Oracle© Enterprise Single Sign-On Suite Plus

Administrator's Guide

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Oracle Enterprise Single Sign-On Suite Plus Administrator's Guide, Release 11.1.2

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Contents

Preface

The Oracle Fusion Middleware Enterprise Single Sign-On Administrator's Guide explains how to use the Oracle Enterprise Single Sign-On Administrative Console to configure your enterprise's system and Oracle Client applications so that users can manage their passwords effectively.

The Oracle Enterprise Single Sign-On Administrative Console lets you configure the following Client applications:

- Oracle Enterprise Single Sign-On Logon Manager (Logon Manager) with Kiosk Manager.
- Oracle Enterprise Single Sign-On Password Reset (Password Reset)

Additionally, this guide contains instructions for:

- Creating and deploying Logon Manager and Oracle Enterprise Single Sign-On Provisioning Gateway (Provisioning Gateway) using Oracle Enterprise Single Sign-On Anywhere (Anywhere).
- Configuring the Oracle Enterprise Single Sign-On Suite Plus Reporting service to generate reports about virtually all the day-to-day activities of your enterprise.

Finally, this guide provides brief descriptions of the integration of the administrator tasks associated with Provisioning Gateway and Orace Enterprise Single Sign-On Universal Authentication Manager (Universal Authentication Manager). See the separate administrator's guides for these products for complete instructions on their use.

Audience

This guide is intended for experienced administrators responsible for the planning, implementation and deployment of Logon Manager. Administrators are expected to understand single sign-on concepts, such as password policies, logon methods, credential sharing groups, and application configuration, as well as have familiarity configuring directory servers, databases and repositories. The person completing the installation and configuration procedure should also be familiar with the company's system standards. Readers should be able to perform routine security administration tasks.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/support/contact.html or visit http://www.oracle.com/accessibility/support.html if you are hearing impaired.

Related Documents

For more information, see the other documents in the Oracle Enterprise Single Sign-On Suite Plus documentation set for this release.

Oracle Enterprise Single Sign-On Suite Plus

Release Notes

Installation Guide

Administrator's Guide

Secure Deployment Guide

User's Guide

Oracle Enterprise Single Sign-On Logon Manager

Deploying Logon Manager with Microsoft Active Directory

Deploying Logon Manager with Microsoft Active Directory Application Mode and Active Directory Lightweight Directory Services

Deploying Logon Manager with a Lightweight Directory Access Protocol Directory

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Oracle Enterprise Single Sign-On Provisioning Gateway

Administrator's Guide

Command Line Interface Guide

Oracle Identity Manager Connector Guide

Sun Java System Identity Manager Connector Guide

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Administrator's Guide

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Part I. Introduction to Oracle Enterprise Single Sign-On Suite Plus

Oracle Enterprise Single Sign-On Suite Plus is a comprehensive solution for managing enterprise users' password and strong authentication activities for applications that they use for daily productivity, while requiring that they remember only one universal password.

Suite Components

The suite consists of the following components:

Logon Manager

Logon Manager provides users with one password to log on to every application on both the company network and the Internet. It works "out-of-the-box" (without programming or additional network infrastructure) with virtually any Windows, Web, proprietary, or host-based application, lowering IT and Help Desk costs without the expense and burden of integration.

Logon Manager is intelligent agent software that works by responding to logon requests on behalf of the user, directly from the desktop. The Agent responds to each software applications logon request by providing the correct credentials (that is, username/ID, password, and other fields) directly and automatically. A strong authentication mechanism controls access to the Agent, ensuring access by only the designated user.

Kiosk Manager, a feature that is configurable from the Oracle Enterprise Single Sign-On Administrative Console, provides a group of settings that deliver a secure, easy to use, and easy to administer solution to address the needs of traditional single sign-on in a kiosk environment. Kiosk Manager has a client-side agent that suspends or closes inactive sessions and seamlessly shuts down all applications. This feature integrates with Logon Manager and Universal Authentication Manager to provide user identification to the kiosk with a Windows password or any supported primary authenticator.

Password Reset

Password Reset enables workstation users to reset their own Windows domain passwords without the intervention of administrative or help-desk personnel. It provides end users with an alternative means of authenticating themselves by taking a quiz comprising a series of passphrase questions.

Each question is weighted with point values. As the end user answers the quiz questions, Password Reset keeps a running score. Points are added to the score for each correct response and deducted for each incorrect response. When the end user accumulates sufficient points to meet a preset "confidence level," Password Reset permits the end user to select a new password. If the end user's score does not achieve the required confidence level after all questions have been presented, or if it falls below a preset negative value, the quiz ends and the end user is not permitted to reset the password.

The reset service is available to each end user upon completion of a one-time Enrollment Interview to record passphrase answers. The Oracle Enterprise Single Sign-On Administrative Console provides easy configuration of the Enrollment Interview and Reset Quiz, including question text, point values, and confidence-level limits. The console also lets you generate reports of enrollment and reset activity and status.

Provisioning Gateway

Provisioning Gateway provides the ability to remotely add, modify, and delete application credentials directly within each user's Logon Manager credential store, eliminating the need for local credential capture and granting the user instant access to the target application. The Universal Authentication Manager Management Console is a standalone, browser-based application. See the separate *Provisioning Gateway Administrator's Guide* for instructions to configure and use this component.

Anywhere

Oracle Enterprise Single Sign-On Anywhere (Anywhere) is the latest innovation in portable single sign-on (SSO) technology, enabling deployment of Logon Manager to end users' desktops.

Using the Anywhere Console, the administrator creates a deployment package with Logon Manager configured exactly as needed by enterprise users, and makes the package available over a Web server or file share. Users download this deployment package from an HTML interface that is included with the Anywhere package, and which the administrator customizes. Users can then perform installations of the Oracle product suite on their own workstations at the click of a button, with assurance that configurations are correct and ready to run, and without administrator intervention.

Universal Authentication Manager

Orace Enterprise Single Sign-On Universal Authentication Manager (Universal Authentication Manager) enables enterprises to replace the use of native password logon to Microsoft Windows and Active Directory networks with stronger and easier to use authentication methods. The Universal Authentication Manager system also enhances enterprise security beyond traditional password authentication by providing two-factor authentication methods. Universal Authentication Manager enables users to rapidly and securely enroll credentials that will be used to identify and authenticate them. Universal Authentication Manager offers five built-in and configurable authentication methods: smart cards, passive proximity cards, biometric fingerprint and other biometric technologies, and challenge questions. Native Windows Passwords are also supported.

See the separate *Universal Authentication Manager Administrator's Guide* for instructions to configure and use this component.

Reporting

The Oracle Enterprise Single Sign-On Suite Plus components include a configurable Reporting tool. This tool integrates with Oracle Business Intelligence Publisher to produce customized reports for virtually any event that occurs in the course of regular business operation.

Suite Administration

Logon Manager, Password Reset, and Universal Authentication Manager settings are configured through the Oracle Enterprise Single Sign-On Administrative Console. Anywhere and Provisioning Gateway have standalone administrative consoles. Each component contains its own Reporting settings.

Overview of the Oracle Enterprise Single Sign-On Administrative Console

The Oracle Enterprise Single Sign-On Administrative Console incorporates administrative functionality for Logon Manager and Password Reset enables both Agent/Client and server configuration of most options, including:

- Easy creation, management, and deployment of:
  - Application configurations and application configuration lists.
  - Credential-Sharing Groups.
  - Password Policies.
  - Bulk-add lists.
  - Agent configuration settings.
  - Customized MSIs.
- Easy setup and management of synchronizer extensions:
  - LDAP Directory Servers, including Oracle Directory Server Enterprise Edition, Oracle Internet Directory, Oracle Unified Directory, Oracle Virtual Directory, Tivoli Directory Server, Novell eDirectory, OpenLDAP Directory Server, and Siemens Dirx.
  - Relational database systems, including Oracle, Microsoft SQL Server, and IBM DB2.
  - Microsoft Active Directory Server systems (including Application Mode).
  - File systems.
- Easy setup of Password Reset including:
  - Configuring service storage.
  - Tracking which users have enrolled and/or attempted to reset their passwords.
  - Creating questions for the Enrollment Interview and assigning their point values for the Reset Quiz.
  - Customizing the user interface for the Enrollment Interview and Reset Quiz.
- Easy configuration and management of users authenticating in kiosk environments.
- Easy integration of Reporting with Oracle Business Intelligence Editor to generate reports for every type of event that might occur in the course of regular business operation.

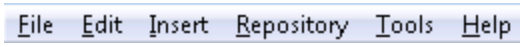
The Oracle Enterprise Single Sign-On Administrative Console obsoletes the need for editing configuration files or the registry by hand, with the associated risks of errors such as "fat-fingering" or providing invalid parameters.

The Oracle Enterprise Single Sign-On Administrative Console functionality is divided into the areas listed below, with their associated topics.

Action	Console Feature	Related Topic
Creating and managing application configurations	Applications	Configuring Application Templates
Troubleshooting templates	Template Test Manager	Testing Templates
Creating and managing password generation policies	Password Generation Policies	Setting Password Policies
Creating and managing passphrase sets	Passphrase Questions	Passphrase Sets
Creating and managing credentials	Credential Sharing Groups Delegated Credentials	Creating credential sharing groups Delegated Credentials
Creating and managing bulk-add lists	Applications > Bulk-Add tab	First time use
Creating and testing Agent configuration settings	Global Agent Settings, Configuration Test Manager	Configuring Global Agent Settings, Configuration Test Manager
Setting up and managing synchronizer extensions	Synchronization	Synchronization
Setting up and managing repositories	Repository	Repository
Generating MSIs	MSI Generator	Using the MSI Generator
Configuring user authentication in a kiosk environment	Kiosk Manager	Kiosk Manager
Creating the Password Reset service	Password Reset	Configuring the Reset Service Account
Creating and configuring questions for a user-initiated password reset	Password Reset	Setting Up the Enrollment Interview
Working with the Reset service	Password Reset Service	Editing Reset Service Settings
Configuring a database for Reporting	Oracle Enterprise Single Sign-On Reporting tool	Configuring an Oracle Database Configuring a SQL Database
Integrating Reporting with Oracle Business Intelligence Publisher to create reports	Oracle Enterprise Single Sign-On Reporting tool	Configuring Oracle Business Intelligence Publisher for Reporting Deployment

Logon Manager Main Menu Commands

The table below describes the commands available on the Oracle Enterprise Single Sign-On Administrative Console main menu and the corresponding keyboard and mouse shortcuts.



Menu	Command	Description	Shortcut
File	**New**	Start a new configuration	**Ctrl+N**
	Open	Open	**Ctrl+O**
	Merge	Merge current configuration (applications, password generation policies, credential sharing groups) with a configuration file. If the merged file contains items with the same names as those in the current configuration, the Import/Merge Conflict dialog box opens. Select the items to import and click **OK**. If the imported file contains a set of global Agent settings with the same name as an existing set in the current configuration, the imported set is named **Copy of existing settings**.	
	Save	Save the current configuration to a file (XML).	**Ctrl+S**
	Save As	Save a copy of the current configuration to a different file.	
	Import	Import configuration from an administrative override object (INI) file or a registration entries (REG) file as a new set of global Agent settings If the imported file contains items (applications, policies, groups) with the same names as those in the current configuration, the Import/Merge Conflict dialog box appears.	Right-click **Applications** and choose **Import** or **Ctrl+I** Choose **Import from HKLM** to import global Agent settings from the local-machine registry to the Oracle Enterprise Single Sign-On Administrative Console as a set named "Live."
	Export	Export selected applications and all password policies and groups to an entlist.ini file, which is a store of application logons.	Right-click **Applications** and select **Export** or **Ctrl**+**E**.
	Exit	Quit the program.	

Menu	Command	Description	Shortcut
Edit	**Delete**	Delete the item selected in the left pane. Click **Yes** to confirm or **No** to cancel.	**Del**

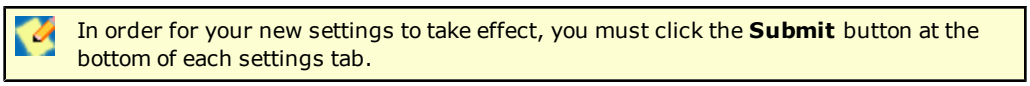
Menu	Command	Description	Shortcut
Insert	**Application**	Add a new application configuration; displays the Add Application dialog box.	Right-click **Applications** and select **New Windows App**, **New Web App**, or **New Host App**.
	UAM Policy	Add a new UAM policy; displays the New UAM Policy dialog box.	Right-click **Policies** and select **New Policy**.
	Password Generation Policy	Add a new password generation policy; displays the Add Password Policy dialog box. • Enter Policy Name and click **OK**.	Right-click **Password Generation Policy** and select **New Policy**.
	Passphrase Questions	Add a new passphrase set; displays the Add Passphrase Set dailog box. Enter a Passphrase Set Name and click **OK**.	Right-click **Passphrase Questions** and select **New Passphrase Set**.
	Credential Sharing Group	Add a new credential sharing group; displays the Add Sharing Group dialog box. • EnterGroup Name and click **OK**. • Enter **Policy Name** and click **OK**.	Right-click **Credential Sharing Group** and select **New Group**.
	Exclusion List	Add a new exclusion list; displays the Add Exclusion List dialog box. Enter a name for the list and click **OK**.	• Select the **Exclusions** node in the left pane, and click **Add** at the bottom of the right pane. • Right-click on the **Exclusions** node, and select **New List** from the contextual menu. • Select the **Exclusions** node and right-click in the empty space in the right pane.
	Global Agent Settings	Save the current configuration to a file (XML).	Right-click **Global Agent Settings** and select **New Settings**.
	Sync Extension	Save a copy of the current configuration to a different file.	Right-click **Synchronization** and select **Manage Synchronizers**.

Menu	Command	Description
Repository	**Extend Schema**	Connect to synchronization repository and create a new synchronization schema (for LDAP and database sync support). Displays Connect to Repository dialog box.
	Initialize UAM Storage	Create static repository containers in which to store Universal Authentication Manager data.
	Use Short Names	Check or uncheck to toggle between displaying and hiding user credential containers in the Repository
	Show User Credential Containers	Check or uncheck to toggle between displaying and hiding Logon Manager user credential containers in the Repository window tree view.

Menu	Command	Description
Tools	**Publish to Repository**	Opens the "Publish to Repository" dialog box, from which you can select multiple objects to publish simultaneously.
	Export Apps to Agent	Add the application logons in the current Oracle Enterprise Single Sign-On Administrative Console session to the list of pre-configured logons for the locally-installed Agent. This option updates the local entlist.inifile, and optionally, the ftulist.ini (first time use) file.
	Write Global Agent Settings to HKLM	Export global Agent Settings to local-machine registry; displays a confirmation message.
	Test Global Agent Settings	Launch the Oracle Enterprise Single Sign-On Test Manager to validate that you have configured Global Agent Settings correctly. See Configuration Test Manager for complete procedures for using this tool.
	Manage Templates	Create, modify, and remove templates for application logons; displays the Manage Templates dialog box.
	Update Applications	Update applications based on templates that have been modified since the application's creation; displays the Update Applications dialog box.
	Modify Configuration	View or edit the configuration (INI) files for the locally-installed Logon Manager Agent. Choose Applist, or open any FTUlist, EntList, MfrmList, or other INI file by name.
	Generate Customized MSI	Launch the Oracle Enterprise Single Sign-On MSI Generator, a wizard-style utility with which you create a custom .MSI file to use for mass deployment to Logon Manager end-users.

Password Reset Console Main Menu Commands

The table below describes the menu structure and available commands of the Password Reset node of the Oracle Enterprise Single Sign-On Administrative Console.



In order for your new settings to take effect, you must click the **Submit** button at the bottom of each settings tab.

Tree Head	Tab	Description
Password Reset	Admin Web Service URL	Connect to the administrative Web service. After you enter a valid URL, the nodes below become available.

Node	Tab	Description
System	**Storage**	Configure, prioritize, and initialize storage.
	Reset Service	Monitor and configure reset service accounts.

Node	Tab	Description
Settings	**Settings**	Configure: • Authentication thresholds • Reset lockout • Forced enrollment • User Emails • Reset experience
	Password Complexity	Configure: • Length and repetition constraints • Allowed alphabetic characters • Allowed numeric characters • Allowed special characters
	Alerts	Configure: • E-mail settings • Alert conditions
	Logging	Configure: • Syslog enabling • Event filters
	Reporting	Configure: • Reporting settings • Database settings
	Enrollment UI	Configure the look and feel of the elements in the Enrollment User Interface, including: • Logos • Fonts • Background, border, and foreground colors
	Reset UI	Configure the look and feel of the elements in the Reset User Interface, including: • Logos • Fonts • Background, border, and foreground colors

Node	Tab	Description
Questions	**System Questions**	Create system questions and specify the languages in which they will appear.

Node	Tab	Description
Users	**Manage Users**	Perform user searches using the criteria you specify on this tab.

Node	Tab	Description
Enrollments	**Manage Enrollments**	Perform enrollment searches based on specified dates; view, export and delete logs.

Node	Tab	Description
Resets	**Manage Resets**	Perform reset searches based on specified dates; view, export and delete logs.

Part II: Using the Administrative Console to Configure Logon Manager

This section describes the procedures and settings in the Oracle Enterprise Single Sign-On Administrative Console, and how to use them to configure repositories, connections, and Logon Manager for your end-users.

In this section, you will learn about the following:

- Logon Manager features.
- Planning your deployment.
- Configuring your server.
- Working with repositories.
- Setting up synchronization.
- Managing user data.
- Creating templates.
- Configuring the Agent.
- Distributing the Agent.
- Configuring sessions with Kiosk Manager.

Product Overview

Logon Manager uses a patented process for detecting requests for credentials, analyzing the response necessary, responding reliably, logging events, and administering settings.

Architecture/Modules

The Logon Manager component architecture provides maximum flexibility to meet your organization's needs.

The Logon Manager architecture consists of seven areas:

- Authentication
- Encryption
- Intelligent agent response
- Core (including storage)
- Credential synchronization
- Event logging
- Miscellaneous components

In addition, administration is facilitated by the Oracle Enterprise Single Sign-On Administrative Console.

Authentication

Authentication is how the system validates users so they gain access to Logon Manager. It consists of three layers: (1) the authenticator itself; (2) the authentication service; and (3) the Logon Manager Authenticator API. Once the system validates the user, it passes the users validation information to the core shell.

Logon Manager ships with these authenticators:

- Windows Domain (same password used to log on to the network *(deprecated as of version 11.1.2)*
- Windows Authentication v2
- LDAP Directory Server
- LDAP Directory Server v2
- Authentication Manager
- Entrust Entelligence
- Proximity Card
- Read-Only Smart Card
- RSA SecurID
- Smart Card

You determine which authenticators to support, which to install on each computer, and which to enable for each user. (Default: Windows Domain installs)

For details, see Configuring for Windows Authentication.

Encryption

Encryption secures user credentials in the data store. The Agent requests that credentials be encrypted/decrypted based on the appropriate Crypto Library algorithm. The Agent automatically migrates credentials to a new algorithm/strength (for example, from Triple-DES to AES).

Logon Manager supports a variety of encryption algorithms and algorithm strengths to suit your corporate, legal, security, performance, and other requirements.

Logon Manager ships with several popular algorithms:

- AES (MS CAPI) (Default)
- Cobra 128-bit *(deprecated)*
- Blowfish 448-bit *(deprecated)*
- Triple-DES 168-bit *(deprecated)*
- AES 256-bit *(deprecated)*
- Triple-DES (MS CAPI) (ALL OSs) *(deprecated)*
- Triple-DES (MS CAPI) (XP/2003 only) *(deprecated)*
- RC-4 (MS CAPI) (ALL OSs) *(deprecated)*
- RC-4 (MS CAPI) (XP/2003 only) *(deprecated)*

Other algorithms can work as encryption modules.

You determine which encryption algorithms a user can use and which encryption new/modified credentials should use.

As of version 11.1.2, all encryption algorithms are being deprecated in favor of AES (MS CAPI). Other algorithms are listed for upgrade scenarios only.

For details on setting the default algorithm and strength, see the Global Agent Security Settings.

Intelligent Agent Response

When an application presents a request for credentials, the Agent detects this event, determines the appropriate action, and responds with the correct credentials. The interface that performs

these evaluations is the Intelligent Agent Response. It interfaces with Access Manager to supply the proper credentials to each application. Access Manager acquires the credentials from the Shell.

Windows support installs automatically. You determine whether support for Web and/or Host applications installs. (Default: All modules install, but Host support is disabled.)

Logon Manager ships with the configuration information for popular applications built in.

For more information on built-in applications, see Application Configurations Included. For more information on adding additional application configurations, see Configuring Application Templates.

Application Configuration

Logon Manager can work with its default install settings. However, Logon Manager provides the flexibility to tailor its functionality to the specific needs of any organization. Some of the most commonly-customized functions are:

- **Application Templates**, which improves usability by letting users select from a predefined logon list. Applications include Windows applications , host applications, and Web applications.
- **Mobility Support**, to provide location transparency and automatic backup and restore.
- **Event Logging**, which enables Logon Manager to log various events such as logons, password changes, and so on.
- **First-time use**, which customize the user setup process to meet an organizations needs and improve usability.
- **Password policies**, which propagate enterprise security policies, improve security, and (when automated) improve usability.
- Logon Manager settings, which control the UI, implement security, enable, disable, and configure features, and more.

Each of these decisions impacts multiple stages of planning, deployment, use, and management.

Host Emulators

Logon Manager supports many host emulators. You determine which, if any, the Agent will recognize. (Default: The Agent works with all supported emulators but requires emulator configuration for some emulators.

It is recommended that you configure host emulators to work with the Agent before deploying Logon Manager.

For more information on host emulators, see Configuring Host Emulators.

Agent (Including Storage)

Using your preferred encryption algorithm, the Agent encrypts and stores user credentials locally in the encrypted Local Credential Storage; it never maintains credentials unencrypted on disk or in memory. The credentials are stored in a user-specific secure database file. Within this file are the encrypted records for each set of user credentials, user settings, and additional configuration information.

Credential Synchronization

While the Agent stores user credentials and settings locally, it can synchronize the credentials and settings with remote file systems, directories, databases, devices, and so on. Synchronization can be of the entire user database file (which contains all user credentials) or of individual records within the database. The synchronization is triggered by a change to the Local Credential Storage

or settings. Synchronization can be extended to any storage mechanism via the Synchronization API.

Agent administration is fully supported via the Synchronization component and allows the administrator to dynamically deliver updated settings and configuration data to the Agent through the central storage mechanism.

Synchronization Extensions

The Agent works with a variety of synchronization extensions, providing users access to their credentials from any desktop.

Logon Manager includes the following synchronizer extensions:

- Microsoft Active Directory
- Microsoft Active Directory Lightweight Directory Services (AD LDS), formerly Microsoft Active Directory Application Mode (ADAM) (hereafter referred to as Microsoft AD LDS (ADAM))
- Lightweight Directory Access Protocol (LDAP)
- Database
- File System

Logon Manager supports the most popular LDAP-compliant directory servers, including:

- Oracle Directory Server Enterprise Edition
- Oracle Internet Directory
- Oracle Unified Directory
- Oracle Virtual Directory
- IBM Tivoli Directory Server
- Microsoft Active Directory Server
- Novell eDirectory
- OpenLDAP Directory server
- SQL-compliant relational database system, including:
  - Oracle Database
  - Microsoft SQL Server
  - IBM DB2

For specific version information, refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Logon Manager also includes a synchronizer extension supporting a file system, such as can be found on a remote network drive share.

You determine which synchronization modules to install on each computer, which modules to enable for each user, and how to configure each extension. (Default: The synchronizer module installs but no synchronization extensions install.)

- For information on Mobility in general, see Mobility Configuration.
- For details on synchronization, see Storing User Credentials and Settings.
- For details on directory servers, see Directory Server Synchronization Support.
- For details on database systems, see Database Synchronization Support.
- For details on the File System synchronization extension, see File System Synchronization Support.

Event Logging

When notified by the Shell, the Agent can log all SSO system events, including credential use, credential changes, global credential events, Agent events, and Agent feature use. The Agent can also log specified fields. Events can be logged locally or to any external destination through the Event Logging API. These destinations can include an SNMP service, a Windows server (for viewing via the Windows Event log), or even a local XML log file for simplified parsing and reporting.

The Agent can log all events through its Event Logging API.

Logon Manager works with a variety of Event Logging extensions and includes two Event Logging extensions writing to both local and remote servers:

- Local File extension, to an XML file
- Windows Event Logging extension, to a Windows Event Logging server
- Logging events to a database
- Logging events to a Syslog server.
- Oracle may release additional extensions (for example, Oracle and SNMP), and you can easily write your own extensions.

You determine which Event Logging modules to install on each computer, which modules to enable for each user, how to configure the extensions, how frequently the Agent writes to these extensions, how much data the Agent caches, where the Agent writes the log, and more. (Default: No Event Logging modules install, and no logging occurs)

See Event Logging for details.

Miscellaneous Components

Logon Manager also contains the following miscellaneous modules:

Backup/Restore

For users who do not perform any Credential Synchronization, the Backup/Restore component enables archiving and restoration of user credentials.

Citrix and Windows Terminal Services Tools

For environments that require using the Agent within a Citrix Server or Windows Terminal Services environment, additional components are supplied to allow Logon Manager to interact appropriately within each session.

Installer Package

Logon Manager ships within a Windows Installer package that supports the flexibility of that technology for easier deployment and customization.

Common Scenarios

First-Time Use

The Agent can prompt the user for current credentials for predefined applications. You determine which, if any, credentials to request. (Default: The Agent does not request credentials for any applications.)

For more information on first-time use issues, see First Time Use (Bulk-Add).

User Work Modes

Logon Manager supports work modes ranging from "One Workstation, One or Multiple Users" to "Frequent Movement Among Many Workstations" and from always-connected to frequently-disconnected.

For more information on first-time use issues, see User Work Modes.

Usability vs. Security

Logon Manager lets you choose the balance between usability and security that is appropriate for your organization. The default configuration guarantees your enterprise is secure, but you have the flexibility to adjust these settings as you need. See the *Oracle Enterprise Single Sign-On Suite Plus Secure Deployment Guidelines* for a complete discussion of Oracle's security recommendations.

For more information on first-time use issues, see Settings Controlling Usability.

Packaging/Distribution/Installation

Logon Manager supports most deployment tools and methods. You determine which components deploy to which desktops.

For more information on deployment, see Deploying Logon Manager.

Resources

Logon Manager stores all program files, settings, and data in the following places:

- The %ProgramFiles%\Passlogix\v-GO SSO directory contains Logon Manager program files. (Default: C:\Program Files\Passlogix\Logon Manager)
- The %ProgramFiles%\Passlogix\v-GO SSO\Console directory contains Oracle Enterprise Single Sign-On Administrative Console program files. (Default: C:\Program Files\Passlogix\v-GO SSO\Console)
- The %ProgramFiles%\Passlogix\SSO File Sync Service directory contains SSO File Sync Service program files. (Default: C:\Program Files\Passlogix\SSO File Sync Service)
- The %AppData%\Passlogix directory contains user data files. (Default: depends on OS; Windows 7: C:\Users\%Username%\AppData\Roaming\Passlogix)
- The HKCU registry tree stores user default settings.
- The HKEY_LOCAL_MACHINE\SOFTWARE\Passlogix registry tree stores overriding setting (settings that override user settings) and Logon Manager defaults.
- The vGOLocator objects on a directory server direct Logon Manager to where each users' credentials are stored (an vGOConfig object).
- The vGOConfig objects on directory servers and similar objects on File Systems store overriding settings and user data.

Settings in vGOConfig objects override registry settings. vGOConfig is the default name, but this file can have any name.

Logon Manager Features

Logon Manager provides users with one password to log on to every application on both the company network and the Internet. It works "out-of-the-box" (without programming or additional

network infrastructure) with virtually any Windows, Web, proprietary, or host-based application, lowering IT and Help Desk costs without the expense and burden of integration.

Logon Manager is intelligent agent software that works by responding to logon requests on behalf of the user, directly from the desktop. The Agent responds to each software application's logon request by providing the correct credentials (that is, username/ID, password, and other fields) directly and automatically. A strong authentication mechanism controls access to the Agent, ensuring access by only the designated user. The following table summarizes Logon Manager's key features.

Feature	Benefits
Single Sign-On	Provides one password to log on to networks, applications, and Web sites.
Authenticator Choice	Authenticate using a Windows logon or LDAP Directory Server logon. Logon Manager accepts strong authenticators for its primary authentication – including smart cards.)
Mobility Support	Users can log on from any workstation and use their Logon Manager credentials via directory servers, database systems, file systems, and Windows Roaming Profiles. (Logon Manager users can log on using smart cards.)
Workstation Sharing	Multiple users can share the same workstation securely using Kiosk Manager.
Automated Password Change	Users can choose a new password or the Agent can select one automatically using approved password rules (Password Policies).
Strong Authentication	Soft token-based, two-factor authentication protects against unauthorized access.
Event Logging	Automatically log events such as logons, password changes, and so on.
Auto Prompt	Automatically prompts users to configure logons when they encounter a new password-protected application.
Credential Sharing	Multiple applications can share the same credentials.
Central Administration	All configurations and settings are centrally manageable via the Oracle Enterprise Single Sign-On Administrative Console.
Automatic Backup/Restore	Automatically back up user credentials to a remote location including a directory server, relational database, or file system, and automatically restore user credentials after a system crash.
User Configuration of Logons	In addition to logons predefined by the administrator, users can add individual logons that they may have to other applications and Web sites.
Customization	Many aspects of the user experience, including user setup, are customizable to tailor the product to the security needs of the organization and technical sophistication of the user population.
Secure Architecture	The Agent is designed to be highly secure, including allowing the Administrator to prevent revealing of any passwords, calling modern encryption algorithms, and using tamper-resistant modules.

Considerations Before Deploying Logon Manager

The topics in this section discuss important concepts and considerations regarding the deployment and administration of Logon Manager.

User Work Nodes	Understanding the different ways to set up the Agent side of supporting users working in different configurations, and how to optimize your configuration for each set of scenarios.
Configuration	Understanding the different ways to set up the server side of supporting users working in different configurations, and how to optimize your configuration for each set of scenarios.
Rollout	Understanding the process and issues surrounding rolling out Logon Manager to an organization.
Administration and Management	Understanding the post-rollout issues for Logon Manager deployments.

User Work Modes

Users access their computers in a variety of work modes:

- Some users are always at a given workstation and are the sole user.
- Some users move frequently among a limited number of workstations (for example, nurses in a department) or move to a different workstation every day or few hours (for example, a call center).
- Multiple users may share a single workstation, for example, in shifts. Such a workstation may be used as a kiosk, that is, by multiple users who log on on using a smart card or other token.
- Some users are not always connected to the network.

Logon Manager supports all these scenarios and can be optimized for each user's most common scenario. (Default: Users are always at a given workstation, but share with others.)

One Workstation, One User

When users are always at a given workstation, their credentials can be backed up to a remote location using an SSO synchronizer extension. See Synchronization for more information.

Alternately, the Backup/Restore facility module can store credentials on the workstation without the use of a remote repository. The Backup/Restore module is not installed by default. Users can perform backups manually, or the backup can be automated. See File-Based Backup/Restore for more information.

Frequent Movement Among Few Workstations

When users move frequently among a few workstations, but are always on those few workstations, you have two basic options for supporting their Logon Manager credentials.

The recommended option is to utilize a remote SSO repository. Both starting the Agent and any change to credentials force a record-level comparison (synchronization) of all records, ensuring that the user always has the most current credentials possible.

One other option is to configure automatic backup to a network file share. With proper configuration, the Agent will perform a silent backup to a remote store (network drive) with each

change of credentials (Refresh Task). When the Agent first starts, it will see if the remote store is newer than the local store; if so, it will perform a silent restore; either way, the user will have the current credentials. Because this is a file-level (as opposed to record-level) comparison, this option is not safe if the user logs onto more than one computer at the same time.

Frequent Movement Among Many Workstations

When users move frequently among many workstations, you have two basic options for supporting their credentials.

The recommended option is to utilize a remote SSO synchronization repository. Both starting the Agent and any change to credentials force a record-level comparison (synchronization) of all records, ensuring that the user always has the most current credentials possible. In addition, to increase security and to reduce disk space use, enable the Delete Local Cache (on Shutdown) option.

Alternately, if your Windows environment is already set up with Windows Roaming Profiles, user data is automatically available to the user since it is included in the %AppData% file directory. However, due to the bandwidth-intensive nature of Windows Roaming Profiles, it is not recommended for use with SSO credentials.

One Workstation, Many Users

A single workstation may be accessed by a number of users, such as a kiosk. A smart card (or other token) and a PIN can be used to log on to a kiosk (Authentication Manager only). To enable these users' access to the remote SSO repository the ssoSCDetect utility can be used to start the Logon Manager Agent and prompt for primary logon whenever a smart card is inserted in the reader. When the card is removed, the user is automatically logged out of the Agent. See ssoSCDetect (smart card monitor utility) for more information.

Disconnected

When users use laptops or are in remote locations, they often stay disconnected from the network for long periods of time.

The Logon Manager Agent stores credentials locally, providing full independence for mobile users who cannot rely on a network connection. Logon Manager modules like Storing User Credentials and Settings and Event Logging support occasional reconnecting, ensuring reliability.

With File-Based Backup/Restore, users can save their own data to a floppy or zip drive.

The Logon Manager synchronizer extensions are configured for offline users using Synchronization options, including Disconnected Operation (See Settings Controlling Mobility).

Usability and Security

Security: Locked Down vs. User Freedom

You can customize Logon Manager to provide the balance of security appropriate to your organization's policies and risk/trust level. For example, some organizations need to insure that a user cannot deny having taken a given action, whereas others are not as security-conscious. See the *Oracle Enterprise Single Sign-On Suite Plus Secure Deployment Guidelines* for a complete discussion of Oracle's security recommendations.

Usability: User Flexibility vs. Simplicity

You can customize Logon Manager to provide the balance of usability appropriate to your organization's policies and user skill level. For example, some organizations largely employ users who are confused by all but the simplest user interface, whereas others are staffed by more experienced users and might wish to offer flexibility in their environment.

Other Settings

You can customize Logon Manager in many ways, and you can enforce these settings at the user, computer, or group level. (The "group" level can include the entire enterprise.) See Global Agent Settings for details.

Mobility Configuration

Some organizations configure their SSO repository components (directory servers, relational databases, file system share) in a very centralized fashion (for example, all user data store objects under one parent object). Other organizations use a decentralized structure (for example, a parent object for each department, location, level of employee). Each has its advantages and disadvantages, depending on your specific current and future network topology. Below are some general advantages and disadvantages.

Centralized	
Advantages	**Disadvantages**
• Easy to configure globally • Easy to manage	• Hard to load balance • Bandwidth-intensive when user population is dispersed and user data isn't locally replicated (for example, retrieving data on a New York server from Tokyo)

Decentralized	
Advantages	**Disadvantages**
• Granular control (for example, different security for different users) • Can reallocate resources easily (for example, move user data objects as the users move closer to different servers, split data among several servers)	• Harder to manage • Easier to make mistakes with one set of data and not realize the disparity
Provisioning Gateway	
Password Reset	Oracle Enterprise Single Sign-On Password Reset
Logon Manager	Oracle Enterprise Single Sign-On Logon Manager
FTU	First Time Use Wizard

First-Time Use Scenarios

You can control users first-time use scenario from the Logon Manager repository. Determine your first-time use scenarios and then push the object to the Logon Manager repository. If using a centralized environment, only one object is needed; if using a decentralized environment, you can customize the first-time use scenario configuration to meet each group's needs. See First Time Use (Bulk-Add) for more information.

System Configuration

You can provide Logon Manager configuration settings to users from the Logon Manager repository. Determine your overriding settings and then push them to an object in the Logon Manager repository. If you are using a centralized environment, only one object is needed, providing ideal top-down security controls; if you are using a decentralized environment, you can customize the settings to meet each group's needs.

Application Configurations

You can provide application configurations to users from the Logon Manager repository. Determine your application configurations and then push to an object in the Logon Manager repository. If using a centralized environment, you need only one object; if you are using a decentralized environment, you can customize the list of supported applications to meet each groups needs. See Configuring Application Templates for more information.

Software Rollout

The Basics

You can introduce yourself to Logon Manager by accessing its basic functions; that is, log on to your computer and the Agent provides the logon to all other applications.

To see examples of this, observe the Agent responding to some predefined applications (for example, Outlook and Lotus Notes 4/5) and some Web sites (for example, Yahoo! and EudoraMail.com). Install Logon Manager with its typical configuration and then start these applications.

Application Configuration

Once you see the Agent respond to some predefined applications and common web sites, you can easily configure the Agent to detect and respond to almost any password-protected application.

Administration and Management

After the initial deployment, you can continue managing Logon Manager modules deployment for updates and upgrades, using the Oracle Enterprise Single Sign-On Administrative Console or your own current deployment method.

Logon Manager Configuration	
Directory Servers & Database Systems	Using the Oracle Enterprise Single Sign-On Administrative Console, modify the SSOAdminOverride objects.
File Systems	Using your current File System administration/management tool or the Oracle Enterprise Single Sign-On Administrative Console modify the overriding settings.
Local	Using a domain management tool, a deployment tool, RegEdit, and so on, modify the HKLM hive.

Application Configurations	
Directory Servers & Database Systems	Using the Oracle Enterprise Single Sign-On Administrative Console, modify the SSOentlist and (optionally) SSOftulist objects.
File Systems	Using the Oracle Enterprise Single Sign-On Administrative Console modify the entlist and (optionally) ftulist files.
Local	Using the Oracle Enterprise Single Sign-On Administrative Console, modify the entlist.ini and (optionally) ftulist.ini files.

Settings	
Change settings post-rollout	Using the Oracle Enterprise Single Sign-On Administrative Console, push overriding settings to the Logon Manager synchronization repository (for example, the directory server, database, file system). Using a domain management tool, a deployment tool, RegEdit, and so on, deploy registry changes.

User Data	
Directory Servers	Using your current directory administration/management tool, move the user object and (if needed) alter or add an SSOLocator object for the user.
File Systems	Using your current network administration/management tool (or even Windows Explorer), move the user file directory tree and (if needed) change the user files' storage location.
Local	Using a domain management tool, a deployment tool, RegEdit, and so on, change the user files' storage location.

Managing User Credentials	
Local	***Deleting User Credentials*** Using a domain management tool, a deployment tool, Windows Explorer, and so on, delete the %AppData%\Passlogix file from the users %AppData%\SSO directory on all computers the user accesses.
Directory Servers	***Deleting User Credentials*** Using your current directory administration/management tool, delete the user object from the directory and delete user credentials by using Windows administrative access to delete the %AppData%\Passlogix file from the users %AppData%\SSO file directory tree on all computers the user accesses. ***Moving a user object*** Using your current directory administration/management tool, move the user object using the directory administrative tool and (if needed) alter or add an SSOLocator object for the user.
File Systems	***Deleting user credentials*** Using your current network administration/management tool or Windows Explorer, delete the user files from the file system and delete user credentials by using Windows administrative access to delete the %UserName% AML.mdb file from the user's %AppData%\Passlogix file directory tree on all computers the user accesses.

Configuring the Server for Logon Manager

The topics below describe how to configure the server for Logon Manager deployment and support for synchronization, and event logging:

- Directory server configuration for LDAP services, including:
  - Oracle Internet Directory.
  - Oracle Directory Server Enterprise Edition.
  - Oracle Unified Directory.
  - Oracle Virtual Directory.
  - IBM Tivoli Directory Server.
  - Microsoft Active Directory and AD LDS (ADAM).
  - Novell eDirectory.
  - Open LDAP Directory Server.
  - Siemens Dirx.
- Database system configuration: for Oracle, Microsoft SQL Server, and IBM DB2 database systems.
- File system configuration: for any UNC (Universal Naming Convention)-compliant network drive or device.
- Event logging: to configure a Microsoft Windows Server to receive Logon Manager Event Log messages.
- Syslog event logging: requires no special configuration of the Agent.

LDAP Directory Server Configuration

This topic describes how to extend LDAP directory servers to work with Logon Manager. Although this process simplifies some directory-related tasks, it assumes that the administrator has knowledge of the planning and deployment of directory services. This guide only covers concepts specific to Logon Manager deployments.

See Directory Server Synchronization Support for more information about how Logon Manager makes use of directory server resources. Also see *Deploying Logon Manager with an LDAP Directory*, *Deploying Logon Manager with Microsoft Active Directory*, and *Deploying Logon Manager with Microsoft AD LDS (ADAM)* on the Oracle Technical Network site for this release.

Configuring a directory server for Logon Manager entails using the Oracle Enterprise Single Sign-On Administrative Console to extend the schema and set up objects in the directory structure.

When you connect to a directory server, you must provide administrator-privileged authentication information. This information includes the directory type, server name or IP address (IP address may not be valid for Microsoft Active Directory Server), port, SSL-use selection, user ID and password.

Your user ID should be in DN format; for example,

```
uid=yourname,ou=Administrators,ou=TopologyManagement,o=NetscapeRoot
```

> For AD LDS (ADAM) repository:
>
> The AD LDS (ADAM) server instance must be installed and running before you begin the following procedure.
>
> The naming context for the Application Directory Partition (step 2, below) must be an organization unit (ou). The example given in the AD LDS (ADAM) Setup Wizard panel shows a cn(container name).

1. Extend the directory schema.

> It is considered a good practice to perform a backup of your directory *before and after* extending the schema. However, it is not necessary to disconnect users to extend the schema, or to reboot the server after the schema is extended.

2. From the Repository menu, select **Extend Schema**.
3. In the Connect to Repository dialog box, enter or select the required connection information, then click **OK**. The Oracle Enterprise Single Sign-On Administrative Console binds to the repository, adds attributes and object classes, and confirms successful server configuration.
4. Repeat for each additional server.
5. Create the container object.

   A container object, typically named SSOConfig (class organizationUnit), holds overriding settings and a container object named People. The People container object (class organizationUnit) holds a container object for each user (class SSOUserData, and each of these user container objects holds user credentials and settings (class SSOSecret.

> Use the Oracle Enterprise Single Sign-On Administrative Console to create container objects with the proper security, to create the People container object with the proper security, and to place overriding settings with the proper security in the People container object.

6. In the left pane of the Oracle Enterprise Single Sign-On Administrative Console, right-click **Repository** and select **Connect to** from the shortcut menu.
7. Enter or select the required connection information, then click **OK**.
8. In the right pane, navigate to the container object where you will create the People object and overriding settings.
9. If necessary, create a new container object:
   a. Right-click the parent container object, and select **New Container** from the shortcut menu.
   b. Enter a name for the new container object and select it.
   c. Right-click the container object (where the People container object and overriding settings will exist) and choose Publish to Repository from the shortcut menu.
   d. Choose the **Data Source** of the overrides and provide the information requested:
      - Administrative Console
      - Data File
10. When you complete the configuration procedure, the newly-created People object, and entries for any overriding settings appear in the Repository pane. Right-click on any object and choose

Refresh if necessary.

11. Repeat this procedure for each additional container object.
12. Create locator objects.
    a. In the left pane of the Oracle Enterprise Single Sign-On Administrative Console, right-click **Repository** and choose **Connect to** from the shortcut menu.
    b. Enter or select the required connection information, then click **OK**.
    c. In the right pane, navigate to the container object where you will create the People object and overriding setting.
    d. If necessary, create a new container object:
        i. Right-click the parent container object, and choose **New Container** from the shortcut menu.
        ii. Enter a name for the new container object and select it.
    e. In the right pane, navigate to the container in which you want to add the locator.
    f. Right-click the container and choose **Add Locator Object** from the shortcut menu.
    g. Specify the **Locator Name** (enter **Default** for all users unless there is one for a specific user).
    h. Navigate to the parent container object of the target People container object (or specify its path) and click **OK**. The newly-created SSOLocator object appears with the name you specified. Right-click any object and choose **Refresh** if necessary.
    i. Repeat for each additional SSOLocator object.

As described in Directory Structure, Logon Manager looks for an SSOLocator object when it connects to the Directory Server, which points where the Agent can store user credentials. An object named Default is required somewhere in the tree. You can create specific SSOLocatorClass objects for specific users as needed.

File Systems Configuration

This topic describes how to extend File Systems to work with Logon Manager. Although this process simplifies some tasks, it assumes that the administrator has knowledge of the planning and deployment of file system shares. This guide only covers concepts specific to Logon Manager deployments.

See File System Synchronization Support for more information about how Logon Manager makes use of file system resources.

Configuring a File System share for Logon Manager entails using the Oracle Enterprise Single Sign-On Administrative Console to set up objects in the directory structure.

When you connect to a File System, you may need to provide Administrator-privileged authentication information. This information includes the synchronizer extension type, UNC path, user ID, and password.

Your user ID should be in domain name format, for example, yourdomain\yourname

Creating the Container Object

A container object is typically a file system share in UNC format, for example

```
\\Server\Share
```

Or it can be a share with a path, for example:

```
\\Server\Share\Path\subPath
```

The container object holds overriding settings and a container object named People.

- The People container object is a file folder that holds a container object for each user (rights: User=Full; Server\Administrators=Full),
- Each of these user container objects holds a container object named SSOUserData.
- Each SSOUserData container object holds user settings in an SSOSecretData object (a file) and container objects for each application credential.
- Each of these container objects contains a user's credentials for one application (a file named SSOSecretData).

Use the Oracle Enterprise Single Sign-On Administrative Console to create container objects with the proper security, to create the People container object with the proper security, and to place overriding settings with the proper security in the People container object.

1. In the left pane of the Oracle Enterprise Single Sign-On Administrative Console, right-click **Repository** and choose **Connect to** from the shortcut menu.
2. Enter or select the required connection information, then click **OK**.
3. In the right pane, navigate to the container object where you will create the People object and overriding settings.
4. If necessary, create a new container object:
   a. Right-click the parent container object, and choose **New Container** from the shortcut menu.
   b. Enter a name for the new container object and select it.
5. Right-click the container object (where the People container object and overriding settings will exist) and choose Publish to Repository from the shortcut menu.
6. Choose the **Data Source** of the overrides and provide the information requested:
   - Administrative Console
   - Data File
7. When you complete the configuration procedure, the newly-created People object and entries for any overriding settings appear in the **Repository** pane. Right-click on any object and choose **Refresh** if necessary.
8. Repeat this procedure for each additional container object.

Database Synchronization Configuration

This topic describes how to configure a relational database server to work with Logon Manager. It assumes that you have basic knowledge of relational database administration and operation. This guide only covers concepts specific to Logon Manager deployments.

See Database Synchronization Support for more information about how Logon Manager makes use of database resources.

Configuring Logon Manager for database synchronization requires using the Oracle Enterprise Single Sign-On Administrative Console to extend the database schema and to create the container objects.

1. Extend the database schema.

   Perform a backup of your database *before and after* extending the schema.

   a. Choose **Extend Schema** from the **Repository** menu.
   b. From the Connect to Repository dialog box, enter or select the required connection information, then click **OK**. You must have administrator-level authentication to connect the Oracle Enterprise Single Sign-On Administrative Console to the database server. The Oracle Enterprise Single Sign-On Administrative Console connects to the database, creates the necessary objects, and confirms successful configuration.

   For SQL Server, when extending the schema, if the database does not exist, the extend schema function will create the database for you. For IBM DB2 Setup instructions, click here.

2. Repeat for each additional server.
3. Create the container objects.

A *container object*, typically named SSOConfig, holds a default set of overriding settings and a container object named People. The People container object contains a container object for each user, and each of these user container objects holds user credentials and settings.

Use the Oracle Enterprise Single Sign-On Administrative Console to create container objects, to create the People container object, and to place overriding settings *with the proper security*in the People container object.

1. In the left pane of the Oracle Enterprise Single Sign-On Administrative Console, right-click **Repository** and select **Connect to** from the shortcut menu.
2. Enter or select the required connection information, then click **OK**.
3. In the right pane, navigate to the container object where you will create the People object and overriding settings.
4. If necessary, create a new container object:

   a. Right-click the parent container object, and choose **New Container** from the shortcut menu.

   b. Enter a name for the new container object and select it.

5. Right-click the container object (where the People container object and overriding settings will exist) and choose Publish to Repository from the shortcut menu.
6. Choose the **Data Source** of the overrides and provide the information requested:

   - **Data File**
   - **Administrative Console**

7. When you complete the configuration procedure, the newly-created People object, and entries for any overriding settings, appear in the Repository pane. Right-click on any object and choose **Refresh** if necessary.
8. Repeat this procedure for each additional container object.

IBM DB2 Configuration

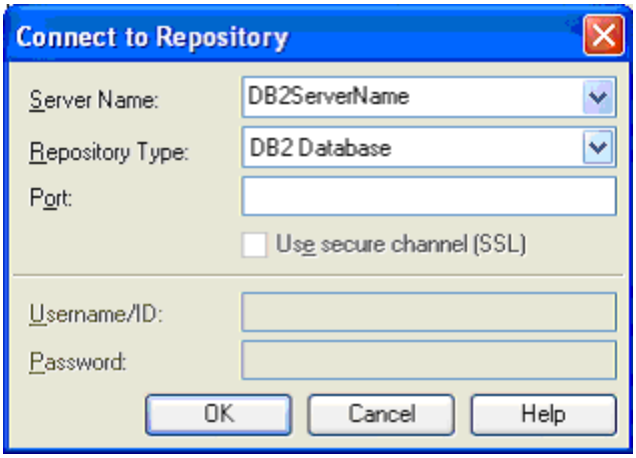
To extend the central repository schema for Logon Manager and prepare IBM DB2 as the central repository, follow the steps in this section.

IBM DB2 Setup Requirements:

- You must install the IBM DB2 Client on the local machine.
- The DB2 client must have OLE DB (Object Linking and Embedding Database) support installed and configured. This support provides a set of interfaces that allow applications to uniformly access data stored in different data sources. To install OLE DB support, run the DB2 setup wizard and navigate to **Client support** > **Interfaces** > **OLE DB Support**. See your DB2 documentation for more information.
- The currently logged-in user (to Windows) that is extending the schema, must have the appropriate rights to the database in order to connect to the repository and extend the schema. The DB2 User Account must have "Database Administrator Authority" rights.
- A DB2 administrator must create a database named "vGOSSO."
- Refer to the IBM DB2 instructions for detailed information on any of these instructions.

Extending the Database Schema

1. Open the Oracle Enterprise Single Sign-On Administrative Console.
2. From the Repository menu, select Extend Schema.
3. From the **Connect to Repository** menu, enter or select the required IBM DB2 connection information:
   - **Server name:** Enter the server name.
   - **Repository Type:** Select DB2 Database.
   - **Port:** The port number only needs to be entered if it is not the default port (normally 50000). If the port is the default, this field can be left blank.



4. Click **OK**.

You must have Administrator-level authentication to connect the Oracle Enterprise Single Sign-On Administrative Console to the database server. The Oracle Enterprise Single Sign-On Administrative Console connects to the database, creates the necessary objects, and confirms successful configuration.

> The 'Extend Schema' function uses the following SQL commands to extend the schema:
>
> CREATE SCHEMA vGOSSO;
>
> CREATE TABLE vGOSSO.SSO_ADMIN (ConfigType VARCHAR(128) NOT NULL, Data CLOB, PRIMARY KEY(ConfigType));
>
> CREATE TABLE vGOSSO.SSO_USERS (UserID VARCHAR(128) NOT NULL, ObjectID VARCHAR(255) NOT NULL, Data CLOB, PRIMARY KEY (UserID, ObjectID));

5. After schema extension, grant "full" rights to SSO_USERS table and its indexes and "read-only" rights to SSO_ADMIN table and its indexes in the DB2 database.

Publishing to the Repository

1. In the left pane of the Oracle Enterprise Single Sign-On Administrative Console, right-click **Repository** and select **Connect to** from the shortcut menu.
2. Enter or select the required connection information, then click **OK**.
3. In the right pane, navigate to the root (server name).
4. Right-click on the root and select **Publish to Repository** from the shortcut menu. The People container object will already exist under the root.
5. Choose the Data Source of the Administrative Overrides and provide the information requested:
   - **Administrative Console.** Use this wizard page to export an Agent configuration to a selected synchronizer container using the current Oracle Enterprise Single Sign-On Administrative Console settings as the source.
   - **Data File.** Use this wizard page to export an Agent configuration to a selected synchronizer container using one or more data files as the source.
6. When you complete the configuration procedure, entries for any overriding settings appear in the **Repository** pane. Right-click on any object and choose **Refresh** if necessary.

Required Settings for Connecting to IBM DB2 Database

You must set the Required Database Synchronization settings for all database synchronizer extensions.

To add the synchronizer and configure it for IBM DB2:

1. Open the Oracle Enterprise Single Sign-On Administrative Console and select a set of global Agent settings.
2. Expand **Synchronization** > **DBExt** > **Required**.
3. Enter the following information:
   - **Extension location:** Make sure this is checked. It is the Path\filename of the IBM DB2 database synchronizer extension.
     Default: C:\Program Files\LocalDirectory\v-GO SSO\Plugin\SyncMgr\ DBEXT\DBExt.dll)
   - **Servers:** Specify the connection string for the database server in the order to attempt connection for synchronization. Select the checkbox and click ... to open the Edit List dialog box. Type the full connection string for one database server on each line; end each line by pressing Enter. Do not use any other delimiter characters.

You must specify at least one connection string for the extension to work.

To connect to an IBM DB2 database, use the following connection string: Provider=IBMDADB2;Data Source=vGOSSO;CurrentSchema=vGOSSO;Location=<DB2ServerName>[:port];Extended Properties="trusted_connection=yes";Where <DB2ServerName> is the name of the server and [:port] is the optional port.

4. Expand **Synchronization** > **DBExt** > **Advanced**. The Advanced Database Synchronization settings control special-case options for all database synchronizer extensions. This setting is not required.

Append Domain when naming objects: Enables appending of the user's domain to the username in naming the user's container. Example: For the domain "company" and user "user1", the container is named "user1" with this flag disabled and "user1.company" with this flag enabled. Default is set to Disable. Select **Enable** to activate this feature.

Repository Settings

To display and establish connection to a synchronization repository:

- Click **Repository** in the left pane to display the current Logon Manager synchronization repository.

Or, if no connection is active:

- Right-click **Repository** in the left pane and choose **Connect to...** from the shortcut menu.

Repository Actions and Options

Right-click an object in the Repository window in the right pane to display a shortcut menu of commands and options.

With a Container Selected

Publish SSO Objects Here	Opens the "Publish to Repository" dialog box, which allows you to publish configuration objects, such as application templates and Agent setting overrides to the repository. *This setting is new as of Logon Manager version 11.1.1.1.0.*
Bring Multiple Objects to Console	Displays a list that allows you to select multiple configuration objects that you wish to import into the current Oracle Enterprise Single Sign-On Administrative Console settings. *This setting is new as of Logon Manager version 11.1.1.1.0.*
Add Locator Object	Create locator objects (directory servers only).
Create People Container	Creates the ou=People container used for application credential storage on directory systems other than Microsoft Active Directory. *This setting is new as of Logon Manager version 11.1.1.1.0.*
New Container	Create a new container within the selected container.
Delete	Remove a container and all objects within.
Refresh	Update the Directory window.
Filter Subnodes...	Opens the "Subnodes Filtering Options" dialog box, which allows you to refine the criteria that the Oracle Enterprise Single Sign-On Administrative Console uses to display the subnodes of the repository.

With an Override Object Selected

Configure	Create Administrative Override objects from Oracle Enterprise Single Sign-On Administrative Console settings or a data file.
View	Quickly view the selected object, with an option to save it to an INI file.
Bring to Console	Import the object to the current Oracle Enterprise Single Sign-On Administrative Console settings. • If the imported file contains items (applications, policies, groups) with same names as those in current configuration, the **Import/Merge Conflict** dialog box appears. • If the imported file contains a set Global Agent Settings with the same name as an existing set in the current configuration, the imported set is named "Copy of *existing settings*."
Save as File	Save the object to a local INI file.
Delete	Remove the object from the repository.

Add User or Group (for Active Directory Role/Group Support)

Use this dialog box to select the individual users or user groups to add to the access list for the current configuration item (application logon, password policy, global Agent settings or passphrase set).

Controls

List Names From	Select an Active Directory domain or server.
Names	Lists the names of users and groups for the selected domain or server. Select one or more names to add to the access list.
Add	Copies user(s) and group(s) selected in the Names list to the Add Names list. Use **Ctrl+click** or **Shift+click** to select multiple entries.
Members	When a group is selected the Names list, displays the Global Group Membership dialog box, which lists the members of the selected group.
Search	Displays the Find Account dialog box for searching one or more domains for a specific user or group.
Add Names	Display the names of the user(s) or group(s)that you have already selected. Click **OK** to add these names to the access list for the current configuration item.  You can type or edit user names in this list. However, your entries are checked for invalid account names, and duplicate account selections are automatically removed when you click **OK**.

Global Group Membership (for AD Role/Group Support)

The Global Group Membership dialog box lists the members of a group selected in the Add User or Group dialog box. Use this dialog box to select the individual members to add to the access-control list for the current configuration item. (use **Ctrl+click** or **Shift+click** to select multiple entries). Click **Add** to copy the selected names to the Add Names list in the Add User or Group dialog box.

Find Account (for Active Directory Role/Group Support)

Use the Find Account dialog box to search for a specific individual user account or user group in a specific domain or across multiple domains, then add any or all of the search results to the access-control list for the current configuration item (application logon, password policy, global Agent settings or passphrase set).

Search for names	
Find a User or Group	Enter the name of a user or group to search for. Only exact user/group name matches are allowed.
Search All/Search Only in	Search all available domains (displayed in the list box below) or select specific domains to search. Use **Ctrl+click** or **Shift+click** to select multiple entries.
Search	Begin searching for the user/group name.

Add results to list	
Search Results	Lists the user and group accounts that match the search criteria.
Add	Add user(s) and group(s) selected in the Search Results list to the Add Names list in the Add User or Group dialog box. Use **Ctrl+click** or **Shift+click** to select multiple entries.

Add Users or Groups (for LDAP Role/Group Support)

Use this dialog box to select the individual users or user groups that are to be added to the access list for the current configuration item (application logon, password policy, global Agent settings or passphrase set).

Controls

Search Base	The base (highest-level) directory to begin searching for user/group accounts. All subdirectories of the base directory are searched Type a location or click **Change** to browse the directory tree.
Change	Displays the Select Search Base dialog box to browse for a base directory for the search.
Search	Begin searching the base directory for wsers and groups.
Users and Groups	Lists the search results. Select the names to be added to the access list for the current configuration item. Use **Ctrl+click** or **Shift+click** to select multiple entries. Click **OK** when finished to copy your selections to the access list.

Select Search Base (for LDAP Role/Group Support)

Use this dialog to browse to and select the base (highest-level) directory to search for user/group names. Click **OK** when finished to return to the Select Users or Groups dialog box.

Browse for Repository

This dialog box allows you to navigate to a specific target repository container within the currently connected directory server's hierarchy. It also allows you to connect to a different server, if necessary.

To select the target repository container:

1. (Optional) If the directory server to which the Oracle Enterprise Single Sign-On Administrative Console is currently connected is not the desired target server, click **Change** Server, fill in the connection information, and click OK to connect to the desired server.
2. In the directory tree, navigate to and select the target container.
3. Click **OK**.

This setting has changed as of Logon Manager version 11.1.1.1.0.

Connecting to the Repository

Connects the Oracle Enterprise Single Sign-On Administrative Console to a synchronization repository.

Connecting to a Synchronization Repository

1. Right-click **Repository** and select **Connect to** from the shortcut menu.
2. Enter or select the required connection information, then click **OK**.

Connection Controls

SyncPath or **Server Name**	• If you selected a directory service for Repository Type, enter or select a server name (). or • If you selected a database for Repository Type, enter or select an instance name (for Oracle), or the server and instance names separated by a backslash (for SQL Server). or • If you selected **File Service** for Repository Type, enter or select the path to the synchronization folder.  Select Edit List to remove directories/servers from the drop-down list. For SQL Server, if the database server is the only instance on the computer that you are connecting to, then type just the computer name. If there is more than one database server instance on the target computer, then enter the full connection address (computerName\dbServerName). You must specify a file system server as a UNC path, not as a drive-letter and directory path. For example: \\ServerName\ShareName not D:\ShareName
Repository Type	Select **File System Sync**, a directory service, or a database server from the drop-down list. If you select **OpenLDAP Directory Server**, and an Extend Schema Status error appears, extend the schema manually.
Port	(Directory server only) Enter the port number .
Database	(Database server only) The name of the database to connect to; enter the name of an existing database (default vGOSSO).
Use secure channel (SSL)	Select to enable secure socket layer (directory server only).
User ID	Enter your username.
Password	Enter your password.

Displaying the Repository Dialog Box:

1. Right-click Repository and select **Connect to** from the shortcut menu.

or

2. Select **Extend Schema** from the Repository menu.

New Container

Use this prompt to name a new container object at the selected node in the current repository.

To name a new container:

- Type a container name, then click **OK**.

See **Repository** for more information.

Edit Server List

Use this dialog box to remove servers that are listed in the Server Name drop-down box on the Connect to Repository dialog box.

- Select a server and click **Delete**. Click **OK** when finished.

Edit Repository List

Select Objects to Bring to the Oracle Enterprise Single Sign-On Administrative Console

This dialog box displays the list of most recently used target repositories and allows you to delete unwanted entries from the list.

To delete an unwanted entry from the list:

1. Select the entry in the list.
2. Click **Delete**.
3. Repeat steps 1-2 for any other unwanted list entries.
4. When you have finished, click **OK**.

This setting has changed as of Logon Manager version 11.1.1.1.0.

Subnodes Filtering Options

The subnodes filtering settings control the number of items that display in repository trees. Using filtering, you can refine the criteria that the Oracle Enterprise Single Sign-On Administrative Console uses to display the subnodes of these trees, so that they display more manageable results.

You can limit displayed subnodes in two ways:

- **Filter list.** Uses the asterisk (*) and question mark (?) wildcards.

  The wildcard filter is node-specific. You can use a different wildcard for each node that you want to filter. The wildcard filter is discarded when you switch repository nodes and expires at the end of the Oracle Enterprise Single Sign-On Administrative Console session.

- **Truncate list.** Limits the number of nodes to display.

  Specify a threshold for the maximum number of child nodes to display in a tree. This number governs all repository nodes and remains in effect between Oracle Enterprise Single Sign-On Administrative Console sessions. The minimum value is 1; the maximum value is 65,535; and the default value is 1,000. This means that the Oracle Enterprise Single Sign-On Administrative Console will display no more than 1,000 entries in a subnode unless you configure it differently.

If you enter a value less than the minimum or greater than the maximum allowable values, Oracle Enterprise Single Sign-On Administrative Console uses whichever limit is closer.

To filter a subnode:

1. Connect to a Repository.
2. Right-click on a node in the repository and select **Filter Subnodes ...**.
3. In the "Subnodes Filtering Options" dialog box, do either or both of the following:
   - In the **Filter List** field, enter a wildcard expression.
   - In the **Truncate list** field, select the maximum number of nodes to display. The maximum number that you can specify is 65,535. The default is 1,000.
4. Click **OK**.
5. Expand the subnode to view the results.

Working with Filtered Subnodes

The icon of a filtered subnode contains an "F" next to its standard icon to indicate a filtered state:

Icon Type	Unflitered State	Filtered State
Program		
Server		
Folder		
User		

If you choose to expand a node containing a number of subnodes greater than the threshold that you set in the "Truncate list" setting, the "Subnodes Filtering Options" dialog box appears, displaying the following:

Warning: The number of items to be displayed is XXXX (the number you specified), which exceeds the limit defined below.

Click **OK** to expand the subnode using the limit that you previously set, or change the maximum number of nodes to accommodate the list, and then click **OK**.If you did not set a threshold for this subnode, the Oracle Enterprise Single Sign-On Administrative Console uses the system default of 1,000.

This feature is new as of version 11.1.1.5.0.

Bring Multiple Objects to Console

Select Objects to Bring to the Oracle Enterprise Single Sign-On Administrative Console

This dialog box displays, in a flat list, all objects residing in the selected container and all of its child containers, and allows you to select multiple objects for import to the current Oracle Enterprise Single Sign-On Administrative Console settings.

To select multiple objects from the list and bring them to the Oracle Enterprise Single Sign-On Administrative Console:

- **Ctrl+click** each desired object.

  or

1. **Shift+click** the first and last objects in the desired range.
2. Click **OK**.

Publish to Repository

This screen allows you to publish configuration objects of your choice to the selected target container, either in a directory-style hierarchy (default), or as a flat configuration file.

> For considerations when publishing an Exclusion list, refer to Using Exclusions.

To select and publish the desired objects to the repository:

1. Do one of the following:
   - From the tree, right-click on the configuration object that you want to publish, and select **Publish** or **Publish To...**.

   or

   - Select a configuration object from the tree and select **Tools**>**Publish to Repository**.

2. In the **Available configuration objects** list of the Publish to Repository screen, navigate to and select the desired objects.

   > Only categories for which objects have been configured will appear in this list. For example, if no password generation policies exist, the corresponding category will not appear in this list.

3. Click **>>** to move the selected objects to the Selected objects to be published list. (To remove an object from this list and not publish it, select the object and click **<<**.)
4. (Optional) If you did not invoke the Publish SSO Objects Here command by right-clicking on the target container, select the desired container from the Target repository drop-down list.

   > If the target container path does not appear in the list, click **Browse** to find and select the desired container.
   >
   > To remove unwanted entries from this list, select the **Edit list** option from the list.

5. (Optional) If your environment calls for storing configuration objects in flat-format, select the check box **Store selected items in configuration files, rather than as individual objects**.

   > Selecting this option will overwrite all items stored in existing configuration files, if present, in the target container.

6. (Optional) If you want to create the first-time-use object (FTUList), select the corresponding check box.

> This option only becomes active if you choose to store your configuration objects in flat format in step 4.

7. Click **Publish**. The Oracle Enterprise Single Sign-On Administrative Console publishes the selected objects to the target repository.

> Do not attempt to dismiss the dialog or close the Oracle Enterprise Single Sign-On Administrative Console until the publishing process completes. The dialog disappears automatically when the objects have been published.

> To quickly publish an object or a group of objects, select it in the left-hand tree, right-click it, and select **Publish** (single objects and groups) or **Publish To** (single objects only) from the context-menu.
>
> This will invoke the "Publish to Repository" dialog and automatically add the object(s) to the list of objects to be published. Keep in mind that:
>
> - If you select the **Publish** option, the "Publish to Repository" dialog appears.
> - If you select the **Publish To** option and select a repository, the selected object is automatically published to that repository and the "Publish to Repository" dialog is not displayed. (If you are not currently connected to the selected repository, you will be prompted to authenticate to the directory server.)

This setting has changed as of Logon Manager version 11.1.1.1.0.

Publishing to the Repository from the Oracle Enterprise Single Sign-On Administrative Console

Use this window to export an Agent configuration to a selected synchronizer container using the current Oracle Enterprise Single Sign-On Administrative Console settings as the source. You can export:

- One or more application logons
- A first-time use (bulk-add) object.
- A set of Global Agent Settings.

Exporting Administrative Overrides from the Oracle Enterprise Single Sign-On Administrative Console

1. Do one of the following:
   - Select **Send All Applications**.

     or

   a. Select **Send Some Applications**, then:

   b. Click **Select Apps**.

      or

   a. From the Select Applications dialog box, select the applications to send, and click **OK**.

   b. Choose **Send No Apps**.
2. Optionally, select **Create First-Time-Use (FTUList) object**.

3. Optionally, choose a set of Global Agent Settings from the **Admin Overrides** drop-down list box.
4. Select **Next**. The wizard displays a summary of the Override configuration.
5. Select **Finish** to complete the export.

Displaying the Publish to Repository Window

1. Connect to the Logon Manager repository.
2. In the right pane, right-click a container object and select **Publish to Repository** from the shortcut menu to open the Publish to Repository window.
3. Select **Administrative Console**.

Publishing to the Repository from a Data File

Use this window to export an Agent configuration to a selected synchronizer container using one or more data files as the source. You can export:

- One or more application logons
- A first-time use (bulk-add) object
- A set Global Agent Settings (from an .ini or .reg file)

Exporting Administrative Overrides from Data Files

1. Enter the file names (or select **Browse** to select a data file) as the source for each administrative override object you want to export: You can export:
   - First-Time Use (from an ftulist.ini file).
   - Administrative overrides (from a valid INI or REG file).
   - Applications (from an entlist.ini file).
2. Click **Next**. The wizard displays a summary of the override configuration.
3. Click **Finish** to complete the export.

Displaying the Wizard Page

1. Connect to the synchronizer repository.
2. From the right pane, right-click a container object and select **Publish to Repository** from the shortcut menu to open the Publish to Repository window.
3. Select **Data File**.

Configuring Logon Manager Support

Use the Publish to Repository window to deploy administrative overrides and application configurations to end users using file-system, database, or directory service synchronizers. The objects you can export include:

- One or more application logons
- A first-time use (bulk-add) object
- A set of Global Agent Settings.

The Publish to Repository window helps you export the overrides, from current Oracle Enterprise Single Sign-On Administrative Console settings or from one or more data files, to a selected synchronizer container object.

See Synchronization for more information.

Exporting Administrative Overrides to a Synchronizer Container

1. Connect to the Logon Manager synchronizer repository.
2. In the right pane, right-click a container object and select **Publish to Repository** from the shortcut menu to open the window.
3. Choose the **Data Source** of the administrative overrides and provide the information requested:
   - Administrative Console
   - Data File

Select Applications, Password Policies, and Session Lists to Publish to Repository

Use the Publish to Repository window to select application logons, password policies, and Kiosk Manager lists from the current Oracle Enterprise Single Sign-On Administrative Console session to deploy to the current synchronization repository. You can choose all applications and policies, select applications and policies individually, or remove items from either list. When your selection is complete, select **Next** to continue.

Lists	
Applications	Lists the application logon configurations to be deployed.
Password Generation Policies	Lists the password policies to be deployed.
Kiosk ManagerApplication List	Lists the Kiosk Manager applications lists to be deployed.

Controls	
Applications	Lists the application logon configurations to be deployed.
Password Generation Policies	Lists the password policies to be deployed.
Kiosk ManagerApplication List	Lists the Kiosk Manager applications lists to be deployed.

Selecting Global Agent Settings to Publish to Repository

Use the Publish to Repository window to select a set of global Agent settings from the current Oracle Enterprise Single Sign-On Administrative Console session to deploy to the current Logon Manager synchronization repository.

1. From the list, select a set of **Global Agent Settings.**
2. Select **Next** to continue.

Including Passphrase Questions to Publish to the Repository

Use the Publish to Repository window to deploy the passphrase questions from the current Oracle Enterprise Single Sign-On Administrative Console session to the current synchronization repository. See Passphrase Questions for more information.

Send the Passphrase questions	Select this checkbox to deploy the current set of passphrase questions. Select **Next** to continue.

Publish to Repository Summary Page

Use this page to review the configuration. To make changes, use the **Back** and **Next** buttons to display a page. When your configuration is complete, select **Finish.**

Configuring Applications for an EntList

Use the "Configure Applications" dialog box to select the application logons to include in an EntList object for synchronization.

1. Do one of the following:
   - Choose **Send All Applications**.

     or
   - Choose **Send Some Applications**.

     Either of these options overwrites all applications in the selected directory. To create a First-Time-Use list object without overwriting applications in the directory, select **Do not send apps**.
2. Click **Select Apps**.
3. In the Select Applications dialog box, select the applications to package and click **OK**.
4. If desired, select **Create First-Time-Use (FTUList) object**.
5. Click **OK**.

To display this dialog box for an EntList object:

- Connect to a synchronizer repository, right-click an Entlist object, then select **Configure** from the shortcut menu.

Add Locator Object

Use the Add Locator Object dialog box to create a *locator*, a directory object that points the Agent to the container in which user credentials are (or can be) stored. You can create a default locator

for all end users or a locator for a specific end user.

See Directory Servers: Create Locator Objects for more information.

Controls

Locator Name	Enter **default** to create a locator for all users. To create a locator for a specific end user, enter the user's distinguished name.
Forwarding Location	Navigate to the container where user credentials are stored. and click **OK**.
Store data under the user objects (AD only)	(Active Directory only) Select this checkbox to store the user's credentials (or all users if Locator Name is "default") in the container under the respective user object, rather than in a specific Forwarding Location. This setting requires updating the directory schema and modifying the directory-root security settings. To do this, use the **Enable Storing Credentials under User Object** command on the Repository menu. You can use this setting to specify individual users whose credentials are to be stored under their respective User objects. All other user credentials will be stored as specified by the default locator. To store all users' credentials under their respective user objects *without* using a locator object, use the **Location for storing user credentials** setting (under Synchronization\Selected Active Directory sync\Advanced).

To display this dialog box:

1. Connect to the synchronizer directory.
2. In the right pane, select the container in which you want to add the locator.
3. Right-click the container and choose **Add Locator Object** from the shortcut menu.

View Object

Use this dialog box to view the contents of the selected configuration object. To save the object to an INI (text) file, click **Save To**. See Repository for more information.

You can edit the displayed configuration information, but your changes can only be saved to an INI file, not to the object itself.

Usage Report Dialog Box

The usage report is helpful in monitoring access of users and applications, and also troubleshooting problems.

Use this dialog box to generate usage reports with information about the user, application, modified date, and the date last used. In the Output File field, enter a fully-qualified path for the output file, or use the **Browse** button to specify the file name and location. Optionally, check the **Include header row** box to include a header row for the report.

Synchronization

Synchronizer extensions allow you to synchronize credentials between an end user's local store (on a workstation) and a store in a remote SSO repository (file system share, relational database or directory server). You can also use these extensions to deploy Administrative Overrides of local Agent settings, application logon configurations (overriding entlist.ini and to be merged with applist.ini), and bulk-add lists (overriding ftulist.ini). See Overriding Settings for more information.

Synchronizer extensions communicate with directory servers, database servers, file systems, and other storage devices. Each type of extension has its own configuration requirements. Logon Manager supports the following extensions:

- Microsoft Active Directory Server, including Application Mode.
- LDAP-compliant directory servers, including Oracle Internet Directory, Oracle Directory Server Enterprise Edition, OpenLDAP Directory Server, IBM Tivoli Directory Server, and Novell eDirectory.
- Relational databases, including Oracle DB, Microsoft SQL Server, and IBM DB2.
- Network file systems.

Universal Authentication Manager supports Microsoft Active Directory Server.

The synchronizer extensions are capable of performing the following tasks:

- Connecting to (or binding with) a destination device/resource/store.
- Retrieving any overriding settings (Administrative Overrides, application configuration information, and first-time use configuration information).
- Synchronizing the local user store (credentials) with the remote store.

Logon Manager supports using each extension multiple times, which allows you to support multiple configurations. For example, if the LDAP Directory Server and File System synchronizer extensions are installed, the Agent will synchronize credentials with, and download overriding settings from, both an LDAP Directory Server and a File System.) See Multiple Synchronizer Extensions for more information about the procedures.

Directory Server Synchronization Support

The Oracle Enterprise Single Sign-On Administrative Console supports any LDAP directory server, including:

- Oracle Internet Directory
- Oracle Directory Server Enterprise Edition
- Oracle Unified Directory
- Oracle Virtual Directory
- Open LDAP Directory Server
- IBM Tivoli Directory Server
- Microsoft Active Directory
- Microsoft AD LDS (ADAM)
- Novell eDirectory
- Siemens Dirx

Logon Manager uses directory server resources for administrative configuration, mobility, and backup. Administrators can deploy configuration overrides to provide new registry, entlist.ini, and ftulist.ini (bulk-add) settings or to update existing settings. Users can store credentials (for

backup) and move among multiple computers (for mobility). When Logon Manager connects to a directory server, it utilizes a specific directory structure to determine where the user's credentials and overriding settings reside.

> Each Directory Server presents platform-specific configuration issues. These are addressed in the individual configuration topics.

Directory Structure

Within each directory, Logon Manager utilizes the following object structure:

[click to view diagram]

When a user first connects to a directory server, the system is configured to locate a specific path on the directory tree. Using the process described below, the Agent is able to find the SSOConfig object, which contains overriding settings, and a People object, which contains the user's settings, preferences, and credentials.

Finding and Creating User Objects

This topic explains the methods that Logon Manager uses to locate user objects and configuration information, and how to create these objects.

The Agent must locate the specific object in which to store and retrieve the user's credentials. After the first successful connection, the Agent records the objects DN in the user's registry at:

```
HKCU\…\Extensions\SyncManager\%Extension%:Root
```

where *%Extension%* can be any name as specified in Sync Order (see Synchronization). However, for the first connection from a given workstation, if the user's object is moved, or if the user registry does not contain this information, the Agent must search for the user's object.

Logon Manager uses three methods to search for the proper location to store user credentials on a directory server. Each method looks at the specified distinguished name; the latter two then each "walk the directory tree," toward the root, to look for a parent object with relevant information.

- The first method is to look for the user object CN=%UserName%,OU=People) in a specified place.
- The second method is to look for a user-specific pointer object (CN=%UserName%,OU=SSOLocator) to the right place; and if the object is not present, "walk the tree" until the Agent finds the object or checks the root.
- The third method is to look for a default pointer (CN=default,OU=SSOLocator) to the right place; and if the object is not present, "walk the tree" until the Agent finds the pointer to the object or checks the root.

If none of these methods succeeds, the user cannot store credentials on the Directory Server (any existing local credentials will be useable).

> The *%UserName%* variable is set automatically in Microsoft Active Directory from the users system username/ID. For LDAP Directory Servers, the *%UserName%* variable is set from the username/ID with which the user performs a bind to the Directory Server.

Method 1: Logon Manager Looks for the User Object

Logon Manager first looks for the user object, CN=%UserName%, inside an OU=People object, specified by the Root registry key (see above).

If that registry key is set to

```
OU=SSOConfig,OU=QA,OU=Eng,OU=Company,DC=com,
```

then the Agent looks for

```
CN=%UserName%,OU=People,OU=SSOConfig,OU=QA,OU=Eng,OU=Company,DC=com.
```

If the Root registry key is not set, the Agent looks in

```
HKLM\…\Extensions\SyncManager\%Extension%
```

for User Paths (see Synchronization\LDAP\Required) or Naming Attribute string (see Synchronization\LDAP\Advanced), which points to where the Agent should look.

For example, if UserPath1 is set to

```
CN=users,DC=Company,DC=com
```

then the Agent looks for

```
CN=%UserName%,OU=People,OU=SSOConfig,OU=QA,OU=Eng,OU=Company,DC=com
```

Method 2: Logon Manager Looks for a User Pointer

If the user object is not present, Logon Manager next looks for an SSOLocator object in the same object as the SSOConfig object. Therefore, continuing the example above, the Agent looks for

```
CN=%UserName%,OU=SSOLocator,OU=QA,OU=Eng,DC=Company,DC=com
```

If the user pointer is not present, then the Agent "walks the tree," toward the root, looking first in

```
CN=%UserName%,OU=SSOLocator,OU=Eng,DC=Company,DC=com
```

and then

```
CN=%UserName%,OU=SSOLocator,DC=Company,DC=com
```

If an SSOLocator object exists with the users CN, it points to where the users credentials will be stored; the Agent records this information in the users Root registry key, and future logons look in that location.

Note that the pointer can indicate any location in the Directory Tree; for example, a pointer at

```
CN=%UserName%,OU=SSOLocator,OU=Eng,DC=Company,DC=com
```

can point to a user object at

```
CN=%UserName%,OU=People,OU=SSOConfig,OU=Sales,DC=Company,DC=com.
```

Method 3: Logon Manager looks for a Default Pointer

If a user pointer object is not present, Logon Manager next looks for a default object inside each SSOLocator object. Continuing the example above, the Agent looks for

```
CN=default,OU=SSOLocator,OU=QA,OU=Eng,DC=Company,DC=com
```

If an SSOLocator object exists with the CN=default object, it points to where the users credentials will be stored by default; the Agent records this information in the users Root registry key, and future logons look in that location. An example of a default object is OU=People,OU=SSOConfig,OU=Sales,DC=Company,DC=com.

File System Synchronization Support

The Oracle Enterprise Single Sign-On Administrative Console supports file system synchronization with any network drive/device that can be addressed by UNC (Universal Naming Convention). File system synchronization can also be used to support a kiosk user scenario, where multiple users share a single workstation.

File System Structure

When a user first connects to the file system, the computer is configured to locate a specific path. The Agent is then directed to find the vGOConfig object, which contains overriding settings and a People object, which contains the user's settings, preferences, and credentials.

Database Synchronization Support

Oracle Enterprise Single Sign-On Administrative Console supports synchronization of user credentials, application logons, and global Agent settings between client workstations and a relational database server. Supported servers include Oracle Database, Microsoft SQLServer 2000, and IBM DB2.

In this type of synchronization, Logon Manager configuration objects and user data containers are stored on the server as database records in Logon Manager-specific tables:

- SSO_ADMIN stores, as records, the configuration objects you create in the Oracle Enterprise Single Sign-On Administrative Console:
- EntList (application logons), FTUList (Setup Wizard configurations)
- AdminOverride (Global Agent Settings)

During synchronization, all workstation users read their logons and overrides from this table; only the administrator, using the Oracle Enterprise Single Sign-On Administrative Console) can write to it. These configuration object are depicted in the Oracle Enterprise Single Sign-On Administrative Console in the same hierarchal layout as for file system and directory server synchronizers.

- **SSO_USERS** stores user credentials, preferences, and synchronization states as records. During synchronization, users read and write to their own record. Only the record for the user currently logged on can be accessed. In the Oracle Enterprise Single Sign-On Administrative Console, the records for each user are depicted within the user container.

When Logon Manager connects to the database server, it reads the configuration objects and overriding settings (from SSO_ADMIN) and synchronizes the user data (in SSO_USERS).

The procedure for configuring database synchronization is similar to that for other synchronization methods.

1. *Extend the database schema* to create the two tables described above.
2. *Create the container objects*: an SSOConfig object. This object contains overriding settings and a People object, which holds the user containers for each user's settings, preferences, and credentials.

Multiple Synchronizer Support

Logon Manager supports synchronizing to multiple synchronizer extensions and multiple configurations of the same extension. In either scenario, the Agent attempts to complete synchronization with the first extension and then with each subsequent extension.

Overriding settings can exist on each extension. See Handling Multiple Sets of Overriding Settings for an explanation of how the Agent handles multiple extensions with overriding settings.

References to *%AD%*, *%LDAP%*, and *%File%* refer to the respective extensions, and %Extension% refers to *any* of those extensions.

Multiple Synchronizer Extensions

Logon Manager supports using multiple synchronizer extensions simultaneously. For example, the Agent could first synchronize with a Microsoft Active Directory Server, then with an Oracle Directory Server Enterprise Edition, and then with the File System synchronizer. With Authentication Manager, the Agent could then synchronize with a smart card.

To enable this:

1. Install Logon Manager with the desired synchronizer extensions.
2. In the Oracle Enterprise Single Sign-On Administrative Console, select an existing set of **Global Agent Settings** or create a new set.
3. In the left pane, open the **Global Agent Settings**, right-click **Synchronization** and select **Manage Synchronizers**.
4. In the **Synchronizers** dialog box, select **Add**, name this extension, select the extension type (for example, Active Directory, File System, or LDAP), then click **OK**.
5. Repeat the previous step for additional synchronizer extensions, and reorder as desired.
6. For each synchronizer: select it in the left pane and confirm in the right pane that **Path** is selected and the location specified is correct.

Oracle recommends that you set the **DisplayName** registry entry to help the user distinguish between the multiple extensions.

Multiple Configurations of the Same Synchronizer Extension

Logon Manager supports using a given extension with multiple configurations. For example, one LDAP Directory Server configuration could be for an Oracle Directory Server Enterprise Edition, and another LDAP Directory Server configuration could be for Novell eDirectory.

To enable this:

1. Install Logon Manager with the desired synchronizer extensions.

In the Oracle Enterprise Single Sign-On Administrative Console, select an existing set of **Global Agent Settings** or create a new set.

1. In the left pane, open the **Global Agent Settings**, right-click Synchronization and select **Manage Synchronizers**.
2. In the Synchronizers dialog box, select **Add**, name this extension, select the extension type **LDAP**, then click **OK**.
3. Repeat the previous step for additional synchronizer extensions, and reorder as desired.
4. For each synchronizer: select it in the left pane and confirm in the right pane that **Path** is selected and the location specified is correct.

Oracle recommends that you set the **DisplayName** registry entry to help the user distinguish between the multiple extensions.

Overriding Settings Objects

Configuration Objects

Synchronizer extensions can download overriding configurations for global Agent settings (administrative overrides), application configuration information (EntList), and first-time use scenarios (FTUlist). Each of these objects has a local equivalent:

Settings Type	Local Equivalent	Directory Server/ Database Object Name	File System Object Name
Administrative Overrides	Registry entries under HKLM	**SSOAdminOverride**	*AdminOverride*
Application logon configuration information	The *entlist.ini* file	**SSOentlist**	*entlist*
First-time-use configuration information (including bulk-add information)	The *ftulist.ini* file	**SSOftulist**	*ftulist*

The latter two types of objects are similar in format and layout to their local equivalents, entlist.ini and ftulist.ini. The first type of object has the following syntax:

[HKLM\Software\Passlogix]

REQUIRED: RegistryPath\RegistryPath:KeyName=TYPE:Value

This format is exported by the Oracle Enterprise Single Sign-On Administrative Console.

Example

```
[HKLM\Software\Passlogix]

Shell:AutoBackupPath=STRING:\\FS\Home

Shell:ShowAccessBtn=DWORD:1

Extensions\AccessManager:ReauthOnReveal=DWORD:0
```

In directory server installations, this configuration information can be enabled with support for role group-based access.

Certain settings, such as server URLs, must not be overridden and are thus permanently excluded from administrative override objects. Refer to the Global Agent Settings section for a complete list of entries that are excluded from being overridden.

Working with Multiple Sets of Overriding Settings

The Agent attempts to retrieve each type of overriding settings from each extension until it finds an extension that has at least one of each; once an overriding setting is downloaded, the Agent does not query other extensions for that overriding setting.

Sample Scenarios

Example

- Order: Ext1,Ext2,Ext3,Ext4.
- Ext1 has Admin Overrides.
- Ext2 has Admin Overrides, an entlist.ini file, and an first-time use information file.
- Ext3 has no Admin Overrides.
- Ext4 has Admin Overrides, and an first-time use information file.

Scenario A

- Ext1 connects; downloads Admin Overrides; and synchronizes.
- Ext2 connects; downloads application configuration information and first-time use configuration information; and synchronizes.
- Ext3 connects and synchronizes.
- Ext4 connects and synchronizes.

Scenario B

- Ext1 fails.
- Ext2 connects; downloads Admin Overrides, application configuration information, and first-time use configuration information; and synchronizes.
- Ext3 connects and synchronizes.
- Ext4 connects and synchronizes.

Scenario C

- Ext1 fails.
- Ext2 fails.
- Ext3 connects and synchronizes.
- Ext4 connects; downloads Admin Overrides and first-time use configuration information; and synchronizes.

Selective Backup/Restore

The Agent can be configured to compare the local store of user credentials with a remote backup file and write the newer set over the older set. This selective backup/restore, or "synchronize", can be triggered from the command line (and thus from an "at", or timed, job) or by configuring certain Agent events (for example, the Startup task, the Refresh task, and so on).

Individual sets of credentials are not compared; for this more-granular level of synchronization, see Synchronization.

Command-Line Synchronization

To trigger a Command-Line Synchronization, run the Agent from the command line (even when the Agent is currently running) using the following syntax:

```
ssoshell.exe /mobility /sync [path] /silent
```

Where:

[path]	The actual path to the directory where the backup file may exist. (Default: the last directory a command line backup file was stored, or where Shell:AutoBackupPath points.)
/silent	Do not show the Backup/Restore Wizard when performing the backup/restore.

To perform a completely-silent synchronize with a network share at \\FS\Backup\Private:

```
ssoshell.exe /mobility /sync "\FS1\Backup\Private" /silent
```

To synchronize to the last-used location or to where `Shell:AutoBackupPath` points:

```
ssoshell.exe /mobility /sync /silent
```

Password Generation Policies

Displays the currently available password generation policies and provides access to policy settings. Click **Password Generation Policy** in the left pane to display the current password policies in the right pane.

See Setting Password Policies for more information.

To add a new password policy:

1. Do one of the following:
   - Click **Add** in right pane

     or
   - In the left pane, right-click **Password Generation Policy** then click **New Policy** on the shortcut menu.
2. Enter a Policy Name and click **OK**. The Policy Subscribers tab appears in the right pane, where you can add applications that will use the new policy

To modify a listed password policy's configuration:

- Click a policy, then click **Edit.** The Policy Subscribers tab appears in the right pane.

To delete one or more password policies:

- Select a policy (use **Ctrl+click** or **Shift+click** to select multiple entries), then click **Remove**.

Setting Password Policies

Logon Manager allows administrators to set policies that control automatic password generation. Password policies simplify user logons while ensuring the organization's security.

Most applications have constraints for passwords how long they can or must be, whether you can use numbers or symbols, and so on. Logon Manager password generation feature improves application logon security by automatically creating passwords made up of random characters according to predefined sets of constraints, stored as *password policies*. Each policy can apply to multiple applications, or subscribers.

Using predefined password policies, you can completely automate password changes and implement sophisticated security schemes, including complex passwords, frequent password changes, and application-specific passwords unknown to users.

If the policy you create makes a password difficult or impossible, Logon Manager will try to create a password for up to five seconds and then notify the user that it was unable to generate a password. You can preview the passwords a particular policy generates using the Test Password Policy dialog box.

Adding a Password Policy

Use this dialog box to add and name a new password generation policy.

- Enter a **Policy Name** and click **OK**.

To display this dialog box:

1. Right-click Password Generation Policy and choose **New Policy** from the shortcut menu.

or

2. Choose **Password Generation Policy** from the **Insert** menu.

Selected Password Policy

Represents a configured password generation policy. You can use the tabs in the right pane to view or modify this policy's properties, add or remove applications that use this policy, or change security settings.

See Setting Password Policies for more information.

Selecting a Password Policy for Viewing or Editing

1. Click **Password Generation Policies** in the left pane
2. Select a policy from the list in the right pane, then click **Edit**. The Policy Subscribers tab appears in the right pane.

or

1. In the left pane, click the plus sign (**+**) next to the Password Generation Policies icon (or double-click **Password Generation Policies**) to display the configured policies.
2. Click a policy icon to select it. The Policy Subscribers tab appears in the right pane.

Add	Create another policy.
Delete	Delete the selected policy.
Add Note	Attach notes about this policy for future reference.

Policy Subscribers

Use the Policy Subscribers tab to add or manage the applications that use the selected password generation policy.

See Setting Password Policies for more information.

To add applications to a policy:

1. Click **Add**. The Select Application dialog box appears.
2. Select the applications that will use this policy. (Use **Ctrl+click** or **Shift+click** to select multiple entries.)
3. Click **OK**.

To remove applications from a policy, select a policy (use **Ctrl+click** or **Shift+click** to select multiple entries) and click **Remove**.

Click **Add Notes** to enter notes.

To display this tab:

1. Click **Password :Generation Policies** in the left pane.
2. Select a policy from the list in the right pane, then click **Edit**.
3. The Policy Subscribers tab appears in the right pane.

Password Constraints Tab

Use the Password Constraints tab to set or modify the allowed type, number, position, and repetition of characters in passwords. These constraints apply to new passwords that Logon Manager automatically generates for applications that subscribe to the selected policy.

To view a set of test passwords based on the passwords constraints for this policy, click the **Test Policy** button.

See Setting Password Policies for more information.

To set password constraints:

1. Do one of the following:
   - Select a password policy.

     or
   - Create a new password policy.
2. Click the **Password Constraints** tab in the right pane.
3. Select constraint options from the displayed controls.

Password Constraint Options

Length Constraint	
Minimum Length	Minimum number of characters a password most contain: 1-128, default: 8
Maximum Length	Maximum number of characters a password can contain: 1-128, default: 8

Repeat Constraint	
Maximum repeated non-consecutive characters	Maximum number of times a given character can be repeated in a password (in any position): 0-127, default: 7
Maximum repeated consecutive characters	Number of times a given character can be repeated consecutively (adjacent to itself): 0-127, default: 7

Alphabetic Characters	
Allow Uppercase Characters	Check to allow uppercase characters to be included in a password, and enter or select the minimum quantity to permit.
Allow Lowercase Characters	Check to allow lowercase characters to be included in a password, and enter or select the minimum quantity to permit.

Numeric Characters	
Allow Numeric Characters	Check to allow numeric characters to be included in a password, and enter or select the minimum and maximum quantity to permit.
Can Start Password	Check to allow password to begin with numeric characters. Default: numeric characters are allowed to begin a password.
Can End Password	Check to allow password to end with numeric characters. Default: numeric characters are allowed to end a password.

Special Characters	
Allow Special Characters	Check **Allow Special Characters** to allow special characters (non-alphabetical, non-numeric). and enter or select the minimum and maximum quantity to permit. Default: special characters are not allowed.
Can Start Password	Select to allow password to begin with a special character. Default: special characters are not allowed to begin a password.
Can End Password	Select to allow password to end with special a character. Default: special characters are not allowed to end a password.

Other Characters
Check to allow other characters to be included in a password.

Excluded Characters
Enter the specific characters to exclude from a password.

Previous Password Constraints	
Password must not be the same as previous password	Select to prevent reusing the previous password.
Limit the amount of characters that are the same as the previous password	Select to limit repetition of characters from the previous password.
Number of characters that can be the same from the previous password	If some number of characters from the previous password is permissible, select the maximum number of characters to allow.  Logon Manager recognizes multiple occurrences of a character as the same character and will therefore permit more than one occurrence of that character in the new password. So, if the previous password contained three "A"s, and you specify that one character from the previous password can repeat, Logon Manager will allow more than one instance of "A" in the new password.

Test Policy
Displays the Test Password Policy dialog box, which lets you generate and view a set of test passwords based on the current policy settings.

This setting is changed in version 11.1.1.1.0.

Using Passphrase Sets

To enhance security, you can create groups of questions to present to the user upon a password reset request. Create, configure, modify, and delete, these groups, called Passphrase Sets, using the Passphrase Questions screens.

This feature is used only with Windows Authenticator v2, LDAP Authenticator v2, and in Authentication Manager with the Smart Card authenticator (SCAuth).

For increased security, the current authenticator checks the SecondaryAuth.dll signature to verify its authenticity before loading it. If you choose to use a secondary authentication extension other than the one that ships with the product, you must submit it to Oracle for signing before you can implement it.

Adding a Passphrase Set

To add a passphrase set:

1. Do one of the following:
   - In the left pane, right-click Passphrase Questions and select **New Passphrase** from the shortcut menu.

     or
   - Right-click in the right pane and select **New Passphrase** from the shortcut menu.

     or
   - Click the **Add** button at the bottom of the right pane.

     or
   - From the INSERT menu, select **Passphrase**.
2. In the Add Passphrase Set dialog box, type a passphrase set name and click **OK**.
3. Use the Questions tab in the right pane to add questions to the current passphrase set.

Deleting a Passphrase Set

To delete a passphrase set, do one of the following:

1. In the left pane, select **Passphrase Questions**.
2. From the list of passphrase sets in the right pane, select a set and click the **Delete** button.

or

- Select a set, right-click, and select **Delete** from the shortcut menu.

or

1. Double-click (or click the "+" sign next to) Passphrase Questions in the left pane.
2. From the expanded Passphrase Questions menu, right-click an existing passphrase set, and select **Delete** from the shortcut menu.

Modifying a Passphrase Set

To modify a passphrase set:

1. Double-click a passphrase set under the Passphrase Questions menu. The questions in that set display in the Questions tab in the right pane.
   - To add a question to the set, click the **Add** button and type your question into the Add a Question dialog box. Then click **OK**.
   - To edit a question in the set, select it and click the **Edit** button. Make changes to the question in the Add a Question dialog box. Then click **OK**.
   - To delete a question in the set, select it and click the **Remove** button. Logon Manager asks you to confirm the deletion. Click **OK**.

Setting the Default Passphrase Set

Use this option to designate a Passphrase set as the default. The default set contains passphrase questions that users answer during First-Time Use (FTU). The FTU wizard is invoked when:

- You start the Agent for the first time after installation

  or

- When the administrator deploys a ftulist object (for example, the *ftulist.ini* file).

On first-time use, Logon Manager users select a passphrase question and supply an answer. This stored passphrase answer can be used to reset Logon Manager authentication if the user later changes the primary logon password. The next time single-sign-on re-authentication is required, the user enters the new password, and Logon Manager displays the passphrase question to confirm the user's identity.

The Agent uses only one passphrase set. You must decide which set of questions you want the user to answer and designate that set as the default passphrase set. The set you designate as the default is the only one written to the ftulist.

If you import an ftulist to the Oracle Enterprise Single Sign-On Administrative Console and change the passphrase set before you re-export the ftulist to the repository, the passhprase set is not included in the export if you do not reset it as the default.

To assign a default passphrase set, do one of the following:

- In the right pane, right-click on the set name, then select **Set As Default** from the shortcut menu.

  or

- In the left pane, right-click on the set name, then select **Set As Default** on the shortcut menu.
  The passphrase set name will appear in bold type in both the right and left panes, indicating that it is the default set.

Working with the Questions Tab

Use the Questions tab to manage questions and settings in the selected passphrase set. To display this tab, from the left pane, select Passphrase Questions and select the Default Set displayed in bold.

To add questions to a passphrase set:

1. Select a language from the drop-down menu.
2. Click **Add** or select **Passphrase** from the Insert menu.
3. In the Add Question dialog box, enter a question.
4. Select or enter a minimum length for the reply.
5. Click **OK**.

Controls

Language	Select language for passphrase questions.
Default Question	Lists current default passphrase question, which is checked by default. When a new passphrase question is added the default passphrase is unchecked. When checked, the default passphrase is disabled for the current passphrase set. When unchecked the default passphrase is enabled for the current passphrase set.
Enabled Question	Lists current passphrase questions. Checked items are the enabled passphrases for the current set. To disable a passphrase click the checkbox to clear it. To modify a passphrase question, double-click it, or select it and click **Edit**.
Add	Add a new passphrase question. Displays the Add Question dialog box
Remove	Delete the selected passphrase question. Displays a confirmation prompt.
Edit	Modify the selected passphrase question. Displays the Edit Question dialog box.
Set This Passphrase Set as Default	Sets the current set as the default. The default passphrase set name in the left pane displays in bold.
Remove or Disable?	Once a passphrase question has been created, deployed, and put into use by end-users, it should not be deleted. Users who have selected a passphrase question that has been deleted will not be able to change their passwords without losing access to their Logon Manager credentials. Instead, to remove an in-use passphrase question (and keep it from being displayed during first-time use), disable the question by clearing its checkbox in the list in the Questions tab.

Creating Credential Sharing Groups

Credential sharing groups let users apply a credential change made in one application to other specified applications automatically.

When Logon Manager handles a credential change for any application that is a member of the sharing group, it automatically applies the credential change to all other group members. Any number or combination of Windows, mainframe/host, and Web applications can share a single credential. when using the Windows (Domain) or Directory Server (LDAP) authenticator, selected applications can share a single credential with the authenticator as well.

Applications will share credentials for only their initial deployment to the Agent unless you enable Credential Sharing Groups. Set this parameter in the Required Password Change settings. You can permit or prohibit users control over which of their applications share credentials in the Advanced Password Change settings.

For example, an enterprise might have a new Web interface to an old mainframe application. One way to share the credential between these two is to use a credential sharing group. Some applications share a common credential (for example, an Intranet application and an e-mail application). These applications should be in the same credential sharing group.

See Credential Sharing Groups for the procedures for creating and managing sharing groups.

The Windows authenticator password is in a predefined group named Domain.
The LDAP Directory Server authenticator is in a predefined group named LDAP.

Supporting Predefined Applications

The Oracle Enterprise Single Sign-On Administrative Console does not currently support adding predefined applications (those included in the default configuration file applist.ini) to credential sharing groups. You must do this manually by creating identically-named sections in entlist.ini (the custom-application configuration file) that identifies the sharing group. The following example adds an Internet Explorer pop-up application to the credential sharing group OurServer.

Example

```
[~Internet Explorer Pop-up XP]
Group=OurServer
```

Credential Sharing Groups

Displays the currently available credential sharing groups and provides access to group settings.

Credential sharing groups are sets of applications that share the information of one or more fields to facilitate account management. For each group that you create, you can include any number of applications and designate which credentials they have in common.

As of version 11.1.1.5.0, credential sharing is enabled by default.

See Settings for a Selected Credential Sharing Group for the procedure to configure a group.

Creating Credential Sharing Groups

1. Select **Credential Sharing Groups** in the left pane to display current password groups in the right pane.
2. Do one of the following:
   - Click **Add** in the right pane.
   - In the left pane, right-click **Credential Sharing Groups**, then select **New Group** on the shortcut menu.
3. In the "Add Sharing Group" dialog box, enter a **Group Name** and click **OK**.
4. With a group selected, click **Add** in the right pane to add applications to the group. See Adding Applications to a Sharing Group for more information.

Selecting a Sharing Group for Viewing or Editing

1. Select **Credential Sharing Groups** in the left pane.
   - Select a group from the list in the right pane, then click **Edit**.

     or
   - In the left pane, click the plus sign (**+**) next to the Credential Sharing Groups icon (or double-click **Credential Sharing Groups**) to display the configured groups.
2. Do one of the following:
   - Select a group icon. The list of applications for this group appears in the right pane.

     or
   - Right-click a group icon to display a shortcut menu with these options:
     - **Delete.** Delete the selected group.
     - **Rename.** Rename the selected group.

Deleting a Sharing Group

- Select a group (use **CTRL+CLICK** or **SHIFT+CLICK** to select multiple entries), then click **Remove**.

You cannot delete the default groups, Domain or LDAP.

Domain Sharing Group

The Domain sharing group is the predefined credential sharing group for the Windows authenticator.

See Adding Applications to a Sharing Group in Settings for a Selected Credential Sharing Group for more information on using this panel.

To select the **Domain** credential sharing group:

1. Select **Credential Sharing Groups** in the left pane.
2. Select **Domain** from the list in the right pane, then click **Edit**.

   or

1. In the left pane, click the plus sign (+) next to the Credential Sharing Groups icon (or double-click **Credential Sharing Groups**) to display the configured groups.
2. Click **Domain**.

LDAP Sharing Group

The LDAP sharing group is the predefined credential sharing group for the Directory Service authenticator. See Credential Sharing Groups for more information on using this panel.

To select the LDAP credential sharing group:

1. Click **Credential Sharing Groups** in the left pane.
2. Select **LDAP** from the list in the right pane, then click **Edit**.

   or

1. In the left pane, click the plus sign (+) next to the Credential Sharing Groups icon (or double-click **Credential Sharing Groups**) to display the configured groups.
2. Click **LDAP**.

Settings for a Selected Credential Sharing Group

Logon Manager provides flexibility and granularity for you to control how credential sharing groups work. You can configure the following options:

- Sharing any or all fields for a group of applications:
  - Username
  - Password
  - Third Field
  - Fourth Field

Administrators should take care to avoid resetting the Password field value when Microsoft Windows 7 users are logged on.

- Pre-filling all shared fields when a user first encounters an application in a sharing group, thus requiring the user to enter information only for fields that are not shared by the group.

- Automatically creating an account when a user encounters an application for which all credentials are pre-determined.
- Designating a "key" field; that is, a field that the Oracle Enterprise Single Sign-On Administrative Console uses when updating shared credentials, changing credentials only for accounts with the same key value.

See Creating Credential Sharing Groups for more information.

Controls

Group account management	
Shared credentials	List of fields that can be included in a credential sharing group. Check the appropriate boxes. • Username • Password • Third Field • Fourth Field
Key credential within group	Designates a field that indicates to the Oracle Enterprise Single Sign-On Administrative Console to update shared credentials only for accounts that share this field value. If the user wants to create an account that is not constrained by the key field, that account must have a new key field to avoid updating all existing accounts.
Pre-fill shared credentials	Specifies that shared fields be pre-populated with the shared credentials when the user creates a new account for an application.  This setting is enabled by default.
Automatically create accounts when all credentials are known	Specifies that Logon Manager should create an account automatically when the user encounters an application that has all fields pre-determined. In order for Logon Manager to complete account creation, you must also enable the "Auto-Submit" setting. Otherwise, the "New Logon" dialog box appears as usual.  This field is available only if "Key credential within group" is set to "None."

Adding Applications to a Sharing Group

1. Click **Add**. The Select Application dialog box appears.
2. Select the applications to include in the selected group. (Use **CTRL+CLICK** or **SHIFT+CLICK** to select multiple entries.)
3. Click **OK**.

Editing Applications in a Sharing Group

1. Select a group from the left pane, and click **Add**.
2. Select the applications that you want to add to this group. (Use **CTRL+CLICK** or **SHIFT+CLICK** to select multiple entries.) Click **OK** after you finish making your selections.
3. In the "Shared credentials" section under "Group account management," check the boxes next to **Username**, **Password**, **Third Field**, and **Fourth Field** as required.
4. To specify a field as the key credential field, select from the "Key credentials within group" drop-down list.
5. Optionally, if you did not specify a key credential (by selecting "None" in the previous step):
   - Check **Pre-fill shared credentials** if you want Logon Manager to fill shared credentials automatically.
   - Check **Automatically create accounts when all credentials are known** if you want Logon Manager to create an account without prompting the user with the "New Logon" dialog box.

The "Pre-fill shared credentials" and "Automatically create accounts when all credentials are known" settings are unavailable if you select a key credential.

In order to create accounts automatically when all credentials are known, you must also enable "Auto-Submit" for the application.

Removing Applications from a Sharing Group

1. Select an application to remove from the selected group. (Use **CTRL+CLICK** or **SHIFT+CLICK** to select multiple entries.)
2. Click **Remove**.

Working with User Exclusions

Using the Exclusions settings, you can prevent specific users from saving credentials for specific applications. The process for creating and publishing an Exclusion list follows the same workflow as that for other objects in the Oracle Enterprise Single Sign-On Administrative Console.

Use exclusions only for applications for which you want *some*, but not *all*, users excluded.

If you want to exclude an application from the entire enterprise, turn on the Global Agent Setting, "Limit user to predefined applications for..." under User Experience > Application Response > Initial Credential Capture. Any application for which you do not create a template will be excluded globally.

Ordinarily, when Logon Manager first detects an application, it prompts the user to enter the credentials to be stored and automatically injected for future use. Using exclusions, if the user enters a username that you have added to the Exclusion list for a specific application, Logon Manager does not permit the user to save credentials.

After you publish an Exclusion list to Logon Manager:

- Users can log on to applications manually, using excluded credentials, but the Agent does not respond to the application with credentials on the Exclusion list, and users cannot save credentials that appear on the Exclusion list.
- Excluded credentials that the user already has saved, prior to the policy being put in place, will no longer be presented to the application, and those excluded credentials are deleted from the user's credential list.
- Silent credential capture will not capture excluded credentials.

Creating an Exclusion List

To create a new Exclusion list, in the Oracle Enterprise Single Sign-On Administrative Console:

1. Do one of the following:
   - From the **Insert** menu, select **Exclusion List**.
   - Select the **Exclusions** node in the left pane, and click **Add** at the bottom of the right pane.
   - Right-click on the **Exclusions** node, and select **New List** from the contextual menu.
   - Select the **Exclusions** node and right-click in the empty space in the right pane.
2. Enter a name for the list in the Add Exclusion List dialog box.

The Exclusion list name appears under the Exclusions node of the tree in the left pane. The right pane contains three tabs associated with each Exclusions list:

- Exclusion Subscribers
- Excluded Usernames
- Security

Use these tabs to configure each Exclusion list.

Publishing an Exclusion List

The procedure for publishing exclusions is identical to that for publishing any other configuration object. For the procedure to publish an Exclusion list, see Publish to Repository.

Special Considerations for Active Directory Users

Active Directory users who publish Exclusion lists must be members of the "SSOExclusionAdmins" Global Security Group, if the group exists. Logon Manager handles the SSOExclusionAdmins group as follows:

- If you are using Active Directory and the SSOExclusionAdmins group exists, a user must be a member of this group to publish exclusions.
- If you are using Active Directory and the SSOExclusionAdmins group does not exist, or if you are using another directory service, anyone with publishing rights can publish an Exclusion list.
- If you are using Active Directory, the SSOExclusionAdmins group exists, and a non-group member attempts to publish several objects that include an Exclusion object, the other objects will be published without the Exclusion object.

Publishing Exclusion Lists with Configuration Files

You cannot publish Exclusion lists as standalone configuration (entlist.ini) files. When you publish configuration files (that is, you have checked the box in the **File mode** section of the "Publish to Repository" screen), Exclusion lists are published as a subset of an application for which you've configured exclusions.

This feature has been added as of Logon Manager 11.1.1.5.0.

Adding an Exclusion List

Use this dialog box to add and name a new exclusion list.

- Enter an **Exclusion List** name and click **OK**.

To display this dialog box:

1. Right-click **Exclusions** and choose **New List** from the shortcut menu.

or

2. Choose **Exclusion List** from the **Insert** menu.

Working with a Selected Exclusion List

Represents a created Exclusion list. Use the tabs in the right pane to view this list's properties, add or remove applications and users to which the list applies, or change security settings.

See Using Exclusions for more information.

Selecting an Exclusion List for Viewing or Editing

1. Click **Exclusions** in the left pane.
2. Select an Exclusion list from the list in the right pane, then click **Edit**; or double-click the Exclusion list name in the right pane. The Exclusion Subscribers tab appears in the right pane.

or

1. In the left pane, click the plus sign (**+**) next to the Exclusions icon (or double-click **Exclusions**) to display the created Exclusion lists.
2. Click an Exclusion list to select it. The Exclusion Subscribers tab appears in the right pane.

Add	Create another Exclusion list.
Remove	Delete the selected list.
Add Notes	Attach notes about this list for future reference.

Exclusion Subscribers

Use this tab to add applications to an Exclusion list.

1. Select an **Exclusion list** from the Exclusions node in the left pane.
2. Click **Add** on the bottom of the tab.
3. In the Select Application screen, select the application that you want to add to the list. Use **Shift+Click** or **Ctrl+Click** to add multiple selections.
4. Click **OK**. The applications you selected appear in the tab window.

Excluded Usernames

Use this tab to add users to an Exclusion list.

1. Select an **Exclusion list** from the Exclusions node in the left pane.
2. Click **Add** on the bottom of the tab.
3. In the Excluded Usernames screen, select the users that you want to add to the list. Use **Shift+Click** or **Ctrl+Click** to add multiple selections.
4. Click **OK**. The users you selected appear in the tab window.

Storing User Data

Logon Managerstores user credentials locally in the ...\Application Data\Passlogix folder. Global Agent settings are stored in the Local Machine registry key (HKLM); settings modified the user are stored in the Current User registry key (HKCU).

Logon Manager can also perform a complete backup of credentials and settings to a file (**.bkv**). The backup can be performed manually by the user, or automatically by administrative configuration). For details on this feature, see File-Based Backup/Restore.

Logon Manager can also synchronize individual user credentials with these remote sources, including file-systems, databases, and directory servers. These remote sources can provide the Agent with application logons. first-time-use (setup) information and administrative overrides (global Agent settings). For details on this feature, see Synchronization.

Storing Credentials in the User Object (Active Directory only)

On Active Directory installations, you can configure Logon Manager to store user data under the user object, rather than in the standard vgoconfig container. To do this, take the following steps:

1. Use the Enable Storing Credentials under User Object command (on the Repository menu) to update the directory schema to allow user-credential containers as children of user objects. This command also modifies the directory-root security settings to grant users the rights to create the credential containers.
2. Do one of the following:
   - Select the Store data under the user objects option (in the Add Locator Object dialog box) to create a vgolocator object ("default" for all users that use this locator, or for specific user by distinguished name) that points to the user objects.
   - Use the Location for storing user credentials Agent setting (in the Active Directory settings) to configure the Agent to disregard the vgolocator object and always store credentials under the user object.

File-Based Backup/Restore

If the backup/restore module is installed, the Oracle Enterprise Single Sign-On Administrative Console can perform a complete backup/restore of user credentials and settings to or from another location. The backup/restore can be performed manually (by the user) or automatically (by administrative configuration). Also, a selective backup/restore (writing the newer information over the older information) can be performed automatically (by administrative configuration).

If the Backup/Restore module is installed, the user can perform a manual backup, store to any location (even a floppy drive), and select any password (even a one-character password).

Automatic Backup

You can configure the Agent to perform a full backup of user credentials and settings. This backup can be triggered from the command line (and thus from an "at," or timed, job) or by configuring certain Agent events (for example, the Startup task, the Refresh task, and so on).

Command-Line Automatic Backup

To trigger a Command-Line Automatic Backup, run the Agent from the command line (even when the Agent is currently running) using the following syntax:

```
ssoshell.exe /mobility /backup [path] /silent
```

&where&

[path]	The actual path to the directory where the backup file is pl`1aced. The default is the last directory where a command line backup file was stored, or to where the Default Backup path (under End-User Experience\ Environment) points.
`	Do not show the Backup/Restore Wizard when performing the backup.

To perform a completely silent backup to a network share at \\FS\Backup\Private:

```
ssoshell.exe /mobility /backup "\FS1\Backup\Private" /silent
```

To backup to the last-used location or to where the **Default Backup path**(under End-User Experience\ Environment) points:

```
ssoshell.exe /mobility /backup /silent
```

Event-Driven Automatic Backup

To configure the Agent to perform an automatic backup upon certain Agent events, determine the command line string needed to perform the desired backup. Then, set the appropriate task. For example, to perform a backup with every change in credentials, set a task to run When logons change (under End-User Experience\Advanced\Special Tasks) to the command line string.

Forced Restore

The Agent can be configured to perform a full restore of user credentials and settings, replacing any existing data. This restore can be triggered from the command line (and thus via a remote "run" command) or by configuring certain Agent events (for example, the startup task).

Command-Line Forced Restore

To trigger a Command-Line Automatic Backup, run the Agent from the command line (even when the Agent is running) using the following syntax:

ssoshell.exe /mobility /restore [path] /silent

&where&

[path]	The path to the directory where the backup file exists. The default is the last directory where a command line backup file was stored, or where the Default Backup path (under End-User Experience\Environment) points.
/silent	Do not show the Backup/Restore Wizard when performing the backup.

To perform a completely silent restore from a network share at \\FS\Backup\Private:

```
ssoshell.exe /mobility /restore "\FS1\Backup\Private" /silent
```

To restore from the last-used location or to where the Default Backup path (under End-User Experience\ Environment) points:

```
ssoshell.exe /mobility /restore /silent
```

Event-Driven Forced Restore

To perform a Forced Restore upon certain Agent events, determine the command line string needed to perform the desired restore. Then, set the appropriate task. For example, to perform a restore at startup, set a task to run After Agent starts up (under End-User Experience\Advanced\Special Tasks) to the command line string.

Managing Templates

Use this dialog box to create, modify, and remove templates for application logons. To display this dialog box, on the Tools menu, click **Manage Templates**.

When creating templates, take precautions to ensure that no complete template name exactly matches the first part of another template name. If the Agent finds two templates, one of whose names is a subset of the other, the Agent recognizes the template with the shorter name.

For example, if two templates are named ABC and ABD, this issue does not occur. But if one template is named ABC, and one is named ABC_D, the Agent recognizes only the ABC template, and ignores the ABC_D template, regardless of which application is opened.

Creating a New Template from an Application

1. Click **Add** to create a new template from an application logon.
2. From the Select Applications dialog box, select the application on which to base the template.
3. Click **OK**. In the **Edit Template** dialog box, specify the settings that must be supplied by an administrator, and the template's overriding settings.

Modifying an Existing Template

- Select an application from the list and click **Edit**. In the **Edit Template** dialog box, modify the settings that must be supplied by an administrator, and the template's overriding settings.

Deleting a Template

- Select an application from the list and click **Remove**.

Adding Application Templates

Logon Managerrecognizes and responds to a wide array of logon scenarios. Users can configure each logon in advance or as they encounter them. When a user configures a logon, the Agent displays a list of predefined applications. Users select an application from this list or create a logon for an unlisted application.

Predefined applications simplify configuration for the user and increase the reliability of both recognizing and responding to logon and password-change requests.

Preconfigured application logons for many popular Windows applications are included with the Oracle Enterprise Single Sign-On Administrative Console in the form of templates that contain all or part of the logon's configuration. The applist.ini file (located in the installation directory in the Plugin\LogonMgrdirectory) includes predefined logons for network and web pop-up logon dialogs boxes and for many online service providers.

Adding Templates

1. Create the application logons using Oracle Enterprise Single Sign-On Administrative Console configuration features (see "Related Topics," below).
2. Create and deploy an entlist as an INI file or equivalent synchronization object.
   - Use **Export to INI file** to create an entlist.ini file.
   - Use **Publish to Repository** to create an entlist synchronization object.
3. Do one of the following:
   - If you are using synchronization to deploy application logons, do not use the Location of entlist.ini file setting. The synchronizer automatically locates entlist.ini and ftulist.ini in the user's %AppData%\Passlogix directory.
   - If you are not using synchronization to deploy application logons, use the **Location of entlist.ini file** setting under End User Experience/Environment.


The administrator must create *entlist.ini*; the Agent does not create it automatically.

Understanding the Application Configuration Files

Logon Manager stores its application logon instructions in a file named aelist.ini that typically resides in the each user's %AppData%\Passlogix directory (i.e. C:\Documents and Settings\username\Application Data\Passlogix). The Agent creates aelist.ini by merging two component files:

- entlist.ini, which you create using the Oracle Enterprise Single Sign-On Administrative Console to provide your organization with customized logons for Windows, Web site, and mainframe/host applications. The Agent's synchronizer extension places entlist.ini in the %AppData%\Passlogix.
- applist.ini, which is included in the Agent installation package and contains predefined logons for network and web pop-up logon dialogs and for many online service providers. The applist.ini file resides in the Agent's installation directory.


Pre-configured logons for Windows and Web application are provided in Oracle Enterprise Single Sign-On Administrative Console templates.

All Oracle Enterprise Single Sign-On Administrative Console configuration files (including entlist.ini and ftulist.ini) can only be created and edited using the Oracle Enterprise Single Sign-On Administrative Console.

How the Agent Uses entlist.ini

The Agent merges entlist.ini with applist.ini to create aelist.ini in the %AppData%\Passlogix directory. The Agent overwrites aelist.ini periodically, including at Agent startup. The Agent then uses aelist.ini to detect "known" applications.

If using a synchronizer extension (for example, Directory Server or File System), a remote object overrides any local entlist.ini file, and is then merged with applist.ini.

If there is no remote object or local entlist.ini file, the Agent will utilize applist.ini without creating the aelist.ini file.

While the Agent is running, you can modify entlist.ini or the SSOentlist object. To force the Agent to re-merge to create a new aelist.ini, select **Refresh** in Logon Manager.

See the following topics for more information about creating and distributing application logons:

- Creating logons from templates:
- Adding Windows Applications
- Adding Web Applications
- Adding Host/Mainframe Applications
- Add Application dialog box
- Distributing Logons
- Configuring Application Templates
- Administration and Management

See Pre-Configured Applications and Templates for a list of templates that ship with the program. See the *Logon Manager Global Agent Settings Reference Guide* for detailed descriptions of Global Agent Setting options.

How the Agent Uses aelist.ini

The file that results from the merger of aelist.ini contains all the information necessary to identify and respond to logon and password change events for all configured applications. This information comprises:

- Application-type settings such as Error Loop settings, for example, how many times the Agent will retry a logon within the specified time period.
- Application-specific configuration information, for example, application executable name or Web Site URL, password change behavior Password Policies, Error Loop settings, data file extension.
- Scenario-specific configuration information for the logon and password change scenarios, for example, window dialog title strings, form names, and locations for credentials.
- Dialog-specific matching settings (for example, that a string or control is or is not present).
- Other settings (for example, name of a third or fourth field).

The merged file, aelist.ini, has a hierarchical structure, containing all the information necessary for the Agent to uniquely identify and respond to logon and password change events for each application to configure. It organizes logons in sections and subsections as follows:

[*Other Apps] **Section1=Application logon 1** **Section2=Application logon 2**	This section references two administrator-defined Windows applications defined later in the file. See Adding Windows Applications for details.
[*Mainframe] **Section1=Host logon 1** **Section2=Host logon 2** **&**	This section references two host/mainframe applications defined later in the file. See Adding Mainframe applications for details
[*Shared Groups] **Section1=Shared Group 1** **Section2=Shared Group 2** **&** **SectionN=Shared Group *N*** **&**	This section references two groups used for credential sharing. See Creating credential sharing groups for details.
[*PasswordPolicies] **&**	This section enables Password Policies. See Setting Password Policies for details.

The application configurations in entlist.ini allow the Agent to automatically recognize and respond to logon and password-change requests from applications specific to your organization.

When present as a local file or downloaded from a remote object, the Agent downloads an entlist object (if available) to an entlist.ini file, and combines your downloaded or local entlist.ini with those Oracle supplies in applist.ini to create aelist.ini, the complete list of predefined applications available to users. (If entlist.ini is not present, the Agent utilizes applist.ini.)

Because Oracle provides updates to applist.ini, it is *strongly* recommended that you make no changes to applist.ini: future Logon Manager releases may overwrite your applist.ini changes, and Oracle provides no guarantees that future releases will support changes you make to applist.ini.

General Guidelines for Setting Up Applications

Setting up and configuring applications is easiest with the following conditions:

- Have the target applications on the same workstation as the Oracle Enterprise Single Sign-On Administrative Console.
- Minimize the number of other applications running during configuration.
- To facilitate creating application configurations and testing:
  - Configure your workstation *not* to use a synchronizer extension.
  - When the application logon request causes the Agent to respond, tell the Agent to ignore it.

- In the Oracle Enterprise Single Sign-On Administrative Console, create the application configuration and then use **Export Apps to Agent** (on the Tools menu) to overwrite the local entlist.ini file.
- Keep Logon Manager visible, and select **Refresh** whenever you finish exporting from the Oracle Enterprise Single Sign-On Administrative Console.
- Bring up the application logon dialog box to see if your new configuration works properly within the Agent.

Adding Windows Applications

The easiest and most precise way to configure Windows applications is by using the Windows Form Wizard.

Before you begin Windows logon configuration, refer to the General Guidelines for configuring applications.

Special Issues and Settings

Some Windows applications interact in unusual ways or have special requirements. For these scenarios, the Oracle Enterprise Single Sign-On Administrative Console offers these additional configuration options.

Special Configuration Settings

On the Fields tab (for a new or selected logon form)	
SendKeys	Use the SendKeys option for Windows applications that: • Cannot receive credentials from the Windows message queue or by other techniques the Agent normally uses to send credentials • Do not use standard Windows controls that have Control IDs • Dynamically generate controls or do not use Windows controls at all (for example, Flash applications).
On the Miscellaneous tab (for a new or selected logon form)	
Allowable Class	Use the Allowable Class option to identify logon or password-change window classes that must be present in order to execute this logon. This is useful for applications that present logon- or password-change windows with non-standard class names.
Ignore this Window Class	Use the Ignore Window Class option for applications that: • Use hidden logon or password-change dialogs, or • Present duplicate dialogs.
Attach to window's Message Queue	Use the Attach to... option to keep the focus on the target logon window while sending credentials.
Preset Focus	Use the Preset Focus options to have the Agent set the focus on a field before entering data in it.
On the Miscellaneous tab (for a selected application)	
Service Logon	Select the **Service Logon** option to let the Agent detect an application that runs as a Windows service (that is, in the System space, rather than the User space).
Third/Fourth Field Label	Use these options to specify the text labels the Agent should use to display these additional fields.
File extension for Icon	Use this option to provide a Windows file extension to associate with a logon; this lets the Agent map an icon to it.

Adding Web Applications

Logon Managerdetects and responds to logon and password-change requests for predefined Web applications. Much like Windows and host/mainframe applications, administrators define Web applications by including a section in entlist.ini.

The Agent recognizes specific strings of data at specified locations within the HTML code of a Web page. This data tells the agent how to detect the Web site's logon and password-change screens, where to enter the user credentials, and how to submit those credentials.

The easiest and most precise way to configure Web applications is by using the **Web Form Wizard**. Before you begin this procedure, refer to the General Guidelines for configuring applications.

Web applications can have the logon and password change forms on the same page, on different pages within the same URL, or at different URLs. Furthermore, logons can be in the same form at different URLs or on different forms at different URLs.

If you add a configuration for a site where the user's local store already includes a logon, your new configuration will override the user's. The user will need to re-enter credentials for this application.

The user can still view the old logon in Logon Manager.

Adding Host/Mainframe Applications

Logon Manager provides single sign-on functionality to host/mainframe applications through *host emulators* that:

- Implement HLLAPI (high-level language application programming interface), or
- Have a built-in scripting language that can display a dialog.

The host emulator enables an end user to connect the Windows workstation to a mainframe, AS/400, OS/390, Unix, or other host-based session. Logon Manager recognizes a terminal screen by looking for specific strings of data at specific screen locations.

In order for Logon Manager to recognize host emulators, enable mainframe support by selecting MFEnable in the Host/Mainframe Apps dialog in the Oracle Enterprise Single Sign-On Administrative Console.

All host/mainframe applications must be predefined. The Logon Manager end user has no means to define host/mainframe applications. The administrator must also configure the host emulators themselves in order for Logon Manager to recognize them. Any host emulator can use application logons created by any other host emulator. See Configuring Host Emulators for information on configuring Logon Manager-supported emulators.

Logon creation is easiest using a host emulator that allows you to select text and that displays the row and column coordinates of your selection.

For information on how to configure an emulator that does not support HLLAPI but does have a scripting language, contact Oracle.

For information on how to configure an emulator that does not support HLLAPI but does have a scripting language, contact Oracle.

For emulators that do not implement HLLAPI or have a scripting language, you can, in some cases, configure the host/mainframe application as a Windows application (to detect the form by its window title) and using SendKeys to supply user credentials. See Adding Windows Applications: Special Issues for more information.

Adding a Host/Mainframe Application

The easiest, and most precise way to configure host/mainframe applications is by using the Host/Mainframe Form Wizard. Before you begin this procedure, refer to the General Guidelines for configuring applications.

Configuring a Host/Mainframe Application Manually

The following procedure describes the steps for manually configuring or modifying a host/mainframe logon. Refer to the specific dialogs and controls for more information. Refer to the

General Guidelines for configuring applications before you begin this procedure. Refer to Selecting Windows for a Host or Mainframe Application for the procedure to select an application from a list of open applications.

1. Start the application and configure the host emulator. See Configuring Host Emulators for more information.
2. In the Oracle Enterprise Single Sign-On Administrative Console, do one of the following:
   - Create a new host/mainframe application logon.

     or
   - In the left pane, click **Applications** and select a host/mainframe application. Click the **General** tab in the right pane.
3. In the **Identification** tab of the **Host/Mainframe** form-configuration dialog box:
   a. Select a logon form from the list and click **Edit**.
   b. Specify one or more Text Matching captions, so that this page can be identified uniquely from other pages. Specify the identifying Text string of the caption and its starting Row and Column numbers.
   c. Specify the Fields for credentials. Click **Edit** (under Fields) to display the SendKeys (Host/Mainframe) dialog box. Specify the starting row/column for each field and the keystrokes to send.
4. If the terminal response time requires a pause between credential field entries, select the **Options** tab and enter the number of milliseconds to pause in **Delay Field**.
5. Repeat the steps above for each additional logon screen.
6. To add password change information, repeat the process with the Password Change tab and the password change dialog box in the target application.

Adding Java Applications and Applets

You can configure Java application logons and Java applet logons (in Web pages) by using the ***Windows Form Wizard***. The procedures for creating and deploying are generally identical for Java and Windows applications.

Before you begin Java logon configuration, refer to the General Guidelines for configuring applications.

In order for the Agent to detect and use Java application logons, the Java Runtime Environment (JRE) must be installed on the workstation prior to installing Logon Manager. If JRE is not already present when Logon Manager is installed, the Agent's Java Helper component is not available for installation.

Adding Telnet Applications

Logon Manager supports Telnet sessions using HLLAPI (high-level language application programming interface) implemented by a mainframe/host emulator. For the most current list of supported emulators, see *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Configuring a logon for a Telnet application is essentially identical to adding host/mainframe applications generally, but with these exceptions:

- Host applications generally display text captions and data fields in fixed positions, which lets Logon Manager detect a screen as a logon form using text matching and absolute row/column coordinates. By contrast a Telnet application, including its logon screen, appears in a scrolling

text window. The screen position of the text caption for Logon Manager to match (and begin the logon) should be set as a row number *relative to the cursor* (negative for above, positive for below) and an absolute column number. See the example below.

- If one or both of the caption's coordinates are unpredictable, you can use an asterisk (*) for the row setting to match text in any row (and a fixed column), for the column setting to match text in any column (and a row relative to the cursor), or for both settings to match text anywhere on screen.
- When supplying credentials for a Telnet logon, Logon Manager ignores the row and column coordinate settings for field-matching. However, the settings must be present in the logon configuration. Use **1** as the value for both row and column coordinates for all credential fields in a Telnet logon.
- In order to ensure that the Telnet logon credentials are filled in properly, Logon Manager is enabled with timing logic. The Delay Field setting (on the Options tab for configuring a host/mainframe logon form) indicates the time in milliseconds that the Agent should pause between each action.

See Configuring Host Emulators for additional information on HLLAPI configuration.

Adding a Telnet application logon

The easiest, and most precise way to configure Telnet applications is by using the **Host/Mainframe Form Wizard**. Before you begin this procedure, refer to the General Guidelines for configuring applications.

Configuring a Telnet Application Logon Manually

The following procedure describes the steps for manually configuring or modifying a Telnet logon. Refer to the specific dialogs and controls for more information. Before you begin this procedure, refer to the General Guidelines for configuring applications.

1. Start the application and configure the host emulator.
2. In the Oracle Enterprise Single Sign-On Administrative Console, do one of the following:
   - Create a new host/mainframe application logon.

     or
   - In the left pane, click **Applications** and select a host/mainframe application.
3. Click the **General** tab in the right pane.
4. Select a logon form from the list and click **Edit**.
5. In the **General** tab of the Host/Mainframe form-configuration dialog box:
   a. Specify one or more **Text Matching** captions, so that this page can be identified uniquely from other pages. Specify the identifying **Text** string of the caption and its starting **Row** and **Column** numbers.
      - The row numbers should be *relative* to the current cursor position and can be negative integers. See the example below.
      - The column number is an absolute position.
      - You can also use an asterisk (*) for the row or column as a wildcard.

b. Specify the **Fields** for credentials. Under **Fields**, click **Edit**. In the **SendKeys (Host/Mainframe)** dialog box, select each field, and set the **Row** and **Column** for each field to **1**. If needed, specify any additional keystrokes that should follow each field entry.

6. If the terminal response-time requires a pause between credential field entries, select the **Options** tab and type the number of milliseconds to pause in **Delay Field**.
7. Repeat the steps above for each additional logon form.
8. To add Password Change information, repeat the process with the **Password Change** tab and the password change dialog boxes in the target application.

Text Matching example

Since the text in a Telnet application scrolls, the row positioning must be set relative to the cursor's row, which is always row 1. Therefore, the row coordinate for a caption ("Welcome to VAX/VMS_ V6.1") that is two rows above the cursor is **-2**. The column setting of the start of the caption text is an absolute coordinate; in the example here, 9.

Screen text column	
	1 2 3
Row#	12345678901234567890123456789012345678901234567890123
-4	
-3	
-2	Welcome_to_VAX/VMS_V6.1_
-1	
1	Username: _
2	
3	
4	

For Logon Manager to identify this sample screen, you could set these text matching criteria (using the Text Matching dialog box):

Match 1	
Text	Welcome to VAX/VMS V6.1
Row	-2
Column	9

Match 2	
Text	Username:
Row	1
Column	1

First-Time Use (Bulk-Add)

After the initial product installation, the First-Time Use Wizard requests various items of information to complete the setup process. If multiple authenticators are installed, the user is prompted to choose a Primary Logon Method. In addition, Logon Manager can also prompt the user for application usernames/IDs and passwords to quickly populate the user's store.

> In order to use Bulk-Add, you must enable First-Time Use.

The configuration settings for the First-Time Use Wizard are specified in the ftulist.ini file. End users can be prompted to provide credentials (username/ID, password, third field) for their existing logons. Combining first-time use configuration with predefined logons ensures that users reap the benefits of single sign-on immediately after installation. Alternatively, users can configure their individual logons as they encounter each application.

> All Logon Manager configuration files (including entlist.ini and ftulist.ini can only be created and edited using the Oracle Enterprise Single Sign-On Administrative Console.

Specifying Applications to Bulk-Add

> Applications must be individually configured to be used in a bulk-add. See To enable a logon for Bulk-Add.

1. Select **Applications** in the left pane, then select the **Bulk-Add** tab in the right pane.
2. Click **Add**.
3. From the **Select Application** dialog box, select the applications to add to this group. (Use **Ctrl+click** or **Shift+click** to select multiple entries.)
4. Click **OK**.
5. Enter or edit the Date Stamp in *yyyymmdd* format (for example "20030615" for June 15, 2003). If this date is later than the last date a given Agent completed Setup, then the Agent activates Setup Wizard to add the new logons.

To Enable a Logon for Bulk-Add

1. Select **Applications** in the left pane, then select an application.
2. Click the **Bulk add tab** in the right pane.
3. Select **Enable Bulk-Add capability for this application**.
4. If the user must re-enter one or more fields for confirmation, then select the appropriate **Confirm** settings.

Creating and Using Templates

Preconfigured application logons for many popular Windows applications are included with the Oracle Enterprise Single Sign-On Administrative Console in the form of templates.

You can also convert the application logons that you create into templates through the Oracle Enterprise Single Sign-On Administrative Console.

Templates provide two practical benefits for creating and managing pre-configured logons:

- You can store, share, and reuse a group of specific logon settings as a "starter set" for creating new logons based on the template. Your templates appear as options in the Add Application dialog box.
- If you make changes to a template's source logon, you can easily apply your changes to any logon based on that template, by using the Update Applications command on the Tools menu.

You create a template by:

- Selecting an existing application logon in the **Manage Templates** dialog box from the Tools menu
- Choosing the logon settings (for the application and for individual forms) that you want to be able to override later; use the Overriding Settings tab in the Edit Template dialog box (click **Edit** in the Manage Templates dialog box). For Web and Windows applications, you can also choose a setting that the template user *must* provide in order to complete the logon configuration (on the **Supply Info** tab).
- Saving the current file to the Templates folder under the Oracle Enterprise Single Sign-On Administrative Console program directory (typically, this is C:\Program Files\Passlogix\SSO Administrative Console\Templates).

You use a template to create a logon by selecting it from the Applications drop-down list in the **Add Application** dialog box. You are prompted if additional information is needed to complete the configuration.

You can update application logons with any changes made in their originating templates. Open the Oracle Enterprise Single Sign-On Administrative Console XML file containing the applications and select the **Update Applications** command from the Tools menu.

Applications

Displays application configuration information and provides access to logon settings.

Click **Applications** in the left pane to display these tabs in the right pane:

- The Application List displaying currently configured logons.
- The Bulk Add (multiple logon deployment) controls.
- Right-click **Applications** in the left pane to display a shortcut menu with these options:

New Windows App	Configure a new Windows application. Displays the Add Application dialog box.
New Web App	Configure a new Website application. Displays the Add Application dialog box.
New Host App	Configure a new mainframe application. Displays the Add Application dialog box.
Import	Open stored application configurations in a .REG or .INI file.
Export	Save one or more application configurations in an INI file.

Applications List

Displays a list of applications with logons configured for use with Logon Manager.

- To add new applications click **Add**.
- To modify a listed application's logon configuration, click an application, then click **Edit**.
- To delete one or more logon configurations, click an application (use Ctrl+click or Shift+click to select multiple entries), then click **Delete**.

To display this tab:

1. Click **Applications** in the left pane, then click the **Applications List** tab in the right pane.

Add Application Dialog Box

Use the Add Application dialog to begin configuring a new application logon. You can define an application logon from scratch or you can use a stored template that provides pre-configured values for some or all logon settings.

To add an application:

1. Type a **Name** for the new logon.
2. Select an **Application Type**:
   - Windows
   - Web
   - Host/Mainframe
3. Do one of the following:
   - Select a template from the Application drop down list and click **Next** to provide any additional information needed to complete the logon.

- Leave the Application selection as New [*type*] Application and click **Finish** to create the logon from scratch.

4. If this application requires authentication by RSA (SecurID/SoftID) token, select the **RSA securID** check box.
5. Click **Finish**.

The Form Wizard for the selected **Application Type** launches. See Windows Form Wizard, Web Form Wizard or Host/Mainframe Form Wizard for more information.

To display the **Add Application** dialog box, do one of the following:

1. Right-click **Applications** in the left pane, then choose the application type (Windows, Web or Host/Mainframe) from the shortcut menu.

or

2. Click **Add** in the Applications List.

Add Application from Template

Use this wizard page to supply application logon configuration settings that are not provided by the application logon template. Settings that must be supplied to complete the logon are marked in the left pane with a red **X**.

1. In the left pane of the dialog box, click a logon setting item that is marked by a red **X**. The corresponding dialog box for supplying the setting appears in the right pane.
2. Enter or choose the requested setting. A green checkmark replaces the red **X** when the setting is completed.
3. Click **Finish** to close the wizard and add the new application.

To display this page:

1. Do one of the following:

   - Right-click Applications in the left pane, then choose the application type (Windows, Web or Host/Mainframe) from the shortcut menu.

   or

   - Click **Add** in the Applications List.

2. In the New Applications dialog box, select a template from the Application drop down list and click **Next**.

Creating a New Windows or Java Application Template

You can create a new Windows application template using the "Applications" menu or the "Add Application" icon in the Oracle Enterprise Single Sign-On Administrative Console, or directly from the window of an open application.

Creating a Template Using the Oracle Enterprise Single Sign-On Administrative Console

1. In the left pane, right-click **Applications** then select **New Windows App** from the shortcut menu. The Add Application dialog box appears with the **Windows** option selected.
2. Type a **Name** for the new logon and click **OK**. The Windows Form Wizard (for configuring new logon forms) appears.

   or

1. Click the **Add Application*** icon on the Oracle Enterprise Single Sign-On Administrative Console toolbar.
2. Select an application from the "Select Window" screen. The Windows Form Wizard (for configuring new logon forms) appears.

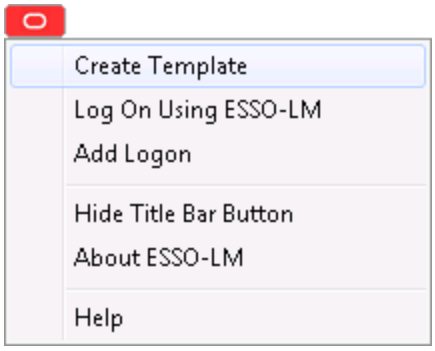
See Windows Form Wizard for more information.

Creating a Template Using an Open Application

You can create a new template on-the-fly for a Windows application while the application is running.

In order to perform this procedure, both the Oracle Enterprise Single Sign-On Administrative Consoleand the Logon Manager Agent must be running, and you must configure the Agent settings to display the Title Bar Button .

1. Launch the application for which you want to create a template.
2. Select **Create Template*** from the application's Title Bar Button menu.



Two things happen:

- In the application's window, Logon Manager detects the credential fields and highlights them.

- A condensed version of the Form Wizard appears. Enter information for the following fields:
  - **Form Name.** This field is pre-filled with the name of the selected application. You can leave this as it is or change it if you want to.
  - **Form Type.** Select the form type from the drop-down menu:

    Logon

    Logon Success

    Logon failure

    Password change

    Password change success

    Password change failure
- **Add to Template.**

  This field defaults to the **New Template** selection. Alternatively, the drop-down menu contains the list of all configured Windows application templates to which you might want to add this form.
- **Edit Fields/Hide Details.**

  Toggle this button to expand the window to display the entire Form Wizard, or collapse the window to the simpler Form Wizard.

See Windows Form Wizard for more information.

**This menu item is new as of version 11.1.1.5.0.*

Windows Form Wizard

Use the Windows Form Wizard to perform any of these tasks:

- Configure new logons for Windows applications or for Java applets and applications.
- Add new forms to existing logons
- Create forms for automatic password changes.
- Create forms for supporting a password confirmation field displayed in a separate window.
- Create forms for automatic detection of password change success and failure.

The Windows Form Wizard lets you use the application itself to identify its forms, the individual fields, and the submit **OK** button.

Before you begin this procedure, refer to the General Guidelines for configuring applications. Also see Adding Windows Applications for specific information about configuring Windows application logons.

To display the Windows Form Wizard, do one of the following:

1. Create a new Windows or Java application logon.

or

1. In the Identification tab (Windows), click **Wizard**.

To configure a form:

1. Start the target application and navigate to the target form. Arrange the Oracle Enterprise Single Sign-On Administrative Console and target application windows so that you can see both at once.
2. In the Form Wizard, select the type of form you want to configure. The available options are:
   - **Logon**. Configures a logon form.
   - **Logon success.** Configures a form that detects a match during silent credential capture. In the presence of this form, the Agent delays credential capture until it verifies the user's entries and displays the Logon Success dialog box. If this form is not present, the Agent captures credentials immediately after the user enters them and clicks **OK**. Refer to the Oracle Knowledgebase for a full discussion on using this form.
   - **Logon failure.** Configures a form that detects a non-match during silent credential capture. In the presence of this form, the Agent delays credential capture until it verifies the user's incorrect entries and displays the Logon Failure dialog box. If this form is not present, the Agent immediately informs the user that the credentials are incorrect, displaying either the New Logon dialog box or the Retry Logon dialog box to allow the user to re-enter credentials. Refer to the Oracle Knowledgebase for a full discussion on using this form.
   - **Password change.** Configures a password change form.
   - **Password confirmation.** Configures a new password confirmation form for applications that display their "Confirm password" field in a separate window.
   - **Password change success.** Configures a form that serves as a match for the target application's password change success message. Since this form does not inject credentials, the Credentials page of the Windows Form Wizard is skipped. When the password change success message is detected, Logon Manager will automatically save the new credentials.
   - **Password change failure.** Configures a form that serves as a match for the target application's password change failure message and reinjects credentials when the password change failure message is detected. If you select this option, you will be presented with the Credentials page of the Windows Form Wizard in which you will configure the necessary fields.
3. In the Application Window list, select the window to configure. Note that a blinking outline indicates the application window you select.
4. Confirm that you have selected the correct window, then click **Next**.
5. In the Credential Fields page list, click the **Detect Fields** button. The Wizard attempts to detect and configure the credential fields and marks them accordingly:
   - Username/ID
   - Password (Logon forms only)
   - Old Password (password change forms only)
   - New password (password change forms only)
   - Confirm new password (password change and password confirmation forms only)
   - Submit button.
6. Confirm that the Wizard has selected the correct fields. You can modify a selection, if necessary:

a. Select a field to configure; for example, the logon window's user ID field. In the application's window, a blinking outline indicates the field corresponding to your current selection.

b. Confirm that you have selected the correct field, then right-click the selected item and choose the field type (for example, **UserID**) from the shortcut menu. The corresponding icon appears to the left of the item. To deselect an item, right-click the item and choose **None** from the shortcut menu.

> Password change success forms do not inject credentials and thus do not require you to configure any fields. In such cases, proceed to step 8, as the Credential Fields page will not be displayed.

> The Class and Text columns provide cues to the fields. For example, text boxes appear as "Edit" Class; password fields usually have the Text value *** HIDDEN ***.

7. Repeat this process for each field required to complete the logon form. You can configure up to four fields in all.
8. Confirm that you have configured the necessary fields and button, then click **Next** A summary page appears, listing your configuration.
9. Do one of the following:
   - Click **Back** to return to a previous page and make corrections.
   - Click **Finish** to complete the logon configuration and close the Form Wizard.

Application Window (Windows Form Wizard)

Use this Form Wizard page to select the application's logon or password/PIN change window.

See Windows Form Wizard for a detailed procedure for configuring Windows applications.

Controls

Window List	Displays the windows of currently applications. Click on the column heads to sort the list.
Show hidden window	Select to include hidden windows in the Window list.
Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Credential Field (Windows Form Wizard)

Use this **Form Wizard** page to select the fields of the application's logon or password change window.

See Windows Form Wizard for details of the procedure for configuring Windows applications.

Credential Fields	Displays the fields of the currently selected application window. Click on the headers (**Class**, **ID** or **Text**, to sort the list. Right-click a field in the list to display a shortcut menu of field types and the submit control: • UserID • Password • Third Field • Fourth Field • Confirm New Password • OK (submit control)
Refresh	Updates the field list.
Use "Send Keys" for this form, do not use Control IDs	Indicates that the Agent should transmit logon data to this form as a series of keystrokes, rather than by addressing individual fields by Control ID. See SendKeys for more information.

Use ordinals instead of control IDs	Indicates that the Agent should transmit data to this form as a series of numbered control IDs assigned by Logon Manager, rather than addressing individuals fields generated by native Control IDs.
Detect Fields	Scans the field list and attempts to match them with field types. Note that although Detect Fields is usually accurate with typical applications, the fields should be checked for proper field types.
Refresh	Updates the field list.
Back	Go back to the previous Wizard page
Next	Go forward to the next Wizard page.

Summary

Displays the results of the Wizard. Do one of the following:

- Click **Finish** to save your settings and close the Wizard.

  or

- Click **Back** to return to a previous page and modify your settings.

Windows Form Wizard (for RSA SecurID Applications)

Use the Windows Form Wizard to perform any of these tasks:

- Configure new logons for RSA SecurID Windows applications.
- Add new forms to existing RSA SecurID logons
- Create forms for automatic PIN changes.
- Create forms for supporting a PIN confirmation field displayed in a separate window.
- Create forms for automatic detection of PIN change success and failure.

The Windows Form Wizard lets you use the application itself to identify its forms, the individual fields, and the submit **OK** button.

Before you begin this procedure, refer to the General Guidelines for configuring applications. Also see Adding Windows Applications for specific information about configuring Windows application logons.

To display the Windows Form Wizard, do one of the following:

1. Create a new Windows or Java application logon. Be sure to select the **RSA SecurID** check box in the Add Application dialog.

or

1. In the Identification tab (for a Windows form), click **Wizard**.

To configure a form:

1. Start the target application and navigate to the target form. Arrange the Oracle Enterprise Single Sign-On Administrative Console and target application windows so that you can see both at once.
2. In the Form Wizard, select the type of form you want to configure. The available options are:
   - **SecurID Logon.** Configures a SecurIDlogon form.
   - **PIN Change.** Configures a PIN change form.
   - **Confirm PIN.** Configures a new PIN confirmation form for applications that display their "Confirm PIN" field in a separate window.
   - **Logon Success.** Configures a form that serves as a match for the target application's Logon Success message. Since this form does not inject credentials, the Credentials page of the Windows Form Wizard is skipped. When the logon success message is detected, Logon Manager will automatically save the new credentials.
   - **Logon Failure.** Configures a form that serves as a match for the target application's logon failure message and reinjects credentials when the logon failure message is detected. If you select this option, you will be presented with the Credentials page of the Windows Form Wizard in which you will configure the necessary fields.
   - **PIN Change Success.** Configures a form that serves as a match for the target application's PIN change success message. Since this form does not inject credentials, the Credentials page of the Windows Form Wizard is skipped. When the PIN change success message is detected, Logon Manager will automatically save the new credentials.
   - **PIN Change Failure.** Configures a form that serves as a match for the target application's PIN change failure message and reinjects credentials when the PIN change failure message is detected. If you select this option, you will be presented with the Credentials page of the Windows Form Wizard in which you will configure the necessary fields.
3. In the Application Window list, select the window to configure. Note that a blinking outline indicates the application window you select.
4. Confirm that you have selected the correct window, then click **Next**.
5. In the Credential fields page, for each credential field:
   a. Select a field to configure; for example, the logon window's user ID field. In the application's window, a blinking outline indicates the field corresponding to your current selection.
   b. Confirm that you have selected the correct field, then right-click the selected item and choose the logon field type (for example, **UserID**) from the shortcut menu. The

corresponding icon appears to the left of the item. To deselect an item, right-click the item and choose **None** from the shortcut menu.

> New PIN Acceptance forms do not inject credentials and thus do not require you to configure any fields. In such cases, proceed to step 7, as the Credential Fields page will not be displayed.

> The Class and Text columns provide cues to the fields. For example, text boxes appear as "Edit" Class; PIN fields usually have the Text value *** HIDDEN ***

6. Repeat this process for each field required to complete the logon form. You can configure up to four fields in all.
7. Confirm that you have configured the necessary fields and button, then click **Next** A summary page appears, listing your configuration.
8. Do one of the following:
   - Click **Back** to return to a previous page and make corrections.
   - Click **Finish** to complete the logon configuration and close the Form Wizard.

Identification Tab for Configuring a Windows Application

Use the Identification (Windows) tab to modify program and window information about a Windows application logon configuration.

- Configure a logon manually by adding, editing or deleting entries in the AppPathKeys and Window Titles list, or
- Use the Windows Form Wizard to define windows, titles and fields by pointing and clicking.

To display this tab, do one of the following:

1. Create a new Windows application logon.

or

1. In the left pane, click **Applications** and select a Windows application.
2. Click the **General** tab in the right pane.
3. Select a logon form from the list and click **Edit**.

The Windows form-configuration dialog appears, displaying the **General** tab.

Controls

Form name	Name of the application logon form.
AppPathKeys	The Windows registry key identifying an application associated with this logon to match against running processes. (Usually the application executable's name, such as Eudora.exe.)
Window Titles	Text matched against logon window titles to identify logon requests. Click **Choose** to select a title from a currently-running application window.
Disabled	Select to disable this Windows template. This can be used with the sort order feature to disable certain Web pop-ups. This feature is useful in a situation where an application has hundreds of windows titles defined using Regular Expressions or wild cards, but a few of those window titles should not be responded to. Rather than creating hundreds of templates to respond to, an administrator can define the window title to match (with regular expressions or wild cards), and exclude those that should not be matched by creating a disabled template for them.
Wizard	Start the Windows Form Wizard for configuring an application visually.

Configuring an Application Using the Windows Form Wizard

- Click **Wizard**.

Configuring an Application Manually

1. Enter the **Name** of the application.
2. In the AppPathKey group, click **Add**.
3. In the Add AppPathKey dialog box, enter a valid application key (usually the application executable's name, such as Eudora.exe). Click **OK**.
4. In the Window Titles group click **Add**, then enter the Window title or click **Choose** to open the **Select Window** dialog box, where you can select a title from a currently-running application window.
5. Click **OK**.

Select Window Title

Use the Select Window dialog to choose the title of an application's logon or password change window.

- Select the logon or password change window and click **OK**.

Controls

Window List	Displays the windows of currently applications. Click on the column heads to sort the list.
Show hidden window	Select to include hidden windows in the Window list.

Fields Tab for Configuring a Windows Application

Use the Fields (Windows) tab to define how the Agent interacts with the fields of the logon form. You can identify one of the following for the currently-selected application form:

- Up to four logon fields (user ID, password, etc.), using Control IDs
- A series of keystrokes (with optional timings) that fill-in and submit the logon form, using Send-Keys.

To display this tab, do one of the following:

1. Create a new Windows application logon.

or

1. In the left pane, click **Applications** and select a Windows application.
2. Select the **General** tab in the right pane.
3. Select a logon form from the list and click **Edit**.
4. In the Windows form-configuration dialog box **General** tab, click the **Fields** tab.

Controls

Transfer Method (choose one)	**Control ID:** Use standard Windows control IDs to identify and transmit credentials to a field. Click **Add** to add a field and enter its Control ID or **Edit** to modify existing field settings. **SendKeys:** Configure fields by transmitting a keystroke series to the form. Click **Edit** to enter or change the series. **SendKeys using Journal Hook:** Configure fields by transmitting a keystroke series to the form using Journal Hook. Click **Edit** to enter or change the series.
Fields	Fields with transfer methods configured for this logon form. You can: • Select a field and click **Edit** to modify **Control ID**, **SendKeys**, or **SendKeys using Journal Hook** settings. • Click **Add** to add a field (for Control ID only).

ControlID

Use the **Control ID** dialog box to identify the fields and the submit button of a logon form in order to configure the Logon Manager response.

Controls

Controls	
Field	Select the credential data that the control represents, or identify the control as the **Submit** (**OK**) button. • **UserID** • **Password** • **Third Field** • **Fourth Field** • **OK** (submit control)
Control ID	Enter the control ID of the selected field or button.
Skip field if control is disabled	Select this option to prevent the Agent from entering data if the selected field is set not to accept user entry.

To display this dialog box, do one of the following:

1. Create a new Windows application logon.

or

1. In the left pane, select **Applications** and select a Windows application.
2. Select the **General** tab in the right pane.
3. Do one of the following:

- Select a logon form from the list and click **Edit**.

or

- Click **Add** to configure a new form.

2. From the Windows form configuration dialog box General tab, do one of the following:

- Click the **Fields** tab, select **Control IDs** as the Transfer Method, then click **Edit**.

or

- Click the **Matching** tab, click **Add**, then click **Control ID**.

SendKeys for a Windows Application Logon

Use the SendKeys dialog box to specify a series of keystrokes that Logon Manager should transfer to the logon form.

Use the SendKeys option for Windows applications that:

- Cannot receive credentials from the Windows message queue or by other techniques the Agent normally uses to send credentials.
- Do not use standard Windows controls that have Control IDs.
- Dynamically generate controls or do not use Windows controls at all (for example, Flash applications).

The New Actions list box in the right pane of the SendKeys dialog box provides the keystroke options for each action. Highlight the action to configure SendKeys for, and select or type the options you need on for each action. Click the **Insert** button to add the key or action to the series.

For East-Asian Language Applications: When adding information using SendKeys in an East Asian-language (Chinese, Japanese, Korean) application template, you must insert an **Enter** key press preceding the **Tab** key that advances to the next field. The **Enter** key signals the Input Method Editor that you have completed the field and allows the IME to differentiate the credentials fields.

Journal Hook SendKeys for East-Asian languages is not compatible with Logon Manager.

Your selections appear in the Current Actions list in the left pane:

- To change the order of the series, select an item and click the **up** or **down arrows** to move it.
- To delete an item, select it, and click **Delete**.
- To edit an item, select it, and click **Edit**. The Edit Action dialog opens. Edit the fields as necessary and click **OK**.

Controls

New Action	Controls	Description
Fields	**Field Type**	Select a credential item from the list to add to the series. • **UserID** • **Password** • **Third Field** • **Fourth Field** • **Old Password** • **New Password** • **Confirm New Password**
	Character to insert after field	Select a keystroke to insert automatically after the field is filled: • **None** (no keystroke) • **Enter** (to submit the form) • **Tab** (to advance the cursor) Also see Special Keys, below.
	Inject directly into control	Injects the credential directly into the control. Click the ellipsis "**...**" button to open the Choose Control ID dialog box.  When using SendKeys, the application is treated as a Windows application. The controls that appear in the Choose Control ID dialog box indicate whatever Windows controls Logon Manager can find.
	Insert	Add the current selection to the series.

New Action	Controls	Description
Click	**Click at a coordinate**	Simulates a mouse click at the X, Y coordinate specified. **X:** Choose the X coordinate for the mouse click. **Y:** Choose the Y coordinate for the mouse click. **Relative to the:** Select where the mouse click will be relative to: • Screen • Active Window **Mouse button:** Select which mouse button will be clicked: • **Left** • **Middle** • **Right**
	Click on a control	This option is similar to clicking at a specified coordinate, except that Logon Manager determines where the control is and simulates a click in the center of the control. Click the ... button to open the Choose Control ID dialog box. When using SendKeys, the application is treated as a Windows application. The controls that appear in the Choose Control ID dialog box indicate whatever Windows controls Logon Manager can find.
	Insert	Add the click selection to the series..

New Action	Controls	Description
Run Task	**Command line to run**	Enter a Command line to be executed. This feature allows you to run a program in the middle of entering keystrokes. • Window Handles can be appended to the command line to inform the script of the window handle currently being worked on: $(HWND) • Environment Variables can also be appended to the command line: $(USERDOMAIN)\$(USERNAME) Click the **...** button to open the Choose Control ID dialog box. Virtual key codes cannot be used within the command line (the initial backquote character will terminate the command line).
	Expected return code	Enter the expected return code. The rest of the Sendkeys script is discarded if this value is not returned.
	Time out (sec.)	Enter the number of milliseconds to wait for the task to complete. The rest of the Sendkeys script is discarded if this timeout is reached. The maximum timeout period is 5 seconds.
	Insert	Add the task to the series.

New Action	Controls	Description
Delay	**Length of delay (in seconds)**	Type or select a delay between keystrokes.
	Insert	Add the delay to the series.

New Action	Controls	Description
Set Focus	**Set focus to control**	Sets the focus to the control. Click the **...**button to open the Choose Control ID dialog box.  When using SendKeys, the application is treated as a Windows application. The controls that appear in the Choose Control ID dialog box indicate whatever Windows controls Logon Manager can find.
	Insert	Add the focus to the series.

New Action	Controls	Description
Text	**Enter text to insert**	Type any literal text to add to the series.
	Insert	Add the text to the series.

New Action	Controls	Description
Special Keys	**Category /Keys**	Choose a keystroke category (for example, Movement keys) from the left list, then a specific key (for example, Page Down) from the right list.
	Key Press	Insert the key as a single keystroke (default).
	Key Down/Up	Insert the key as a pair of actions: key-press and key-release. This option lets you insert other keystrokes between these actions to indicate one or more keys held down as another is typed, as for a "hot key" combination that moves the focus to a specific text box. For example, to insert the keystroke "**Alt+P**," select the **Key Down/Up** option, then select **Modifier** for the Category and **Alt** for the Key. and click **Insert**. This inserts two actions: [Down:Alt] and [Up:Alt]. Select the **Text** tab and enter **P** in the text box. In the left pane, select **[Up:Alt]** and click **Insert**. The "P" is inserted between the two Alt-key actions, producing "Alt-P."
	Insert	Add the keystroke to the series.

To display this dialog box:

1. Do one of the following:

a. Create a new Windows application logon.

or

a. In the left pane, click **Applications** and select a Windows application.
b. Click the **General** tab in the right pane.
c. Do one of the following:

- Select a logon form from the list and click **Edit**.

or

- Click **Add** to configure a new form.

The Windows form-configuration dialog opens, displaying the **General** tab.

2. Click the **Fields** tab, select **SendKeys** as the Transfer Method, then click **Edit**.

Matching Dialog Box

Use this dialog box to create match criteria that the Agent uses to distinguish among similar target forms that use the same credential data. This lets the Agent apply a single set of user credentials appropriately to these multiple forms. To display this dialog box, from the Matching tab (for configuring a Windows logon form) click **Add**.

The easiest and most efficient way to create match criteria is through the Control Match Wizard. The Wizard lets you specify match criteria by selecting elements from the target form itself. You can also create and modify match criteria manually.

Creating Match Criteria Using the Wizard

- Click **Wizard** and follow the onscreen instructions.

Creating or Modifying Match Criteria Manually

1. Enter a Match name and select the **Type** of the target form.
2. Add or edit the **Window Titles** that the target form displays, or select **Use Titles from Main**.
3. Add or edit the **Control Matching** items: these are criteria based on the properties of form objects (such as a text caption, or a control class). Together these items uniquely identify the target form.
4. Add or edit the **Control IDs** of the target form's credential fields.
5. Click **OK**.

Controls

Match Name	Enter or edit the name for the Match
Type	Select the type of form to match: • **Logon** • **Change Password** • **Confirm (Password)** • **Ignore** • **Logon Success** • **Logon Failure** • **Password Change Success** • **Password Change Failure**  Unlike the "Logon," "Change Password," "Confirm," and "Ignore" match types, these matches cannot be explicitly selected by the user. They are determined by form type.
Windows Titles	Click **Use Titles from Main** to copy the Windows Titles in the General tab for this logon or click **Add** to enter titles manually.
Control Matching	Click **Add** (or select a matching item and click **Edit**) to display the Control Matching dialog box.
Control ID	Click **Add** (or select a control ID item and click **Edit**) to display the Control ID dialog box.
Wizard	Start the Control Match Wizard.

Add/Edit Window Title

Use this dialog box to add or modify the text string that the Agent uses to detect specific application windows (for example, for logon entry or password change) by their window title.

Specifying a Window Title for Matching

1. Select one of the following (see Matching Expressions, below).
   - **Exact match**
   - **Use wildcards** (does not apply to Kiosk Manager)
   - **Use regular expression** (does not apply to Kiosk Manager)
2. Type (or edit) the **Window Title** or a matching expression.
3. Click **OK**.

Matching Expressions

For applications that have varying text in their URLs, you can use substrings or regular expressions to specify how to match the variable text.

Wildcards	• **?** (question mark) matches any single character. • ***** (asterisk) matches zero or more occurrences of any character.  This does not apply to Kiosk Manager.
Regular Expressions	You can also use the set of regular expressions to specify a string pattern that the Agent should recognize as a match.  This does not apply to Kiosk Manager.

Matching Environment Variables

For applications that include the user's name in the URL (as derived from the DOMAINUSER environment variable in the workstation operating system), select **Exact** as the matching criterion, and use one of the following substitution tokens in the match string:

%DOMAINUSER%	User name exactly as derived from the environment variable
%UC%%DOMAINUSER%	User name converted to all upper case
%LC%%DOMAINUSER%	User name converted to all lower case

Example

This Window Title entry matches a password-change window title that includes the username.

Password Expired - %UC%%DOMAINUSER%

Control Matching

Use the Control Matching dialog box to specify a match criterion based on the properties of a target-form control (such as a text caption, or a control style).

Controls

Control ID	Type the numeric identifier of the control.	
Match Condition	Select one property of the control, select a relation (**Equals** or **Not Equal**, **Equals regular expression**, **Not equals regular expression**), and type or select the condition that should (or should not) be met. The valid conditions for each property are:	
	Class	**Edit** or **Static** control
	Style	A decimal numeric identifier for the aggregate of styles applied to the control.
	Text	A literal string.

Click **OK** to save and exit the dialog box or **Cancel** to exit without changes.

Control ID dialog box (Windows Fields tab)

Use the Control ID dialog box to identify the fields and the **Submit** button of a logon form in order to configure the Agent's response.

Controls

Field	Select the credential data that the control represents, or identify the control as the **Submit** (**OK**) button. • **UserID** • **Password** • **Third Field** • **Fourth Field** • **OK** (submit control)
Control ID	Enter the control ID of the field or button.
Control Type	Select the control type: • **Edit** (text box) • **Combo** (drop-down list box) • **List**

In most cases, you can use the Windows Form Wizard to identify fields and control IDs.

Control Match Wizard

Use the Control Match Wizard to define match criteria by choosing from the windows and controls of the target application. The Agent uses match criteria to identify a target form, such as a password-change dialog, that is similar to the currently selected logon. The Agent then supplies data to the matched target form using the same credentials as the original logon. You can also use match criteria to specify target forms similar to the current logon that the Agent should ignore.

Using the Wizard to Create Match Criteria

1. Start the target application and navigate to the target form. Arrange the Oracle Enterprise Single Sign-On Administrative Console and target application windows so that you can see both at once.
2. Select a form **Match Type**, then follow the onscreen instructions or help topics.
   - Ignore
   - Logon
   - Password Change
   - Password Confirm

See the Matching tab for more information

To display the Control Match Wizard:

1. From the Matching tab, select **Add** (for configuring a Windows logon form). The Matching dialog box appears.
2. Click **Wizard**.

Ignore App Window

Use this Wizard page to choose the application window that the Agent should recognize.

1. Select the application window that the Agent should ignore from the Window List.
2. Click **Next** to display the Match Fields page.

Controls

Window List	Displays the windows of currently applications. Click on the column heads to sort the list.
Show hidden window	Select to include hidden windows in the Window list.
Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Ignore Match Fields

Use this Wizard page to choose a set of match fields, one or more window objects that uniquely identify the application window that the Agent should recognize. You can identify a match field by its Class (the type of control, such as Edit or Static), its Style (the aggregate of its properties

identified by a number), or its Text.

1. In the field list, right-click a field and select the match criteria.
2. Click **Next** to display the Summary page.

Controls

Match Fields	Displays the fields of the currently selected application window. Click on the headers (**Class**, **ID, Text** or **Style**) to sort the list. Right-click a field in the list to display a shortcut menu of match criteria: • **None** (deselect field) • **Class** • **Style** • **Text**
Use ordinals instead of control IDs	Indicates that the Agent should transmit data to this form as a series of numbered control IDs assigned by Logon Manager, rather than addressing individuals fields generated by native Control IDs.
Refresh	Updates the list.
Back	Goes back to the previous Wizard page.
Next	Goes forward to the next Wizard page.

Logon App Window

Use this Wizard page to choose the application window that the Agent should recognize.

1. Select the application window that the Agent should recognize as a logon form from the Window List.
2. Click **Next** to display the Match Fields page.

Window List	Displays the windows of currently applications. Click on the column heads to sort the list.
Show hidden window	Select to include hidden windows in the Window list.
Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Logon Match Fields

Use this Wizard page to choose a set of match fields: one or more window objects that uniquely identify the application window that the Agent should recognize. You can identify a match field by its Class (the type of control, such as Edit or Static), its Style (the aggregate of its properties identified by a number), or its Text.

1. In the field list, right-click a field and select the match criteria
2. Click **Next** to display the Credentials page.

Controls

Match Fields	Displays the fields of the currently selected application window. Click on the headers (**Class**, **ID**, **Text** or **Style**) to sort the list. Right-click a field in the list to display a shortcut menu of field types: • **None** (deselect field) • **Class** • **Style** • **Text**
Use ordinals instead of control IDs	Indicates that the Agent should transmit data to this form as a series of numbered control IDs assigned by Logon Manager, rather than addressing individuals fields generated by native Control IDs.
Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Logon Credential

Use this Wizard page to identify the field in which the Agent should supply credential data.

1. In the field list, right-click a field and select the credentials.
2. Click **Next** to display the Summary page.

Controls

Credential Fields	Displays the fields of the currently selected application window. Click on the headers (**Class**, **ID**, **Text** or **Style**) to sort the list. Right-click a field in the list to display a shortcut menu of field types: • **None** (deselect field) • **UserID** • **Password** • **Third Field** • **Fourth Field**
Use ordinals instead of control IDs	Indicates that the Agent should transmit data to this form as a series of numbered control IDs assigned by Logon Manager, rather than addressing individuals fields generated by native Control IDs.
Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Password Change App Window

Use this Wizard page to choose the application window that the Agent should recognize.

1. Select the application window that the Agent should recognize as a password-change form from the Window List.
2. Click **Next** to display the Match Fields page.

Window List	Displays the windows of currently applications. Click on the column heads to sort the list.
Show hidden window	Select to include hidden windows in the Window list.
Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Password Change Match Fields

Use this Wizard page to choose a set of match fields: one or more window objects that uniquely identify the application window that the Agent should recognize. You can identify a match field by its Class (the type of control, such as Edit or Static), its Style (the aggregate of its properties identified by a number), or its Text.

1. In the field list, right-click a field and select the match criteria
2. Click **Next** to display the Credentials page.

Controls

Match Fields	Displays the fields of the currently selected application window. Click on the headers (**Class**, **ID**, **Text** or **Style**) to sort the list. Right-click a field in the list to display a shortcut menu of field types: • **None** (deselect field) • **Class** • **Style** • **Text**
Use ordinals instead of control IDs	Indicates that the Agent should transmit data to this form as a series of numbered control IDs assigned by Logon Manager, rather than addressing individuals fields generated by native Control IDs.
Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Password Change Credential

Use this Wizard page to identify the field in which the Agent should supply credential data.

1. In the field list, right-click a field and select the credentials.
2. Click **Next** to display the Summary page.

Controls

Credential Fields	Displays the fields of the currently selected application window. Click on the headers (**Class**, **ID**, **Text** or **Style**) to sort the list. Right-click a field in the list to display a shortcut menu of field types: • **None** (deselect field) • **UserID** • **Old Password/PIN** • **New Password/PIN** • **Confirm Password/PIN**
Use ordinals instead of control IDs	Indicates that the Agent should transmit data to this form as a series of numbered control IDs assigned by Logon Manager, rather than addressing individuals fields generated by native Control IDs.
Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Password Confirm App Window

Use this Wizard page to choose the application window that the Agent should recognize.

1. Select the application window that the Agent should recognize as a password-confirmation form from the **Window List**.
2. Click **Next** to display the **Match Fields** page.

Window List	Displays the windows of currently applications. Click on the column heads to sort the list.
Show hidden window	Select to include hidden windows in the Window list.

Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Password Confirm Match Fields

Use this Wizard page to choose a set of match fields: one or more window objects that uniquely identify the application window that the Agent should recognize. You can identify a match field by its **Class** (the type of control, such as Edit or Static), its **Style** (the aggregate of its properties identified by a number), or its **Text**.

1. In the field list, right-click a field and select the match criteria
2. Click **Next** to display the **Credentials** page.

Controls

Match Fields	Displays the fields of the currently selected application window. Click on the headers (**Class**, **ID**, **Text** or **Style**) to sort the list. Right-click a field in the list to display a shortcut menu of field types: • **None** (deselect field) • **Class** • **Style** • **Text**
Use ordinals instead of control IDs	Indicates that the Agent should transmit data to this form as a series of numbered control IDs assigned by Logon Manager, rather than addressing individuals fields generated by native Control IDs.
Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Password Confirm Credential

Use this Wizard page to identify the field in which the Agent should supply credential data.

1. In the field list, right-click a field and select the credentials.
2. Click **Next** to display the **Summary** page.

Controls

Credential Fields	Displays the fields of the currently selected application window. Click on the headers (**Class**, **ID**, **Text** or **Style**) to sort the list. Right-click a field in the list to display a shortcut menu of field types: • **None** (deselect field) • **UserID** • **Old Password/PIN** • **New Password/PIN** • **Confirm Password/PIN**
Use ordinals instead of control IDs	Indicates that the Agent should transmit data to this form as a series of numbered control IDs assigned by Logon Manager, rather than addressing individuals fields generated by native Control IDs.
Refresh	Updates the list.
Back	Go back to the previous Wizard page.
Next	Go forward to the next Wizard page.

Options Tab for Configuring a Windows Application

Use the Miscellaneous (Windows) tab to refine properties of the currently-selected application logon form for special configurations.

To display this tab, do one of the following:

a. Create a new Windows application logon.

or

a. In the left pane, click **Applications** and select a Windows application.
b. Click the **General** tab in the right pane.
c. Select a logon form from the list and click **Edit**.
d. From the General tab in the Windows form-configuration dialog box, select the **Options** tab.

Controls

Attach to window's Message Queue	Select to hold on to the target window while sending credentials.
Preset Focus	Select to set the focus on a logon field before the Agent places data in the field.
System Logon	(Reserved)
Use WM_CHAR messages to fill controls	Some applications require that you enter passwords via a keyboard and not set text commands. Enabling this setting simulates keyboard entry in an alternate way by setting text within controls.
Adhere to Logon Loop Grace Period	Select to have the Agent ignore this application's logon form when the logon loop grace period (set on the application's Miscellaneous tab) is in effect.
Fall back to SendKeys if direct injection fails	Indicates whether to use SendKeys to enter credentials if direct injection using ControlIDs fails. Default is Yes.
Auto-Recognize	Select to have the Agent recognize the application automatically. If this setting is checked or unchecked, it overrides the global Agent setting. If this setting is checked, the user can configure this setting from the Logon Manager. If this setting is unchecked, the user will not have access to this setting from the Logon Manager.
Auto Submit	Select to have the Agent automatically select **OK** for this application logon after providing credentials.
Sort Order	Specify the order in which Logon Manager searches templates for window class titles containing regular expressions. By setting sort order, you increase the efficiency of your search without eliminating less precise matches. If you do not assign a sort order to a template, Logon Manager checks templates in ascending order (lower values are checked first). Default is 1000.
Detection Delay	The time interval that the Agent should wait before detecting the application fields.

Creating a New Web Application Template

The Web Form Wizard simplifies the process of creating a new Web application template. You can launch the Web Form Wizard using the "Applications" menu or the "Add Application" icon in the Oracle Enterprise Single Sign-On Administrative Console, or directly from the window of an open application.

Creating a Template Using the Oracle Enterprise Single Sign-On Administrative Console

1. In the left pane, right-click **Applications** then select **New Web App** from the shortcut menu. The Add Application dialog box appears with the Web option selected.
2. Type a **Name** for the new logon and click **OK**. The Web Form Wizard (for configuring new logon forms) launches.

   or

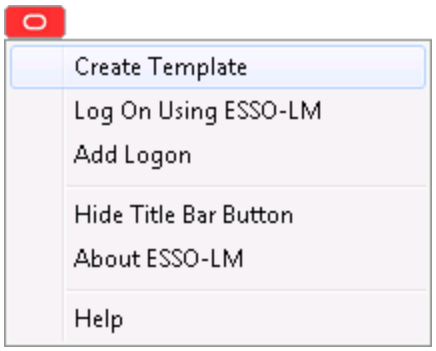
1. Click the **Add Application*** icon on the Oracle Enterprise Single Sign-On Administrative Console toolbar.
2. Select a Web application from the "Select Window" screen. The Web Form Wizard (for configuring new logon forms) launches.

Creating a Template Using an Open Application

You can create a new template on-the-fly for a Web application while the application is running.

In order to perform this procedure, both the Oracle Enterprise Single Sign-On Administrative Consoleand the Logon Manager Agent must be running, and you must configure the Agent settings to display the Title Bar Button .

1. Open a browser and navigate to the URL for which you want to create a template.
2. Select **Create Template*** from the browser's Title Bar Button menu.



   The Web Form Wizard (for configuring new logon forms) launches.

See Adding Web Applications for more information.

**This menu item is new as of version 11.1.1.5.0.*

Web Form Wizard

The Web Form Wizard lets you browse the Web application itself to capture the identifiers for its logon or password-change windows, the individual fields, and the submit **OK** button. To display the Web Form Wizard:

1. Create a New Web application.
2. In the New Web Application configuration dialog, click **Wizard**. The Web Form Wizard appears.

> When using a workstation running at 800x600 resolution, buttons are missing from the bottom of the Web Form Wizard. The wizard is also extremely slow to start at this resolution. Oracle recommends that you set the resolution on your workstation to a higher resolution.

Configuring a Web Application

1. In the dialog box that appears, select the type of application form you want to configure. The available options are:
   - **Logon**. Configures a logon form.
   - **Logon success.** Configures a form that detects a match during silent credential capture. In the presence of this form, the Agent delays credential capture until it verifies the user's entries and displays the Logon Success dialog box. If this form is not present, the Agent captures credentials immediately after the user enters them and clicks **OK**. Refer to the Oracle Knowledgebase for a full discussion on using this form.
   - **Logon failure.** Configures a form that detects a non-match during silent credential capture. In the presence of this form, the Agent delays credential capture until it verifies the user's incorrect entries and displays the Logon Failure dialog box. If this form is not present, the Agent immediately informs the user that the credentials are incorrect, displaying either the New Logon dialog box or the Retry Logon dialog box to allow the user to re-enter credentials. Refer to the Oracle Knowledgebase for a full discussion on using this form.
   - **Password change.** Configures a password change form.
   - **Password confirmation.** Configures a form that verifies that the user's second password entry in a password change form is identical to the first password entry.
   - **Password change success.** Configures a form that serves as a match for the target application's password change success message. Since this form does not inject credentials, the Credentials page of the Web Form Wizard is skipped. When the password change success message is detected, Logon Manager will automatically save the new credentials.
   - **Password change failure.** Configures a form that serves as a match for the target application's password change failure message and reinjects credentials when the password change failure message is detected. If you select this option, you will be presented with the Credentials page of the Web Form Wizard in which you will configure the necessary fields.

   > If you are editing an existing form, this dialog box will not appear.

2. In the Web Form Wizard, enter the Web Address (URL) of the Web site and click **Go**. The top pane of the Wizard acts as a web browser window. You can resize the Wizard's window as

needed.

3. In the top pane, navigate to the Web site's logon form. When the Wizard detects one or more forms in a web page, it lists the forms and their elements (fields and buttons) in the bottom pane.
4. Click the **Detect Fields** button. The Wizard attempts to detect and configure the credential fields and marks them accordingly:
   - Username/ID
   - Password
   - Old Password (password change forms only)
   - New Password (password change forms only)
   - Submit button.
5. (Optional) Select **Use ordinals instead of names**. The Credential Fields Screen displays the fields, assigning control IDs by location order instead of using native (dynamic) control IDs.
6. (Optional) Select **Show non-input fields**. The Oracle Enterprise Single Sign-On Administrative Console detects fields that have input functionality but into which you cannot enter information, such as IMG tags that function as Submit buttons, and includes these fields in the Web Form Wizard fields list.
7. (Optional) Select **Allow multiple field designation**. The Oracle Enterprise Single Sign-On Administrative Console recognizes multiple fields that require the same credential, such as enter and confirm password fields, or a page with the same field on two forms.
8. Confirm that the Wizard has selected the correct fields. You can modify a selection, if necessary:
   a. If you are editing an existing template, you may change the form type using the Form Type drop-down at the lower right. Keep in mind that if you do so, you will need to reconfigure the template (reassign fields, and so on). Only fields relevant to a given form type are displayed when that form type is selected.
   b. Identify and select a field from the list in the bottom pane. (The Element and Type descriptions provide cues.) In the top pane, a blinking outline indicates the corresponding field or button you have selected.
   c. Confirm that you have selected the correct field, then right-click the selected item and choose from the shortcut menu (for example, **UserID**). An icon appears to the left of the item. To deselect an item, right-click the item and select **None** from the shortcut menu.
9. Confirm that the Wizard has selected the correct fields. You can modify a selection, if necessary:
   a. If you are editing an existing template, you may change the form type using the Form Type drop-down at the lower right. Keep in mind that if you do so, you will need to reconfigure the template (reassign fields, and so on). Only fields relevant to a given form type are displayed when that form type is selected.
   b. Identify and select a field from the list in the bottom pane. (The Element and Type descriptions provide cues.) In the top pane, a blinking outline indicates the corresponding field or button you have selected.
   c. Confirm that you have selected the correct field, then right-click the selected item and choose from the shortcut menu (for example, **UserID**). An icon appears to the left of the item. To deselect an item, right-click the item and select **None** from the shortcut menu.

10. Confirm that the Wizard has selected the correct fields. You can modify a selection, if necessary:
    a. If you are editing an existing template, you may change the form type using the Form Type drop-down at the lower right. Keep in mind that if you do so, you will need to reconfigure the template (reassign fields, and so on). Only fields relevant to a given form type are displayed when that form type is selected.
    b. Identify and select a field from the list in the bottom pane. (The Element and Type descriptions provide cues.) In the top pane, a blinking outline indicates the corresponding field or button you have selected.
    c. Confirm that you have selected the correct field, then right-click the selected item and choose from the shortcut menu (for example, **UserID**). An icon appears to the left of the item. To deselect an item, right-click the item and select **None** from the shortcut menu.
11. Repeat this process for each field required to complete the logon form. You can configure up to four fields in all.
12. Repeat the two previous steps for each field required to logon. You can configure up to four fields in all.
13. When you have completed your configuration click **OK** to save it and close the Web Form Wizard.

Web Form Wizard (for RSA SecurID Applications)

Use the Web Form Wizard to perform any of these tasks:

- Configure new logons for RSA SecurID Windows applications.
- Add new forms to existing RSA SecurID logons.
- Create forms for automatic PIN changes.
- Create forms for automatic detection of PIN change success and failure.

The Web Form Wizard lets you browse the Web application itself to capture the identifiers for its forms and windows, the individual fields, and the submit (OK) button. To display the Web Form Wizard:

1. Create a New Web application. Be sure to select the **RSA SecurID** check box in the Add Application dialog.
2. In the New Web Application configuration dialog, click **Wizard**. The Web Form Wizard appears.

When using a workstation running at 800x600 resolution, buttons are missing from the bottom of the Web Form Wizard. The wizard is also extremely slow to start at this resolution. Oracle recommends that you set the resolution on your workstation to a higher resolution.

Configuring a Web Application

1. In the dialog box that appears, select the type of application form you want to configure. The available options are:
    - **SecurID Logon**. Configures a SecurID logon form.
    - **SecurID Logon success.** Configures a form that detects a match during silent credential capture. In the presence of this form, the Agent delays credential capture until it verifies

the user's entries and displays the Logon Success dialog box. If this form is not present, the Agent captures credentials immediately after the user enters them and clicks **OK**. Refer to the Oracle Knowledgebase for a full discussion on using this form.

- **SecurID Logon failure.** Configures a form that detects a non-match during silent credential capture. In the presence of this form, the Agent delays credential capture until it verifies the user's incorrect entries and displays the Logon Failure dialog box. If this form is not present, the Agent immediately informs the user that the credentials are incorrect, displaying either the New Logon dialog box or the Retry Logon dialog box to allow the user to re-enter credentials. Refer to the Oracle Knowledgebase for a full discussion on using this form.
- **PIN change.** Configures a PIN change form.
- **PIN confirmation.** Configures a form that verifies that the user's second password entry in a password change form is identical to the first password entry.
- **PIN change success.** Configures a form that serves as a match for the target application's PIN change success message. Since this form does not inject credentials, the Credentials page of the Web Form Wizard is skipped. When the PIN change success message is detected, Logon Manager will automatically save the new credentials.
- **PIN change failure**. Configures a form that serves as a match for the target application's PIN change failure message and reinjects credentials when the PIN change failure message is detected. If you select this option, you will be presented with the Credentials page of the Web Form Wizard in which you will configure the necessary fields.

 If you are editing an existing form, this dialog box will not appear.

2. In the Web Form Wizard, enter the Web Address (URL) of the Web site and click **Go**. The top pane of the Wizard acts as a Web browser window. You can resize the Wizard's window as needed.
3. In the top pane, navigate to the Web site's logon form. When the Wizard detects one or more forms in a Web page, it lists the forms and their elements (fields and buttons) in the bottom pane.
4. Click the **Detect Fields** button. The Wizard attempts to detect and configure the credential fields and marks them accordingly:
   - SecurID Username
   - Passcode
   - Tokencode
   - Old PIN (PIN change and PIN change failure forms only)
   - New PIN (PIN change and PIN change failure forms only)
   - Submit button.
5. (Optional) Select **Use ordinals instead of names**. The Credential Fields Screen displays the fields, assigning control IDs by location order instead of using native (dynamic) control IDs.
6. (Optional) Select **Show non-input fields**. The Oracle Enterprise Single Sign-On Administrative Console detects fields that have input functionality but into which you cannot enter information, such as IMG tags that function as Submit buttons, and includes these fields in the Web Form Wizard fields list.

7. (Optional) Select **Allow multiple field designation**. The Oracle Enterprise Single Sign-On Administrative Console recognizes multiple fields that require the same credential, such as enter and confirm password fields, or a page with the same field on two forms.
8. Confirm that the Wizard has selected the correct fields. You can modify a selection, if necessary:
    a. If you are editing an existing template, you may change the form type using the Form Type drop-down at the lower right. Keep in mind that if you do so, you will need to reconfigure the template (reassign fields, and so on). Only fields relevant to a given form type are displayed when that form type is selected.
    b. Identify and select a field from the list in the bottom pane. (The Element and Type descriptions provide cues.) In the top pane, a blinking outline indicates the corresponding field or button you have selected.
    c. Confirm that you have selected the correct field, then right-click the selected item and choose from the shortcut menu (for example, **SecurID Username**). An icon appears to the left of the item. To deselect an item, right-click the item and select **None** from the shortcut menu.
9. Repeat this process for each field required to complete the logon form. You can configure up to four fields in all.
10. Repeat the two previous steps for each field required to logon. You can configure up to four fields in all.
11. When you have completed your configuration click **OK** to save it and close the Web Form Wizard.

Identification Tab for Configuring a Web Application

Use the Identification (Web) tab to modify program and window information for a Web application logon configuration.

- You can configure a logon manually by adding, editing, or deleting entries in the Form name and URL fields,

or

- You can use the Web Form Wizard to define URLs, forms, and fields by pointing and clicking.

To display this tab, do one of the following:

1. Create a new Web application logon.

or

1. In the left pane, click **Applications** and select a Web application.
2. Click the **General** tab in the right pane.
3. Select a form from the list and click **Edit**.

The Web form-configuration window appears, displaying the **General** tab.

Controls

Form name	Enter an application name.
URL	One or more URLs of the logon or password-change form to configure. Click **Add** (or select a matching item and click **Edit**) to display the URL dialog box. Click **Delete** to remove a URL.

Fields Tab for Configuring a Web Application

Use the Fields (Web) tab to define how the Agent interacts with the fields of the logon form. Select one of the following transfer methods for the currently-selected application form:

- Up to four logon fields (user ID, password, etc.), using Control IDs
- A series of keystrokes (with optional timings) that fill-in and submit the logon form, using SendKeys or SendKeys using Journal Hook.

  If you want to switch from one transfer method to the other after creating a Web form, select the desired transfer method on this screen. The Oracle Enterprise Single Sign-On Administrative Console converts the fields for the transfer method you selected.

> When you switch from Control IDs to SendKeys, all fields convert with a direct injection setting. You can change the injection method during the editing process. When you switch from SendKeys to Control IDs, any field that is not set to inject directly does not convert.

To display this tab, do one of the following:

1. Create a new Web application logon.

- *or*

1. In the left pane, click **Applications** and select a Windows application.
2. Select the **General** tab in the right pane.
3. Select a logon form from the list and click **Edit**.
4. In the Windows form-configuration dialog box **General** tab, click the **Fields** tab.

Controls

Transfer method (choose one)	**Options:** • **Control IDs:** Use standard Windows control IDs to identify and transmit credentials to a field. Click **Add** to add a field and enter its Control ID or **Edit** to modify existing field settings. • **SendKeys:** Configure fields by transmitting a keystroke series to the form. Click **Edit** to enter or change the series. • **SendKeys using Journal Hook:** Configure fields by transmitting a keystroke series to the form using Journal Hook. Click **Edit** to enter or change the series.
Fields	One or more credential fields (including the Submit button) with transfer methods and their identifying information. You can: • Select a field and click **Edit** to modify Control ID or SendKeys settings. • Click **Add** to add a field (for Control ID only). • Click **Delete** to remove a field (for Control ID only). • Use the **Up** and **Down** arrows to re-order the fields.

Dynamic and Ordinal Control IDs

Certain applications change the control ID for each field with every application launch. Logon Manager provides you with the option to assign ordinal ID numbers to replace these dynamic control IDs, thereby eliminating variations in control IDs with each application launch.

Logon Manager assigns mandatory ordinal field IDs by default to .NET applications, which have no native support for control IDs.

Configuring Logon Manager to assign ordinal control IDs

1. Launch the Oracle Enterprise Single Sign-On Administrative Console.
2. Pause the Logon Manager Agent.
3. Launch an application to create a template.
4. Launch the template wizard.
5. Select **Logon**.

   The control ID for each field appears in the Credential Fields screen. For applications with dynamic control IDs, these ID numbers will vary with each launch. (This does not apply to .NET applications, which have no native control IDs.)

6. Select **Use ordinals instead of control IDs**.
   - The Credential Fields Screen displays the fields, assigning control IDs by location order instead of using native (dynamic) control IDs.
   - For applications with native Control ID Support, if Use ordinals instead of control IDs is checked, the control ID detection is done by enumerating controls on the application window. The ID column will be filled with field ordinals and the display refreshes.
   - If you select not to use ordinal IDs, dynamic control IDs will display as the default (except for .NET applications, for which the ordinals are already displayed).
   - If you select **Use 'Send Keys' for this form. Do not use Control ID**, the **Use ordinals instead of control IDs** option is unavailable.
7. Select a numeric field value to determine which field is assigned to the ID. The field will be surrounded by a flashing border. Right-click the dropdown menu to select the field name (for instance, Username or Password).

SendKeys Settings for a Web Application

Use the controls on this screen to define SendKeys actions. If you convert the transfer method from Control IDs to SendKeys or SendKeys using Journal Hook, Oracle Enterprise Single Sign-On Administrative Console automatically converts the ControlID settings to SendKeys actions, and specifies the "Direct injection" option. If you convert from either SendKeys transfer method to Control IDs, you must configure the settings to use direct injection or they will be lost.

Using the SendKeys Editor

1. On the "Fields" tab, select **SendKeys** as the transfer method. The "Fields" window changes to reflect conversion of the existing fields, whose names now include "-> *direct injection*."
2. Click the **Edit** button to open the SendKeys editor. The "Current Actions" list contains the items that the editor has detected.

   The "New Actions" box contains a list of additional controls to add to the form. Depending on what you select in this list, the options to its right vary.

   For example, if you select **Fields** from the "New Actions" list, the "Field Type" box appears, offering choices of a third and fourth field. If you select **Delay**, a menu in which you can specify a delay interval appears.
3. Select an item in the Current Actions list and click the **Edit** button below the list to change the settings for that field or action. Click the **Up** or **Down** arrows to re-order the list.
4. Use the "New Actions" section of the SendKeys editor to add fields and actions to the list. Refer to the tables below for information on configuring the various action choices.

   After you configure a New Action and insert it, it appears as part of the "Current Actions" list.

SendKeys Controls

Current Actions	
Keys/Actions	Lists the keys and actions that the editor detected. If you converted this list from Control IDs to SendKeys, every action is configured for direct injection by default. Use the **Up** and **Down** arrows to re-order the items in this list.

New Action	Controls	Description
Fields	**Field Type**	Select a credential item from the list to add to the series. • **Username/ID** • **Password** • **Third Field** • **Fourth Field**
	Character to insert after field	Select a keystroke to insert automatically after the field is filled: • **None** (no keystroke) • **Enter** (to submit the form) • **Tab** (to advance the cursor) Also see Special Keys, below.
	Inject directly into control	Injects the credential directly into the control. Click the ellipsis ("**...**") button to open the Web Field dialog box.
Web Field	**Function**	This box is pre-filled with the name of the field that you are editing and cannot be changed. 1. Click **Wizard** to launch the Web Form Wizard, which is pre-filled with the URL that you specified previously. 2. Select a field from the Web page in the wizard and click **OK** to close the wizard. You return to the "Web Field" dialog box, which is populated with the parameters of the field that you selected. 3. Click **OK** to exit the "Web Field" dialog box. The "Current Actions" list now includes the field or action that you just configured.
	Frame	Identifies the frame number in the Web page that contains the function you are configuring.
	Form	Identifies the type of form you are creating based on the function.
	Field identification	Identifies the field as specified in the Web page.
	Field type	Identifies the type of field: • Text • Password • Select-One • Select-Multiple
	Insert	Add the current selection to the series.

New Action	Controls	Description
Click	**Click on a control**	Click the ellipsis ("**...**") button to open the "Web Element" dialog box, and click **Wizard** to launch the Web Form Wizard. This time, the wizard identifies only clickable fields. Select the field that you want to associate with a click, and select **OK**. The wizard closes and returns you to the "Web Element" dialog box. Its fields are populated with the information that the wizard identified.
	Frame	Identifies the frame number in the Web page that contains the function you are configuring.
	Form	Identifies the type of form you are creating based on the function.
	Field identification	Identifies the field as specified in the Web page.
	Field type	Identifies the type of field: • Submit • Image • Button • Anchor • IMG Oracle Enterprise Single Sign-On Administrative Console detects where the control is and simulates a click in the center of the control.
	Insert	Add the click selection to the series..

New Action	Controls	Description
Run Task	**Command line to run**	Enter a Command line to be executed. This feature allows you to run a program in the middle of entering keystrokes. • Window Handles can be appended to the command line to inform the script of the window handle currently being worked on: $(HWND) • Environment Variables can also be appended to the command line: $(USERDOMAIN)\$(USERNAME) Click the ellipsis ("**...**") button to open the Choose File dialog box. Virtual key codes cannot be used within the command line (the initial backquote character will terminate the command line).
	Expected return code	Enter the expected return code. The rest of the SendKeys script is discarded if this value is not returned.
	Time out (sec.)	Enter the number of milliseconds to wait for the task to complete. The rest of the SendKeys script is discarded if this timeout is reached. The maximum timeout period is 5 seconds.
	Insert	Add the task to the series.

New Action	Controls	Description
Delay	**Length of delay (in seconds)**	Type or select a delay between keystrokes.
	Insert	Add the delay to the series.

New Action	Controls	Description
Set Focus	**Set focus to control**	Sets the focus to control. Click the ellipsis ("**...**") button to open the Web Element dialog box and launch the Web Form Wizard. Select which of the available fields will receive focus. Click **OK**.
	Insert	Add the focus to the series.

New Action	Controls	Description
Text	**Enter text to insert**	Type any literal text to add to the series.
	Insert	Add the text to the series.

New Action	Controls	Description
Special Keys	**Category**	Choose a keystroke category (for example, Movement keys) from the left list, then a specific key (for example, Backspace) from the right list.
	Key List	Select the functionality of the key. • **Key Press.** Insert the key as a single keystroke (default). • **Key Down/Up.** Insert the key as a pair of actions: key-press and key-release. This option lets you insert other keystrokes between these actions to indicate one or more keys held down as another is typed, as for a "hot key" combination that moves the focus to a specific text box. For example, to insert the keystroke "**Alt+P**," select the **Key Down/Up** option, then select **Modifier** for the Category and **Alt** for the Key. and click **Insert**. This inserts two actions: [Down:Alt] and [Up:Alt]. Select the **Text** tab and enter **P** in the text box. In the left pane, select **[Up:Alt]** and click **Insert**. The "P" is inserted between the two Alt-key actions, producing "Alt-P." • **Key Down.** Insert the key as a downward press only. • **Key Up.** Insert the key as a release only.
	Insert	Add the keystroke to the series.

Matching Tab for Configuring a Web Application

Use the Web Matching tab to distinguish among logon, password-change, or password-confirmation forms (referred to here as *target forms*) within the same Web application, typically a multi-form portal page. The Agent uses the matching criteria you supply here to distinguish among similar forms.

This tab is typically used to refine the *detection* match criteria, that is, the set of HTML tags and values you use to identify a specific page. You can then create an *offset* match that uses a subset of the detection match to identify the desired logon or password-change form on the page.

To display this tab:

- Create a new Web application logon.

or

1. In the left pane, select **Applications** and select a Web application.
2. Click the **General** tab in the right pane.
3. Select a form from the list and click **Edit**.
4. From the General tab in the Web form-configuration dialog box, select the **Matching** tab.

Creating or Modifying Detection-Matching Criteria

1. In the Detection Match list, do one of the following:
   - Click **Add** to create a new matching criterion.
   - Select a match and click **Edit** to modify an existing match.
2. From the Edit Match dialog box, enter or select the required information, then click **OK** to return to this dialog box.
3. If necessary, adjust the match criteria order.
   a. Select a match to move.
   b. Click the **Up** or **Down** arrow.
4. Click **OK**.

Offset Matching

> Offset matching should only be used with portal Web pages.

This type of matching is used with portal pages that have multiple windows that the user can rearrange, add, and remove. If the site you are matching on is not a portal, leave the offset matching section on this panel blank.

With regular match detection, the forms must always appear in the same order. With offset matching, you can rearrange the forms (which look like a window) and isolate a specific window from all the others. This only applies to portal pages because these pages are dynamic, and ordinal values are used to match instead of field names.

Use the **Offset Start** field to tell Logon Manager which match result's forms to use for the form offsets. The offset start value should be the number of the offset matches. For example, if there are three offset matches, the offset start value should be 3.

Creating or Modifying Offset Matching Criteria

1. In the Offset Match list, do one of the following as needed:
   - Click **Copy from Detection** to copy defined Detection Match criteria.
   - Click **Add** to create a new matching criterion.
   - Select a match and click **Edit** to modify an existing match.
2. In the **Edit Match** dialog box, enter or select the required information, then click **OK** to return to this dialog box.
3. If necessary, adjust the match criteria order.
   a. Select a match to move.
   b. Click the **Up** or **Down** arrow.
   c. Select an **Offset Start**.
4. Click **OK**.

Edit Match Criteria for a Web Application

Use this dialog box to create or modify matching criteria for the selected Web form.

Tag	Enter an HTML tag type; for example, <TD> for a table cell.
Match Tag Instance	Select to match a specific instance of the *Tag* and select the instance number; for example, 3 for the third table cell on the page.
Criteria	Select one criteria type: • **Text.** The plain-text (InnerText) content of the tag element (for example, *Enter your password*) • **HTML.** The rich-text (InnerHTML) content of the tag element (for example, Enter your password). Certain browsers' innerHTML properties tags can differ from the normal HTML. For instance, the tags might appear in a different letter case, or they might add or remove spacing between the tag and the enclosed text. In order to avoid matching problems, use alternate tags and wildcard characters to account for these differences. **Example:** Although you would expect the tag for a bold "**OK**" button to be: OK, the innerHTML tag might be: <B> OK </B>. To ensure that this match works, specify this regular expression as: <(b|B)>.*OK.*</(b|B)>. • **Attribute.** In the box, enter an HTML attribute of the tag element (for example, id =password).
Value	Enter the actual text to match. • **Match whole value:** Select to enforce strict matching of "Value" (that is, any additional text in the tag element will cause the match to fail). • **User regular expression:** Select to allow more flexible matching based on regular expressions.
Operation	Select the relationship of this match to any others: • **And:** This match is one of multiple matches required to identify the form. • **Or:** This match alone identifies the form. • **Not:** This match excludes the form The AND, OR, and NOT operators specify the conditions under which the Agent should respond to Web match combinations. If you assign a match value of AND to a match criterion, that criterion must be present for the Agent to respond to a page. So, when several fields are assigned an AND operator, all those criteria must be present. If you assign a match value of OR to several match criteria, the Agent responds if any one of the criteria is present. The NOT operator is used as an excluder when performing a match. The Agent responds to any criteria that are assigned the AND and OR operators, unless the conditions of the NOT criteria are present. The Agent excludes the instances specified by the NOT operator.

Add/Edit URL

Use this prompt to specify the URL (or Uniform Resource Locator, commonly called a *Web address)* of the logon or password-change form to configure.

To specify a URL for matching

1. Select one of the following (see Matching Expressions, below).
   - **Exact**
   - **Wildcard** (does not apply to Kiosk Manager)
   - **Regular Expression** (does not apply to Kiosk Manager)
2. Type (or edit) the **URL** or a matching expression.
3. Click **OK**.

Matching Expressions

For applications that have varying text in their URLs, you can use substrings or regular expressions to specify how to match the variable text.

Wildcards	• **?** (question mark) matches any single character. • ***** (asterisk) matches zero or more occurrences of any character.  This does not apply to Kiosk Manager.
Regular Expressions	You can also use the set of regular expressions to specify a string pattern that the Agent should recognize as a match.  This does not apply to Kiosk Manager.

Matching Environment Variables

For applications that include the user's name in the URL (as derived from the DOMAINUSER environment variable in the workstation operating system), select **Exact** as the matching criterion, and use one of the following substitution tokens in the match string:

%DOMAINUSER%	User name exactly as derived from the environment variable
%UC%%DOMAINUSER%	User name converted to all upper case
%LC%%DOMAINUSER%	User name converted to all lower case

Example

This URLentry matches a password-change window title that includes the username:

Password Expired - %UC%%DOMAINUSER%

Adding and Editing Web Fields

Use this dialog box to specify a credential field or **Submit** button on a Web form.

<table>
<tr><td>Function</td><td>Select a credential type:
UserID
Password
Third Field
Fourth Field
New Password
Confirm New Password
Submit</td></tr>
<tr><td>Frame</td><td>Type the target name of the browser frame in which the field appears (specified by the NAME attribute in a <FRAME> element in the target page's parent frameset).</td></tr>
<tr><td>Form</td><td>Type the name of the form in which the field appears (specified by the NAME attribute in the <FORM> element in the target page).</td></tr>
<tr><td>Field identification</td><td>Select the "..." button to launch the Field Identification dialog box, where you can select which type of field you want to match.</td></tr>
<tr><td>Field type</td><td>Select the field type (corresponding to the TYPE attribute of the field's <INPUT> element) or a hyperlink anchor or IMG tag (<A HREF=...>) used as a Submit button.
<table>
<tr><th>Credential Type</th><th><INPUT TYPE=...> Options</th></tr>
<tr><td>UserID</td><td>Text</td></tr>
<tr><td>Password</td><td>Password</td></tr>
<tr><td>Third Field</td><td>Select-One</td></tr>
<tr><td>Fourth Field</td><td>Select-Multiple</td></tr>
<tr><td>New Password</td><td></td></tr>
<tr><td>Confirm New Password</td><td></td></tr>
<tr><td rowspan="5">Submit</td><td>Submit</td></tr>
<tr><td>Image</td></tr>
<tr><td>Button</td></tr>
<tr><td>Anchor (<A HREF...> tag</td></tr>
<tr><td>IMG (<A HREF...> tag</td></tr>
</table></td></tr>
</table>

Field Identification Dialog Box

Use this screen to specify the type of field you want the Agent to recognize. Check the appropriate radio button from among the following:

- **Use field name:** Select for a Web site whose fields have consistent, named labels, such as "User" or "e-mail."

- **User ordinal number:** Select if you want to replace varying field numbers with ordinals for dynamic Web pages. See Dynamic and Ordinal Control IDs for more information.
- **Use matching:** Select for a Web site where the field index varies depending on the user. Choose from among the matching choices as explained in the following table.

Tag	Enter an HTML tag type; for example, <TD>for a table cell.	
	Match Tag Instance	Select to match a specific instance of the **Tag** and select the instance number; for example, 3 for the third table cell on the page.
Criteria	Select one criteria type: • **Text.** The plain-text (InnerText) content of the tag element (for example, Enter your password) • **HTML.** The rich-text (InnerHTML) content of the tag element (for example, Enter your password). Certain browsers' innerHTML properties tags can differ from the normal HTML. For instance, the tags might appear in a different letter case, or they might add or remove spacing between the tag and the enclosed text. In order to avoid matching problems, use alternate tags and wildcard characters to account for these differences. **Example:** Although you would expect the tag for a bold "**OK**" button to be: OK, the innerHTML tag might be: <B> OK </B>. To ensure that this match works, specify this regular expression as: <(b|B)>.*OK.*</(b|B)>. • **Attribute.** In the box, enter an HTML attribute of the tag element (for example, id =password).	
Value	Enter the text of the **Criteria** to match.	
	Match Whole Value	Select to enforce strict matching of the Value you entered in the previous field(that is, any additional text in the tag element will cause the match to fail).
	Use regular expression	Select any legal expression to match the Value you entered in the previous field (you can use wildcards to create a broader matching range). Do not use the colon (":") as part of your matching expression. Oracle Enterprise Single Sign-On Logon Manager uses this character as a delimiter when parsing the contents of the expression.

Options Tab for Configuring for a Web Application

Web pages occasionally include forms that require a short time to become enabled as the page loads. In such a case, Logon Manager might submit credentials too soon. To avoid this occurrence, use the Submit Delay setting on the Options tab to allow time for all forms to become enabled.

Dynamic Page	Check to indicate that the Web page for the template includes dynamic content.
Adheres to Logon Loop Grace Period	Select to have the Agent ignore this application's logon form when the logon loop grace period (set on the application's Miscellaneous tab) is in effect.
Auto-Recognize	Select to have the Agent recognize the application automatically. Specifying a status for this setting on the Options tab overrides the global Agent setting. If this setting is checked, the user can configure this setting from the Logon Manager. If this setting is unchecked, the user will not have access to this setting from the Logon Manager.
Auto Submit	Select to have the Agent automatically select **OK** for this application logon after providing credentials.
Preset Focus	Select to set the focus on a logon field before the Agent places data in the field.
Submit via Keyboard	Select to instruct the Agent to enter a programmatic "Submit" command for Web pages that have no "Submit" button.
Submit Delay (milliseconds)	Enter a time in milliseconds for the Agent to wait to submit credentials.

To display this tab:

In the General tab in the right pane for a Web application, double-click or right-click on the Web application, and select the **Options**tab.

Creating a New Host/Mainframe Application

Use this dialog box to configure a new logon for a host/mainframe application.

See Adding Mainframe Applications for the full procedure.

Configuring a New Host/Mainframe Application

a. Start the target application.
b. In the left pane, right-click **Applications** then select **New Host App** from the shortcut menu.
c. The "Add Application" dialog box appears with the Host/Mainframe option selected.
d. In the Add Application dialog box, enter a **Name** for the new logon and click **OK**. The Host/Mainframe Form Wizard (for configuring new logon forms) appears.

See Adding Mainframe Applications for more information.

Host/Mainframe Form Wizard

Use the **Host/Mainframe Form Wizard** to perform any of these tasks:

- Configure new logons for a host/mainframe emulator or Telnet (scrolling-screen) applications.
- Add new forms to existing logons.
- Create forms for automatic password changes.
- Create forms for detecting password change success and failure.

The **Host/Mainframe Form Wizard** lets you use the application itself to identify its logon/password-change windows and the individual username/ID, password, and other fields. The general steps for creating a logon are as follows:

1. Start the target emulator or Telnet application.
2. Select the Form Type and Screen Type.
3. Copy the text of the application's logon/password-change screen and paste it to the Oracle Enterprise Single Sign-On Administrative Console.
4. Indicate the text and position of onscreen captions that identifies the screen as a logon/password-change form.
5. Indicate the position (or, for Telnet applications, the sequence) of the individual username/ID, password, and other fields.
6. Review the configuration and make changes as needed, using the **Back** and **Next** buttons.
7. To modify a host/mainframe logon's settings manually, use the Identification tab (for configuring a host/mainframe logon form).
8. Before you begin this procedure, refer to the General Guidelines for configuring applications. Also see Adding Host/Mainframe Applications for specific information about creating and configuring host/mainframe logons.

Configuring a Host/Mainframe Application

Start the target application in the host/mainframe emulator or Telnet.

1. In the Oracle Enterprise Single Sign-On Administrative Console, do one of the following:
   - Create a new host/mainframe application logon.
   - Select an existing host mainframe application, then in the **General** tab, click **Add**.
2. In the **Host/Mainframe Wizard**, select the form type. The available options are:
   - **Logon.** Configures a logon form.
   - **Logon success.** Configures a form that detects a match during silent credential capture. In the presence of this form, the Agent delays credential capture until it verifies the user's entries and displays the Logon Success dialog box. If this form is not present, the Agent captures credentials immediately after the user enters them and clicks **OK**. Refer to the Oracle Knowledgebase for a full discussion on using this form.
   - **Logon failure.** Configures a form that detects a non-match during silent credential capture. In the presence of this form, the Agent delays credential capture until it verifies the user's incorrect entries and displays the Logon Failure dialog box. If this form is not present, the Agent immediately informs the user that the credentials are incorrect, displaying either the New Logon dialog box or the Retry Logon dialog box to allow the user to re-enter credentials. Refer to the Oracle Knowledgebase for a full discussion on using this form.
   - **Password change.** Configures a password change form.
   - **Password confirmation.** Configures a form that verifies that the user's second password entry in a password change form is identical to the first password entry.
   - **Password change success.** Configures a form that serves as a match for the target application's password change success message. Since this form does not inject credentials, the Credentials page of the Host/Mainframe Wizard is skipped. When the password change success message is detected, Logon Manager will automatically save the new credentials.
   - **Password change failure.** Configures a form that serves as a match for the target application's password change failure message and reinjects credentials when the password change failure message is detected. If you select this option, you will be presented with the Credentials page of the Host/Mainframe in which you will configure the necessary fields.
3. In the **Screen Type** wizard page, do one of the following:
   - Choose **Fixed Screen** for applications running on a host/mainframe emulator that presents logon forms as static text pages.
   - Choose **Scrolling Screen** for applications running on Telnet or other scrolling-screen consoles that request logon information as a series of prompts.
4. In the **Paste Screen Text** page that opens, in the target application, copy all of the onscreen text to the Windows Clipboard.

   
   Some emulators provide a Copy command or button; others let you select **Ctrl+C** to copy. In Windows Telnet, select the text and select **Enter**.
5. In the Console's **Paste Screen Text** page, click **Paste Text** to paste the text into the wizard page, and click **Next**.

If the emulator screen does not use return or line-feed characters, adjust the **Characters per Line** to set proper text wrapping.

6. In the **Cursor Position** page, click or use the arrow keys to place the text cursor in the exact position that it appears in the Telnet application's window.
7. Click **Next** to display the next wizard page.
8. In the **Text to Match** wizard page, select a block of text that identifies the screen as a logon or password-change form. Right-click the selection, and click **Add as Text Match**. Repeat this step for additional text blocks.
9. When your selections are complete, click **Next** to display the next wizard page.
10. In the **Fields** wizard page, do one of the following:
    - *For a fixed-screen logon*, place the text cursor at the starting position of a field. Right-click and select the field type (**Username/ID**, **Password**, **Third Field**, **Fourth Field**) from the shortcut menu. Repeat this step for each required field.
    - *For a scrolling screen*, place the text cursor at the prompt-entry position. Click **Add**, then select the first field type requested. Repeat this step for each required prompt.
11. When your selections are complete, click **Next** to display the summary page.
12. Review the configuration. To make changes, use the **Back** and **Next** buttons to display a page.
13. When your configuration is complete, click **Finish**.

Host/Mainframe Form Wizard for RSA SecurID

Use the **Host/Mainframe Form Wizard** to perform any of these tasks:

- Configure new logons for a host/mainframe emulator or Telnet (scrolling-screen) applications.
- Add new forms to existing logons
- Create forms for automatic PIN changes
- Create forms for detecting PIN change success and failure

The **Host/Mainframe Form Wizard** lets you use the application itself to identify its windows and fields. The general steps for creating a logon are as follows:

1. Start the target emulator or Telnet application.
2. Select the Form Type and Screen Type.
3. Copy the text from the form displayed by the application and paste it to the Oracle Enterprise Single Sign-On Administrative Console.
4. Indicate the text and position of onscreen captions that identifies the screen as a form of the selected type.
5. Indicate the position (or, for Telnet applications, the sequence) of the individual username/ID, PIN, and other fields.
6. Review the configuration and make changes as needed, using the **Back** and **Next** buttons.

To modify a host/mainframe logon's settings manually, use the General tab (for configuring a host/mainframe logon form).

Before you begin this procedure, refer to the General Guidelines for configuring applications. Also see Adding Host/Mainframe Applications for specific information about creating and configuring host/mainframe logons.

Configuring a Host/Mainframe Application

Start the target application in the host/mainframe emulator or Telnet.

1. In the Oracle Enterprise Single Sign-On Administrative Console, do one of the following:
   - Create a new host/mainframe application logon. Be sure to select the **RSA SecurID** check box in the Add Application dialog.
   - Select an existing host mainframe application, then in the **General** tab, click **Add**.
2. In the **Host/Mainframe Wizard**, select the form type. The available options are:
   - **SecurID Logon.** Configures a logon form.
   - **SecurID Logon success.** Configures a form that detects a match during silent credential capture. In the presence of this form, the Agent delays credential capture until it verifies the user's entries and displays the Logon Success dialog box. If this form is not present, the Agent captures credentials immediately after the user enters them and clicks **OK**. Refer to the Oracle Knowledgebase for a full discussion on using this form.
   - **SecurID Logon failure.** Configures a form that detects a non-match during silent credential capture. In the presence of this form, the Agent delays credential capture until it verifies the user's incorrect entries and displays the Logon Failure dialog box. If this form is not present, the Agent immediately informs the user that the credentials are incorrect, displaying either the New Logon dialog box or the Retry Logon dialog box to allow the user to re-enter credentials. Refer to the Oracle Knowledgebase for a full discussion on using this form.
   - **PIN change.** Configures a PIN change form.
   - **PIN confirmation.** Configures a form that verifies that the user's second password entry in a password change form is identical to the first password entry.
   - **PIN change success.** Configures a form that serves as a match for the target application's PIN change success message. Since this form does not inject credentials, the Credentials page of the Host/Mainframe Wizard is skipped. When the PIN change success message is detected, Logon Manager will automatically save the new credentials.
   - **PIN change failure.** Configures a form that serves as a match for the target application's PIN change failure message and reinjects credentials when the PIN change failure message is detected. If you select this option, you will be presented with the Credentials page of the Host/Mainframe Wizard in which you will configure the necessary fields.
3. In the **Screen Type** wizard page, do one of the following:
   - Choose **Fixed Screen** for applications running on a host/mainframe emulator that presents logon forms as static text pages.
   - Choose **Scrolling Screen** for applications running on Telnet or other scrolling-screen consoles that request logon information as a series of prompts.
4. In the **Paste Screen Text** page that opens, in the target application, copy all of the onscreen text to the Windows Clipboard.

   
   Some emulators provide a Copy command or button; others let you select **Ctrl+C** to copy. In Windows Telnet, select the text and select **Enter**.
5. In the Console's **Paste Screen Text** page, click **Paste Text** topaste the text into the wizard page, and click **Next**.

> If the emulator screen does not use return or line-feed characters, adjust the **Characters per Line** to set proper text wrapping.

6. In the **Cursor Position** page, click or use the arrow keys to place the text cursor in the exact position that it appears in the Telnet application's window.
7. Click **Next** to display the next wizard page.
8. In the **Text to Match** wizard page, select a block of text that identifies the screen as a logon or password-change form. Right-click the selection, and click **Add as Text Match**. Repeat this step for additional text blocks.
9. When your selections are complete, click **Next** to display the next wizard page.
10. In the **Fields** wizard page, do one of the following:
    - *For a fixed-screen logon*, place the text cursor at the starting position of a field. Right-click and select the field type (**Username/ID**, **Password**, **Third Field**, **Fourth Field**) from the shortcut menu. Repeat this step for each required field.
    - *For a scrolling screen*, place the text cursor at the prompt-entry position. Click **Add**, then select the first field type requested. Repeat this step for each required prompt.
11. When your selections are complete, click **Next** to display the summary page.
12. Review the configuration. To make changes, use the **Back** and **Next** buttons to display a page.
13. When your configuration is complete, click **Finish**.

Identification Tab for Configuring a Host or Mainframe Application

Use this dialog box to modify information about a Host/Mainframe application logon form.

> See Adding Telnet Applications for information about configuring logons for Telnet applications.

To display this tab, do one of the following

1. Create a new host/mainframe application logon.

or

1. In the left pane, select **Applications** and select a host/mainframe application.
2. Click the **General** tab in the right pane.
3. Select a logon form from the list and click **Edit**.

The Host/Mainframe form-configuration dialog appears, displaying the General tab.

Controls

Form Name	The name of the application logon form. You can edit the name.
Window Titles	Since some emulators do not have unique characteristics within their screens to differentiate one from another, you have the option of selecting the window title from a list of open emulator applications. • Click **Add** to open the "Window Title" screen and enter a window title name manually. or • Click **Choose** to open the "Select Window" screen and pick an application from the open emulator list.
Text Matching	Displays the literal **Text** string that the Agent uses to identify this form, the screen coordinates (**Row** and **Column** numbers) of the first character of the string. Click **Add** to specify a new text identifier or **Edit** to modify an existing one.
Fields	Displays the series of keystrokes that Logon Manager transfers to the host application's logon form. To add or modify a keystroke series, click **Edit** to display the SendKeys (Host/Mainframe) dialog box.
Wizard	Start the Host/Mainframe Form Wizard for configuring an application visually.

Text Matching (on a Host/Mainframe Logon Form)

Use the **Text Matching** dialog box to specify the text and position of an onscreen caption that identifies the screen as a logon or password-change form.

You must also specify the location (row and column number) of the first character of the text. Use the cursor-position indicator in the status bar at the bottom of the session window to find the row and column numbers of the text.

For Telnet applications, use row coordinates relative to the cursor position. See Adding Telnet Applications for an example. You can also use an asterisk for wildcard matching of a row, column or both.

When you have completed your entries for a match, click **OK**.

Controls

Row	Type the row number (vertical screen coordinate) of the first character of the **Text**. For Telnet applications (with supported host emulators), this value is relative to the cursor position and can be negative (to indicate a row above the cursor) or an asterisk (*) to indicate any row onscreen).
Column	Type the column number (horizontal screen coordinate) of the first character of the **Text**. For Telnet applications (with supported host emulators), this setting can be an asterisk (*) to indicate any row onscreen.
Text	Type the string of text to match.

To display this dialog box, click the **Add** button under Text Marching on the General tab for configuring a host/mainframe logon form.

Edit Fields and Actions for a Host/Mainframe Application

Use the Edit Fields/Actions dialog box to specify a series of keystrokes for Logon Manager to transfer to the host application's logon form.

The tabs in the right pane of the Edit Fields/Actions dialog box provide the keystroke options. Select or enter the options you need on each tab. Click the **Insert** button to add the key or action to the series.

Your selections appear in the list in the left pane. To change the order of the series, select an item and click the up or down arrows to move it. To modify an item, select it, and click **Edit** to display the Fields dialog box. To delete an item, select it, and click **Delete**.

Controls

Current fields/actions		
Fields tab	**Select fields to insert**	Select a credential item from the list to add to the series: • UserID • Password • Third Field • Fourth Field • New Password • Confirm New Password Use the **Up** and **Down** arrows for correct navigation through the form.
	Insert this character after field	Select a keystroke to insert automatically after the field is filled: • **None** (no keystroke) • **Tab** (to advance the cursor) • **Enter** (to submit the form) Also see Special Keys, below.
	Position	Enter the row and column coordinates of the first character of the text-entry field. If the column number is variable, (for example, most Unix systems include the affected username as part of the "New Password" and "Confirm Password" field labels when changing passwords), you can use a regular expression to wildcard the variable portion of the field label so that Logon Manager always injects credentials in the correct spot.
	Insert	Add the current selection to the series.
Delay tab	**Length of delay** (in seconds)	Enter or select a delay between keystrokes.
Text tab	**Enter text to insert**	Enter any literal text to add to the series.
	Insert	Add the text to the series.
Special Keys tab	**Category/Key**	Select a keystroke category (for example, Movement keys) from the left list, then a specific key (for example, Page Down) from the right list.
	Insert	Add the keystroke to the series.

To display this dialog box:

1. Do one of the following:

- Create a new Host/Mainframe application logon.

or

- In the left pane, select **Applications** and select a host application.
- Click the **General** tab in the right pane.
- Do one of the following:

◦ Select a logon form from the list and click **Edit**.

or

◦ Click **Add** to configure a new form.

The Host/Mainframe form-configuration dialog box appears, displaying the General tab.

2. Under the Fields list box, click **Edit**.

Fields Tab for Configuring a Host or Mainframe Application

Use the **Fields** tab to define how the Agent interacts with the fields of a form.

You must also specify the location (row and column number) of the first character of the field. Use the cursor-position indicator in the status bar at the bottom of the session window to find the starting row and column numbers of the text. When you have completed your entries, click **OK**.

See Adding Host/Mainframe Applications for more information.

Controls

Fields/Actions	Select the field type: • **UserID** • **Password/OldPassword** • **Third Field** • **Fourth Field** • **New Password** • **Confirm New Password** Use the **Up** and **Down** arrows to re-order the fields for correct navigation through the form. Click **Edit** to specify the way the Agent navigates the form.

Matching Tab for Configuring a Host or Mainframe Application

Use the "Matching" tab to specify the text that identifies the screen as a logon or password-change form.

Controls

Row	Enter the row number (vertical screen coordinate) of the first character of the text. For Telnet applications (with supported host emulators), this value is relative to the cursor position and can be negative (to indicate a row above the cursor) or an asterisk (*) to indicate any row onscreen).
Column	Enter the column number (horizontal screen coordinate) of the first character of the text. For Telnet applications (with supported host emulators), this setting can be an asterisk (*) to indicate any row onscreen
Text to Match	Displays the literal **Text** string that the Agent uses to identify this form, the screen coordinates (**Row** and **Column** numbers) of the first character of the string. Click **Add** to specify a new text identifier or **Edit** to modify an existing one.

Options Tab for Configuring a Host or Mainframe Application

Use this screen to configure behaviors for a host or mainframe application.

To display this tab, do one of the following:

a. Create a new host/mainframe application logon.

or

a. In the left pane, click **Applications** and select a host/mainframe application.
b. Click the **General** tab in the right pane.
c. Select a logon form from the list and click **Edit**.
d. In the **Host/Mainframe** form-configuration dialog box, select the **Options** tab.

Controls

Field Delay	Enter a time in milliseconds for the Agent to wait to submit credentials.
Screen type	Specify whether the application has a fixed or scrolling screen.
Column position of cursor	Specify the column where the cursor should be placed before starting to enter credentials. Type the starting column number of the text cursor when logon or password change begins. If this position varies (for example, most Unix systems include the affected username as part of the "New Password" and "Confirm Password" field labels when changing passwords), you can use a wildcard for the variable portion of the field label so that Logon Manager always injects credentials in the correct spot.
Adhere to logon loop grace period	Select to have the Agent ignore this application's logon form when the logon loop grace period (set on the application's Miscellaneous tab) is in effect.
Auto-Recognize	Select to have the Agent recognize the application automatically. If this setting is checked or unchecked, it overrides the global Agent setting. If this setting is checked, the user can configure this setting from the Logon Manager. If this setting is unchecked, the user will not have access to this setting from the Logon Manager.
Auto-Submit	Select to have the Agent automatically select **OK** for this application logon after providing credentials.

Bulk Add Tab

See First Time Use (Bulk-Add) for more information.

Specifying Applications to Bulk-Add

You must configure applications individually to use in a bulk-add. See To enable a logon for Bulk-Add.

1. Click **Applications** in the left pane, then click the **Bulk-Add** tab in the right pane.
2. Click **Add**. The Select Application dialog box appears.
3. Select the applications to add to this group. (Use **Ctrl**+**click** or **Shift**+**click** to select multiple entries.)
4. Click **OK**.
5. Type or edit the **Version Stamp** in *yyyymmdd* format (for example "20120615" for June 15, 2012). If this date is later than the last date a given Agent completed setup, then the Agent activates the Setup Wizard to add the new logon(s).

Working with a Selected Application

Represents a configured application. Use the tabs in the right pane to view or modify this logon's properties.

To select a logon for viewing or editing:

1. Click **Applications** in the left pane, then click the **Applications List** tab in the right pane.
2. Select an application from the list, then click **Edit**.

or

1. In the left pane, click the plus sign (+) next to the Applications icon (or double-click **Applications**) to display the configured logons.
2. Do one of the following:
   - Click a logon icon to select it. The General tab appears in the right pane.

     or
   - Right-click a logon icon to display a shortcut menu with these options:

New Form	Add a new form for the selected application logon. Displays the corresponding configuration dialog for the selected application type.
Delete	Delete the selected logon.
Make copy	Duplicate the selected logon.
Rename	Rename the selected logon.
Publish...	Select to launch the Publish to Repository dialog, from which you can select among all publishable items and the repository to which you want to publish them.
Publish To	Select to specify a repository to which you want to publish a specific item.

General Tab (for a Selected Application)

Use the General tab to add or modify form or field configurations for the selected application.

Description	Enter an optional text comment to appear in the Description field of the Agent Logon Manager. For example, "Email."=
Reference	Enter an optional text comment to appear in the Reference field of the Agent Logon Manager. For example, the "Version 1.0."  This field is read-only on the client side.
Add	Add a new form for the selected application. The corresponding configuration dialog box for the selected application type appears.
Edit	Modify an existing logon form. Select a form from the Forms window, then click **Edit**. The corresponding configuration dialog for the selected application type appears.
Delete	Remove a form. Select a form from the **Forms** window, then click **Delete**. If only one form is listed, deleting it will remove the application entirely.
Add [Edit] Notes	Type or modify optional comments or documentation.
Deny response	Check this button to prevent the Agent from responding to this form.  Disabling any form in a template disables the entire template.

To display this tab:

1. Do one of the following:
   - Select an application.

     or
   - Configure a new application.
2. Click the **General** tab in the right pane.

Bulk Add Tab (for a Selected Application)

Use this tab for special configurations of the currently-selected application. Also see Bulk-Add tab (general) for more information.

Enable Bulk-Add capability for this application	Select to enable this application to be included in a bulk-add.
Confirm UserID during Bulk-Add	Select to require the user to confirm username in order to perform a bulk-add.
Confirm Password during Bulk-Add	Select to require the user to confirm password in order to perform a bulk-add.
Confirm Third Field during Bulk-Add	Select to require the user to confirm a third field's information in order to perform a bulk-add.
Confirm Fourth Field during Bulk-Add	Select to require the user to confirm a fourth field's information in order to perform a bulk-add.

To display this tab:

1. Do one of the following:
   - Select an application

     or
   - Configure a new application.
2. Click the **Bulk Add** tab in the right pane.

Authentication Tab (for a Selected Application)

Use this tab to set the minimum authentication grade for the selected application.

The Primary Logon Method used must have an Authentication Grade equal to or higher than this value in order for Logon Manager to log on to the selected application.

If the end-user's Primary Logon Method has an authentication grade lower than the minimum set for this application, when the user requests access to the application, Logon Manager prompts the user to authenticate at a higher grade. The user will only gain access after successfully logging on at the required grade.

To set the authenticator grade for primary logon methods using the Authenticator Grade setting.

Minimum Authentication Grade	Select or type the numeric value of the lowest Authentication Grade the end user's Primary Logon Method must have. The default is 1.

To display this tab:

1. Do one of the following:
   - Select an application.

     or
   - Configure a new application.
2. Click the **Authentication** tab in the right pane.

Error Loop Tab (for a Selected Logon)

Use the Error Loop tab (under a selected application) to control the appearance and behavior of the Logon Error (Error Loop) dialog box for individual applications.

Controls

Logon timeout (sec.) [TimeOut]*	Maximum time in seconds between successive logon attempts before Logon Error dialog appears. Default is 30.  If the logon timeout is set to zero (0), a logon error (for example, entering the wrong credentials) does not cause the Logon Error dialog box to display.
Max. retries [MaxRetry]*	Maximum number of retries (after first try) allowed before the Logon Error dialog box appears. Default is 0.
Hide "Confirm Password" [HideConfirmPW]*	Whether to suppress the Confirm Password dialog box after the user enters a password. Default is No.
**(Global registry equivalents shown in brackets.)*	

To display this tab:

1. Do one of the following:
   - Select an application

     or
   - Configure a new application.
2. Click the **Error Loop** tab in the right pane.

Password Change Tab (for a Selected Application)

Use the Password Change tab to set or modify options that control how the Agent manages password changes.

The Agent distinguishes between logon and password change fields that appear on the same screen or on different tabs of a dialog box. In the instance of this type of screen, the Agent prompts the user, through the Action Chooser dialog box, to select a password change or logon. You can configure a period of time for which the user will not need to change passwords, and hence will not receive the Action Chooser.

Controls

Password Change Options	
Password Change Dialog Behavior	Controls how the Agent responds when an application prompts the end user to change passwords. The options are: • **Prompt User:** Prompts the user with the Password Change Wizard. • **Manual:** Prompts the user to select a new password; does not let the Password Change Wizard automatically generate a password. • **Manual w/Auto Option:** Prompts user to select a new password, but lets the Password Change Wizard offer to generate a password automatically. • **Auto w/Manual Option:** Generates a new password automatically, but first allows the user to select a new password. • **Quietly Generate and Submit Password:** Generates and submits password without prompting the user.
Prevent Ability to Cancel	When enabled, disables the "Cancel" button in the password change dialog, prohibiting the user from canceling the password change process. *This setting is new as of Logon Manager version 11.1.1.1.0.*
Enable Password verify pop-up dialog	Check this box if you want to display the password change verification pop-up dialog box, which provides an additional confirmation that the password has been changed.
Lock focus to password change dialog	When enabled, locks desktop focus to the password change dialog, preventing interaction with the target application until the user completes or dismisses the dialog. *This setting is new as of Logon Manager version 11.1.1.1.0.*
Password Generation Policy	Select a password generation policy. To subscribe multiple applications to a policy, see Policy Subscribers.
Credential Sharing Group	Select a credential sharing group. To assign multiple applications to a password group, see Credential Sharing Groups.

Password Expiration Options	
Enable Password Expiration	Select this check box to require users to change passwords after a specified period.
Number of days until password expires	Enter or select the number of days for which a user's password is valid.
Run this command when the password expires	Type the full path and command (or click **Browse** to locate the executable file) that should be invoked when the user attempts to log on after the Number of days setting has elapsed. (Example C:\Program Files\PassChange\passchange.exe.)

Logon Chooser Options	
Bypass Logon Chooser	Controls whether the Logon Chooser appears when a password change is initiated. When enabled, the password change dialog will be displayed immediately if the selected condition is met. The available conditions are listed below. **Options:** • When the most recent logon was to the same application instance. • When the most recent logon for the same application occurred within: ○ If you select the second condition, specify the length of the timeout in seconds. Valid range is 1-999999 seconds.
Bypass Logon Chooser for*	If you select to bypass the Logon Chooser by either means above, specify the forms that you want the Agent to bypass. **Options:** • Password Change and Logon forms. • Password Change form only. This setting is new as of 11.1.1.5.0.

Action Chooser Grace Period	
Days	Enter the length of the grace period (in days) for which the Agent will not display the Action Chooser dialog box.
Automatically proceed with password change	When enabled, the Action Chooser is bypassed when the grace period expires and password change initiates automatically.  This option is only available after the grace period has been specified. *This setting is new as of Logon Manager version 11.1.1.1.0.*

To display this tab:

1. Do one of the following

   • Select an application

   or

- Configure a new application.

2. Click the **Password Change** tab in the right pane.

Events Tab (for a Selected Application)

Use this tab to add a logon event and configure the environment surrounding it.

Add Logon Event	
Run this command when a logon for this application is added	This setting allows you to define a process (such as exe, web, script, etc.) to be run immediately after the Add Logon Wizard is completed for an application. For example, this setting could be used to launch a password change application right after credentials are entered into the Agent, thus allowing the Agent to change the application password immediately. Click the **Browse** button to locate a command to be entered.

Pre Logon Event	
Run this command before a logon for this application is used	This setting allows you to define a pre-logon task that occurs prior to each logon instance, transmitting information from this process about the current logon attempt. The information in the resulting exit code cues Logon Manager whether to continue credential submission or abort the logon process. For example, you might want to run a script to call an API, perform a task to ensure that an application is in the state required for logon, or check usernames against a list of permitted or prohibited applications. Click the **Browse** button to locate a command to be entered.
Failure Return Code	The Agent will ignore a logon returning a number of errors equal to or higher than the number set in this field. A higher setting allows the application to return multiple error codes. The default for this setting is 1.
Time out	Specifies the time, in milliseconds, for the Agent to wait for the task to complete. This setting is incremental from 1.000 to 5.000 milliseconds (default). If the task has not completed within the specified time, the task terminates and logon does not occur.

It is recommended that you specify a full path to the application to run, and surround it with double quotes. For example, "C:\Program Files\My Tools\checktool.exe"

Miscellaneous Tab (for a Selected Application)

Use this tab for special configurations of the currently-selected application.

Miscellaneous Settings	
Allow Masked Fields to Be Revealed	Select to enable the **Reveal** button for masked fields in Wizards and property pages.
Force Reauthentication	Select to require the user to reauthenticate before providing credentials to this application.
Auto Submit	Select to have the Agent automatically select **OK** for this application logon after providing credentials.
Service Logon	Select to let the Agent detect an application that runs as a Windows service (that is, in the System space, rather than the User space).
Auto-Recognize	Select to have the Agent recognize applications and Web sites and log users on automatically. If this setting is checked or unchecked, it overrides the global Agent setting. If this setting is checked, the user can configure this setting from the Logon Manager. If this setting is unchecked, the user will not have access to this setting from the Logon Manager. If this setting has a green box instead of a check, this means that the user can configure this setting from the Logon Manager.
Mask Third Field	Select to mask the third field of an application logon. This affects the third field appearance on the following pages: New Logon property, Error Loop Dialog, Logon Properties, and FTU Entry. By default, this box is checked (third field is masked).
Mask Fourth Field	Select to mask the fourth field of an application logon. This affects the fourth field appearance on the following pages: New Logon property, Error Loop Dialog, Logon Properties, and FTU Entry. By default, this box is checked (fourth field is masked).
Prohibit disabling the addition of new logons	Specifies whether the "Disable" button in the "New Logon" dialog is active for this application. When enabled, the "Disable" button is deactivated and the user is prohibited from adding new logons for this application when auto-prompted by the Agent. When disabled, clicking the "Disable" button adds this application is to the "Exclusions" list in the Agent settings dialog. **Options:** • Yes • No (default) *This setting changed in version 11.1.1.1.0.*
Prohibit canceling the addition of new logons	Specifies whether the "Cancel" button in the "New Logon" dialog is active for this application. When enabled, the "Cancel" button is deactivated and the user is prohibited from canceling a logon addition in progress for this application after being auto-prompted by the Agent. When disabled, clicking the "Cancel" button defers the logon addition until the next time this application is detected. **Options:** • Yes • No (default)

Miscellaneous Settings	
Allow creation of multiple accounts during credential capture	Specifies whether to enable the checkbox that allows the user to add another set of credentials in the "New Logon" dialog box. For any template, this setting overrides the Global Agent Setting of the same name.
File extension (for Icon)	Enter a Windows file extension associated with a logon. Instructs the Agent to map an icon to the configuration.
ConfigName	Click **Choose** to select the windows and control that contains the text to use to create the new logon's initial configuration name (Windows applications only).
UserID Field Label	Type a text label to be used by the Agent for the username/ID field.
Password Field Label	Type a text label to be used by the Agent for the password field.
3rd Field Label	Type a text label for the Agent to use when displaying a third logon field.
4th Field Label	Type a text label for the Agent to use when displaying a fourth logon field.

Logon Chooser	
Logon chooser columns	Select **Choose** to open the Logon Chooser Columns window, which contains a list of possible columns to display in the Logon Chooser dialog box.  Third and Fourth field selection is available only if you do not choose to mask them in the setting above.

SendKeys Settings	
Delay Char	Use this setting to add a delay, in milliseconds, between every press in SendKeys, slowing credential submission. This setting is useful for applications that require additional time to recognize credential input.

Logon Loop Grace Period	
None	There is no grace period between logon prompts. The user is logged on automatically after initial logon. (Default)
Prompt	If the logon grace period has not expired, the user receives a prompt asking if he wants to log back on to an application.
Silent	The Agent ignores the applcation for the duration of the grace period and does not inject credentials until the grace period expires.
Minutes	Set the length of the grace period in minutes.
Reset for each process	When enabled, the grace period is reset for each new process that is launched. This will cause Logon Manager to log the user on to an application when the application is closed and restarted, even if the grace period has not expired. When disabled, the grace period is not reset for each new process. Logon Manager will not attempt to log the user on to an application that has been restarted until the grace period has expired. (When this is disabled and the grace period has not expired, the user will be prompted to log on again if the **Prompt/Silent** option is set to **Prompt**.)

Credential Capture Mode	
Configures credential capture behavior by using one of the modes below. • Silent credential capture mode is not compatible with applications that require SendKeys. For this reason, you cannot use this mode for host/mainframe applications, nor for any Web or Windows application for which you use SendKeys. • You should not use silent credential capture for applications where the username and password are obfuscated. *This setting is new as of version 11.1.1.5.0.*	
Default to global agent setting	Specifies that this application should use the same value as that in the Initial Credential Capture global agent setting. Selecting any of the following settings overrides the global agent setting.
Do not capture silently	Presents the New Logon dialog box in which the user enters credentials manually.
Capture, but do not inform user	The Agent captures the credentials as the user enters them, and does not inform the user of the process.
Capture, and inform user with balloon tip	The Agent captures the credentials as the user enters them, and displays a balloon tip near the system tray to inform the user during the process.
Capture, and present New Logon dialog box	The Agent captures the credentials as the user enters them, and displays a balloon tip near the system tray to inform the user during the process. After capturing the credentials, the Agent displays the New Logon dialog box with the user's entries pre-filled. The user can accept, change, cancel, or disable.
Silent capture timeout	The time (in milliseconds) that the Agent should wait to create an account after the user submits credentials. If this timeout expires before the Agent can determine if the logon succeeded or failed, it dismisses the credentials it captured.

To display this tab:

1. Do one of the following:
   - Select an application.

     or
   - Configure a new application.
2. Click the **Miscellaneous** tab in the right pane.

Choose Control ID

Use the ConfigName wizard to select a logon window's text control to use as the initial name of the application logon. Use this feature to name a logon (when it is added to the Agent) with a variable text item (such as an account name) that appears in the logon window.

1. Select the window that contains the text control you want to use, then click **Next**.
2. Select the control that contains the text item to use as the logon's initial configuration name. Click **Finish**.

Controls (Application Window)

Window List	Displays the windows of current applications. Click on the column heads to sort the list.
Show hidden window	Specifies to include hidden windows in the Window list.
Next	Advances to the next Wizard page.

Controls (ConfigName Control)

Control List	Displays the controls of the currently-selected application window. Click on the headers (**Class**, **ID**,or **Text**) to sort the list.
Use ordinals instead of control IDs	Indicates that the Agent should transmit data to this form as a series of numbered control IDs assigned by Logon Manager, rather than addressing individuals fields generated by native Control IDs.
Refresh	Updates the field list.
Back	Returns to the previous Wizard page.

Security Tab—Role/Group Support (for a Selected Application)

Use this tab to set the access rights for the currently-selected configuration item. You can assign access rights to these items:

- Application logons (including associated credential sharing groups).
- Password generation policies.
- Global Agent settings.
- Passphrase question sets.
- Exclusion lists.

For increased security on Active Directory domains, right-click the domain administrator's name and select **DENY**. This action will ensure that application templates are not automatically sent to domain administrators.

Controls

Directory	Select the target directory server.
Access information:	
Name	Lists the groups or users who currently have access to this item.
ID	The user account name.
Access	Indicates whether the user or group has read/write or read-only access rights to the currently selected item. To change a user or group's access rights, right-click the user or group and select **Read** or **Read/Write** from the shortcut menu.
Actions:	
Copy Permissions To...	Displays the Select Application screen. Select an application to add; use **Ctrl+click** or **Shift+click** to select multiple entries. Click **OK** to confirm your selection.
Add	Displays the Add User or Group dialog box (for LDAP or Active Directory) to select the users or groups who should have access to the currently selected item. Click **OK** to confirm your selection.
Remove	Removes selected user(s) or group(s) from the list. Select a user or group to remove; use **Ctrl+click** or **Shift+click** to select multiple entries. Click **OK** to confirm your selection.

Provisioning Tab—Role/Group Support (for a Selected Application)

To access this tab, expand **Applications** and double click any application. Click the **Provisioning** tab.

From this tab, permissions can be added and removed. You can also select the level of access rights (for example, add/modify/delete applications) for those permissions.

Controls

Directory	Select the target directory server.
Access information:	
Name	Lists the groups or users who currently have access to this item.
ID	Lists the user account name.
Access	Indicates the permissions that have been granted to the user or group (Add, Modify or Delete Logon). To change a user or group's access rights, right-click the user or group and select **Add Logon**, **Modify Logon** or **Delete Logon** from the shortcut menu.
Actions	
Copy permissions to	Use this button to easily apply the provisioning rights for the current application to multiple applications. Clicking this button displays a dialog listing all the applications. Selects the applications that you want these provisioning rights to be copied to. Use **Ctrl+click** or **Shift+click** to select multiple entries. Click **OK**.
Add	Displays the Add User or Group dialog box (for LDAP or Active Directory) to select the users or groups who should have access to the currently selected item.
Remove	Removes selected user(s) or group(s) from the list. Select a user or group to remove; use **Ctrl+click** or **Shift+click** to select multiple entries.

Add User or Group Dialog Box

The Select User or Group dialog box varies based on the directory server being used:

- LDAP
- Active Directory
- AD LDS (ADAM)

LDAP

Use this dialog to select the individual users or user groups that are to be added to the access list for the current configuration item (Add Logon, Modify Logon, or Delete Logon).

Controls

Search Base	The base (highest-level) directory to begin searching for user/group accounts. All subdirectories of the base directory are searched. Type a location or click **Change** to browse the directory tree.
Change	Displays the Select Search Base dialog box to browse for a base directory for the search. Use this dialog to browse to and select the base (highest-level) directory to search for user/group names. Click **OK** when finished.
Search	Begin searching the base directory for users and groups.
Users or Groups	Lists the search results. Select the names to be added to the access list for the current configuration item. Use **Ctrl+click** or **Shift+click** to select multiple entries. Click **OK** when finished to copy your selections to the access list.

Active Directory/AD LDS (ADAM)

Use this dialog box to select the individual users or user groups that are to be added to the access list for the current configuration item (Add Logon, Modify Logon, or Delete Logon).

Controls

List Names From	Select an Active Directory domain or server.
Names	Lists the names of users and groups for the selected domain or server. Select one or more names to add to the access list.
Add	Copies user(s) and group(s) selected in the **Names** list to the **Add Names** list. Use Ctrl+click or Shift+click to select multiple entries.
Members	When a group is selected the Names list, displays the Global Group Membership dialog box, which lists the members of the selected group.
Search	Displays the Find Account dialog box for searching one or more domains for a specific user or group.
Add Names	Display the names of the user(s) or group(s) for whom you have you have added so far. Click **OK** to add these names to the access list for the current configuration item. Note: You can type or edit user names in this list. However, entries are checked for invalid account names, and duplicate account selections are automatically removed when you click **OK**.

Delegated Credentials Tab (for a Selected Application)

Use this tab to specify whether a user can delegate his credentials for this application to another user, and the terms of the delegation. This feature is useful in scenarios where one user (the delegator) temporarily assigns some responsibilities to another user (the delegatee), such as for a vacation or to meet a specific deadline, but where the delegatee will not be performing the delegator's duties permanently.

The delegator is required to authenticate when revoking a delegated credential. To complete the revocation, the delegatee must also authenticate. This causes a repository synchronization that reverts the credentials back to their undelegated state.

Only the delegator can revoke delegated credentials. If for any reason you need to revoke credentials from the delegatee in the delegator's absence, you can lock the delegatee's account and force a password reset.

Delegated credentials are installed during installation of the Logon Manager Client as one of the selections in the Advanced installation setup mode.

Allow users to delegate credentials for this application	Check the box if you want to allow a user to delegate credentials to another user. After the box is checked, the configuration options below become available. Default is Disabled.
Allow reveal password	Specify whether to allow the delegatee to see the delegator's password. Default is Disabled.
Maximum number of delegation days	Specify the maximum number of days that the delegatees has the delegator's credentials for this application. Default is 15.
Permitted usage	Specify the day(s), and time interval for each day, that the delegatee can access the application.

You must also specify the path to the provisioning service and the encryption algorithm in the Global Agent Provisioning Settings.

Setting Up Delegated Credentials with Oracle Repositories

You have the option of using Oracle Internet Directory (OID), Oracle Unified Directory (OUD), or Oracle Virtual Directory (OVD) for your repository. Perform the following configuration steps to use delegated credentials with any of these Oracle repositories.

1. Navigate to the Provisioning Gateway Service folder (typically, "%PG_SERVER%\Service")
2. Open the web.config file in a text editor. Toward the end of the file there are two lines:
   - `<add key="LDAP_Username" value="" />`
   - `<add key="LDAP_Password" value="" />`
3. Set the "value" attribute of these lines to the username and password of a directory account with permissions to do the following (this account does not have to be an administrator account):

- Read the objects in the Locator container.
- Read the objects in the CO container.
- Read and write objects in the People container and its sub-containers.

4. Encrypt the web.config file where you are storing these credentials:
   a. From the command prompt, go to the directory:
   `%Windows%\Microsoft.NET\Framework\v2.0.50727.`
   b. Enter the following command:
   `aspnet_regiis -pef "appSettings" "C:\Program Files\Passlogix\v-GO PM\Service"`
   (assuming you installed the Provisioning Gateway server in the "C:\Program Files" folder).
   c. Open the web.config file to make sure the appSettings section has been encrypted.

Export to INI File

1. Export selected applications and all password policies and groups to an *entlist.ini* file- a store of application logons.
2. Do one of the following:
   - Select applications to export (use Ctrl+click or Shift+click to select multiple entries), then click **OK**.

     or

   - Click **Export All** to export all listed applications.
3. If any applications you have selected are enabled for Bulk-Add, you can select **Create First-Time-Use file** to generate a bulk-add (ftulist.ini) file.
4. Click **OK**. The Export EntList file dialog box appears.
5. Locate and open the folder for the file, name the file, and click **Save**.
6. If you chose to create a First-Time Use file, the Export First-Time Use dialog box appears. Locate and open the folder for the file (rename the file if desired), and click **Save**.

Displaying the Export EntList file Dialog:

1. Right-click **Applications** and select **Export** from the shortcut menu.

or

1. Choose **Export** from the File menu.

Export *EntList* File

Save an exported application configuration file (*enlist.ini*) to disk. The Export EntList file dialog displays when you export application logon information using the Export to INI file dialog box.

1. Locate and open the folder for the file, name the file, and click **Save**.
2. If you chose to create a First-Time Use file, the Export First-Time Use dialog box opens. Locate and open the folder for the file (rename the file if desired), and click **Save**.

Export First-Time Use

Save a first-time-use file (*ftulist.ini*) to disk. The Export First-Time Use dialog box opens when you create a First-Time Use file while exporting application logon information to an *enlist.ini* file.

1. Locate and open the folder for the file (rename the file if desired).
2. Click **Save**.

Import Merge Conflict

The Import/Merge Conflict dialog box appears if the merged file contains items with same names as those in current configuration.

- Select the items to import and click **OK**.

  The items you select overwrite the current like-named items.

Override Settings Tab (Edit Template Dialog Box)

Use this tab to select the settings that the template updates in all logons that are based on it. You can choose global overrides that apply to all of the forms in the application logon configuration, and you can also select specific overrides for individual forms.

The left pane displays the hierarchy of the application and its component forms:

- The global override settings for applications correspond to the general configuration settings for each application-type.
- The form-specific settings correspond to the configuration controls for individual logons.

Both Setting types are listed in the right pane with a Category that corresponds to the application-configuration dialog box in which you make the setting. Refer to the dialog box or tab for information on each setting.

Applications	General Error Loop Password Change Miscellaneous
Windows forms	General Fields Matching Miscellaneous
Web forms	General Matching
Mainframe/Host forms	General Options

To display this tab:

1. Choose **Manage Templates** from the Tools menu.
2. Do one of the following:

- Add a new template.

  or

- Select an existing template and click **Edit**.

3. In the **Edit Templates** dialog box, select the **Overriding Settings** tab.

Supply Info Tab (Edit Template Dialog Box)

Use this tab to specify what information an administrator must provide in order to complete an application logon based on this template. You can choose all items or choose individual items by selecting checkboxes.

Update Applications (from Template)

Use this dialog box to update application logons based on a template that has been modified since the logons were created. Only logons whose templates have been modified appear in the list. Select the applications to update (use **SHIFT+CLICK** or **CTRL+CLICK** for multiple applications), then click **Update**.

Testing Templates

The Oracle Enterprise Single Sign-On Administrative Console Template Test Manager* provides a simple way to validate templates that you have created, before publishing them. It engages the Agent directly, bypassing the repository and synchronization. The manager guides you through the test, prompting you to take action at various points, and asking questions about the results. Your answers to these questions are the cue to the manager's next steps.

Using the Template Test Manager requires the following:

- The Oracle Enterprise Single Sign-On Administrative Console
- The Logon Manager Agent
- Application templates that you want to test added to the Oracle Enterprise Single Sign-On Administrative Console
- Applications whose templates you have added to the Oracle Enterprise Single Sign-On Administrative Console.

The Template Test Manager supports Windows applications only.

Using the Template Test Manager

1. Launch the Oracle Enterprise Single Sign-On Administrative Console.
2. Right-click on a template under the "Applications" menu, and select **Test** to launch the Template Test Manager. During testing, the Oracle Enterprise Single Sign-On Administrative Console application window minimizes and the Template Test Manager receives focus.
3. Observe the three sections of the manager window:
   - The "Forms to be validated" section contains the name of the template (and all its forms) that you have selected to test. A status icon appears next to each name to indicate its status:
     -  Processing
     -  Success
     -  Failure
   - The "Status Messages" section apprises you of the test status.
   - The "Interactions" section prompts you to take the actions required to proceed with the test. Watch the status messages and follow the interactions prompts and proceed accordingly.
4. The manager asks if the Agent detected the template. If the test was successful, click **Yes**, and then click **Finish**. If the test is not successful, click the button that best describes why detection was unsuccessful:
   - Yes, but also responds to other windows that should be ignored
   - No (any other reason)
5. Click **Next** to receive suggestions to correct the errors in the template.
6. Continue the process until the Agent responds correctly to the template.
7. Select **Close** to shut down the Template Test Manager and return to the Oracle Enterprise Single Sign-On Administrative Console.

Example

1. In the Oracle Enterprise Single Sign-On Administrative Console, you have selected an application template, right-clicked it, and selected **Test**. The Template Test Manager launches, and the template's forms appear in the "Forms to be validated" section, but the Agent is not running. The "Status Messages" section reads,
   "Waiting for the Logon Manager Agent…." This indicates that the Agent is not active and that you must launch it to begin the test. So, the "Interactions" section displays the action request, "Launch the Logon Manager Agent."
2. You launch the Agent, and the status message indicates that the Template Test Manager is publishing the template to the Agent. The "Actions" message prompts you to launch the application for the template you are testing.
3. After you launch the application, the Agent should detect it and respond (in accordance with your configuration for initial credential capture).
4. The "Interactions" section informs you that you are at the "Detection" stage and presents the question, "Does the Agent detect the window?" Select the appropriate response:
   - Yes
   - Yes, but also responds to other windows that should be ignored
   - No
5. Click **Next**.
6. If you responded **Yes**, the Interactions section in the next screen informs you that the test was completed successfully. A check icon  appears next to the template name.
7. If you responded with either of the other answers, click **Next** and the manager prompts you through a series of troubleshooting tests, offering suggestions based on your input.
8. Continue the process until you have modified the template to achieve successful results.
9. Click **Close** when done.

**This utility is new as of version 11.1.1.5.0.*

Configuring Logon Manager for Specific Environments

These topics describe how to configure Logon Manager to support specific environments.

- For Windows authentication
- For directory servers
- For databases
- For file systems
- For Citrix Server

Configuring for Windows Authentication

Logon Manager supports Windows Authentication as the Primary Logon Method (Authenticator), creating a true single sign-on user experience. The Agent can use the Windows logon credentials as its authentication. In order for Logon Manager to support this, the administrator needs to be aware of two issues:

- The OS must have 128-bit encryption installed.
- The administrator must enable user-level profiles.

For Microsoft Windows XP, user-level profile support is part of the base feature set when installed.

Confirming 128-bit Encryption

To check the encryption strength of the OS, launch Microsoft Internet Explorer, and select **Help**>**About**. Confirm that Cipher Strength is 128-bit.

If the OS is not 128-bit, download the update from Microsoft:

http://www.microsoft.com/windows/ie/ie6/downloads/recommended/128bit/default.mspx.

Configuring the Agent for Directory Server Synchronization

This topic describes the settings needed to configure Logon Manager to use a directory server as a repository. The configuration is similar for all supported directory servers, with explanations of any differences.

- See Directory Server Synchronization Support for more information about how Logon Manager makes use of directory server resources.
- See the See the Global Agent Settings section for detailed descriptions of the associated registry entries.

> Where the LDAP AUI and LDAP Directory Server extension are both installed, values must exist in both AUI\LDAP and Extensions\SyncManager\Syncs\%LDAP%.

1. Point Logon Manager to the server or servers.
2. Do one of the following:
   - From Global Agent Settings in the left pane, select an existing set of registry entries.
   - Import a saved set of settings (**File**>**Registry**>**Import**).
   - Create a new set of registry settings (**Insert**>**Global Agent Settings**).
3. In the left pane of the Oracle Enterprise Single Sign-On Administrative Console, select and open the set of settings, select and open **Synchronization** (add the appropriate extension if needed), select and open the appropriate extension, then select and open **Servers**.
4. In the right pane, select **Servers**, select the **...** button, enter the server names, or IP addresses, and click **OK**.

> **For Microsoft Active Directory Server (other than Application Mode):**
>
> - If no Servers are entered for the Active Directory extension, and the user account is in an Active Directory domain, then Logon Manager uses AD domain resources to discover the server. If one or more servers are provided in the Global Agent Settings, then Logon Manager uses the Servers list to locate the server.
> - Unless otherwise configured, Logon Manager queries the domain name server (DNS) for the name of the preferred domain controller assigned to the local subnet.
> - In Active Directory networks with multiple servers, be sure to enable replication in order to include the Logon Manager schema extension and related objects. This assures that Logon Manager will always find SSO information on every server it connects with.
> - If one or more servers are provided for Microsoft Active Directory Server, use server names, rather than IP addresses.
>
> **For Microsoft Active Directory Server Application Mode:**
>
> - At least one server must be specified for AD LDS (ADAM) services.
> - Use the port parameter (for example myserver.com:9890) to specify particular instances of AD LDS (ADAM) running on a single server.
> - Applications templates must reside in a specific OU and not at the root of the AD LDS (ADAM) instance.

5. Point Logon Manager to the User path.
6. In the left pane, select the appropriate extension, then do one of the following:
   - For an LDAP extension, select **Required**.
   - For an Active Directory extension, select **Advanced**.

7. In the right pane, select **User Paths**, then select the **...** button, enter the user path(s), and click **OK**.
8. Enable or disable SSL.
9. In the left pane, select the appropriate extension.
10. In the right pane, select SSL options as follows:
11. If using SSL, select **SSL** (for LDAP or Active Directory) and select **Connect via SSL** (defaults to port #636).

- SSL is not enabled by default; the non-secure default port is #389.
- To set non-standard ports, use the Servers setting (for LDAP or Active Directory).

12. If using SSL, select **When SSL Fails** (for LDAP or Active Directory) appropriately.

For Novell eDirectory
There are two major caveats for Novell eDirectory and some other environments If the domain name for a user is in the form of

```
cn=%UserName%,ou=people,dc=Oracle,dc=com
```

instead of the form

```
namingattribute =%UserName%,ou=people,
dc=Oracle,dc=com
```

where namingattribute can be any string, do the following:

a. In the left pane, select the appropriate extension, then select Advanced.
b. Select Naming Attribute string and set it to CN.
c. Select Alternate User ID location and set it to uid=%user%,path where path is the rest of the path to the object; for example:

```
uid=johnd,ou=people,dc=Company,dc=com.
```

Configuring the Agent for File System Synchronization

This topic describes the settings needed to initially configure the Logon Manager Agent to synchronize application logons, global agent settings, and user credentials with a network file share.

The configuration settings described below can be distributed to the client workstations either as part of the general deployment of the Agent software (by modifying the MSI installer file), or after Agent deployment, by distributing a registry-entries (.REG) file that can be merged with the client workstation's registry.

- See Deployment Options for topics about Logon Manager Agent rollout.
- See File System Synchronization Support for more information about how Logon Manager makes use of file system resources.
- See Overriding Settings for detailed descriptions of the associated registry entries.

1. Point the Logon Manager Agent to the server.
2. Do one of the following:

- Import a saved set of settings (choose Registry, then Import from the File menu).

  or

- Create a new set of registry settings (from the Insert menu,l choose Global Agent Settings).

  or

- Select an existing set of registry entries (by selecting it in the left pane under Global Agent Settings).

3. In the left pane, select and open the set of registry settings, select and open Synchronization, add the appropriate extension (if needed), select and open the appropriate extension, then select Required.
4. In the right pane, select Server, enter the server names or IP address and click **OK**.
5. Export the settings to the Agent.
6. Select a method for initial distributing the global agent settings to client workstations:
7. Customize the MSI package that installs the Logon Manager Agent to include these settings.
8. Distribute a .REG file that you export from the Oracle Enterprise Single Sign-On Administrative Console. The REG file can be merged with the client workstation's registry locally by double-clicking the file icon.

Database Synchronization: Configuring the Agent

You can distribute the configuration settings described below to the client workstations either as part of the general deployment of the Agent software (by modifying the MSI installer file) or, after Agent deployment, by distributing a registry entries (.REG) file to merge with the client workstation's registry.

- See Deployment Options for topics about Logon Manager Agent rollout.
- See Database Synchronization Support for more information about how Logon Manager makes use of database server resources.
- See the Global Agent Settings section for detailed descriptions of the associated registry entries.

1. Point Logon Manager to the database server.
2. Do one of the following:
   - Select an existing set of registry entries (by selecting it in the left pane under Global Agent Settings).
   - Import a saved set of settings (from the **File** menu, choose **Registry**, then **Import**).
   - Create a new set of registry settings (from the **Insert** menu, choose **Global Agent Settings**).
3. In the left pane, select and open the set of registry settings, select and open **Synchronization**, add the appropriate extension (if needed), select and open the appropriate extension, then select and open **Servers**.
4. In the right pane, select **Servers**, select the **...** button, enter the database server name(s) and click **OK**.
5. Export the settings to the Agent by selecting a method for initial distribution to client workstations:

- Customize the MSI package that installs the Logon Manager Agent to include these settings.
- Distribute a .REG file that you export from the Oracle Enterprise Single Sign-On Administrative Console. The REG file can be merged with the client workstation's registry locally by double-clicking the file icon.

Using Role/Group Support with Directory-Server Synchronization

In directory-server synchronization installations, Logon Manager provides support for role/group access control for individual configurations, including application logons, password-change policies, global Agent settings, and passphrase question sets. When this feature is enabled, you can assign access-control lists, similar to those used in Windows security to the individual logons, policies, settings, and question sets.

Role/group support-enabled configurations are exported to a synchronizer container object just like the standard Logon Manager configuration objects (EntList, FTUlist, and AdminOverride). When role/group support is enabled and these access-controlled objects are present in the container, they override the standard objects. Follow these steps to configure role/group support:

1. Configure these global Agent settings to enable role/group security support and update the Agent:

Synchronization	Enable role/group security support	Enables role/group support for application logons, password policies, global Agent settings, and passphrase question sets. **Options:** • Do not use role/group security (default) • Use role group security.
Synchronization > selected sync > Advanced	**Configuration Objects Base Locations** **(LDAP, Active Directory, AD LDS (ADAM))**	Specifies where to begin the search for role/group-enabled configuration objects. The search is from the specified locations or locations downward, (away from the root). If there are no entries for this setting, the search is from the root.

2. Specify the access rights for each configuration:

   Use the **Security** tab for each configuration (application logons, password policies, global Agent settings, and passphrase question sets) to specify the users and groups that should have access to it.

3. Export the configurations to a synchronizer container
4. Connect to the synchronizer directory.
5. In the right pane, right-click a container object and choose **Publish to Repository** from the shortcut menu to display this window.
6. Choose **Administrative Console** as the Data Source.
7. Choose **Advanced Support** and complete the Wizard procedure to export the configuration objects as individual, access-controlled objects.

For best performance and highest security, Oracle recommends the following practices:

- Unless your organization explicitly requires role/group support, make certain that Enable role/group security support is set to "Do not use..."
- For best security, make certain that there are no user-writeable areas anywhere down the directory tree from the location specified by **Configuration Objects Base Locations** (LDAP, Active Directory, AD LDS (ADAM)).
- For best performance, *always specify at least one location* for **Configuration Objects Base Locations**. This ensures that the entire server is not searched.
- To minimize the search load and length, be sure to store as little unnecessary data as possible down the directory tree from the location specified by **Configuration Objects Base Locations**.

Configuring Logon Manager in a Citrix Environment

Default Installation of Logon Manager on Citrix Server

The Logon Manager default installation process automatically detects and installs the components necessary for Logon Manager in a Citrix environment. The installation process enables Logon Manager support for every application published on that Citrix server.

Installing Logon Manager on Citrix Server

1. Log on to the Terminal server as an administrator and close all applications.
2. Click **Start** and then click **Run**.
3. In the Run Dialog window, enter `cmd` and press **Enter**.
4. In the Command Prompt window, enter **change user/install** and press **Enter**.
5. Install Logon Manager with the appropriate installation options for your environment.
6. At the command prompt, enter **change user/execute** when installation is complete.

Controlling Logon Manager for Specific Applications in Citrix

The following section explains how to change the from the default installation of Logon Manager and enable it for only specific applications in a Citrix environment. There are two steps in this process. The first step is to remove global Logon Manager support. The second is to specify which applications are going to be SSO-enabled through their published application configurations.

Removing Global Logon Manager Support

1. Click **Start** and then click **Run**.
2. In the Run Dialog window, enter **Regedit** and press **Enter**.
3. Go to *HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon*.
4. From the right pane, right-click the string value **AppSetup** and select **Modify**.
5. Delete the value data in this entry that refers to SSOLauncher. (*C:\Program Files\Passlogix\v-GO SSO\wts\ssolauncher.exe /nossoshutdown*)
6. If you are using Windows Authentication v1 add the "**CheckForParentProcess**" key to the Passlogix registry hive. This ensures authentication event handoff to Logon Manager.

```
HKEY_LOCAL_MACHINE\SOFTWARE\Passlogix\AUI\WinAuth\

DWORD:

CheckForParentProcess

Value=0
```

Removing ssolauncher.exe from AppSetup configures Logon Manager not to function with any applications on this Citrix server unless specified in your published applications configuration.

Specifying Which Applications Are SSO-Enabled Through the Published Application Configuration (SSOLauncher)

Since Logon Manager support is now globally disabled, you must specify which applications you wish to be published with Logon Manager support by including the *SSOLauncher.exe* command in the published application properties.

1. Open Citrix Management Console.
2. Publish/Locate the application you would like to enable for Logon Manager.
3. Right-click on the published application and select **Properties**.
4. On the Application Location tab, add to the front of the Command Line the following syntax:
   `C:\Program Files\Passlogix\v-GO SSO\wts\SSOLauncher.exe/application`

The command for SSOLauncher.exe is added to your published application's command line; it does not replace it.

Following is an example of the Command Line syntax for the application ACT:

```
C:\Program Files\Passlogix\v-GO SSO\wts\SSOLauncher.exe" /application C:\Program Files\ACT\act.exe
```

This example is based on the assumption that Logon Manager and ACT are both installed on the C:\ drive of the Citrix Server.

See SSOLauncher for Citrix Servers for more information.

Enabling Citrix Server Monitoring

To enable Logon Manager to be monitored by Citrix Server, so that Logon Manager will not keep otherwise-ended sessions alive, go to the following registry tree:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet
  \Control\Citrix\Wfshell\TWI
```

If an entry named `LogoffCheckSysModules` exists, append to it the following items:

- `ssosehell.exe`
- `ssocredcap64.exe`
- `ssocredcap.exe`
- `ssobho.exe`
- `ssox64ho.exe`
- `ssowebho.exe`
- `ssomho.exe`
- `ssosapho.exe`
- `idcontext.exe`

For example, change `app1.exe,app2.exe` to `app1.exe,app2.exe,ssoshell.exe,ssocredcap64.exe`, and so forth.

If the current `LogoffCheckSysModules` includes `ssomozho.exe`, remove this executable.

If the entry does not exist, create `LogoffCheckSysModules` as type STRING and set to include the executables above.

Also see the reference topic, Best Practices for Deploying the Agent in a Citrix Environment.

SSOLauncher for Citrix Servers

This utility lets you control the delivery Logon Manager with published applications in a Citrix Server environment.

To use the ssolauncher utility:

1. Copy the ssolauncher utility in the WINNT\system32 folder. Otherwise you must include the full path to where ssolauncher resides.
2. You can now manage the applications you want with which you want Logon Manager to run by utilizing the ssolauncher utility. By accessing the Citrix Published Application Management console and applying the ssolauncher command through the Application Definition command line you can make Logon Manager run on an application by application basis.

The ssolauncher command is applied in front of the command line.

Example

```
ssolauncher.exe /application "C:Program Files\Internet
Explorer\IEXPLORE.EXE"
```

The following are the commands for ssolauncher:

Command	Use
/application	The full path of the application to execute. This is required.
/command	Used to supply command parameters to an application. This is optional.
/directory	Used to supply working to an application. This is optional.
/wait	The number of milliseconds to wait for an application to shut down. This is optional. If not specified ssolauncher will wait forever for the application to terminate.
/verbose	This supplies dialog boxes for error message if ssolauncher has any failures.
/nossoshutdown	Prevents shutting down sso when application completes.
/SSOCOMMAND LOGON	Used to initiate a command to the "Log On Using Logon Manager" trigger, located in the Logon Manager system tray icon.

Sample command line to launch AIM:

```
ssolauncher.exe /verbose /application "C:\Program Files\AIM95\aim.exe" /
directory "C:\Program Files\AIM95"
```

The command should begin and end with quotation marks if it contains backslash (\) characters.

Configuring the Agent with Global Agent Settings

This section discusses the ways in which an administrator can configure the Agent's behavior. It begins with a discussion of the differences between using global Agent settings and administrative overrides: the best practices for the use of each, and which is preferable to use for different functions.

Following the best practice discussion is a complete list of global Agent settings, including all setting options, registry paths, and default values.

Global Agent Settings vs. Administrative Overrides

The behavior of the Logon Manager Agent, including its interaction with the directory, is governed by settings configured and deployed to the end-user machine by the Logon Manager administrator using the Oracle Enterprise Single Sign-On Administrative Console. The settings fall into one of the following categories:

- Global Agent settings are the "local policy" for the Agent; they are stored in the Windows registry on the end-user machine and are included in the Logon Manager MSI package to provide the Agent with an initial configuration during deployment. Global Agent settings are stored in `HKEY_LOCAL_MACHINE\Software\Passlogix` (32-bit systems) or `HKEY_LOCAL_MACHINE\Wow6432Node\Software\Passlogix` (64-bit systems).

  Users able to modify the HKLM hive can alter their global Agent settings and thus change the behavior of the Agent from the one originally intended. To ensure that a setting will not be changed by the end-user, deploy it through an *administrative override*.

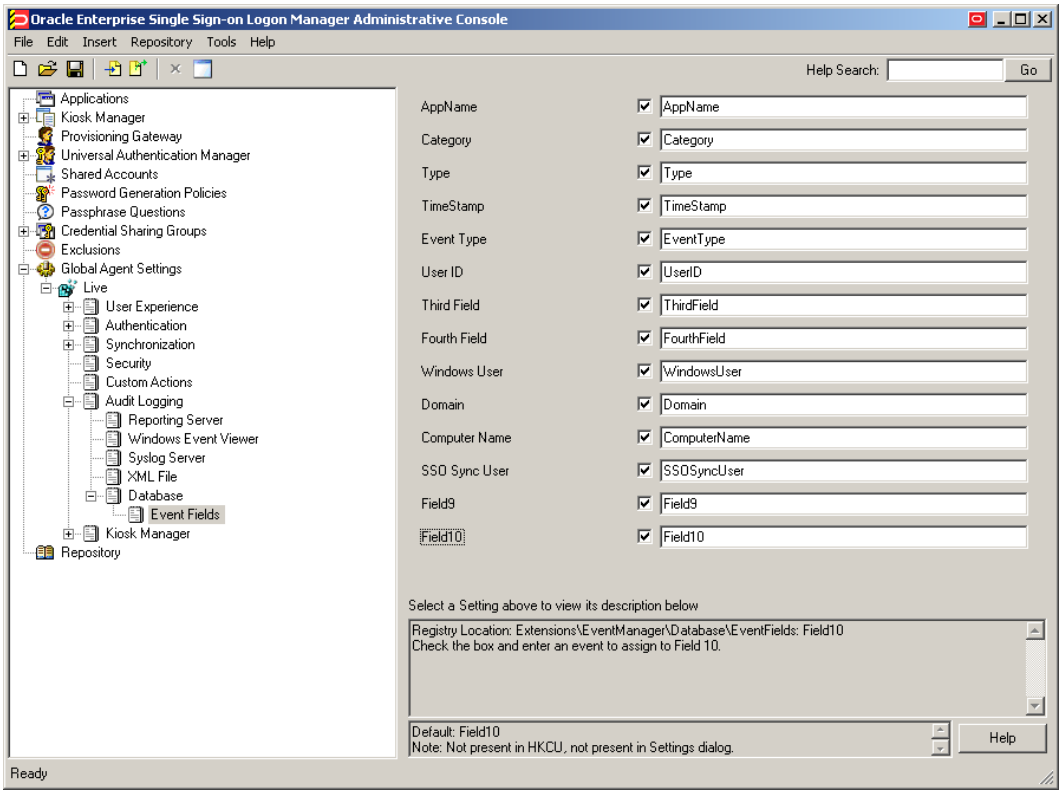
- Administrative overrides take precedence over the global Agent settings stored in the Windows registry and constitute the "domain" policy for the Agent. Overrides are downloaded from the central repository by the Agent during synchronization and stored in the Agent's encrypted and tamper-proof local cache, which makes them immune to end-user alterations. When role/group security is enabled, administrative overrides can be applied on a per-user or per-group basis; they can also be applied enterprise-wide to enforce configuration consistency for all users.

  Be conservative when planning your administrative overrides. Fewer overrides mean less data to store and transfer, and thus more efficient synchronization with the central repository. Reducing the number of overrides also simplifies troubleshooting by eliminating unknowns, as administrative overrides cannot be viewed on the end-user machine.

Global Agent settings together with administrative overrides constitute the *complete* configuration policy for the Agent. The rest of this section describes the recommended optimal configuration and complements the information found in the Logon Manager Best Practices guides.

A typical view of the Oracle Enterprise Single Sign-On Administrative Console is shown below.



In a development or staging environment, disable the option **Check for publisher's certificate revocation** in Internet Explorer to eliminate a delay when the Console starts and your machine is not connected to the Internet. (The delay is caused by Internet Explorer attempting to look up the server's certificate and timing out when a certificate authority cannot be reached.) Do not disable this option on production machines.

A Note on Default Values

The best practice for settings not described in this and other Logon Manager guides is to leave them at their default values, unless your environment dictates otherwise. The default value is automatically in effect whenever the check box for the setting in the Oracle Enterprise Single Sign-On Administrative Console is not checked. The value is visible in the inactive field next to the check box.

Recommended Global Agent Settings

This section lists Oracle-recommended best-practice global Agent settings. Configure the settings as described below and include them in the customized Logon Manager MSI package.

Allow Users to Exclude Logons from Credential Sharing Groups

Credential sharing groups allow you to share a single credential among a group of applications; the credential is managed at the group level, and the changes propagate instantly to all applications in the group. When an application is part of a credential sharing group and the user has more than one set of credentials for the application, all but the shared credentials must be excluded from the group. This feature gives users the ability to exclude logons from assigned credential sharing groups.

Located in: Global Agent Settings > Live > User Experience > Password Change

To enable: Select the check box, then select Allow from the drop-down list.

When this option is enabled, users can exclude a logon as follows:

1. In the "Logon Manager" window, select the logon you want to exclude from the assigned group.
2. Click **Properties**.
3. In the dialog that appears, select the **Exclude from password sharing group** check box.
4. Click **OK**.
5. Click **Refresh** to synchronize the changes with the central repository.

Restrict Disconnected Operation

As a best practice, the Agent should run even if it cannot reach the central repository so that users can receive the benefits of single sign-on when not on the corporate network. Before working offline, the user must have done the following:

- Completed the First Time Use (FTU) wizard while connected to the repository to generate encryption keys that protect the user's credentials. The keys are stored in the repository and in the Agent's local cache.
- Synchronized with the repository at least once to obtain templates, policies, and any pre-provisioned credentials. These items are stored in the Agent's local cache for offline use.

If the user has successfully synchronized on one machine and completes the FTU on a secondary machine (such as a laptop) that has never been used with Logon Manager and is not connected to the repository, the keys generated on the secondary machine will not match the keys already stored in the repository. The secondary machine will not be able to synchronize with the repository due to this mismatch.

In order to avoid this problem and still allow users to work offline, do the following:

1. In your custom MSI package, configure the Agent not to run when disconnected from the repository, as shown below:

Located in: Global Agent Settings > Live > Synchronization

To set: Select the check box, then select No from the drop-down list.

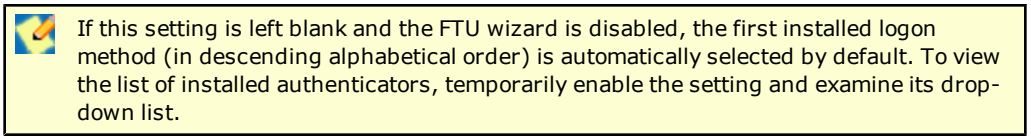
2. After deployment, push an administrative override that lifts this restriction, as described in Allow the Agent to Run when Disconnected from the Directory. (The override will be in effect after first successful synchronization.)

Select the Primary Authenticator for End-Users

Oracle highly recommends that you select and configure the primary authenticator in the following scenarios:

- If you want to disable the First-Time Use (FTU) wizard, as described in the next section
- If you want users to authenticate only via the selected primary authenticator.

For information on configuring specific authenticators, see the Authentication section of the global Agent settings.



Located in: Global Agent Settings > Live > User Experience > Setup Wizard

To set: Select the check box, then select the desired logon method from the drop-down list.

Do Not Show the First-Time Use Wizard

When Logon Manager starts for the first time, the FTU wizard appears and prompts the user to:

- Restore credentials and settings from a backup file (if a backup exists)
- Select the primary logon method
- Authenticate to Logon Manager using the selected primary logon method
- Provide credentials for default applications.

As a best practice, avoid burdening end-users with setting up Logon Manager manually. Instead, disable the FTU wizard, select the primary authenticator as described in the previous section, and provision the required applications beforehand; at that point, the only thing users will need to provide on the first launch of Logon Manager is their Windows password.

Located in: Global Agent Settings > Live > User Experience > Setup Wizard

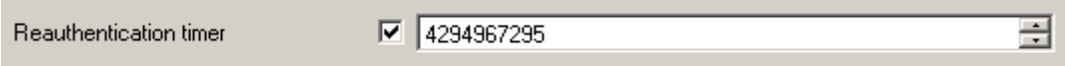
To disable: Select the check box, then select No from the drop-down list.

Disable the Reauthentication Timer

Disable the reauthentication timer so that users are not interrupted by unexpected reauthentication prompts. (The user is prompted at the next secure operation that occurs after the timer expires.)

> This is not an inactivity timer; this function is best served by the secure screensaver included in the operating system.

Located in: Global Agent Settings > Live > Security



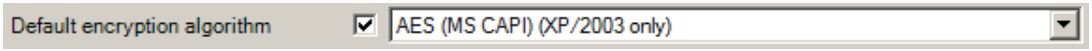
To disable: Select the check box, then enter 4,294,967,295 in the field; this value disables the timer.

Use the Default Encryption Algorithm

Do not change the default encryption algorithm (AES MS CAPI) that Logon Manager uses to encrypt application credentials to retain compatibility with all supported operating systems. Not all algorithms supported by Logon Manager function with all operating systems. (The operating systems supported by a given algorithm are listed next to the algorithm's name in the drop-down list.)

> Oracle strongly advises you to use MS CAPI algorithms to retain FIPS compliance across your enterprise.

Located in: Global Agent Settings > Live > Security



To set: Select the check box, then select the desired encryption method from the drop-down list.

Oracle recommends that you leave this setting at the default value shown above.

Recommended Administrative Overrides

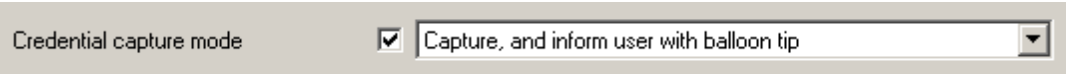
This section lists recommended best-practice administrative overrides. Configure the overrides as described below and push them to the central repository. The overrides will be applied to end-user machines during the next synchronization event.

Configure Silent Credential Capture

Logon Manager provides the ability to automatically (silently) capture credentials when a user logs into a supported application for the first time instead of displaying the interactive wizard. To simplify the user experience, Oracle recommends that you take advantage of this feature, but configure it so that users are aware that Logon Manager is capturing their credentials; fully silent capture (without user notification) may lead to trust issues (most users prefer to have a choice whether their credentials are captured or not) and increase incoming helpdesk calls as a direct result.

- For most applications, set the Credential capture mode option to **Capture and inform the user with balloon tip**.
- For applications that do not support silent credential capture (such as applications that require Logon Manager to use the SendKeys response method), set the Credential capture mode option to **Do not capture silently**.

Located in: Global Agent Settings > Live > Use Experience > Application Response > Initial Credential Capture



To set: Select the check box, then select the desired value from the drop-down list.

Make the Logon Manager Agent Wait for Synchronization on Startup

To ensure that users always have the most recent credentials, application templates, password policies, and administrative overrides, configure the Agent to wait for synchronization on startup. When this option is enabled, the Agent checks whether the directory is online when initializing and does one of the following:

- If the directory is online, the Agent does not respond to application logon requests until it successfully synchronizes with the directory.
- If the directory is offline, the Agent does not attempt to synchronize and starts immediately.

Located in: Global Agent Settings > Live > Synchronization

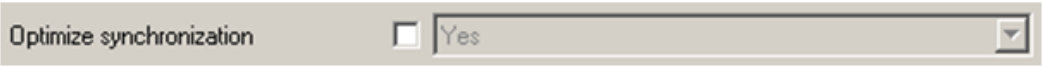
Use the default value shown above unless your environment requires otherwise.

Use Optimized Synchronization

Optimized synchronization instructs the Logon Manager Agent to synchronize only credentials that have changed since the last synchronization. Do one of the following, depending on your environment:

- Enable this option to improve synchronization performance on deployments with more than five credentials per user.
- Disable this option to improve synchronization performance on deployments with fewer than five credentials per user and large number of downloaded templates per user.

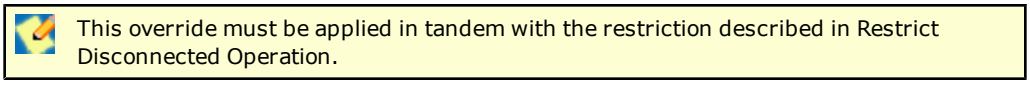
Located in: Global Agent Settings >Live > Synchronization



Use the default value shown above unless your environment requires otherwise.

Allow the Agent to Run when Disconnected from the Repository

This override is required to lift the restriction placed on the Agent in its initial configuration as described in Restrict Disconnected Operation. When this override is applied, users will benefit from single sign-on capability while not on the corporate network.



Located in: Global Agent Settings > Live > Synchronization

To allow: Select the check box, then select Yes from the drop-down list.

Set the Optimal URL Matching Precision for Web Applications

URL matching precision determines how many levels within a URL are considered when matching the URL of an application to that defined in the template. If the URL matching precision is set too low, Logon Manager might mistake one intranet application for another and respond with incorrect credentials. If URL matching precision is set too high, an application served through a distributed infrastructure with unique host names may be erroneously recognized as separate applications due to the varying host name.

Follow these guidelines when determining the optimal URL matching precision for your environment:

- Typically, set URL matching precision to 5 (the maximum value). This will ensure that Logon Manager only responds when the URL of the application requesting logon exactly matches the URL stored in the template. The auto-recognize feature will have limited functionality.
- If you want to get the maximum benefit from the Logon Manager auto-recognize feature for Web applications, leave URL matching precision at its default value of 2. However, response to intranet applications might be impaired.

Located in: Global Agent Settings > Live > User Experience >Response > Web Applications

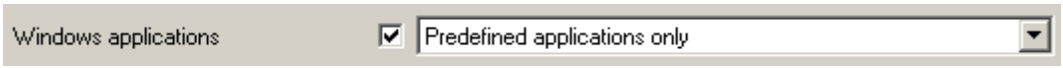
To set: Select the check box, then enter the desired value in the field.

Limit Users to Predefined Applications

Logon Manager allows you to prevent users from storing credentials for applications for which templates do not exist in the repository. To simplify the user experience while maintaining a degree of flexibility, Oracle recommends that you do the following, based on the type of application:

- **Windows applications.** Determine and provision the required applications before users begin working with Logon Manager. Instruct Logon Manager to store credentials only for applications for which templates already exist in the repository. Since users will not be prompted to store credentials for unprovisioned Windows applications, you retain full control of the single sign-on process for your enterprise applications.

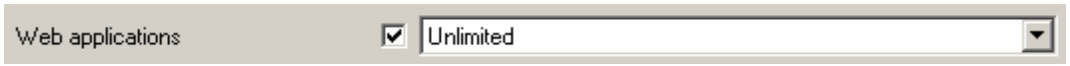
Located in: Global Agent Settings > Live > User Experience > Application Response >Initial Credential Capture



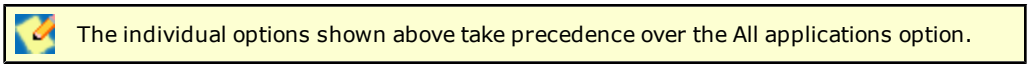
To set: Select the check box, then select Predefined applications only from the drop-down list.

- **Web applications.** To provide the maximum value of single sign-on, you should allow users to store credentials for Web applications of their choice (by using this option's default value of Unlimited). Note, however, that users will be prompted to store credentials for each unprovisioned Web application every time they access it, until credentials are successfully stored. For this reason, Oracle recommends that you set this option to Predefined applications only rather than Unlimited. In the end, your decision will depend on the needs of your organization.

Located in: Global Agent Settings > Live > User Experience > Application Response > Initial Credential Capture



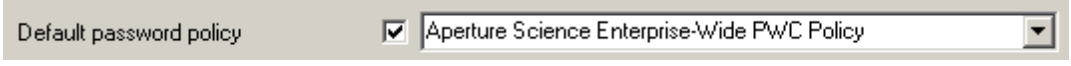
To set: Select the check box, then select Unlimited from the drop-down list.


The individual options shown above take precedence over the All applications option.

Create and Set the Company Password Change Policy

By default, Logon Manager ships with an inadequate default password change policy that must be replaced with a new policy which meets the security requirements of your organization. Include the name of your organization in the policy name to indicate that it is not a built-in policy. You must create this policy before setting this option; for instructions on creating a password change policy, see Adding a Password Policy.

Located in: Global Agent Settings > Live > User Experience > Password Change



To set: Select the check box, then select the desired policy from the drop-down list.

The policy set as the default password change policy is in effect enterprise-wide.

Force Reauthentication when Revealing Masked Fields

To prevent unauthorized access to stored application passwords, configure Logon Manager to prompt the user to authenticate when the "reveal masked fields" feature is invoked within the Agent. Configuring this policy as an administrative override will also prevent a rogue administrator from manually adding the setting to the local machine's registry and gaining unauthorized access to the local user's passwords if the setting is left unconfigured during initial deployment.

Located in: Global Agent Settings > Security

To set: Select the check box, then select Yes from the drop-down list.

Select an Audit Logging Method

Configure and use audit logging to make troubleshooting your installation efficient. The audit method you choose will depend on the needs of your organization; a quick summary of the available methods is provided below.

- Syslog and Windows Event Logging Server are the methods of choice for most organizations.
- Databases are also supported (a valid ODBC connection string to the database is required).
- If you want to implement a custom event logging system, Logon Manager offers the "XML File" option which exposes raw log data that can be directly parsed by an external application. (Be aware that the raw log data are not self-cleaning and will grow indefinitely unless cleaned up externally.)

For more information on the available audit methods, see the Audit Logging section of global Agent settings.

Select Event Types to Log

If you are using an audit logging method other than the Reporting Server, you must select the types of events that should be logged. Oracle highly recommends logging all event types for maximum benefit during troubleshooting.

You must select the Event Types: Info item in addition to the desired event types. This item is the parent to all event types and is required for data capture.

Located in: Global Agent Settings > Audit Logging > <Selected Audit Logging Method>

To set: Select the check box, then select the desired event types in the dialog that appears. When you are finished, click OK to dismiss the dialog.

Working with a Set of Global Agent Settings

Global Agent Settings contain defaults, switches, and other configuration information that modify the behavior of Logon Manager on the desktop. Double-click items in the list in the right pane to view or modify the individual settings. Click **Add Notes** to type notes about this set of settings.

Viewing a Set of Global Agent Settings

1. Do one of the following:
   - Click **Global Agent Settings** in the left pane, then double-click a set of settings from the right pane.

     or
   - In the left pane, click the plus sign (**+**) next to the Global Agent Settings icon (or double-click **Global Agent Settings**) to display the sets of settings.
2. Do one of the following:
   - Select a **Global Agent Settings** icon. The list of individual settings appears in the right pane.

     or
   - Right-click a **Global Agent Settings** icon to display a shortcut menu with these options:

Export	Save the selected set of settings to a registry file or administrative override object.
Write to Live HKLM	Export the current Agent configuration to the local-machine registry (HKLM).
Test	Launch the Logon Manager Configuration Test Manager, which tests your connections and adjusts settings, if necessary.
Manage Synchronizers	Add, delete, and reprioritize synchronizers.
Delete	Delete the selected set of settings.
Make copy	Duplicate the selected set of settings.
Rename	Rename the selected set of settings.
Publish	Opens the Publish to Repository dialog box, from which you can select the Global Agent Settings and other objects you want to publish.
Publish To	Allows you to select a location to which to publish the selected set of Global Agent Settings.

Creating and Importing Global Agent Settings

The Global Agent Settings contain Agent configuration information and provide access to stored sets of Global Agent Settings.

1. Click **Global Agent Settings** in the left pane to display a list of sets of Global Agent Settings in the right pane.
2. Right-click **Global Agent Settings** in the left pane to display a shortcut menu with these options:

New Settings	Create a new set of Global Agent Settings. Displays the Add Set of Settings dialog box.	
Import	Import a set of Global Agent Settings from an external source:	
	From File	Import a set of settings from an administrative override object (INI) file or a registration-entries (REG) file. Navigate to the file and click **Open**.
	From Live HKLM	Import the current Agent configuration from the local-machine registry (HKLM) as a set of settings named Live.
Publish	Opens the Publish to Repository dialog box, from which you can select the Global Agent Settings and other objects you want to publish.	

If the imported settings have the same name as an existing set in the current configuration, the imported set is named "Copy of existing settings.

If this version of the Oracle Enterprise Single Sign-On Administrative Console is installed on a foreign OS (any OS other than English), do not use the New Settings option. Rather, use the Import option. If the New Settings option is used, the path for the synchronization extension points to an invalid path, which results in a synchronization failure.

Adding a Set of Global Agent Settings

Use this dialog box to add and name a new set of Global Agent Settings.

- Enter the **Set of Settings Name** and click **OK**.

To display this dialog box:

- Right-click Global Agent Settings and choose **New Settings** from the shortcut menu.

  or

- Choose **Global Agent Settings** from the Insert menu.

Export Format

Use this dialog box to select an output format for the selected set of settings.

Options

Administrative Override Object	Export the settings as an administrative override object (INI) file.
HKLM Registry	Export the settings as a registration-entries (REG) file.
Both	Export both file types.
Unicode encoding (.REG format only)	Export the .REG file in Unicode format.

Exporting a Set of Global Agent Settings

1. (Optional) Select **Unicode format** for the .REG file, if desired.
2. Click an option.
3. In the File Save dialog box, locate and open the folder for each file, name the file, and click **Save**.

To display this dialog box:

1. Right-click the **Global Agent Settings** icon in the left pane and select **Export** from the short-cut menu.

User Experience

The User Experience settings control the Agent as a Windows application, including its interactions with the end user and with other programs.

Default values, where applicable, are in **bold**.

System tray icon

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Display icon in system tray `Shell:ShowTrayIcon`	Specifies whether to show the Logon Manager icon in the system tray.	0-No **1-Yes (Default)**	Yes	dword/Ø
Use server icon `Shell:TrayIconUseRemote`	Specifies whether to use the alternative server icon, as opposed to the standard system tray icon.	**0-No (Default)** 1-Yes	Yes	dword/Ø
Tooltip text `Shell:TrayIconName`	Specifies the text to display when the mouse hovers over the system tray icon. (Recommended use: Label each Citrix Server/Terminal Services/Remote server)	63 characters maximum **(Default-Logon Manager)**	Yes	string/Ø
Show system name `Shell:TrayIconDisplaySysName`	Specifies whether to append the computer name to the tooltip text, separated by a space-dash-space.	**0-No (Default)** 1-Yes	Yes	dword/Ø
Allow shutdown `Shell:AllowShutdown`	Specifies whether the "Shut Down" option is enabled on the system tray icon menu for the end user.	0-No **1-Yes (Default)**	Yes	dword/Ø

Title bar button

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Show title bar button `Shell:ShowAccessBtn`	Specifies whether to show the Logon Manager button on all window title bars. This button can be configured for single-click application recognition and response, or it can provide a menu similar to the system tray menu, by changing the "Provide Dropdown Menu" setting.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Always show for `Shell:ShowTitleIconAlways ForModuleN`	Identifies a list of applications (by executable filename, such as "notepad.exe") for which the title bar button should always be displayed. This setting overrides the "Show title bar button" setting. Click the ellipsis button ("**...**") button to enter the application names. Separate application names with a carriage return.		Yes	string/Ø
Provide dropdown menu `Shell:ShowAccessBtnMenu`	Specifies whether to show the menu from the title bar button. If turned off, the title bar button acts as a single-click button for application recognition and response.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Tooltip text `Shell:TitleIconName`	Specifies the text to display when the mouse hovers over the title bar button.	**Default-Oracle Enterprise Single Sign-On Logon Manager**-	Yes	string/Ø

Application Response

The Application Response settings control the behavior of the Agent when the end user provides credentials for new logons and when detecting applications requiring logons.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Log on to waiting applications upon Agent startup `Shell:LogonOnStartup`	Enables the Agent, at startup, to submit credentials to a Windows or Java application that has already presented its logon form before the Agent was initialized and ready.  Web and host/mainframe application logons are not affected by this setting.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
SendKeys event interval `Extensions\AccessManager:SendkeysEventInterval`	Specifies the minimum time to allow between SendKeys key events. This is especially useful for eastern languages where keystrokes are sometimes lost.  Logon Manager does not support credential submission using Journal Hook SendKeys	• **0-Best speed (Default)** • 60-Typical for eastern languages • 80-Use for slow system • 120-Use for very slow system	Yes	dword/Ø
Respond to hidden and minimized windows `Shell:StrictWindowDetect`	Specifies whether the Agent will respond to hidden and minimized windows.  This setting must be disabled when using Kiosk Manager.	• **0-Yes (Default)** • 1-No	Yes	dword/Ø

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Applications that hooks should ignore `Shell:HookIgnorePathsContain`	Specifies applications that are incompatible with hooks, and which Logon Manager should therefore ignore. Click the ellipsis "**...**" button and enter the list of paths to exclude, separating items with semi-colons. This list can include full paths or sub-strings of paths. **Example:** To exclude all applications from all folders whose paths contain "C:\Program Files\Java," and all folders whose paths contain "Oracle Enterprise Single Sign-On Administrative Console," enter the following: `C:\Program Files\Java;`Oracle Enterprise Single Sign-On Administrative Console  This setting is specifically for applications that might cause loss of functionality for compatibility reasons. Such applications might be discovered only in a production environment. Do not use this setting for applications that are compatible with Logon Manager functionality; for these applications, use the exclude/ignore settings on the appropriate application-type settings pages. You cannot use this setting as an administrative override.		Yes	string/ string

Initial Credential Capture

The Initial Credential Capture settings control the behavior of the Agent when it first encounters an application. Default values, where applicable, are in **bold**.

User interface

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Credential capture mode `Shell:CaptureType`	Specifies how the Agent should respond when it encounters a new application requiring credentials, and the level of involvement on the user's part. Silent credential capture mode is not compatible with applications that require SendKeys. For this reason, you cannot use this mode for host/mainframe applications, nor for any Web or Windows application for which you use SendKeys. You should not use silent credential capture for applications where the username and password are obfuscated. Silent Credential Capture for on-the-fly Web applications requires a "Submit" element with one of the following tags: • `<input type=submit>` • `<button type=submit>` • `<input type=image>` You must create a template for a Web application if the "Submit" element has an underlying tag of <img> or <a>.	• 0-Do not capture silently Presents the New Logon dialog box in which the user enters credentials manually. • 1-Capture, but do not inform user The Agent captures the credentials as the user enters them, and does not inform the user of the process. • **2-Capture, and inform user with balloon tip (Default)** The Agent captures the credentials as the user enters them, and displays a balloon tip near the system tray to inform the user during the process. • 3-Capture, and present New Logon dialog box The Agent captures the credentials as the user enters them, and displays a balloon tip near the system tray to inform the user during the process. After capturing the credentials, the Agent displays the New Logon dialog box with the user's entries pre-filled. The user can accept, change, cancel, or disable.	Yes	dword/Ø
Enable Auto-Prompt `Shell:UseAutoSense`	Specifies whether to automatically prompt the user to add a logon when a new application is detected.	0-No **1-Yes (Default)**	Yes	dword/Ø
Enable Auto-Enter `Extensions\AccessManager: LogonAfterConfig`	Specifies whether to log on to an application after configuring it (adding its credentials).  The end-user can override this setting by deselecting it in the Logon Manager "Response" tab.	0-No **1-Yes (Default)**	Yes	dword/Ø

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Enable Auto-Recognize `Shell:UseActiveLogin`	Specifies whether to automatically provide credentials to applications.  The application configuration-specific setting overrides the global setting.	0-No **1-Yes (Default)**	Yes	dword/Ø
Allow creating multiple accounts during credential capture `Extensions\AccessManager: ShowAddAdditionalLogon`	Specifies whether to enable the checkbox in the New Logon dialog box that allows the user to add another set of credentials.	**0-No (Default)** 1-Yes	Yes	dword/Ø
Prohibit canceling the addition of new accounts `Extensions\AccessManager: EnableCancelButton`	Specifies whether the user has the option to click the **Cancel** button or close the "New Logon" dialog box to defer entering credentials. This permits current access to an application and re-prompts the user to enter credentials at the next appropriate instance.	0-Yes **1-No (Default)**	Yes	dword/Ø
Prohibit disabling the addition of new accounts `Extensions\AccessManager\ EnableNeverButton`	Specifies whether the **Disable** button is available in the New Logon dialog box, allowing the user to reject adding credentials for applications permanently.  Disabling an application adds it to the Exclusions list in Agent settings.	0-Yes **1-No (Default)**	Yes	dword/Ø
Prohibit excluding accounts from credential sharing groups `Extensions\AccessManager: DisableAllowExcludePWSG`	Specifies whether to disable the checkbox in the New Logon dialog box that allows an account to be excluded from credential sharing groups. This checkbox will be available for the "Account Properties" dialog box.	**0-No (Default)** 1-Yes	Yes	dword/Ø

Limit response to predefined applications for...

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
All application types `Extensions\AccessManager: AllowUnknown`	Sets the following options: • Whether the Agent should auto respond to an application; • Whether the user should be allowed to create logons for applications that the Administrator has not predefined. The "Predefined applications only" setting prohibits both options. The 'Unlimited' setting permits both options.	0-Predefined applications only **1-Unlimited (Default)**	Yes	dword/Ø
Windows applications `Extensions\AccessManager: AllowUnknownApp`	Specifies whether the users is allowed to add credentials for Windows applications that are not predefined by the administrator.	0-Predefined applications only **1-Unlimited (Default)**	Yes	dword/Ø
Web applications `Extensions\AccessManager: AllowUnknownWeb`	Sets the following options: • Whether the Agent should respond to a Web application automatically. • Whether the user should be allowed to create logons for applications that the administrator has not predefined. The "Predefined applications only" setting prohibits both options. The "Unlimited" setting permits both options. The "Manually add undefined" setting prohibits the first option and permits the second option.	0-Predefined applications only **1-Unlimited (Default)** 2-Manually add undefined<	Yes	dword/Ø
Allowed Web pages `Extensions\AccessManager\ BHOAllowedWebPages: WebPageN`	Use this setting to list the Web pages that the Agent should allow. Click the ellipsis "**...**" button to add the allowed Web pages and enter the regular expressions that match the URLs. (There is no default for this setting.)  Use this setting only when you select "All application types" or "Web applications" for "Predefined applications only."		Yes	string/Ø

Web Application Response

The Web Applications Response settings control the behavior of the Agent with Web applications.

Because some Web applications contain content that changes with each visit, you can configure a Web template to re-scan dynamic Web pages, detect changes, and respond appropriately.

Default values, where applicable, are in **bold**.

Credential field identification

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Show border `Extensions\AccessManager\ BHO:ShowBorder`	Specifies whether to display a highlighted border around the credential fields of a Web form during logon.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Border appearance `Extensions\AccessManager\ BHO:FeedbackColor`	Default border color/size/style for highlighting detected web page fields. See Border Values for more information.	**Default-red 6px solid**	Yes	string/ string

Behavior

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
URL matching precision `Extensions\AccessManager: DNLevelsToMatch`	Number of levels of the host portion of the URL used for application detection and response. For example, for the URL `http://mail.company.co.uk`: • 2=match to `*.co.uk` • 3=match to `*.company.co.uk` • 4=match to `*.mail.company.co.uk` Values less than 2 are treated as 2.	• **Minimum-2 (Default)** • Maximum-5	Yes	dword/int
Scroll into view `Extensions\AccessManager\ BHO:ScrollIntoView`	Enables or disables scrolling the browser window to bring the logon fields into view. This setting disables scrolling when the user has not yet stored credentials for a Web application. The Agent always scrolls when injecting credentials into the logon fields for an account that already exists.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Activate tab `Extensions\AccessManager\ BHO:ActivateTab`	Enables or disables activating the tab that identifies the logon fields.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Respond to IE modal dialogs `Extensions\AccessManager\ BHO:RespondToIEModalDialogs`	Enables Agent response to a Web page that displays as a modal dialog or HTML application.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø

Response control

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Applications to ignore `Extensions\AccessManager: BHOIgnoredApps`	Enter a comma-delimited list of applications (without path or extension) that the Browser Helper Object (BHO) should not attach to when searching for logons. Used when the BHO causes conflicts with certain applications. **Example:** `ws_ftp, customapp1`		Yes	string/Ø
Web pages to ignore `Extensions\AccessManager\ BHOIgnoredWebPages: WebPageN`	Use this setting to list the Web pages that the Agent should ignore. Used when the BHO causes conflicts with specific web applications or sites. Click the ellipsis ("**...**") button to enter the regular expressions that match the URLs to be ignored (one per line). **Examples:** • `.*http://login\.company\.com/.*` • `.*http://.*\.company\.com/.*`		Yes	string/Ø
Allowed dynamic Web pages `Extensions\AccessManager\ BHOAllowedDynamicWebPages: DynamicWebPageN`	Use this setting to list the dynamic (DHTML) Web pages allowed by the Agent. By default, the BHO will not detect changes made to a dynamic page after the initial presentation of the page. Click the ellipsis ("**...**") button to enter the regular expressions that match the URLs. **Examples:** • `.*http://logon\.company\.com/.*` • `.*http://.*\.company\.com/.*`		Yes	string/Ø

Windows Application Response

The Windows Applications Response setting controls the behavior of the Agent with Windows applications.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Allow fallback from control IDs to SendKeys `Extensions\AccessManager: AllowSendKeysFallback`	Allows fallback to SendKeys when direct injection of credentials using control IDs fails.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø

Java Application Response

The Java Application Response settings control the behavior of the Agent with Java applications.

Default values, where applicable, are in **bold**.

Exclusions

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Excluded Java versions `Extensions\AccessManager\ JHO:JhoExcludeJavaVersionN`	Specifies Java versions to exclude, listed as regular expressions. Enter one expression per line. *This setting is new as of Logon Manager version 11.1.1.1.0.*		No	string/Ø
Excluded Java vendors `Extensions\AccessManager\ JHO:JhoExcludeJavaVendorN`	Specifies Java vendors to exclude, listed as regular expressions. Enter one expression per line. *This setting is new as of Logon Manager version 11.1.1.5.0.*		No	string/Ø

Response delays

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Time allowed for Java applets to load `Extensions\AccessManager: MaxAppletLoadTime`	Specifies the maximum time (in seconds) that the Agent waits for a Java applet to be fully loaded in the browser.	**(Default-6)**	Yes	dword/int
Delay after Java runtime startup `Extensions\AccessManager: JHOAttachDelay`	Specifies the length of time (in milliseconds) the JHO should wait before listening to window events at Java startup. Adding a delay can resolve timing conflicts during Java runtime initialization.	**(Default-0)**	Yes	dword/int
Delay between retries `Extensions\AccessManager: JhoRetryTimeout`	Specifies the length of time (in milliseconds) the JHO should wait between retries of credential injection into a form control.	**(Default-500)**	Yes	dword/int

Retry behavior

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Maximum times to retry credential injection `Extensions\AccessManager: JhoRetryMaxAttempts`	Specifies the number of times to retry credential injection.	**(Default-0)**	Yes	dword/int

Java events to respond to

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Hierarchy events `Extensions\AccessManager: JhoHierarchyEventProcessing`	Specifies which Java hierarchy events are recognized. Set the flag using the following syntax: HIERARCHY_EVENT_CHANGED = 0x1 This instructs the JHO to recognize all hierarchy events.	**(Default-0)**	Yes	dword/int
Window events `Extensions\AccessManager: JhoWindowEventProcessing`	Specifies which Java window events are recognized.	A combination of the following values: • WINDOW_EVENT_OPENED = 0x1 • WINDOW_EVENT_CLOSED = 0x2 • WINDOW_EVENT_ACTIVATED = 0x4 • WINDOW_EVENT_DEACTIVATED = 0x8 • WINDOW_EVENT_CLOSING = 0x10 • WINDOW_EVENT_ICONIFIED = 0x20 • WINDOW_EVENT_DEICONIFIED = 0x40 **(Default-255-All window events are recognized.)** The recommended setting for new installations of Logon Manager is 3.	Yes	dword/int
Component events `Extensions\AccessManager: JhoComponentEventProcessing`	Specifies which Java component events are recognized.	A combination of the following values: • COMPONENT_EVENT_SHOWN = 0x1 • COMPONENT_EVENT_HIDDEN = 0x2 • COMPONENT_EVENT_ADDED = 0x4 • COMPONENT_EVENT_REMOVED = 0x8 **(Default-15-All component events are recognized.)** The recommended setting for new installations of Logon Manager is 0xB (11).	Yes	dword/int

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Injection type `Extensions\AccessManager: JhoInjectType`	Specifies the injection type that the JHO uses to submit data to the controls.	One of the following values: • **INJECT_TYPE_DEFAULT = 0 (Default)** The default causes the JHO to attempt injection using each of the following methods in the order shown until injection is successful: • INJECT_TYPE_METHOD = 1 (if an appropriate set method has been found for the control) • INJECT_TYPE_ACCESSIBLE = 2 (if the control supports accessibility) • INJECT_TYPE_NONACCESSIBLE = 3 • INJECT_TYPE_ROBOT = 4  For combo and list boxes, the JHO always uses INJECT_TYPE_METHOD.	Yes	dword/int

Host/Mainframe Application Response

The Host/Mainframe Response settings control the behavior of the Agent with host/mainframe applications.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
16-bit screen capture attempts `Extensions\AccessManager\ MHO\ConXP: 16BitTimeouts_ToFallback`	Specifies the number of times to attempt the 16-bit screen capture. If an attempt is unsuccessful after the allotted number of tries, the Agent reverts to the 32-bit method.	**(Default-5)**	Yes	dword/int
Credential request delay interval `Extensions\AccessManager\ MHO:NotNowDelay`	Specifies the interval (in milliseconds) between prompts to create a logon for a mainframe session. When a user logs onto a mainframe session that matches a configured application for which there is no stored password,the Agent prompts the user: "Would you like Logon Manager to remember your logon information for this application?" If the user selects **Not Now**, the next time the user presses any key on the mainframe screen, the Agent prompts the user again. This delay setting is the amount of time the Agent should wait before displaying the question again.	**(Default-60000)**	Yes	dword/int
Polling interval `Extensions\AccessManager\ MHO:CycleInterval`	Specifies the interval (in milliseconds) between instances when the Agent checks the host emulator for changes. Lower values can use more CPU time; higher values can increase the time between when a screen appears and when the Agent provides credentials.	**(Default-700)**	Yes	dword/int

Password Change

The Password Change settings control the Agent behavior and policies for password generation and credential maintenance. Default values, where applicable, are in **bold**.

Password change behavior

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Default password policy `Extensions\AccessManager: DefaultPolicy`	Name of Password Generation Policy that application templates will use when no policy is defined in the application template. To define this setting, ensure that you currently have a defined/named policy loaded in the console, so the dropdown allows you to select the policy.  If no policy is defined here or in the template, a default policy of exactly eight alpha-only characters applies. For this reason, it is important to define a more appropriate policy.		Yes	string/Ø
Allow user to exclude accounts from credential sharing groups `Extensions\AccessManager: AllowExcludePWSG`	Allows end user to exclude application logons from an assigned credential sharing group. Enabling this option causes a check box to appear on the "New Logon" and "Properties" dialog boxes, giving the user the choice to omit accounts from credential sharing groups.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Change passwords automatically `Extensions\AccessManager: QuietGenerator`	Specifies the level of control given to the user in the password change process.	• **No. (Default)** The user has full control; Logon Manager does not automatically change passwords. The user must initiate password change. (default) • Yes, with user confirmation. The user has partial control; Logon Manager automatically initiates password change and prompts the user to either accept the auto-generated password, request to generate another, or enter one manually. • Yes, without user confirmation. The user has no control; Logon Manager automatically initiates password change, generates a password, and submits it to the application without permitting user interaction.	Yes	dword/Ø

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Manual password change behavior `Extensions\AccessManager:CPWFlag`	Specifies the behavior of the Password Change Wizard when a user encounters a password-change request.	• **Prompt. (Default)** Prompts user with the Password Change Wizard. • Manual, offer auto. Prompts user to select a new password, but also allows the Password Change Wizard to offer to generate the password automatically. • Auto, offer manual. Generates the new password automatically, but also allows the user to select the new password. • Manual only. Prompts user to select a new password; does not allow Password Change Wizard to automatically generate the password.	Yes	dword/Ø
Pop-up dialog text after submission `Extensions\AccessManager: CPVerifyMessage`	To change the default text, select the checkbox and highlight the current text, then type in new text. To restore default text, unselect the checkbox.	**Default:** After closing this message, verify that the application accepted the password. Select **OK** if it was accepted. If it was rejected, please try again.	Yes	string/Ø

Allowed character sets

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Lowercase characters `Extensions\AccessManager: LowerAlphaChars`	Specifies the list of lowercase alphabet characters to allow in passwords.	• Any lowercase characters • **(Default-All lowercase characters)**	Yes	string/Ø
Uppercase characters Extensions\AccessManager: UpperAlphaChars	Specifies the list of uppercase alphabet characters to allow in passwords.	• Any uppercase characters • **(Default-All uppercase characters)**	Yes	string/Ø
Numeric characters `Extensions\AccessManager: NumericChars`	Specifies the list of numeric characters to allow in passwords.	• Any numeric characters • **(Default-All numeric characters)**	Yes	string/Ø
Special characters `Extensions\AccessManager: SpecialChars`	Specifies the list of non-alphanumeric (special) characters to allow in passwords	**!@#$^&*()_-+=[]|,? (Default)**	Yes	string/Ø

User Interface

The User Interface settings control the appearance of the Agent when performing a logon and of the information presented in the Logon Manager and "Logon Chooser" dialog box.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Language `[Root]:Language`	Specifies the language in which to present the user interface.  Other values may be acceptable based on localized versions. The display font should support the desired characters in the specified language.	• **English (Default)** • Chinese (Simplified) • Chinese (Traditional) • Czech • Danish • Dutch • Finnish • French • German • Greek • Hungarian • Italian • Japanese • Korean • Norwegian • Polish • Portuguese (Brazil) • Portuguese (Portugal) • Romanian • Russian • Slovak • Spanish • Swedish • Thai • Turkish	Yes	string/Ø

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Allow refresh in My Accounts `Extensions\AccessManager: AllowRefresh`	Enables/disables the SSO Manager Refresh button.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Columns in "Details" view of My Accounts `Extensions\AccessManager\ LogonManager:Columns`	Click the ellipsis "**...**" button to display the "Edit Columns" dialog box. Choose the appearance and order of columns in the Logon Manager.	• 1-Application Name • 2-URL/Module • 3-Username/ID • 4-Password • 5-Modified • 6-Last Used • 7-Description • 8-Reference • 9-Group • 10-Third Field • 11-Fourth Field • **(Default-1,2,3,4,5,6,7,8,9)**	Yes	string/Ø
Columns in Logon Chooser `Extensions\AccessManager\ LogonChooser:Columns`	Click the ellipsis "**...**" button to display the Edit Columns dialog box. Choose the appearance and order of columns in the Agent's "Logon Chooser" dialog box.	• 1-Username/ID • 2-Application Name • 3-Description • **(Default-1,2,3)**	Yes	string/Ø
Logon animation's duration Shell:AutoLogonAnimationTime	Specifies the duration (in milliseconds) that the animated spinner appears (pausing response). A value of 0 (the default) disables the spinner.	**(Default-0)**	Yes	dword/int

Edit Columns

Use the **Edit Columns** dialog box to select and order the logon details that appear as columns in the Agent's **Logon Manager** and **Logon Chooser** dialog boxes.

- To add detail columns, select the columns in the **Available** list, then click **>>** to move your selections to the **Selected** list.
- To remove detail columns, select the columns in the **Selected** list, then click **<<** to move your selections to the **Available** list.
- To change the order of the columns, select a column in the **Available** list and click **Up** or **Dn**.

Setup Wizard

The Setup Wizard settings control the behavior of the First-Time-Use Wizard, which launches when you start Logon Manager for the first time. See First Time Use for more information.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Show first-time-use (FTU) wizard `Extensions\SetUpManager:HideWizard`	Controls whether the Setup Wizard displays when first-time-use is invoked.  If more than one authenticator (primary logon method) is installed, then the first authenticator in the list is automatically selected as the end user's primary logon method. You must have the FTU Wizard enabled in order to use the Bulk-Add feature.	• **0-Yes (Default)** • 1-No	Yes	dword/Ø

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Selected authenticator AUI:FTUShowOnly	Enables the selected logon method as the primary logon method and hides all other installed logon methods. To hide the primary logon method selection menu, use the "Show first-time-use (FTU) wizard" setting. If the primary logon method selection page is hidden, and this setting is blank, then the first installed logon method in the list is automatically selected.	• **None (Default-End-users select their own primary logon method)** • MSauth-Windows v2 • WinAuth-Windows • LDAPauth-LDAP v2 • LDAP-LDAP • SCauth-Smart Card • ROSCAuth-Read-Only Smart Card • ProxcardAuth-Proximity Card • SecureIDAuth-RSA SecurID • Entrust-Entrust • MultiAuth-Authentication Manager • UAMAuth-Universal Authentication Manager	Yes	string/Ø
Skip selection page if only one authenticator is installed AUI:HideSingleSelection	Hides the Select Primary Logon Method step in the Setup Wizard if only one authenticator (primary logon method) is installed.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø

Authentication

Use the Global Agent Authentication Settings to configure the overall authentication environment and individual authenticators' settings. Select a topic below to learn more about authentication options.

- **Authentication Manager.** This pane and its sub-panes contain settings that apply to your overall authentication configuration.
  - Enrollment
  - Grade
  - Order
- **Authenticator Panes.** Each pane contains settings applicable to a specific authenticator.
  - Windows v2
  - Windows v2 Passphrase
  - Windows (deprecated)
  - LDAP v2
  - LDAP v2 Special Purpose
  - LDAP
  - LDAP Special Purpose
  - Smart Card
  - Read-Only Smart Card
  - Proximity Card
- **Secure Data Storage.** Refer to this section for information about configuring storage for use with strong authenticators.
- **Strong Authentication.** Refer to this section for information about advanced configuration of strong authenticators, such as cards and tokens.

Authentication Manager

The Authentication Manager setting controls the number of authenticators and their priority.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Allowed number of authenticators `AUI\MultiAuth:MaxPreferred`	Specifies the maximum number of logon methods that the Agent offers the user to select. If the user receives and skips this number of logon methods, a "Choose Logon" dialog box appears.  This setting is only used for the Multi-Authenticator primary logons.	**(Default-1)**	Yes	dword/int

Authentication Manager Enrollment Settings

The Authentication Manager Enrollment settings specify the primary logon methods (authenticators) that can be used by the Multi-Authenticator primary logon.

The settings on this page will determine whether a user will be required to set up a specific logon method during the First Time Use Wizard, if Authentication Manager is chosen as the primary logon method. Use these settings for *Multi-Authenticators only*.

Default values, where applicable, are in **bold**.

For each primary logon method, select one of the following:

- **Disabled.** The logon method will not be presented to the user during the FTU Wizard.
- **Optional.** Logon Manager will have the option to configure this logon or to skip it. If the user defers the logon request, Logon Manager will not ask again. (default)
- **Required.** The user will be required to configure this logon. If this logon is not configured, the user will not be able to complete enrollment.
- **Incremental.** Logon Manager will have the option to configure this logon or to skip it. If the user defers the logon request, Logon Manager will ask for credentials each time the application starts.

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Windows v2 `AUI\MSauth:AuthState`	Specifies whether a user will be required to set up Windows v2 as a primary logon method during the First Time Use Wizard, if Authentication Manager is chosen as the primary logon method.	• 0-Disabled • **1-Optional (Default)** • 2-Required • 3-Incremental	Yes	dword/Ø
Windows `AUI\WinAuth:AuthState`	Specifies whether a user will be required to set up Windows as a primary logon method during the First Time Use Wizard, if Authentication Manager is chosen as the primary logon method. Windows Authenticator is deprecated as of version 11.1.2 and is listed for upgrade scenarios only. Do not use this authenticator for new configurations.	• 0-Disabled • **1-Optional (Default)** • 2-Required • 3-Incremental	Yes	dword/Ø
LDAP v2 `AUI\LDAPauth:AuthState`	Specifies whether a user will be required to set up LDAP v2 as a primary logon method during the First Time Use Wizard, if Authentication Manager is chosen as the primary logon method.	• 0-Disabled • **1-Optional (Default)** • 2-Required • 3-Incremental	Yes	dword/Ø

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
LDAP AUI\LDAP:AuthState	Specifies whether a user will be required to set up LDAP as a primary logon method during the First Time Use Wizard, if Authentication Manager is chosen as the primary logon method.	• 0-Disabled • **1-Optional (Default)** • 2-Required • 3-Incremental	Yes	dword/Ø
Smart card AUI\SCauth:AuthState	Specifies whether a user will be required to set up smart card as a primary logon method during the First Time Use Wizard, if Authentication Manager is chosen as the primary logon method.	• 0-Disabled • **1-Optional (Default)** • 2-Required • 3-Incremental	Yes	dword/Ø
Read-only smart card AUI\ROSCauth:AuthState	This setting determines whether a user will be required to set up read-only smart card as a primary logon method during the First Time Use Wizard, if Authentication Manager is chosen as the primary logon method.	• 0-Disabled • **1-Optional (Default)** • 2-Required • 3-Incremental	Yes	dword/Ø
Proximity card AUI\ProxCardAuth:AuthState	Specifies whether a user will be required to set up proximity card as a primary logon method during the First Time Use Wizard, if Authentication Manager is chosen as the primary logon method.	• 0-Disabled • **1-Optional (Default)** • 2-Required • 3-Incremental	Yes	dword/Ø
RSA SecurID AUI\SecureIDAuth:AuthState	Specifies whether a user will be required to set up RSA SecurID as a primary logon method during the First Time Use Wizard, if Authentication Manager is chosen as the primary logon method.	• 0-Disabled • **1-Optional (Default)** • 2-Required • 3-Incremental	Yes	dword/Ø
Entrust AUI\Entrust:AuthState	Specifies whether a user will be required to set up Entrust as a primary logon method during the First Time Use Wizard, if Authentication Manager is chosen as the primary logon method.	• 0-Disabled • **1-Optional (Default)** • 2-Required • 3-Incremental	Yes	dword/Ø

Authentication Manager Grade Settings

The Authentication Manager Grade settings specify an authentication grade for each primary logon method.

Authentication Grades are numeric values:

- An authentication grade will automatically default to grade level 1 if authentication grading is turned on and no grade level is specified.
- The higher the grade level specified, the stronger the authentication level that is being requested.
- The grading scale can be arbitrarily configured. For example, an expected normal scenario would be a scale of 1-3, but you have the flexibility to make this 1-5 or 1-n, as required. Any grade less than 1 will be converted to 1.

The Multi-Authenticator logon supports the authentication grades by mapping the grades to the authentication methods used, if you choose Authentication Manager as the primary logon method.

If a user tries to access credentials with a grade level that is too low, he will be asked to authenticate at a higher grade and only gain access if successful.

Lockouts occur as per normal Logon Manager authentication lockout policy. Since graded authentication uses the core SSO authentication process, this will happen naturally.

Set a number grade value (>=1) for each logon method. Use these settings for *Multi-Authenticators only*. Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Windows v2 AUI\MSauth:AuthGrade	Assigns an authentication grade to Windows v2. Set a number grade value (≥1). The higher the grade level specified, the stronger the authentication level that is being requested.	**(Default-1)**	Yes	dword/Ø
Windows AUI\WinAuth:AuthGrade	Assigns an authentication grade to Windows. Set a number grade value (≥1).  Windows Authenticator is deprecated as of version 11.1.2 and is listed for upgrade scenarios only. Do not use this authenticator for new configurations.	**(Default-1)**	Yes	dword/Ø
LDAP v2 AUI\LDAPauth:AuthGrade	Assigns an authentication grade to LDAP v2. Set a number grade value (≥1).	**(Default-1)**	Yes	dword/Ø
LDAP AUI\LDAP:AuthGrade	Assigns an authentication grade to LDAP. Set a number grade value (≥1).	**(Default-1)**	Yes	dword/Ø
Smart card AUI\SCauth:AuthGrade	Assigns an authentication grade to Smart card. Set a number grade value (≥1).	**(Default-1)**	Yes	dword/Ø
Read-only smart card AUI\ROSCauth:AuthGrade	Assigns an authentication grade to read-only smart card. Set a number grade value (≥1).	**(Default-1)**	Yes	dword/Ø
Proximity card AUI\ProxCardAuth:AuthGrade	Assigns an authentication grade to Proximity card. Set a number grade value (≥1).	**(Default-1)**	Yes	dword/Ø
RSA SecurID AUI\SecureIDAuth:AuthGrade	Assigns an authentication grade to RSA SecurID. Set a number grade value (≥1).	**(Default-1)**	Yes	dword/Ø
Entrust AUI\Entrust:AuthGrade	Assigns an authentication grade to Entrust. Set a number grade value (≥1).	**(Default-1)**	Yes	dword/Ø

Authentication Manager Order Settings

The Authentication Manager Order settings specify the sequence in which the installed logon methods will be presented to the end user during reauthentication scenarios, if Authentication Manager is chosen as the primary logon method.

For each primary logon method, select or enter a number to indicate the logon method's position in the FTU/logon order. Use these settings for *Multi-Authenticators only*. Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Windows v2 AUI\MSauth:AuthOrder	Sets the ordered position for Windows v2. This will be the order that Windows v2 will be presented to the end user during reauthentication scenarios.	**(Default-2)**	Yes	dword/int
Windows AUI\WinAuth:AuthOrder	Sets the ordered position for Windows. This will be the order that Windows will be presented to the end user during reauthentication scenarios.  Windows Authenticator is deprecated as of version 11.1.2 and is listed for upgrade scenarios only. Do not use this authenticator for new configurations.	**(Default-2)**	Yes	dword/int
LDAP v2 AUI\LDAPauth:AuthOrder	Sets the ordered position for LDAP v2. This will be the order that Windows will be presented to the end user during reauthentication scenarios.	**(Default-3)**	Yes	dword/int
LDAP AUI\LDAP:AuthOrder	Sets the ordered position for LDAP. This will be the order that Windows will be presented to the end user during reauthentication scenarios.	**(Default-3)**	Yes	dword/int
Smart card AUI\SCauth:AuthOrder	Sets the ordered position for smart card. This will be the order that Windows will be presented to the end user during reauthentication scenarios.	**(Default-1)**	Yes	dword/int
Read-only smart card AUI\ROSCauth:AuthOrder	Sets the ordered position for read-only smart card. This will be the order that Windows will be presented to the end user during reauthentication scenarios.	**(Default-1)**	Yes	dword/int
Proximity card AUI\ProxCardAuth:AuthOrder	Sets the ordered position for proximity card. This will be the order that Windows will be presented to the end user during reauthentication scenarios.	**(Default-6)**	Yes	dword/int
RSA SecurID AUI\SecureIDAuth:AuthOrder	Sets the ordered position for RSA SecurID. This will be the order that Windows will be presented to the end user during reauthentication scenarios.	**(Default-6)**	Yes	dword/int
Entrust AUI\Entrust:AuthOrder	Sets the ordered position for Entrust. This will be the order that Windows will be presented to the end user during reauthentication scenarios.	**(Default-4)**	Yes	dword/int

Windows v2 Authenticator Settings

The Windows v2 authenticator settings are the primary controls for the Windows Authenticator version 2.

> Windows Authenticator version 2 is the preferred authenticator for Logon Manager and is installed by default. For more information about this authenticator, refer to the Best Practice guide in the Oracle online documentation center.

Default values, where applicable, are in **bold**.

Recovery

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Recovery method `AUI\MSauth\ResetMethods: ResetMethodGUID`	Specifies the reset method to use when the user's password changes.	• **4ED42DB8-B8F1-4AE6-B13A-272F74B48FE7-User passphrase (Default)** • B623C4E7-A383-4194-A719-7B17D074A70F-Passphrase suppression using user's SID • 7B4235FF-5098-435c-9A05-052426D96AA8-Passphrase suppression using secure key	Yes	string/Ø
Use Windows Data Protection (DPAPI) `AUI\MSauth:UseDPAPI`	Set to **Yes** to use a DPAPI key to protect the Kiosk Manager encryption key, instead of the traditional two-key system of User Password and Recovery Key. Consult Microsoft and Oracle DPAPI best practices to ensure your Active Directory and desktop infrastructure is capable and configured to use DPAPI.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø

User interface

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Window title `AUI\MSauth:WindowTitle`	Use this setting to customize the window title name for this authenticator. Check the box and enter the desired name. This entry is not required.		Yes	string/string
Window subtitle `AUI\MSauth:WindowSubTitle`	Use this setting to customize the window subtitle name for this authenticator. Check the box and enter the desired name. This entry is not required.		Yes	string/string
Custom image for authentication prompt `AUI\MSauth:ImagePath`	Enter the fully-qualified path, including the file name, to the image, or click the ellipsis "**...**" button and browse to the image file. The image file must be in bitmap (.bmp) format. The dimensions set for this image are 300 pixels wide by 100 pixels tall. You cannot change these dimensions. If the image is smaller it will be centered in this area; if it is larger, it will be cropped equally on all sides. *This setting is new as of Logon Manager 11.1.1.1.0.*		No	string/filename
Reauthentication dialog `AUI\MSauth:AuthOptions`	Select which method to use when Logon Manager requires the end-user to re-authenticate. While the setting is called "Use GINA," it also applies to the Credential Provider mechanism in operating systems newer than Windows XP.	• **0-Use SSO dialog. (Default)** The user is presented with an authentication dialog box whenever reauthentication is needed, and at initial enrollment. • 1-Use GINA. The Windows desktop is locked, and the user must reauthenticate to the operating system (using whatever GINA or Credential Provider is installed) before Logon Manager is unlocked.	Yes	dword/Ø

Credential sharing

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Include in Domain credential sharing group `AUI\MSauth:PWSEnable`	Enables credential sharing from the authenticator to credentials in a special credential sharing group called "Domain." Whenever the authenticator detects a new password, the password is automatically shared with the Domain credential sharing group.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Share credentials with other authenticators `AUI\MSauth: ShareCredsToAuths`	This setting eliminates double authentication by linking authenticator credentials. If multiple authenticators use the same credentials, the duplicate credentials are used without requiring the user to reenter them. Enter a comma-separated list of authenticators to share the credentials with, for example *WinAuth*, *MSAuth*.  To locate other authenticator names, refer to the list located under `HKLM\ Software\ Oracle\ AUI`.		Yes	string/string
Share credentials with synchronizers `AUI\MSauth: ShareCredsToSyncs`	This setting eliminates double authentication when an authenticator shares credenitals with one or more synchronizers. Enter a comma-separated list of synchronizers to share the credentials with, for example "*ADEXT*,*LDAPEXT*."  To locate other synchronizer names, see the name listed in the registry for that synchronizer (located under `HKLM\Software\Passlogix\Extensions\SyncManager`).		Yes	string/string

Windows v2 Authenticator Passphrase Settings

The Advanced Windows v2 Primary Logon Methods settings control special-case options for the Windows Authenticator version 2.

Default values, where applicable, are in **bold**.

User interface

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Message `AUI\MSauth\Reset: PassphraseMessage`	Use this setting to display a user agreement-style dialog where the user must check a checkbox to continue. This is typically used to suggest the importance of the passphrase that users enter. Check the box and enter the desired message.  This message can contain multiple lines, 180 character maximum. The character sequence "\n" will be replaced with carriage return and new line characters. If this setting is not set, the dialog box is skipped.		Yes	string/string
Message dialog title `AUI\MSauth\Reset: PassphraseDialogTitle`	Use this setting to customize the user agreement-style dialog title. Check the box and enter the desired title.		Yes	string/string
Checkbox label `AUI\MSauth\Reset: PassphraseChkboxMsg`	Use this setting to customize the user agreement style dialog checkbox. Check the box and enter the desired label.  The user must check this checkbox before the dialog can be dismissed. The OK button is disabled until this checkbox is checked.		Yes	string/string

Options

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Minimum length `AUI\MSauth\Reset: MinPassphraseLength`	Default required length of a passphrase. You can override this setting by specifying the required length for a specific question.	**8-Default**	Yes	dword/int
User can change passphrase `AUI\MSauth: ShowChangeAnswerOption`	Toggles availability of the user's option to change the answer to the verification question.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Reset with old password `AUI\MSauth:ResetWOP`	Allows the previous password to be used in the passphrase process.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Force password re-enrollment when using old password to reset `AUI\MSauth:RWOPSkipReset`	Specifies whether the user can skip the Logon Manager passphrase prompt. Enabling this feature ensures that after a user enters his previous Windows password, Logon Manager will prompt him to enter a new passphrase. Disabling this feature entails the risk of a complete lockout to Logon Manager. This can happen if a user no longer remembers his passphrase, and subsequently forgets his Windows password. In this scenario, a user would be completely locked out of Logon Manager.	• **0-Yes (Default)** • 1-No	Yes	dword/Ø

Windows Authenticator Settings

The Windows authenticator settings are the primary controls for the Windows Authenticator.

Default values, where applicable, are in **bold**.

> Windows Authenticator is deprecated as of version 11.1.2 and is listed for upgrade scenarios only. Do not use this authenticator for new configurations.

User interface

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Window title `AUI\WinAuth: WindowTitle`	Use this setting to customize the window title name for this authenticator. Check the box and enter the desired name. This entry is not required.		Yes	string/string
Window subtitle `AUI\WinAuth: WindowSubTitle`	Use this setting to customize the window subtitle name for this authenticator. Check the box and enter the desired name. This entry is not required.		Yes	string/string
Custom image for authentication prompt `AUI\WinAuth:ImagePath`	Enter the fully-qualified path, including the file name, to the image, or click the ellipsis "**...**" button and browse to the image file. The image file must be in bitmap (.bmp) format. The dimensions set for this image are 300 pixels wide by 100 pixels tall. You cannot change these dimensions. If the image is smaller it will be centered in this area; if it is larger, it will be cropped equally on all sides. *This setting is new as of Logon Manager version 11.1.1.1.0.*		No	string/filename
Require old password when Windows password changes `AUI\WinAuth:PWEnable`	Provides enhanced security by requiring the user to enter the previous password when changing to a new one.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø

Credential sharing

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Share credentials with other authenticators `AUI\WinAuth: ShareCredsToAuths`	This setting eliminates double authentication by linking authenticator credentials. If multiple authenticators use the same credentials, the duplicate credentials are used without requiring the user to reenter them. Enter a comma-separated list of authenticators to share the credentials with, for example *WinAuth*, *MSAuth*.  To locate other authenticator names, refer to the list located under `HKLM\ Software\ Oracle\ AUI`.		Yes	string/string
Share credentials with synchronizers `AUI\WinAuth: ShareCredsToSyncs`	This setting eliminates double authentication when an authenticator shares credenitals with one or more synchronizers. Enter a comma-separated list of synchronizers to share the credentials with, for example "*ADEXT*,*LDAPEXT*."  To locate other synchronizer names, see the name listed in the registry for that synchronizer (located under `HKLM\Software\Passlogix\Extensions\SyncManager`).		Yes	string/string

LDAP v2 Authenticator Settings

The LDAP v2 authenticator settings are the primary controls for enabling LDAP version 2 authentication.

Default values, where applicable, are in **bold**.

Connection information

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Servers `AUI\LDAPauth\ Servers:ServerN`	Enter the servers to try, in the format "computer[:port]" (one server per line), where computer is the server name or IP, and port is assumed to be default (636 for SSL, 389 for no SSL) if not specified. **Examples:** • `127.0.0.1` • `127.0.0.1:456` • `somewhereelse.com:8080` • `anotherplace.com`  You musty specify at least one server for this extension to work.		No	string/Ø
User paths `AUI\LDAPauth: UserPathN`	Enter the fully-qualified path to where the user account is located. There can be unlimited paths to search. The extension searches these in order, looking for the user account. If not found, the extension will search the directory tree.  You must specify a value for either UserPrepend or at least one value for UserPath for this extension to work. If using UserPaths, do not use UserLocation.		Yes	string/Ø
Use SSL `AUI\LDAPauth:UseSSL`	Specifies whether to connect via SSL.	• 0-No (insecure) (default to port #389) • **1-Yes (default to port #636) (Default)**	Yes	dword/Ø

User interface

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Window title `AUI\LDAPauth:WindowTitle`	Use this setting to customize the Window title name for this authenticator. This entry is not required.		Yes	string/string
Show user path `AUI\LDAPAuth:ShowUserPath`	Enable this setting to display the User path combo box control in the LDAP v2 authentication dialog box. *This setting is new as of Logon Manager version 11.1.1.1.0.*	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Custom image for authentication prompt `AUI\LDAPAuth:ImagePath`	Enter the fully-qualified path, including the file name, to the image, or click the ellipsis "**...**" button and browse to the image file. The image file must be in bitmap (.bmp) format. The dimensions set for this image are 300 pixels wide by 100 pixels tall. You cannot change these dimensions. If the image is smaller it will be centered in this area; if it is larger, it will be cropped equally on all sides. *This setting is new as of Logon Manager version 11.1.1.1.0.*		Yes	string/filename

Credential sharing

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Share credentials with other authenticators `Registry node: AUI\LDAPauth:ShareCredsToAuths`	Enter a comma-separated list of authenticators with which to share the credentials, for example "*WinAuth*, *MSAuth*."  For other authenticator names, refer to the list located under HKLM\Software\Oracle\AUI.		Yes	string/string
Share credentials with synchronizers `AUI\LDAPauth: ShareCredsToSyncs`	Enter a comma-separated list of synchronizers to share the credentials with, for example "*ADEXT*,*LDAPEXT*."  For other synchronizer names, refer to the list located under HKLM\Software\ Oracle\ Extensions\ SyncManager.		Yes	string/string
Include in LDAP credential sharing group `AUI\LDAPauth:PWSEnable`	Enables credential sharing from the authenticator to credentials in the Group Domain. (Also requires AccessManager:PWSEnable to be enabled.)	• 0-No • **1-Yes (Default)**	Yes	dword/Ø

LDAP v2 Authenticator Special Purpose Settings

The LDAP v2 Authenticator Special Purpose settings control special-case options for enabling standard LDAP v2 authentication.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Naming attribute string `AUI\LDAPauth: UserPrepend`	String to prepend to UserPaths when the DN for a user is in the form of: • `cn=%UserName%,ou=people,dc=computer` instead of the form: • `namingattribute= %UserName%, ou=people, dc=computer` (where namingattribute can be any string). Usually, you must set this value to cn for Novell eDirectory. If using UserPrepend, you must use UserPathN and do not use UserLocation.		Yes	string/string
BIND timeout `AUI\LDAPauth:Timeout`	Enter the length of the timeout (in milliseconds) of LDAP BIND call.	(Default depends on the operating system)	Yes	dword/int
Alternate user ID location `AUI\LDAPauth: UserLocation`	Specifies where to locate a user object when the user validates against an attribute other than the username. **Example:** If users authenticate with an employee ID# for logon (validation against the empid attribute) and the user object is in: • `ou=people,dc=computer` then set UserLocation to: • `empid=%user,ou=people,dc=computer` instead of to: • `uid=user,ou=people,dc=computer`. For Novell eDirectory, UserLocation should be: uid=%user,path to the object. If using UserLocation, do not use UserPrepend or UserPaths.		Yes	string/string

LDAP Authenticator Settings

The LDAP authenticator settings are the primary controls for enabling standard LDAP authentication. These settings must be used in order for the Agent to use LDAP as a primary logon method.

Default values, where applicable, are in **bold**.

Connection information

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Directory type `AUI\LDAP:DirectoryType`	Specifies the type of directory server. If the directory server is not listed, select "Generic LDAP Directory."	• 0-Unspecified LDAP Directory • 3-Novell eDirectory • **5-Generic LDAP Directory (Default)** • 8-Oracle Directory Server Enterprise Edition • 9-IBM Tivoli Directory Server • 10-Oracle Internet Directory • 11-Siemens DirX Directory Server	Yes	dword/Ø
Servers `AUI\LDAP\Servers:ServerN`	Specifies the servers to try, in the format *computer[:port]* (one server per line), where *computer* is the server name or IP, and *port* is assumed to be default (636 for SSL, 389 for no SSL) if not specified. **Examples** • 127.0.0.1 • 127.0.0.1:456 • somewhereelse.com:8080 • anotherplace.com  You must specify at least one server in order for this extension to work.		No	string/Ø

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
User paths AUI\LDAP:UserPathN	Specifies the fully-qualified path to where the user account is located. There can be unlimited paths to search. The extension searches these in order, looking for the user account. If the account is not found, the extension will search the directory tree. You must specify a value for either UserPrepend or at least one value for UserPaths for this extension to work. If using UserPaths, do not use UserLocation.		Yes	string/Ø
Use SSL AUI\LDAP:UseSSL	Specifies whether to connect via SSL.	• No. (insecure) (default to port #389) • **Yes. (default to port #636) (Default)**	Yes	dword/Ø

Active Directory

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Enable Domain name support AUI\LDAPauth:UsingAD	Enables Active Directory Domain name support. End users can specify the Domain name (for example, domainname\ username) at primary logon. Alternatively, the administrator can specify a default Domain name (see the "Active Directory: Default Domain name" setting, below) to let end users log on by username alone. If you don't specify a Domain, Logon Manager uses the local workstation's Domain.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Default Domain name AUI\LDAP:ADDomain	The Active Directory Domain name to use for primary logon if you don't specify a Domain for the username/ID credential (for example, domainname\username). Use this setting only if you set the "Active Directory: Domain name support enabled" setting to "Use AD Domain names." If you enable Domain name support and this setting is blank (and the end user does not specify a Domain), then Logon Manager uses the local workstation's Domain.		Yes	string/string

User interface

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Window title `AUI\LDAP:WindowTitle`	Use this setting to customize the Window title name for this authenticator. This entry is not required.		Yes	string/string

Password change window title
`AUI\LDAPauth:`
`CAP_WindowTitle`
	Use this setting to customize the Active Directory Change Password Window title name for this synchronizer.
	This entry is not required.
			Yes	sting/string

Password change window subtitle
`AUI\LDAPauth:`
`CAP_WindowSubTitle`
	Use this setting to customize the Active Directory Change Password Window subtitle name for this synchronizer.
	This entry is not required.
			Yes	string/string

Custom image for authentication prompt `AUI\LDAP:ImagePath`	Enter the fully-qualified path, including the file name, to the image, or click the ellipsis "**...**" button and browse to the image file. The image file must be in bitmap (.bmp) format. The dimensions set for this image are 300 pixels wide by 100 pixels tall. You cannot change these dimensions. If the image is smaller it will be centered in this area; if it is larger, it will be cropped equally on all sides. *This setting is new as of Logon Manager version 11.1.1.1.0.*		No	string/filename
Show user path `AUI\LDAP:ShowUserPath`	Use this setting to show/hide the "User Path" combo box control in the LDAP authentication dialog box. *This setting is new as of Logon Manager version 11.1.1.1.0.*	• 0-No • **1-Yes (Default)**	Yes	dword/Ø

Credential sharing

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Share credentials with other authenticators `AUI\LDAP: ShareCredsToAuths`	Enter a comma-separated list of authenticators with which to share the credentials. For example "*WinAuth*, *MSAuth*."  To locate other authenticator names, refer to the name listed in the registry for that authenticator (located under: `HKLM\Software\Passlogix\AUI`).		Yes	string/string
Share credentials with synchronizers `AUI\LDAP: ShareCredsToSyncs`	Enter a comma-separated list of synchronizers with which to share the credentials. For example "*ADEXT*,*LDAPEXT*."  To locate other synchronizer names, refer to the name listed in the registry for that synchronizer (located under: `HKLM\Software\Passlogix\Extensions\ SyncManager`).		Yes	string/string

LDAP Authenticator Special Purpose Settings

The LDAP Authenticator Special Purpose settings control special-case options for enabling standard LDAP authentication.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Naming attribute string `AUI\LDAP:UserPrepend`	Specifies the string to prepend to UserPaths when the DN for a user is in the form of: • `cn=%UserName%,ou=people,dc=computer` instead of the form: • `namingattribute=%UserName%, ou=people,dc=computer` (where namingattribute can be any string). Usually, you must set this value to cn for Novell eDirectory. If using UserPrepend, you must use UserPathN and do not use UserLocation.		Yes	string/string
BIND timeout `AUI\LDAP:Timeout`	Specifies the timeout (in milliseconds) of LDAP BIND call.	Default depends on the operating system.	Yes	dword/int
Alternate user ID location `AUI\LDAP:UserLocation`	Specifies where to locate a user object when the user validates against an attribute other than the username. **Example** If users authenticate with an employee ID # for logon (validation against the empid attribute) and the user object is in `ou=people,dc=computer`, then set UserLocation to • `empid=%user,ou=people,dc=computer` instead of to • `uid=user,ou=people,dc=computer` For Novell eDirectory, UserLocation should be: `uid=%user, path to the object`. If using UserLocation, do not use UserPrepend or UserPaths.		Yes	string/string

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Enable directory search for users AUI\LDAP:LDAPBindSearch	Enables or disables directory search for the user account. When the user account is not found in the given path, the authenticator will search for it from that location down the directory tree. The search is performed whether using "User Paths" or the "Alternate User ID location."	• **0-No (Default)** • 1-Yes	Yes	dword/Ø

About Strong Authenticators

Logon Manager includes both standard logon methods such as LDAP and Windows Logon, and strong authenticators such as smart cards, proximity devices, and RSA SecurID tokens. Logon Manager enables organizations to seamlessly bridge strong authentication to all of their applications. Users can employ different authenticators at different times and application access can be controlled based upon the authenticator used.

See the *Oracle Enterprise Single Sign-on Suite Plus Release Notes* for the most up-to-date list of supported authentication devices.

Logon Manager provides authentication support from a variety of strong authenticators for all authentication events: initial authentication, re-authentication, and forced authentication.

This section describes any specific settings that can be enabled within a strong authenticator in order for the authenticator to work with Logon Manager. It also describes all the Oracle Enterprise Single Sign-On Administrative Console settings and any steps that must be taken to integrate with Kiosk Manager, as well as any known issue or technical notes that apply to a specific strong authenticator.

Strong Authenticator Configuration Settings

If the strong authenticator you are using is not listed in this section, there are no specific settings that must be adjusted or relevant technical notes.

Select your strong authenticator, or see the Kiosk Manager integration notes, which apply to all authenticators:

- Smart Card
- Read Only Smart Card
- Proximity Card
- RSA SecurID
- Secure Data Storage
- Kiosk Manager Integration Notes

Smart Card

Smart Card settings are available in the Authentication section of Global Agent Settings in the Oracle Enterprise Single Sign-On Administrative Console. This section also includes steps that you must take to integrate Smart Cards with Kiosk Manager, and other technical notes about using this authenticator.

Administrative Console Settings

The smart card settings control special-case options for smart-card authentication. These settings are not required.

To access the smart card settings, click **Global Agent Settings** > **Live** > **Authentication** > **Smart Card**. See the Smart Card Authentication section for a full discussion of these settings.

Smart Card Initialization

Prior to use with Authentication Manager, smart cards must be initialized and contain a valid PIN. If Authentication Manager is configured to use smart card certificates, smart cards must contain a valid PKI certificate. If the smart cards are also to be used with Kiosk Manager, they must have a serial number.

Authentication Manager does not provide any smart card initialization, configuration, or administration services, so this step must be performed using a third-party Card Management System (CMS) or middleware administration utility compatible with your smart card.

Integrating with Kiosk Manager

The following information applies when using the Smart Card authenticator with Kiosk Manager:

Support for storing and passing through the synchronization credentials with Kiosk Manager and Smart Card integration:

When using Smart Card authenticator with Kiosk Manager, the user's synchronization credentials can optionally be stored on the smart card by the authenticator. If stored in this manner, the credentials are then silently passed through to Logon Manager after a user initiates a Kiosk Manager session by inserting their smart card into the reader and entering the correct PIN. This feature prevents a double authentication when starting a Kiosk Manager session whereby the user authenticates with their smart card and PIN and then is subsequently prompted by Logon Manager to provide their synchronization username and password.

.NET Smart Cards

Due to technical limitations with the .NET cards, when using .NET smart cards with Kiosk Manager, inserting the smart card when Kiosk Manager is locked always causes a new session to start. To unlock an existing session, click the **Unlock Existing Session** link.

Separate Authentication Prompts Appear for the Kiosk Manager Session and Logon Manager when Smart Card is the Primary Logon Method:

In a Kiosk Manager environment that uses smart cards as the primary logon method, users are prompted to authenticate separately to Kiosk Manager and Logon Manager.

This occurs because a smart card authentication is only valid for the process that initiated it and cannot be shared between processes. This is a design characteristic of the smart card middleware and not Oracle software.

When the Kiosk Manager session starts, Kiosk Manager queries the smart card middleware for authentication and the user is prompted to authenticate via smart card and PIN. This authentication is valid for the Kiosk Manager process only; therefore, when the Kiosk Manager session is successfully created and Logon Manager starts, the user is authenticated again, this time to Logon Manager.

This double-prompt can be eliminated by configuring an AD/AD LDS (ADAM) synchronizer to use the card's certificate and the smart card authenticator to share credentials with synchronizers. Configure the following settings:

- On the Global Agent Settings' Smart Card authenticator page, add ADEXT or ADAMSyncExt to the list for the setting, "Share credentials with synchronizers."
- On the Global Agent Settings' AD/ADAM synchronizer pages Credential sharing group, add SCAuth to the list for the setting, "Share credentials with authenticators."
- On the Global Agent Settings' AD/ADAM synchronizer pages' Connection information group, select "Use card's certificate" for Credentials to use.
- On the Global Agent Settings' Kiosk Manager page, disable the setting, "Pre-populate on startup" under the Strong authenticator options group.

HID Crescendo C200 and C700 smart cards:

When using HID Crescendo C200 or C700 as smart cards with Kiosk Manager, a smart card-only reader should be used. Using a dual function smart card and proximity card reader is unsupported. The HID Crescendo C200 mini-driver should be installed from Microsoft's update catalog - http://test.catalog.update.microsoft.com/v7/site/search.aspx?q=umdf.

Using SSO-Generated Keys Technical Note

When the **Use default certificate for authentication** (located in the Logon Manager Administrative Console **Global Agent Settings** > **Authentication** > **Smart Card**) is set to **No**, users may be prompted to enter their PIN twice during the First Time Use (FTU) enrollment process.

This is normal and necessary in order to create the SSO keyset.

Subsequent authentications after FTU only prompt users to enter their PIN once.

Smart Card Middleware

These technical notes are in reference to known issues and considerations with Smart Card middleware.

Gemplus Libraries 4.20 with Authentication Manager

Re-authentication events do not display the PIN dialog. When authenticating to Logon Manager, the first authentication properly displays a PIN dialog and allows a successful authentication. Subsequent re-authentication events within a short period of time do not display the PIN dialog, preventing authentication from succeeding.

To work around this, restart the Logon Manager process requesting authentication.

Netmaker Net iD 4.6 with Kiosk Manager

When starting a new Kiosk Manager session, the user's synchronization credentials are not read off the card. After entering their PIN, users must then manually enter their synchronization credentials to start the session.

RSA RAC 2.0 / Smartcard Middleware 2.0 with Kiosk Manager

RSA Middleware reports that no smart cards are present when Kiosk Manager is locked and a smart card is inserted into a reader. Sessions must be manually started. After Kiosk Manager is unlocked, authentication to Logon Manager with smart cards will work as expected.

Smart Card Middleware Default Library Path Locations

The following table provides the default installation paths for all supported smart card middleware. These are sample paths to enter in the PKCS #11 Library Path field located on the **Read Only Smart Card** > **Advanced** and **Smart Card** > **Advanced** panels:

Smart Card

Axalto Access Client Software 5.2	C:\Program Files\Axalto\Access Client\v5\xltCk.dll
GemSafe Libraries 4.2.0	C:\Program Files\Gemplus\GemSafe Libraries\BIN\GCLIB.DLL
HID C700 middleware	aetpkss1.dll
NetMaker Net iD 4.6	iidp11.dll
RSA Authentication Client 2.0 / Smartcard Middleware 2.0	C:\Program Files\RSA Security\RSA Authentication Client\Pkcs11.dll
SafeSign/RaakSign Standard 2.3	aetpkss1.dll
Schlumberger Cyberflex Access 4.5	C:\Program Files\Schlumberger\Smart Cards and Terminals\Cyberflex Access Kits\v4\slbCk.dll
Siemens 3.2.41 (CardOS API v3.2)	siecap11.dll

Read-Only Smart Card

Fujitsu mPollux DigiSign Client 1.3.2-34(1671)	C:\Program Files\Fujitsu Services\Fujitsu mPollux DigiSign Client\Cryptoki.dll
SafeSign Identity Client 2.2.0	aetpkss1.dll

The files above that are just file names and not the fully qualified path reside in the system directory so the full path is not necessary.

Any file without a fully-qualified path listed in the tables above resides in the system directory and therefore does not require a full path when being specified.

Smart Card Authenticator Settings

The Smart Card authenticator settings control special-case options for smart card authentication. Also see Smart Card in the Strong Authenticators section for configuration with Kiosk Manager and technical notes.

Default values, where applicable, are in **bold**.

Options

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Smart card library AUI\SCauth: SmartCardAPI	Specifies whether to use the Cryptographic Service Provider (CSP) or the PKCS #11 library to perform cryptographic operations on the smart card.  Set this to PKCS # 11 only if using SafeSign/RaakSign middleware.	• **0-CSP (Default)** • 1-PKCS#11	Yes	dword/Ø
Use default certificate for authentication AUI\SCauth: UseCertOnCard	Specifies whether to use the default logon certificate (provided by the administrator) on the card for authentication. With this setting disabled (the default), the public/private keys in the SSO container on the card will be used (and created if necessary).	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Store synchronization credentials AUI\SCauth: StoreSyncCreds	Specifies whether to store the user's synchronization repository credentials on the smart card. Store credentials when using smart card authorization in conjunction with Kiosk Manager and/or if using the read-only smart card authenticator.  Performance improves when credentials are not stored on the smart card because the read/write operation adds time to the authentication process.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Store the PIN AUI\SCauth: AuthOptions	Specifies whether to store the smart card PIN (creating the possibility that the Agent might prompt for the PIN), or to let the smart card drivers handle the PIN request.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
PKCS#11 Library Path AUI\SCAuth:PKCS11Path	Specifies the path to the smart card middleware file, which implements the PKCS#11 standard.		Yes	string/string
Custom certificate check extension path AUI\SCAuth:CCCEPath	Specifies the path to the custom certificate check extension.  This entry is not required.		Yes	string/string

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Allow secure PIN entry AUI\SCAuth:AllowSPE	Specifies whether to allow users to enter a PIN on a smart card reader keypad that supports secure PIN entry.  You cannot use secure PIN entry in conjunction with a PIN recovery group.	• **0-Only allow non-SPE login (Default)** • 1-Only allow SPE login	Yes	dword/Ø
Lock desktop on smart card removal AUI\SCauth:LockDesktopOnRemoval	Specifies whether to lock the desktop when the smart card owner removes the smart card from the reader. By default, this value is set to **No**. If the value is set to **Yes**, the user's workstation locks when the smart card is removed. If the user locks the desktop using **Ctrl+Alt-Delete**, the authentication status remains unchanged.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Allow forced verification AUI\SCauth: AllowForcedVerification	Specifies whether Logon Manager should automatically authenticate users after they authenticate to Windows with a smart card. Setting this to **No** (the default) requires a user to enter a PIN for both Windows logon and to authenticate to Logon Manager. Setting this to **Yes** eliminates the double PIN prompt and the user needs to enter a PIN only to authenticate to Windows, while Logon Manager automatically authenticates the user.  To use this feature, you MUST install Network Provider with Logon Manager. This is available during the installation on the Advanced Setup panel under Authenticators. Refer to the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide* for more information.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø

User interface

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Window title AUI\SCauth:WindowTitle	Use this setting to customize the window title name for this authenticator. Check the box and enter the desired name.  This entry is not required.		Yes	string/string
Window subtitle AUI\SCauth: WindowSubTitle	Use this setting to customize the window subtitle name for this authenticator. Check the box and enter the desired name.  This entry is not required.		Yes	string/string

Recovery

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Recovery method AUI\SCauth:ResetEnable	Specifies which supplier of the reset passphrase to use: • The user (entering the passphrase in a dialog box); • The newest non-default encryption certificate on the card itself; or • The smart card PIN.	• **1-Passphrase (Default)** • 2-Encryption certificate • 3-Smart card PIN	Yes	dword/Ø
Recovery certificate object identifier AUI\SCAuth:ResetCertOID	Specifies the object identifier of the certificate to use for the certificate-based passphrase feature. The authenticator searches the "Enhanced Key Attributes" of each certificate on the smart card for this Object Identifier. You must set the "Recovery method" option to **Encryption certificate**. This entry is not required.		Yes	string/string
PIN recovery group AUI\SCauth: PINRecoveryDomainGroupName	Enter the domain security group name (in format domain\group) for the PIN Recovery Group. Members of this group have permission to authenticate to Logon Manager without a smart card, using only a PIN. This setting is useful in a scenario where users lose their cards and are waiting for replacements. In the interrim, users can be added to this PIN recovery group so that they can authenticate to Logon Manager without their cards. To use this feature, you MUST set the "Recovery method" setting above to Smart card PIN. You cannot use a PIN recovery group in conjunction with secure PIN entry.		Yes	string/string

Credential sharing

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Share credentials with synchronizers `AUI\SCauth:ShareCredsToSyncs`	This setting eliminates double authentication when an authenticator shares credenitals with one or more synchronizers. Enter a comma-separated list of synchronizers to share the credentials with, for example "*ADEXT*,*ADAMSyncEXT*." To locate other synchronizer names, see the name listed in the registry for that synchronizer (located under `HKLM\Software\Passlogix\Extensions\SyncManager`).		Yes	string/string

Read-Only Smart Card

Read-Only Smart Card settings are available in the Authentication section of Global Agent Settings in the Oracle Enterprise Single Sign-On Administrative Console. This section also includes steps that you must take to integrate Smart Cards with Kiosk Manager, and other technical notes about using this authenticator.

Administrative Console Settings

The read-only smart card settings control special-case options for read-only smart card authentication. These settings are not required.

To access the smart card settings, click **Global Agent Settings** > **Live** > **Authentication** > **Read Only Smart Card**. See the Read-Only Smart Card Authentication section for a full discussion of these settings.

Read-Only Smart Card Initialization

Prior to use with Authentication Manager, read-only smart cards must be initialized and contain a valid PIN and PKI certificate. If the smart cards are also to be used with Kiosk Manager, they must have a serial number.

Authentication Manager does not provide any smart card initialization, configuration, or administration services, so this step must be performed using a third-party Card Management System (CMS) or middleware administration utility compatible with your smart card.

Integrating with Kiosk Manager

Support for storing and passing through the synchronization credentials with Kiosk Manager and Read-Only Smart Card integration:

When using Read-Only Smart Card authenticator with Kiosk Manager, the user's synchronization credentials can optionally be stored by setting **Store Synchronization Credentials** to **Yes** and configuring the Secure Data Storage feature. If stored in this manner, the credentials are then silently passed through to Logon Manager after a user initiates a Kiosk Manager session by inserting their read-only smart card into the reader and entering the correct PIN. This feature prevents a double authentication when starting a Kiosk Manager session whereby the user authenticates with their read-only smart card and PIN and then is subsequently prompted by Logon Manager to provide their synchronization username and password.

Separate Authentication Prompts Appear for the Kiosk Manager Session and Logon Manager when Read-Only Smart Card is the Primary Logon Method

In a Kiosk Manager environment that uses read-only smart cards as the primary logon method, users are prompted to authenticate separately to Kiosk Manager and Logon Manager.

This occurs because a smart card authentication is only valid for the process that initiated it and cannot be shared between processes. This is a design characteristic of the smart card middleware and not Oracle software.

When the Kiosk Manager session starts, Kiosk Manager queries the smart card middleware for authentication and the user is prompted to authenticate via smart card and PIN. This authentication is valid for the Kiosk Manager process only; therefore, when the Kiosk Manager session is successfully created and Logon Manager starts, the user is authenticated again, this time to Logon Manager.

There is currently no workaround for this behavior.

Read-Only Smart Card Authenticator Settings

The Read-Only Smart Card authenticator settings control special-case options for read-only smart card authentication. Also see Read-Only Smart Card in the Strong Authenticators section for configuration with Kiosk Manager and technical notes.

Default values, where applicable, are in **bold**.

Options

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Store synchronization credentials `AUI\ROSCauth: StoreSyncCreds`	Specifies whether to store the user's synchronization repository credentials using Secure Data Storage.  Using this setting requires that you enable and configure Secure Data Storage.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
PKCS#11 Library Path `AUI\ROSCAuth: PKCS11Path`	Specifies the path to the smart card middleware file, which implements the PKCS#11 standard.  This entry is not required unless you set "Store synchronization credentials" to **Yes** or are using read-only smart cards with Kiosk Manager.		Yes	string/string
Custom certificate check extension path `AUI\ROSCauth:CCCEPath`	Specifies the path to the custom certificate check extension.  This entry is not required.		Yes	string/string
Allow secure PIN entry `AUI\ROSCauth:AllowSPE`	Use this setting to allow users to enter a PIN on a smart card reader keypad that supports secure PIN entry.	• **0-Only allow non-SPE login (Default)** • 1-Only allow SPE login	Yes	dword/Ø

Recovery

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Recovery method `AUI\ROSCauth: ResetEnable`	Enables the use of the reset passphrase. The passphrase can be supplied either by the user (entering the passphrase in a dialog box) or by the newest non-default encryption certificate on the card itself.	• **1-Passphrase (Default)** • 2-Encryption certificate	Yes	dword/Ø
Recovery certificate object identifier `AUI\ROSCAuth: ResetCertOID`	Specifies the object identifier of the certificate used for the certificate-based passphrase feature. The authenticator searches the "Enhanced Key Attributes" of each certificate on the smart card for this object identifier.  You must set the "Recovery method" option to "Encryption certificate." This entry is not required.		Yes	string/string

Proximity Card

Proximity Card settings are available in the Authentication section of Global Agent Settings in the Oracle Enterprise Single Sign-On Administrative Console. This section also includes steps that you must take when using AD or AD LDS (ADAM), and other technical notes about configuring and using this authenticator.

Administrative Console Settings

To access proximity card settings, click **Global Agent Settings** > **Live** > **Authentication** > **Proximity Card**. See the Proximity Card Authentication section for a full discussion of these settings.

Integrating with Kiosk Manager

Support for storing and passing through the synchronization credentials with Kiosk Manager and Proximity Card integration

When the Proximity Card authenticator's second factor is set to "User Defined PIN", the user's synchronization credentials can optionally be stored by the authenticator by configuring the Secure Data Storage feature. If stored in this manner, the credentials are then silently passed through to Logon Manager after a user initiates a Kiosk Manager session by tapping their proximity card and entering the correct PIN. This feature prevents a double authentication when starting a Kiosk Manager session whereby the user authenticates with their proximity card and PIN and then is subsequently prompted by Logon Manager to provide their synchronization username and password.

Insufficient privileges for Guest User Accounts

Guest User accounts do not have sufficient privileges to perform operations required for successfully completing the Logon Manager First Time Use wizard. Oracle recommends against using Guest Accounts as the kiosk account.

Active Directory Technical Notes

An AD administrator must perform the following steps on the "CN=Users" container on the AD controller to grant read/write access to the Creator Owner user.

If the steps are not administered, users will not have sufficient rights to change their proximity card number. As a result, when a user enters the passphrase scenario to update their card information (lost card scenario), they get an error "Proximity card assigning failed."

1. Open Active Directory Users and Computers console on AD controller.
2. Right-click on the **Users** AD object (CN=Users).
3. Click **Properties** in pop-up menu.
4. Click the **Security** tab.
5. Click the **Add** button.
6. Under **Enter the object names to select**, type CREATOR OWNER.
7. Click the **Check Names** button to resolve the entry.
8. Click **OK**.
9. Under **Group or user names**: highlight **CREATOR OWNER**.
10. Click the **Advanced** button.

11. The Advanced Security Settings for Users window displays. Verify that **Allow inheritable permissions from the parent to propagate to this object and ...** checkbox is checked (set to TRUE).
12. Double-click the **CREATOR OWNER** user.
13. Set **Apply Onto** dropdown to **Child Objects** only.
14. Set the **Read All Properties** and **Write All Properties** checkboxes under **Allow** to checked (set to TRUE).
15. Apply all changes.

To use the proximity card authenticator with Active Directory, you must enable the storing of credentials under user objects:

1. Open the Oracle Enterprise Single Sign-On Administrative Console.
2. Connect to the repository.
3. From the **Repository** menu, select **Enable Storing Credentials under User Objects** (AD only).

AD LDS (ADAM) Technical Notes

An AD LDS (ADAM) administrator must perform the following steps on the "OU=People" container on the AD LDS (ADAM) server to grant read/write access to the users.

1. Open AD LDS (ADAM) Tools Command Prompt on AD LDS (ADAM) server.
2. Execute the following command to give users 'Read' permission to the **People** container and its sub-objects:

   ```
   dsacls.exe \\<hostname>:<port>\<adam container dn> /I:T /G <user/group/role DN>:GR
   ```

3. Execute the following command to give users 'Create Child' and 'Write Self' permissions to the **People** container and its sub-objects:

   ```
   dsacls.exe \\<hostname>:<port>\<adam container dn> /I:T /G <user/group/role DN>:CCWS
   ```

OmniKey Proximity Card Reader Technical Note

When using the OmniKey family proximity card readers, it is recommended that the driver be installed through Windows updates.

Proximity Card Authenticator Settings

The proximity card authenticator settings are used for configuring proximity card authentication. Also see Proximity Card in the Strong Authenticators section for configuration with Kiosk Manager and technical notes.

Default values, where applicable, are in **bold**.

Options

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Card family `AUI\ProxCardAuth: ProximityCardFamily`	Specifies the proximity card family type.	• **0-HID ISO / DUO PROX (Default)** • 1-iClass • 2-Indala / EM	Yes	dword/Ø
Reader type `AUI\ProxCardAuth: ReaderName`	Specifies the name of the proximity card reader to use.	• **OMNIKEY CardMan 5x25-CL 0-Omnikey CardMan 5125 (Default)** • OMNIKEY CardMan 5x21-CL 0-Omnikey CardMan 5121 • OMNIKEY CardMan 5x21-CL 0-Omnikey CardMan 5321 • No entry-RFIdeas (all readers)	Yes	string/Ø
Second factor authentication `AUI\ProxCardAuth: AuthenticationMethod`	Specifies whether to use the Active Directory password or a user-defined PIN for the second factor in authentication.	• **0-AD password (Default)** • 1-User-defined PIN	Yes	dword/Ø

PIN settings

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Minimum length `AUI\ProxCardAuth: MinPINLength`	Specifies the minimum length of the user-defined PIN.	**Default is 4**	Yes	dword/int
Maximum length `AUI\ProxCardAuth: MaxPINLength`	Specifies the maximum length of the user-defined PIN.	**Default is 8**	Yes	dword/int
Maximum retries `AUI\ProxCardAuth: RetryPINCount`	Specifies the number of PIN attempts before the authentication fails.	**Default is 3**	Yes	dword/int
Alphanumeric constraints `AUI\ProxCardAuth: AlphabeticRequirements`	Specifies the alphanumeric requirements of the user defined PIN.	• 1-Numbers only • 2-Letters only • **3-Numbers and letters (Default)**	Yes	dword/Ø

RSA SecurID

This section lists steps that you must take to integrate RSA SecurID with Kiosk Manager, and other technical notes about installing and using this authenticator.

Installing the RSA SecurID Method

Before installing the RSA SecurID authentication method, the RSA middleware must be installed and configured. There are two middleware options for the RSA SecurID authenticator:

- **RSA Local Authentication Client (LAC)** - if using RSA LAC, you must install the **RSA SecurID** Logon Method in the Authentication Manager installer.
- **RSA Local Authentication Toolkit (LAT)**- if using RSA LAT, you must install the **RSA SecurID** Logon Method as well as the **Local Authentication Toolkit**, if not previously installed, in the Authentication Manager installer. Installing RSA LAT will prompt you to reboot your machine so that it can start the service.

After RSA LAT is installed, according to the RSA documentation on LAT, you must perform the following 2 steps:

1. You must get the `server.cer` file from your RSA Authentication Manager administrator and place it in the subdirectory of the main installation directory. For example: C:\Program Files\RSA Security\RSA Authentication Agent\Agenthost Autoreg Utility directory.
2. You must get the `sdconf.rec` file from your Authentication Manager administrator and place it in the system32 directory.

These notes are stated in RSA SecurID Local Authentication Toolkit document and also mentioned in *RSA Authentication Agent 6.1 for Microsoft Windows Installation and Administration Guide*.

Once RSA SecurID is installed, there are no specific settings that must be set in the Oracle Enterprise Single Sign-On Administrative Console.

Integrating with Kiosk Manager

When using the RSA SecurID authenticator with Kiosk Manager,you have to enable and configure Secure Data Storage in the Oracle Enterprise Single Sign-On Administrative Console.

RSA SecurID authenticator uses the user's PIN rather than the repository password for the pre-population of the synchronization dialog. Secure Data Storage is used to securely save the PIN which then is associated with the repository credentials on the server. See the Secure Data Storage section below to set it up.

Support for storing and passing through the synchronization credentials with Kiosk Manager and RSA SecurID integration:

When using RSA SecurID authenticator with Kiosk Manager, the user's synchronization credentials can optionally be stored by the authenticator by configuring the Secure Data Storage feature. If stored in this manner, the credentials are then silently passed through to Logon Manager after a user initiates a Kiosk Manager session with a RSA SecurID token. This feature prevents a double authentication when starting a Kiosk Manager session whereby the user authenticates with their PIN and Tokencode and then is subsequently prompted by Logon Manager to provide their synchronization username and password.

Microsoft Visual C++ Technical Note

Microsoft Visual C++ 2005 Redistributable Package (x86) is required for the RSA SecurID authenticator. This can be downloaded from Microsoft's web site: http://www.microsoft.com/Downloads/details.aspx?FamilyID=32bc1bee-a3f9-4c13-9c99-220b62a191ee&displaylang=en.

PIN Mode Support Technical Note

Due to an incompatibility between RSA Local Authentication Toolkit and Visual Studio 2005, the RSA SecurID authenticator does not support New PIN Mode for SID700 and SID800. A support case has been opened with RSA (# C0842539).

Secure Data Storage

Secure data storage settings control the location for data storage. Secure data storage can be used for:

- The RSA SecurID authenticator in a Kiosk Manager environment.
- The Proximity Card authenticator in a Kiosk Manager environment when using "User Defined PIN" as second factor authentication.
- The Read-Only Smart Card authenticator in a Kiosk Manager environment.

Secure Data Storage is supported in Active Directory, Active Directory Application Mode, and Oracle Internet Directory.

When using Secure Data Storage, you must log on to Windows using a domain user account.

To access the secure data storage settings, click **Global Agent Settings** > **Live** > **Authentication** > **Secure Data Storage**. See the Secure Data Storage section for a full discussion of these settings.

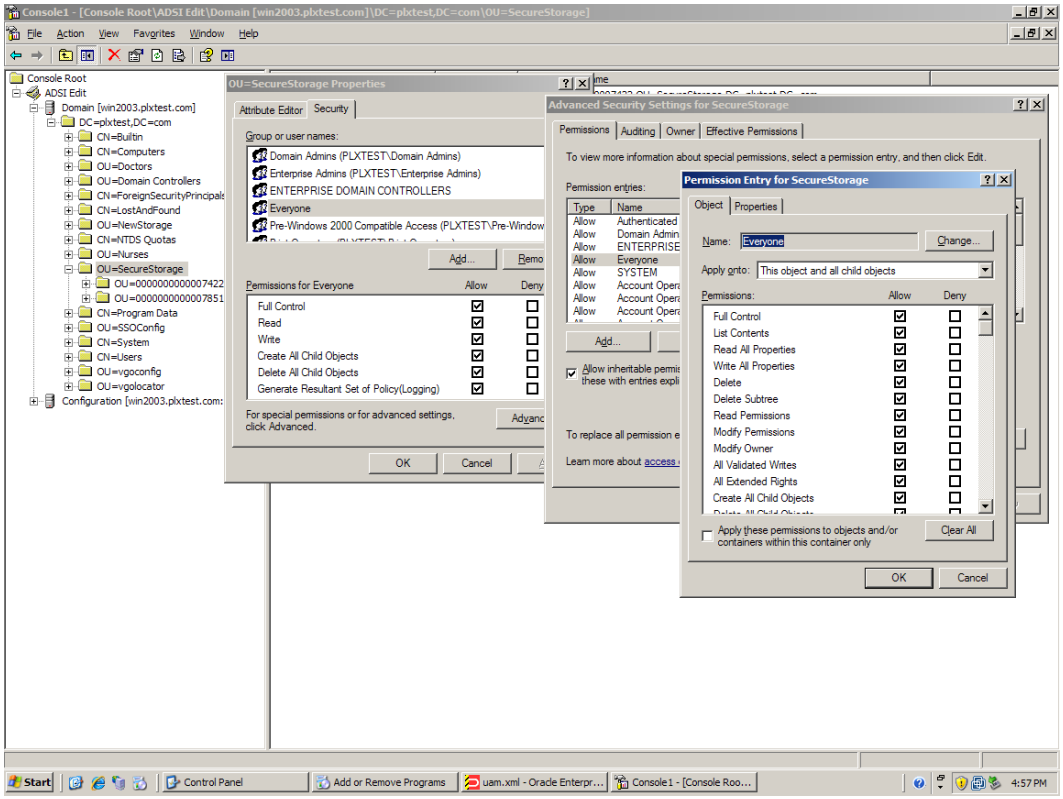
Enabling Secure Data Storage

Regardless of your repository, start the procedure for enabling secure data storage as follows:

1. On the Secure Data Storage pane, set **Enable Data Storage** to **Yes**.
2. Create a new Organizational Unit that will serve as the data storage location.
3. Specify the fully-qualified distinguished name for this object as the value of the **Data storage location** setting.
4. Continue to the next steps below for the appropriate repository.

Next Steps for Active Directory

5. Grant FULL CONTROL permission to this Organizational Unit to "Everyone."
6. Apply this to **This object and all child objects**.

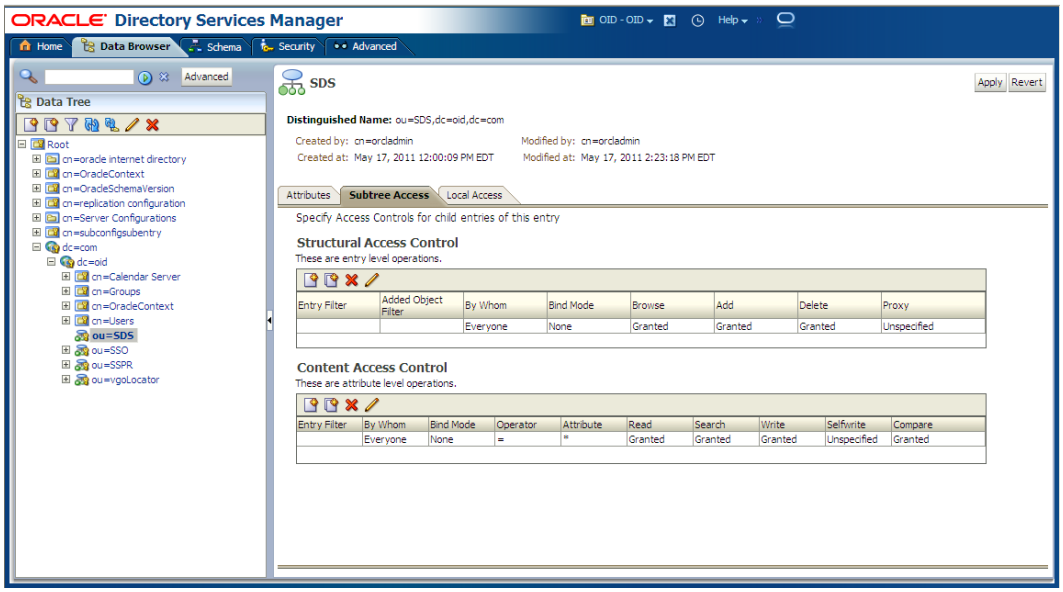


Next Step for AD LDS (ADAM)

5. Grant General Access (GA) permission to this Organizational Unit and its sub-objects for "Everyone ":
   `dsacls.exe \\<hostname>:<port>\<adam container dn> /I:T /G "Everyone":GA`

Next Steps for Oracle Internet Directory

5. Grant anonymous users access to the Secure Data Storage container.
6. Log on to the Directory Services Manager as an administrator.
7. Select the **Data Browser** tab.
8. In the tree, navigate to and select the **Secure Data Storage** container that you created.
9. Select the **Subtree Access** tab.
10. Create a new access entry under Structural Access Control and Content Access Control. Accept the default permissions and click **OK**.
11. **Apply** the changes. The default permissions grant "Everyone" with bind mode "None" the appropriate access:



Secure Data Storage Settings

These settings are used for configuring secure data storage.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description Text	Options/ Default	Overridable	RegType/ DataType
Enable data storage `DataStorage:Passlogix SecureDataStorage`	Specifies whether to store users' synchronization credentials securely within the repository.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Data storage location `SecureDataStorage: LocationDN`	Enter the fully-qualified path to the location in the repository where the data will be stored.		Yes	string/string

Kiosk Manager Integration Notes

Domain Password Change

This issue occurs when using proximity devices, smart cards, and read only smart cards.

If user's domain password is changed, the next time the user tries to start a session on a kiosk with the device within the lifetime period of the old password, depending on their sync repository, the following occurs:

- **Active Directory:** An error message displays saying "Unable to connect to network …".
- **AD LDS (ADAM):**Kiosk Manager stops responding and requires a restart.

There are two workarounds to this issue:

1. Users can manually start a Kiosk Manager session by authenticating with a username and new password within the password lifetime period.
2. Administrators can change the lifetime period of an old password to decrease the probability that this issue will occur. Refer to Microsoft Help and Support for more details - http://support.microsoft.com/kb/906305.

Hardware Reassignment

If a hardware device, such as a smart card, is ever reassigned to another user, it is possible that Kiosk Manager will log on as the original user. This occurs because Kiosk Manager keeps a device-to-username mapping.

There is no workaround for this issue. It is strongly recommended that these devices not be reassigned to avoid this issue.

Configuring the SoftID Helper

The SoftID Helper is an extension helper that adds SSO support for SecurID applications. This section describes how to install and configure the SoftID helper and enable RSA SecurID application templates.

Prerequisites

Logon Manager supports the following combinations of software and hardware tokens for SoftID applications:

- RSA SecurID Software Tokens
- RSA Authentication Client and RSA SecurID SID800 Hardware Authenticator
- Both software and hardware tokens, if both are installed on the machine, Authentication Manager looks for the hardware token first, and if it cannot find the hardware token, it defaults to the software token.

One of the above combinations must be installed before installing and using the SoftID Helper.

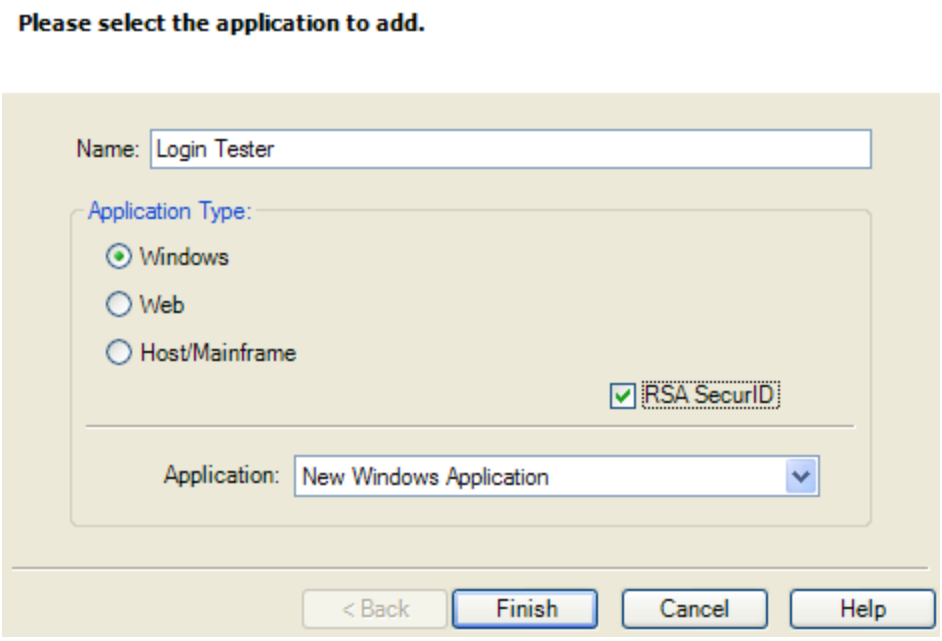
Install Logon Manager

Install Logon Manager with Authentication Manager and Authentication Manager with the SoftID helper. See the *Logon Manager Installation Guide* for more information.

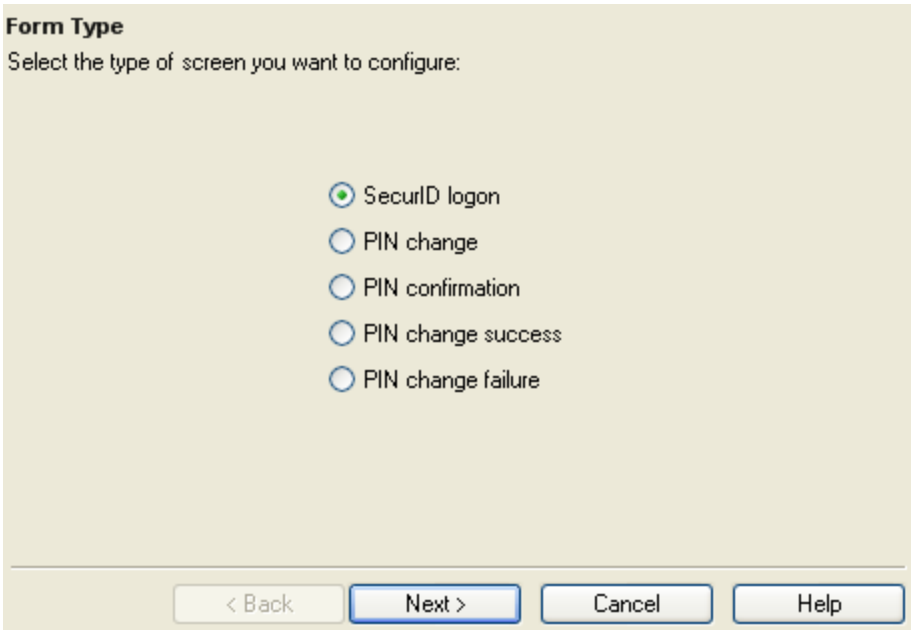
Configuring RSA SecurID Application Templates

This example walks through setting up a new RSA SecurID application for an application called Login Tester.

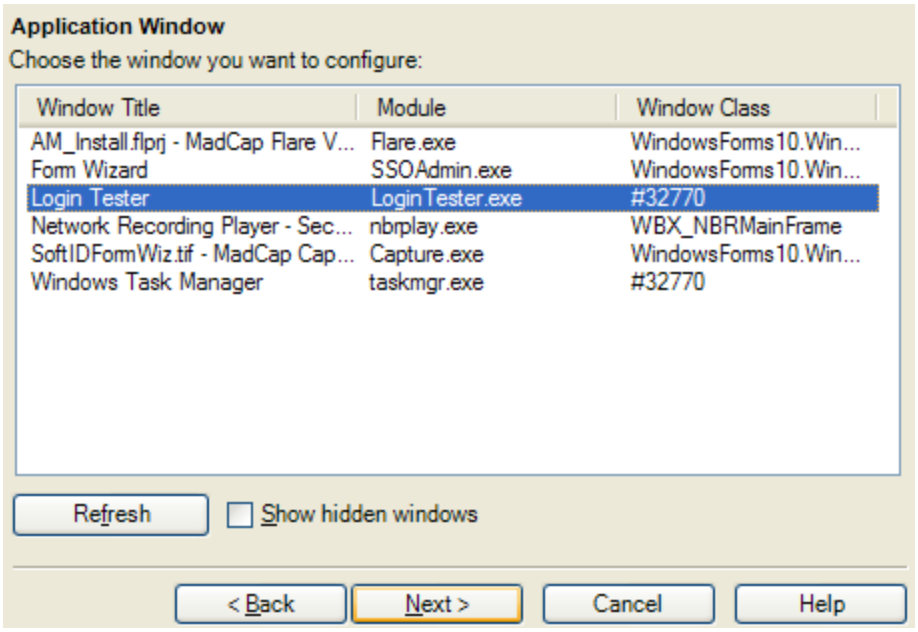
1. Open the Oracle Enterprise Single Sign-On Administrative Console.
2. Launch the application for which you are defining a template.
3. Right-click **Applications** and select **New Windows Application**. The Add Application dialog appears.



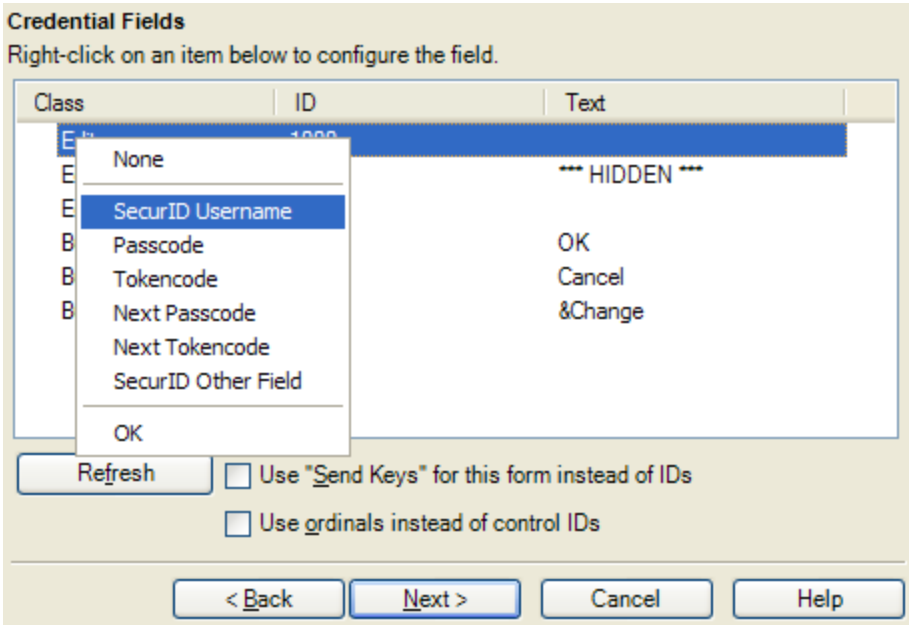
4. Enter the application **Name** and check the **RSA SecurID** check box. Click **Finish.** The Form Wizard appears.



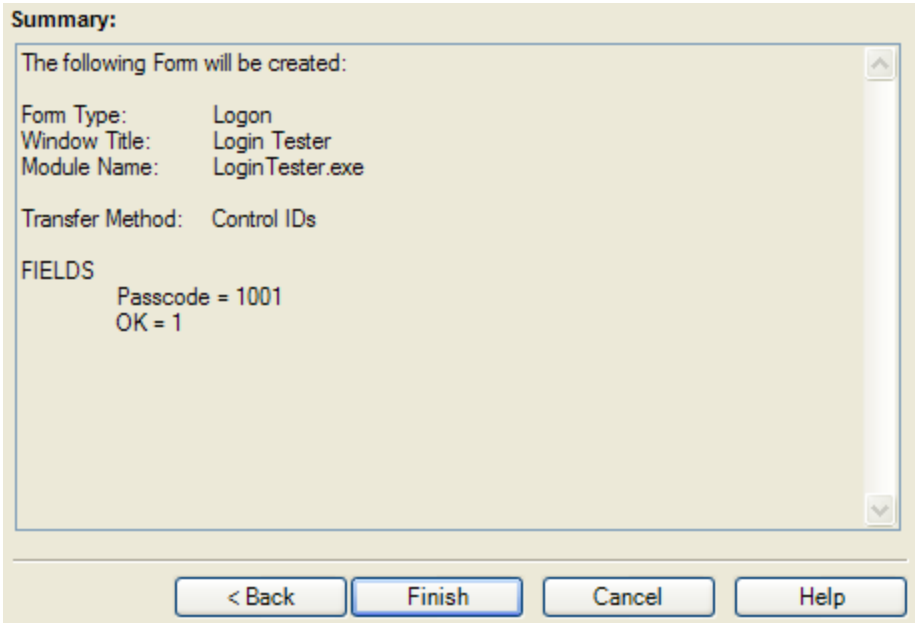
5. Select the **SecurID Login** button. Click **Next**. As long as the application for which you are defining a template is running, the window title will appear in the next wizard panel.



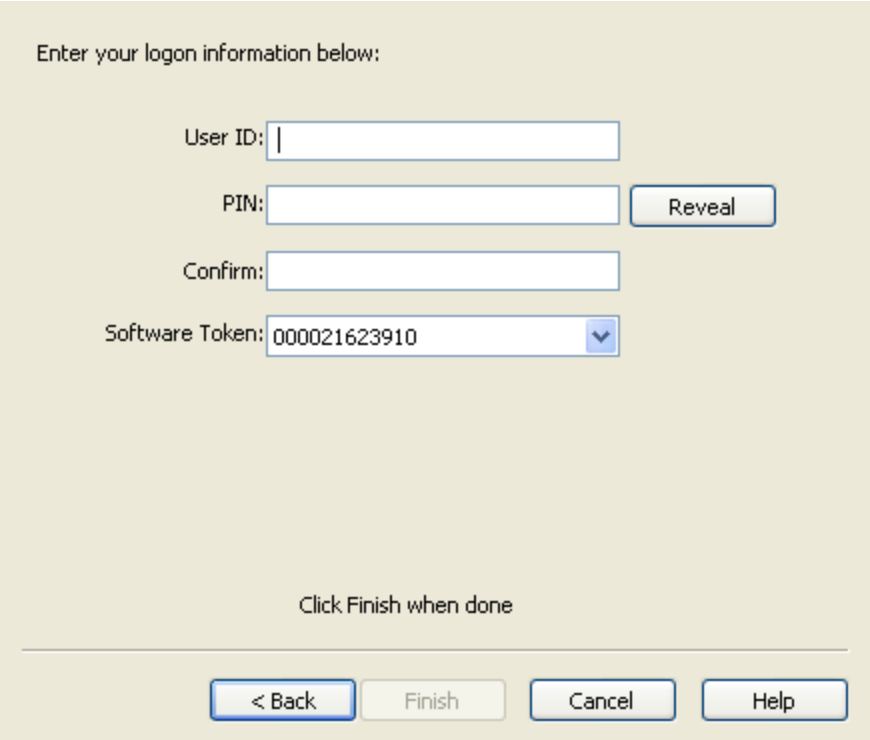
6. Select the Window Title for your application. Click **Next**.



7. On this dialog, you configure the **SecurID Username**, **Passcode**, and **OK** button fields as well as any other applicable fields for your application. Right-click on the class and select the fields. Click the **Help** button for more information on configuring the credential fields. Click **Next** when you are done. A Summary panel appears.



8. Review the summary. Click **Finish** when done.
9. The Windows Logon Form appears. Change any other applicable settings and click **OK**.
10. Export the template to the Agent. See the Oracle Enterprise Single Sign-On Administrative Console help file for more information on exporting applications.
11. When the Agent is started, the user will go through the FTU Wizard. They must select **Authentication Manager** as the primary logon method.
12. When the application for which you defined a template is started, the Agent will first ask the user if they want to add credentials for the application. If the user selects **Yes**, the Agent will prompt the user to enter their credentials into the New Logon for this application.



13. The user must enter the **User ID**, **PIN** and select the **Software Token**. The user's PIN is set up through the RSA middleware prior to use with Authentication Manager. Authentication Manager automatically populates the Software Token field as it detects the serial number of the available token.
14. Click **Finish** when done. The Agent will log the user onto the RSA SecurID application every time the application is started.

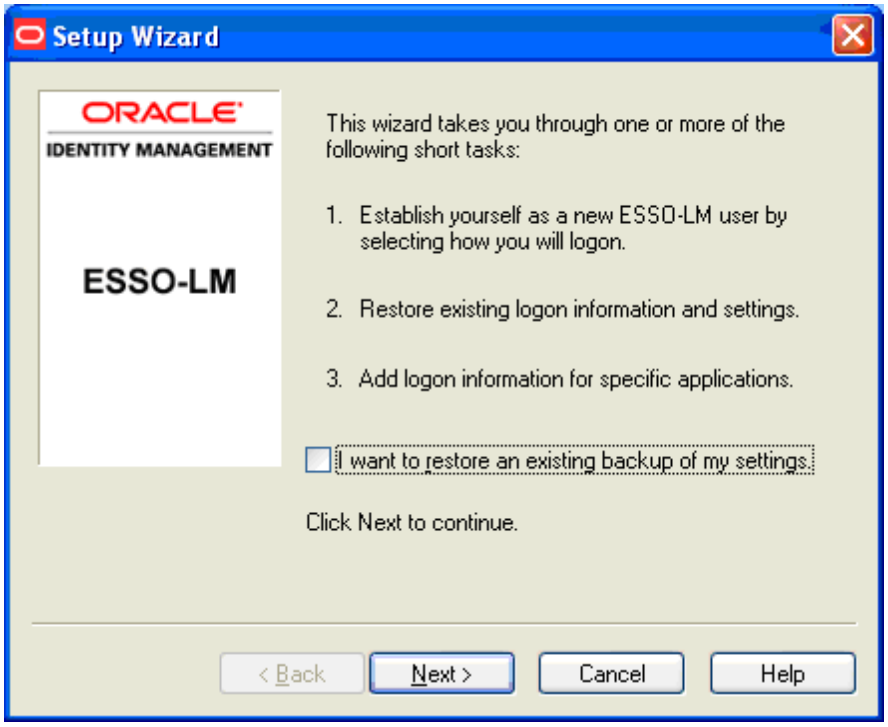
First Time Use Scenarios

In the setup phase, the user will go through the normal Logon Manager First Time Use (FTU) wizard until the Select Primary Logon Method dialog box is displayed.

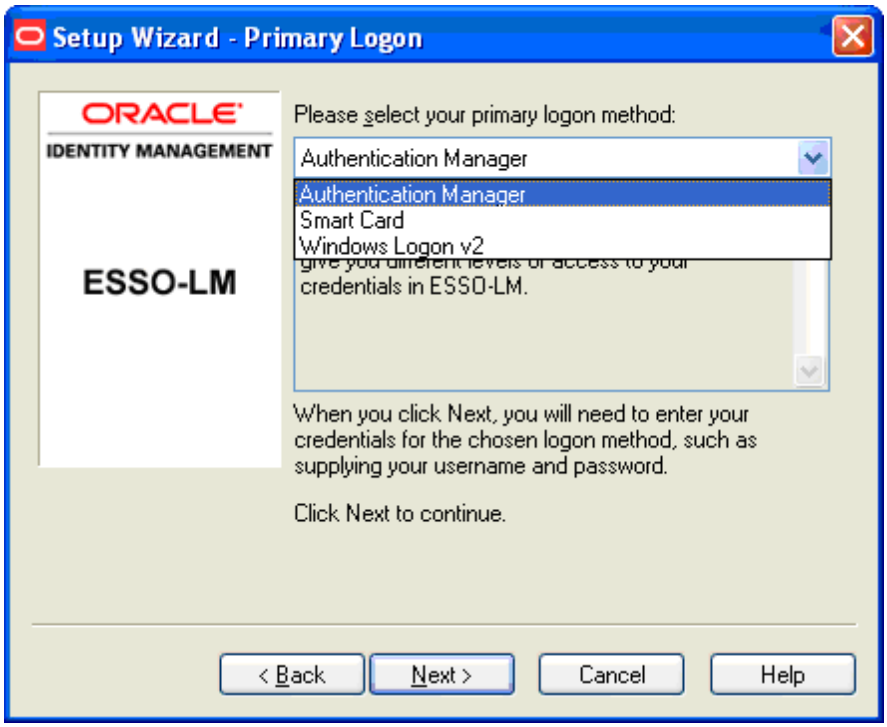
The behavior of this setup wizard is configured through the Oracle Enterprise Single Sign-On Administrative Console.

Setup Flow Example

1. The first dialog box in the Setup Wizard dialog box lists the setup tasks necessary for the local installation of Logon Manager. Click **Next** to begin setup.



2. The dialog box lists the setup tasks necessary for your local installation of Logon Manager, choosing your primary logon method and supplying the credentials for that method. Click **Next**.
3. The Primary Logon dialog box prompts you to select a logon method. Select your desired primary logon method. Only methods that are currently installed will appear in the drop-down box. Click **Next**.



4. Enroll in your selected primary logon method. For example, if a smart card authenticator is installed, you will see the dialog below. Clicking **Cancel** for a required authenticator cancels the Setup Wizard.

5. Insert your smart card. You are prompted to enter your PIN. Click **OK**. A successful message appears. Click **OK**.
6. If the passphrase option is enabled, you might be prompted to enter a passphrase with a minimum answer length of eight characters. Enter an answer, confirm (re-enter) it, and click **OK**.
7. The Setup Wizard indicates that the process is complete and Logon Manager is ready for use. Click **Finish** to complete.

Delegated Credentials Settings

Use these settings to specify the server(s) and encryption for delegated credentials.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
PM Locations `Extensions\ProvManager\Plugins\ Delegate\PMLocations:PMLocationN`	Click the ellipsis ("**...**") button and enter the path, or list of paths, to the provisioning service. Enter one path per line. For example: http://localhost/v-GO PM Service		Yes	string
Encryption algorithm `Extensions\EventManager:Retry`	Select the default encryption algorithm from the dropdown menu.  All algorithms except AES 256 have been deprecated as of version 11.1.2 and are listed for upgrade scenarios only. Do not select other algorithms for new configurations. This setting is not required.	**AES 256 (Default)** Triple DES (deprecated)	Yes	dword

Agent Synchronization Settings

The Synchronization settings are the general options for credential synchronization for all synchronizer extensions. Use these settings to control the following functions and features:

Performance Options

- Synchronizer Order
- Aggressive Synchronization
- Optimized Synchronization
- Interval for automatic resynchronization
- Resynchronize when network or connection status changes
- Wait for synchronization at startup
- Roaming Profile Synchronization Support

User Mobility Options

- Delete local cache
- Deleted-credential cleanup
- Disconnected operation

Security and Management Options

- Enable role/group security support

Default values, where applicable, are in **bold**.

Options

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Synchronizer order `Extensions\SyncManager: SyncOrder`	Specifies the order of synchronization extensions to use. If no value is specified, all extensions are used (in an unpredictable order). For reads, the first operational synchronizer is authoritative, and no other synchronizer is queried. For writes, all synchronizers are updated, in the order specified in this setting. **Examples:** LDAPExt,ADExt FileSync Remote,AD,FileSync Local,SmartCard MySmartCard,ADExt,ADExtRemote		Yes	string/ synchronizers
Use configuration objects `Extensions\SyncManager: RetrieveCO`	When this setting is disabled, all templates and policies are consolidated into one of two objects: CN=vgoentlist and CN=vgoadminoverride. When this setting is enabled, all template and policies are independent objects for directory-based synchronizers. In this mode, additional features are available, including role/group security and directory hierarchy support.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Allow disconnected operation `Extensions\SyncManager: AllowDisconnected`	Specifies whether the offline cache is usable or whether the First-Time-Use setup wizard executes when the Agent is unable to connect to any synchronizer repository. If this setting is disabled, and the repository is not available, the Agent shuts down.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Delete local cache `Shell:CleanupOnShutdown`	Specifies whether to delete the user's data files and registry keys upon shutdown of the Agent.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Deleted credential cleanup `Shell:nDelDays`	Length of time (in days) for which a credential's "deleted" flag is retained after a credential is deleted. Used to ensure that the credential is deleted from all of a user's local caches on multiple systems.	**(Default-30)**	Yes	dword/int
Location of entlist.ini file `Extensions\AccessManager: EntList`	Enter the fully-qualified path and filename to the entlist.ini file. Only applicable in standalone (no synchronizer) mode. This setting should be used only to deploy Oracle Enterprise Single Sign-On Administrative Console templates locally to the workstation when synchronization is not installed. The setting should NOT be used when synchronization is installed and application templates are deployed via a repository such as Active Directory. See Configuring Application Templates for more information.		Yes	string/filename

Behavior

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Wait for synchronization at startup `Extensions\SyncManager: WaitForStartupSync`	Specifies whether to wait for synchronization at startup, which ensures that the user's data is current, and new templates and policies are put into effect before Logon Manager logs on to applications. With this setting enabled, Logon Manager does not respond until the synchronization is complete; synchronization times vary based on your synchronization infrastructure and the number of templates and policies in the repository.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Interval for automatic resynchronization `Extensions\SyncManager: CycleInterval`	Interval (in minutes) between automatic resynchronizations. This synchronization interval is not reset if a manual, user-generated sync event (such as an Logon Manager refresh) takes place. A value of zero (0) disables this setting, which means that synchronization occurs only during normal sync events such as Logon Manager startup or user credential update. Generally set when Provisioning Gateway is in use, to ensure that updates are delivered in a timely manner.	**(Default-0)**	Yes	dword/int
Optimize synchronization `Extensions\SyncManager: OptimizedSync`	With this setting enabled, the synchronization function uses a checksum object called SyncState to determine changed credentials, rather than retrieving all credentials. Changed credentials are then independently synchronized without synchronizing all credentials. Note that templates and policies are always synchronized in full during each sync event.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Use aggressive synchronization `Extensions\SyncManager: AggressiveSync`	With this setting enabled, each time Logon Manager detects a logon event, a synchronization occurs before the target application credential is decrypted and passed to the application. This feature ensures that the most current credentials or settings are used at all times. The feature is normally only used in special cases where a user uses multiple systems to simultaneously access the same application (such as through a Citrix farm). This feature can have a significant performance impact on both client and server computers.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Resynchronize when network or connection status changes `Shell:MonitorNetwork`	Enables or disables monitoring for changes in the network connection status. Enabling this setting causes the Agent to perform resynchronization when a status change occurs (for example, reconnecting to the network).	• **0-No (Default)** • 1-Yes	Yes	dword/Ø

Active Directory Synchronization Settings

Use these settings to configure a Microsoft Active Directory (AD) synchronization.

Default values, where applicable, are in **bold**.

Synchronizer location

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
AD Sync DLL location `Extensions\SyncManager\ Syncs\%AD%:Path`	Enter the path\filename of the Active Directory synchronizer extension.	**(Default-%INSTALLDIR%Plugin\ SyncMgr\ADEXT\ adsync.dll)**	No	string/filename

Data storage configuration

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Base location(s) for configuration objects `Extensions\SyncManager\ Syncs\%AD%\ COBaseLocations: LocationN`	Specifies where to begin the search for Configuration Objects (templates and policies). This is a fully-qualified, distinguished path, such as: `OU=SSOConfig,DC=Domain,DC=com` The search starts from the specified location(s) and searches all subordinate OUs (if any) for Configuration Objects. To specify multiple locations, place one entry on each line.		No	string/Ø
Location for storing user credentials `Extensions\SyncManager\ "Syncs\%AD%:LocateInUser`	Credentials can be stored either as objects subordinate to the Active Directory user object, or as specified by an Oracle locator object.	• **0-As specified by locator object (Default)** • 1-Under respective directory user objects	Yes	dword/Ø
Prepend Domain when naming objects `Extensions\SyncManager\ Syncs\%AD%:AppendDomain`	Enables prepending the user's Domain to the username in naming the user's container. **Example:** For the Domain "*company*" and user "*jamesk*" the container is named "*jamesk*" with this flag disabled and "*company.jamesk*" with this flag enabled. If you enable this setting, do not enable the **Enable storing credentials** setting under User Object (in the Directory menu). If you enable credential storage in User Objects, you must disable this option (the default setting). If you enable both options, synchronization does not occur.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
Base location(s) for UAM storage index `Extensions\SyncManager\Syncs\%AD%\ IndexBaseLocations:LocationN`	Fully qualified DN of the Universal Authentication Manager index container.		No	string/Ø

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Use secure location for storing user settings Extensions\SyncManager\Syncs\%AD%: UseSecureLocationForUserRegistry	Set to Yes if you want the synchronizer to use a secure location for storing user registry settings in Active Directory. Set to No only for the duration of the Logon Manager client's upgrade period for backward compatibility with Logon Manager versions prior to 11.1.2.  You *should not* select Yes for this setting *until* you have upgraded all Logon Manager clients to version 11.1.2. You *must* select Yes for this setting: • If version 11.1.2 is your *first installation* of Logon Manager. • *After* you have upgraded all Logon Manager clients to version 11.1.2, and *before* upgrading to versions beyond 11.1.2.	• **0-No (Default)** • 1-Yes (recommended)	Yes	dword/Ø

Connection information

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Credentials to use `Extensions\SyncManager\Syncs\%AD%:AuthType`	Specifies which credentials to use when authenticating to the Active Directory Server.	• 0-Use local computer credentials only • 1-Use Active Directory server account only (recommended that UserPathN be set) • **2-Try local computer credentials; if it fails, use Active Directory server account (Default)** • 3-Use card's certificate. Use this setting to allow users to authenticate to the repository using a smart card's certificate and their PIN instead of a username and password. • 4-Try card's certificate; if logon is canceled, use Active Directory server account.	Yes	dword/Ø
Prompt when disconnected `Extensions\SyncManager\Syncs\%AD%:AllowOffline`	Allows the user to work offline without prompting/notification if a synchronization event fails.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Servers `Extensions\SyncManager\Syncs\%AD%\Servers:ServerN`	Servers to try, in the format "computer[:port]" (one server per line), where "computer" is the server name, and "port" is assumed to be the default (636 for SSL, 389 for no SSL) if not specified. **Example:** • DC1.company.com • DC2.company.com • company.com:8080 • companylab.com  This setting is not normally used when storing Oracle data in Active Directory. Active Directory requires use of computer names (not IP addresses).		No	string/Ø

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
User Paths `Extensions\ SyncManager\ Syncs\%AD%:UserPathN`	Enter the fully-qualified path to where the user account is located. There can be unlimited paths to search. The extension searches these in order, looking for the user account. If not found, the extension will search the directory tree.  This entry is not required for this extension.		Yes	string/Ø
Use SSL `Extensions\ SyncManager\ Syncs\%AD%:UseSSL`	Specifies to connect via SSL.	• 0-No (insecure) (default to port #389) • **1-Yes (default to port #636) (Default)**	Yes	dword/Ø
Logon attempts `Extensions\SyncManager\ Syncs\%AD%: RetryLockCount`	Specifies the number of times to present the Synchronization dialog to the user. For example, if you set this value to 3, the Synchronization dialog displays a maximum of three times if the user submits incorrect credentials.	**(Default-3)**	Yes	dword/int

User interface

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Descriptive name `Extensions\SyncManager\ Syncs\%AD%:DisplayName`	Enter a logon dialog title to differentiate between multiple synchronizer extensions having the same name. This entry is not required.		Yes	string/string
Password change window title `Extensions\SyncManager\ Syncs\%AD%:CAP_WindowTitle`	Use this setting to customize the Active Directory Change Password window title name for this synchronizer. This entry is not required.		Yes	string/string
Password change window subtitle `Extensions\SyncManager\ Syncs\%AD%: CAP_WindowSubTitle`	Use this setting to customize the Active Directory Change Password window subtitle name for this synchronizer. This entry is not required.		Yes	string/string

Credential sharing

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Share credentials with authenticators `Extensions\SyncManager\ Syncs\%AD%: ShareCredsToAuths`	This setting eliminates double authentication by linking authenticator and synchronizer credentials. If authenticators and synchronizers use the same credentials, the duplicate credentials are used without requiring the user to reenter them. Enter a comma-separated list of authenticators with which to share the credentials, for example *WinAuth*, *MSAuth*. To locate other authenticator names, see the name listed in the registry for that authenticator (located under `HKLM\Software\Passlogix\AUI`).		Yes	string/string

File mode configuration

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Limit search to server root `Extensions\SyncManager\ Syncs\%AD%:StopAtRoot`	Specifies how the Agent searches for locator and override objects.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø

AD LDS (ADAM) Synchronization Settings

Use these settings to configure a AD LDS (ADAM) synchronization.

Default values, where applicable, are in **bold**.

Synchronizer location

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
ADAM Sync DLL location `Extensions\SyncManager\ Syncs\%ADAM%:Path`	Enter the path\filename of the AD LDS (ADAM) synchronizer extension.	**(Default-%INSTALLDIR%Plugin\ SyncMgr\ ADAMext\ ADAMsyncExt.dll)**	No	string/filename

Data storage configuration

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Base location(s) for configuration objects `Extensions\SyncManager\ Syncs\%ADAM%\ COBaseLocations: LocationN`	Specifies where to begin the search for Configuration Objects (templates and policies). This is a fully-qualified, distinguished path, such as: `OU=SSOConfig,DC=Domain,DC=com` The search starts from the specified location(s) and searches all subordinate OUs (if any) for Configuration Objects. To specify multiple locations, place one entry on each line.		No	string/Ø
Prepend Domain when naming objects `Extensions\SyncManager\ Syncs\%ADAM%: AppendDomain`	Enables prepending of the user's Domain to the username in naming the user's container. **Example:** For the Domain "*company*" and user "*jamesk*" the container is named "*jamesk*" with this flag disabled and "*company.jamesk*" with this flag enabled.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø
User Domain name to use `Extensions\SyncManager\ Syncs\%ADAM%: UserDomain`	Specifies the domain name to use in the container name (for example, *DomainName.UserName*) when you enable the Prepend Domain setting. The user can specify another domain the in the logon dialog. **Example:** If User Domain is "*MyDomain*" (with Prepend Domain enabled) and the user logs on as *jamesk*, the container name used is *MYDOMAIN.jamesk*. If the user logs on as *HISDOMAIN\jamesk* the container name used is *HISDOMAIN.jamesk*.		Yes	string/string

Connection information

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Credentials to use `Extensions\SyncManager\ Syncs\%ADAM%:AuthType`	Specifies which credentials to use when authenticating to the AD LDS (ADAM) server.	• 0-Local computer credentials • 1-ADAM server account • **2-Try local computer credentials before using ADAM server account (Default)** • 3-Use card's certificate. Use this setting to allow users to authenticate to the repository using a smart card's certificate and their PIN instead of a username and password. • 4-Try card's certificate; if logon is canceled, use ADAM server account.	Yes	dword/Ø
Prompt when disconnected `Extensions\SyncManager\ Syncs\%ADAM%: AllowOffline`	Allows the user to work offline without prompting/notification if a synchronization event fails.	• 0-Yes • **1-No (Default)**	Yes	dword/Ø
Servers `Extensions\SyncManager\ Syncs\%ADAM%\ Servers:ServerN`	Specifies the servers to try, in the format "*computer[:port]*" (one server per line), where "*computer*" is the server name, and "*port*" is assumed to be the default (636 for SSL, 389 for no SSL) if not specified. **Examples:** • `Adam1.company.com` • `Adam2.company.com` • `Adam3.company.com:50389`		No	string/string
Use SSL `Extensions\SyncManager\ Syncs\%ADAM%:UseSSL`	Specifies to connect via SSL.	• 0-No (insecure) (default to port #389) • **1-Yes (default to port #636) (Default)**	Yes	dword/Ø

User interface

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Descriptive name `Extensions\SyncManager\ Syncs\%ADAM%:DisplayName`	Specify a logon dialog title to differentiate among multiple synchronizer extensions having the same name. This entry is not required.		Yes	string/string
Password change window title `Extensions\SyncManager\ Syncs\%ADAM%: CAP_WindowTitle`	Use this setting to customize the AD LDS (ADAM) Change Password window title name for this synchronizer. This entry is not required.		Yes	string/string
Password change window subtitle `Extensions\SyncManager\ Syncs\%ADAM%: CAP_WindowSubTitle`	Use this setting to customize the AD LDS (ADAM) Change Password window subtitle name for this synchronizer. This entry is not required.		Yes	string/string

Credential sharing

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Share credentials with authenticators `Extensions\SyncManager\ Syncs\%ADAM%: ShareCredsToAuths`	This setting eliminates double authentication by linking authenticator and synchronizer credentials. If authenticators and synchronizers use the same credentials, the duplicate credentials are used without requiring the user to reenter them. Enter a comma-separated list of authenticators with which to share the credentials, for example *WinAuth*, *MSAuth*. To locate other authenticator names, see the name listed in the registry for that authenticator (located under `HKLM\Software\Passlogix\AUI`).		Yes	string/string

Database Synchronization Settings

Use these settings to configure database synchronization.

Database synchronization relies on the database trust for the current user. You should not provide any credentials in the connection string.

Oracle does not support scenarios where the credentials are included in the connection string.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
DB Sync DLL location `Extensions\SyncManager\ Syncs\%DB%:Path`	Enter the path\filename of the Database synchronizer extension.	**(Default-%INSTALLDIR% Plugin\ SyncMgr\ DBEXT\ DBExt.dll)**	No	string/string

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Servers `Extensions\SyncManager\Syncs\%DB%\Servers:Server`	Specifies the database servers and the order to attempt connection for synchronization. Select the checkbox and click the ellipsis "**...**" button to open the "Edit List" dialog box. Enter the full connection address (*computerName.dbServerName*) for one database server on each line; end each line by pressing **Enter**. Do not use any other delimiter characters. You must specify at least one server for the extension to work. **For Oracle** To connect to an Oracle database, use the following connection string: Provider=OraOLEDB.Oracle;Data Source=%MachineName%;Extended Properties='OSAuthent=1' where the "`Data Source`" value will be different for each configuration. To connect to the Oracle database, the Oracle client must be installed on the same machine as the Oracle Enterprise Single Sign-On Administrative Console. **For SQL Server** To connect to a SQL Server that is hosting multiple instances, use the following connection string (with no manual line break): `Provider=SQLOLEDB; Data Source="ServerName\Instance"; Initial Catalog="DatabaseName" Trusted_Connection=Yes; Use Encryption for Data=True;`		No	string/string
Append Domain when naming objects `Extensions\SyncManager\Syncs\%DB%:AppendDomain`	Enables appending the user's Domain to the username in naming the user's container. **Example:** For the Domain "*company*" and user "*jamesk*" the container is named "*jamesk*" with this flag disabled and "*jamesk.company*" with this flag enabled.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø

File System Synchronization Settings

Use these settings to configure a File System synchronization.

Default values, where applicable, are in **bold**.

Synchronizer location

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
File Sync DLL location `Extensions\SyncManager\ Syncs\%File%:Path`	Enter the path\filename of the File System synchronizer extension.	**(Default-%INSTALLDIR% Plugin\ SyncMgr\ FileSyncExt\ filesync.dll)**	No	string/filename

Data storage configuration

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Prepend Domain when naming user folders `Extensions\SyncManager\ Syncs\%File%: AppendDomain`	Enables prepending the user's Domain to the username in naming the user's container. **Example:** For the Domain "*company*" and user "*jamesk*" the container is named "*jamesk*" with this flag disabled and "*company.jamesk*" with this flag enabled.	• 0-No • **1-Yes (Default)**	Yes	dword/Ø

Connection information

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Prompt when disconnected `Extensions\SyncManager\ Syncs\%File%: AllowOffline`	Allows the user to work offline without prompting/notification if a synchronization event fails.	• 0-Yes • **1-No (Default)**	Yes	dword/Ø

Server
`Extensions\ SyncManager\ Syncs\%File%\Servers: Server1`
	Enter the list of UNC paths to try for synchronization. You must specify Server1 for this extension to work.
	Examples
	`\\FS1\Users`
	`\FS2\Extras`
	`D:\Backup`
	The File System extension requires use of proper UNC paths. Only one path is supported. Failover is not supported.
			No	string/string

Logon attempts `Extensions\SyncManager\ Syncs\%File%: RetryLockCount`	Specifies the number of times to present the Synchronization dialog to the user. For example, if you set this value to 3, the Synchronization dialog displays a maximum of three times if the user submits incorrect credentials.	• Minimum value of 1 • **(Default-3)**	Yes	dword/int

User interface

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Descriptive name `Extensions\SyncManager\ Syncs\%File%: DisplayName`	Specifies a logon dialog title to differentiate among multiple synchronizer extensions having the same name.  This entry is not required.		Yes	string/string

LDAP Synchronization Settings

The LDAP/IBM Synchronization settings must be set for all LDAP synchronizer extensions.

You can bind to a directory before or after searching for a specific user account. If you choose to search for a user account before binding, Logon Manager begins searching at the user path you specify and continues down the tree until it locates the user account and binds to that directory, or it exhausts all paths. If Logon Manager does not find the user account you specify, the user receives a message that the system has been configured incorrectly and to contact the administrator.

Typically, Logon Manager uses anonymous binding for LDAP directories, but it also allows you to create a "browse-only" account to search for a user in scenarios where anonymous binding is disabled. In such cases, the account name is not the user's name and therefore is not readily identifiable (for instance, an employee ID or social security number). The browse-only account facilitates user searches when the alternate user ID option is enabled, identifying the user who belongs to the alternate user ID. Use the Alternate User ID location, BIND User Name, and BIND User Password settings to configure the browse-only account.

Default values, where applicable, are in **bold**.

Synchronizer location

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
LDAP Sync DLL location `Extensions\SyncManager\ Syncs\%LDAP%:Path`	Enter the path\filename of the LDAP Directory Server synchronizer extension.	**(Default-%INSTALLDIR%Plugin\ SyncMgr\ LDAP\ ldapsync.dll)**	No	string/filename

Data storage location

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Base location(s) for configuration objects `Extensions\SyncManager\ Syncs\%LDAP%\ COBaseLocations: LocationN`	Specifies where to begin the search for Configuration Objects (templates and policies). This is a fully-qualified, distinguished path, such as: `OU=SSOConfig,DC=Domain,DC=com` The search starts from the specified location(s) and searches all subordinate OUs (if any) for Configuration Objects. To specify multiple locations, place one entry on each line.		No	string/Ø

Connection information

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Prompt when disconnected `Extensions\SyncManager\ Syncs\%LDAP%: AllowOffline`	Allows the user to work offline without prompting/notification if a synchronization event fails.	• 0-Yes • **1-No (Default)**	Yes	dword/Ø
Directory type `Extensions\SyncManager\ Syncs\%LDAP%: DirectoryType`	The specific type of directory server. If the directory server is not listed, select **Unspecified LDAP Directory** (the default) for backwards compatibility in upgrade scenarios; otherwise select **Generic LDAP Directory**.	• **0-Unspecified LDAP Directory (Default)** • 3-Novell eDirectory • 5-Generic LDAP Directory • 8-Oracle Directory Server Enterprise Edition • 9-IBM Tivoli Directory Server • 10-Oracle Internet Directory • 11-Siemens DirX Directory Server	Yes	dword/Ø

Servers
`Extensions\SyncManager\ Syncs\%LDAP%\Servers: ServerN`
	Servers to try, in the format "*computer[:port]*" (one server per line), where "*computer*" is the server name, and "*port*" is assumed to be the default (636 for SSL, 389 for no SSL) if not specified.
	Example:
	`LDAP1.company.com`
	`LDAP2.company.com`
	`LDAP3.company.com:50389`
			No	string/Ø

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
User paths `Extensions\SyncManager\ Syncs\%LDAP%:UserPathN`	Enter the fully-qualified (distinguished) path to the location of the user account when LDAP Directory Search is not enabled. There can be unlimited paths to search. The extension searches these in order, looking for the user account. When using LDAP Directory Search, if the user account is not found in the given userpath, the extension searches down the directory tree from that path. **Example:** `OU=Users,DC=Domain,DC=com` You must specify at least one value for UserPath for this extension to work.		Yes	string/Ø
Use SSL `Extensions\SyncManager\ Syncs\%LDAP%:UseSSL`	Specifies to connect via SSL.	• 0-No (insecure) (default to port #389) • **1-Yes (default to port #636) (Default)**	Yes	dword/Ø

Administrative security

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Administrative group DN `Extensions\SyncManager\ Syncs\%LDAP%:AdminGroup`	Enter the Distinguished Name for the administrative group. This value is placed in the ACI. **Example:** `cn=configuration administrators, ou=groups, ou=topologymanagement, o=netscaperoot`		Yes	string/string
Security version `Extensions\SyncManager\ Syncs\%LDAP%: SecurityVersion`	Updates the ACI with a new :AdminGroup value when this value is higher than :SecurityUpgrade. Use this setting in conjunction with the Administrative Group DN setting to update of the security rights on the people container used by Logon Manager to store LDAP user credentials for deployed environments. To do this: 1. Provide the new Administrative Group DN to be used for the new security. This is the Distinguished Name of the security group. 2. Set the Security Version to one higher than its current value. 3. Deploy the settings. The next time Logon Manager performs a synchronization, it updates the security to the new Administrative Group DN and sets its current internal Security Version to the one configured. This forces the security update to run only once.  This setting is not meant to be used as a typical upgrade path for the security change. It is recommended that you use in-place mechanisms that exist for the various servers.		Yes	dword/int

User interface

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Descriptive name `Extensions\SyncManager\ Syncs\%LDAP%:DisplayName`	Specifies a logon dialog title to differentiate among multiple synchronizer extensions having the same name.  This entry is not required.		Yes	string/string
Show user path `Extensions\SyncManager\ Syncs\%LDAP%: ShowUserPath`	Use this setting to show/hide the User Path combo box control in the LDAP synchronizer authentication dialog. *This setting is new as of Logon Manager version 11.1.1.1.0.*	• 0-No • **1-Yes (Default)**	Yes	dword/Ø
Logon attempts `Extensions\SyncManager\ Syncs\%LDAP%: RetryLockCount`	Specifies the number of times to present the Synchronization dialog to the user. For example, if you set this value to 3, the Synchronization dialog displays a maximum of three times if the user submits incorrect credentials.	• Minimum value of 1 • **(Default-3)**	Yes	dword/int

Credential sharing

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Share credentials with authenticators `Extensions\SyncManager\ Syncs\%LDAP%: ShareCredsToAuths`	This setting eliminates double authentication by linking authenticator and synchronizer credentials. If authenticators and synchronizers use the same credentials, the duplicate credentials are used without requiring the user to reenter them. Enter a comma-separated list of authenticators with which to share the credentials, for example *WinAuth*, *MSAuth*.  To locate other authenticator names, see the name listed in the registry for that authenticator (located under `HKLM\Software\Passlogix\AUI`).		Yes	string/Ø

LDAP Special Purpose Synchronization Settings

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType

Naming attribute string
`Extensions\ SyncManager\ Syncs\%LDAP%: UserPrepend`
	String to prepend to User Paths. This is required when the domain name for a user is in the form:
	`cn=%UserName%,ou=people,dc=computer;`
	instead of the form:
	`namingattribute=%UserName%,ou=people,dc=computer`
	(where namingattribute can be any string). If needed, set to cn.
	Typically, you must set this value to cn for Novell eDirectory.
	If you use UserPrepend, you must use User PathN and not use UserLocation.
			Yes	string/string

BIND timeout `Extensions\ SyncManager\ Syncs\%LDAP%:Timeout`	Enter the length of the timeout (in milliseconds) of the LDAP BIND call.	(Default depends on the operating system)	Yes	dword/int
BIND user DN `Extensions\ SyncManager\ Syncs\%LDAP%: BindUserName`	Specifies LDAP "browse only" account user DN. This must be in the format: `uid=%username%, ou=people, dc=%CompanyName%` (for example, `uid=jsmith, ou=people, dc=passlogix, dc=com`). You must enable anonymous binding on the directory for LDAP Directory Search functionality. If you do not enable anonymous binding, you must use this account to perform the directory search. The search is performed whether using "User Paths" or the "Alternate User ID location."		Yes	string/string
BIND user password `Extensions\ SyncManager\ Syncs\%LDAP%: BindUserPassword`	Specifies LDAP "browse only" account user password. You must enable anonymous binding on the directory for LDAP Directory Search functionality. If you do not enable anonymous binding, you must use this account to perform the directory search. The search is performed whether using "User Paths" or the "Alternate User ID location."		Yes	string.MaskedString

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Alternate user ID location `Extensions\ SyncManager\ Syncs\%LDAP%: UserLocation`	Specifies where to locate a user object when the user validates against an attribute other than the username. **Example:** If users authenticate with an employee ID # for logon (validation against the empid attribute) and the user object is in: • `ou=people,dc=computer,` set UserLocation to: • `empid=%user,ou=people,dc=computer` instead of to • `uid=user,ou=people,dc=computer.`  For Novell eDirectory, the Alternate User ID location should be: uid=%user,path to the object% If you use UserLocation, do not use UserPrepend or UserPaths.		Yes	string/string
Enable directory search for users `Extensions\ SyncManager\ Syncs\%LDAP%: LDAPBindSearch`	Enables or disables directory search for the user account. When the user account is not found in the given path, the extension will search for it from that location down the directory tree. The search is performed whether using "User Paths" or the "Alternate User ID location." If you enable this setting and have moved a user to a different OU in the LDAP directory since the last synchronization, the user will receive a prompt for credentials at the next logon.	• **0-No (Default)** • 1-Yes	Yes	dword/Ø

Roaming Profile Synchronization Extension

Roaming Profile is deprecated as of version 11.1.2 and is listed for upgrade scenarios only. Do not use this synchronizer for new configurations.

The Oracle Enterprise Single Sign-On Administrative Console uses the Roaming Profile synchronizer to support file system synchronization with roaming profiles. You can use the Roaming Profile synchronizer in deployments that meet the following conditions:

- Users are set up to use roaming profiles on the server.
- The "Delete Local Cache" setting has not been enabled for synchronization.
- You are using v1 Authentication.

If the above conditions exist, set up the roaming profile environment as follows:

1. Set Logon Manager to operate in a multi-sync environment, where one of the sync extensions installed is the roaming sync extension. A multi-sync environment is one in which at least two sync extensions are installed. For example, if you are using AD sync extension, you must install AD sync extension and Roaming profile extension.
2. The Roaming Profile Synchronizer extension must be first in the synchronizer configuration order. To set this order, expand **Global Agent Settings** > **Live** and click on Synchronization. In the Synchronizer order field, click the ellipsis "**...**" button. On the Synchronizers panel, make sure that the **Roam** setting is in the top position, and the other synchronizer type (for example, Active Directory) being used is second.
3. You do not need to change any other synchronizer settings when using Roaming Profiles.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Roaming Sync DLL location `Extensions\SyncManager\ Syncs\%ROAM%:Path`	Enter the path\filename of the roaming synchronizer extension.	**(Default-%INSTALLDIR% Plugin\ SyncMgr\ RoamExt\ RoamSyncExt.dll)**	No	string/filename

Custom Actions

The Custom Actions settings control the tasks (lists of commands) that should execute when specific Agent actions occur.

For each event, select the checkbox and click "**...**" to open the list dialog box for that event. Enter one command on each line; end each line by pressing **Enter**. Do not use any other delimiter characters. They run one at a time, sequentially.

Logon Manager will not respond until all of the tasks complete.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
After Agent starts `Shell\Tasks:StartupTaskN`	Command(s) that will run every time the background task starts (the Tray Icon appears).		Yes	string/Ø
Before each instance of the Agent executable starts `Shell\Tasks:PreTaskN`	Command(s) that will be run before each agent executable is started.  The intention of this option is to enable license checking before any part of the Agent is executed. The Agent will stop running if any of these tasks fails to set the registry value located at: HKEY_CURRENT_USER\Software\Passlogix\License\PreCheck:PreCheck to 1. Each task should reset this to 0 when starting.  Anything run in this way will impact performance of the Agent, as these tasks will run every time a new Agent process starts.		Yes	string/Ø
When logons are deleted `Shell\Tasks:DeletionTaskN`	Command(s) that will run every time a user deletes an application configuration.		Yes	string/Ø
When logons change (add, delete, copy, modify) `Shell\Tasks:RefreshTaskN`	Command(s) that will run every time a user modifies credentials and configurations.		Yes	string/Ø

Audit Logging

The Audit Logging settings let you specify the retry interval and size of the logging cache.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Cache limit `Extensions\EventManager:CacheLimit`	Maximum number of event log entries to be cached before old events are discarded.	**(Default-200)**	Yes	dword/int
Retry interval `Extensions\EventManager:Retry`	Interval (in minutes) between retries for all Event Logging extensions.  If you are using Reporting, you should set this value to zero (0).	**(Default-30)**	Yes	dword/int

Configuring the Windows Event Logging Server

To configure a Microsoft Windows XP or Microsoft Windows 7 server to receive Event Log messages:

- Install the Agent on that server.

  or

1. Copy SSOeventmessage.dll from an Agent installation to the server, preferably in the System32 directory.
2. Create the following registry keys under HKEY_LOCAL_MACHINE\System\CurrentControlSet\ Services\Eventlog\Application\v-GO SSO:

Name	EventMessageFile
Type	STRING
Value	Full path to the file SSOeventmessage.dll, including filename (recommended: %WinDir%\System32\SSOeventmessage.dll)

Name	TypesSupported
Type	DWORD
Value	7

Name	CategoryMessageFile
Type	STRING
Value	Full path to the file SSOeventmessage.dll, including filename (recommended: %WinDir%\System32\SSOeventmessage.dll)

Name	CategoryCount
Type	DWORD
Value	4

Reporting Server

The Reporting tool allows you to generate reports on user activities. Refer to the Logon Manager Reporting documentation for complete information on using this tool.

Default values, where applicable, are in **bold**.

Database

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Connection string `Reporting\Extensions\Database: ConnectionString`	Database connection string in the OLE DB format: `Provider=SQLOLEDB;Data Source=myServerName; Initial Catalog=myDatabaseName;Integrated Security=SSPI;Use Encryption for Data=True; Use Encryption for Data=True`		No	string/string
Stored procedure `Reporting\Extensions\Database: StoredProcedure`	The name of the stored procedure used to populate the database with events. When encoded events are sent to the database, the stored procedure is called to decode the XML file and store the events in the database.	**(Default-dbo.sp_ WriteEvents)**	No	string/string

Options

In order for Reporting to function properly, it is important that the following parameter values be set to zero (0):

- HKEY_LOCAL_MACHINE\SOFTWARE\Passlogix\Extensions\EventManager\ CacheLimit:DWORD = 0

  and

- HKEY_LOCAL_ MACHINE\SOFTWARE\Passlogix\Extensions\EventManager\Retry:DWORD = 0

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Batch size `Reporting:BatchSize`	Defines the group size of events to be sent to the database Stored Procedure in one batch. For example, if you have 1000 events in the Reporting Service cache and the Batch Size = 100, you will have 10 database Stored Procedure calls.	**(Default-100)**	Yes	dword/int

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Cache limit `Reporting:CacheLimit`	Maximum number of reporting events to cache before discarding old events. When this number is reached, the oldest events are discarded. For example, if the batch size is 100 and an end-user's system cannot connect to the reporting service, it will keep logging events. When it reaches 1000, the oldest events will be discarded. (Default is 4294967295, or 0xFFFFFFFF.)	**(Default-4294967295, or 0xFFFFFFFF)**	Yes	dword/int
Retry interval `Reporting:RetryInterval`	Specifies the timeout (in minutes) between sequential operations of the Reporting Service Cache offloading events to the database. An interval is necessary to reduce database connection load.  You must restart the ESSO Reporting Service for your changes to take effect.	**(Default-30)**	Yes	dword/int

Windows Event Viewer

The Windows Event Viewer settings enable event logging on a remote server. Specify which events should be logged. You can also change the default path to the Windows Event logging extension and Windows event message components, and you can modify the retry interval of the logging cache.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Windows event logging server `Extensions\EventManager\WindowsEvent:EventServer`	Specifies the server name for the Windows Event Logging extension (do not provide leading "\\" characters). If you do not specify a server, logging is performed on the local workstation. The server should have a trusted relationship with the user's account and the user's workstation, depending on access rights and restrictions.		Yes	string/string
Retry interval `Extensions\EventManager\WindowsEvent:Retry`	Specifies the interval (in minutes) between retries for the Windows Event Logging extension.	**(Default-30)**	Yes	dword/int

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Events to log `Extensions\EventManager\ WindowsEvent:Filter`	Event logging filter delineating which events (of those logged by the root Filter setting) to log to the Windows Event Logging extension. Click the ellipsis "**...**" button to open the "Events to log" window, which presents a checklist of events for you to select.	• **(Default-0)** • 4-Credential Edit • 8-Credential Delete • 10-Credential Copy • 20-Credential Add • 100-Provisioning • 200-Startup/Shutdown • 400-Help • 800-Settings Change • 1000-Reauthentication • 10000-Sync User Information • 20000-Logon Field: System Username • 40000-Logon Field: System Domain • 80000-Logon Field: Third Field • 100000-Logon Field: Username • 200000-Logon Field: Fourth Field • 800000-Application Password Change • 1000000-Primary Logon Method Change • 4000000-Backup/Restore • 40000000-Event Types: Info	Yes	dword/Ø

Event Logging: Filter Options

Select the events you want to log, then click **OK**. The table below groups the filters by function.

Default values, where applicable, are in **bold**.

You must select Event Types Info to enable Event Logging.

Type	Name
Changes to user data (Credential)	Credential Add
	Credential Copy
	Credential Delete
	Credential Edit
Agent controls used (Feature)	Help
	Reauthentication
	Settings Change
	Startup / Shutdown
Credential data supplied (Logon)	Logon Field: Fourth Field
	Logon Field: System Domain
	Logon Field: System Username
	Logon Field: Third Field
	Logon Field: Username
	Sync User Information
Agent actions and changes (Application)	Primary Logon Method Change
	Backup/Restore
	Application Password Change
Event Types	Event Types Info (must be selected to enable Event Logging)

To display this dialog box, select the **Filter** option and click the ellipsis **...** button on any of the following settings panels:

- Event Logging (general)
- XML File (for local storage)
- Windows Event logging (advanced).

Syslog Server

The **Syslog** settings control how the Agent records program events.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Destination host `Extensions\EventManager\ Syslog:RemoteAddress`	Specifies the hostname to send messages to, using either a hostname or dotted IP v4 address. Use 0.0.0.0 to disable sending to Syslog-Daemon, or use 255.255.255.255 to send to any daemon that is set up to receive broadcast messages. It must be on your local network as broadcast does not reach beyond a router.	**(Default-localhost)**	No	string/string
Destination port `Extensions\EventManager\ Syslog:RemotePort`	Specifies the destination port for syslog messages using a number.	**(Default-1468)**	Yes	dword/int
Protocol for sending messages `Extensions\EventManager\ Syslog:UseTCP`	Specifies whether to send messages via TCP or UDP protocol. Note that the UDP protocol is connectionless, so it is impossible to tell whether the Syslog Daemon is reachable at the specified hostname and port. If the UseTCP parameter is set to "Use UDP," the Syslog Extension returns S_OK on both success and failure. If it is necessary to make the Syslog Extension return the correct state, enable TCP in the Syslog Daemon and set this parameter to "Use TCP."	• 0-Use UDP • **1-Use TCP (Default)**	Yes	dword/Ø
Retry interval `Extensions\EventManager\ Syslog:Retry`	Specifies the interval (in minutes) between retries for the Syslog extension.	**(Default-30)**	Yes	dword/int

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Events to log `Extensions\EventManager\ Syslog:Filter`	Event Logging filter delineating which events (of those logged by the root Filter setting) to log to the Syslog extension. Click the ellipsis "**...**" button to see a list of events to log.	• **(Default-0)** • 4-Credential Edit • 8-Credential Delete • 10-Credential Copy • 20-Credential Add • 100-Provisioning • 200-Startup/Shutdown • 400-Help • 800-Settings Change • 1000-Reauthentication • 10000-Sync User Information • 20000-Logon Field: System Username • 40000-Logon Field: System Domain • 80000-Logon Field: Third Field • 100000-Logon Field: Username • 200000-Logon Field: Fourth Field • 800000-Application Password Change • 1000000-Primary Logon Method Change • 4000000-Backup/Restore • 40000000-Event Types: Info	Yes	dword/Ø

XML File Event Logging

The XML File Event Logging settings let you specify which events should be logged locally. You can also change the default path to the local logging extension, and you can modify the retry interval of the logging cache.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Retry interval `Extensions\EventManager\LocalStorage:Retry`	Specifies the interval (in minutes) between retries for the Local (XML) File Logging extension.	**(Default-30)**	Yes	dword/int
Events to log `Extensions\EventManager\LocalStorage:Filter`	Event Logging filter delineating which events (of those logged by the root Filter setting) to log to the Local (XML) File Logging extension. Click the ellipsis "**...**" button to see a list of events to log.	• **(Default-0)** • 4-Credential Edit • 8-Credential Delete • 10-Credential Copy • 20-Credential Add • 100-Provisioning • 200-Startup/Shutdown • 400-Help • 800-Settings Change • 1000-Reauthentication • 10000-Sync User Information • 20000-Logon Field: System Username • 40000-Logon Field: System Domain • 80000-Logon Field: Third Field • 100000-Logon Field: Username • 200000-Logon Field: Fourth Field • 800000-Application Password Change • 1000000-Primary Logon Method Change • 4000000-Backup/Restore • 40000000-Event Types: Info	Yes	dword/Ø

Database Event Logging

Use the Database Event Logging menu to specify the server instance and table name where you want to send log data, as well as the fields to write to the database.

In addition to the fields, users must specify the server instance and table name. These are previously defined in the Database Setting and should not be required for Database Fields. If the database and table name are not specified for each field, events will not be written to the database.

The XML File Event Logging settings let you specify which events should be logged locally. You can also change the default path to the local logging extension, and you can modify the retry interval of the logging cache.

Default values, where applicable, are in **bold**.

You must specify the database instance and table name in the Database Fields in order for events to be written to the database.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Servers `Extensions\EventManager\ Database\Servers:ServerN`	Click the ellipsis "**...**" button to open a window in which to enter Database servers. Enter one server name per line, using the OLE DB format: `"Provider=sqloledb; Data Source=myServerName; Initial Catalog=myDatabaseName; User Id=myUsername; Password=myPassword; Use Encryption for Data=True"`		No	string/Ø
Default server `Extensions\EventManager\ Database:Default Server`	If no other server is specified, the server to which the database log will be written. (OLE DB connection string)	**(Default-Server1)**	No	string/string
Default table `Extensions\EventManager\ Database:Default Table`	If no other table is specified, the table to which the database log will be written.		Yes	string/string
Retry interval `Extensions\EventManager\ Database:Retry`	Interval (in minutes) between retries for the Database extension.	**(Default-30)**	Yes	dword/int

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Events to log `Extensions\EventManager\ Database:Filter`	Event Logging filter delineating which events (of those logged by the root Filter setting) to log to the Database extension. Click the ellipsis "**...**" button to see a list of events to log.	• **(Default-0)** • 4-Credential Edit • 8-Credential Delete • 10-Credential Copy • 20-Credential Add • 100-Provisioning • 200-Startup/Shutdown • 400-Help • 800-Settings Change • 1000-Reauthentication • 10000-Sync User Information • 20000-Logon Field: System Username • 40000-Logon Field: System Domain • 80000-Logon Field: Third Field • 100000-Logon Field: Username • 200000-Logon Field: Fourth Field • 800000-Application Password Change • 1000000-Primary Logon Method Change • 4000000-Backup/Restore • 40000000-Event Types: Info	Yes	dword/Ø

Event Fields

The Event Fields screen lists the data assigned to each field in the event log. The fields are mapped to the log information as specified in the table below.

You can select which events to include in your log by checking the box next to the desired field(s). Fields 9 and 10 have no pre-assignment. Assign categories to these fields by checking their boxes and entering the name of the desired field next to the check box. Refer to the "Events to log" list on the Database screen for the available event names.

Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
AppName `Extensions\EventManager\ Database\EventFields:AppName`	The name of the application of the event log.	**(Default-AppName)**	Yes	string/string
Category `Extensions\EventManager\ Database\EventFields:Category`	The category of the event.	**(Default-Category)**	Yes	string/string
Type `Extensions\EventManager\ Database\EventFields:Type`	The specific type of event.	**(Default-Type)**	Yes	string/string
TimeStamp `Extensions\EventManager\ Database\EventFields:TimeStamp`	The time of the event.	**(Default-TimeStamp)**	Yes	string/string
Field1 `Extensions\EventManager\ Database\EventFields:Field1`	EventType	**(Default-Event type)**	Yes	string/string
Field2 `Extensions\EventManager\ Database\EventFields:Field2`	UserID	**(Default-User ID)**	Yes	string/string
Field3 `Extensions\EventManager\ Database\EventFields:Field3`	ThirdField	**(Default-Third field)**	Yes	string/string

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Field4 `Extensions\EventManager\Database\EventFields:Field4`	FourthField	**(Default-Fourth field)**	Yes	string/string
Field5 `Extensions\EventManager\Database\EventFields:Field5`	WindowsUser	**(Default-Windows user)**	Yes	string/string
Field6 `Extensions\EventManager\Database\EventFields:Field6`	Domain	**(Default-Domain)**	Yes	string/string
Field7 `Extensions\EventManager\Database\EventFields:Field7`	ComputerName	**(Default-Computer name)**	Yes	string/string
Field8 `Extensions\EventManager\Database\EventFields:Field8`	SSOSyncUser	**(Default-SSO synchronization user)**	Yes	string/string
Field9 `Extensions\EventManager\Database\EventFields:Field9`	Customizable for your needs.	**Open**	Yes	string/string
Field10 `Extensions\EventManager\Database\EventFields:Field10`	Customizable for your needs.	**Open**	Yes	string/string

Kiosk Manager

Use the Kiosk Manager settings to configure sessions in a kiosk environment.

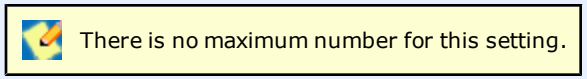
When using Kiosk Manager, you must disable response to hidden or minimized windows in User Experience settings.

Default values, where applicable, are in **bold**.

Session termination

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Allow administrator to close Kiosk Manager SM\Agent: AdministrativeClose	Specifies whether an administrator has the ability to close Kiosk Manager. With this setting enabled, only a user with administrator credentials can close the Agent.	• 0-No • **1-Yes (Default)**	Yes	dword
Number of times to process termination SM\Agent: TerminationIteration	Enter the number of times that Kiosk Manager should process the termination of an application. This setting instructs the termination process to loop a certain number of times or until it is done (whichever comes first). This allows Kiosk Manager to react to an application if it displays multiple screens during the termination process.	**(Default-1)**	Yes	dword/int
Timeout for locked session SM\Agent:ExpireTerm	Enter the length of time (in seconds) of inactivity after which Kiosk Manager should close a suspended/locked session.	**(Default-600 ([15 minutes])**	Yes	dword/int

Multisession configuration

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Maximum number of sessions SM\Agent: MaxSessions	Specifies the maximum number of sessions allowed at one time. A setting of zero will be interpreted as one session.  SM\Agent:MaxSessions	**(Default-1)**	Yes	dword/int
Track memory consumption SM\Agent: TrackMemoryConsumption	Specifies the level of memory usage at which Kiosk Manager should automatically close sessions. When system memory use has reached the percentage set by this value, Kiosk Manager automatically closes the oldest user sessions.	• Minimum-0 (disabled) • Maximum-100 • **(Default-90)**	Yes	dword/int

Cached credentials

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Use cached credentials SM\Agent: UseCachedCredentials	Specifies whether to use cached credentials. If this setting is enabled, at logon the Agent displays a list of cached credentials for users to choose from. If this setting is disabled, the Agent does not display the list, and users must enter a user name at logon. Enabling cached credentials improves performance. When using Universal Authentication Manager as the primary logon method, you cannot use cached credentials (that is, select *No* for this setting). For a full discussion about configuring and deploying Universal Authentication Manager, see the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide* and the *Universal Authentication Manager Administrator's Guide*.	• **0-No (Default)** • 1-Yes	Yes	dword
Storage path SM\Agent: CachedCredentialsStoragePath	Specifies the default folder to store the cached credentials. The default is an empty string. If this value is empty, the default folder is: C:\Documents and Settings\<Kiosk User>\Local Settings\ Application Data\ Passlogix\ SessionData\ Kiosk Manager User.	**(Default-An empty string)**	Yes	string
Expiration date SM\Agent: CachedCredentialExpiration	Specifies the number of days to retain cached credentials. Zero indicates that this feature is disabled.	**(Default-30)**	Yes	dword/int

Strong authentication options

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Lock session on smart card removal `AUI\SCauth: LockSMOnRemoval`	Specifies whether to lock a session when the session owner removes the smart card from its reader. If set to not lock, the session remains open after smart card removal. This setting is useful in a scenario where employees must display their smart cards at all times, and therefore cannot leave them in a reader.	• 0-No • **1-Yes (Default)**	Yes	dword
Lock session on read-only smart card removal `AUI\ROSCauth: LockSMOnRemoval`	Specifies whether to lock a session when the session owner removes the read-only smart card from its reader. If set to not lock, the session remains open after read-only smart card removal. This setting is useful in a scenario where employees must display their read-only smart cards at all times, and therefore cannot leave them in a reader.	• 0-No • **1-Yes (Default)**	Yes	dword
Lock session on ESSO-UAM token removal `AUI\SCauth:LockSMOnRemoval`	Specifies whether to lock a session when the session owner removes a Universal Authentication Manager logon token from its reader (or taps out, in the case of passive proximity tokens). If set to not lock, the session remains open after token removal. This setting is useful in a scenario where employees must display their tokens at all times, and therefore cannot leave them in a reader.  Any value other than zero (0) will result in token events being forwarded to Kiosk Manager. Whatever setting you select here will apply to all Universal Authentication Manager authenticators.	• 0-No • **1-Yes (Default)**	Yes	dword
Pre-populate on startup `SM\Agent:Prepopulate`	Specifies whether to run a pre-populate step at startup. If an authenticator requires this step and Authentication Manager is not installed, this setting enables Kiosk Manager to perform the required pre-population, eliminating the need for the synchronization manager to reauthenticate.  When using Universal Authentication Manager as the primary logon method, you must pre-populate on startup (that is, select *Always* for this setting). For a full discussion about configuring and deploying Universal Authentication Manager, see the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide* and the *Universal Authentication Manager Administrator's Guide*.	• **0-On device-in event (Default)** • 1-Always • 2-Never	Yes	dword
Monitor for device events `SM\Agent:DeviceMonitoring`	Specifies whether Kiosk Manager should actively monitor for device insertion and removal events.  For integration with Universal Authentication Manager, you must select "Always" for this setting.	• 0-Never • **1-Only when Access Manager is installed (Default)** • 2-Always	Yes	dword

Audit logging

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Event log name SM\Agent:EventLogName	Enter the name of the Windows event log for Kiosk Manager events.	**(Default-Application)**	Yes	string
Event log machine name SM\Agent:EventLogMachine	Enter the name of the local machine to log Kiosk Manager events.		No	string

Kiosk Manager User Interface

The User Interface settings control the appearance and interaction of Kiosk Manager with end-users.

Default values, where applicable, are in **bold**.

Options

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Allow computer restart SM\Agent:AllowRestart	Specifies whether the restart computer option is enabled in the Kiosk Manager Desktop Manager. You can also choose to allow only an administrator to have privileges to restart the computer by selecting **Administrator must supply password**. If the Kiosk account does not have sufficient privileges, restarting might still be disabled.	• **0-No (Default)** • 1-Yes • 2-Administrator must supply password	Yes	dword
Allow computer shutdown SM\Agent:AllowShutdown	Specifies whether the shutdown computer option is enabled in the Kiosk Manager Desktop Manager. You can also choose to allow only an administrator to have privileges to shut down the computer by selecting **Administrator must supply password**. If the Kiosk account does not have sufficient privileges, shutting down might still be disabled.	• **0-No (Default)** • 1-Yes • 2-Administrator must supply password	Yes	dword
Show confirmation message when restarting kiosk SM\Agent:ConfirmRestart	Specifies whether to prompt the user with a confirmation message after choosing to restart the kiosk.	• **0-No (Default)** • 1-Yes	Yes	dword
Show confirmation message when shutting down kiosk SM\Agent:ConfirmShutdown	Specifies whether to prompt the user with a confirmation message after choosing to shut down the kiosk.	• **0-No (Default)** • 1-Yes	Yes	dword
Lock session when screen saver times out SM\Agent:LockOnScreenSaver	Specifies whether to lock a session after the screen saver timeout occurs. A blank value has the same effect as setting the value to "No." Specifies whether Kiosk Manager should lock a session when the screen saver timeout occurs. If you set this value to **No** (default value) or do not specify a setting, Kiosk Manager does not lock the session after the screen saver timeout occurs if device detection is used to control the session. If you set this value to **Yes**, Kiosk Manager locks the session.	• **0-No (Default)** • 1-Yes	Yes	dword
Timeout for authentication prompt SM\Agent:AuthTerm	Enter the length of time (in seconds) after which the synchronization/authentication dialog closes (due to inactivity).	**(Default-600 [15 minutes])**	Yes	dword/int

Status window

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Show desktop status window SM\Agent:DisplayDesktopStatus	Specifies whether to show the optional window that displays the current session owner.	• **0-No (Default)** • 1-Yes	Yes	dword
X coordinate SM\Agent:DesktopStatusX	Enter the X coordinate (horizontal location) for the status window. Negative values are represented by large positive numbers in the registry. For example: -1 = 4294967295 and -2 = 4294967294.	**(Default-0)**	Yes	dword/int
Y coordinate SM\Agent:DesktopStatusY	Enter the Y coordinate (vertical location) for the status window. Negative values are represented by large positive numbers in the registry. For example: -1 = 4294967295 and -2 = 4294967294.	**(Default-0)**	Yes	dword/int

Transparent screen lock

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Use transparent lock SM\Agent:TransparentLock	Specifies whether to enable the transparent screen lock. Specifies whether to enable the transparent screen lock. The transparent screen lock provides the ability to lock the desktop inputs (keyboard and mouse) in view mode. For example, a monitoring application can be viewed without starting a session. When there are multiple sessions running, the last active session displays when transparent screen lock engages.	• **0-No (Default)** • 1-Yes, but only for active session • 2-Yes	Yes	dword
Delay period SM\Agent:TransparentLockTime	Specifies the number of seconds to wait for mouse and keyboard inactivity before showing the desktop. You must enable the **Use transparent lock** setting above in order to use this feature.	**(5-Default)**	Yes	dword/int
Ignore delay period if authentication is canceled SM\Agent: TransparentDisplayAfterCancel	Specifies whether transparency should take effect immediately after canceling an authenticator or synchronizer dialog. You must enable the **Use transparent lock** setting above in order to use this feature.	• **0-No (The desktop displays when the inactivity timer expires.) (Default)** • 1-Yes (The desktop displays instantly.)	Yes	dword
Only recognize Ctrl-Alt-Del SM\Agent: TransparentOnlyRecognizeCAD	Specifies whether the Agent should recognize only Ctrl-Alt-Del and authenticators that support "device-in" to display the Desktop Manager.	• **0-No (Any keyboard or mouse activity results in displaying the Desktop Manager.) (Default)** • 1-Yes (The Agent ignores all keyboard or mouse activities. Only Ctrl-Alt-Del and authenticators that support "device-in" will be recognized to display the Desktop Manager.)	Yes	dword

Setting the Kiosk Manager Background Image

Use this panel to place a background image, such as your company logo, on the Kiosk Manager Desktop Manager.

To configure the administrative settings for the Desktop Manager background image:

1. Open the Oracle Enterprise Single Sign-On Administrative Console.
2. Navigate to **Global Agent Settings > Live > Kiosk Manager > User Interface > Background Image**.

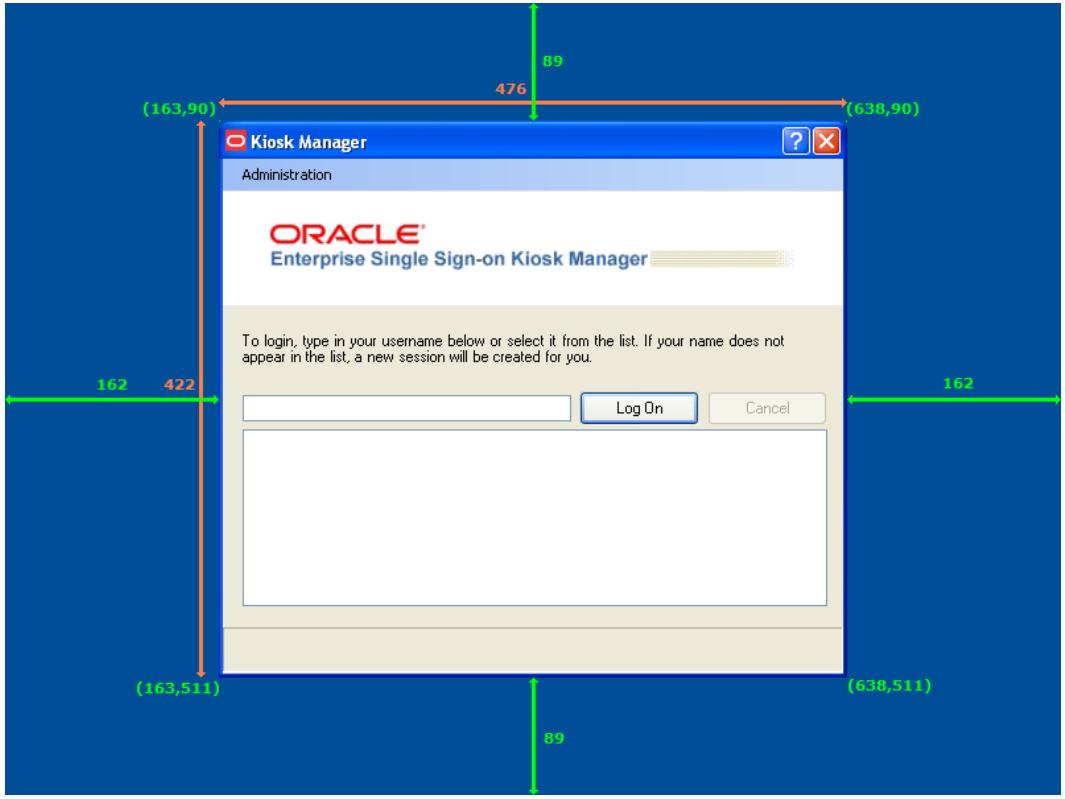
Default values, where applicable, are in **bold**.

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Location of image file `SM\Agent\Desktop: LogoPath`	Fully-qualified path and filename of the image file. Enter the fully-qualified path, including the filename, to the image file. Click the ellipsis "**...**" button to locate the file.		Yes	string/filename
X coordinate `SM\Agent\Desktop: LogoX`	Enter the X coordinate (horizontal location) for the image.  Negative values are represented by large positive numbers in the registry. For example: -1 = 4294967295 and -2 = 4294967294.	**(Default-0)**	Yes	dword/int
Y coordinate `SM\Agent\Desktop: LogoY`	Enter the Y coordinate (vertical location) for the image.  Negative values are represented by large positive numbers in the registry. For example: -1 = 4294967295 and -2 = 4294967294.	**(Default-0)**	Yes	dword/int

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Width SM\Agent\Desktop: LogoWidth	Enter the width of the image (in pixels).	**(Default-300)**	Yes	dword/int
Height SM\Agent\Desktop: LogoHeight	Enter the height of the image (in pixels).	**(Default-300)**	Yes	dword/int
Placement behavior SM\Agent\Desktop: LogoMode	Specifies how to handle the image with respect to its coordinates and dimensions.	• **0-Normal (Place image in upper left corner of coordinates and clip if larger than specified height and width) (Default)** • 1-Auto (Place image in upper left corner of coordinates) • 2-Center (Center image within coordinates and clip if larger than specified height and width) • 3-Stretch (Stretch or shrink image to fit within specified coordinates) • 4-Maximize (Stretch image to full screen size)	Yes	dword

Example on an 800x600 display

This screen shot illustrates the horizontal and vertical dimension of the Desktop Manager logon dialog and the location of it on the screen.



Replacing the Logo Banner

The ability to modify the Oracle Kiosk Manager logo banner on the Desktop Manager logon dialog is available through a manual step. To replace that logo you must:

1. Create a "branding" folder in the directory that SMAgent.exe is installed to, for example `C:\Program Files\Passlogix\SM\branding`.
2. Place the customized logo banner in the branding folder with the name "banner.gif".
3. The customized banner appears the next time you start Kiosk Manager.

Adding a Customized Message to the Kiosk Manager Desktop

Use this panel to upload a message around the Kiosk Manager Desktop Manager, for example, a HIPAA compliance reminder. This message will be displayed when the Desktop Manager is active.

Some relevant sizes:

Desktop Manager Logon Window Size

- Width = 476 Pixels
- Height = 404 Pixels

Desktop Manager Logon Window Origin

- XOrigin = (ScreenWidth – 476)/2
- YOrigin = (ScreenHeight – 404)/2

Desktop Manager Logon Window Extent (Lower right corner)

- XExtent= XOrigin+476-1
- YExtent= YOrigin+404-1

Example on an 800x600 display:

- Desktop Manager Logon Window is:
- Width: 476 Pixels x Height: 404 Pixels.
- On an 800x600 display, this appears at coordinates 161, 97.

Default values, where applicable, are in **bold**.

Message

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Message text `SM\Agent\Desktop: MOTDText`	Enter a message to display on Desktop Manager. This message appears when the user unlocks a new session.		Yes	string/string

Font

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Name SM\Agent\Desktop: MOTDFontName	Specifies the Message Text font. Select a font from the drop-down list.		Yes	string/font
Size SM\Agent\Desktop: MOTDFontSize	Specifies the Message Text font size.	**(Default-0)**	Yes	dword/int
Style SM\Agent\Desktop: MOTDFontStyle	Specifies the Message Text font style.	• **0-Regular (Default)** • 1-Bold • 2-Italic	Yes	dword

Color

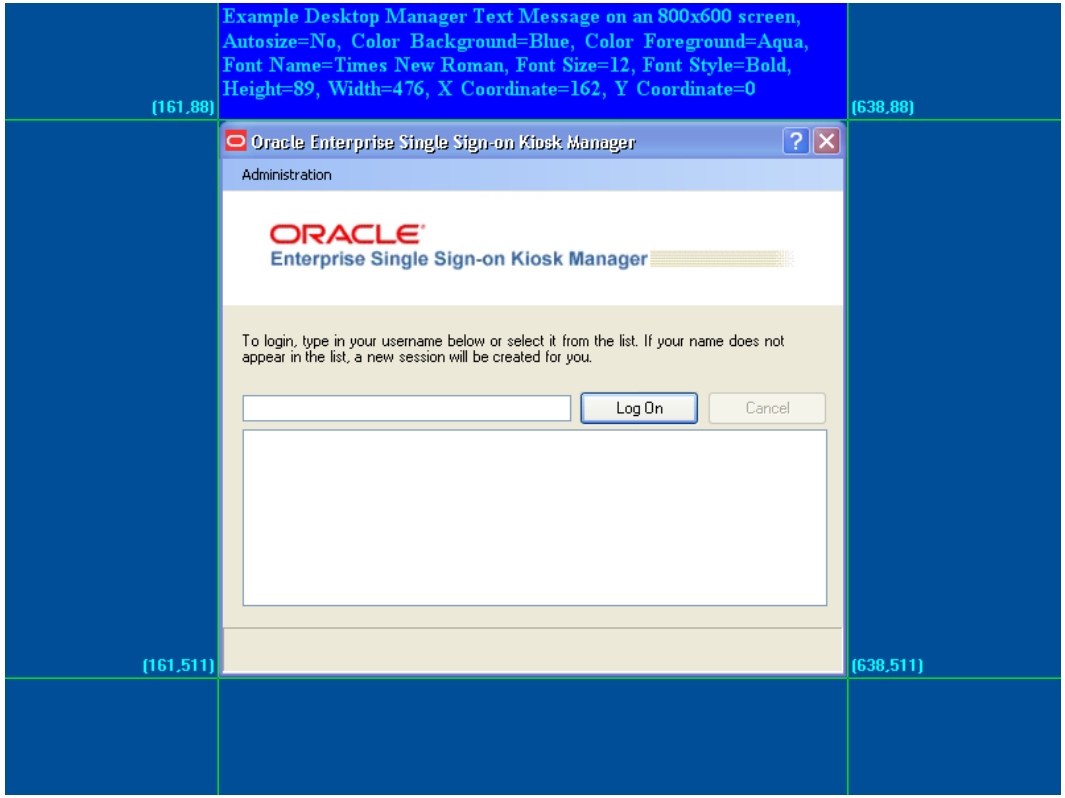
Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Background SM\Agent\Desktop: MOTDBackColor	Click the ellipsis "**...**" button to select the background color for the Message Text.		Yes	string/color
Foreground SM\Agent\Desktop: MOTDForeColor	Click the ellipsis "**...**" button to select the foreground color for the Message Text.		Yes	string/color

Placement

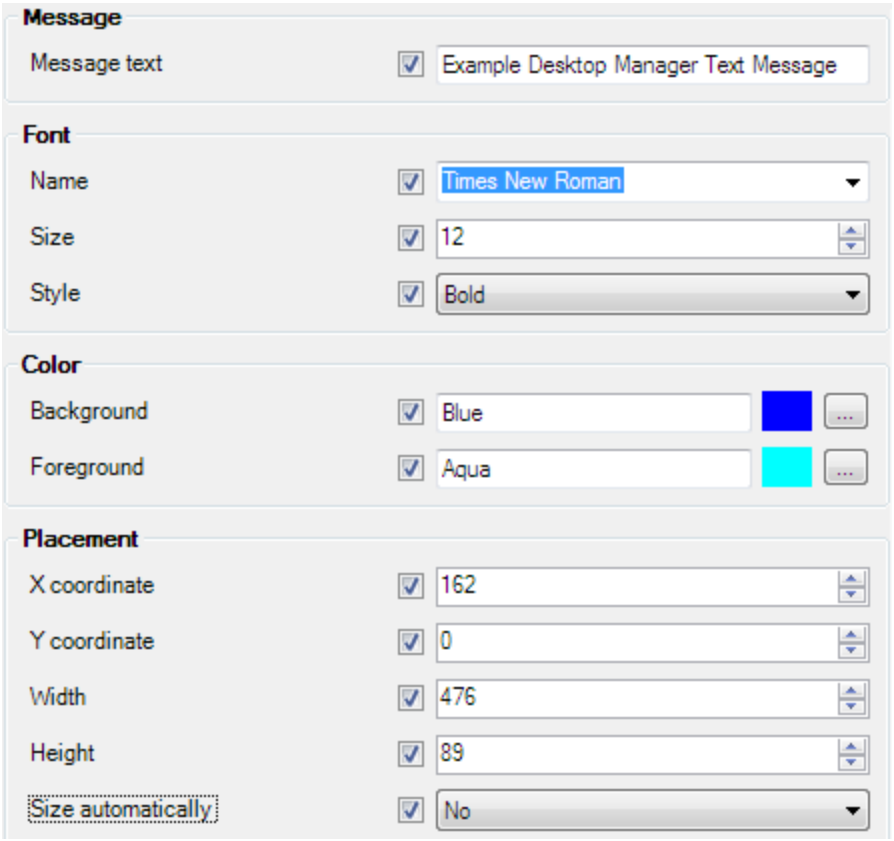
Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
X coordinate SM\Agent\Desktop: MOTDX	Enter the X coordinate for the Message Text, positioned relative to the Status image on the Kiosk Manager Desktop screen. A negative value places the message to the left of the Status image.  Negative values are represented by large positive numbers in the registry. For example: -1 = 4294967295 and -2 = 4294967294.	**(Default-0)**	Yes	dword/int
Y coordinate SM\Agent\Desktop: MOTDY	Enter the Y coordinate for the Message Text, positioned relative to the Status image on the Kiosk Manager Desktop screen. A negative value places the message above the Status image.  Negative values are represented by large positive numbers in the registry. For example: -1 = 4294967295 and -2 = 4294967294.	**(Default-0)**	Yes	dword/int
Width SM\Agent\Desktop: MOTDWidth	Specifies the width of the Message Text (in pixels).	**(Default-300)**	Yes	dword/int
Height SM\Agent\Desktop: MOTDHeight	Specifies the height of the Message Text (in pixels).	**(Default-300)**	Yes	dword/int
Size automatically SM\Agent\Desktop: MOTDAutoSize	Specifies whether to auto-size the Message Text to fit the available area.	• **0-No (Default)** • 1-Yes	Yes	dword

Example on an 800x600 display

The screen shot below illustrates an example of a text message. This text message displays the values used to customize the text message as seen in this screen shot.



The screen below displays the actual values used to produce the text message as seen above.



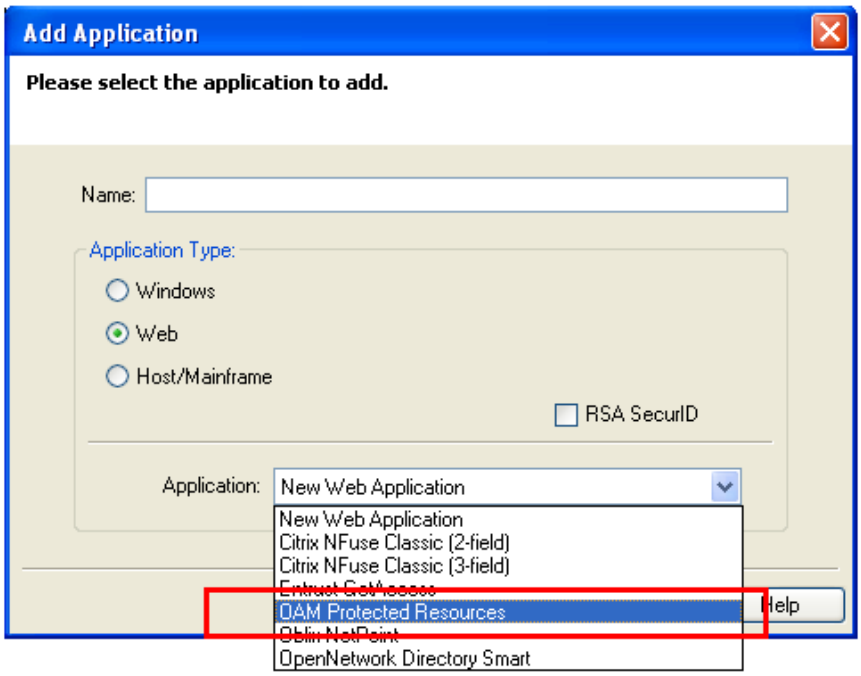
Oracle Access Manager Support

Logon Manager provides transparent single sign-on capability to Oracle Access Management Access Manager-protected Web applications by securely authenticating to Access Manager via one or more Access Manager endpoints using SSL, obtaining the Access Manager authentication cookie, and transparently injecting it into the current Web browser session. This 100%-seamless integration completely eliminates the visibility of the logon process to Access Manager-protected Web applications, allowing for instant application availability without compromising security.

> Logon Manager ships with a pre-configured template for Access Manager. You must publish this template to the repository and propagate it to Access Manager-enabled Logon Manager client machines to use this feature.
>
> Integration with Access Manager is only possible when using the Embedded Credential Collector; the Distributed Credential Collector is not supported.

To enable this capability, you must:

1. Install and configure at least one Access Manager endpoint within your Access Manager deployment.
2. Install the "OAM Support" component of Logon Manager on end-user machines as described in the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide*.
3. Publish the OAM Protected Resources template to the repository. This template is included in the Administrative Console installation.
   a. Launch the Administrative Console.
   b. Right-click on the **Applications** node and select **New Web App**.
   c. Select **OAM Protected Resources** from the dropdown list of available applications.



d. Click **Finish**. The OAM Protected Resources application is now listed under the Applications node. There is no need to modify the URLs or logon fields; the template is configured for immediate use.

4. Configure Logon Manager to connect to the desired Access Manager endpoint(s) as described in Access Manager settings. (If more than one endpoint is specified, Logon Manager will attempt connecting to each specified endpoint, in the order entered in the Administrative Console, until a connection is established.)

> You must enter the endpoint URL(s) in the following format only:
>
> `https://<server>:<port>/oam/services/rest/11.1.2.0.0/sso/token/`
>
> where *<server>* is the full network address of the target endpoint and *<port>* is the number of the port on which the endpoint is listening for connections.

5. Provide Logon Manager with the end-user's Access Manager credentials using one of the following methods:
   - Remotely provisioning the credentials via Provisioning Gateway;
   - Configuring Logon Manager to use the user's repository credentials to authenticate to Access Manager;
   - Capturing the Access Manager credentials from the end-user during Logon Manager's first attempt to authenticate to Access Manager. (The captured credentials are stored in Logon Manager's secure cache once captured; the user will not be prompted to provide them again unless the secure cache is erased.) .

The following session attributes are pushed by Logon Manager into the session:

Attribute	Description
$session.attr.client.firewallenabled	Specifies whether a firewall is active on the client machine.
$session.attr.client.antivirusenabled	Specifies whether an anti-virus application is active on the client machine.
$session.attr.client.fingerprint	Specifies a unique identifier for the client machine.

After being positively authenticated to Access Manager, the session cookie remains in the Web browser's cache as long as Logon Manager is running and is periodically updated according to an update interval configured by the administrator, or upon expiration. When Logon Manager shuts down, the cookie is removed from the Web browser's cache.

> Logon Manager does not support password change for Access Manager credentials. If the user's Access Manager password expires, it must be reset via other means. If Logon Manager cannot authenticate with the currently supplied credentials to Access Manager, it will prompt the user to enter valid credentials.

You can change the message that prompts the user to enter Access Manager credentials using the **Authentication dialog message** setting in the **User interface** settings group, or leave the default message. If you choose to change it, select a message that will be meaningful to the user in your particular environment.]

Access Manager

Connection information

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Endpoints `Extensions\AccessManager\ WebHO\OAM:EndpointN`	A list of URLs that the Agent should use as Access Manager token endpoints. Check the box and click the ellipsis (**...**) button, then enter the URLs in the Endpoints window, one per line. Click **OK** when you have entered all the URLs you want the Agent to try. The Agent attempts to use the URLs in the order that you enter them; if the first URL fails, the Agent proceeds to the second one, and so on.		Yes	string/Ø
Use sync credentials to authenticate to OAM `Extensions\AccessManager\ WebHO\OAM:CredUseSync`	Allows Logon Manager to use the synchronizer's credentials to automatically create an account for an Access Manager template.  This feature supports only Active Directory, AD LDS (ADAM), and LDAP synchronizers. You cannot enable this setting with the Active Directory synchronizer unless you select "Use Active Directory server account only" for the "Credentials to use" setting. You cannot enable this setting with the AD LDS (ADAM) synchronizer unless you select "ADAM server account" for the "Credentials to use" setting.	**0-No (Default)** 1-Yes	Yes	dword/Ø

Behavior

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Perform OAM server certificate validation `Extensions\AccessManager\WebHO\OAM:PerformCertificateValidation`	Specifies whether the Agent should check the Access Manager server certificate when connecting to the endpoint. If the certificate is invalid, no connection is established.	**0-No. The Agent ignores the server certificate (less secure) (Default)** 1-Yes. The Agent checks the server certificate.	Yes	dword/Ø
OAM credentials request retry interval `Extensions\AccessManager\WebHO\OAM:CredRetryInterval`	Specifies the interval (in seconds) after which the Agent will ask for Access Manager credentials again if the user cancels an Access Manager credentials request. Values can range from zero (the Agent request credentials immediately) to 300 (the Agent requests credentials after five minutes).	Any integer between 0 and 300. **Default is 30.**	Yes	dword/int
OAM session renewal interval `Extensions\AccessManager\WebHO\OAM:SessionRenewalInterval`	Specifies the interval (in minutes) that the Agent uses for polling an Access Manager endpoint in order to detect whether the Access Manager session token is valid. The minimum value is one minute, which means that the Agent checks the Access Manager session token validity at one minute intervals.  Greater interval values create less network traffic but lower sensitivity to Access Manager session token expiry.	Any positive integer. **Default is 1.**	Yes	dword/int

User interface

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Authentication dialog message `Extensions\AccessManager\WebHO\OAM:AuthWindowSubtitle`	The message that Logon Manager displays to prompt the user for Access Manager credentials. This message should be meaningful to the user in your environment and approximately the same length as the default message.	**Default:** Logon Manager needs your credentials for Access Manager. If you do not know these credentials, contact your administrator.	Yes	string/string

Integrating with Password Reset

The Universal Authentication Manager Challenge Questions logon method enables the use of Password Reset to store questions and answers enrolled by the user through Universal Authentication Manager (existing Password Reset enrollments cannot be used by Universal Authentication Manager) providing portability for the enrollment data. Synchronization with Password Reset also enables control over the questions that are available to different users and groups, as well as individual customization of the weight of each question, as allowed by Password Reset.

In order to configure Universal Authentication Manager to integrate with Password Reset, you must do the following:

1. Install the Challenge Questions logon method if it has not already been installed. For instructions, see the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide*.
2. Install and configure Password Reset as described in the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide.*
3. Obtain the Password Reset synchronization URL.
   The URL will have the following format:
   `https://<hostname>:<port>/vGOSelfServiceReset/WebServices/Synchronization.asmx`
4. Configure Universal Authentication Manager to synchronize with Password Reset as described in the next section.
5. Configure the challenge questions as desired within Password Reset. For more information, see Password Reset documentation.
6. Instruct users to select their questions and provide answers by enrolling the Challenge Questions logon method via Universal Authentication Manager; existing Password Reset enrollments cannot be used by Universal Authentication Manager.

To configure Universal Authentication Manager to leverage Password Reset questions and answers for authentication, do the following:

1. Launch the Oracle Enterprise Single Sign-On Suite Plus Administrative Console.
2. Under the **Global Agent Settings** node navigate to the settings set you want to modify, or load it if necessary.
3. Navigate to the **Password Reset** node and select it.
4. In the right-hand pane, select the check-box next to the **Password Reset Synchronization URL** option and enter the appropriate URL in the following format:

   `https://<hostname>:<port>/vGOSelfServiceReset/WebServices/Synchronization.asmx`

   
   If you have not configured your Password Reset deployment for SSL connectivity, replace https:// with http://.

5. Export your settings to a .REG file for distribution to end-user machines:
   a. From the **File** menu, select **Export**.
   b. In the dialog that appears, click **HKLM Registry Format (.REG)**.

c. In the "Save" dialog that appears, navigate to a desired target location, enter a descriptive file name and click **Save**.

6. Distribute the .REG file to end-user machines and merge it into each machine's Windows registry.

Password Reset Settings

Display Name/ Registry Path	Description	Options/ Default	Overridable	RegType/ DataType
Password Reset synchronization URL `SSPR\Sync:SyncURL`	Specifies the URL to the Password Reset synchronization server. This setting is required when using the Challenge Questions feature of Universal Authentication Manager in Enterprise Client Mode. Once configured, Password Reset interview questions will be leveraged during the Challenge Questions enrollment process, and Challenge Questions enrolled in Universal Authentication Manager will be valid enrollments for Password Reset. **Example** `https://server/vGOSelfServiceReset/WebServices/Synchronization.asmx`  If you have not configured your Password Reset deployment for SSL connectivity, replace https:// with http://.		No	string/string

See the *Oracle Enterprise Single Sign-On Suite Plus Administrator's Guide* for a full discussion of using this setting.

Using the Configuration Test Manager

This tool enables you to test your Global Agent Settings to ensure that they are properly configured.

You can only run these tests on an Active Directory repository.

To access this tool, either:

- Select **Test Global Agent Settings** from the **Tools** menu. If you access the test manager from this location, you are required to pick a set of Global Agent Settings to test.

  or

- Right-click on a set of Global Agent Settings and click **Test**. If you access the test manager from this location, the tests will run on that set of Global Agent Settings only.

All changes made in the test manager are reflected in the Oracle Enterprise Single Sign-On Administrative Console. Upon launching the test manager, a dialog box appears, informing you that any changes you make in the test manager will be reflected in the Oracle Enterprise Single Sign-On Administrative Console. You can dismiss this message by selecting **Do not show this notice again**.

Before using this tool, in addition to reading this help information, Oracle strongly recommends that you read the *Deploying Logon Manager with <Repository>* and the *Configuring the Logon Manager Agent* Best Practice Guides, located at:

http://download.oracle.com/docs/cd/E21040_01/index.htm.

These guides describe best practices and recommended procedures for deploying Logon Manager on your repository and configuring the Logon Manager Agent with Global Agent Settings and administrative overrides.

There are three stages in the testing process:

1. **Select Categories.** Select the test categories to determine which tests to run.
2. **Enter Parameters.** Enter all data needed to run the tests.
3. **Execution and Results.** Run tests, view results, and make changes if necessary.

Categories

When you open this tool, the **Categories** stage is selected in the left pane. The **Test Categories** pane lists the categories and individual tests.

The **Test Categories** list is interactive - you can check or uncheck desired categories, and expand or collapse the categories to view the individual tests. You can click on any category or test and a description appears in the right pane.

By default, all categories are selected. Individual tests cannot be selected.

As long as at least one test category is selected, the **Next** button and the **Parameters** stage are enabled. The **Execution and Results** stage is unavailable until all of the data parameters are satisfied.

The **Synchronization** test category contains the following individual tests, which verify synchronization settings.

Test Name	Test Description
Server Validation	Verifies that the specified server is a valid server name and is accessible. If an IP address is entered as the server name, or the server cannot be accessed, this test will fail.
SSL Configuration	Checks the server to determine if SSL is enabled. If SSL is not enabled on the server, and SSL is enabled in the Oracle Enterprise Single Sign-On Administrative Console, this test will fail.
Schema Extension	Verifies that the schema is extended. If the schema is not extended, this test will fail.
User Object Schema Extension	Verifies that the schema is extended under the Active Directory User Object. If the schema is not extended, this test will fail. This test applies to Active Directory synchronizers only.
Configuration Object Retrieval	Verifies that the Configuration Object Base Location path is valid and that the configuration objects can be retrieved with the test credentials. If the path is not valid or the test credentials supplied do not have permission to retrieve configuration objects, this test will fail.
Credential Location Access Rights	Verifies the proper access rights are assigned to the credential location on the server to upload, retrieve, and delete credentials. If the supplied test credentials do not have permission to perform any of these actions, this test will fail.

Ensure the **Synchronization** test category is selected and click **Next**, or click the **Parameters** stage from the left pane.

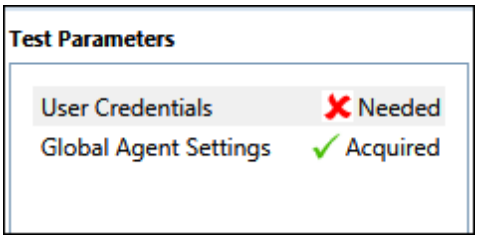
Parameters

The Parameters stage collects all the data necessary to run the tests. The data requested during this stage is dependant upon the test categories selected in the Categories stage.

The Execution & Results stage is unavailable until all of the data parameters are satisfied.

Test Parameters

The parameters are listed in the **Test Parameters** pane and are dynamic based upon the tests selected. Each parameter has a status icon of **Needed** or **Acquired** to visually indicate which parameters need attention. For example, if the User Credentials have not been acquired, and the Global Agent Settings have been acquired, the Test Parameter list will look like this:



Data

The data needed for each parameter is entered in the **Data** pane on the right.

You must input all needed data before running any tests. After all parameters are successfully acquired, the **Next** button and Execution & Results stage become available.

The **Next Parameter** button, located on the bottom of the **Data** pane, is available when there are multiple parameters. It enables you to quickly click through all the parameters.

It is important that you ensure that the quality of the data parameters entered is good. Just because data exists and a status is set to acquired, does not mean the data is correct.

As the data is entered, it is captured for the current session. You can either save or clear the data for future sessions:

- **Saving the data.** If you want to save the data for future sessions, ensure the **Save this value** check box located below the **Data** pane is checked.
- **Clearing the data.** If you want to clear the data for this and future sessions, click the **Clear All Data** button at the top of the **Data** pane. A message will appear asking if you are sure you want to do this. Confirming this action will clear all entered parameters, turning all of the parameter statuses to Needed. It will also disable the option to proceed to the Execution and Results stage.

After all data is entered, click **Next >**, or select the **Execution & Results** stage in the left pane.

After all data has been acquired, move onto the next stage.

Execution and Results

The Execution & Results stage is where you run the tests, view the results, and make changes if necessary.

The Execution & Results stage is unavailable until all of the data is entered during the Parameters stage.

Test Execution and Results

The Test Execution & Results pane lists all the tests to be run, in the order that they will be run. Once you click **Execute Tests**, the tests will run and once a test is in progress, and icon appears indicating the status of the testing. There are 5 possible statuses:

- **Passed.** The test has completed and passed.
- **Need info.** The test is paused to allow the user to enter prompted information.
- **Warning.** The test has paused, prompting the user with a warning.
- **Failed.** The test has failed. Information is provided explaining why the test failed. All testing stops when a single test fails.
- **In Progress.** Test is in progress.

After the tests have run, you can click through them and read the results and messages about each test in the Description pane.

Description

The Description pane provides a description of the test. As tests run, the lower portion of the Description pane will provide messages such as warnings, passed and failed situations, and fields to change information and continue testing.

The **Execute Tests** button begins the testing. When tests are running, the **Execute Tests** button toggles to **Stop Tests**, allowing you to cancel the testing if desired.

In this pane, you can interact with either Failed or Need Info tests results. You are presented with information and actions or fields you can make changes to and re-run the tests.

Clear All Data

If you want to clear the data for this test and future sessions, click the **Clear All Data** button at the top of the **Description** pane. A message will appear asking if you are sure you want to do this and provide two paths:

- Click **OK** to clear ALL parameters.
- Click **Cancel** to close the dialog box, and all data is retained.

If you click **OK** , and tests were previously run with results available in the right frame, the test results persist, but the **Execute Test** button is disabled.

After the tests have all passed, you can exit by closing the Test Manager from the X in the top right title bar. You may also use the **Clear All Data** button, navigate to the Categories or Parameters page and set things up to run different tests.

Deploying Logon Manager

The topics in this section describe the options for packaging, deploying, and managing Logon Manager in a networked environment:

- Microsoft Windows Installer (MSI) Package
- Deployment Options
- Administration and Management
- Storing User Credentials and Settings
- File-Based Backup/Restore

Deployment Options

This section describes using the default MSI package from the following perspectives:

- Performing an installation with the shipped MSI package
- Launching the MSI package from the command line
- Remote installation
- Editing the MSI package
- Adding logons and settings that you create with the Oracle Enterprise Single Sign-On Administrative Console to the MSI package
- Alternate tools and methods

Performing an Installation with the Shipped MSI Package

To perform an installation using the shipped MSI package, run the program setup from the network share and follow the prompts. Because each environment is different and each organization has different needs, Oracle recommends you perform a custom install and select the desired components.

Installing from the Command Line

The MSI package can be installed from the command line. To do this, run the setup program with the appropriate parameters. The components of the command line are the executable name, InstallShield parameters (for example, /qn for a quiet install), and the Logon Manager feature names.

/qn	The MSI package should install quietly (optional)
RUNVGO	Whether the Agent should be launched after the install: **YES** or **NO**
MDAC	Whether to install MDAC: **YES** or **NO**
ADDLOCAL "FeatureNames"	*FeatureNames* is a comma-delimited list of the Logon Manager features to install, see MSI Package Contents for a list of the acceptable list values.

Quoting is critical. There must be quotes around each option's value (following the equal (=) sign, and the MSI features list.

Example

Install (without seeing any visual signs) the core, the Windows authenticator, NO support for Microsoft Internet Explorer or hosts, and the Microsoft Active Directory synchronizer, and then start the Agent, as follows:

```
Msiexec /i ProductName.msi /qn RUNVGO="YES"
ADDLOCAL="Core,Authenticators,SLA,LogonMgr,SetupMgr,SyncMgr,AD_Sync,English_Pack"
```

Installing the MSI Package Remotely

To install Logon Manager to a computer remotely, verify that your system meets the following conditions:

- Windows Installer must be present on the remote computer
- The MSI package must be accessible to the remote computer

- The person performing the remote installation must have administrator access rights to the remote computer.

Editing the MSI Package

Some organizations want to distribute MSI packages without Oracle-supplied optional components or with additional components (for example, alternative authenticators). The Oracle Enterprise Single Sign-On Administrative Console includes a Custom MSI Generator that you can use to create custom MSIs to suit the needs of your enterprise.

Adding Console-Created Application Logons and Global Agent Settings

You can also use the Custom MSI Generator to create a modified Logon Manager installation package. The modified MSI package you create with this feature can include:

- Selected application logons from an entlist.ini file or from the current Oracle Enterprise Single Sign-On Administrative Console configuration.
- Agent settings from an administrative overrides (.ini) file or from the current Oracle Enterprise Single Sign-On Administrative Console configuration.

To do this use the Generate Customized MSI command on the Tools menu.

Use the Configuration Test Manager to verify that you have configured your Global Agent Settings correctly.

Using Other Deployment Tools

Logon Manager works with numerous deployment methods and tools, including (but not limited to):

- Manual installation (for example, from a CD-ROM or network share)
- Microsoft Windows Installer (MSI) service (local or remote installation)
- Network remote installation (for example, copy files and install registry entries remotely to a desktop)
- Microsoft SMS
- IBM Tivoli
- Attachmate NetWizard
- Intel LANDesk
- Novadigm Radia/EDM
- Novell ZENworks
- HP OpenView
- Seagate Desktop Management Suite
- McAfee ZAC Suite
- Veritas WinINSTALL

Microsoft Windows Installer (MSI) Package

Logon Manager ships as an MSI package, a standard format used by installers from Microsoft and other vendors. Many other installers can read MSI files. For information on the contents of the Logon Manager Setup MSI, see MSI Package Contents.

You might want to create an MSI package to meet special requirements, such as:

- Providing custom applications and Logon Manager Agent configurations
- Deactivating some options or components (for example, different authenticators) before end users install the Agent
- Adding options or components to accommodate a complex environment, for example, one using biometric security devices or having an unusual network topology.

To meet these needs, there are these options:

- Use a command-line installation.
- Customize the installer package using the Oracle Enterprise Single Sign-On Administrative Console Custom MSI Generator.
- Include logons and Global Agent Setting configurations that you created in Oracle Enterprise Single Sign-On Administrative Console in the installer.

  Use the Configuration Test Manager to verify that you have configured your Global Agent Settings correctly.

- Deploy using a third-party deployment tool.

Deploying the Agent with Anywhere

Anywhere provides a simple and flexible method for deploying configurations of Logon Manager, Authentication Manager, Provisioning Gateway, and Provisioning Gateway in any combination, all with little or no administrator involvement.

You can create as many configurations as necessary for members of your enterprise, and use Anywhere to take snapshots and compile complete deployment packages, which you then distribute to the appropriate users. Anywhere also simplifies the upgrade and rollback process, all with virtually no hands-on involvement on your part.

See the Anywhere section for complete instructions to configure and deploy Logon Managerusing the Anywhere component.

Using the MSI Generator

This tool enables you to create a custom .MSI file that to use for mass deployment to Logon Manager end-users.

To access this tool, select **Generate Customized MSI** from the **Tools** menu.

> Before using this tool, in addition to reading this help information, Oracle strongly recommends that you read the *Packaging Logon Manager for Mass Deployment* Best Practice Guide, located at: http://download.oracle.com/docs/cd/E21040_01/index.htm. This guide describes best practices and recommended procedures for creating a custom MSI file for deploying Logon Manager to end-users.

There are three stages in the .MSI generation process:

1. **Base MSI Selection.** Select a Base MSI file.
2. **Feature Selection.** Select the features to include in your custom MSI file.
3. **New MSI Generation.** Select the Global Agent Settings file to include, and an output file location.

Base MSI Selection

Upon opening this tool, the **Base MSI Selection** stage is selected in the left pane. All other stages are unavailable until the base MSI file is selected.

1. In **Path** field, click **Browse ...**, navigate to the MSI file, and click **Open**. If an invalid MSI file is selected, a message appears indicating that the MSI file failed to open.
2. Click **Next >**, or select the **Feature Selection** stage in the left pane.

Selecting MSI Features

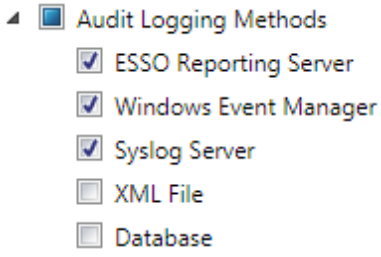
The Feature Selection stage becomes available after you select a valid MSI file. The features display in a tree structure.

Make your selections and click **Next >**, or select the **New MSI Generation** stage in the left pane.

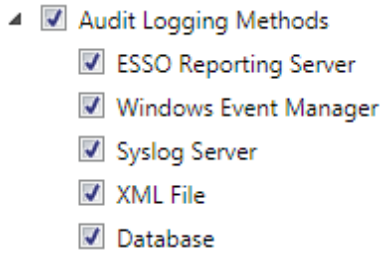
There are three possible states for the check boxes:

- **Unchecked.** A state of no check in the parent node indicates that no child nodes are checked. The reverse is also true – if no child nodes are checked, the parent node is unchecked.

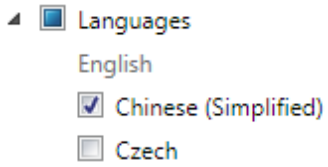
- **Partial Check.** If any (but not all) of the child nodes are checked, the parent reflects this with a partial check state. A partial check in a parent node indicates that at least one of the non-default child nodes is checked.



- **Checked.** If a parent is checked, all of its children are checked as well. The reverse is also true – if all of the children are checked, the parent is checked as well.



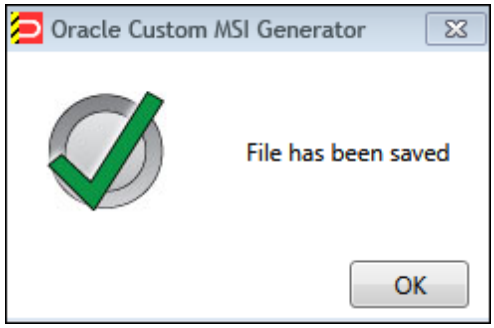
There might be some default items in the list that are required in the installer, and cannot be changed. An example of this is the **English** item in the **Languages** node in the Logon Manager MSI file. English is installed as the default language. Default items have no influence on the state of the checkboxes and are unavailable for selection.



Generating a New MSI

The New MSI Generation stage becomes available after you select a valid MSI file. In this stage you choose the Global Agent Settings and Output location for the MSI file.

1. If you want to include a Global Agent Settings file in the MSI file, select it from the **Global Agent Settings** drop-down box. You can leave the default selection of **<None>** if you do not want to include a Global Agent Settings file.
2. In the **Output MSI** field, click the **Browse (...)** button. Select a valid path and enter a **File Name** for the output MSI file. Click **Save**. If you enter an invalid path or name, a message appears indicating that the output MSI file name is invalid.
3. Click **Generate**. A message appears indicating that the file has been saved. Click **OK**.



If an error occurs, ensure that you have entered a valid path and file name.

Testing and Deploying to End Users

After you have tested and verified the MSI file fully, use a deployment tool (such as Microsoft Systems Management Server) to deploy Logon Manager enterprise-wide.

For in-depth discussion and best practices on testing the MSI file, refer to the *Packaging Logon Manager for Mass Deployment* Best Practice Guide, located at: http://download.oracle.com/docs/cd/E21040_01/index.htm.

Using Kiosk Manager

Kiosk Manager delivers a secure, easy to use and easy to administer solution that addresses the needs of traditional single sign-on in a kiosk environment. Kiosk Manager has a client-side agent that provides user identification to the kiosk by prompting users to log on with a Windows password or any supported primary authenticator. The Agent suspends or closes sessions and seamlessly shuts down all applications after a specified period of inactivity.

The following topics are covered in this section:

Using Kiosk Manager and the Oracle Enterprise Single Sign-On Administrative Console

The Oracle Enterprise Single Sign-On Administrative Console cannot run simultaneously with the Kiosk Manager Session Agent. If you launch the Session Agent while the Administrative Console is running, an error message displays saying, "Cannot run Kiosk Manager until Administrative Console is closed."

It is recommended that you do not use the Administrative Console on a workstation running Kiosk Manager.

Events and Actions

The following overview describes Kiosk Manager session functionality.

Types of Events

Kiosk Manager can be configured such that actions can be performed by any combination of the events below for all types of authenticators supported by Logon Manager:

- After Session Unlocked
- AM Device In
- AM Device Out
- AM Grace Period

- Authenticator Logon
- Authenticator Timeout
- Before Session Unlocked
- Cached Credential Session Start
- Session End
- Session Locked
- Session Start
- Timer Expired
- Transparent Screen Displayed
- Transparent Screen Hidden
- User Change

Events and Action Lists

Based upon the above events, Kiosk Manager can run a specified terminate list, launch a custom task (.NET application or script) through a run list, or specify a special action:

- **Terminate list**. A list of applications to be closed by Kiosk Manager on a specified event. (Previously known as black lists or applications to close on session end.)
- **Run list**. Either a .NET API to call or a script of command lines to be executed by Kiosk Manager on a specified event.
- **Special actions list**. Special action lists specify how to handle application windows, such as the positioning of the application and the order that this application has actions performed on it.

Configuring Events and Action Lists

These features are configured through the Logon Manager Administrative Console under **Kiosk Manager** > **Actions** and **Session States**:

- An **Action** tells Kiosk Manager to do something, such as call a .NET method or terminate a specific application.
- **Session States** are a list of events, authenticators, and security settings to associate with actions. For example, a defined Session State can instruct Kiosk Manager that when a session ends, perform this list of actions.

See the following sections for instructions on how to:

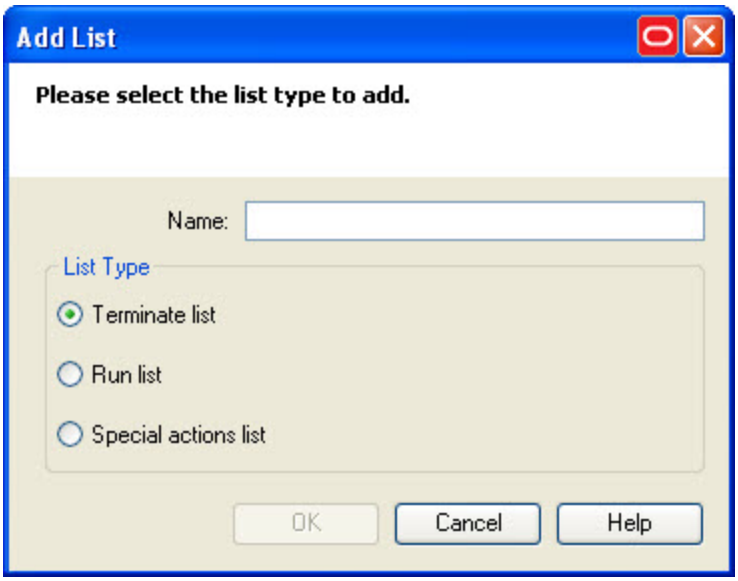
- Create an Action List
- Create a Session State

Creating an Action List

An action tells Kiosk Manager to do something, such as call a .NET method or terminate a specific application.

To create an action list:

1. Open the Oracle Enterprise Single Sign-On Administrative Console.
2. Expand the **Kiosk Manager** node.
3. Click **Actions**.
4. Click **Add** or right-click and select **New Action**.



5. Enter a **Name**, and then select the **List Type**. Click **OK** when complete. The three types of actions lists are:

   - Terminate lists
     Terminate lists are a list of applications to be closed by Kiosk Manager on session end.
   - Run lists
     Run lists are either a .Net API to call or a script of command lines to be executed by Kiosk Manager.
   - Special Actions lists
     Special Action lists specify how to handle application windows, such as the positioning of the application and the order that this application has actions performed on it.

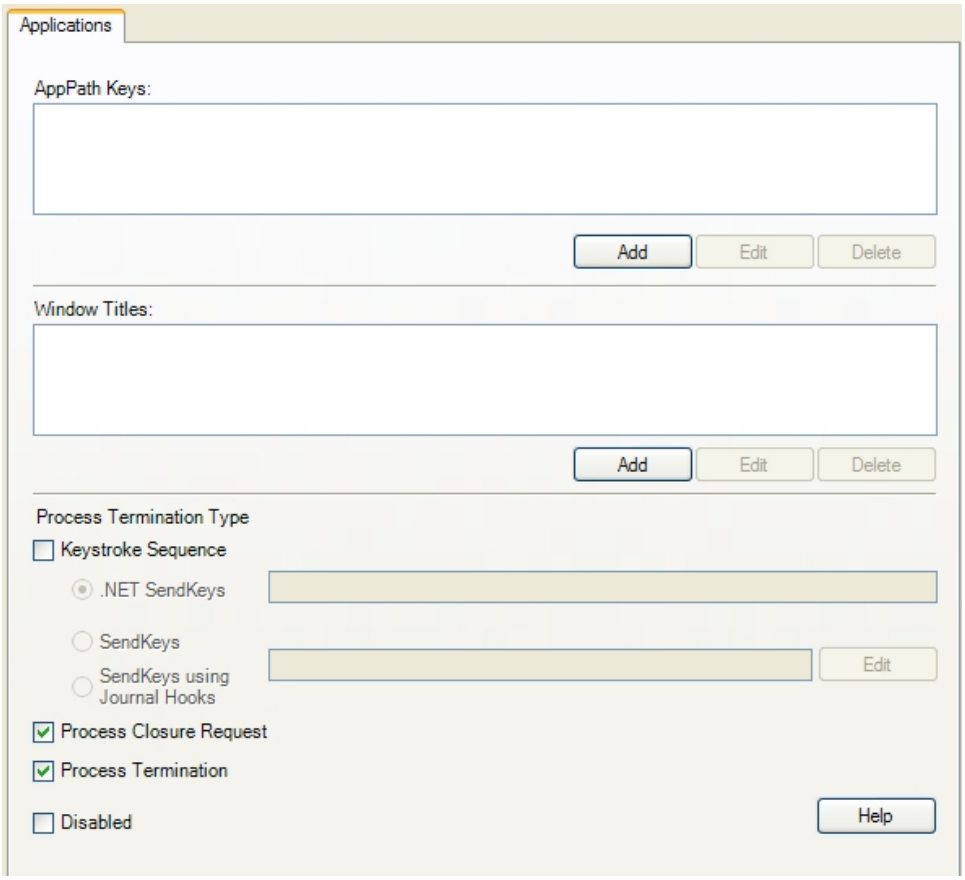
   For more information, refer to the specific list section for complete instructions on creating all lists.

Another way to create an action list is:

1. Expand the **Kiosk Manager** node.
2. Click **Session States**.
3. Select a Session State and click the **Actions** tab.
4. Click **Add**.

Creating and Using Terminate Lists

Terminate lists are used to specify applications to be closed by Kiosk Manager on session end.



To display this tab:

1. Expand the **Kiosk Manager** node and select **Actions**.
2. Click on any Terminate List.

Controls

AppPathKeys	The Windows registry key identifying an application associated with this logon to match against running processes. (Usually the application executable's name, such as Notepad.exe)
Window Titles	Text matched against logon window titles to identify logon requests.

Process Termination Type	Select the methods of termination for applications to be closed on session end:
	• **Keystroke Sequence**
	• **.NET SendKeys**
	• SendKeys: Configure fields by transmitting a keystroke series to the form. Click **Edit** to enter or change the series.
	• SendKeys using Journal Hook: Configure fields by transmitting a keystroke series to the form using Journal Hook. Click **Edit** to enter or change the series.
	  ○ Process closure requests
	  ○ Process termination
	  When using keystroke sequences to terminate an application, a visual flicker occurs on the end users screen. This flicker is a function of using sendkeys to terminate an application.

Disabled	Select this checkbox to disable this list. Disabling a list allows you to retain the settings in a list without deleting the original list. This way you can still refer to the settings and use them with other lists.

Configuring Kiosk Manager to Terminate an Application

1. Under the AppPath Keys box, click **Add**. The Process Path Key dialog box displays.
2. Enter a valid application key (usually the application executable's name, such as Notepad.exe). Click **OK**.
3. The application has been added to the list of applications to close on session end. Kiosk Manager will terminate these applications when a session ends.
4. Use the **Edit** and **Delete** buttons to modify or remove applications from this list.
5. In the Window Titles box, click **Add**. The Windows Title dialog box appears.
6. Enter a valid windows title. Click **OK**.

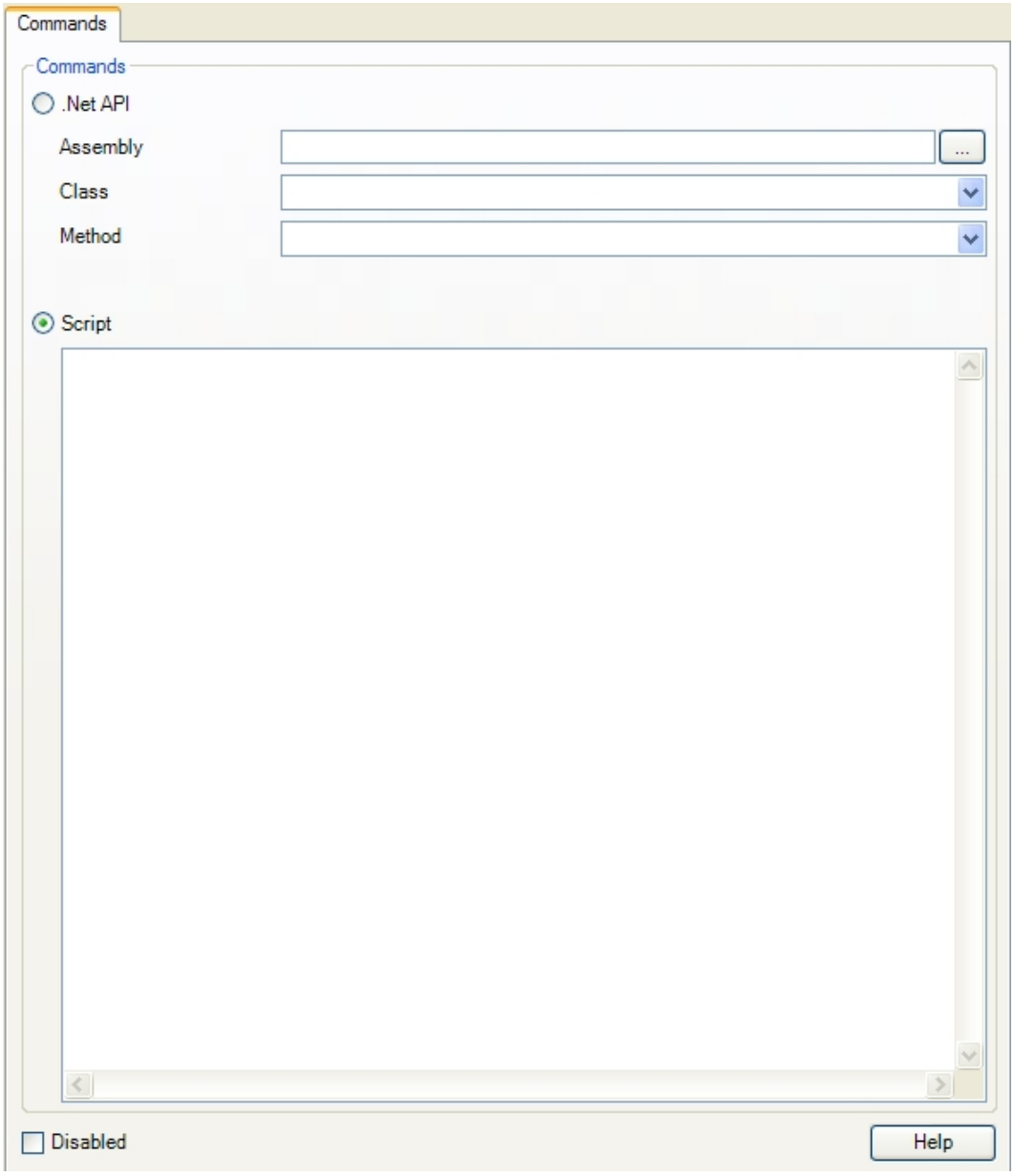
Specifying a Window Title for Matching

1. Enter (or edit) the exact Window Title.
2. Click **OK**.

Creating and Using Run Lists

Use this panel to define either a .NET API to call or a script of command lines to be executed by Kiosk Manager.

1. Expand the **Kiosk Manager** node and select **Actions**.
2. Select a Run list.



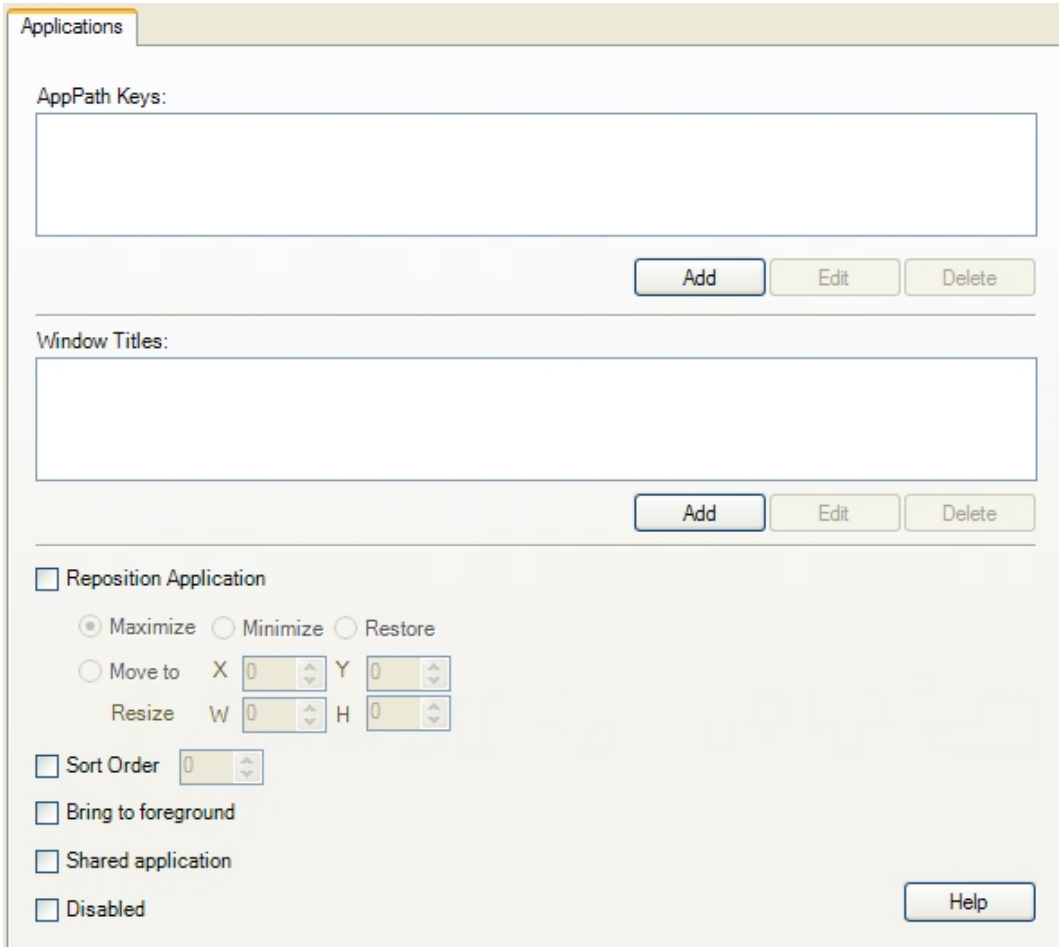
Controls

<table>
<tr><td rowspan="4">.NET API</td><td>Assembly</td><td>Click the ellipsis "..." button to locate the .NET assembly to use. The assembly loads.</td></tr>
<tr><td>Class</td><td>Select a .NET class using the drop-down box. The .NET classes listed will be those that are available in the selected assembly.</td></tr>
<tr><td>Method</td><td>Select a method to call using the drop-down box. The .NET methods listed will be those that are available in the selected class. The method will be limited to the following signature and will not take any parameters or return any values:
<code>void MethodName();</code>
Unlike the script, processing will not continue until the method returns.</td></tr>
<tr><td colspan="2">Click here to see a sample .NET API.
  .NET API calls are synchronous (Kiosk Manager will wait for the call to complete).</td></tr>
<tr><td>Script</td><td colspan="2">Enter a command line script for Kiosk Manager to execute. If this list contains multiple commands, each line starts without waiting for the previous task to terminate or checking the previous task's return code.
  Command line calls are asynchronous (run in parallel to other tasks including Kiosk Manager).</td></tr>
<tr><td>Disabled</td><td colspan="2">Select this checkbox to disable this list. Disabling a list allows you to retain the settings in a list without deleting the original list. This way you can still refer to the settings, and copy them to other lists, etc.</td></tr>
</table>

Creating and Using Special Actions Lists

Special action lists are used to specify how to handle application windows, such as the positioning of the application and the order that this application has these actions performed on it.

If an application window does not appear in a special actions list, it will be hidden.



To display this tab:

1. Expand the **Kiosk Manager** node and select **Actions**.
2. Click on any Special Actions List.

Controls

AppPathKeys	The Windows registry key identifying an application associated with this logon to match against running processes. (Usually the application executable's name, such as Notepad.exe.)
Window Titles	Text matched against logon window titles to identify logon requests.
Reposition Application	This setting and those below it allow you to specify the position of the application.The state of this checkbox determines if the actions listed below it will be applied to the application window. **Options:** • Maximize • Minimize • Restore • Move to. Enter the coordinates for the applications position. • Resize. Enter the width and height for the applications position.
Sort Order	This setting determines the order in which special actions are executed. This ensures that windows which are brought to the foreground can be in a specific order with a preferred window displayed on top when multiple windows are repositioned.
Bring to foreground	This setting ensures that the application window is always first in the application windows order.
Shared Application	Check this box to enable an application to be shared among user sessions. For example, if "Notepad.exe" is designated as a shared application, if user1 opens a document in notepad and then locks the session, notepad will be running when user2 starts a session. If user2 then closes notepad and locks their session, notepad will no longer be running when user1 logs back on.
Disabled	Select this checkbox to disable this list. Disabling a list allows you to retain the settings in a list without deleting the original list. This way you can still refer to the settings and use them with other lists.

Configuring an Application

1. Under the AppPath Keys box, click **Add**. The Process Path Key dialog box displays.
2. Enter a valid application key (usually the application executable's name, such as Notepad.exe). Click **OK**.
3. The application has been added to the list of applications to close on session end. Kiosk Manager will terminate these applications when a session ends.
4. Use the **Edit** and **Delete** buttons to modify or remove applications from this list.
5. In the Window Titles box, click **Add**. The Windows Title dialog box appears.
6. Enter a valid windows title. Click **OK**.

Specifying a Window Title for Matching

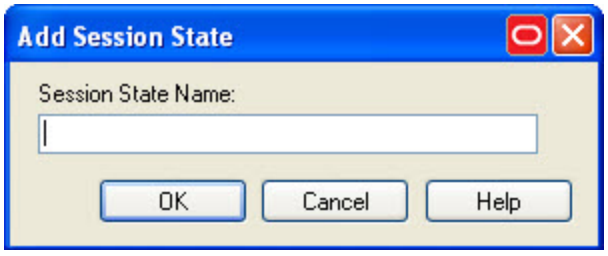
1. Enter (or edit) the exact Window Title.
2. Click **OK**.

Kiosk Manager Session States

This panel contains the list of existing Session States. Session States are a list of events to associate with an action; for example, a defined Session State tells Kiosk Manager that when a session ends, perform a specific list of actions.

Creating a Session State

1. Open the Oracle Enterprise Single Sign-On Administrative Console.
2. Expand the **Kiosk Manager** node.
3. Click **Session States**.
4. Click **Add** or right-click and select **New Session State**.



5. Type a **Session State Name** and click **OK**.
6. The new Session State is created. Each Session State has four tabs associated with it:

   - Events tab
   - Authenticators tab
   - Actions tab
   - Security tab

Copying a Session State

- Select a Session State.
- Right-click **Make Copy** to quickly make a copy of this Session State. To change the name, right-click the Session State in the left pane and click **Rename**. You can also perform a copy by right-clicking the Session State in the left pane and clicking **Copy**.

Deleting a Session State

1. Click **Delete** to delete a Session State. A confirmation message appears before the Session State is deleted.
2. Expand the **Kiosk Manager** node.
3. Right-click the Session State that you want to delete.
   - From the context menu, select **Delete**.

     or
   - From the context menu, select **Edit**.
   - Select **Delete**.

Selecting Session State Events

The Events tab contains a list of all the possible events that Kiosk Manager can respond to and the option to add custom events. Each listed event has a checkbox next to it that when checked indicates that the associated action lists should be executed when this event occurs. When a new Session State is created, **Session End** is checked by default.

To display this tab:

1. Expand the **Kiosk Manager** node.
2. Click **Session States**.

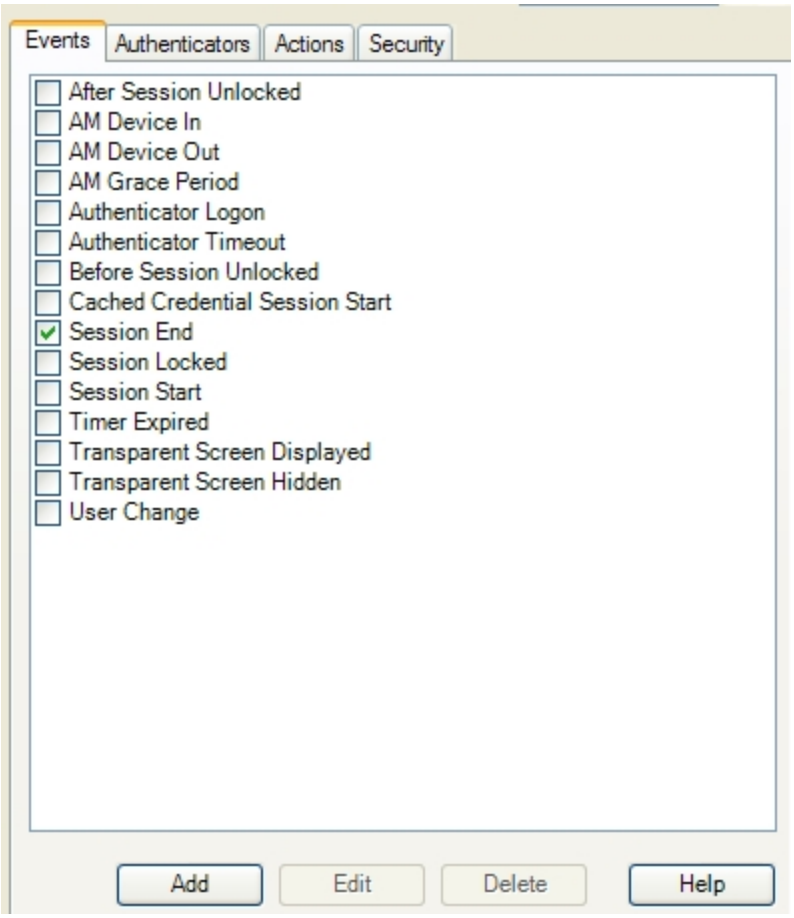
There are two ways to create events:

- Select the predefined events for this Session State.

  or

- Create your own custom events by clicking the **Add** button. Use the **Edit** button to edit the custom event name and the **Delete** button to delete a custom event.

  The following figure illustrates the pre-defined events available to you:



Selecting a Predefined Event

From the Events tab, select from:

- **After Session Unlocked**
  This event runs when the user unlocks their session after authentication has taken place. If an authentication is canceled, this event will not be triggered.
- **AM Device In**
  This event is triggered when the SSO device monitor is enabled and a monitored authenticator is detected (e.g., a smart card is inserted or a biometrics device is in range).
- **AM Device Out**
  This event is triggered when the SSO device monitor is enabled and a monitored authenticator is detected (e.g., a smart card is removed or a biometric goes out of range). This event will only be triggered when:
  - A session is open or locked
  - A "Device-In" event started the session
- **AM Grace Period**
  This event is triggered if an authenticator which uses a grace period function is being used and a user returns to an open session within the grace period.
- **Authenticator Logon**
  This event is triggered when an authenticator has accepted a logon. For example, the correct password for WinAuth or the correct PIN for smart card is entered.
- **Authenticator Timeout**
  This event is triggered when Logon Manager's internal timer has expired.
- **Before Session Unlocked**
  This event is triggered when a user unlocks their session but before authentication takes place.
- **Cached Credential Session Start**
  This event is triggered when a session is started and the user has cached credentials stored on the local computer.
- **Session End**
  This event is triggered when the session ends and the timer expires, or when another user starts a session.
- **Session Locked**
  This event is triggered when a user manually locks the session via the system tray.
- **Session Start**
  This event is triggered when a user starts a new session.
- **Time Expired**
  This event is triggered when the locked session timer has reached 00:00:00.
- **Transparent Screen Displayed**
  This event is triggered when the transparent lock initiates and the screen is visible to the user in locked mode.
- **Transparent Screen Hidden**
  This event is triggered when the transparent lock is ending.
- **User Change**
  This event is triggered when a user logs into Kiosk Manager. This event sets two properties

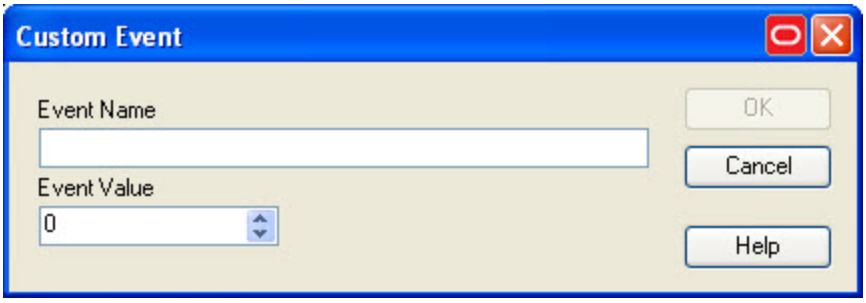
on the .NET object if they exist (If the properties do not exist, nothing happens):

- **UserName.** The sync user name.
- **DomainName**. The sync domain name.

Authentication Manager events run when the authenticator sends a message to Kiosk Manager indicating the event type.

Adding a Custom Event

To add a custom event, click the **Add** button on the **Events** tab. The Custom Event dialog appears:



1. Type an **Event Name**. This is the event name that displays.
2. Enter an **Event Value**. An external application generates the custom event, sending a message to the Kiosk Manager hidden window. The value is the custom value that the other application sends.
3. Click **OK**. The custom event is created.

Selecting a Session State Authenticator

The Authenticators tab contains a list of all the authenticators that Logon Manager supports as well as the option to add a custom authenticator. Each authenticator has a checkbox next to it that when checked indicates if the associated action lists should be executed when the selected events occur and the selected authenticator was used to authenticate the user.

When a new Session State is created, all authenticators are checked by default.

There are two ways to select authenticators:

- Create your own custom authenticator by clicking the **Add** button. Use the **Edit** button to edit the custom event authenticator and the **Delete** button to delete a custom authenticator.
- Select the pre-defined authenticator for this Session State. Available authenticator are:
  - Authentication Manager
  - Entrust
  - LDAP
  - LDAP v2
  - Proximity Card
  - Read-Only Smart Card
  - SecurID

- Smart Card
- Universal Authentication Manager

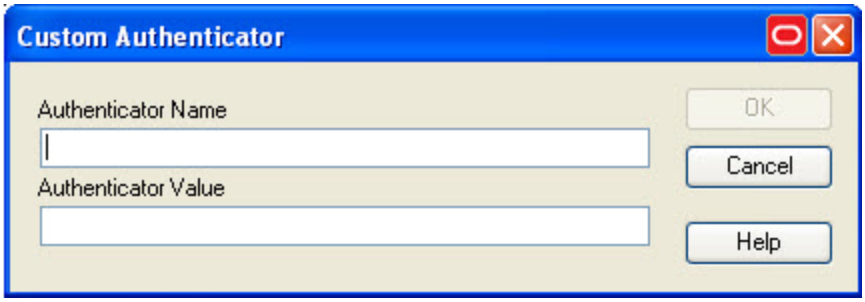
> Kiosk Manager does not support Windows Logon or Windows Logon v2.
>
> To configure Kiosk Manager to use the Universal Authentication Manager authenticator, you must set Kiosk Manager to broadcast/monitor for token events. To do this, set the following registry key to a value of 2 (Always):
>
> `HKEY_LOCAL_MACHINE\SOFTWARE\Passlogix\SM\Agent`

To display this tab:

1. Expand the **Kiosk Manager** node.
2. Click **Session States**.
3. Select a Session State and click the **Authenticators** tab.

Adding a Custom Authenticator

Custom authenticators allow you to filter events based on that authenticator. To add a custom authenticator, click the **Add** button on the Authenticators tab. This opens the Custom Authenticator dialog:



1. Enter an Authenticator Name. This is the authenticator name that displays.
2. Enter an Authenticator Value. The authenticator value is the name that the authenticator is known by within the code. This name comes from the authenticator itself. For example, the value for Windows Authenticator v2 is MSAuth and for Smart Card is SCAuth.
3. Click **OK**.

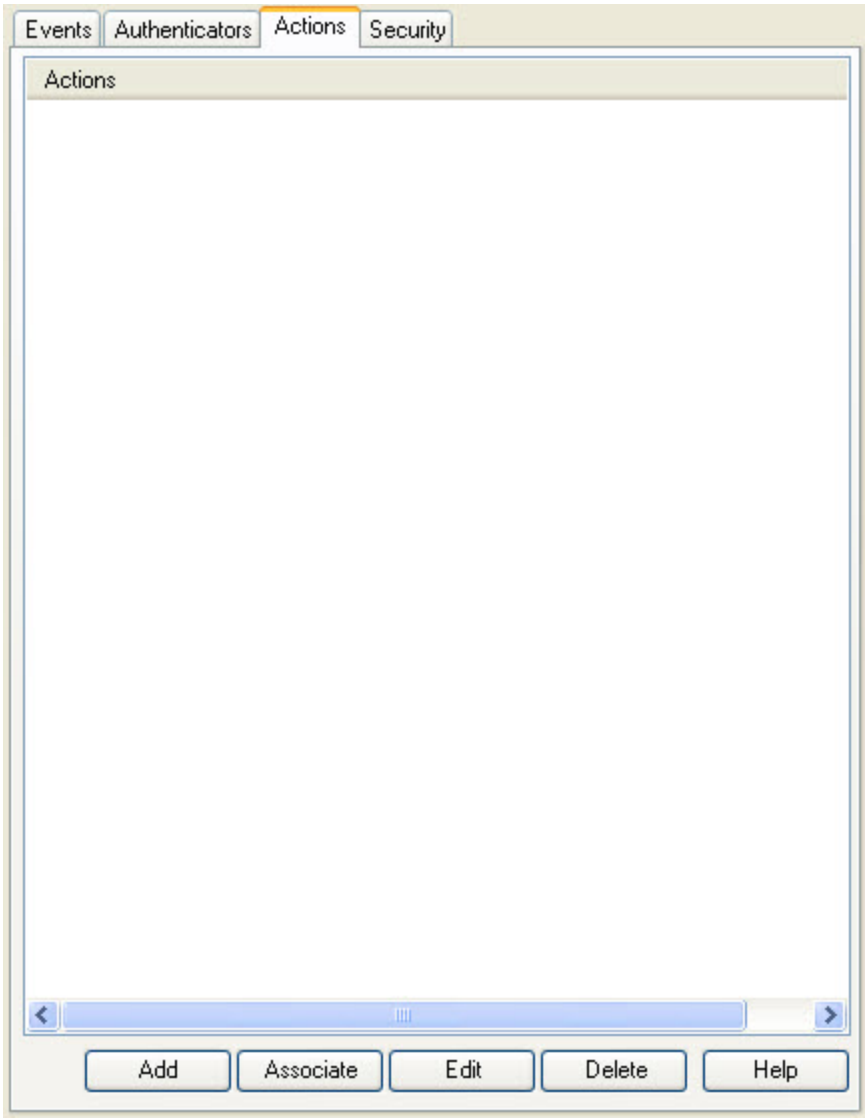
To display this dialog box:

1. Expand the **Kiosk Manager** node.
2. Click **Session States**.
3. Select a Session State and click the **Authenticators** tab.
4. Click **Remove**or **Edit**.

Using the Actions Tab to Add Session States

The Actions tab contains a list of all the actions associated with a specific Session State. This panel is empty for newly-created Session States. After you associate actions with the Session State, the actions appear in this panel.

Use this panel to create, associate, edit and delete actions.



To display this tab:

1. Expand the **Kiosk Manager** node.
2. Click **Session States**.
3. Select a Session State and click the **Actions** tab.

To use the Actions tab:

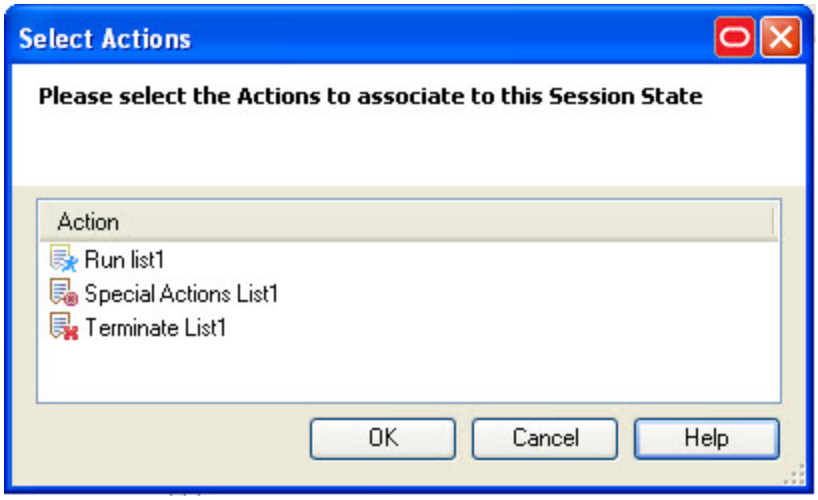
- To define a new action list, click **Add**. There are two types of action lists: Terminate lists and Run lists. A new action that you create from this panel is automatically added to this session

state.

- To associate a defined action with this Session State, click **Associate** and select an action from the list.
- To make changes to an action, highlight it and click **Edit**.
- To delete an action from a Session State, click **Delete**. This deletes the action only from the current Session State, not the actions list.

Associating Actions

Use the Select Actions dialog to select one or more actions to associate to this Session State.



Select the actions to add to this Session State (use **Ctrl+click**, or **Shift+click** to select multiple entries). Click **OK**.

If actions are associated with this Session State and you are adding new actions, you must reselect ALL actions; otherwise the previous list of actions will be replaced with the newly-selected actions.

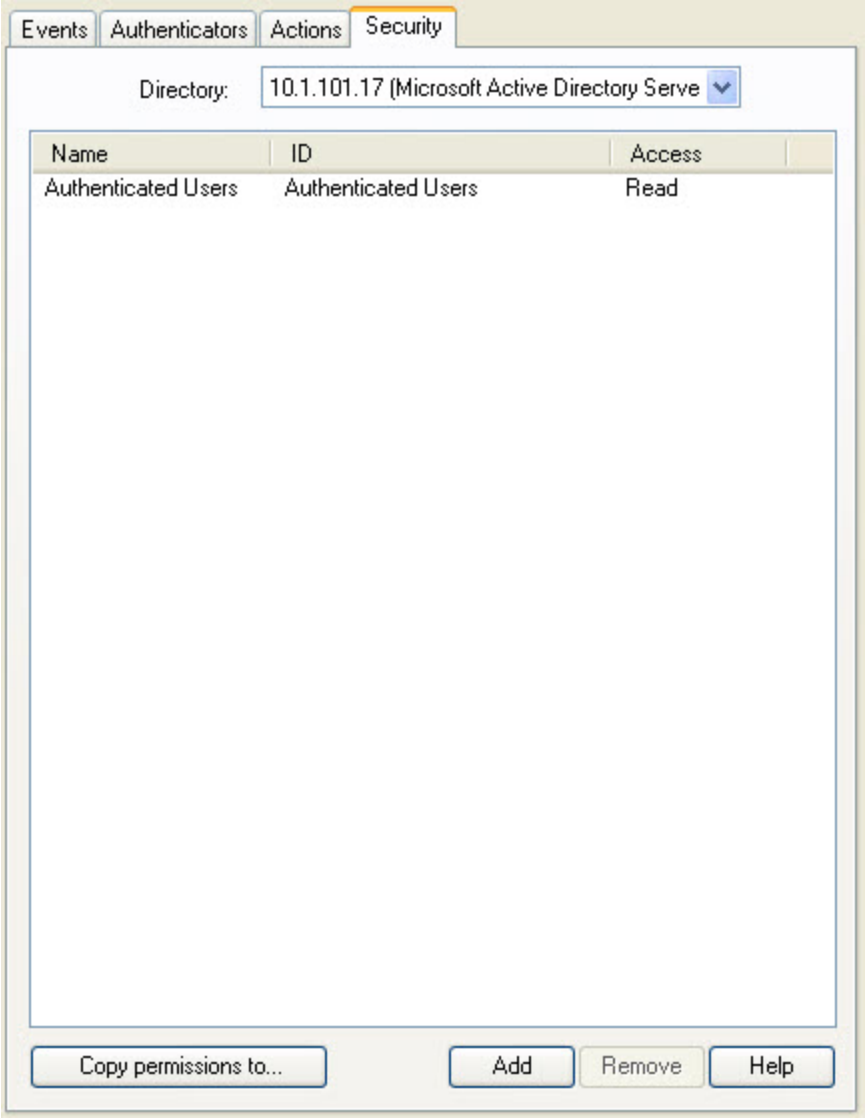
Configuring Session State Security

Use the Security tab to set the access rights for this Session State. You can assign access rights to these items:

- Application logons (including associated credential sharing groups)
- Password generation policies
- Global Agent settings

- Passphrase question sets

> The security tab is available only if Role/Group security is enabled.



Controls

Directory	Select the target directory server.
Access information	
Name	Lists the groups or users who currently have access to this Session State.
ID	The user account name.
Access	Indicates whether the user or group has read/write or read-only access rights to the currently selected Session State. To change a user or group's access rights, right-click the user or group and select **Read** or **Read/Write** from the shortcut menu.
Actions	
Add	Displays the Add User or Group dialog box (for LDAP or Active Directory) to select the users or groups who should have access to the currently selected Session State.
Remove	Removes selected user(s) or group(s) from the list. Select a user or group to remove; use **Ctrl+click** or **Shift+click** to select multiple entries.

To display this tab:

1. Expand the **Kiosk Manager** node.
2. Click **Session States**.
3. Select a Session State and click the **Security** tab.

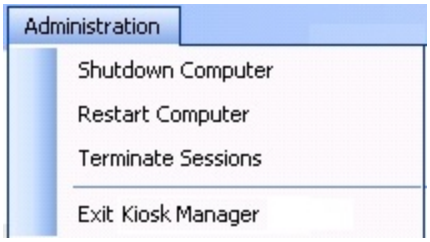
About Desktop Manager

The Desktop Manager is the logon dialog that manages the Kiosk Manager sessions on the kiosk. End users can start and unlock sessions from this dialog. Administrators can terminate sessions, shut down the computer, restart the computer and exit Kiosk Manager.

The Desktop Manager is configured through the Oracle Enterprise Single Sign-On Administrative Console under **Global Agent Settings** > **Kiosk Manager**. The following sections contain all the necessary information on configuring these settings.

Administration Menu

The **Administration** menu is located on the top of the Desktop Manager.



The settings that are used to configure this menu are:

- **Restart Computer.** Options are **Yes**, **No**, or **Administrator must supply password**. Default is No.
- **Shutdown Computer.** Options are **Yes**, **No**, or **Administrator must supply password**. Default is No.
- **Allow administrator to close Kiosk Manager.** Options are **Yes** or **No**. Default is **Yes**. This setting controls the **Exit Kiosk Manager**option and the **X** in the title bar.

> If the Kiosk account does not have sufficient privileges, the Restart Computer and Shutdown Computer options may not work even if they are disabled.

Session Termination

In addition to providing an administrator with rights to close sessions, there are other session termination settings you can configure. For information about configuring these settings, see Global Agent Settings > Kiosk Manager.

Open Sessions (Multi-Sessions)

The Desktop Manager includes a list that displays all open sessions. Multiple sessions can be running at one time. There is no maximum amount of sessions. For information about configuring these settings, see Global Agent Settings > Kiosk Manager.

Transparent Screen Lock

The transparent lock feature provides the ability to lock desktop inputs (keyboard and mouse) in view mode, so for example, a monitoring application can be viewed without starting a session. It is similar to the screen saver functionality. When Kiosk Manager invokes the transparent lock, the desktop and applications on the desktop shall continue to be displayed on the monitor in real time.

Transparent lock is disabled by default.

When there are multiple sessions running, the last active session is displayed when transparent lock engages.

Application priorities and positioning are configurable in the Special Actions lists .

Transparent lock events are set up in the Events panel of the Session States section.

- **Transparent Screen Displayed**
  This event is triggered when the transparent lock initiates and the screen is visible to the user in locked mode.
- **Transparent Screen Hidden**
  This event is triggered when the transparent lock is hidden.

Transparent lock can be invoked in the following ways:

- **Timeout**
- **Canceling** out of an authentication ONLY if **Transparent Display After Cancel** is set to **Enable**.

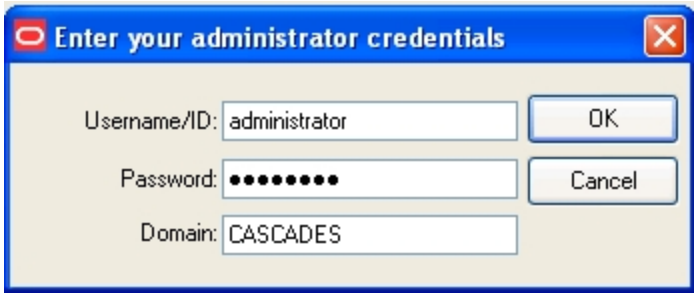
To initiate a session while transparent lock is running, move mouse or click any keyboard button. If **Transparent Only Recognize Ctrl-Alt-Delete** is set to **Enable**, users will have to click Ctrl+Alt+Delete to disengage Transparent Lock.

Transparent screen lock is configured through the Oracle Enterprise Single Sign-On Administrative Console on the Global Agent Settings > Kiosk Manager > User Interface panel.

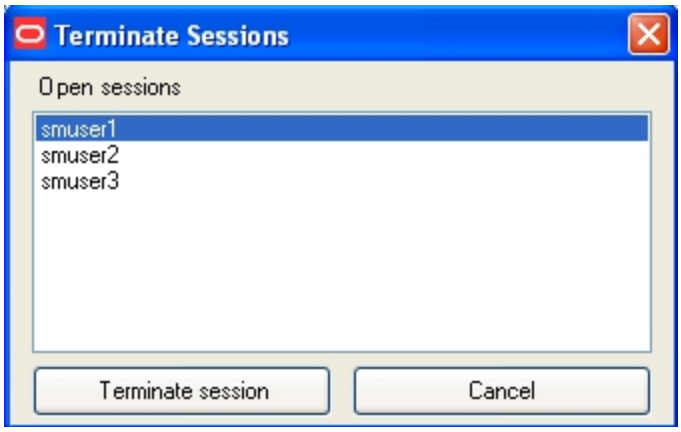
Terminating Sessions

Administrators can terminate Kiosk Manager user sessions from the Desktop Manager by clicking **Terminate Sessions** from the **Administration** menu. This menu option is not configurable.

When clicked, the Authenticate as Administrator dialog appears prompting the administrator to enter administrative credentials before performing this action.



Once credentials are entered, the Terminate Sessions dialog appears.



Only one session can be selected at a time. **Cancel** and the **X** close this dialog.

Customizing the Desktop Manager

The Desktop Manager can be customized in several ways. Refer to the following sections for more information about each option.

- **General Custom User Interface Options.** See Global Agent Settings > Kiosk Manager > User Interface.
- **Add a custom text message around the logon dialog.** See Global Agent Settings > Kiosk Manager > Adding a Customized Message to the Desktop.
- **Upload a background image around the logon dialog.** See Global Agent Settings > Kiosk Manager > Setting the Background Image.
- **Replace the Oracle and Kiosk Manager logo banner on the logon dialog.** You may choose to display a company logo as the background image, or an important custom text message to inform your users of any important information.

  The information in the following section provides instructions to replace the logon dialog logo banner and an example of a customized desktop.

Replacing the Logo Banner

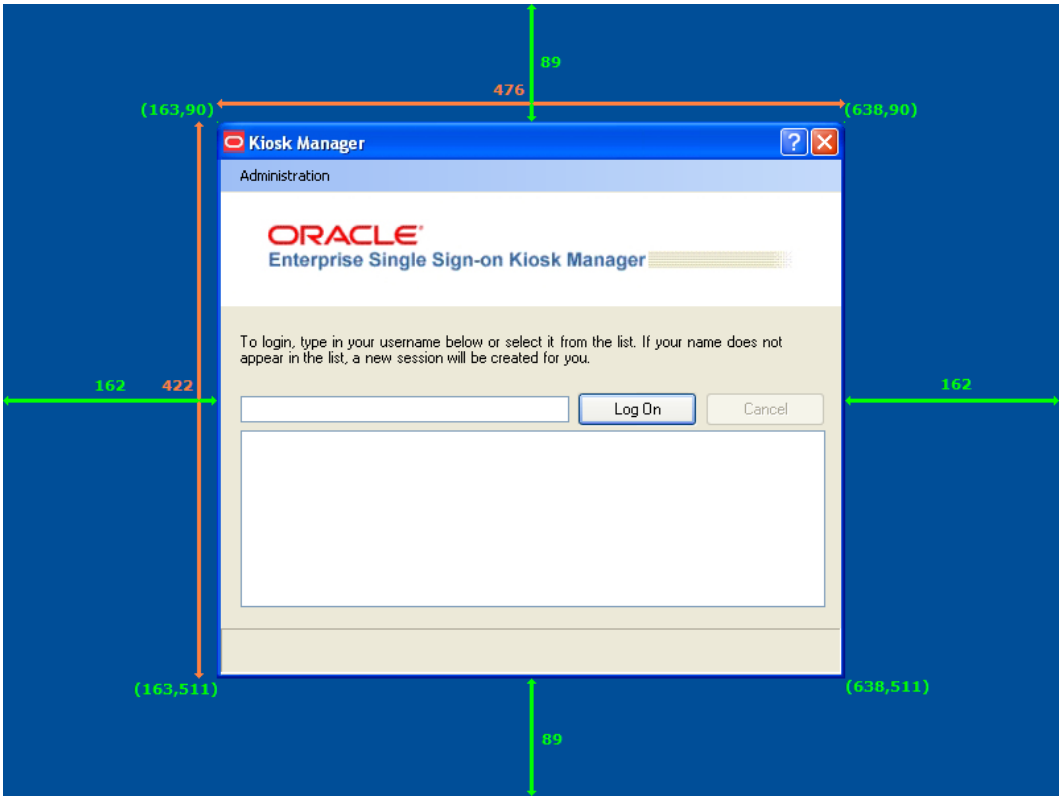
You can modify the Oracle Kiosk Manager logo banner on the Desktop Manager logon dialog through a manual step. To replace the logo:

1. Create a "branding" folder within the SMAgent.exe home directory.
2. Place the customized logo banner in the branding folder with the name "banner.gif".
3. The customized banner will appear the next time you start Kiosk Manager.

Examples of a Customized Background Image and Text Message

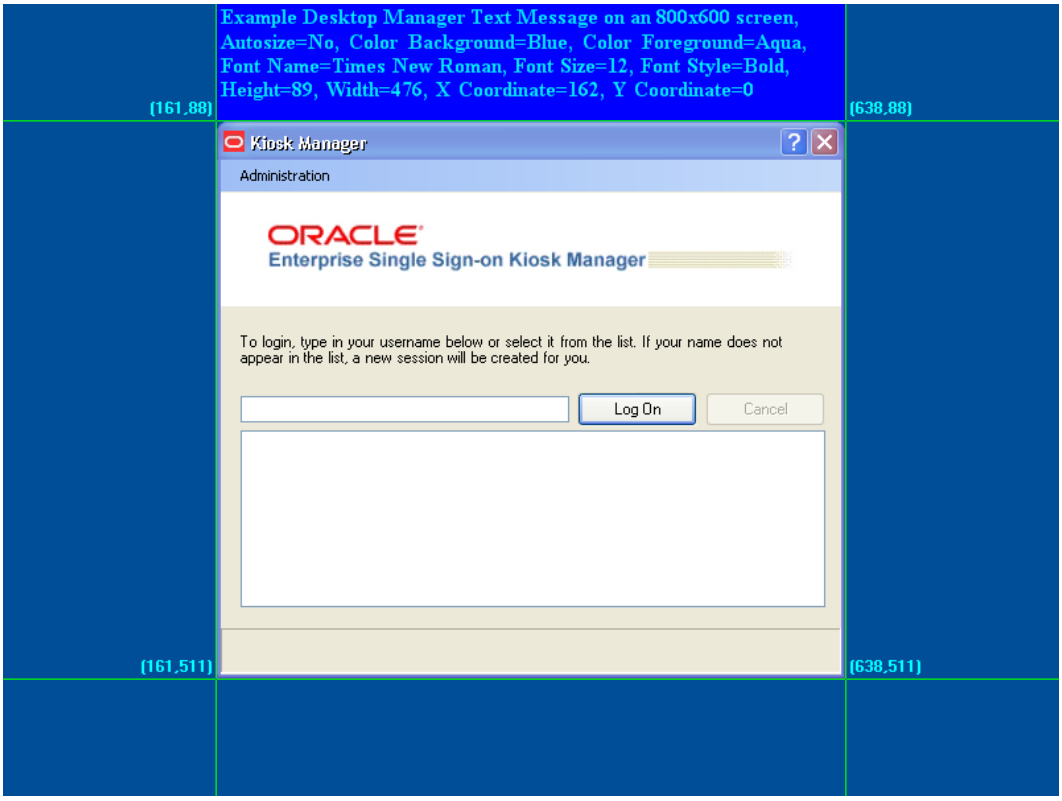
Customized Background Image on an 800x600 Display

This screen shot illustrates the horizontal and vertical dimension of the Desktop Manager logon dialog and the coordinates and dimensions used to position it.

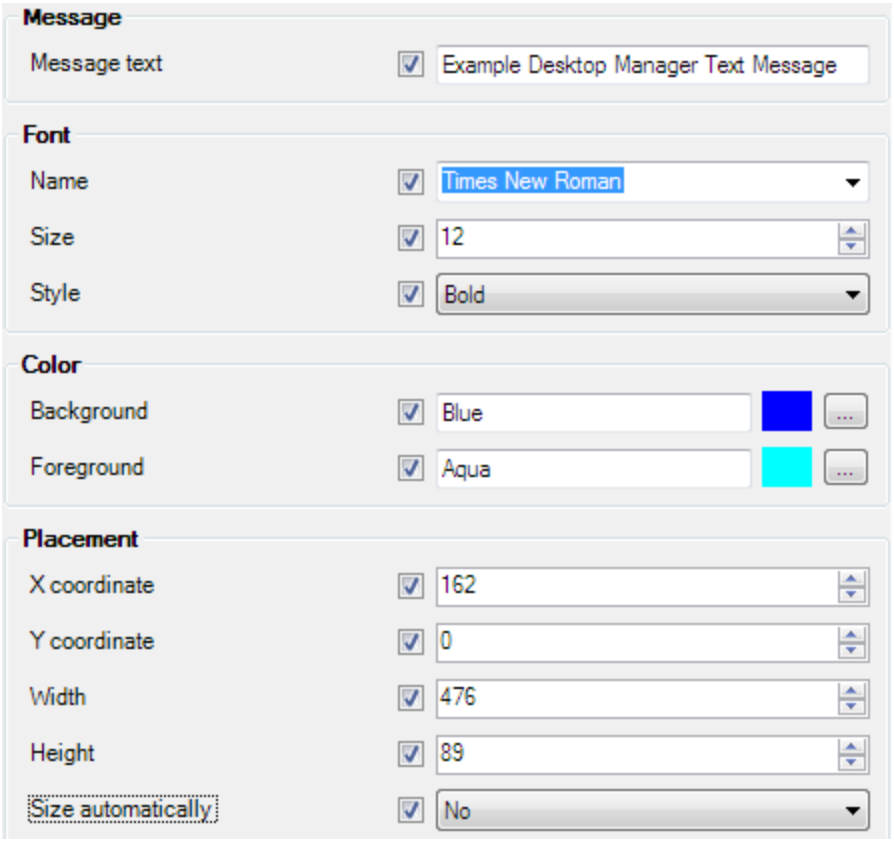


Customized Text Message on an 800x600 Display

This screen shot illustrates an example of a text message. This text message displays the values used to customize the text message as seen in this screen shot.



This screen shot displays the actual values used to produce the text message as seen above.



Desktop Status Window

The Desktop Status window is a small window that displays during a Kiosk Manager session. It allows you to conveniently view the current session owner and lock the session. If enabled, by default it displays in the upper right corner of the desktop during a session.

The desktop status window is hidden by default. The default values are calculated at runtime. The window is placed in the upper-right hand corner of the display with 10 pixels between the edge of the window and the physical edge of the screen. See Global Agent Settings > Kiosk Manager > User Interface for instructions to customize this window's appearance and location.

Event and Audit Logs

Kiosk Manager logs agent events to the local machine's Windows Event Viewer. This functionality is enabled by default. For a list of Kiosk Manager events that are logged, please see the table in the following section, Event Log Messages.

Kiosk Manager can also log events to a Syslog server application on the local kiosk machine or a remote machine.

To use a Syslog application to view Kiosk Manager events on a local or remote machine:

Using the Logon Manager Agent on the Kiosk

This step must be performed before installing Kiosk Manager.

1. Launch **Add-Remove Programs** from the Control Panel.
2. Click on **Oracle Enterprise Single Sign-On Logon Manager** and click **Change**.
3. Select **Modify** on the Program Maintenance panel.
4. On the Custom Setup panel, expand **Extensions**, and then expand **Event Manager**.
5. Select **Syslog** for installation.
6. Follow the prompts to complete installation of Syslog.

Using the Oracle Enterprise Single Sign-On Administrative Console

1. Open the Oracle Enterprise Single Sign-On Administrative Console, expand **Global Agent Settings** > **Audit Logging** >**Syslog Server**.
2. Configure the settings for the target Syslog machine according to your environment. If logging to a remote machine, specify either a hostname or IP address of the remote machine in the **Destination Host** setting.
3. Navigate to **Global Agent Settings** > **Kiosk Manager**. Under the Audit Logging Section, enter the **Event log name** and **Event log machine name**.

Event Log Messages

The following is the list of messages that currently are logged in the Event Viewer for applications:

Message	Notes About Message (If Applicable)
User session started: domain/username	When a user session is started.
User session ended: domain/username	When a user session ends.
User session locked: domain/username	When a session is locked.
User session unlocked: domain/username	When a session is unlocked.
Process action: action type, action name	(IE, Terminate list, notepad_close) This corresponds to the session actions in the repository. If the action does not have a corresponding state that triggers, you should not see the action logged in the event viewer.
Process state: state name, event GUID	(IE, Session_locked, {6D5B7645-25A5-42f3-B641-BFE4DC4F774C}) This corresponds to the Session States in the repository. A log entry is only generated if a state is triggered, such as a session lock. The GUID corresponds to the GUID for that state, if you viewed the state from the console. For example, if you have a state in the repository for Transparent Lock but you do not have Transparent lock turned on, you should not see an event logged.
Transparent lock screen DISPLAYED	When transparent lock displays.
Transparent lock screen HIDDEN	When transparent lock is hidden.

Message	Notes About Message (If Applicable)
Method Invocation: file path/file name, method name	Corresponds with Run List .Net API Assembly name and method.
Run list command: command name	Corresponds with Run List Script commands.
The following applications were not terminated:	This will only log applications that are specified in a terminate list and did not terminate.
Kiosk Manager STARTED	When Kiosk Manager is started.
Kiosk Manager SHUTDOWN	When Kiosk Manager is shut down.
Successfully closed: Application name	Applicable to all three closure methods in the terminate list - keystroke sequence, closure request and process termination. This event is logged when the application in a terminate list is closed. Logs are not generated for applications that are closed but not specified in a terminate list.

Bypassing the Kiosk Manager Agent

If needed, the Kiosk Manager Agent can be bypassed when a kiosk starts up.

The Kiosk Manager Agent will not start if you hold the **Shift** key down when logging into the computer.

Closing the Kiosk Manager Agent

If needed, the Kiosk Manager Agent can be closed on a kiosk by:

- Pressing **ALT + F4** on the keyboard.
- Clicking **Exit Kiosk Manager** from the **Administration** menu on the Desktop Manager.
- Clicking the **X** located on the top right of the window title bar.

The administrator is then prompted to enter his or her credentials. Only an administrator's credentials will succeed in closing the agent.

This feature is disabled by default. To enable this feature:

1. Open the Logon Manager Administrative Console, expand **Global Agent Settings** > **Kiosk Manager**.
2. Check the **Allow administrator to close Kiosk Manager** setting.
3. Select **Yes**.

Setting Up a Trust

Kiosk Manager has the capability to allow other applications that trust Kiosk Manager authentication to retrieve the logged-on username. Kiosk Manager provides a public function in

SSOUserInfo.dll with the following function signature:

```
extern "C" BOOL _stdcall GetUserId(BSTR* bstr);
```

Parameters:

`bstr`

Object into which to retrieve the username.

Return Value

Returns `TRUE` if the function succeeds and a user is currently logged in.

Returns `FALSE` if the function fails. `Use GetLastError()` for more information.

If the function succeeds, the username will be returned as: "`DomainName\UserName`".

Kiosk Manager can be set up to run a command line or call a .NET method after a user successfully starts a session. Utilize this mechanism to trigger the other application to request the logged-on username from Kiosk Manager.

Using the MacListener Utility to Enable Caregiver Mobility and Oracle VDI Session Support

The MacListener utility enables Kiosk Manager to interface with Caregiver Mobility and Oracle VDI environments, allowing health-care professionals to log on to kiosk systems to access location-specific information, such as patient data or other local resources pertinent to the kiosk system's location. MacListener.exe ships with Oracle Enterprise Single Sign-On Suite Plus and is located in the "Utility" sub-folder of the "Logon Manager" folder of the suite master archive.

MacListener.exe is a command-line utility that emulates the echo server by listening on a specific TCP/IP port for incoming client connections, receiving the client's MAC address in plain-text form, and running a specified command when a client disconnects with the client's MAC address appended to the end of the specified command in the following format:

```
/MACADDRESS=xx:xx:xx:xx:xx:xx
```

where `xx:xx:xx:xx:xx:xx` is the client's MAC address.

The syntax for using the `MacListener.exe` utility is as follows:

Parameter	Description
/PORT <port_number>	Specifies the port number on which to listen for incoming client connections.
/DEBUG	Displays error messages.
/E <command>	Command to execute upon client disconnection. The MAC address received from the client will be appended to the end of the command in the following format:

For example, if you launch the utility as follows:

```
MacListener /PORT=8080 /E=C:\Windows\Notepad.exe
```

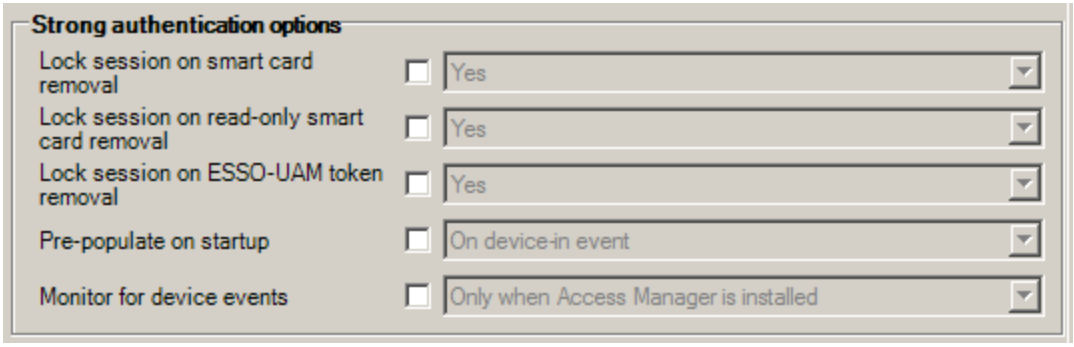
and a client with a MAC address of `12:AB:34:CD:56:EF` connects to the utility on port 8080, then the utility will execute the following command when the client disconnects:

```
C:\Windows\Notepad.exe /MACADDRESS=12:AB:34:CD:56:EF
```

Configuring Strong Authentication Options

Settings are available in the Oracle Enterprise Single Sign-On Administrative Console (under Global Agent Settings > Kiosk Manager: Strong authenticator options) that allow you to configure how Kiosk Manager integrates with the strong authenticators.

These settings can be manually configured from the Kiosk Manager panel under Global Agent Settings > Kiosk Manager:



See Global Agent Settings > Kiosk Manager for strong authentication options, and the *Universal Authentication Manager Administrator's Guide* for detailed information on integrating Kiosk Manager with Universal Authentication Manager.

Linking to Password Reset

A link to Password Reset can be added to the Kiosk Manager Desktop Manager. This allows users to reset their own kiosk passwords (for example, Microsoft Active Directory via LDAP authentication) using Password Reset.

Clicking this banner launches the Password Reset Web interface. Users can then follow the prompts to reset their password.

A link to the Password Reset client can be installed as a DOS command, using the following command syntax:

```
msiexec /i [/q] c:\ESSO Kiosk Manager 7.000.msi programURLs
```

`/q` Quiet mode: suppress all installer user-interface messages. Refer to the description of other Windows Installer command-line options for msiexec at http://msdn.microsoft.com.

programURLs (required):

```
REG_RESETURL=" http://host /vgoselfservicereset/resetclient/default.aspx"

REG_STATUSURL="http://host /vgoselfservicereset/resetclient/checkstatus.aspx"
```

where: *`host`* is the server name (or domain name or IP address) and path of the folder that holds the Password Reset service root folder.

Command Line Options

Command-line options are available to support non-kiosk environments and allow Kiosk Manager to run on a desktop machine without presenting a user interface.

```
/EVENT <EventName1> [EventName2…]
```

This option triggers the named event and Kiosk Manager performs the tasks associated with the event and terminates. The authenticator filters are ignored.

```
/RUN <ListName1> [ListName2…]
```

This option triggers Kiosk Manager to perform the tasks associated with the named list and terminate. The event and authenticator filters are ignored.

`ListName` can be either a Session State or an Action.

For example, "`SMAgent /run StartVisualSourceSafe`".

Any `SessionAction` or `SessionState` names that have spaces in them must be enclosed in double quotes.

Some command-line options prevent others from working. For example, multiple lists can be run with the `/RUN` command. If `/LOCK` appears on the command line, the session is locked and the rest of the command line is ignored, including any options that appeared before `/LOCK`.

`/SHUTDOWN`, `/LOCK`, and `/TERM` are the command-line options that cause Kiosk Manager to ignore the rest of the command line.

The `/RUN` and `/EVENT` commands trigger Kiosk Manager to treat the rest of the command line as event and list names to be run. These will be run when all of the command line options have finished processing. The type of the parameter depends on the previous command. The command-line parameter type resets with the next `/EVENT` or `/RUN` parameter received. For example:

```
SMAgent /Event "SM session start" "SM session end" /RUN termlist1 termlist2
runlistA "My SessionState"
```

This command line will run the lists associated with events "`SM session start`" "`SM session end`" and run the named lists: `termlist1`, `termlist2`, `runlistA` and "`My SessionState`".

.NET API

Externally Callable Interfaces and Methods

A class named `KioskAPI` is available within the SMAgent.exe that is loaded by external programs.

The object is instantiated as follows:

```
Passlogix.SM.Manager.KioskAPI kiosk = new

Passlogix.SM.Manager.KioskAPI();
```

The following methods are available:

```
void Lock();

void Term();

void Shutdown();

void Event(string eventName);

void Run(string runtaskName);
```

- **Lock**. Locks the current Kiosk Manager session.
- **Term**. Ends the user's session as if the Kiosk Manager timer expired for a user.
- **Shutdown**. Terminates the SMAgent.exe.
- **Event**. Simulates the named event to occur causing Kiosk Manager to perform tasks associated with the named event without filtering by the authenticator. Event names are the GUID strings from Events.xml.
- **Run**. Starts the named task without filtering by the event or authenticator. Task names are the `SessionAction` and `SessionState` names that are displayed by the Logon Manager Administrative Console.

> Any `SessionAction` or `SessionState` names that have spaces in them must be enclosed in double quotes.
>
> ```
> kiosk.Run("\"My SessionAction\"");
> ```

Example to run tasks associated with the "`SM Session End`" event:

```
Passlogix.SM.Manager.KioskAPI kiosk = new

Passlogix.SM.Manager.KioskAPI();

if (kiosk != null)

kiosk.Event("{A644ED55-6A3F-4160-A355-C713C90733DF}");
```

> Refer to the .Net API Sample Code.

.NET API Sample Code

```
using System;
using System.Collections.Generic;
using System.Text;
using System.Windows.Forms;
namespace ClassLibraryTest
{
    public class TestClass
    {
        private string m_userName;
        private string m_domainName;
        public string UserName
        {
            set
            {
                m_userName = value;
            }
            get
            {
                return m_userName;
            }
        }
        public string DomainName
        {
            set
            {
                m_domainName = value;
            }
            get
            {
                return m_domainName;
            }
        }
        public void UserChange()
        {
            MessageBox.Show("UserChange called with user: " +
DomainName + "\\" + UserName);
        }
        public void SessionStart()
        {
            MessageBox.Show("SessionStart called");
        }
        public void SessionEnd()
        {
            MessageBox.Show("SessionEnd called");
        }
        public void SessionLocked()
        {
            MessageBox.Show("SessionLocked called");
        }
        public void SessionUnlocked()
        {
            MessageBox.Show("SessionUnlocked called");
```

```
        }
        public void PreSessionUnlocked()
        {
            MessageBox.Show("PreSessionUnlocked called");
        }
        public void AuthLogon()
        {
            MessageBox.Show("AuthLogon called");
        }
        public void AuthTimeout()
        {
            MessageBox.Show("AuthTimeout called");
        }
        public void DeviceIn()
        {
            MessageBox.Show("DeviceIn called");
        }
        public void DeviceOut()
        {
            MessageBox.Show("DeviceOut called");
        }
        public void GracePeriod()
        {
            MessageBox.Show("GracePeriod called");
        }
    }
```

Kiosk Manager Best Practices

These best practices are recommendations that will help you implement an optimal Kiosk Manager configuration.

Deploying Kiosk Manager Settings

The most convenient way to mass deploy Kiosk Manager settings from the Oracle Enterprise Single Sign-On Administrative Console is to create a customized MSI package and distribute it to end user kiosk workstations using a deployment tool of your choice.


Administrative Overrides are not available for use with Kiosk Manager settings.

SendKeys

SendKeys is not a reliable method and therefore not guaranteed to work as expected. It is recommended that you do not use SendKeys.

Disable Task Manager and Run

The Windows Task Manager and Run menu option are disabled programmatically as a function of the Kiosk Manager Registry Service. For added security, we recommend disabling these functions for any user account that is to be used as a Kiosk Manager kiosk user account.

To remove the Run menu option from the Start menu:

1. Open Group Policy editor by double clicking on 'gpedit.msc' (C:\WINNT\system32\gpedit.msc)
2. Navigate to **User Configuration** > **Administrative Templates** > **Start Menu** and **Toolbar**.
3. In the right pane double-click **Remove Run from start menu**.
4. Select **Enabled** and click **Apply** and **OK**.

To disable Task Manager:

1. Open Group Policy editor by double clicking on 'gpedit.msc' (C:\WINNT\system32\gpedit.msc)
2. Navigate to **User Configuration** > **Administrative Templates** > **System** >**Ctrl+Alt+-Delete Options**.
3. In the right pane double-click **Remove Task Manager**.
4. Select **Enabled** and click **Apply** and **OK**.

Provisioning Gateway Overview

Oracle Enterprise Single Sign-On Provisioning Gateway (Provisioning Gateway) provides an administrator with the ability to automatically provision Logon Manager with a user's ID and password by using a provisioning system. An administrator is able to add, modify, and delete IDs and passwords for particular applications within the provisioning system and have the changes reflected in Logon Manager. From the provisioning system, all usernames and passwords inside of Logon Manager can also be deleted so that a user’s access to all protected applications is eliminated.

The following Provisioning Gateway settings are configured through the Oracle Enterprise Single Sign-On Administrative Console:

- Provisioning tab (for role/group support)
- An application's Provisioning tab (for role/group support)

Provisioning Gateway is an add-on module to Logon Manager available separately from Oracle. For more detailed information on Provisioning Gateway, refer to the Provisioning Gateway product documentation.

Accessing the Provisioning Gateway Administrative Console

- Open a Web browser and enter this URL (replacing serverhost with the server where Provisioning Gateway was installed):
  https://serverhost/Provisioning Gateway console/overview.aspx

Managing Provisioning

Use this node to manage provisioning rights for users. There are two tabs to set the rights:

- Default Rights
- Delete SSO User Right

Default Rights

Use this tab to define the provisioning rights for each new application created. This feature sets standard rights for each application created. Once each application is created, change the rights as needed.

Controls

Directory	Select the target directory server.
Access information:	
Name	Lists the groups or users who currently have access to this item.
ID	Lists the user account name.
Access	Indicates the permissions that have been granted to the user or group (Add, Modify or Delete Logon). To change a user or group's access rights, right-click the user or group and select **Add Logon**, **Modify Logon** or **Delete Logon** from the shortcut menu.
Actions	
Copy permissions to	Use this button to easily apply the provisioning rights for the current application to multiple applications. Clicking this button displays a dialog listing all the applications. Selects the applications that you want these provisioning rights to be copied to. Use **Ctrl+click** or **Shift+click** to select multiple entries. Click **OK**.
Add	Displays the Add User or Group dialog box (for LDAP or Active Directory) to select the users or groups who should have access to the currently selected item.
Remove	Removes selected user(s) or group(s) from the list. Select a user or group to remove; use **Ctrl+click** or **Shift+click** to select multiple entries.

Add User or Group Dialog Box

The Add User or Group dialog box varies based on the directory server being used:

- LDAP
- Active Directory
- AD LDS (ADAM)

LDAP

Use this dialog to select the individual users or user groups that are to be added to the access list for the current configuration item (Add Logon, Modify Logon, or Delete Logon).

Controls

Search Base	The base (highest-level) directory to begin searching for user/group accounts. All subdirectories of the base directory are searched. Type a location or click **Change** to browse the directory tree.
Change	Displays the Select Search Base dialog box to browse for a base directory for the search. Use this dialog to browse to and select the base (highest-level) directory to search for user/group names. Click **OK** when finished.
Search	Begin searching the base directory for users and groups.
Users or Groups	Lists the search results. Select the names to be added to the access list for the current configuration item. Use **Ctrl+click** or **Shift+click** to select multiple entries. Click **OK** when finished to copy your selections to the access list.

Active Directory/AD LDS (ADAM)

Use this dialog box to select the individual users or user groups that are to be added to the access list for the current configuration item (Add Logon, Modify Logon, or Delete Logon).

Controls

List Names From	Select an Active Directory domain or server.
Names	Lists the names of users and groups for the selected domain or server. Select one or more names to add to the access list.
Add	Copies user(s) and group(s) selected in the **Names** list to the **Add Names** list. Use **Ctrl+Click** or **Shift+Click** to select multiple entries.
Members	When a group is selected the Names list, displays the Global Group Membership dialog box, which lists the members of the selected group.
Search	Displays the Find Account dialog box for searching one or more domains for a specific user or group.
Add Names	Display the names of the user(s) or group(s) for whom you have you have added so far. Click **OK** to add these names to the access list for the current configuration item. Note: You can type or edit user names in this list. However, entries are checked for invalid account names, and duplicate account selections are automatically removed when you click **OK**.

Delete SSO User Right

Use this tab to define the users to grant the Delete SSO User functionality to in the Provisioning Gateway Administrative Console. The controls function the same as on the Default Rights tab.

Part III. Configuring an Agent Deployment with Anywhere

This section describes the procedures and settings in the Anywhere Console, and how to use them to create an Agent deployment for your end-users.

In this section, you will learn how to do the following:

- Create a deployment package.
- Use the General tab to learn what software versions you are running.
- Use the Options tab to configure a deployment.
- Use the Generate tab to specify a deployment output location and generate output.

Overview of Creating a Deployment Package

Following is the general procedure for creating a deployment package. Use the settings in the three tabs of the Anywhere Console for your deployment configurations. See the help topic for each tab for an in-depth discussion of that tab's settings.

A Few Notes About Anywhere Prerequisites and Deployment Limitations

Consider the following when planning your deployment options:

- Anywhere is designed for compatibility with Windows Authenticator v1. It is not designed to work with Logon Manager features that require installing system services or GINAs, adding registry entries outside of Live HKLM\Software\Passlogix, or additions to Program Files or Windows system folders.
- The Visual C++ Runtime Library and .NET 2.0 Framework are prerequisites for running Anywhere. The installation package includes the Visual C++ Runtime Library, however you must make the .NET 2.0 Framework available to users. See the *Oracle Enterprise Single Sign-On Suite Plus Release Notes* for a complete list of software and hardware requirements.
- The final output of the deployment package is not an .MSI file. You must ensure that you supply any additional requirements that your end users will need to run their Logon Manager and additional Agent software.
- Due to security restrictions in Windows Server 2008 and Windows 7, you must change group policy settings in order for end users running these clients to use the Anywhere deployment package. See the Technical Notes section in the *Oracle Enterprise Single Sign-On Suite Plus Release Notes* for more information.
- Anywhere does not support Kiosk Manager. When you install Logon Manager with the intention of using it to create a deployment, do not select the Kiosk Manager option.
- You must be running a 32-bit operating system when creating a 32-bit deployment, and a 64-bit operating system when creating a 64-bit deployment. Moreover, a 32-bit deployment downloaded to a 64-bit operating system, or a 64-bit deployment downloaded to a 32-bit operating system, will fail.

Creating a Deployment Package

1. Create a certificate file to be submitted when you generate the deployment package. See Creating and Exporting an SSL Certificate for complete instructions
2. Install the Oracle Enterprise Single Sign-On Administrative Console and Agent on a clean workstation.
3. Optionally, install Provisioning Gateway.
4. Configure the Oracle Enterprise Single Sign-On products as you want them for deployment.
5. Make your Logon Manager and Provisioning Gateway configuration settings available to Anywhere by one of the following methods:
   - **Live Registry.** Write the Global Agent Settings to the registry, and select **Live registry** on the **Options tab** > **Agent settings**.
   - **Exported Registry File (.REG).** The Oracle Enterprise Single Sign-On Administrative Console .REG file is not immediately compatible with Anywhere. If you want to use this file, you must do the following:

a. Open Microsoft Registry Editor (regedit.exe).

b. Open the Oracle Enterprise Single Sign-On Administrative Console registry file from within regedit.exe.

c. Save the Oracle Enterprise Single Sign-On Administrative Console registry file using regedit.exe.

d. Browse to this file for your selection on the **Options tab** > **Agent settings**.


Test your configuration before proceeding to create the deployment package.

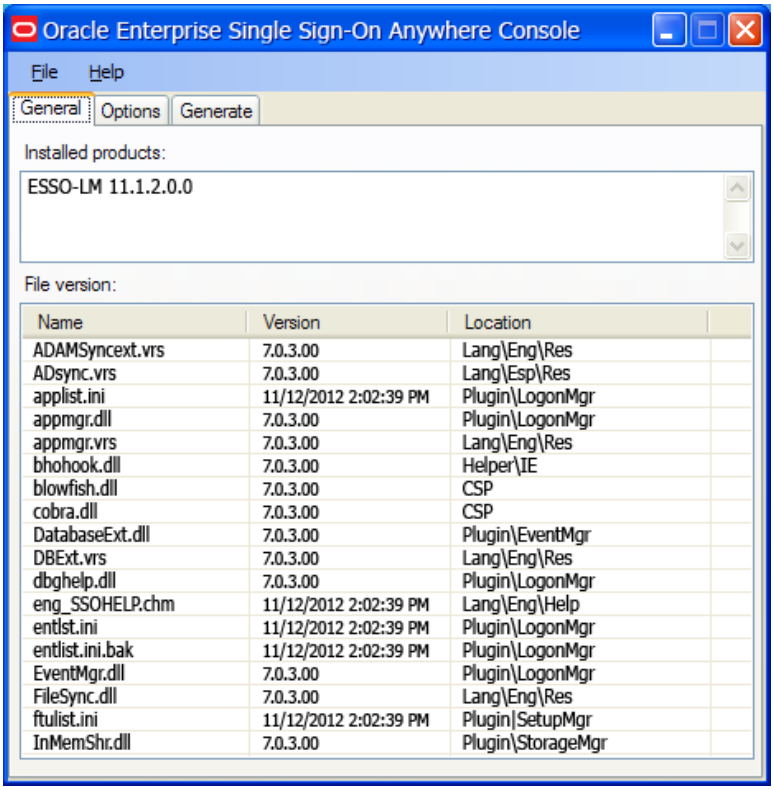
6. Install the Anywhere Console. Anywhere reads the Oracle Enterprise Single Sign-On software configuration on the workstation where you installed it.
7. Verify in the General tab that the products and versions installed are the ones that you want to deploy.
8. From the Options tab, specify:
   - The deployment version and location, the installation location, and the installation type
   - The update schedule preferences
   - Which registry settings Anywhere will use (the settings from the live registry, or the registry file you saved using regedit.exe).
9. On the Generate tab:
   a. In the Summary window, review all settings.
   b. Enter the directory path where the deployment package will be created, or click the **Browse...** button to navigate to the directory.
   c. Click the **Generate** button.
   d. At the prompt, enter the location for the certificate file that you created, and the password.

   The Anywhere Console creates a deployment package in the location you specified in the "Output folder" setting.
10. From the File menu, click **Save** or **Save As...** to save the deployment configuration settings.
11. Copy the deployment package to the virtual directory or file share that you specified in the "Target location" setting.
12. If deploying from a web server, customize the index.html file in the deployment directory, replacing the generic text with the information that you want end users to see.
13. If this is a first installation, notify users that the deployment package is available.
14. To create additional deployment packages, reconfigure settings on the Oracle Enterprise Single Sign-On Administrative Console, and click **New** on the Anywhere **File** menu.


Users do not have the option to alter the installation. If you want different users to install different packages, create a separate deployment package for each installation.

General Tab

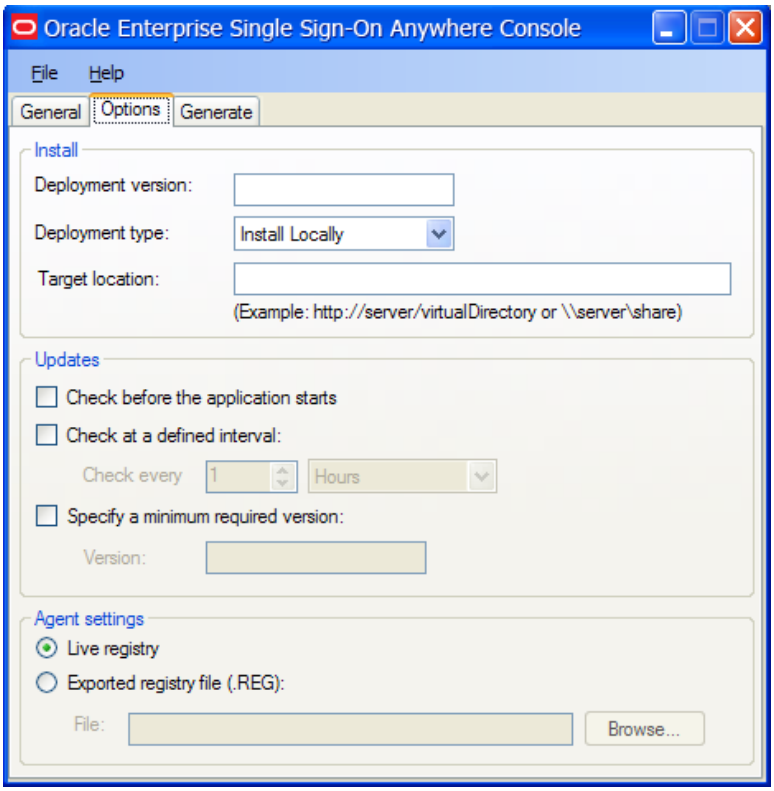
The two sections of the "General" tab contain information about the software installed on the workstation where you are creating the deployment package.



Installed products	This section indicates that Logon Manager is installed on this workstation.
File version	This section lists all components that were installed as part of the Oracle Enterprise Single Sign-On product installation, with their version numbers and installation locations. This information is the same as the information in the Logon Manager "About" box.

Options Tab

Use the "Options" tab to configure the settings for your deployment package.



Install

Use the settings in the "Install" group to configure the deployment version and file locations.

Deployment version	Specify the four-field (x.x.x.x) version number of the deployment. It is your choice whether to match the deployment version to the version of Logon Manager that you use for the deployment.
Deployment type	Specify whether Anywhere will install on the local workstation. The Install Locally option creates a shortcut icon to Anywhere in the user's Start menu and adds an entry for Anywhere to the user's Add or Remove Programs applet on the Control Panel. The Online option is a per-session deployment and does not create the Start menu shortcut or add an entry to Add or Remove Programs. It also requires the user to have access to the web server or file share where the Anywhere deployment package is located in order to run Anywhere. The files will be cached on the user's machine, but the user cannot run the program directly.
Target location	Enter the virtual directory or file share from which Anywhere will be distributed.

Updates

Use the settings in the "Updates" group to specify when Anywhere should check for updates, and whether the user has the option to reject them when they are available.

If the user declines an optional update, Anywhere does not offer that update again.

Check before the application starts	Check this box to have Anywhere check for updates to any of the installed files before the application launches. Anywhere updates only files that have changed.
Check at defined intervals	Check this box to specify a time interval at which Anywhere checks for updates. Configurable intervals are from one hour to one year (52 weeks).
Specify a minimum required version	Check this box to enforce a minimum deployment version. This setting is useful for rollbacks. Anywhere rolls back only one version. If you want to roll back beyond the previous deployment, rename the desired rollback to a higher version than currently installed, and specify this new version as the minimum required. Rollbacks are available through Control Panel > Add or Remove Programs > Change > Restore.

Localized Deployments

In order for localized installers and update notifications to appear in the correct language, you must have the appropriate .NET language pack installed on the workstation. To install a .NET language pack:

1. Log on to the local workstation.
2. Install the latest Microsoft .NET Framework if it is not already present (version 2.0 or above is required).
3. Download and install the target .NET language pack for your version of the .NET Framework.
4. Restart the workstation.
5. Install Anywhere.

   The installer appears in the target language.

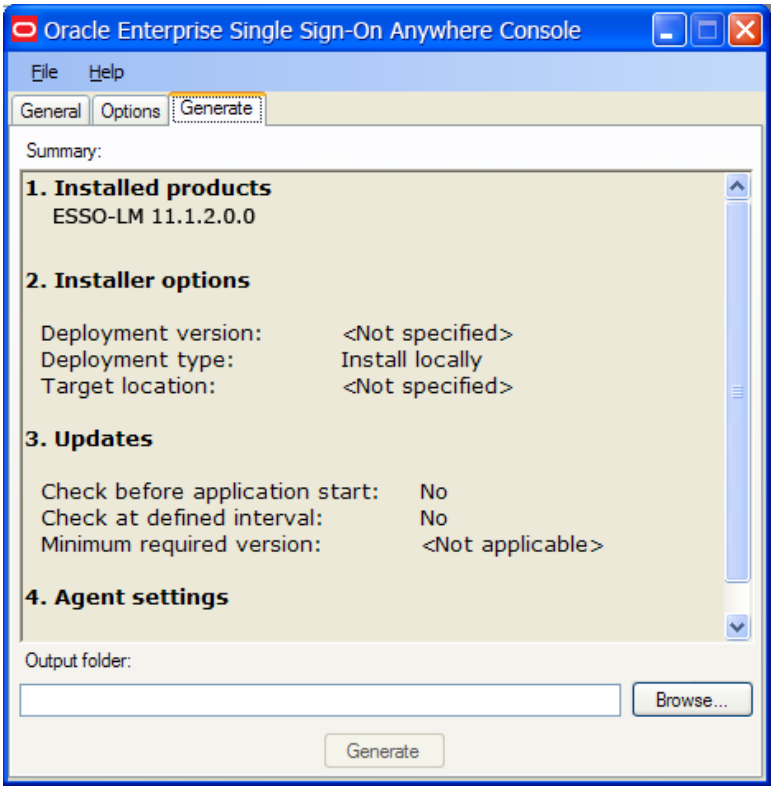
Agent Settings

Use the settings in the "Agent Settings" group to specify which registry settings Anywhere should use.

Live registry	Select to use the same settings as in the Anywhere live registry.
Exported registry file (.REG)	Select to use a custom registry that you created in the Administrative Console and exported. If you select this option, click the **Browse...** button to direct Anywhere to the desired registry file.

Generate Tab

Use the "Generate" tab to view a summary of your configuration settings, specify a location for your deployment output, and generate your deployment package.



Summary	Review the settings in the "General" and "Options" tabs.
Output folder	Enter the path of the directory where you want to generate the Anywhere deployment, or click the **Browse...** button to navigate to the desired directory.
Generate	After you review your settings and specify the location of the deployment package, click the **Generate** button to create the Anywhere deployment package.

Before distributing the deployment package, verify that it works correctly.

The Anywhere installation includes a customizable index.html file. Edit this file with the information to direct end users to the deployment package, and distribute it.

Part IV. Using the Administrative Console to Configure Password Reset

This section describes the Password Reset settings in the Oracle Enterprise Single Sign-On Administrative Console, and how to use them to configure repositories, connections, and the Enrollment Interview and Reset Quiz for your end-users.

This section covers the following procedures:

- First-time setup
- Planning the Enrollment Interview
- Planning the Reset Quiz
- Configuring the reset service
- Working with logs and reports
- Managing user data
- Working with external validators

First-Time Setup

After you have installed the Password Reset server application, the first task is to configure the service for use with the directory-server or relational database and Web services. You perform this first-time configuration with the dialog pages in the **System** tab:

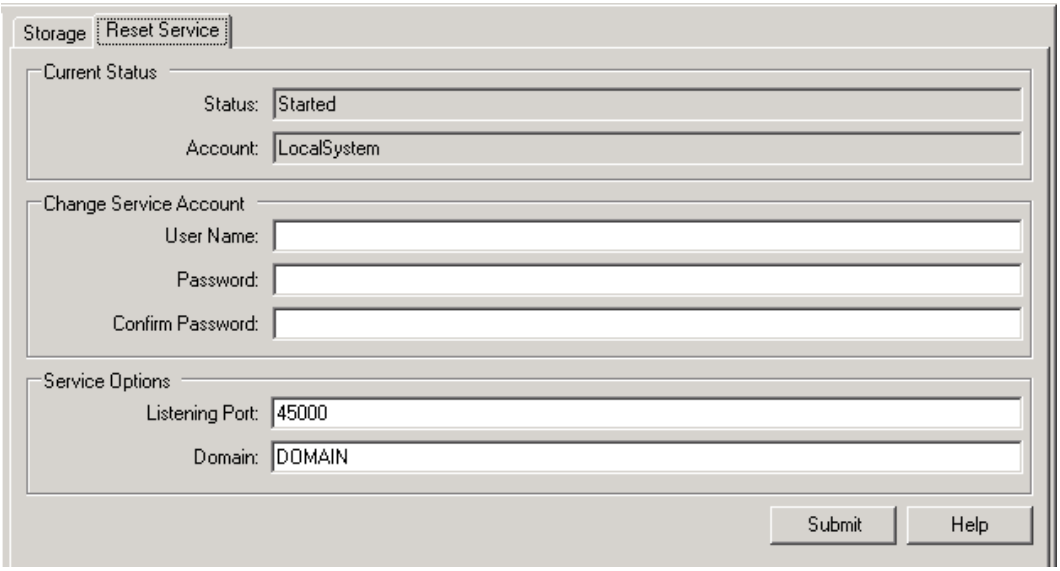
- Use the Reset Service tab to set the Anonymous Logon account—the user account through which Password Reset users and administrators access the service.
- Use the Storage tab to configure the directory or database to create the Password Reset repository for system questions and user data.
- Use the Reset Service tab to set the Service account—the user account that Password Reset "logs on as" to the server.

When you have completed these steps, you can begin configuring the reset service itself. These tasks include:

- Setting up the Enrollment Interview by supplying a set of system questions and associated point values
- Setting the general reset service options. These options include the pass and fail score thresholds, user-lockout parameters, and administrator alerts.

Configuring the Reset Service Account

Use the Reset Service tab (under the System node) to set or change the Anonymous Logon for IIS Web Services. This is the domain account through which all end users access the Password Reset Web interface.



The Anonymous Logon account you specify in this dialog box appears in the Log On As column of the Computer Management Services tool. The account should have local administrator privileges, including permission to perform the following tasks:

- Start, stop, and change services
- Read from and write to Active Directory, AD LDS (ADAM)-instance, or database server.
- Write to the local-machine registry (HKLM).

> To create a new user account with administrator privileges, use the Users and Groups tool in the Windows Computer Management Console.

Setting or Changing the Anonymous Logon

1. Enter the User Name and Password of the account that you want to use.
2. Enter the password again to confirm.
3. Click **Submit**.

Options for This Tab

Current Status	
Status	Displays whether the reset service account is started. This field is informational only.
Account	Displays the current password reset account. This field is informational only.

Change Service Account	
User name	The user name you have designated for the reset service account.
Password and Confirm password	The password of the reset service account. Enter the password in both fields.

Service Options	
Listening port	The number of the port used to detect password reset activity (default is 45000).
Domain	The trusted domain where user accounts are located. This setting is required only if the user accounts are in a domain other than that of the Password Reset machine's domain.  Changes to this setting take effect immediately and do not require a restart of the IIS or Password Reset Service.

Configuring Service Storage

Use the Storage tab (under the System node) to view or change connection settings for the database (SQL Server or Oracle Database) or directory service (Active Directory or AD LDS (ADAM)) that you use as the repository for Password Reset system questions and user enrollments. To do this, use the settings in the Storage Configuration group. When you have completed your changes, click **Submit** to apply your new settings to Password Reset.

You also use the Storage tab to have Password Reset perform the first-time setup tasks that prepare the database or directory-server repository for use with the enrollment and reset services. These tasks include:

- Extending the schema to include directory types/database tables
- Creating the main container or database
- Granting read/write access to the Web service account
- Creating required child objects or tables.

To perform these tasks, use the controls in the Initialize Storage group:

1. Select **Initialize storage for Password Reset**.
2. For **Connect as (User Name**, enter the user name of an administrator of the directory server.
3. Enter the administrator password.
4. Click **Submit** to save any changes or modifications. Your changes will be lost if you don't click the **Submit** button before closing the Storage tab.

Storage Configuration	
Storage type	The type of service used. The remaining settings in this group change based on this selection. **Options:** • Active Directory • AD LDS (ADAM) • LDAP • Oracle Database • SQL Server

Active Directory and AD LDS (ADAM) Storage Settings

Setting	Description
Servers	Click **Add** to launch the Add Server dialog, and enter the information required. Click **OK** to return to the Servers list. Password Reset attempts connections in the order that they appear in the list, from top to bottom. Use the up and down arrows to arrange the servers in the order in which connections should be attempted. To delete a server from the list, select the server in the list box and click **Delete**. Note that you cannot delete a connection if it is the only connection in the list. In some cases, such as long server names, the entire string is not displayed in the list box. Clicking on an item in the list box populates the Server Name/IP Address and Port text boxes with that item. The full string can then be viewed by scrolling in the text box and, if desired, modified and added as a new connection to the list.
Server timeout (seconds)	Enter a value (in seconds) that Password Reset should wait for a response from a server before moving on to the next server in the list.
Storage location (DN)	The distinguished name or naming context of the connection node.
Use SSL	Select to enable a secure socket layer connection.

LDAP Storage Settings

For correct functionality of the Enrollments and Resets tabs when using Oracle Internet Directory (OID) as your repository, you must use the Catalog Management Tool included with OID to index the "createTimestamp" attribute.

Setting	Description
Servers	Click **Add** to launch the Add Server dialog, and enter the information required. Click **OK** to return to the Servers list. Password Reset attempts connections in the order that they appear in the list, from top to bottom. Use the up and down arrows to arrange the servers in the order in which connections should be attempted. To delete a server from the list, select the server in the list box and click **Delete**. Note that you cannot delete a connection if it is the only connection in the list. In some cases, such as long server names, the entire string is not displayed in the list box. Clicking on an item in the list box populates the Server Name/IP Address and Port text boxes with that item. The full string can then be viewed by scrolling in the text box and, if desired, modified and added as a new connection to the list.
Username (DN)	Enter a name for the account that will communicate with the LDAP server. This must be in distinguished name (DN) format.
Password	Enter a password for the Username (DN) account.
Server timeout (seconds)	Enter a value (in seconds) that Password Reset should wait for a response from a server before moving on to the next server in the list.
Storage location (DN)	The distinguished name or naming context of the connection node.
Use SSL	Select to enable a secure socket layer connection.

Oracle Database Storage Settings

Setting	Description
Database connections	Click **Add** to launch the Add Connection String dialog, and enter the information required. Click **OK** to return to the Servers list. Then to initialize storage: 1. From the <Password Reset Server install>\WebServices directory (for example, C:\Program Files\Passlogix\v-GO SSPR\WebServices), locate the OracleTables.txt file and copy it to the Oracle DBMS workstation. 2. On the Oracle DBMS workstation, run the OracleTables.txt file, which will create the tables in Oracle that are necessary for the Password Reset storage repository.  Running this script will delete and re-create any existing Password Reset tables in Oracle DBMS. In the Password Reset Management Console, go to **System** > **Storage**. Select **Oracle** as the storage type. 3. Enter the connection string as noted above. Password Reset attempts connections in the order they appear in the list, from top to bottom. Use the up and down arrows to arrange the connection strings in the order in which connections should be attempted. To delete a connection string from the list, select the string in the list box and click **Delete**. Note that you cannot delete a connection string if it is the only connection in the list. In some cases, such as long database connection strings, the entire string is not displayed in the list box. Clicking on an item in the list box populates the Connection String text box with that item. The full string can then be viewed by scrolling in the text box, and if desired, modified and added as a new connection to the list.
Database timeout (seconds)	Enter a value (in seconds) that Password Reset should wait for a response from a database before moving on to the next database in the list. This value is not used in database connections if the connection string contains a "Connect Timeout" parameter.

SQL Server Storage Settings

Setting	Description

Connection string	The complete connection string to the database server; for example:
	`Provider=SQLOLEDB.1;Integrated Security=SSPI;Initial Catalog=SSPR;Data Source=Servername;`
	`Trusted_Connection=Yes`
	Click **Add** to add the connection to the Database Connections list. Multiple connections can be added for failover support. If more than one connection is entered, Password Reset iterates through the list in sequential order until either it has successfully connected or all connections have failed.

Database connections	Click **Add** to launch the Add Connection String dialog, and enter the information required. Click **OK** to return to the Servers list. Password Reset attempts connections in the order they appear in the list, from top to bottom. Use the up and down arrows to arrange the connection strings in the order in which connections should be attempted. To delete a connection string from the list, select the string in the list box and click **Delete**. Note that you cannot delete a connection string if it is the only connection in the list. In some cases, such as long database connection strings, the entire string is not displayed in the list box. Clicking on an item in the list box populates the Connection String text box with that item. The full string can then be viewed by scrolling in the text box and, if desired, modified and added as a new connection to the list.
Database timeout (seconds)	Enter a value (in seconds) that Password Reset should wait for a response from a database before moving on to the next database in the list. This value is not used in database connections if the connection string contains a "Connect Timeout" parameter.

Initialize Storage	
Initialize storage for ESSO-PR	Activates the first-time configuration tasks. If this option is checked, Password Reset automatically iterates through the new connections in the list and attempts to initialize them sequentially. If a connection fails to initialize, initialization stops and connections further down in the list will not be initialized. If this occurs, resolve the issue and then retry initialization.  **For Oracle Database:** Because of the steps you performed in the Database Connections section, this setting is unnecessary and unavailable for Oracle Database. You need only enter the following two settings.
Connect as (User Name)	The user name of a directory or database administrator.
Password	The password of the administrator.

Adding a Connection String

1. Enter the connection string for the server that holds the password reset information (users, password reset policies, enrollment questions and answers).
2. Click **OK** to return to the Storage Configuration tab when you are finished.

The string must be the complete connection string to the database server; for example:

- For Oracle DB: `Provider=OraOLEDB.ORACLE;Data Source=XE;User ID=system;Password=password`
- For SQL Server: `Provider=SQLOLEDB.1;Integrated Security=SSPI;Initial Catalog=SSPR;Data Source=Servername; Trusted_Connection=Yes`

You can use multiple servers for failover support. If you enter more than one server address, Password Reset iterates through the list, in sequential order, until either it has successfully connected to a server or all connection attempts have failed.

Setting Up the Enrollment Interview

When the user starts the enrollment process, Password Reset displays the Enrollment Interview.

The Enrollment Interview comprises a series of questions in two groups:

- Required questions
- Optional questions

The required and optional questions are called *system questions*. System questions are predefined and managed by the administrator using the Questions tab of the Oracle Enterprise Single Sign-On Administrative Console. See Configuring System Questions and Question Examples for more information.

When the end user has answered enough questions to meet the defined enrollment level, the Enrollment Interview ends.

If the user skips any optional questions, they may not meet the enrollment level threshold. If this scenario occurs, Password Reset begins the optional question set again, prompting the user to answer any questions they may have skipped.

Enrollment Level Setting

The Enrollment Level is specified on the Settings page. This feature allows the administrator to set the total points value that end users must accumulate in order to complete the enrollment interview process. This threshold removes the previous requirement that the administrator had to configure required questions with enough total value in points to meet the Authentication Success Level (Settings > Authentication thresholds).

Password Reset allows administrators to configure questions with enough points to meet the Enrollment Level by counting both the required and optional questions. The Enrollment Level must be at least equal to the Authentication Success Level. With both the Enrollment Level and Authentication Success Level thresholds, users have the flexibility to select questions they want to answer out of a pool of questions.

During the enrollment interview, starting questions can be optional or required. A progress bar shows the user's progress (in percentage) in satisfying the enrollment level threshold.

If the user reaches the end of the question set without enough points to meet the enrollment level, Password Reset displays a message stating that "You have not answered enough optional questions to satisfy the enrollment requirement. In order to complete the enrollment process, you must continue to answer questions until the progress bar reaches 100%." Password Reset will then begin the optional question set prompting the user to answer questions they previously skipped.

National Language Support

The initial enrollment dialog can be presented in the preferred language for each business unit as required by National Language Support (NLS). NLS is required for all languages supported by Password Reset.

The welcome text that appears on the initial page of the English enrollment interview is stored in an XML file called `UserText.xml`. The XML file names for the localized welcome pages take the form: `UserText.<language code>.xml`, where *<language code>* is replaced with the language code as denoted in the RFC 1766 format used by .NET. For example, the German XML file is named `UserText.de.xml`, the French XML file is named `UserText.fr-ca.xml`, and so forth. The files are

stored in the \WebServices folder. Password Reset loads all the files with the above naming pattern and uses the appropriate version to display the 'Welcome' screen of the enrollment page.

On the client side, the Windows interface passes the language the user installed within the URL to tell Password Reset to show the enrollment page in that language.

For a complete list of language codes, see Client Registry Settings in the Reference section of this guide.

Creating System Questions

Use the System Questions tab (under the Questions node) to create system questions for the Enrollment Interview. For instructions to edit questions, including enabling/disabling and changing question weights, see Editing System Questions. For suggested text and settings, also see Question Examples.

Security of the Response Repository

Password Reset stores the answers to the Enrollment Interview in encrypted form in the repository using the one-way SHA-1 hash algorithm. Additionally, 16 random bytes of entropy are added to enrollment answers before hashing.

Creating a New System Question

1. In the System Questions tab, select the **Language** in which to enter the question. The default language is always available.

   You can enter and configure the same questions in multiple languages. When you navigate to this tab and select a language from the drop-down list, your questions display in whichever language you select.

   As you add questions to this list, the line directly below the window keeps a running tally of the potential points a user can accumulate with correct and incorrect answers. The line appears in red type until you add questions with enough points for a user to reach the authentication threshold you specified on the Settings tab.

2. Click **Add** to launch the Edit Question dialog and begin entering and configuring questions.

Assigning Point Values to Questions

Secure implementation of self-service reset depends on the selection and weighting of the individual system questions. Here are some primary considerations for each question:

- **How secret the answer is.** How few people (ideally, none) are likely to know or be able to guess any given user's answer. The more secret the answer, the higher a point-value that can be assigned to the question if answered correctly in the Reset Quiz.
- **How personal the answer is.** How much a wrong answer ensures that the person taking the Reset Quiz is *not* the authorized user; for example, "Are you left-handed, right-handed, or ambidextrous?" Questions that call for personal answers can serve as "eliminators" in the Reset Quiz: few or zero points are awarded for a correct response, and more points deducted for an incorrect response.
- **How memorable and static the answer is.** This ensures that the user will recall the exact answer that he or she provided at enrollment. Questions that involve preferences (such as "what is your favorite ice cream") should have lower point-values for both correct and incorrect answers and are better suited as Optional questions. By comparison, questions that are based on unchanging and easily-recalled facts ("what is the name of the last high school you attended?") can have higher point-values for correct or incorrect responses; they are better candidates for Required questions.
- **The minimum number** of questions that must be answered in order to pass (or explicitly fail) the Reset Quiz. This is derived from the Success/Failure score thresholds and the point values you assign to each question for correct and incorrect responses.

See Question Examples for more information.

Configuring System Questions

System questions are those prepared by the administrator. See Creating and Editing System Questions for the procedure.

Each system question has the following settings:

- **The text of the question.** The question text should include any special format instructions that will help keep the answer that the end user provides at enrollment identical to the answer he or she will give in the Reset Quiz. The answer given in the Reset Quiz must be a case-sensitive string match (that is, have exactly the same spelling, punctuation, capital-letter use, and white space). For example, if the question is "What is your Social Security number?" note whether or not the response should include dashes between number segments.
- **The point-value to be added** to the total score when the question is answered correctly during the Reset Quiz.
- **The point-value to be subtracted** from the total score when the question is answered incorrectly during the Reset Quiz.
- **Whether the user is required to answer the question** in order to complete the Enrollment Interview. The user must provide an answer to any required questions. Optional questions are presented at the end of the Interview. Optional questions for which an end user declines to provide an answer will not appear in the Reset Quiz for that user.
- **The source of the answer.** By default, Password Reset requires that all the questions and weights used for reset are entered and set up by the administrator and answered by the user upon enrollment. Password Reset also works with external validator sources to simplify this process. An external validator can call data from various sources (such as a human resources database) that contain predefined answers. See External Validators for more information.
- **Constraints on what the end user can enter** as a valid answer, including:
  - The minimum length of the answer.
  - The format of the answer (such as numeric digit and punctuation usage), specified as a regular expression; for example, to require a Social Security number to be entered as digits separated by hyphens, use the expression:
    \d{3}-\d{2}-**\d{4}**
    For more information about regular expressions, refer to the reference at http://msdn.microsoft.com/.
  - Case-sensitivity; that is, whether upper case and lower case characters used in Enrollment Interview answers must exactly match those in Reset Quiz answers.
- **The language of the question.** You specify the language when you initially select to create a new question.The question can be displayed in any of the following languages:

English (default)	German	Norwegian	Slovak
Brazilian Portuguese	Greek	Polish	Spanish
Czech	Hungarian	Portuguese	Swedish
Danish	Italian	Romanian	Thai
Dutch	Japanese	Russian	Traditional Chinese
Finnish	Korean	Simplified Chinese	Turkish
French/Canadian French			

Editing System Questions

Use the System Questions tab (under the Questions node) to enter or modify the current set of system questions. On this tab, you can:

- Create new questions (in multiple languages, if desired).
- Assign point values.
- Set Required/Optional status,
- Specify answer sources.
- Perform validity checks on the end user's answers.
- Select Users and Groups to allow or deny access to any question.
- Disable system questions; that is, remove them from the Enrollment Interview.

  Questions that you disable from the Enrollment Interview will still appear in the Reset Quiz to end users who have already provided answers to the disabled question, but they will no longer be presented to users who subsequently enroll or re-enroll.

See Creating System Questions, Editing System Questions, and Setting Up the Enrollment Interview for more information.For suggested text and settings, also see Question Examples.

Question Text	
Question text	The text of the question, *in the default language*, as it is displayed to the end user. It is advisable to include formatting instructions or examples. For instance, if asking for a telephone number, provide an example, such as "(333) 555-1234" to insure consistency between the Enrollment Interview and the Reset Quiz.
<Language> text	If you are using Password Reset in more than one language, enter the translated question text in this field.

Question Properties	
Correct response weight	Specify the number of points to add to the end user's score if the question is answered correctly. If modifying this field, see Changing Question Weights.
Wrong response weight	Specify a negative number to indicate the number of points to deduct from the end user's score if the question is answered incorrectly. If modifying this field, see Changing Question Weights above.
Enabled	**If checked:** This question is used in the Enrollment Interview and in the Reset Quiz. **If unchecked:** This question is not used in the Enrollment Interview. It is used in a Reset Quiz only if :1) it has previously been enabled and 2) if the end user has answered the question in an Enrollment Interview.
Required	**If checked:** This is a Required question. The end user must provide an answer to the question in order to complete enrollment. A Required question is always used in the Reset Quiz. **If unchecked:** This is an Optional question. The end user can skip this question in the Enrollment Interview, in which case the question will not be used in this end user's Reset Quiz. If the end user supplies an answer to an Optional question, the question is used in the Reset Quiz only after all Required questions have been asked.

Answer Constraints	
Answer source	Specify the source from which the answer to this question should come. Select the default, User supplied, if the user will supply the correct answer during the Enrollment Interview. If the source is not supplied by the user, select the external validator location from the drop-down list. See Working with External Validators for more information.
Minimum answer length	Specify the minimum number of characters the end user must enter for a valid answer.
Answer format	Specify the format and punctuation for the answer using a regular expression. For example, you can specify the date format "12/1/1983" with the expression \d*\d/*\d\d/\d{4} (allowing the entry of single or double-digit month and day and requiring a four-digit year). If you want to require the end user to type a Social Security number with dashes, use the expression \d{3}-\d{2}-\d{4} This setting is optional.
Case sensitive	**If checked:** The end user's answer is checked for consistent use of upper- and lower-case characters. **If unchecked:** The end user's answer is not checked for consistent use of upper- and lower-case characters.

Access Control	
Allow	Click the **Add** button to launch a window from which to select users and groups that will receive this question.
Deny	Click the **Add** button to launch a window from which to select users and groups that will not receive this question.  By default, if any user or group is denied access, all users and groups are denied access except those specified in the Allow list.

Modifying or Disabling a System Question

1. In the Questions tab, select the **Language** in which to modify the question.
2. Do one of the following:
   - Double-click a question.
   - Select a question and click **Edit**.
3. In the Edit Question dialog, do any or all of the following:
   - Edit the text and then click **OK**.
   - Edit the weights and then click **OK**.

 If you change the Correct Response Weight or Wrong Response Weight, a Response Weights Changed dialog box appears. See Changing Question Weights below.

- Clear **Enabled** to remove the question from the Enrollment Interview.

  
  After you create a question, you cannot change whether to require it or the answer constraints settings.

- Select or deselect the **Users and Groups** that you want to assign this question to.

  
  You cannot assign questions to users or groups when using a database (such as Microsoft SQL Server or Oracle Database) for your repository. The settings are available for editing, but the assignments will not be written to the database.

4. Click **OK** to save your changes, or click **Cancel** to abandon your changes, and return to the System Questions tab.

Changing Question Weights

The weight of a question may be modified if it is determined to be more or less effective in the reset test. A possible ramification of modifying a correct response weight after a question has been created is that enrolled users might not be able to pass the reset test due to an insufficient score, even if they answer all the questions correctly. To avoid such an occurrence, if a correct response weight is changed, a dialog box appears, presenting the option to:

- **Modify this question:** When this option is selected, the change will be made to this question. Note that users who answered this question during enrollment may not be able to reset their password if the correct response weight is set too low.

  or

- **Disable this question and create a new question:** Disables this question and creates a new question with the changes. The benefit is that currently enrolled users will not be affected by the changes. Note that disabled questions are shown as "disabled" (dimmed) in the System Questions list.

Question Examples

The following table provides some examples of system questions, recommended as Required or Optional, with suggested point-values based on the default score thresholds of -100 to 100 points.

Required Questions

These questions are good prospects for Required questions. Note that all of these questions have answers that are facts on record. Oracle strongly recommends that your selection of Required questions have answers that come from as many *different sources* as possible. For example, in some states, a driver's license may display the Social Security number and date of birth.

Question	Required?	Points if Correct	Points if Incorrect
What is your Social Security number (numbers only, no spaces)?	Y	10	-75
What is your date of birth (mmddyy)?	Y	25	-50
In which city were you born?	Y	25	-50
What is your mother's maiden name?	Y	25	-75
What was the name of the first school you attended? (or "...that you remember attending)?"	Y	25	-25
What is the name of the last high school that you attended?	Y	25	-25

Eliminators

These questions are "eliminators" because the authorized end user is very unlikely to answer them incorrectly. The answers are personal, and therefore have low or no point-value for correct answers and high negative point-value if answered incorrectly.

Question	Required?	Points if Correct	Points if Incorrect
What is your eye color?	Y	0	-75
Are you left/right handed, or ambidextrous (l, r, or a)	Y	5	-75
What is your gender (male or female)?	Y	0	-75

Optional Questions

These questions are acceptable as Optional questions only, because they may not apply to all enrollees.

Question	Required?	Points if Correct	Points if Incorrect
What was the name of your first or favorite pet?	N	25	-25
What color was your first car?	N	25	-25
What is your wife's maiden name?	N	25	-25
How many siblings do you have?	N	25	-25
What is your spouse’s date of birth? (mmddyy)	N	25	-25

Configuring Reset Authentication

When an end user requests a password reset, Password Reset displays the Reset Quiz.

The Reset Quiz is a series of questions drawn from the system questions that the end user answered in the Enrollment Interview. The Reset Quiz presents all of the required questions one at a time, in random order, for the end user to enter a response. If there are no required questions set up, the Reset Quiz presents the optional questions only. With each response, the preset point-value for correct answers is added to the total score, or the point-value for incorrect answers is deducted.

After all of the required questions have been presented, the Reset Quiz continues until either: a) all Optional questions have been presented, or b) the end user answers a sufficient number of questions to meet either of two score thresholds:

- If the end user's score equals or exceeds a preset Success score threshold, the New Password dialog box appears. The end user then enters and confirms a new password, and returns to the initial logon dialog box.
- If the end user's score equals or falls below a preset Failure score threshold, the Reset Quiz ends with no password reset, and the end user returns to the initial logon dialog box. Password Reset records the quiz session as an explicit failure, indicating that the end-user failed the quiz by incorrectly answering questions.

If the end user answers all of the questions without achieving either score threshold, the Reset Quiz ends with no password reset, and the end user returns to the initial logon dialog box. Password Reset records the quiz session as an *implicit* failure indicating that the end-user failed the quiz with an insufficient score to pass or explicitly fail.

The Success and Failure score thresholds are set by the administrator in the Settings page of the Password Reset Management Console. The text and point-values for individual system questions are set in the System Questions page.

Also see Reset Service Settings for more information.

Score Thresholds

The score thresholds are the point-values that determine whether the end user passes or fails the Reset Quiz.

- The Success value determines the score (the point-value total achieved for the quiz) that end users must achieve in order to reset their passwords.
- The Failure value determines the minimum (that is, a negative) score that end users can accrue by answering Reset Quiz questions incorrectly. If the end user's score falls below this setting, the Reset Quiz ends without a password reset.

See Reset Service Settings for more information.

Multi-Domain Support

You can configure Password Reset to reset Windows passwords and unlock Windows accounts in its own domain or any domain you designate as trusted.

Multi-domain support requires the following conditions:

- There must be valid two-way trusts between the Password Reset domain and other domains.
- The Password Reset reset service user account must be a member of the local administrators group of the trusted domain.
- All the domains must share the same settings as the Password Reset server, such as password complexity, alerts, questions, and so forth.

Setting Up Multi-Domain Support

In the Management Console, select the domain you want to designate as trusted from any of the following screens:

- The drop-down menu in the Edit Users/Groups dialog box.
- The Questions Tab, when you edit existing questions or create a new one.
- The Users tab.

When you make a domain selection on any one of these screens, that change is reflected in all the other screens. The domain that you select is saved in the registry value, HKLM\SOFTWARE\Passlogix\SSPR\SSPRService\DisplayDomain.

When performing queries again a trusted domain, you may receive the error message: "The server is not operational." This can occur if the guest account on the trusted domain is turned on, because that account does not have the rights to enumerate users

To eliminate this error, do one of the following:

- Turn off the guest account in the trusted domain.
- Create the same trusted domain user account in the trusted domain.

Editing Reset Service Settings

Use the **Settings** tab (under the Settings node) to modify general settings for the Reset Quiz. When you have completed your changes, click **Submit** to apply your new settings to Password Reset.

Authentication Thresholds	
Authentication success level	The score (the point-value total achieved for the quiz) that end users must achieve in order to reset their passwords. The default value is 100.
Authentication failure level	The minimum (negative) score that end users can accrue. If the end user's score falls below this setting, the Reset Quiz ends without a password reset. The default value is −100.
Enrollment level	The score (the point-value total achieved for the enrollment interview) that end users must achieve in order to complete the enrollment interview. The default value is 100. The **Enrollment Level** must be at least equal to or greater than the **Authentication Success Level**.

Reset Lockout	
Lockout threshold (attempts)	The number of consecutive unsuccessful reset attempts permitted. If an end user fails the Reset Quiz this number of times in a row, no further Reset Quiz attempts are permitted for the Lockout Duration interval.
Lockout duration (hours)	The time period, in hours, that an end user is not permitted to take the Reset Quiz. The Lockout Duration begins when the end user consecutively fails the Reset Quiz the number of times given for Lockout Thresholds.  To override lockout for individual end users, click the **Users** tab, select the end user from the list, then click **Unlock**.

Forced Enrollment	
Deferrals allowed	The maximum number of times a user can defer Password Reset enrollment. When the user exceeds the maximum number of deferrals, he must complete the enrollment process in order to be allowed to log on.  If you wish, you can exclude certain users from forced enrollment. See Excluding Users from Forced Enrollment for detailed instructions.

User E-mails	
Required during enrollment	Controls whether or not users are required to enter an e-mail address during the enrollment process.
E-mail format (regular expression)	Controls the valid format of the user e-mail address. The default setting allows for most acceptable e-mail formats.

Reset Experience	
Show "Unlock account only" option	Controls whether or not a user is given the option to unlock his or her account rather than reset the password. This option is presented after a user passes the Reset Quiz.
Enable "Display temporary password" mode	Controls whether or not Password Reset should allow the end user to reset the password regardless of the Active Directory password policy. With this checkbox enabled, Password Reset overrides any AD restrictions that are in place and provides the user with a temporary password. The user can then log on with that temporary password and change it through Windows.

Also see Configuring Reset Authentication for more information.

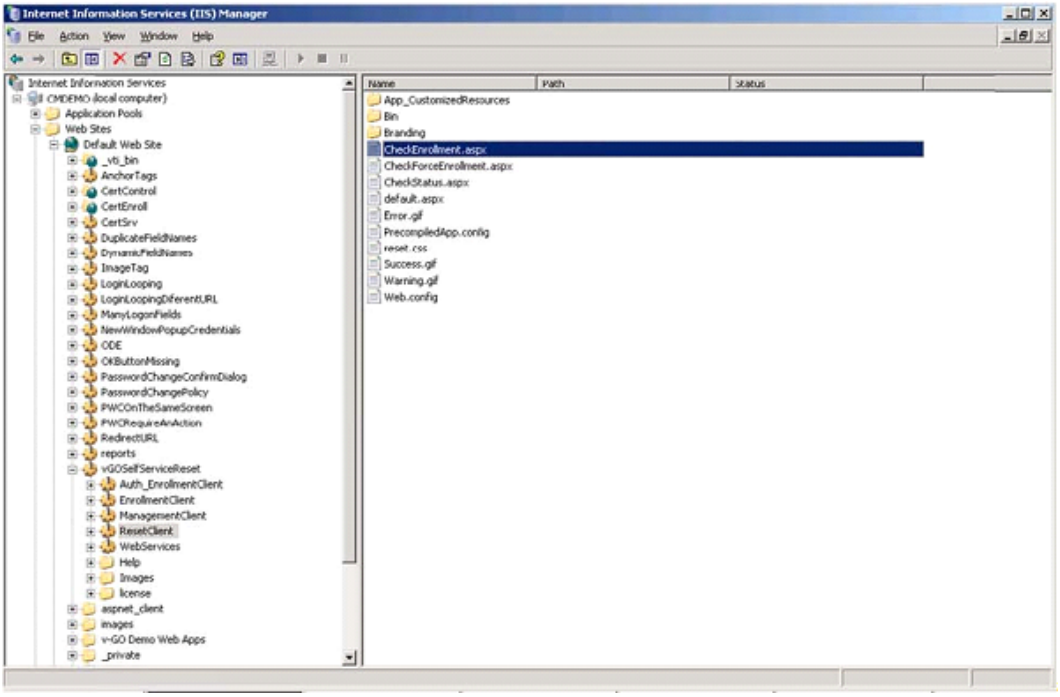
Excluding Users from Forced Enrollment

You have the option to exclude users from forced enrollment. The procedures differ depending on which version of Internet Information Services (IIS) you are running.

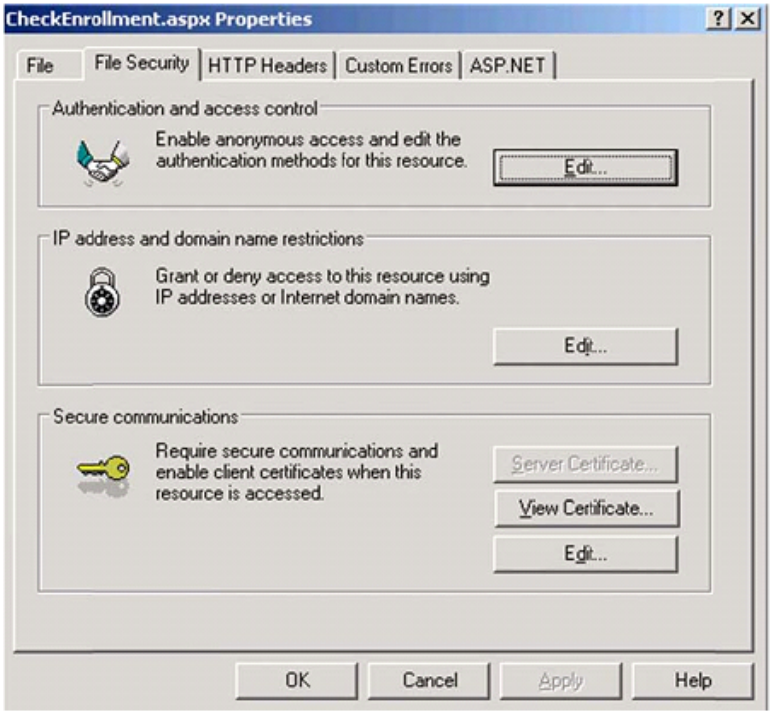
Internet Information Services 6

To exclude a user from forced enrollment with IIS Manager 6:

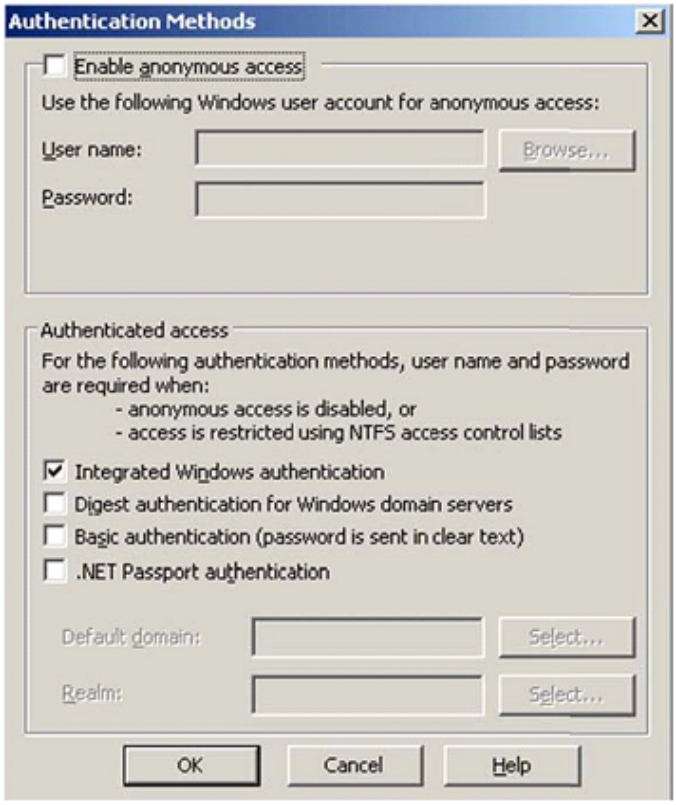
1. Open the Internet Information Services (IIS) Manager tool.
2. Locate the vGOSelfServiceReset virtual Web directory, and expand it.
3. Locate the "CheckEnrollment.aspx" file beneath the vGOSelfServiceReset\ResetClient virtual directory.
4. Right-click **CheckEnrollment.aspx**, and select **Properties**.



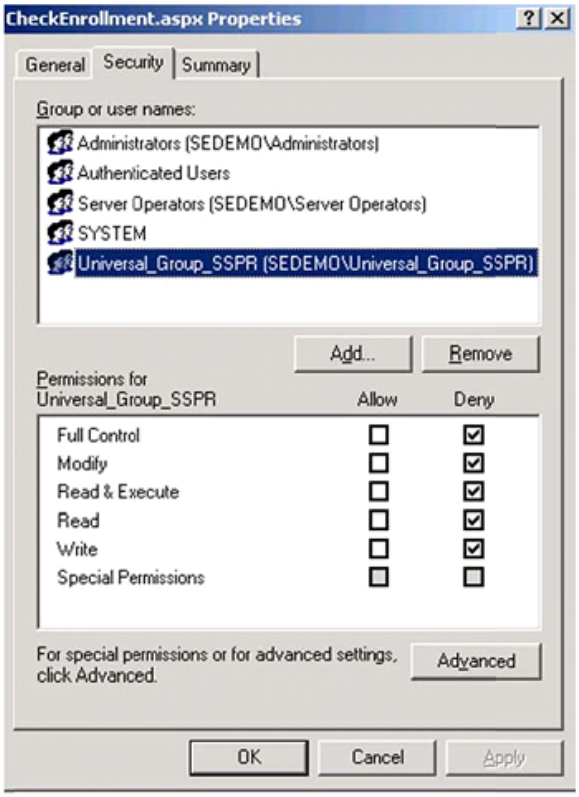
5. In the properties of "CheckEnrollmentStatus.aspx," click the **File Security** tab, then click **Edit** in the "Authentication and access control" section.



6. In the "Authentication Methods" dialog box, uncheck **Anonymous Access** so that only "Integrated Authentication" is selected.



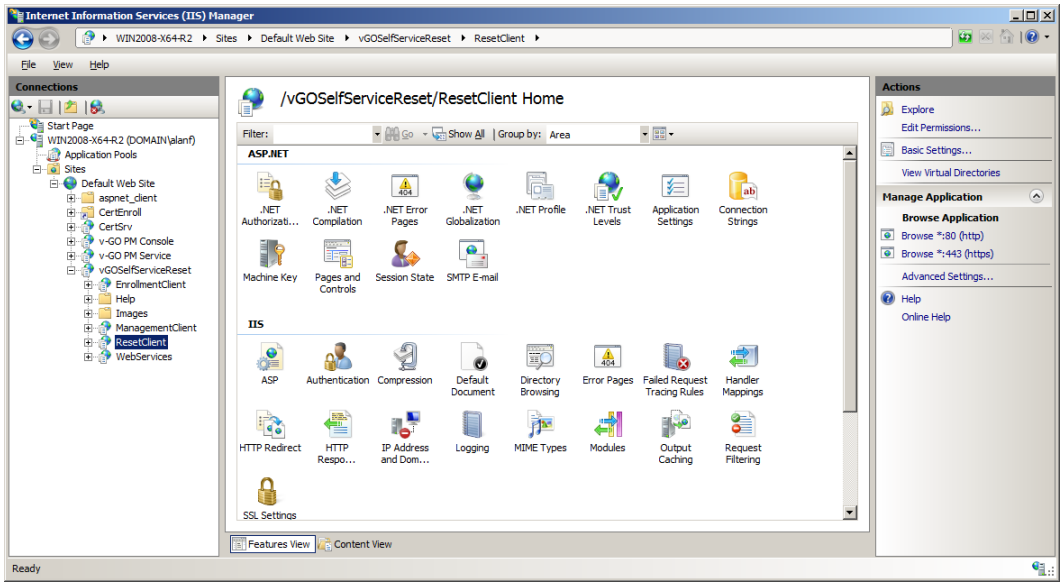
7. Navigate to C:\Program Files\Passlogix\v-GO SSPR\ResetClient, and set permissions on the "CheckEnrollment.aspx" file.
8. Add the Exclusion Group(s) with "Deny" permissions checked. In the following example, the Exclusion Group is Universal_Group_SSPR.



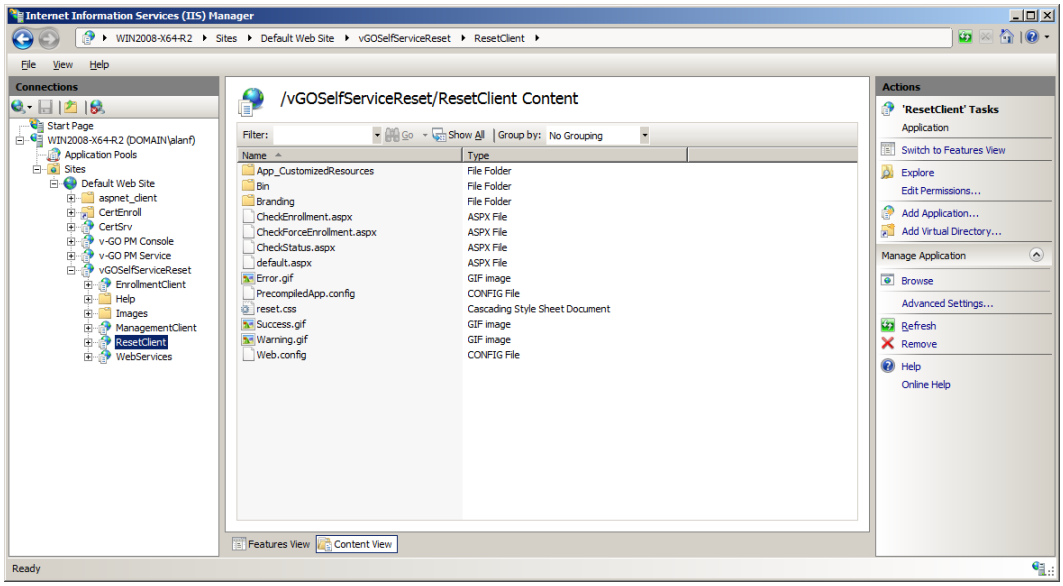
Internet Information Services 7

To exclude a user from forced enrollment with IIS 7:

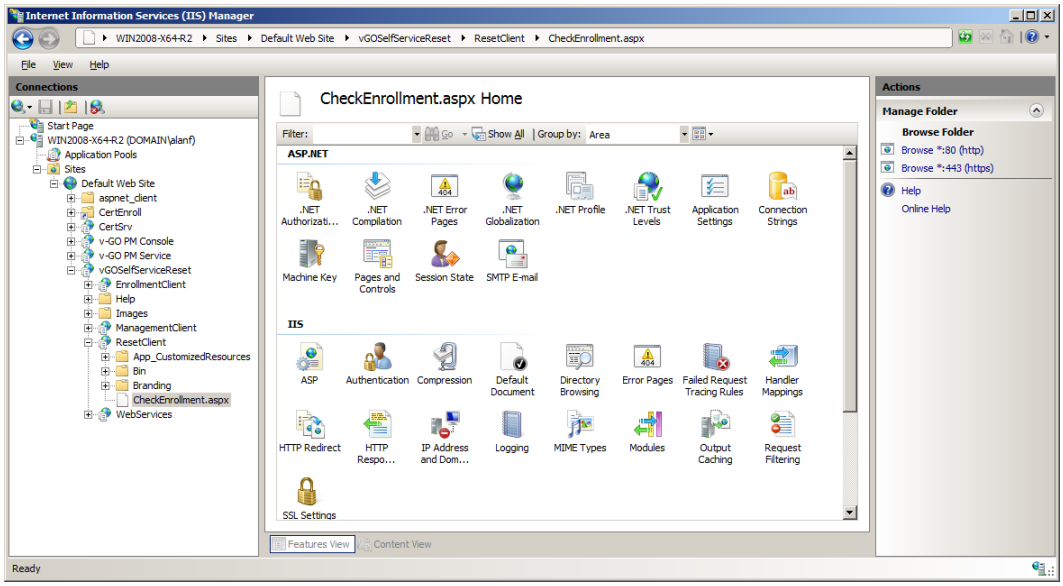
1. Open the Internet Information Services (IIS) Manager tool and expand the **Default Web Site**. Then expand the **vGOSelfServiceReset** virtual web directory.
2. Select the **ResetClient** virtual directory.



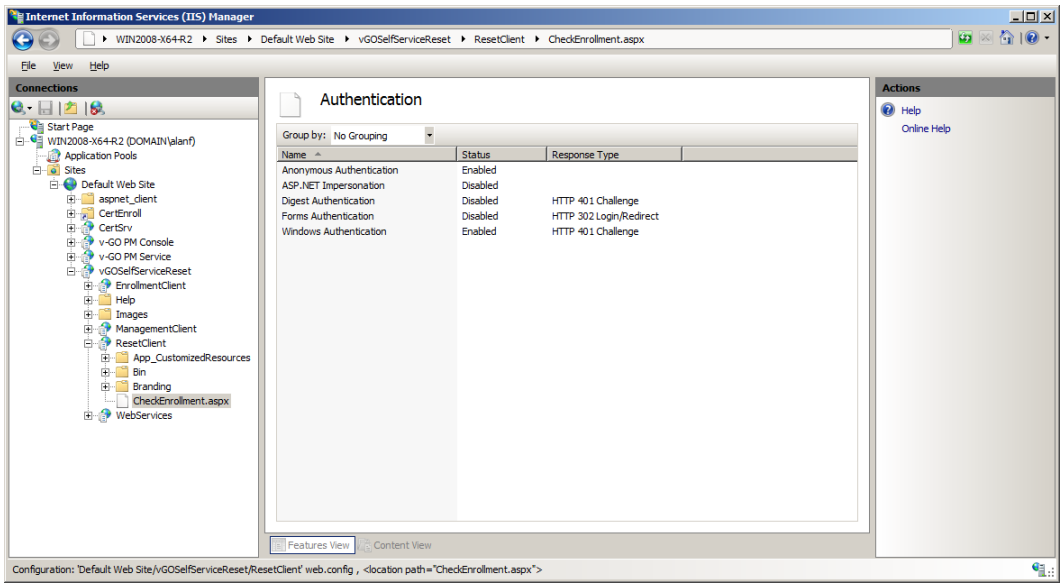
3. Select **Content View** at the bottom of the right-hand pane.



4. Right-click **CheckEnrollment.aspx**, and select **Switch to Features View**.



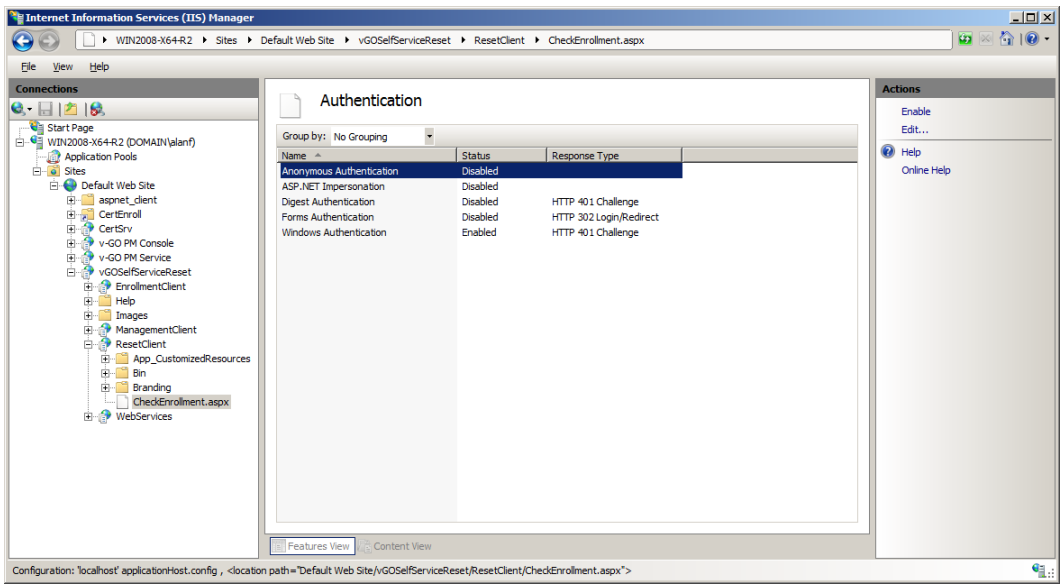
5. In the IIS section in the right-hand pane, double-click **Authentication**.



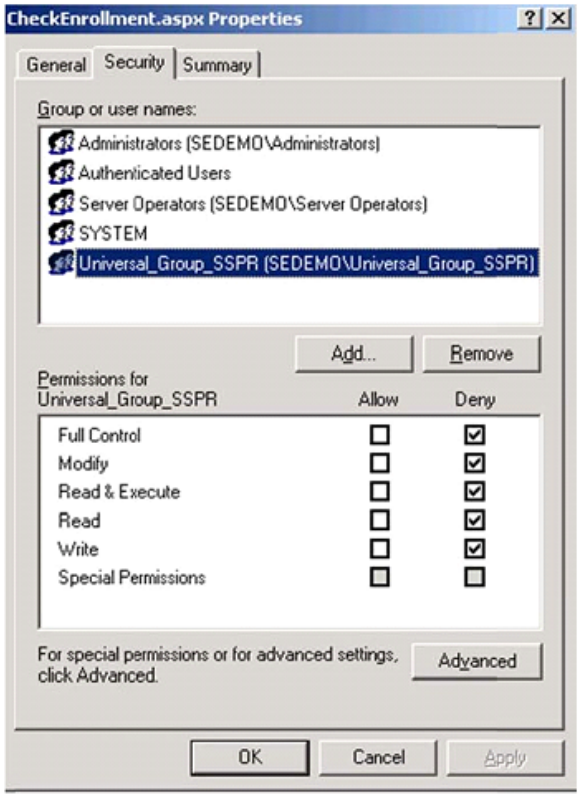
6. Right click **Anonymous Authentication** and select **Disable**.

   Now, the only authentication method enabled for the CheckEnrollment.aspx should be Windows Authentication.

7. In the left-hand pane right-click **CheckEnrollment.aspx** and select **Edit Permissions...**.



8. Add the Exclusion Group(s) with Deny permissions checked. In the following example, the Exclusion Group is Universal_Group_SSPR.


CheckEnrollment.aspx Properties
General
Security
Summary
Group or user names:
Administrators (SEDEMO\Administrators)
Authenticated Users
Server Operators (SEDEMO\Server Operators)
SYSTEM
Universal_Group_SSPR (SEDEMO\Universal_Group_SSPR)
Add...
Remove
Permissions for Universal_Group_SSPR
Allow
Deny
Full Control
Modify
Read & Execute
Read
Write
Special Permissions
For special permissions or for advanced settings, click Advanced.
Advanced
OK
Cancel
Apply

Password Complexity

Use the Password Complexity tab (under the Settings node) only to adjust the password constraints to make certain that they match or are within the constraints of the Group Policy of the Windows domain. This setting does not apply to end- user passwords (see Note, below). In typical usage (that is for typical group policies), these settings need not be changed.

When you have completed your changes, click **Submit** to apply your new settings to Password Reset.

In order for Password Reset to reset end-user passwords, the Reset Service account performs an intermediate password reset as a proxy for the user. The Reset Service account generates a password internally that must conform to the domain's group policy, but is not subject to the domain's minimum password age policy. The password complexity settings in this dialog box apply only to that intermediate password, not to end-user passwords.

Password Complexity Options

Constraints	
Minimum length	Minimum internal password length: 1-63 (default: 16)
Maximum length	Maximum internal password length: 1-63 (default: 16)
Number of times characters can repeat	0-62, default: 7

Alphabetic Characters	
Allow uppercase characters	Select to allow uppercase characters (default: allowed)
Allow lowercase characters	Select to allow lowercase characters (default: allowed)

Numeric Characters	
Allow numeric characters	Select to allow numeric characters (0-9), (default: allowed)
Minimum occurrences	1-63, default: 1
Maximum occurrences	1-63, default: 1

Special Characters	
Allow special characters	Select to allow special characters (non-alphabetical, non-numeric) (default: not allowed)
Minimum occurrences	1-63, default: 1
Maximum occurrences	1-63, default: 1
Special characters list	Characters that may be used (default: !@#$%^&*()_-=+[]|.?)

Alerts

Use the Alerts tab (under the Settings node) to configure Password Reset to email administrators and/or users with notification of significant user-generated events. You configure this alert with the UserText.xml template included with the product in the directory: `C:\program files\Passlogix\v-GO SSPR\WebServices`.

The following table lists the variables in the UserText.xml file.

E-Mail Template Variable	Description
$USER	The user's "display name" (full name) as defined in Active Directory
$ACCOUNT	The user's username in the format: domain\username.
$ADMIN	The administrator's name (as entered in the Alerts tab of the Administrative Console)
$DATETIME	The date and time when the event occurred; for example: "7/23/2012 3:24 PM"
$ATTEMPTS	The number of times the user has failed the reset quiz
$PRODUCT	ESSO-PR
$FULLPRODUCT	Oracle Enterprise Single Sign-On Password Reset

You can see a sample alert by clicking **Send Test E-mail to Admin**. When you are satisfied with the results, click **Submit** to apply your new settings to Password Reset.

E-mail Settings	
Enable e-mail alerts	Select to activate e-mail alerts
"From" e-mail address	The e-mail address that originates the alert. This can be any valid email address for the SMTP mail server specified below.
Admin e-mail address	The e-mail address of the administrator to whom the alerts will be sent.
Admin name (displayed in e-mails)	The name of the administrator to whom alerts will be sent. This name will be displayed in the e-mails.
SMTP mail server	The name of the outbound mail server.

Alert Conditions	
User fails a reset attempt	Select who should receive e-mail alerts if a user fails a reset attempt: the Admin, the User, or both. This field is only active if **Enable e-mail alerts** is selected. Also see Reset Service Settings for the lockout controls.
User successfully resets password	Select who should receive e-mail alerts if a user successfully resets his password: the Admin, the User, or both. This field is only active if **Enable e-mail alerts** is selected.
User is locked out of Reset Quiz	Select who should receive e-mail alerts if a user fails the Reset Quiz more times than the threshold permits: the Admin, the User, or both. This field is only active if **Enable e-mail alerts** is selected.

Logging

Use the Logging tab (under the Settings node) to enable logging, specify the syslog server and port, and select the types of events that should generate syslog messages. Password Reset sends these messages to a syslog listener, which in turn generates notifications to apprise the administrator of user enrollment and reset events.

Enter the following information and click **Submit** to apply your new settings to Password Reset.

SysLog	
Enable	If checked, syslog logging will be enabled.
Server name/IP address	The name or IP address of the syslog server.
Server port	The port where the syslog server is listening for Syslog messages (default port is 514).

Event Filters	
Start	Check to have Password Reset send a message when the user begins an enrollment or reset session.
Cancel	Check to have Password Reset send a message when the user cancels an enrollment or reset session.
Success	Check to have Password Reset send a message when the user successfully completes an enrollment or reset session.
Fail	Check to have Password Reset send a message when the user fails the reset session.
Locked out	Check to have Password Reset send a message when the user gets locked out of the Password Reset system (by failing too many reset quizzes).

Reporting

Use the Reporting tab (under the Settings node) to configure generation of reports on user activities. Refer to the Reporting section of this guide for more information on using this tool.

The settings on this tab configure the Reporting tool and database. Click **Submit** to apply your new settings.

Reporting Settings

Enable	Check this box to enable Reporting.
Retry interval	Defines timeout in minutes between sequential operations of the Reporting Service Cache offloading events to the database. Default is 30. An interval is necessary to reduce database connection load.
Batch size	Defines the group size of events to be sent to the database Stored Procedure at one time. Default is 100. For example, if you have 1000 events in the Reporting Service cache and the Batch Size = 100, you will have 10 database Stored Procedure calls.
Cache limit	Number of reporting events to be cached. Once this number is reached, the oldest events are discarded. Default is 4,294,967,295. For example, if the batch size is 100, and an end users system cannot connect to the reporting service, it will keep logging events. Once it gets to 4,294,967,295, the oldest events will be discarded.

Database Settings

Connection string	Database connection string in the OLE DB format: • "Provider=sqloledb; Data Source=myServerName; Initial Catalog=myDatabaseName; User Id=myUsername; Password=myPassword" or • Provider=SQLOLEDB.1;Integrated Security=SSPI;Persist Security Info=False;Initial Catalog=<Database>;Data Source=<DBServer>
Stored procedure	The name of the stored procedure in the database. When encoded events are sent to the database, the stored procedure is called to decode the XML file and store the events in the database.

Configuring the Enrollment User Interface

Use the **Enrollment UI** tab (under the Settings node) to customize the Enrollment Interview User Interface.

You can edit the look and feel of all Password Reset Client pages (the Enrollment and Reset interviews, not the Management Console). This page allows you to adjust colors, fonts, and logos on the Enrollment user interface.

The choices you make on this tab become the Default style settings. You can create additional styles by performing the following steps:

1. Shut down the Oracle Enterprise Single Sign-On Administrative Console.
2. In C:\Program Files\Passlogix\v-GO SSPR\WebServices\Templates, select the default.xml and copy it.
3. Paste the copy into the same directory.
4. Select the copied file and rename it. The new style will be available in the drop-down when you relaunch the Oracle Enterprise Single Sign-On Administrative Console. You can select it to create and save an entirely different look and feel while still retaining the Default style.

Enter the following information and click **Submit** to apply your new settings to Password Reset.

Status Panel	
Text color	Select the color for the text in the status panel. 1. Click the ellipsis "**...**" button to launch the color picker. Then either: • Select a standard color swatch. or 1. Click **Define Custom Colors>>** to mix a color of your choosing. 2. Use the slider or enter a color's HSL or RGB values, and click **Add to Custom Colors**. 3. Select the new color in the custom color swatches and click **OK**.
Background	From the drop-down list, select to use either a solid color or background image. • Choosing **Select solid color...** launches the color picker. Follow the same procedure as above to choose a color. • Choosing **Select image...** launches a dialog that lets you choose from all images in the %SSPR%\Images folder on the server.  There is no size requirement for this image. For reference, the Oracle status panel background image is 408x28.

Side Panel	
Normal text color	Select the text color for the unhighlighted category text in the side panel. Follow the same procedure as above to choose a color.
Current step text color	Select the text color for the current step text in the side panel. Follow the same procedure as above to choose a color.
Background	From the drop-down list, select to use either a solid color or background image. Follow the same procedure as above.  There is no size requirement for this image.

Page	
Background	From the drop-down list, select to use either a solid color or background image. Follow the same procedure as above.  There is no size requirement for this image.
Border color	Select the border color for the page. Follow the same procedure as above to choose a color.
Text font	Select the font to be used for the Enrollment UI. Click the ellipsis "**...**" button to launch the Font window. Highlight the desired font and click **OK**.  The font list is generated from fonts installed on the server. To add a font to the list, install it on the server.

Buttons	
Enable style	Check this box to activate the button style you create in this section.
Normal color	Select the normal color for buttons in the Enrollment UI. Follow the same procedure as above to choose a color.
Hover color	Select the hover color for buttons in the Enrollment UI. Follow the same procedure as above to choose a color.
Text color	Select the text color for buttons in the Enrolment UI. Follow the same procedure as above to choose a color.

Top Panel	
Text Color	Select the text color to be displayed for the text in the top panel of the Enrollment UI. Follow the same procedure as above to choose a color.
Background	From the drop-down list, select to use either a solid color or background image. Follow the same procedure as above.  There is no size requirement for this image. For reference, the Oracle status panel background image is 408x47.

Logo	
Image	Select the logo image to appear in the top left area of the Enrollment UI. Follow the same procedure for selecting a background image above. For images to appear in this list, they must exist in the %SSPR%\Images folder.  There is no size requirement for this image. For reference, the Oracle enrollment logo is 146x47.

Main Panel	
Text Color	Select the color for the text in the main panel. Follow the same procedure as above to choose a color.
Background	From the drop-down list, select to use either a solid color or background image. Follow the same procedure as above.  There is no size requirement for this image. For reference, the Oracle main panel background image is 408x273.

Configuring the Reset User Interface

Use the Reset UI dialog box (under the Settings tab) to customize the Reset User Interface.

You can edit the look and feel of all Password Reset Client pages (the Enrollment and Reset interviews, not the Management Console). This page allows you to adjust colors, fonts, and logos on the Reset User Interface.

Changing the Reset User Interface Through the Registry

Some user interface settings are configurable through registry settings only. For instance:

- The Reset User Interface, by default, has fields pre-populated with the username and domain of the last Windows account to log on to the workstation. You can set the message above these fields to display a prompt that reads, "To reset your network password, please type in your user name, choose the domain, and click OK to continue."

  See the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide* for more information on the registry settings for the above option.

- The title bar for the enrollment and reset windows, by default, reads, "Oracle ESSO-PR." You can change this window title to suit your company's needs.

- The password reset link message, by default, reads, "Forgot your password? Click here to reset it." You can change the message in this link (registry settings for this configuration apply only to Windows 7).

  See the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide* for more information on the registry settings for the above options.

Error messages can be customized. See Customizing Reset Messages for more information.

Enter the following information and click **Submit** to apply your new settings to Password Reset.

Logo	
Image	Select the logo image to appear in the reset window. Click the ellipsis "**...**" button to launch a window that lets you choose from all images in the %SSPR%\Images folder on the server.  There is no size requirement for this image. For reference, the Oracle reset logo is 106x29.

Window	
Border Color	Select the border color for the reset box: 1. Click the ellipsis "**...**" button to launch the color picker. Then either: • Select a standard color swatch. or 1. Click **Define Custom Colors>>** to mix a color of your choosing. 2. Use the slider or enter a color's HSL or RGB values, and click **Add to Custom Colors**. 3. Select the new color in the custom color swatches and click **OK**.
Background	From the drop-down list, select to use either a solid color or background image. • Choosing **Select solid color...** launches the color picker. Follow the same procedure as above to choose a color. • Choosing **Select image...** launches a dialog that lets you choose from all images in the %SSPR%\Images folder on the server.  There is no size requirement for this image. For reference, the Oracle reset window background image is 450x350.
Normal text color	Select the text color for error messages that appear during the reset process. Follow the same procedure as above to choose a color.
Error color	Select the text color for the unhighlighted category text in the side panel. Follow the same procedure as above to choose a color.
Version info color	Select the text color for version information shown on the reset window. Follow the same procedure as above to choose a color.

Buttons	
Enable style	Check this box to activate the button style you create in this section.
Normal color	Select the normal color for buttons in the Reset UI. Follow the same procedure as above to choose a color.
Hover color	Select the hover color for buttons in the Reset UI. Follow the same procedure as above to choose a color.
Text color	Select the text color for buttons in the Reset UI. Follow the same procedure as above to choose a color.

Page	
Background	From the drop-down list, select to use either a solid color or background image. Follow the same procedure as above.  There is no size requirement for this image.
Text font	Select the font to be used for the Enrollment UI. Click the ellipsis "**...**" button to launch the Font window. Highlight the desired font and click **OK**.  The font list is generated from fonts installed on the Password Reset server. To add a font to the list, install it on the server.

Customizing Reset Messages

When the user attempts to change a password and cannot, due to either an account or password policy restriction that you have set, the user receives an error message explaining why the attempt was unsuccessful. The Administrator has the ability to customize the most common of these error messages through the Management Console to help the user to correct the error.

Following are the customizable error messages and the instances that would prompt their display:

Message	Message Code	Description
Password has been successfully reset.	Text_ResetSuccess	The password reset attempt was successful.
Your account has been successfully unlocked.	Text_UnlockSuccess	The attempt to unlock the account was succesful.
Your temporary password is "{0}".	Text_TempPassword	Provides the user with a temporary password after completion of the reset quiz.  Be certain to include the **{0}** syntax in this message. Password Reset replaces this string with the temporary password
** Thank you for using $PRODUCT. ** ** You may not be able to log on immediately because it takes time for account updates to propagate throughout the network. **	Text_Success	Informational message that follows each of the succcess messages above.  Password Reset replaces the **$PRODUCT** string with the product name.
Access Denied	Error_AccessDenied	There is a configuration error that the Administrator needs to rectify in order for the user to continue.
Bad Password	Error_BadPassword	The user entered a password that does not fulfill the password policy requirements.
Click here to reset the enrollment session.	Text_ResetSession	This text instructs the user to click to be directed to a URL that links to the reset session.
Session is invalid.	Error_ SessionInvalid	The user has exceeded the permissible interval of inactivity while taking the reset quiz.

Message	Message Code	Description
The answers provided failed to satisfy the requirements necessary to continue with the reset.	Error_FailQuiz	The user provided enough incorrect answers to reach the failure threshold.
The reset service is currently not available. Please contact your administrator for more information.	Error_ ServiceNotRunning	The SSPRChangePasswordSvc service is not running on the Password Reset server.
Error retrieving user data. Please make sure the specified user is enrolled.	Error_UnknownUser	The user who is attempting to log on has not enrolled in Password Reset.
User Cannot Change	Error_ UserCannotChange	The user is attempting to change a password in a time frame or manner contrary to the policy that the Administrator has defined.
User Not Found	Error_UserNotFound	The user's account has been deleted from Active Directory between the time of enrollment and the current attempt to access the account.
Your account has been locked out.	Error_LockedOut	The user has exceeded the permissible number of failures taking the reset quiz and has been locked out of Password Reset. The user must wait until the Administrator unlocks the account or the lockout interval elapses.

You add this setting to the Server registry. See the Password Reset Registry Settings section of the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide* for more information.

Example

In the following example, you will change the 'Bad Password' error message. If the user enters a password that does not comply with the password policy, the user receives the standard error message, "The password did not meet password policy requirements."

Perhaps you want to inform the user how to select a policy-compliant password, and so you want to add more information to this message. To change this message:

1. From the Start menu, select **Run...**
2. Open the registry by entering `regedit`.
3. Select the registry key: `HKLM > SOFTWARE > Passlogix > SSPR > SSPRService`.
4. Create a new DWORD value by right-clicking the SSPRService folder and clicking **New > DWORD value**.
5. Name the registry setting `Reset_CustomizedErrorMsg` and assign a value of **1** to activate it. This setting specifies the directory from which the Server retrieves the error message: `C:\Program Files|Passlogix\v-GO SSPR\ResetClient\App_CustomizedResources`.

6. Select the .ini file that you want to edit and open it in a text editor.

> The Server retrieves the error message in the language that the user selected during enrollment. If the user selected English, the Server uses the `ResetErrorStrings.ini` file. Otherwise it uses the corresponding language's .ini file. The messages available for editing are contained in this .ini file.

7. Open the .ini file in Notepad or another text editor.
8. Change the message to read as you want it to display to the end user.

> Be certain to enter the message as one continuous line. If you want to display the message to the end user as separate paragraphs, use the `<br>` tag.

9. Save your changes and close the file. The next time a user enters an unacceptable password, he will see your edited message. For example, "The password did not meet password policy requirement. Please enter a password at least seven characters long."

Role/Group Support

System questions can be assigned to particular roles or user groups. Role/Group assignment determines the questions a user will be asked during the enrollment interview.

> You cannot assign questions to users or groups when using a database (such as Microsoft SQL Server or Oracle Database) for your repository. The settings are available for editing, but the assignments will not be written to the database.

The Access Control panel makes users and groups available so that you can assign question rights to them. The Users and Groups list is unpopulated until you check the Show Users box. Domain users and groups are not initially assigned Allow or Deny access for a given question.

When a user or group is selected, the arrow buttons (<< and >>) become enabled. You move users back and forth between the Users and Groups list and the Allow and Deny lists by clicking the arrow buttons. When you click Create or Modify, the Role/Group access rights are written to the back-end storage for the system question.

The rules for Access Control are as follows:

- **Allow/Deny lists empty:** All users and groups receive the question.
- **Allow list empty, Deny list populated:** All users and groups in the Deny list do not receive the question. All other users and groups receive the question; Allow is implicit.
- **Deny list empty, Allow list populated:** All users and groups in the allow list receive the question. All other users/groups do not. Deny is implicit.
- **Both lists populated:** Users and groups in the Allow list that are not in the Deny list receive the question. If a user or group in the Allow list is also in the Deny list, or belongs to a group in the Deny list, that user or group does not receive the question. Deny overrides Allow.

A user's or group's presence in the Deny list always supersedes its presence in the Allow list.

Scenario Number	Description	Allow	Deny	Outcome
1	No user or group specified in Allow and Deny lists	Ø	Ø	Everyone receives the question.
2	Dr. Baxter specified in Allow list; no one specified in Deny list	Dr. Baxter	Ø	Only Dr. Baxter receives the question. All others users are denied.
3	Dr. Baxter specified in Deny list; no one specified in Allow list	Ø	Dr. Baxter	Everyone receives the question except Dr. Baxter.
4	Doctors group specified in Allow list; Dr. Loomis, a member of Doctors group, specified in Deny list	Doctors	Dr. Loomis	All members—and only members—of Doctors group receive the question, except Dr. Loomis, who is denied the question.
5	Doctors group specified in Deny list, Dr. Loomis specified in Allow list	Dr. Loomis	Doctors	Everyone, including Dr. Loomis, is denied the question. The Deny list supersedes the Allow list.

The scenarios below demonstrate how to apply these rules.

You have set up a group, Doctors, which includes members Dr. Baxter and Dr. Loomis.

- **Scenario 1:** If the Allow and Deny lists are unpopulated, all users and groups receive the question.
- **Scenario 2:** If the Deny list is unpopulated and the Allow list is populated, only users and groups in the Allow list receive the question.
- **Scenario 3:** If any user or group is in the Deny list, and the Allow list is unpopulated, only the user or group in the Deny list does not receive the question.
- **Scenario 4:** If a group is in the Allow list but a member of that group is in the Deny list, all members of that group receive the question except the member in the Deny list.
- **Scenario 5:** If a group is in the Deny list but a member of that group is in the Allow list, that member will not receive the question.

Managing Users

Use the Manage Users tab (under the Users node) to generate reports on the enrollment status of end users. This report indicates whether or not users have completed the Enrollment Interview, the date and time of enrollment, and whether or not the user is currently locked out.

To generate a report, select the appropriate display options. Click **Search** to generate and display the report on your screen, or click **Export** to save the report as a CSV file.

Display Options	
Show users whose username contains	Enter text for the report search to match.
Domains	Select from the available domains.
Show users that are:	Select the user enrollment status to generate a report on: • Enrolled • Not Enrolled • Both
Show date/time of enrollment	Select to display the date and time of enrollment. (Enabling this may increase report generation time.)

Viewing Enrollment Search Results

Use the Search Results screen (from the Manage Enrollments tab) to view the enrollment log. This log records enrollment activity for all users who have taken (or at least started) the Enrollment Interview within the time span you specify:

- The names of all users who began the Enrollment Interview.
- The current enrollment status of each user.
- The total point values of all system questions (Required and Optional) that the end user answered during enrollment.
- The date and time of each enrollment activity.

See Setting Up the Enrollment Interview and Managing Enrollments for more information.

Managing Enrollments

Use the Manage Enrollments tab (under the Enrollments node) to view, export, or delete enrollment log entries within a specified date range.

1. Select a **Start date** and an **End date** for the date range from the pop-up calendars).
2. Select an **Action**:
   - **View log** opens the Search Results window where you can review users, their status, scores, and the time of their activity.
   - **Export to file** saves all log entries within the specified date range to a file in comma-separated-value format. Select the **Delete entries after successful export** checkbox if you want to remove the exported log entries after saving them to a file.
   - **Delete entries** removes all log entries within the specified date range, without saving them.

3. Click **Submit**. If you have selected **Export to file**, in the Save As dialog, enter a file name and click **OK**.

See Setting up the Enrollment Interview for more information.

View Resets

Use the View Resets dialog (under the Resets tab) to view the reset log. The record for each Reset Quiz given shows the username, the date and time of the quiz, the quiz score, the current reset status, and the IP address of the workstation used to take the quiz.

To view log entries within a specific date range, enter a **Start Date** and an **End Date** (or click **Choose** to select a date from a pop-up calendar), then click **Submit**.

See Configuring Reset Authentication for more information.

Managing Resets

Use the Manage Resets tab (under the Resets node) to view, export, or delete reset log entries within a specified date range.

1. Select a **Start Date** and an **End Date** for the date range for the date range from the pop-up calendars).
2. Select an **Action**:
   - **View Log** opens the Search Results window where you can review users, their status, scores, and the time of their activity.
   - **Export to File** saves all log entries within the specified date range to a file in comma-separated-value format. Select the **Delete entries after successful export** checkbox if you want to remove the exported log entries after saving them to a file.
   - **Delete** removes all log entries within the specified date range, without saving them.
3. Click **Submit**. If you have selected **Export to File**, in the Save As dialog, enter a file name and click **OK**.

See Configuring Reset Authentication for more information.

Working with External Validators

By default, Password Reset requires that all the questions and weights used for reset are entered and set up by the administrator and answered by the user upon enrollment. Password Reset can also work with external validator sources to simplify this process. External validators allow organizations to write an interface to their backend which can be accepted by Password Reset. This validator can call data from various sources (for example, the HR database) that contain pre-defined answers.

For example, lets say one of the reset questions is "What is your Social Security Number?". By default, when a user enrolls, the enrollment interview asks him to supply his social security number. Then when a user resets his password,he is asked to enter his social security number. With an external validator in place, an administrator can direct Password Reset to an external data source which contains a pre-defined list of social security numbers. The validator supplies the answer to that question upon user enrollment so that the user does not even have to see that question. A user will only have to enter the answer to that question when attempting to reset his password. If all system questions are answered by an external validator, users can be automatically enrolled.

Follow these basic steps to implement the use of external validators:

1. Write an external validator.
2. Install the validator.
3. Direct Password Reset to the external validator.

Writing the External Validator Interface

The external validator must be written in .Net 2.0. To write an implementation, add a reference to the library Passlogix.PasswordReset.dll. Within your assembly, a class implementing the interface, ISSPRValidator, must be written. The interface has the following five methods:

- Initialize
- Cleanup
- IsValidQuestion
- IsValidAnswer
- FriendlyName

Validators that do not implement the ISSPRValidator interface or fail on startup will be ignored.

The validator interface definition is as follows:

```
interface ISSPRValidator

{

      // Called by SSPR on first use of validator.
      void Initialize();


      // Called once by SSPR when the service shuts down.
      void Cleanup();
```

```
      // Returns true/false if question is valid for a given user
      bool IsValidQuestion(ISSPRQuery iquery);


      // Returns true/false if question/answer pair is correct
      bool IsValidAnswer(ISSPRQuery iquery, string strAnswer);


      // The friendly name for SSPR to display
      string FriendlyName { get; }

}
```

The ISSPRQuery interface is supplied by the SSPR service and contains the following properties:

```
interface ISSPRQuery

{

      // The guid of the question

      Guid QuestionGuid { get; }

      // The users identity (in SID format)

      string UserIdentity { get; }

}
```

After this interface has been implemented, the following attribute must be declared referencing the implementation:

```
[assembly: ISSPRValidatorType("<Validator class>")]
```

Replace the string <`Validator class`> with the full name of the class (including namespace) that implements this interface.

Installing the External Validator

After the validator .dll is written, follow these steps:

1. Create a directory called `Validators` under `<INSTALL_DIR> \Vg-oSelfServiceReset\WebServices`. The actual validator directory is defined in `web.config` and can be changed if a different folder for discovery is preferred.
2. Copy the validators into this directory.
3. Restart the Password Reset Web Service.

Directing Password Reset to the External Validator

After the validators are installed, follow these steps:

1. Open the Password Reset Management Console.
2. Click **Questions** from the top menu and then select **System Questions**. Select an existing question or create a New Question.
3. The Answer Source drop-down field lists the available external validators that can be used. The default is User Supplied, which indicates that the user must answer that question during enrollment. If a validator is installed and detected, its friendly name will now be listed here. Select the appropriate validator and save the question settings.

User Enrollment

Enrollment can contain a mix of User Supplied and Validator Supplied questions. Questions that require external validation will be checked against IsValidQuestion and allowed / discarded based on the result. A user will only be prompted for answers on questions that are user supplied. In a pure external validation case, the user will be automatically enrolled.

Reset

During a password reset, questions with answers supplied by an external validator will be sent to IsValidAnswer to determine a pass or fail for a particular question.

Deleting the External Validator

To delete an external validator:

1. Remove the .dll from the directory in which you placed it.
2. Return to the Management Console, and individually select for editing the questions that relied on the external validator.

   You will be presented with the error message, "The validator <*validator details*> cannot be found. Answer Source will default to User Supplied."
3. Click the **Modify** button.

Deleting an external validator results in users' failing the reset quiz, but does not force them to re-enroll. In order to force their re-enrollment, you must delete users whose enrollment was dependent on the external validator.

Part V. Using the Administrative Console to Configure the Reporting Client

Using the Oracle Enterprise Single Sign-On Suite Plus Administrative Console, you can configure the Reporting client to generate reports for every type of event that might occur in the course of regular business operation. Using Oracle Business Intelligence (BI) Publisher, you can output reports, with a selection of a variety of formats to suit your needs. This section describes the steps to install and configure the Reporting client and database, and to leverage BI Publisher to create reports for enterprise single sign-on events.

This section covers the following:

- Installing the Oracle Enterprise Single Sign-On Administrative Console and Reporting Client
- Configuring Oracle Enterprise Single Sign-On Administrative Console Settings
- Configuring an Oracle Database
- Configuring a SQL Database
- Configuring BI Publisher to Create Oracle Enterprise Single Sign-On Suite Plus Reports

For complete instructions to install and configure Oracle Enterprise Single Sign-On Suite Plus, refer to the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide*.

Also see the Reference section of this guide for Reporting event definition tables.

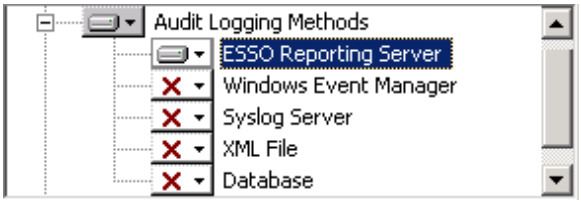
Installing the Oracle Enterprise Single Sign-On Administrative Console and Reporting Client

If you haven't already done so, download and install the Oracle Enterprise Single Sign-On Administrative Console and Logon Manager Agent. The Reporting Extension is installed as an option during the Agent installation and configured within the Oracle Enterprise Single Sign-On Administrative Console.

Installing the Reporting Extension

You install the Reporting extension on Client workstations during the Logon Manager Agent installation. After starting the InstallShield Wizard:

1. On the Setup Type panel, select a **Custom Setup**.
2. On the Custom Setup panel, expand **Audit Logging Methods**.
3. Select **Reporting Server** and set it to install.
4. Follow the on-screen instructions to complete the installation.

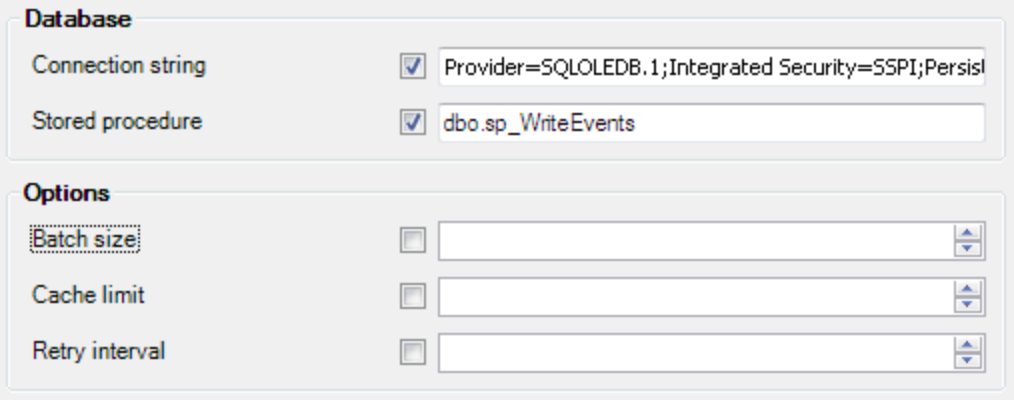


Refer to the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide* for specific instructions.

Configuring Reporting Settings

To configure Logon Manager to begin capturing events, you must adjust some settings in the Oracle Enterprise Single Sign-On Administrative Console.

1. Open the Oracle Enterprise Single Sign-On Administrative Console by pointing to **Start** > **Programs** > **Oracle** > **ESSO-LM Administrative Console**.
2. Select a set of Global Agent Settings (or right-click **Global Agent Settings**, point to **Import**, click **From Live HKLM**, expand **Live**).
3. Expand **Audit Logging** and select **Reporting Server**. Configure the following settings:



- **Connection string.** Enter the database connection string in OLE DB format. The machine must be within the domain. For example:
  `Provider=SQLOLEDB.1;Integrated Security=SSPI;Persist Security Info=False;Initial Catalog=<Database Name>; Data Source=<database server>.`
- **Stored procedure.** The name of the stored procedure in the database. When encoded events are sent to the database, the stored procedure is called to decode the XML file and store the events in the database. Set this to "dbo.sp_WriteEvents".
- **Batch size.** Defines the group size of events to be sent to the database Stored Procedure at one time. For example, if you have 1000 events in the Reporting Service cache and the Batch Size = 100, you will have 10 database Stored Procedure calls. (Default is 100.)
- **Cache limit.** Maximum number of reporting events to be cached. Once this number is reached, the oldest events are discarded. For example, if the batch size is 100, and an end-user's system cannot connect to the reporting service, it will keep logging events. Once it gets to 1000, the oldest events will be discarded. (Default is 1000.)
- **Retry interval.** Defines timeout in minutes between sequential operations of the Reporting Service Cache offloading events to the database. An interval is necessary to reduce database connection load. (Default is 30.) Retry Interval should be set to 0 when Reporting is used.

6. Export the settings to the Logon Manager Agent. Refer to the Logon Manager documentation for information on exporting Global Agent Settings.

Setting Up the Reporting Service as a Domain User

You can make the Reporting Server a domain user by assigning it the same privileges as the Domain Computers group. This eliminates having the Domain Computers group connect to the database and, when using an Oracle database, also eliminates the need to specify a clear text username and password.

It is strongly recommended that you select "Password never expires" for user accounts that are used to log on as a service.

Overview of the Process to Set Up Reporting as a Domain User

This process consists of the following steps:

1. Creating the domain user account:
   - For Oracle, create the account that connects to the Oracle database.

     or

   - For Microsoft SQL, create a domain user with the same rights to the SQL database as you would give the Domain Computers group.
2. Granting the Reporting Service domain user the "Log on as a service" privilege.
3. Running the Reporting Service as the domain user account you created. (For instance, run the "sc config" command on all workstations.)

Refer to the following sections for detailed instructions to set up your database for Windows integrated authentication:

- Setting Up Oracle Database to Use Reporting with Windows Integrated Authentication
- Setting Up Microsoft SQL Server to Use Reporting with Windows Integrated Authentication

Oracle Database Configuration Overview

The following is a brief overview of the procedures that you must follow in order to successfully configure the Oracle database to work with Reporting.

- Creating the Oracle Database User
- Creating the Database Table and Setting Up Stored Procedures
- Creating a Connection String
- Configuring Oracle Database on Client machines
- Next Steps

Creating the Reporting Administrative Console User

You must create one user and grant the appropriate privileges to the account. This user will be the SSO Database table owner.

Launch the database in which you want to create the user and enter the following command in the SQL*Plus tool:

```
SQL> create user username identified by password default tablespace user_
tablespace temporary tablespace temp_tablespace;
```

where *user_tablespace* is the default tablespace identified by the database administrator to store user objects, and *temp_tablespace* is identified to store temporary objects.

For example:

1. Start SQL*Plus (the Oracle SQL command line tool), and type the following commands to log in: `$ sqlplus`
2. Press **Enter**.
3. Enter user-name: **username/password@dbname**
   where **username** is an existing administrative user in the database. For example, "system/manager" will log the administrative user "system" with a password of "manager" into the default database.
4. Create the user, grant these two default roles and their corresponding default privileges to the user that you created, and log out of the SQL command line tool:
   ```
   SQL> create user orauser identified by oracle default tablespace
   USERS temporary tablespace TEMP;
   SQL> grant CONNECT, RESOURCE, CREATE ANY DIRECTORY, CREATE PROCEDURE
   to orauser;
   SQL> exit
   ```

Creating the Database Table and Setting Up Stored Procedures

After you create the Oracle Database User, run the provided script, `Oracle_Setup.sql`, to:

- Upgrade an existing or create a new database table.
- Upgrade existing or set up new stored procedures.

The script might require some modification with respect to the location of the `StoredProcedures.java` file, which is initially set to `D:\orcl_scripts`. If you plan to use a different location, refer to the script's comment header for the exact line number where you can make this change.

When you have updated the `StoredProcedures.java` location (if necessary), you are ready to execute the following script using SQL*Plus (the Oracle SQL command line tool) to accomplish the remaining tasks:

```
$ sqlplus <username>/<user password> < <path_to_file>\Oracle_Setup.sql
```

where *username* is orauser, *user_password* is oracle, and *path_to_file* is the path to the SQL script file.

For example:

```
$ sqlplus orauser/oracle < Oracle_Setup.sql
```

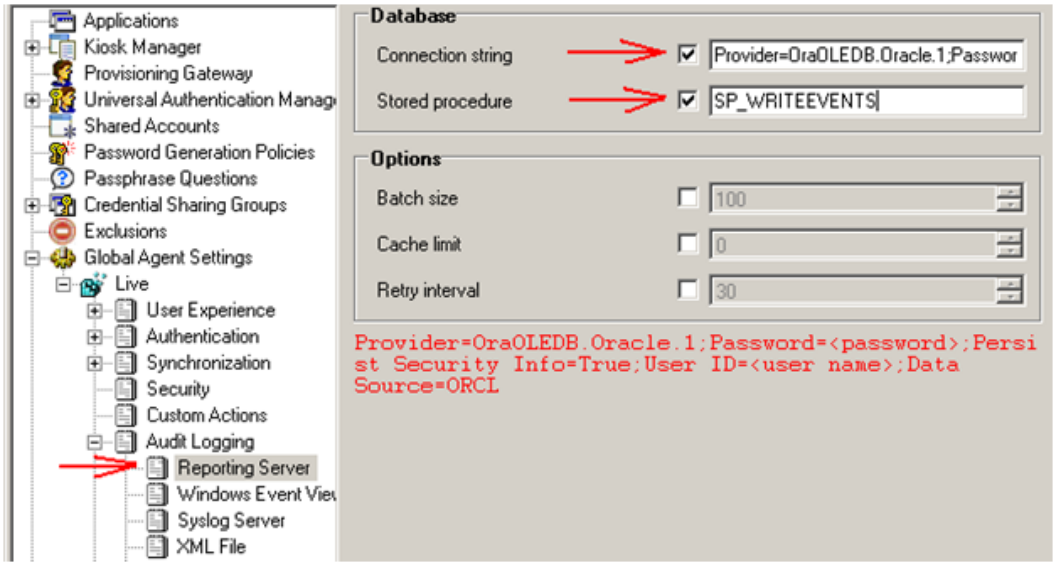
or:

```
C:\>sqlplus orauser/oracle < C:\oracle_setup\Oracle_Setup.sql
```

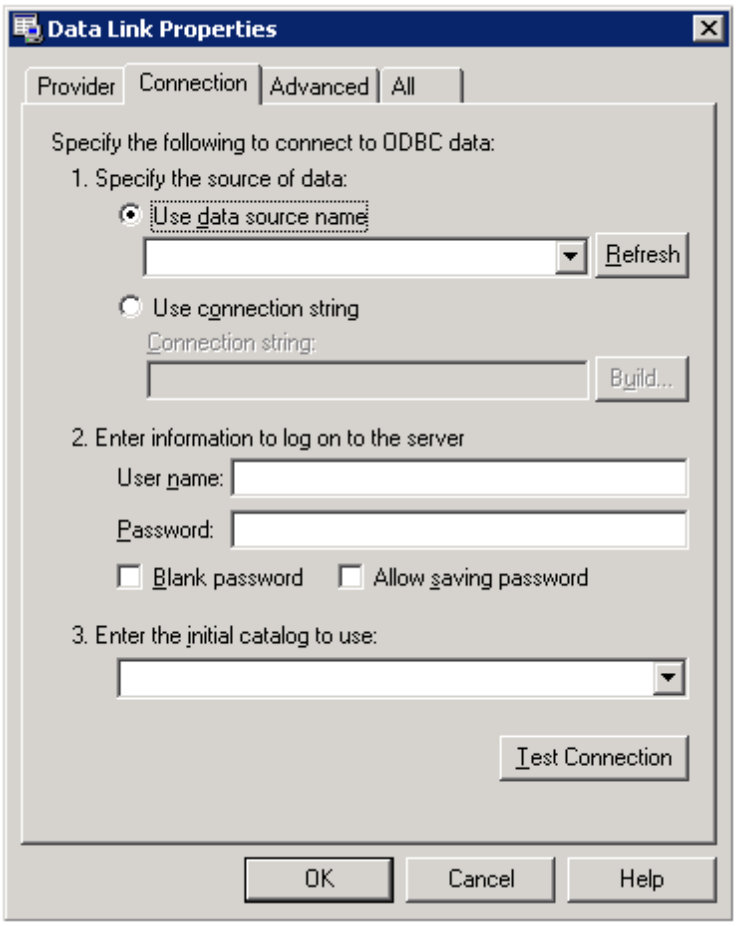
Creating a Connection String

In this section, you will create a connection string that will be used in the following section, Configuring the Oracle Database on Client Machines.

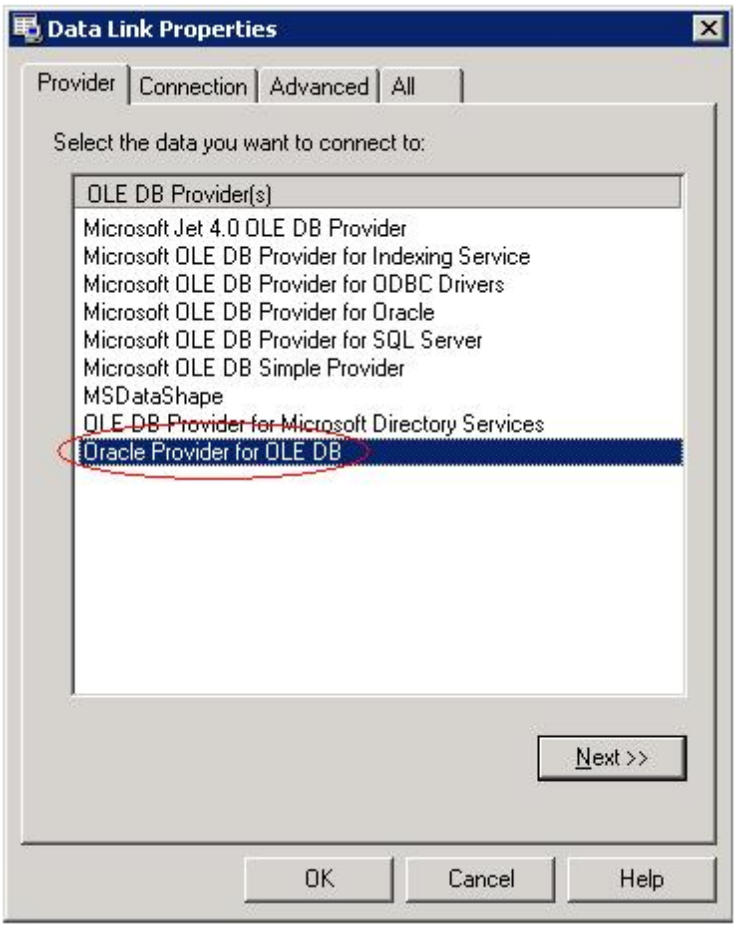
1. Open Windows Explorer and navigate to the folder in which you want to store the .udl file.
2. From the File menu, click **New** and then click **Text Document**. A new file named New Text Document.txt appears in the directory.
3. Rename this file, removing all spaces and changing the file extension to **.udl**, for Universal Data Link.



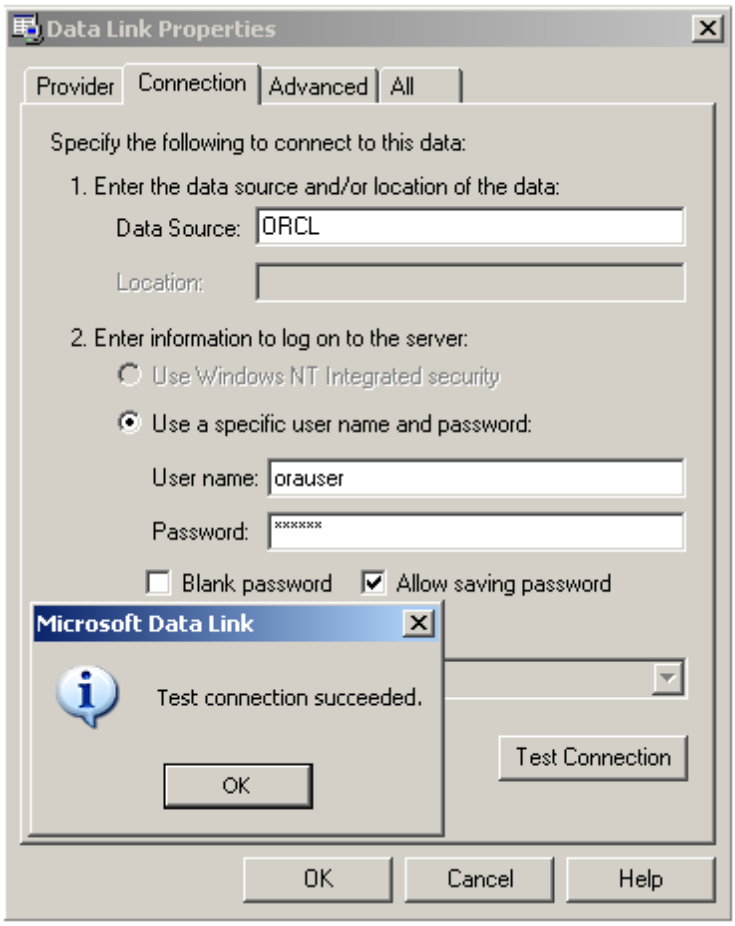
4. Double-click the Universal Data Link (.udl) file. The Data Link Properties dialog opens.



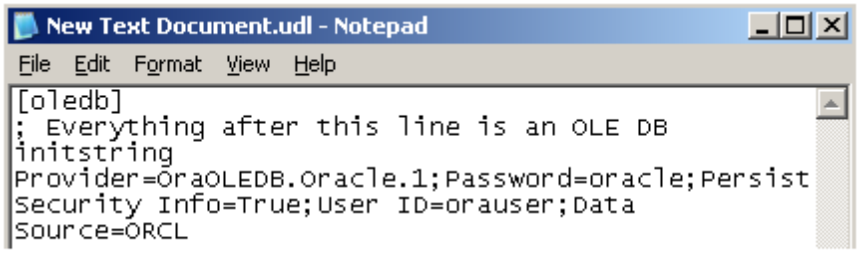
5. On the **Provider** tab, select **Oracle Provider for OLE DB** and then click **Next**.



6. On the **Connection** tab, enter the **Data Source**, **User name**, and **Password**. Check the **Allow saving password** checkbox and click **Test Connection**. For example: Data Source: ORCL, User name: orauser, Password: oracle.



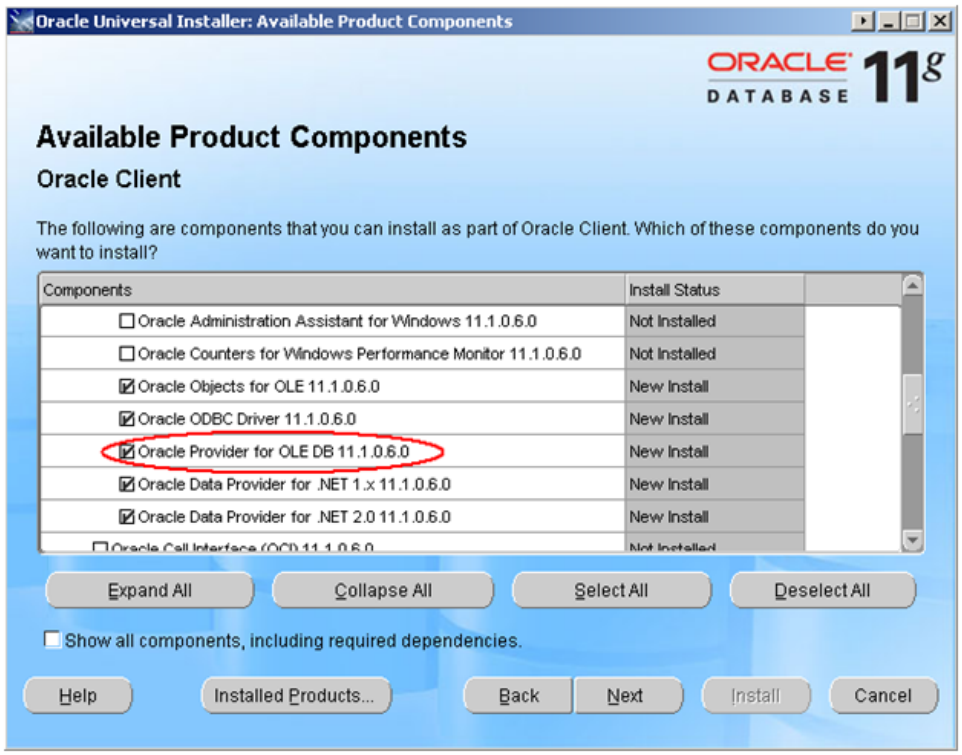
7. A message will appear indicating that the test connection succeeded. Click **OK**.
8. Click **OK** to save the connection string to the Universal Data Link (.udl) file.
9. Open the .udl file in Notepad. In the next section of this guide you will be instructed to enter a connection string. Copy and paste this string and enter it into the **Connection string** field.



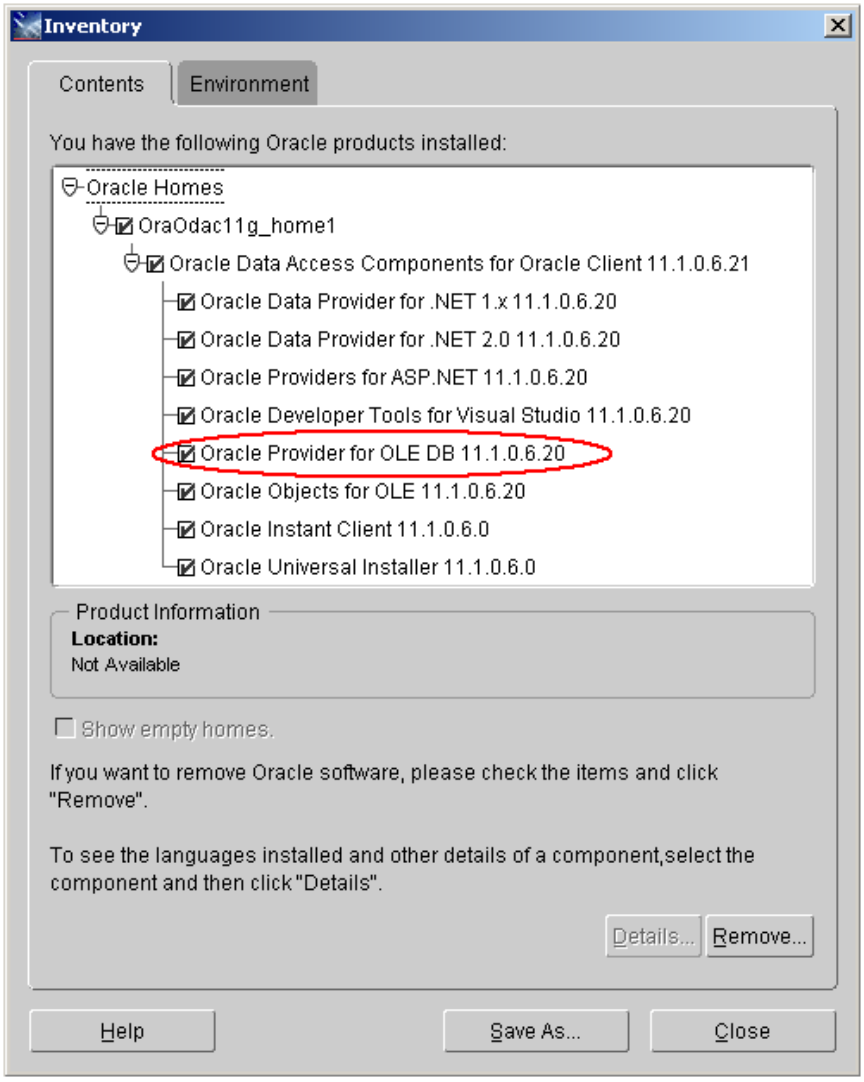
Configuring the Oracle Database on Client Machines

If you are installing Logon Manager on a 64-bit system and plan to configure the Reporting Service to store event data in an Oracle database, you must install the 32-bit version of the Oracle database client on the target end-user machine; otherwise, the Reporting Service will not be able to connect to the Oracle database.

1. Install either Oracle Client with Oracle Provider for OLE DB or Oracle Data Access Components for Oracle Client.



or

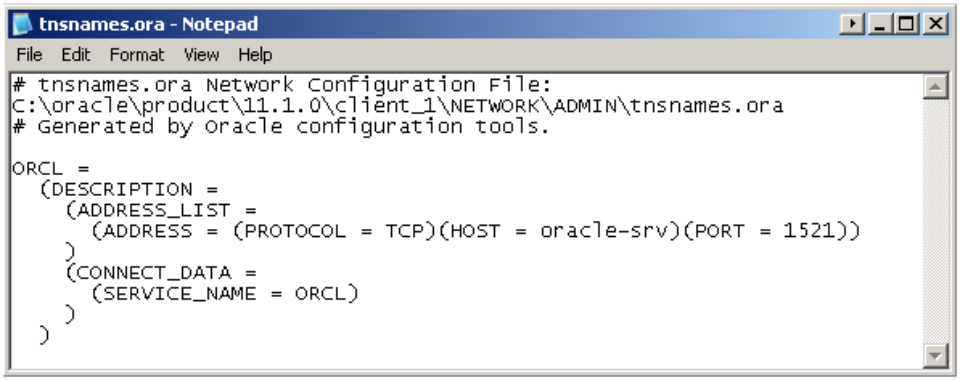


2. Next, configure the Oracle Client for connection to the Oracle Server. Edit or create the following file:

 <Oracle Home\client_1\Network\Admin\tnsnames.ora:

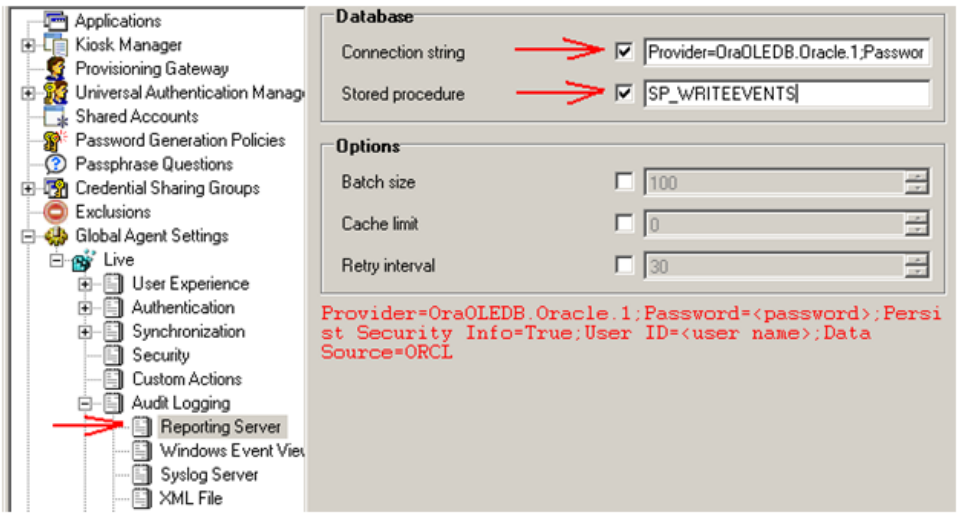
```
"# tnsnames.ora: Network Configuration File:
C:\oracle\product\11.1.0\client_1\NETWORK\ADMIN\tnsnames.ora
# Generated by Oracle configuration tools.


ORCL =
(DESCRIPTION =
 (ADDRESS_LIST =
 (ADDRESS = (PROTOCOL = TCP)(HOST = <oracle host server name>)(PORT =
1521))
)
(CONNECT_DATA =
```

```
  (SERVICE_NAME = ORCL)
)
)
```



3. Launch the Oracle Enterprise Single Sign-On Administrative Console by clicking **Start** > **Programs** > **Oracle** > **Oracle Enterprise Single Sign-On Administrative Console**.
4. In the tree, right-click **Global Agent Settings**, click **Import**, then click **From live HKLM**.
5. Under **Global Agent Settings** > **Live**, expand **Audit Logging** > **Reporting Server**.
6. Copy and paste the **Connection string** created in the previous section. For example:
   `"Provider=OraOLEDB.Oracle.1;Password=<password>;Persist Security Info=True;User ID=<user name>;Data Source=ORCL"`
7. Set the Stored Procedure setting to:

   `"SP_WRITEEVENTS"`



8. Right-click **Live** and click **Write to Live HKLM**.
9. Close the Oracle Enterprise Single Sign-On Administrative Console.

Setting Up Oracle Database to Use Reporting with Windows Integrated Authentication

To use Windows integrated authentication with Reporting, the ESSO Reporting Service must run as a domain user with permissions to write to the Reporting database (either Microsoft SQL Server or Oracle). To run the service as domain user on a workstation, the user must have "Log on as Service" permissions.

You can modify this setting (as detailed below) on your domain controller so that the setting is published to all client computers.

Creating an Active Directory domain user that will write events to the database

Create a user in Active Directory (henceforth referred to as the "Reporting Domain User"). You will grant this user permissions to write Reporting events to the database.

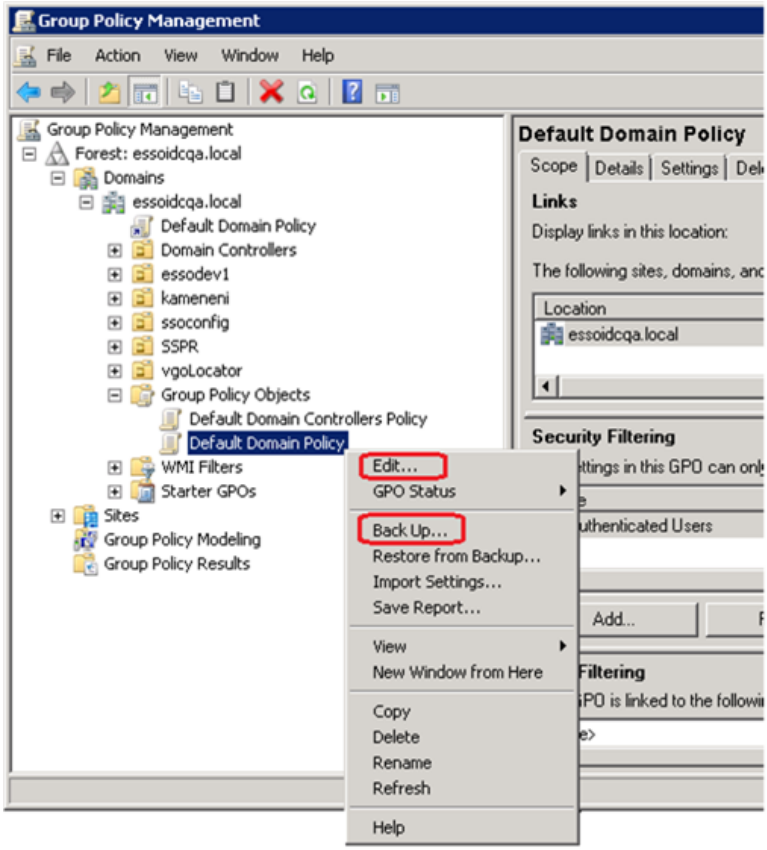
Modifying the Default domain policy to allow the Reporting Domain User to "Log on as a service"

Oracle recommends that you create a backup of the current Group Policy before editing the default domain policy. To create a backup, in the console tree, open Domains/Current Domain Name/Group Policy objects. Right-click Default Domain Policy, and select **Back Up** from the context menu.

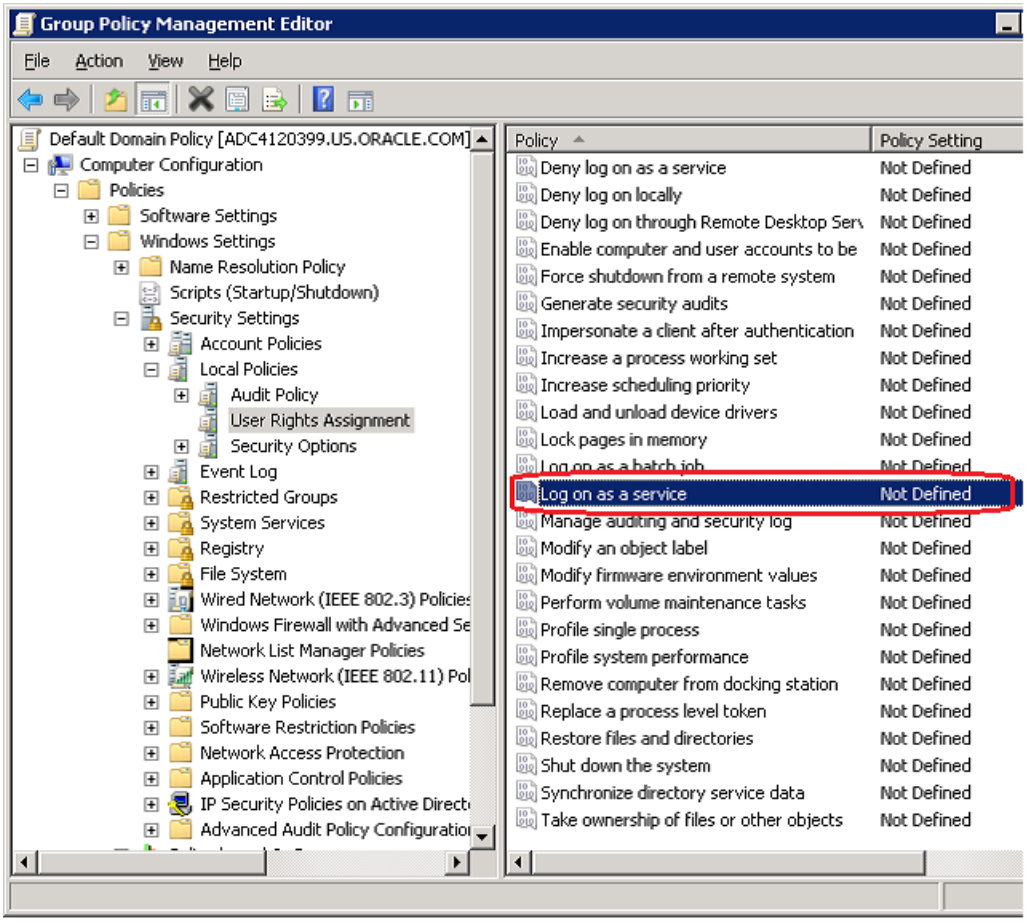
Modify the Default domain policy on your domain controller so that all client computers connected to the domain have this setting defined.

The Group Policy is domain-wide and overwrites the local policy. If you need to configure any local accounts to log on as a service, refer to the documentation for the Group Policy Management Console for this procedure.

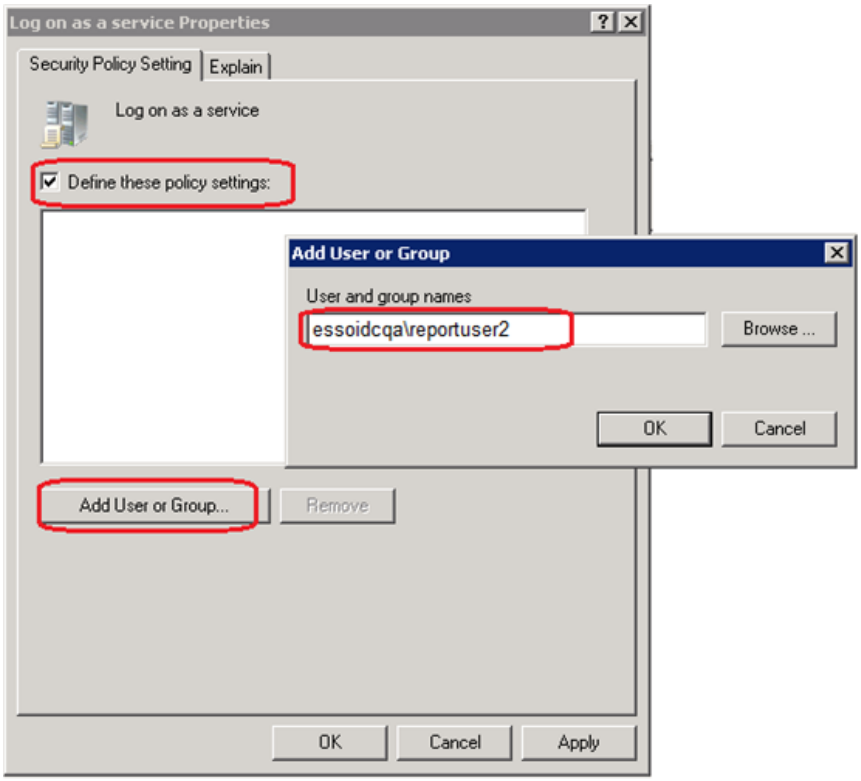
1. On your domain controller, click **Start**, click **Run**, type `gpmc.msc`, and then click **OK**.
2. In the console tree, open **Domains** > **Current Domain Name** > **Group Policy Objects**. Right-click **Default Domain Policy**, and select **Edit** from the context menu.



3. In the Group Policy Management Editor's console tree, go to **Computer Configuration** > **Policies** > **WindowsSettings** > **Security Settings** > **Local Policies** > **User Rights Assignment**.
4. In the details pane, double-click **Log on as a service**.



5. Verify that the "Define this policy setting" check box is selected, and click **Add User or Group**. Enter the new Reporting Domain User in the User and group names field.
6. Click **OK** when finished.



To apply the Group Policy change immediately:

- Restart the domain controller.

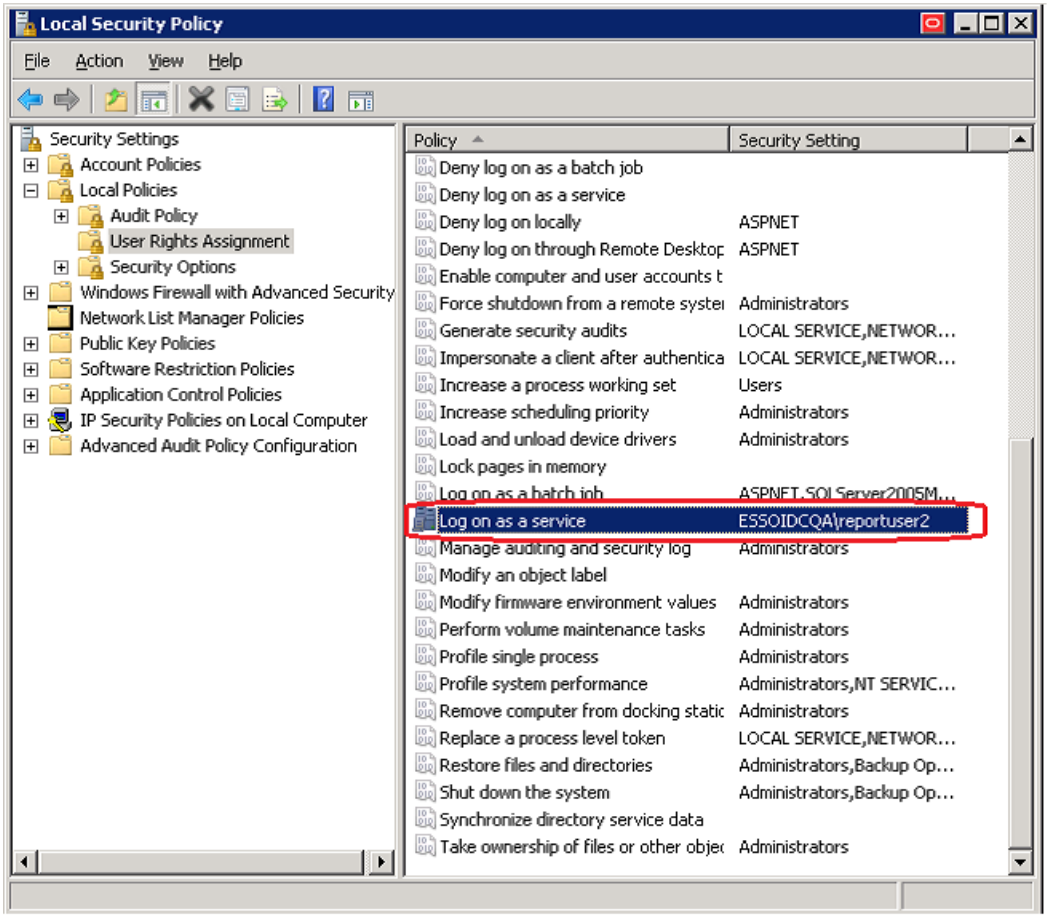
  or

- Open a command prompt, and type: `gpupdate /force`. Then press **Enter**.

Verifying Publication of the Active Directory Permission on the Client Machine

> Also see Microsoft's technical note about modifying permissions on an Active Directory domain or local computer to allow a domain user to log on as a service.

1. Ensure that the client is updated by opening a command prompt and entering the `gpupdate /force` command. See the Microsoft Technical library for a discussion of this procedure.
2. Go to **Administrator Tools** > **Local Security Policy**.
3. In Local Security Policy go to **Security Settings** > **Local Policies** > **User Rights Assignment** (as shown in the following figure).
4. In the Detail Panel check for the updated "Log on as a service" policy. It should include the Reporting Domain User among the users who have this permission.



Configuring the ESSO Reporting Service on the Client Machine to run as this domain user

Perform these steps on all client computers where the ESSO Reporting Service is running.

To configure the ESSO Reporting Service to run under the Reporting Domain User account:

1. Open a command prompt and enter the following command:

   ```
   sc config "SSO Reporting Service" obj= "Domain\User" password= "password"
   ```

2. Press **Enter**.

   This command should return the following output:

   ```
   [SC] ChangeServiceConfig SUCCESS
   ```

3. Restart the ESSO Reporting Service:

   a. Open a command prompt and enter the following command.

      ```
      net stop "SSO Reporting Service" && net start "SSO Reporting Service"
      ```

   b. Press **Enter**.

      This command should return the following output:

      ```
      The ESSO Reporting Service service is stopping.

      The ESSO Reporting Service service was stopped successfully.

      The ESSO Reporting Service service is starting.

      The ESSO Reporting Service service was started successfully.
      ```

You can achieve the same results through the UI by accessing the "Services" console on any client computer.

Setting Up the Server for Integrated Authentication

Verifying the Windows Authentication Protocol

Ensure that the SQLNET.AUTHENTICATION_SERVICES entry in the sqlnet.ora file reads NTS. This setting must be modified on both the client and database server. You must edit or create the sqlnet.ora file. The file is located at:

`ORACLE_BASE\ORACLE_HOME\network\admin\sqlnet.ora`

Refer to the Oracle Database Platform Guide on Windows Authentication Protocols, User Authentication and more information.

Creating the External Oracle User for the Domain User

You must create the new "Reporting Domain User" as "identified externally" on the Oracle Database and grant appropriate privileges to the account.

Refer to the Oracle Database Platform Guide for Manually Creating an External Operating System User, External user Authentication Task on the Oracle database Server, External User Authentication Task on the Client Computer and more information.

Set OSAUTH_PREFIX_DOMAIN to true in HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\HOMEID, to enable authentication at domain level, where ID is the Oracle home directory you want to edit. Refer to the External User Authentication task on the Oracle Database Server in the Oracle Database Platform Guide for more information.

1. Grant Administrative privileges to the New "Report Domain User". (for example, domain-name\username) on the workstation where the Oracle Database is installed or will be installed.
2. Log on to this workstation as the New Report Domain User.
3. Launch SQLPLUS and log on as SYSDBA at the prompt.
4. Create the "Reporting Domain User" identified externally (refer to the SQL syntax below). Grant required privileges to the user that you created, and log out of the SQL command line tool.

Create the User with the following syntax:

```
SQL> create user username identified externally default tablespace user_tablespace
temporary tablespace temp_tablespace;
```

Where `user_tablespace` is the default tablespace identified by the database administrator to store user objects, and `temp_tablespace` is the location to store temporary objects.

The username would take the form `OPS$DOMAINNAME/USERNAME`, where:

- `OPS$` is the value of `OS_AUTHENT_PREFIX` set for your database
- `DOMAINNAME` is the name of the domain

  and

- `USERNAME` is the Reporting User with whose permissions the Reporting service would be running.

The following examples were created using Oracle Database 11*g*.

Example

```
SQL> CREATE USER "OPS$ESSOIDCQA\REPORTUSER1" IDENTIFIED EXTERNALLY DEFAULT
TABLESPACE USERS TEMPORARY TABLESPACE TEMP;

User created.

SQL> GRANT CONNECT, RESOURCE, CREATE ANY DIRECTORY, CREATE PROCEDURE TO
"OPS$ESSOIDCQA\REPORTUSER1";

Grant succeeded.

SQL> EXIT

Disconnected from Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 -
Production

With the Partitioning, OLAP, Data Mining and Real Application Testing options

C:\Users\reportuser1>
```

In the above example `OPS$` is the `OS_AUTHENT_PREFIX` prefix value and `REPORTUSER1` is the username defined on the `ESSOIDCQA` domain.

Grant the User `CONNECT`, `RESOURCE`, `CREATE ANY DIRECTORY` and `CREATE PROCEDURE` permissions.

The Windows Domain user `ESSOIDCQA\REPORTUSER1` (that is, the Reporting Domain User) will now be able to log on to Oracle Database if this domain user is logged on to the machine and if the Windows Authentication Protocol has been set.

Perform the following steps to verify these conditions:

- Make sure you log on to the system with the new user (here, `ESSOIDCQA\REPORTUSER1`).
- Make sure you have Windows Authentication Protocol set correctly. That is, the `SQLNET.AUTHENTICATION_SERVICES` entry in the sqlnet.ora file reads NTS.
- Open a command prompt and enter `sqlplus /@ORCL`, where `ORCL` is the net_service_name defined in the tnsnames.ora file on the system.
- If configured properly, sqlplus will log the user on without prompting for a username and password. Once logged on, enter `SHOW USER` at the sqlplus prompt. This displays the current logged-on user.

Example

```
Microsoft Windows [Version 6.1.7600]

Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\reportuser1>SQLPLUS /@ORCL

SQL*Plus: Release 11.2.0.1.0 Production on Fri May 11 07:43:12 2012

Copyright (c) 1982, 2010, Oracle. All rights reserved.

Connected to:

Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - Production

With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL> SHOW USER
```

```
USER is "OPS$ESSOIDCQA\REPORTUSER1"

SQL>
```

You can verify the value of `OS_AUTHENT_PREFIX` set on your database with the `SHOW PARAMETER OS_AUTHENT_PREFIX` command as shown in the following example. By default it is set to `OPS$`. You can modify this value to any string you wish. Refer to the Oracle Database Platform Guide for more information.

```
C:\Users\reportuser1>SQLPLUS /NOLOG

SQL*Plus: Release 11.2.0.1.0 Production on Thu May 10 10:33:49 2012

Copyright (c) 1982, 2010, Oracle. All rights reserved.

SQL> CONNECT SYS AS SYSDBA

Enter password:

Connected.

SQL> SHOW PARAMETER OS_AUTHENT_PREFIX

NAME TYPE VALUE

------------------------------------ ----------- ------------------------

os_authent_prefix string OPS$

SQL>
```

Setting Up the Oracle Database for Reporting

For an existing installation of the Reporting database set up on your Oracle database system, follow the instructions in the Upgrade section. For a new database installation, follow the instructions in the New Setup section.

Upgrading an Existing Oracle Database Setup

Perform the following steps to run version 11.1.2 of the ESSO Reporting Service with integrated authentication under the Reporting Domain User account.

- Upgrade the Database Tables Schema.
- Grant appropriate permissions to the new Reporting Domain User account so that it can access the required Oracle objects.
- Create Public `SYNONYM for SP_WRITEEVENTS`.

Upgrading an Existing Database Table and Stored Procedures

Run the provided script, Oracle_Setup.sql as the SSO Database table owner.

The initial location of the StoredProcedures.java file is D:\orcl_scripts. If you plan to use a different location, refer to the script's comment header for the exact line number where you can make this change.

After updating the StoredProcedures.java location (if necessary), execute the following script using SQL*Plus (the Oracle SQL command line tool) to accomplish the remaining tasks:

```
$ sqlplus <username>/<user password> < <path_to_file>\Oracle_Setup.sql
```

where username is the existing SSO Database table owner, user_password is that user's password, and path_to_file is the path to the SQL script file.

Example

```
$ sqlplus orauser/oracle < Oracle_Setup.sql
```

or:

```
C:\>sqlplus orauser/oracle < C:\oracle_setup\Oracle_Setup.sql
```

Providing the Required Permissions to the New Reporting Domain User

Allow the new Reporting Domain User Execute permission on SP_WRITEEVENTS.

Log in to SqlPlus with the existing orauser account and password. The orauser is the SSO Database table owner.

Grant the Execute permission on SP_WRITEEVENTS to the new Reporting Domain User, OPS$DOMAINNAME\USERNAME, with the following command:

```
GRANT EXECUTE ON SP_WRITEEVENTS TO "username";
```

The username will be in the format, *OPS$DOMAINNAME\USERNAME*, where *OPS$* is the value of OS_AUTHENT_PREFIX for your database, *DOMAINNAME* is the name of the domain, and USERNAME is the Reporting User with whose permissions the Reporting service would be running.

Example

```
C:\Users\reportuser1>SQLPLUS orauser/oracle@ORCL

SQL*Plus: Release 11.2.0.1.0 Production on Mon May 14 11:03:45 2012

Copyright (c) 1982, 2010, Oracle. All rights reserved.

Connected to:

Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - Production

With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL> SHOW USER

USER is "ORAUSER"

SQL> GRANT EXECUTE ON SP_WRITEEVENTS TO "OPS$ESSOIDCQA\REPORTUSER1";

Grant succeeded.

SQL> QUIT

Disconnected from Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 -
Production

With the Partitioning, OLAP, Data Mining and Real Application Testing options
```

Creating a Public Synonym for SP_WRITEEVENTS

Log in to SQLPLUS as SYSDBA and create a public synonym for SP_WRITEEVENTS using the following syntax:

```
CREATE OR REPLACE PUBLIC SYNONYM SP_WRITEEVENTS FOR USERNAME.SP_WRITEEVENTS;
```

Where *USERNAME* is the SSO Database table owner and the account whose permissions you used during your initial setup of Oracle Database for Reporting.

Example

```
C:\Users\reportuser1>SQLPLUS /NOLOG

SQL*Plus: Release 11.2.0.1.0 Production on Mon May 14 11:15:35 2012

Copyright (c) 1982, 2010, Oracle. All rights reserved.

SQL> CONNECT SYS AS SYSDBA

Enter password:

Connected.

SQL> CREATE OR REPLACE PUBLIC SYNONYM SP_WRITEEVENTS FOR ORAUSER.SP_WRITEEVENTS;

Synonym created.

SQL> QUIT

Disconnected from Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 -
Production

With the Partitioning, OLAP, Data Mining and Real Application Testing options
```

Refer to the Oracle Database SQL Language Reference for more information on Creating Synonyms.

Setting Up a New Oracle Database for the ESSO Reporting Service

After you create the Reporting Domain User Identified Externally on the Oracle Database, run the provided script, Oracle_Setup.sql to:

- Create a new Database table.
- Set up required functions, and so forth.

Run Oracle_Setup.sql with integrated authentication of the new Reporting Domain User. After you run this script, this user becomes the ESSO Database table owner.

The initial location of the StoredProcedures.java file is D:\orcl_scripts. If you plan to use a different location, refer to the script's comment header for the exact line number where you can make this change.

After updating the StoredProcedures.java location (if necessary), execute the following script using SQL*Plus (the Oracle SQL command line tool) to accomplish the remaining tasks:

```
sqlplus / < <path_to_file>\Oracle_Setup.sql
```

where `path_to_file` is the path to the SQL script file.

Make sure you log on to the system as the Reporting Domain User. You will not need to enter a username or password to SQL*Plus when you provide the forward slash ("/") at the prompt. The current user is logged on automatically to the Oracle Database machine with the appropriate permissions.

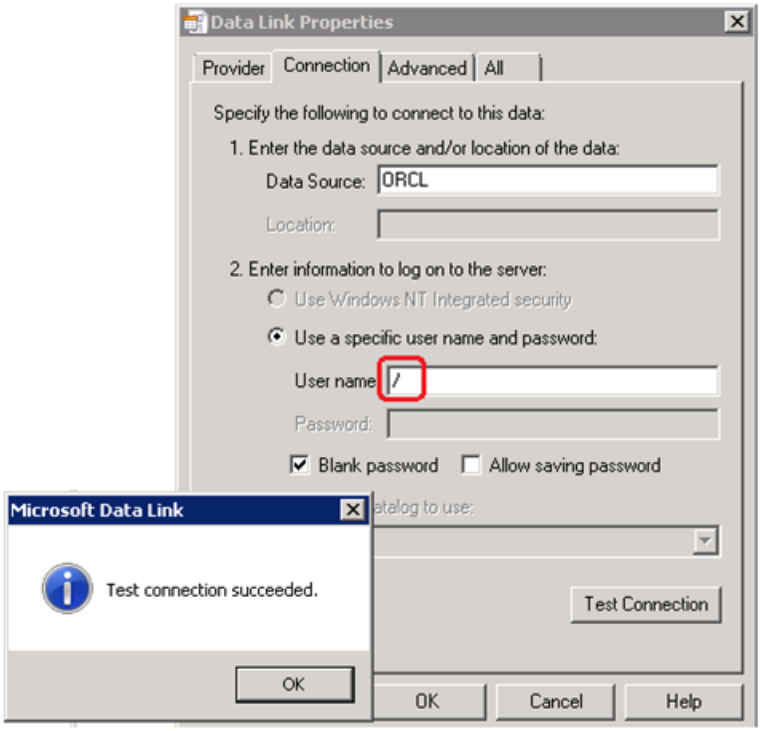
Example to run the script

```
C:\Users\reportuser1>sqlplus / < C:\oracle_setup\Oracle\Oracle_Setup.sql
```

Creating the Connection String for Integrated Login

Use a .udl file to create a connection string for the integrated Login User as you would for any other Oracle Database user. For the Integrated Login User, do not specify any username or password. Enter the user name as "/" and test the connection.

Make sure you are logged on to the system as the Report Domain User who has been identified in Oracle Database as an external user, and that the sqlnet.ora file has AUTHENTICATION_SERVICES set to NTS.



The connection string will read as follows:

```
Provider=OraOLEDB.Oracle.1;Persist Security Info=False;User ID=/;Data Source=ORCL
```

Configuring the Oracle Database on Client Machines

Refer to the section on Configuring the Oracle Client and Server for this procedure.

Ensure that the `SQLNET.AUTHENTICATION_SERVICES` parameter in the sqlnet.ora file is set to `NTS` on both the client and the server.

Also see the Oracle Database Platform Guide for more information on External User Authentication Task on the Client Computer and more.

It is important to keep in mind that using a database for reporting will result in having a number of connections equal to the number of active users. This will have a substantial impact on memory requirements (for performance) and storage requirements (for data logged).

Next Steps

After you configure the Agent to report events and the database to store them, you must configure BI Publisher to locate them for publication. Continue to these instructions.

Microsoft SQL Server Configuration Overview

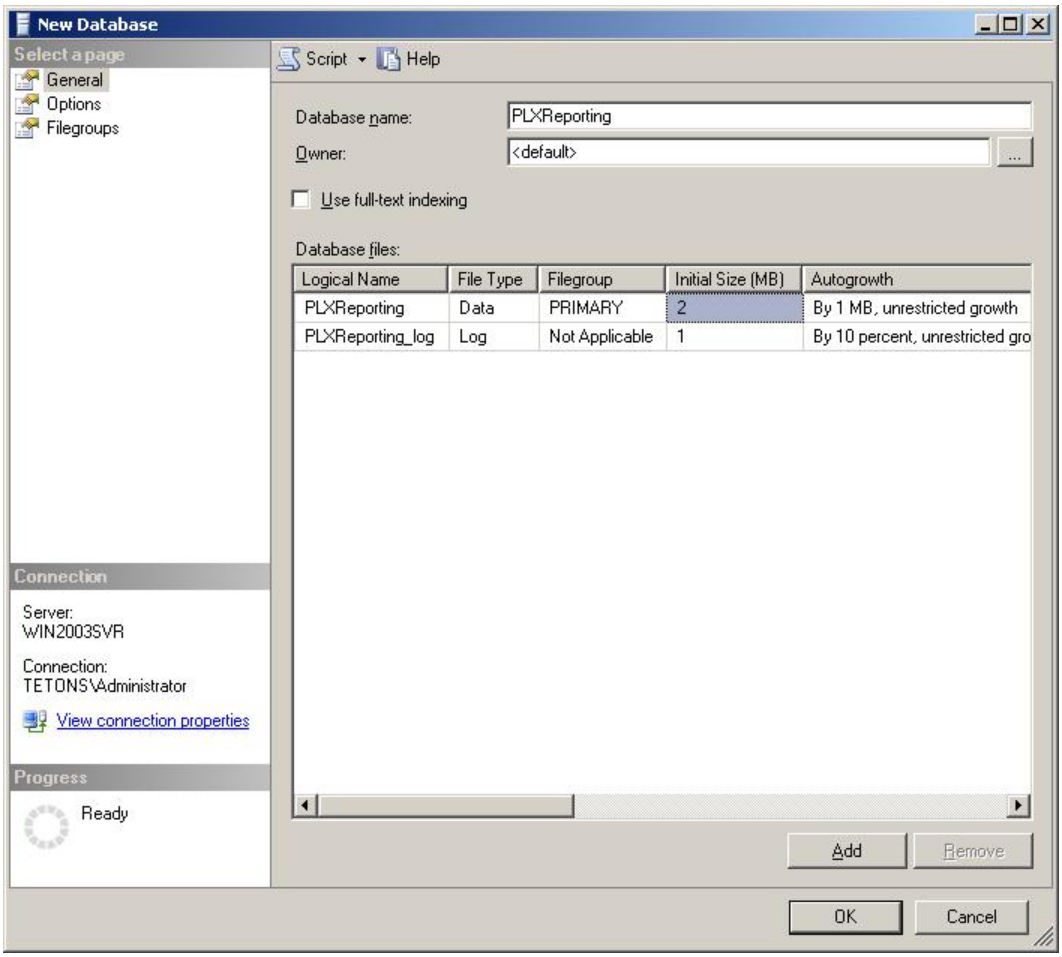
The following is a brief overview of the procedures that you must follow in order to successfully configure the SQL database to work with Reporting:

- Creating the Database Table and Setting Up Stored Procedures
- Creating the Reporting Administrative Console User
- Setting Permissions to Log On to the Reporting Administrative Console
- Setting Up a Domain Computers as a SQL User
- Enabling TCP/IP Protocol
- Next Steps

Creating the Database Table and Setting Up Stored Procedures

The following procedure creates a database table and stored procedures for a SQL Server database. You must perform these steps for both upgrades and new installations.

1. Open SQL Server 2005 or 2008. Click **All Programs** > **Microsoft SQL Server 2005 (or 2008)** > **SQL Server Management Studio**.
2. Connect to the Database using Windows authentication, which should be the default.
3. On the left pane, navigate to **Databases**.
4. Right-click on **Databases** and select **New Database**. The New Database dialog opens.



5. Enter a **Database name**, for example **PLXReporting**, and click **OK**. You should now see a **PLXReporting** database under **Databases**.

> The database can have any name as long as the name is consistent in the queries and stored procedures.

6. Right-click on **PLXReporting** and select **New Query**.
7. Execute the following script on the SQL Server to instruct the database where to put the ESSO.Reporting.MSSQL.Decoding.dll:

- For SQL Server 2005:

```
DECLARE @AssemblyPath nvarchar(1024)
SELECT @AssemblyPath = REPLACE(physical_name,
'Microsoft SQL Server\MSSQL.1\MSSQL\DATA\master.mdf',
'Microsoft SQL Server\MSSQL.1\CLR\')
FROM master.sys.database_files WHERE name = 'master';
SELECT @AssemblyPath
```

- For SQL Server 2008 R2:

```
DECLARE @AssemblyPath nvarchar(1024)
SELECT @AssemblyPath = REPLACE(physical_name,
'Microsoft SQL Server\MSSQL10_50.MSSQLSERVER\MSSQL\DATA\master.mdf',
'Microsoft SQL Server\MSSQL10_50.MSSQLSERVER\CLR\')
FROM master.sys.database_files WHERE name = 'master';
SELECT @AssemblyPath
```

The result of this query provides the correct path for the file `ESSO.Reporting.MSSQL.Decoding.dll`. After receiving this information, create the folder where this file will be placed:

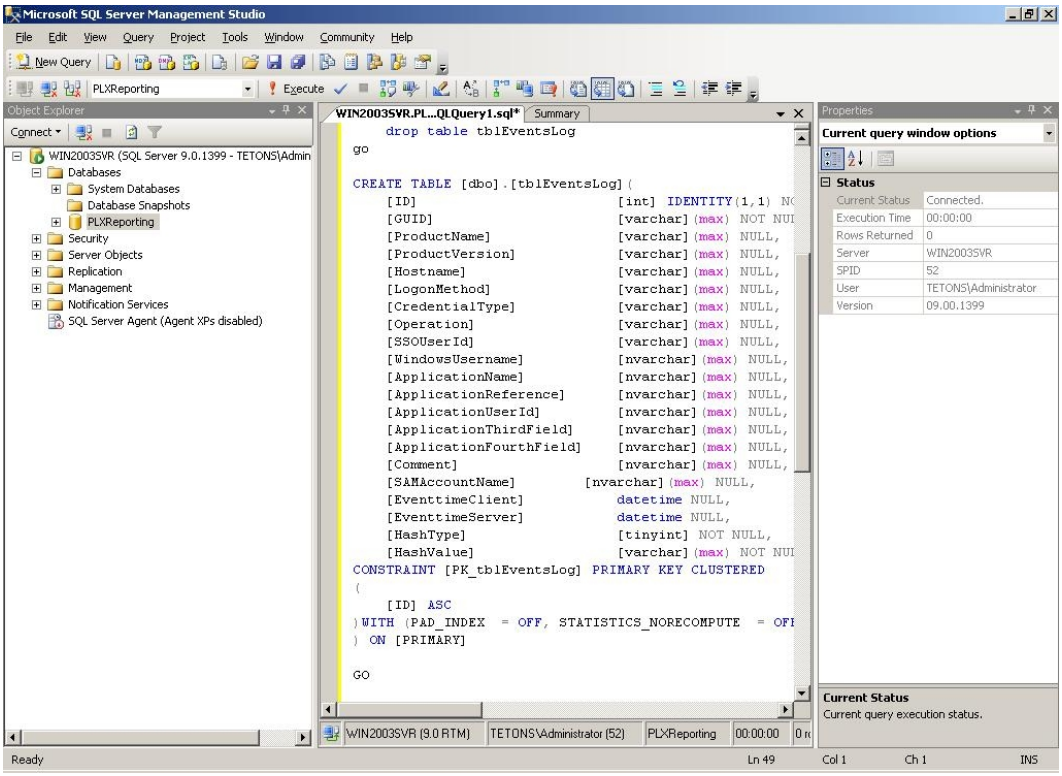
1. Browse to the path that resulted from the query above.
2. Create a folder named "CLR".
3. Place `ESSO.Reporting.MSSQL.Decoding.dll` in this folder.

8. Open the `MSSQL_Setup.sql` file located in the Reporting package. Copy the contents of the file into the New Query panel.

The database name after the "`Use`" statement in the query must match the database name entered in Step 5 above.

9. Click **Execute**, which is located above the workspace pane. Upon completion, a success message appears in the bottom right pane.

   You have completed creation of the Database table dbo.tblEventsLog, under PLXReporting – Tables, and the stored procedures.

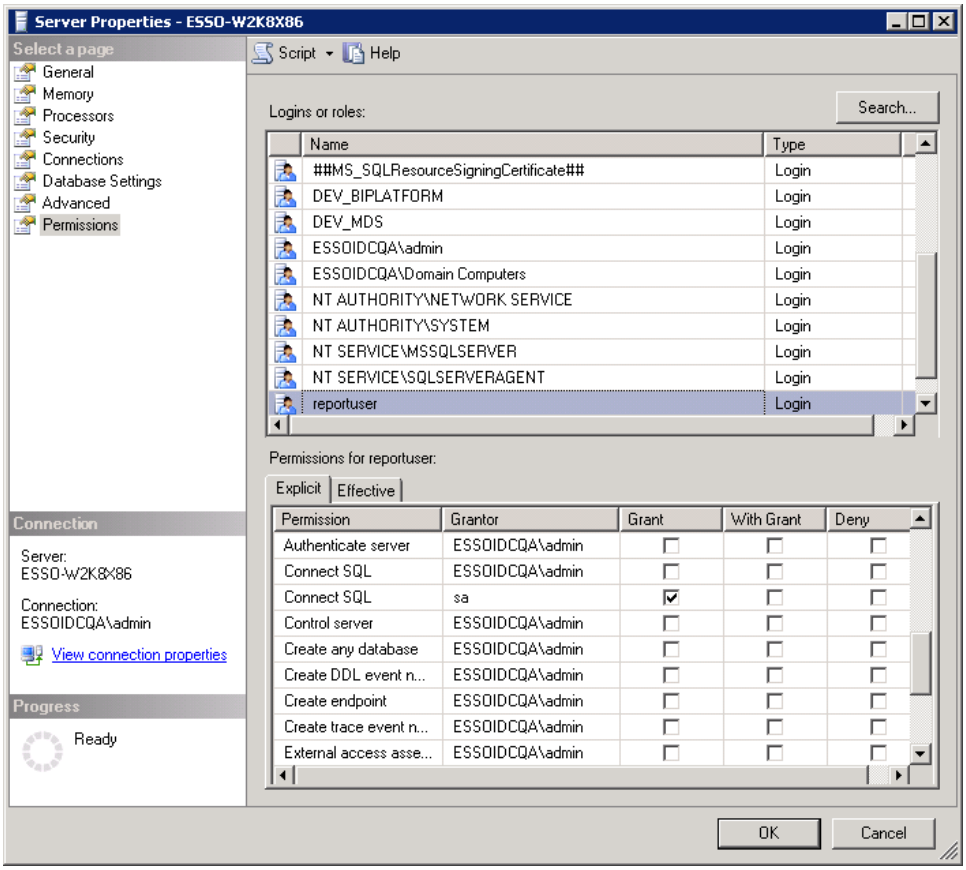

Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Community Help
New Query
PLXReporting
Execute
Object Explorer
Connect
WIN2003SVR (SQL Server 9.0.1399 - TETONS\Admin
Databases
System Databases
Database Snapshots
PLXReporting
Security
Server Objects
Replication
Management
Notification Services
SQL Server Agent (Agent XPs disabled)
WIN2003SVR.PL...QLQuery1.sql*
Summary
drop table tblEventsLog
go
CREATE TABLE [dbo].[tblEventsLog](
[ID] [int] IDENTITY(1,1) NO
[GUID] [varchar](max) NOT NUL
[ProductName] [varchar](max) NULL,
[ProductVersion] [varchar](max) NULL,
[Hostname] [varchar](max) NULL,
[LogonMethod] [varchar](max) NULL,
[CredentialType] [varchar](max) NULL,
[Operation] [varchar](max) NULL,
[SSOUserId] [varchar](max) NULL,
[WindowsUsername] [nvarchar](max) NULL,
[ApplicationName] [nvarchar](max) NULL,
[ApplicationReference] [nvarchar](max) NULL,
[ApplicationUserId] [nvarchar](max) NULL,
[ApplicationThirdField] [nvarchar](max) NULL,
[ApplicationFourthField] [nvarchar](max) NULL,
[Comment] [nvarchar](max) NULL,
[SAMAccountName] [nvarchar](max) NULL,
[EventtimeClient] datetime NULL,
[EventtimeServer] datetime NULL,
[HashType] [tinyint] NOT NULL,
[HashValue] [varchar](max) NOT NUL
CONSTRAINT [PK_tblEventsLog] PRIMARY KEY CLUSTERED
(
[ID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF
) ON [PRIMARY]
GO
WIN2003SVR (9.0 RTM)
TETONS\Administrator (52)
PLXReporting
00:00:00
Properties
Current query window options
Status
Current Status Connected.
Execution Time 00:00:00
Rows Returned 0
Server WIN2003SVR
SPID 52
User TETONS\Administrator
Version 09.00.1399
Current Status
Current query execution status.
Ready
Ln 49
Col 1
Ch 1
INS

Creating the Reporting Administrative Console User

1. In the SQL Server Management Studio left pane, expand the top node (server name), then navigate to **Security** > **Logins**.
2. Right-click on **Logins** and select **New Login**.
3. On the New Login dialog:
   a. Select **SQL Server Authentication**.
   b. Enter your login name and password.
   c. Unselect **User must change password and next login**.
   d. Select **User Mapping** in the left pane.
   e. Ensure all server roles are unchecked.
   f. Enable db_datareader, and db_datawriter.
4. Click **OK**.

Setting Permissions to Log On to the Reporting Administrative Console

1. In the SQL Server Management Studio left pane, right-click on the top node (server name), and select **Properties**.



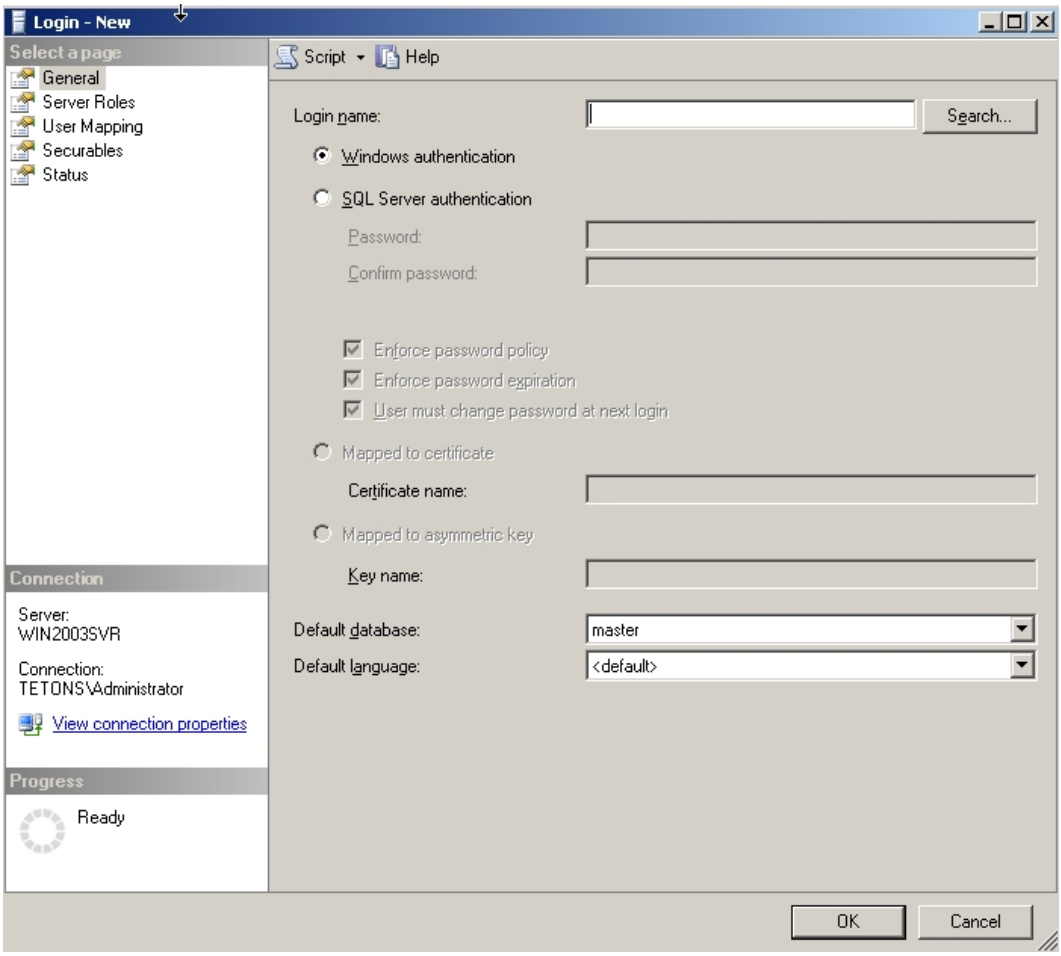
2. On the Properties dialog, select **Security** from the left pane.

3. Select the **SQL Server and Windows Authentication mode** radio button.
4. Select **Permissions** from the left pane .
5. Select the user (created in the previous section) in the **Logins and Roles** section.
6. In the bottom pane, **Explicit Permissions for <name>**, ensure **Grant** is enabled for the **Connect SQL** permission.

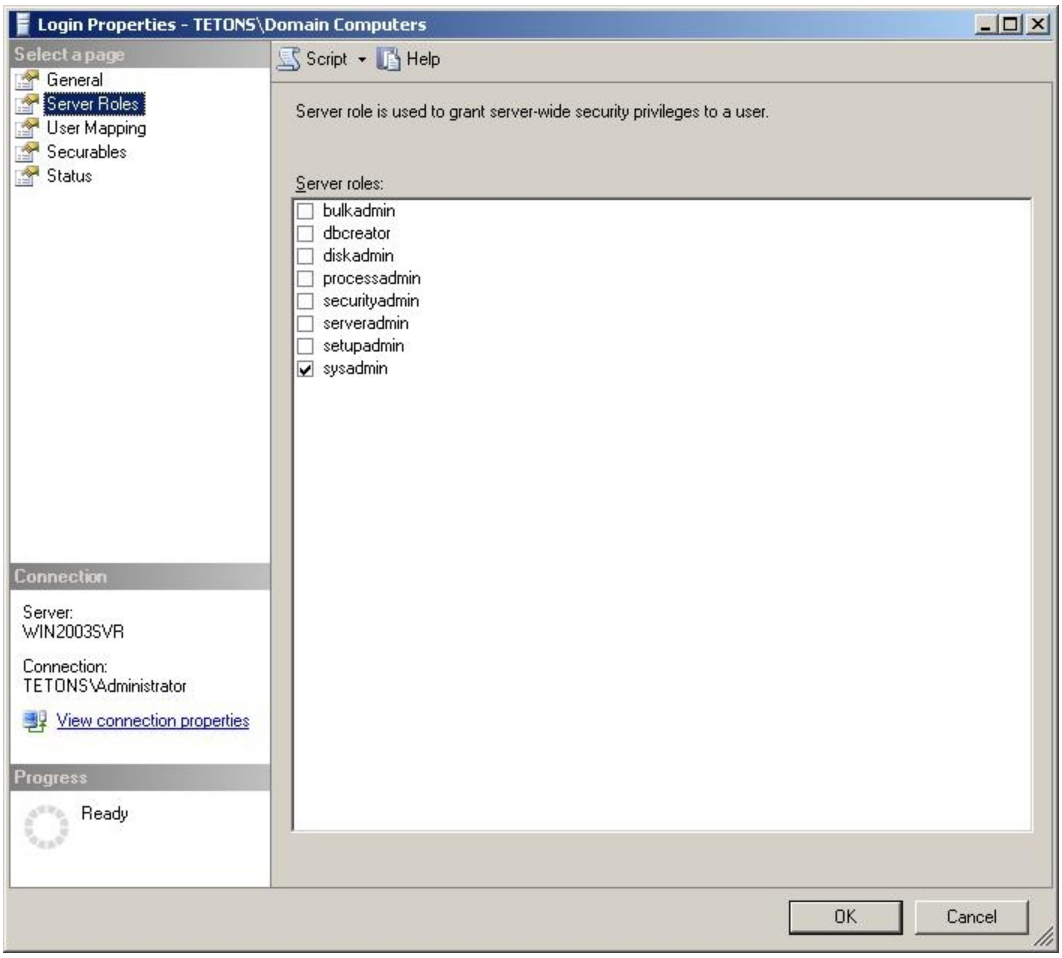
Setting Up the Domain Computer

The following steps configure the Reporting Service to connect to the database:

1. In the SQL Server Management Studio left pane, expand the top node (server name), then navigate to **Security** > **Logins**.
2. Right-click on **Logins** and select **New Login**.



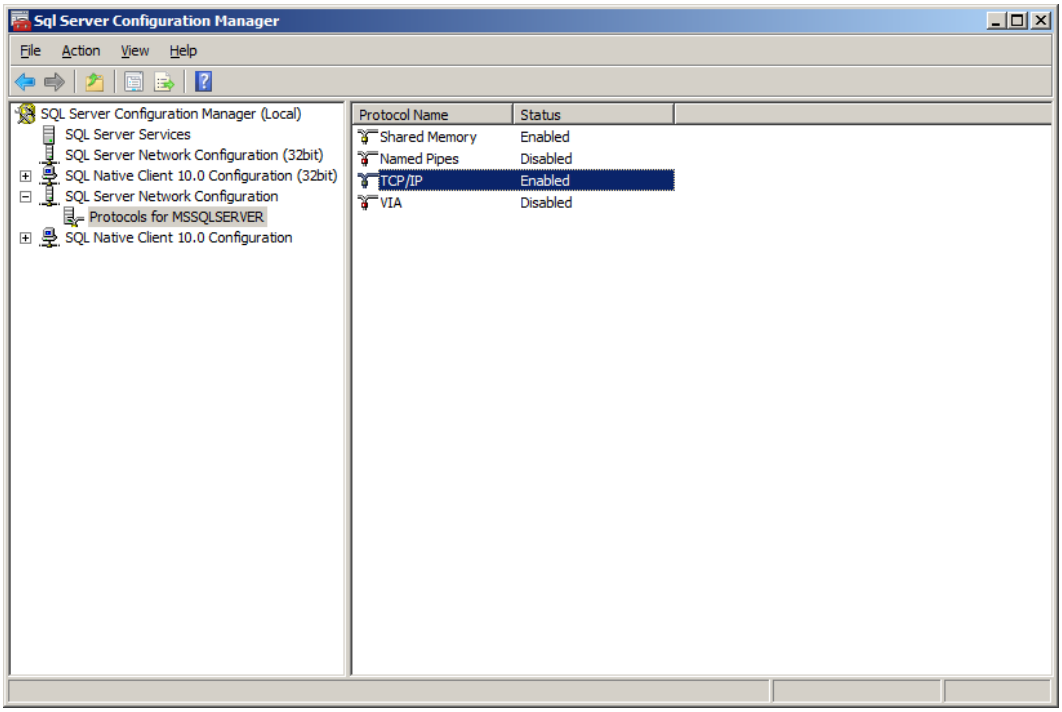
3. On the New Login dialog, enter **<Domain>\Domain Computers** in the **Login Name** field, and then select **Windows Authentication**.
4. Select **User Mapping** in the left pane.
5. Enable db_datareader, and db_datawriter.
6. Click **OK**.


Login Properties - TETONS\Domain Computers
Select a page
General
Server Roles
User Mapping
Securables
Status
Script
Help
Server role is used to grant server-wide security privileges to a user.
Server roles:
bulkadmin
dbcreator
diskadmin
processadmin
securityadmin
serveradmin
setupadmin
sysadmin
Connection
Server:
WIN2003SVR
Connection:
TETONS\Administrator
View connection properties
Progress
Ready
OK
Cancel

Enabling TCP/IP Protocol on SQL 2008 Server R2

This step only applies to SQL 2008 Server R2.

1. In the SQL Server Configuration Manager, select **SQL Server Network Configuration**.
2. Select Protocols for **MSSSQLSERVER**.
3. On the right pane, under Protocol Name, ensure that **TCP/IP** is enabled.



It is important to keep in mind that using a database for reporting will result in having a number of connections equal to the number of active users. This will have a substantial impact on memory requirements (for performance) and storage requirements (for data logged).

Setting Up Microsoft SQL Server to Use Reporting with Windows Integrated Authentication

To use Windows integrated authentication with Reporting, the ESSO Reporting Service must run as a domain user with permissions to write to the Reporting database (either Microsoft SQL Server or Oracle). To run the service as a domain user on a workstation, the user must have "Log on as Service" permissions.

You can modify this setting (as detailed below) on your domain controller so that the setting is published to all client computers.

Creating an Active Directory domain user that will write events to the database

Create a user in Active Directory (henceforth referred to as the "Reporting Domain User"). You will grant this user permissions to write Reporting events to the database.

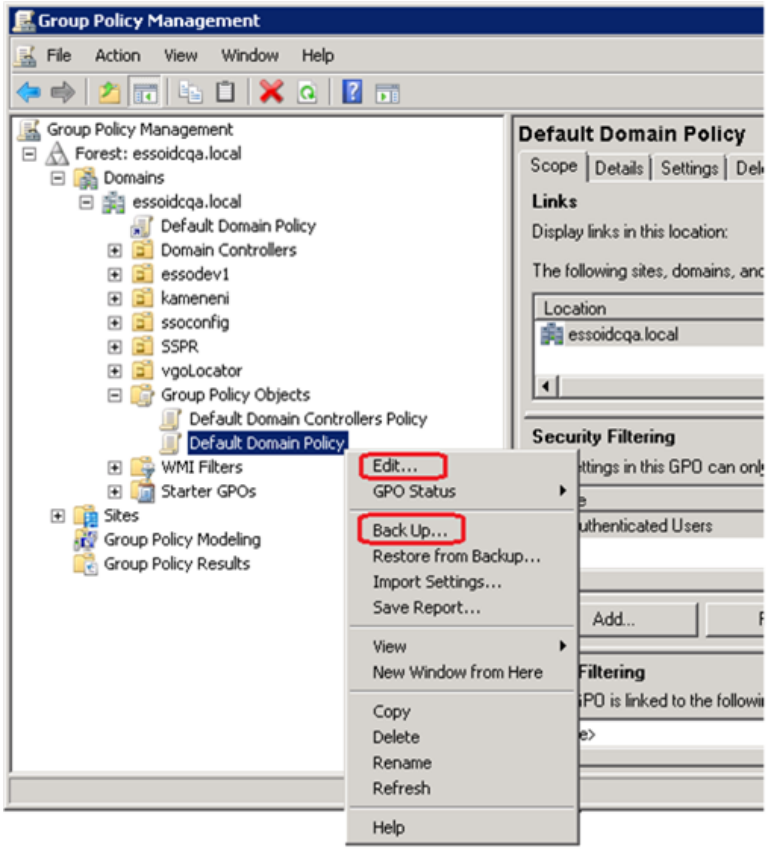
Modifying the Default domain policy to allow the Reporting Domain User to "Log on as a service"

Oracle recommends that you create a backup of the current Group Policy before editing the default domain policy. To create a backup, in the console tree, open Domains/Current Domain Name/Group Policy objects. Right-click Default Domain Policy, and select **Back Up** from the context menu.

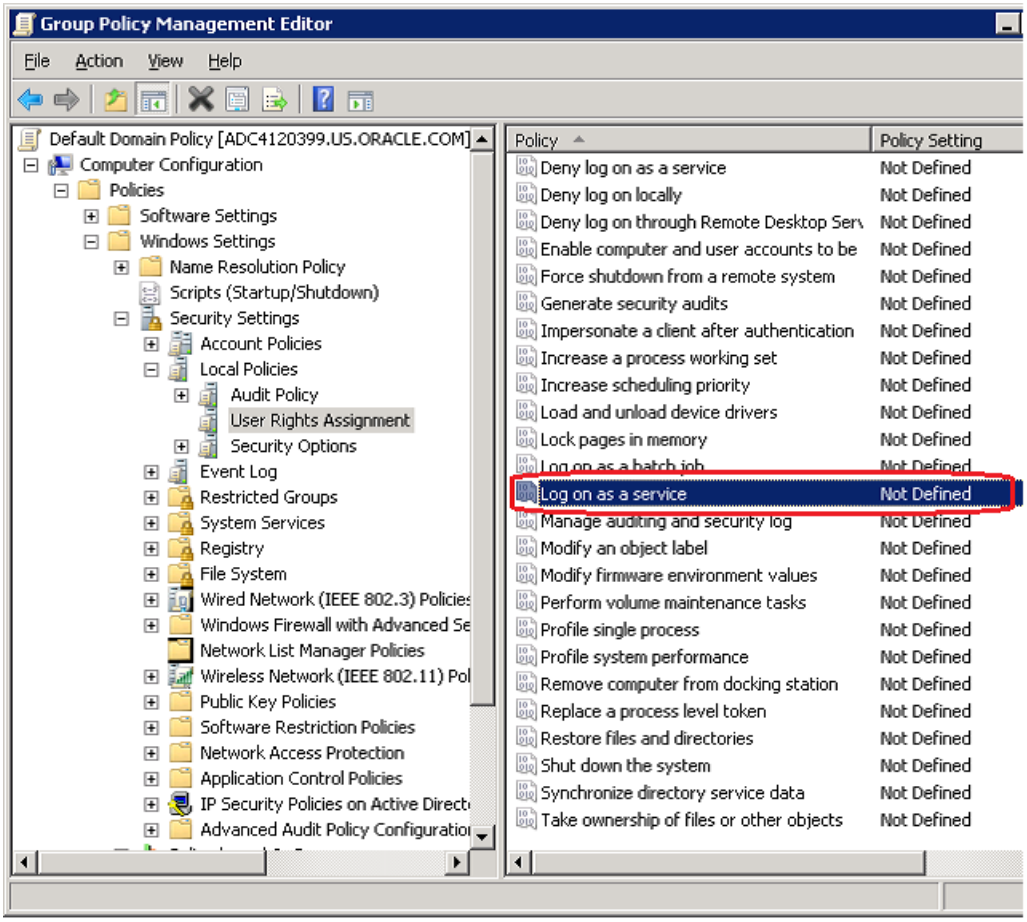
Modify the Default domain policy on your domain controller so that all client computers connected to the domain have this setting defined.

The Group Policy is domain-wide and overwrites the local policy. If you need to configure any local accounts to log on as a service, refer to the documentation for the Group Policy Management Console for this procedure.

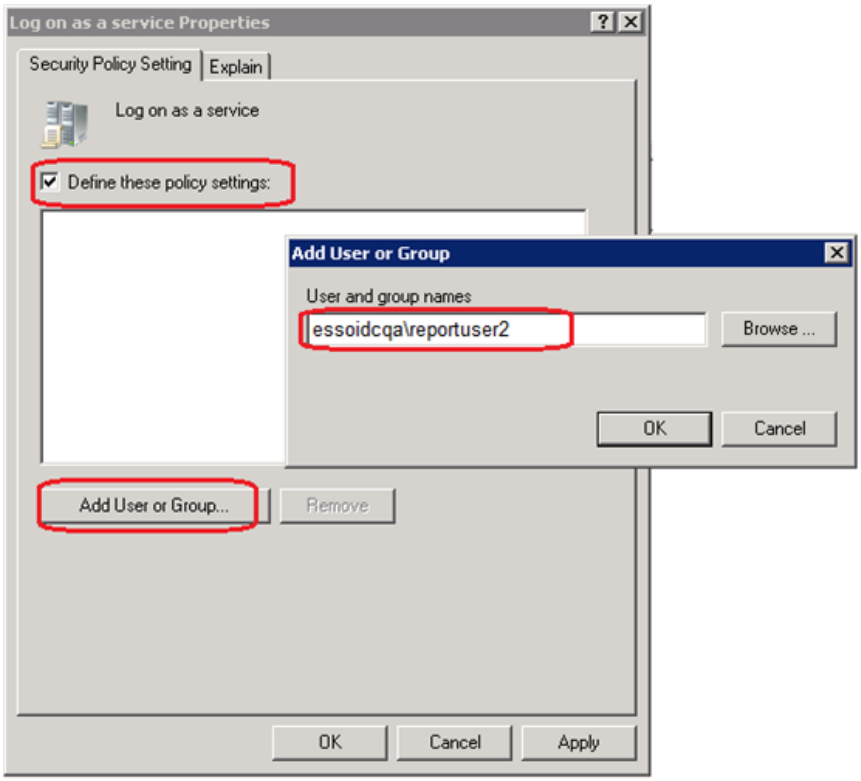
1. On your domain controller, click **Start**, click **Run**, type `gpmc.msc`, and then click **OK**.
2. In the console tree, open **Domains** > **Current Domain Name** > **Group Policy Objects**. Right-click **Default Domain Policy**, and select **Edit** from the context menu.



3. In the Group Policy Management Editor's console tree, go to **Computer Configuration** > **Policies** > **WindowsSettings** > **Security Settings** > **Local Policies** > **User Rights Assignment**.
4. In the details pane, double-click **Log on as a service**.



5. Verify that the "Define this policy setting" check box is selected, and click **Add User or Group**. Enter the new Reporting Domain User in the User and group names field.
6. Click **OK** when finished.



To apply the Group Policy change immediately:

- Restart the domain controller.

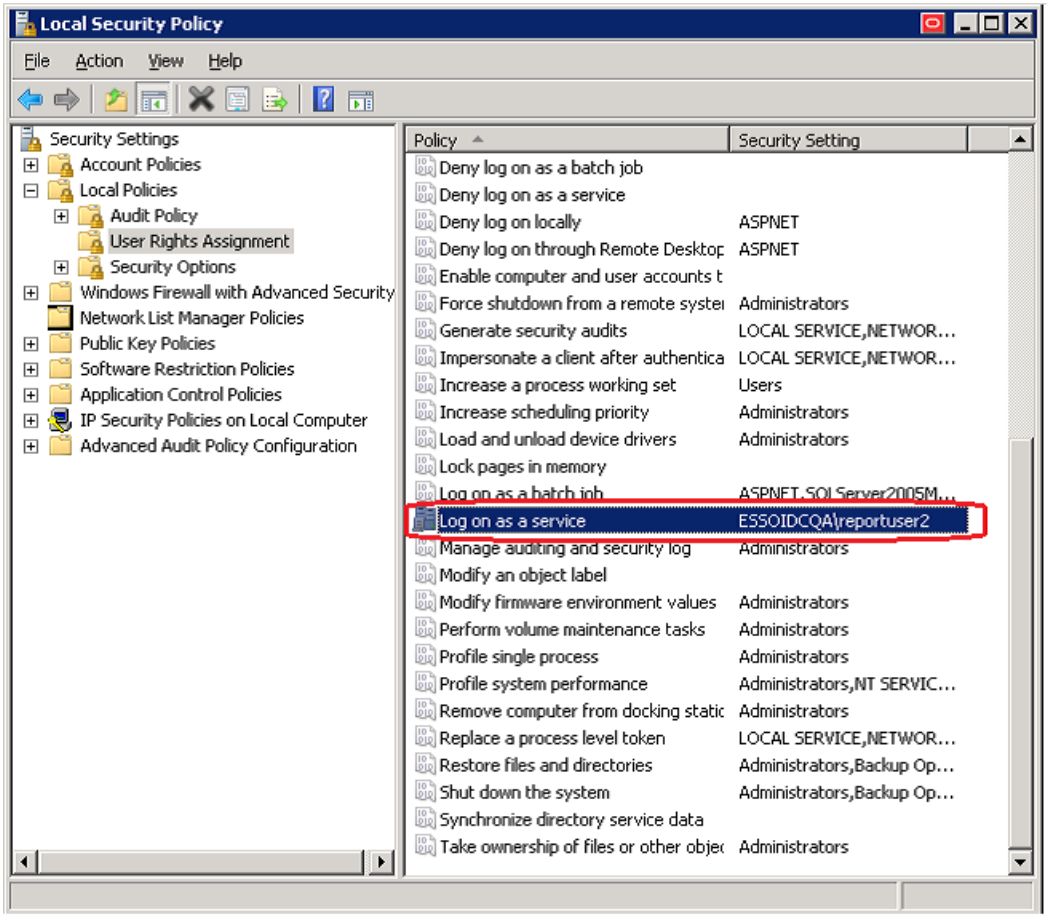
  or

- Open a command prompt, and type: `gpupdate /force`. Then press **Enter**.

Verifying Publication of the Active Directory Permission on the Client Machine

> Also see Microsoft's technical note about modifying permissions on an Active Directory domain or local computer to allow a domain user to log on as a service.

1. Ensure that the client is updated by opening a command prompt and entering the `gpupdate /force` command. See the Microsoft Technical library for a discussion of this procedure.
2. Go to **Administrator Tools** > **Local Security Policy**.
3. In Local Security Policy go to **Security Settings** > **Local Policies** > **User Rights Assignment** (as shown in the following figure).
4. In the Detail Panel check for the updated "Log on as a service" policy. It should include the Reporting Domain User among the users who have this permission.



Configuring the ESSO Reporting Service on the Client Machine to run as this domain user

Perform these steps on all client computers where the ESSO Reporting Service is running.

To configure the ESSO Reporting Service to run under the Reporting Domain User account:

1. Open a command prompt and enter the following command:

   ```
   sc config "SSO Reporting Service" obj= "Domain\User" password= "password"
   ```

2. Press **Enter**.

   This command should return the following output:

   ```
   [SC] ChangeServiceConfig SUCCESS
   ```

3. Restart the ESSO Reporting Service:

   a. Open a command prompt and enter the following command.

      ```
      net stop "SSO Reporting Service" && net start "SSO Reporting Service"
      ```

   b. Press **Enter**.

      This command should return the following output:

      ```
      The ESSO Reporting Service service is stopping.

      The ESSO Reporting Service service was stopped successfully.

      The ESSO Reporting Service service is starting.

      The ESSO Reporting Service service was started successfully.
      ```

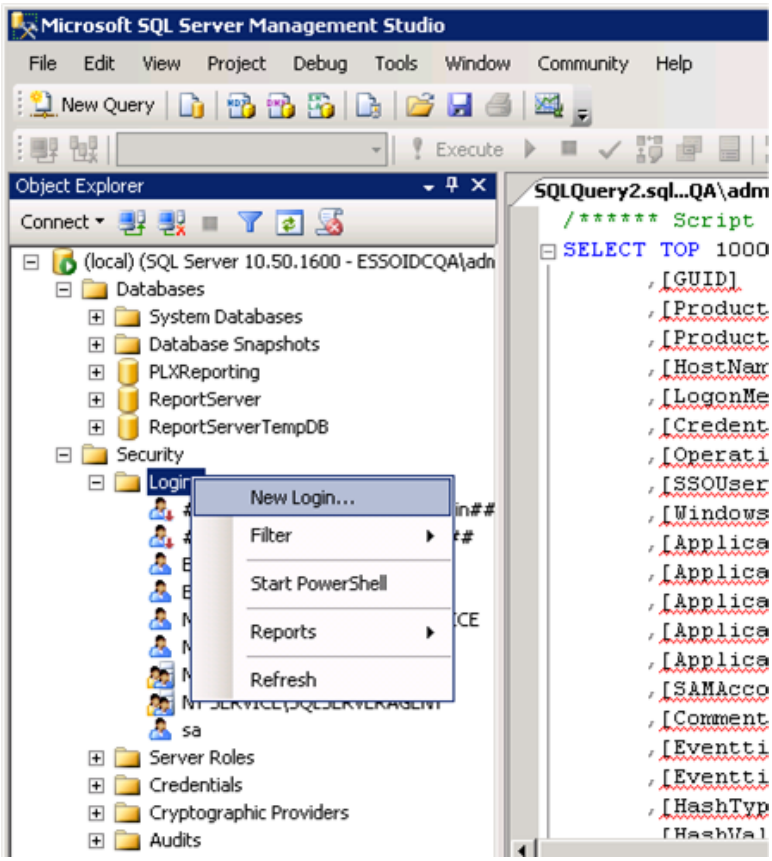
You can achieve the same results through the UI by accessing the "Services" console on any client computer.

Setting Up Microsoft SQL Server for Integrated Authentication

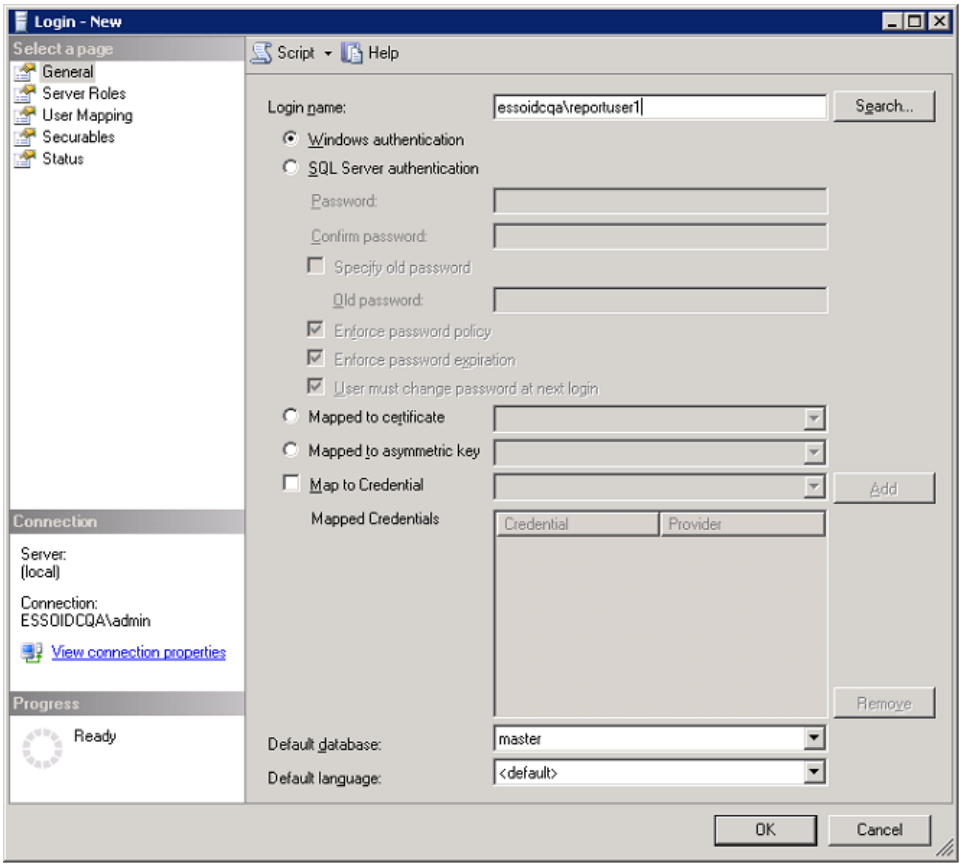
Before performing the following steps for Microsoft SQL Server Integrated Authentication, you must complete the procedures described in Creating the Database Table and Setting Up Stored Procedures in the SQL Database Configuration section of this guide. You must perform those steps for both upgrades and new installations.

Configuring a Login and Role for the New Reporting Domain User in the Microsoft SQL Database

1. In the SQL Server Management Studio left pane, expand the top node (server name), then navigate to **Security** > **Logins**.
2. Right-click on **Logins** and select **New Login...**.

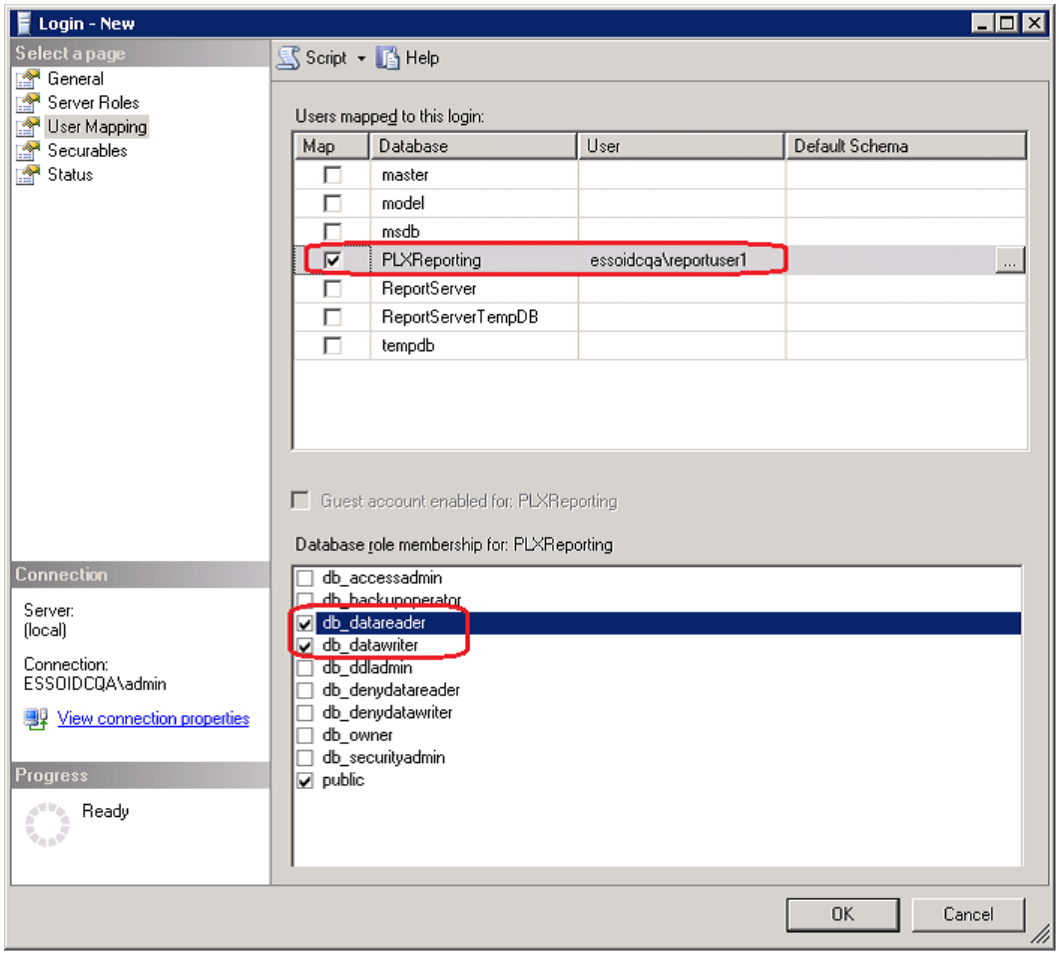


3. In the New Login dialog:
   a. Select **Windows authentication**. Enter the Reporting Domain User as the Login name.



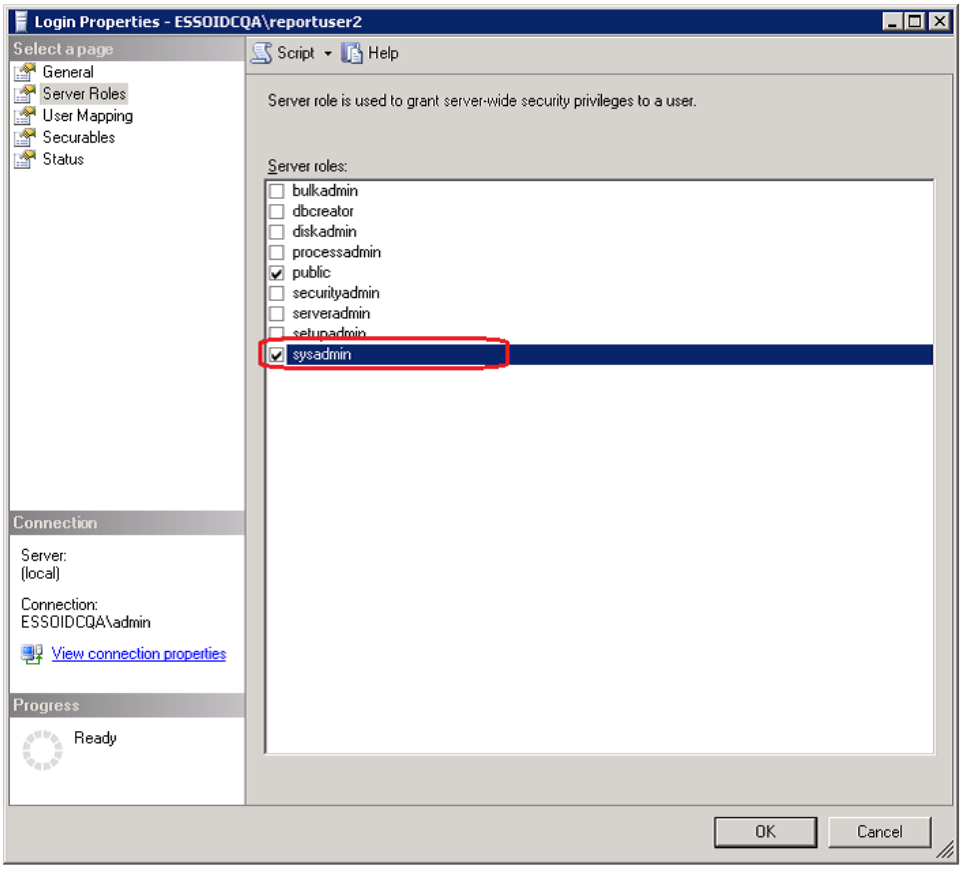
   b. Select **User Mapping** in the left pane.
   c. Map the Reporting Console user to the PLXReporting database.

d. Enable the **db_datareader** and **db_datawriter** role memberships for the Reporting Console User.



e. Select **Server Roles** in the left pane.

f. Select **sysadmin**.

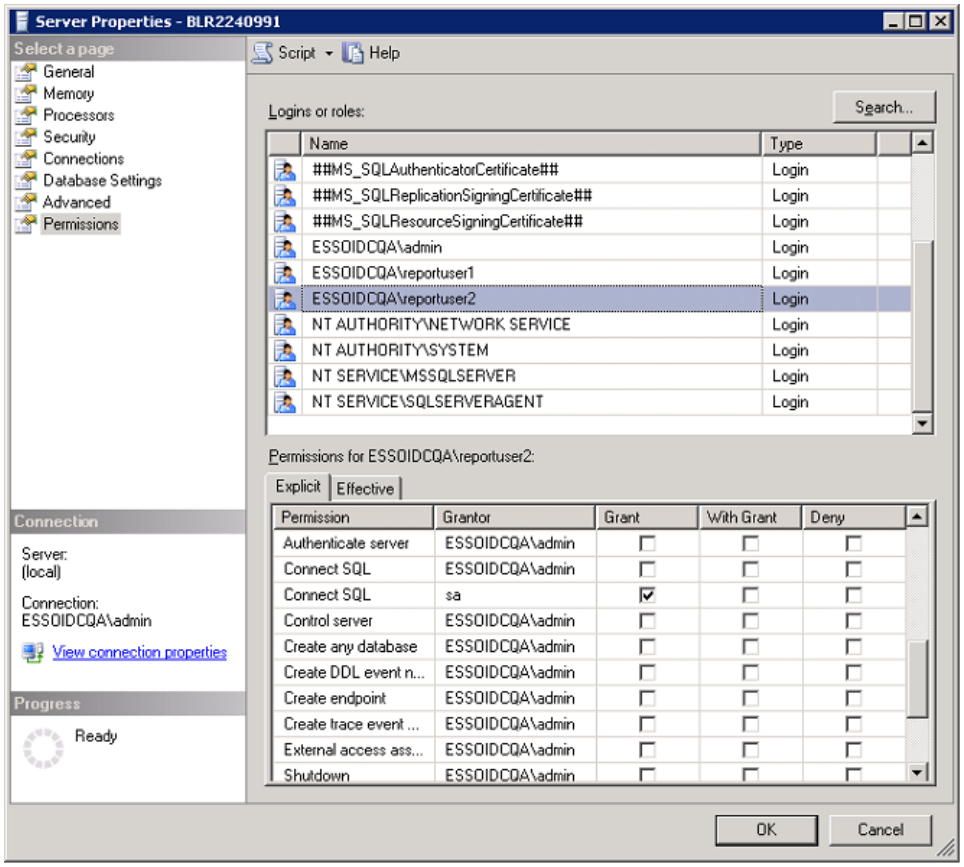


4. Click **OK**.

Setting Permissions for the Reporting Domain User

1. In the SQL Server Management Studio left pane, right-click on the top node (server name), and select **Properties**.
2. In the Properties dialog, select **Security** from the left pane.
3. Select the **SQL Server and Windows Authentication mode** radio button.
4. Select **Permissions** from the left pane.
5. Select the user (Reporting Domain User, created in the previous section) in the Logins or roles section.
6. In the bottom pane, Explicit Permissions for <name>, ensure Grant is enabled for the Connect

SQL permission.



> It is important to keep in mind that using a database for reporting will result in having a number of connections equal to the number of active users. This will have a substantial impact on memory requirements (for performance) and storage requirements (for data logged).

Next Steps

After you configure the Agent to report events and the database to store them, you must configure BI Publisher to locate them for publication. Continue to these instructions.

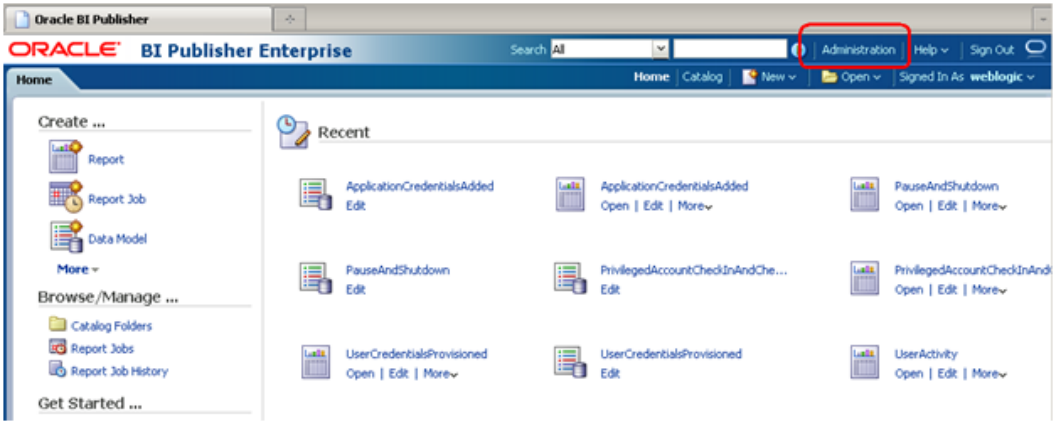
Configuring Oracle BI Publisher for Deployment with Reporting

The Reporting service uses BI Publisher to generate reports for collected data. The following procedure explains how to configure BI Publisher to receive data from the Reporting Service. Refer to BI Publisher documentation for complete information about using this tool.

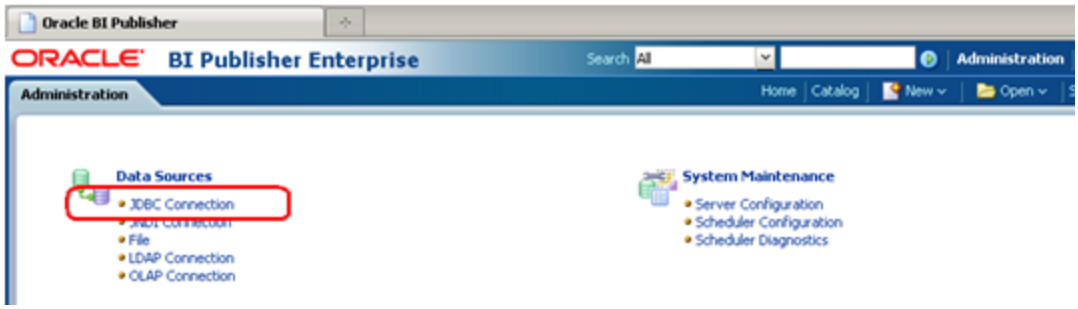
It is assumed that you have already installed Oracle Business Intelligence (BI) Publisher 11g.

Configuring Oracle Business Intelligence Publisher

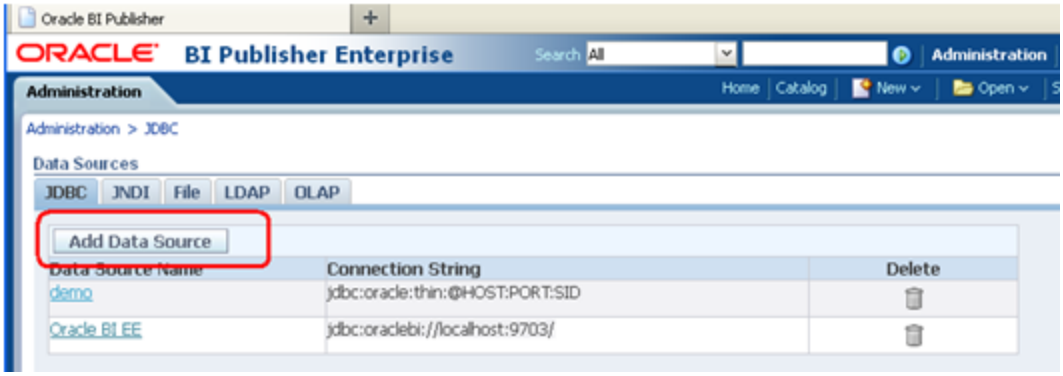
1. Open BI Publisher in your browser (the typical URL is `http://<host>:7001/xmlpserver`).
2. Submit credentials for an administrator account.
3. In the BI Publisher window, select the **Administration** menu.



4. Under Data Source, select **JDBC Connection**.

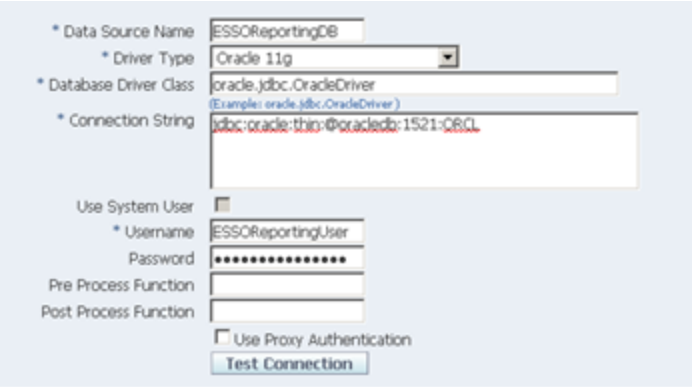


5. Click **Add Data Source**.

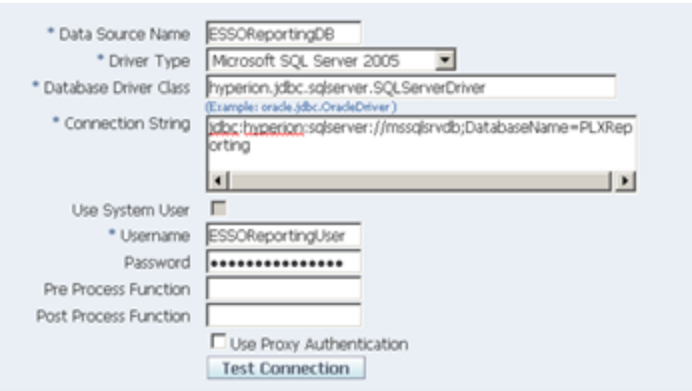


6. For the data source name, enter: `ESSOReportingDB`. Provide the Reporting database connection information as in the following examples:

   - Example of Oracle 11g connection information:

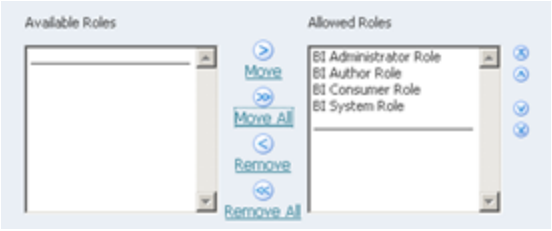


   - Example of Microsoft SQL Server 2005 database connection information:

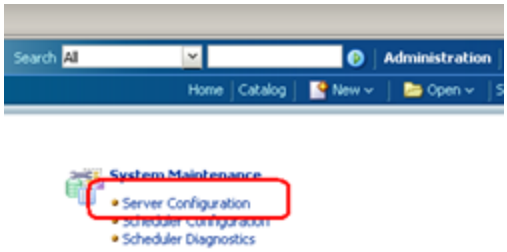


7. Click **Test Connection** to verify that the connection is operational. You will see a Confirmation message when the test succeeds.

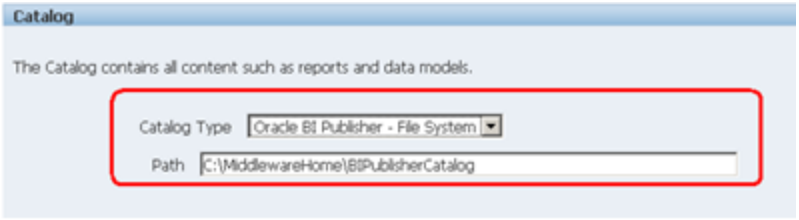
8. In the Security section, set the roles that will have access to the ESSOReportingDB data source.



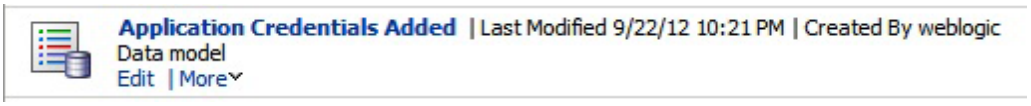
9. Click **Apply** to save your settings.
10. On the Administration page under System Maintenance, select **Server Configuration**.



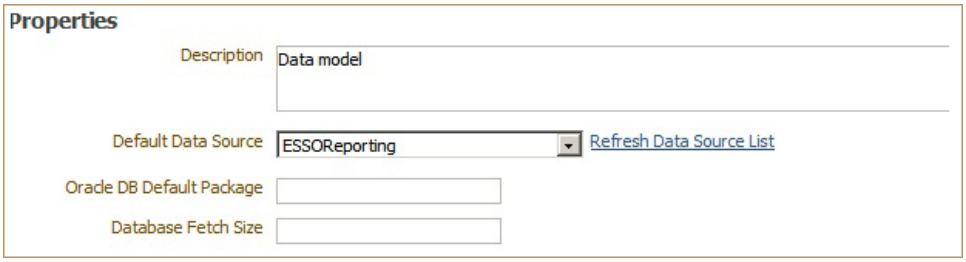
11. In the Catalog section choose catalog type "Oracle BI Publisher – File System" and set a folder on your hard drive. This folder will be used for storing your reports.



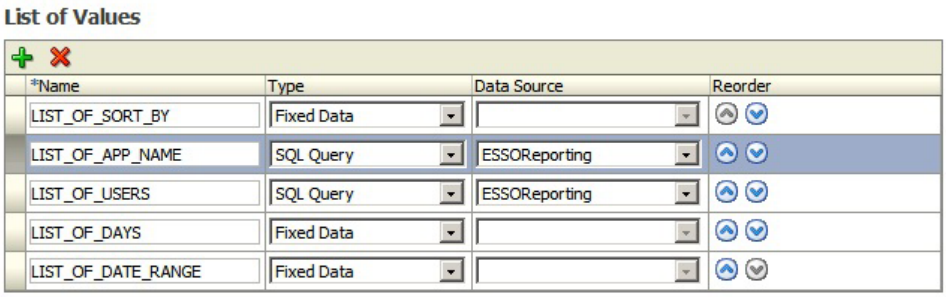
12. Under the Report Folder for each component (for example, Logon Manager), for each Report Type "Data Model," click **Edit**.



13. In the Properties dialog, select the database connection you created previously as the value for the Default Data Source.



Then select from the List of Values to the left of the Properties dialog. Change the Data Source in this dialog as you did in the step above, assigning the previously-created database connection.

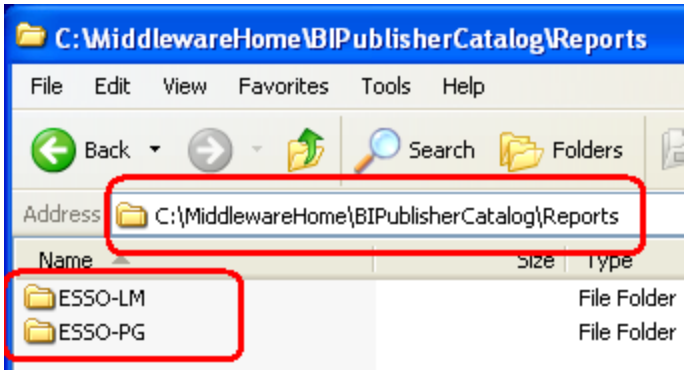


14. Save your changes after completing this process.

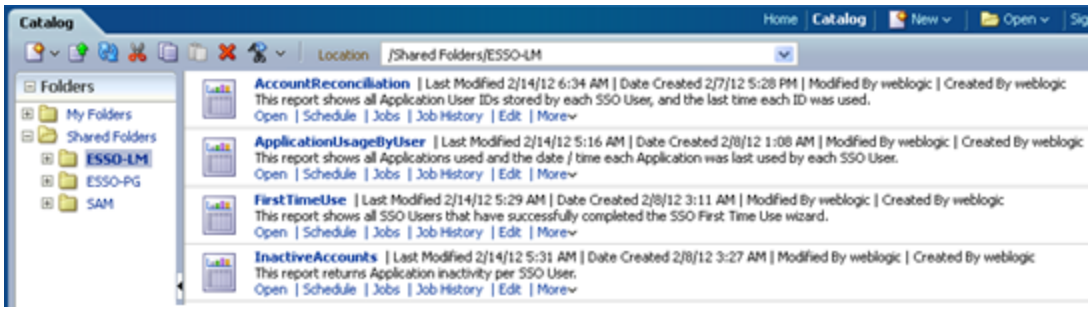
Continue to the next section to add Oracle Enterprise Single Sign-On Suite Plus reports to Business Intelligence Publisher.

Deploying Reporting

1. Open the BI Publisher Catalog folder on your hard drive.
2. Create a Reports folder in this location. BI Publisher searches for the Reports folder in the BIPublisherCatalog directory, so it is important that you create this folder in the correct place.



3. Copy Oracle Enterprise Single Sign-On Suite Plus reports to the Reports subfolder.



4. Restart Business Intelligence Publisher.
5. Log on to Business Intelligence Publisher and navigate to **Catalog** > **Shared Folders**

   Oracle Enterprise Single Sign-On Suite Plus Reports are ready to use.

Part VI. Reference Topics

This section contains important supplementary information about configuring and using Oracle Enterprise Single Sign-On Suite Plus components.

Logon Manager

Password Reset

- Understanding Data Structures
  - Schema Diagram
  - Rights and Security
  - Object Classes
  - Attributes
- Configuring Password Reset for Data Storage in an Oracle Database
- Client Registry Settings
- Server Registry Settings

Reporting

- Reporting Event Definition Table

General

- Obtaining a Certificate of Authority

Best Practices for Deploying the Agent in a Citrix Environment

Deploying Logon Manager on Citrix can be performed using several strategies, with dependencies on how the Citrix farm or farms are deployed, and how access is delivered to end-users. These methods do not change between using a Citrix ICA client on the desktop and using the Citrix Web portal to deliver applications, except where otherwise specified.

Fundamentally, three options exist:

- Deploy Logon Manager per user.
- Deploy Logon Manager per application.
- Deploy Logon Manager per server.

This section covers these options in depth.

Installation

Regardless of the ultimate configuration, the initial Agent installation process is the same for all deployment options.

Before starting, be certain that you have properly configured your Global Agent Settings, have a solid understanding of Logon Manager, and decided which extensions you need to install with the Agent. Generally these will be the same extensions and very similar GAS settings to the user workstations in your environment. For more detailed instructions on installing Logon Manager on Citrix, see Configuring Logon Manager in a Citrix Environment.

To install Logon Manager on Citrix MetaFrame:

1. Log on to the Terminal server as an administrator and close all applications.
2. Click **Start** and then click **Run**. The Run Dialog window appears.
3. Type `cmd` and press **Enter**. The Command Prompt window appears.
4. Type `change user /install` and press **Enter**.
5. Install Logon Manager with the appropriate installation options for your environment.
6. At the command prompt, type `change user /execute` when installation is complete.

Configuration and Deployment

Deploying Logon Manager on Citrix can be performed using several strategies, with dependencies on how the Citrix farm or farms are deployed, and how access is delivered to end-users.

Fundamentally, three options exist:

- Deploy Logon Manager per user
  - Enables you to deploy Logon Manager to all servers and all applications, yet still limit users who will utilize it on those servers and applications.
- Deploy Logon Manager per application
  - Enables you to deploy Logon Manager to all servers and users, but only on a per-application basis.
- Deploy Logon Manager per server
  - Enables you to deploy Logon Manager to individual servers

Deploying Logon Manager Per User

Deploying Logon Manager per user allows you to control access to those users/groups that should and should not be granted access to use Logon Manager.

The steps involved in deploying Logon Manager per user are as follows:

1. Create a group on your domain for Logon Manager Users. Include all users in your environment who will use Logon Manager for Citrix published applications.
2. On each Citrix server, edit the Security properties of the ssoshell.exe file located in the `C:\Program Files\Passlogix\v-GO SSO` directory.
3. Add the previously-created SSO Users group to the ACL of the directory. Be sure to give this group the rights "Read" and "Read & Execute" to this file. Remove the Users, Domain Users or any other group that may have read access to this file. To accomplish this, you may have to uncheck "inherit permissions from parent."

   This method of permission settings will still allow any administrators full access to this file and thus the ability to use Logon Manager. There are many other possible combinations or ways to set these permissions. The bottom line is to give those users needing access to Logon Manager the permissions to read/execute ssoshell.exe and keep all other users from being able to access/read it at all.

   Using the per-user deployment option in Citrix means you can leave all applications published to all users and do not have to use ssolauncher.exe to configure each of your Published Applications.
4. If you do not wish to invoke Logon Manager immediately, delete the ssolauncher.exe value from the `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft \Windows NT\CurrentVersion\Winlogon\AppSetup` key in the Windows registry.

   Without this key, Logon Manager will not respond to any applications. To elicit a response, you would have to either replace this key or modify your published applications commands to include ssolauncher.exe.

Deploying Logon Manager Per Application

Deploying Logon Manager per application allows you to enable Logon Manager on an application by application basis.

The steps involved in deploying SSO per application are as follows:

1. Install Logon Manager on every server that will host a single sign-on-enabled application.
2. Prevent Logon Manager from launching automatically by deleting the ssolauncher.exe value from `HKEY_LOCAL_MACHINE\SOFTWARE \Microsoft\Windows NT\CurrentVersion\Winlogon\AppSetup` and deleting the ssoshell.exe value from the `HKEY_LOCAL_MACHINE\SOFTWARE \Microsoft\Windows NT\CurrentVersion\Winlogon\UserInit` key. For specific instructions on doing this, please use the keyword "Citrix" in the SSO Console help files.
3. Modify the published applications that you wish to use eSSO-LM with to include a command-line wrapper that calls SSOLauncher.exe, which subsequently calls the original command line. For specific instructions, see Configuring Logon Manager in a Citrix Environment.

Deploying Logon Manager Per Server

Deploying Logon Manager per Citrix server allows you to enable the Agent on a server-by-server basis. This is the easiest of the three methods to fully deploy.

1. Install Logon Manager on Citrix Servers that you wish to enable for single sign-on.
2. Direct Logon Manager users to the single sign-on-enabled servers.

   There is no need to modify any published applications, set any permissions, or remove any registry keys. Logon Manager automatically launches for all users on this server. This method works well if users access remote desktops via the Citrix server.

Global Agent Settings Specific to Citrix Servers

For the most part and in most cases, the Citrix servers will use Global Agent Settings that are extremely similar to those deployed to all of your other Logon Manager client machines. In a typical deployment, you would fully configure and test a client workstation prior to beginning Citrix. After you configure and validate your Global Agent Settings configuration, import these into the Administrative Console and rename them for use in your Citrix Environment.

You should configure the following Global Agent Settings for Citrix servers:

- End-User\Experience\Advanced\Store user data on disk in encrypted format: Set to "Do not store data in user disk file."
- Synchronization\Delete local cache: Set to "Delete."
- Eliminate drive letter hard-coding in Global Agent Settings: these are in the Synchronizer and Event Log settings. Simply change the "C:" to match whatever drive letter where you have installed Logon Manager on your Citrix server. If different Citrix servers use different drive letters, you would have to specify different settings for each server. This is crucial because Logon Manager uses this drive letter to locate components.

Publishing Applications

After completing the steps above, Logon Manager is ready for use on your Citrix servers. You can begin enabling some or all of your published applications. To enable Logon Manager for an application, you need to modify its command line using ssolauncher.exe. For specific instructions, see Configuring Logon Manager in a Citrix Environment.

Logon Manager Application Compatibility Considerations

While Oracle officially tests and supports only the applications for which we provide templates, we have an exceptionally high success rate enabling the vast majority of business and productivity applications for Windows, the Web, Java applications and mainframe/AS400 emulators. Our support team will assist you in configuring any application template unless or until we determine that the application as it exists is incompatible with Logon Manager.

The following table identifies characteristics of applications for which Logon Manager is known to have support issues:

High Risk	Medium Risk
Application characteristics that generally hinder successful application template configuration	*Application characteristics that often result in incomplete SSO functionality or require an action on the part of the end-user to complete the sign-on or password change*

• XWindows
• Flash applications
• Outdated Java (earlier than 1.3.1)
• Non-HLLAPI emulators
• Emulator applications that already use HLLAPI, when used in conjunction with emulators that allow only one application to connect to HLLAPI
• DOS GUI applications and DOS applications not run in CMD
• Web Applications that:
  ○ Require SendKeys
  ○ Require a delay.
  Logon Manager does not inject credentials until it sees that the page has fully loaded. With some Web sites, the page appears to be fully loaded from the perspective of the browser, but fields are not yet ready for credential injection.
• Applications that require matching to fix an issue (for example, logon looping, ignore, password change, etc.), but unique criteria is not available for matching.
	• Applications hosted on Terminal Server or Citrix, if Logon Manager cannot be installed on the Terminal Server or Citrix box.
	• Applications where the OK Button is missing and ENTER is not accepted. Logon Manager cannot process the submission and the user must manually submit the credentials or SendKeys must be used.
	• Applications where logon or password change requires an action (for example, a checkbox). SendKeys can be used for Windows applications.
	• Applications where the window title of the target application changes after creation but before the logon screen is active.
	• Applications where logon fields are on a page with other logon or credential entry fields. Logon Manager cannot distinguish between multiple logons if they are on the same screen.
	• Applications where the Submit button is in an image tag with a fully-qualified path and ENTER is not accepted. If the image path changes, Logon Manager will not insert and submit the credentials properly.
	• Password change scenarios where the application password policy does not match the SSO capabilities, and the user is responsible for password selection (for example, if the application has a password history or dictionary requirement).
	• SendKeys for Windows applications (Web applications are high risk and Mainframe applications lose the password change).

Configuring Host Emulators to Enable HLLAPI Short Session Names

Logon Manager provides single sign-on functionality for the following host/terminal emulators using built-in HLLAPI (high-level language application programming interface) support. The topics listed here outline how to enable HLLAPI support in each emulator.

- Telnet Support
- Attachmate Extra! / myExtra! / Xtra! X-Treme
- BlueZone Web-to-Host
- BOSaNOVA
- Ericom PowerTerm
- G&R Glink
- Hummingbird HostExplorer
- IBM Client Access
- IBM Client Access Express
- IBM Host on-Demand
- IBM Personal Communications
- Jolly Giant QWS3270 PLUS
- NetManage Rumba
- Net Soft NS/Elite
- Newhart Systems BLUES 2000
- Novell LAN Workplace
- PuTTY
- Scanpak Aviva for Desktops
- Seagull Bluezone
- WRQ Reflection
- Zephyr PC to Host
- Zephyr Web to Host

For emulators that do not implement HLLAPI support, you can configure a host/mainframe application as a Windows application (to detect the form by its window title) and using SendKeys (to supply user credentials). See Adding Windows Applications: Special Issues for more information.

Attachmate EXTRA!/ myExtra!

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

To set up *each session* of Attachmate EXTRA! to work with Logon Manager:

In the emulator:

1. Open the session.
2. Select **Global Preferences** from the **Options** menu.

3. Select **Advanced**, select the **Short name** (for example, A), select **Browse**, select the session document, and click **OK**.

This setting needs to be saved with each session configuration file.

Background processes sometimes remain running after a mainframe or host session has ended. This may disrupt the Auto-Logon process and prevent the session from restarting.

BlueZone Web-to-Host Emulator

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

To install and configure BlueZone Web-to-Host emulator:

1. Launch the BlueZone Web-to-Host setup.
2. In the Setup Type section, select **Install BlueZone Web-to-Host** and click **Next**.
3. Read the end-user license agreement carefully. If you agree to the terms, select the button next to **Yes, I agree with the terms of this software license**, and click **Next**.
4. Select a location to install the software. The installer defaults to your C: drive's Program Files directory.
5. Direct the installer to the location of the Seagull Activation File (SAF), or leave it blank if you do not have an SAF yet.
6. Select whether the installer should create a program group to use, and whether it should create a desktop shortcut for the BlueZone Web-to-Host Wizard, and click **Next**.
7. In the Sites dialog box, select a language for the site from the dropdown menu.
8. Do one of the folllowing:
   - Click **Create** and enter a path and folder name.
   - Click **Import** and navigate to the site you want to import.
   - Click **Copy** and navigate to the site you want to copy.
   - Click **Upgrade** and navigate to the site you want to upgrade.
   - If you want to delete an existing site, select it and click **Delete** .
9. In the Launch Folders dialog box, select an existing launch folder, or click **Create** to create a new one. Click **Next**.
10. In the New BlueZone Launch Folder dialog box, enter the folder name, and select from the folder options whether to distribute as a standard web-to-host or as a served desktop. Click **OK**.
11. When you return to the Launch Folders dialog box, which now displays your new launch folder, click **Next**.
12. In the Sessions dialog box, click **Create**.
13. In the New BlueZone Session dialog box, select **Mainframe Display** from the dropdown menu and click **OK**.
14. Enter a name for the session and specify whether to use an existing profile. Select an existing profile if appropriate. Select whether to allow local saves. Click **OK**.
15. In the Define New Connection dialog box, enter your connection information and click **OK**.

16. Review the information in the Session Properties window. Edit any information that you want to change. Click **OK** when you are done.
17. Select **Session** in the BlueZone Mainframe Display and click **Connect**.

Support for this emulator is new as of version 11.1.1.1.0.

BOSaNOVA

> For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Logon Manager supports BOSaNOVA emulator. No steps are necessary to set up BOSaNOVA to work with Logon Manager.

> There is an open issue with the BOSaNOVA emulator when used with Logon Manager. When closing the emulation, the following warning message appears: "There are active applications connected to the emulation via the HLLAPI/DDE interface. Closing the emulation now may cause unpredictable results. Are you sure?"
>
> If you click **Yes**, Logon Manager stops responding to the BOSaNOVA emulator and you must restart it. Note that the restart may take a few additional seconds. Another workaround for this issue is to shut down Logon Manager before closing the emulation, close the emulation, and then restart Logon Manager.

Ericom PowerTerm

> For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Setting Up Ericom PowerTerm to Work with Logon Manager

In the emulator:

1. Select **Terminal** from the **Setup** menu.
2. Select the **General** tab.
3. Under **HLLAPI Names**, set **Short** to a unique value.
4. Click **OK**.

> In order to enable Logon Manager support for PowerTerm InterConnect, Plus, and Lite editions, the complete and exact path to the emulator must be specified in the Agent's host/mainframe-configuration file, **MfrmList.ini**. The default path in the mainframe configuration is **C:\Program Files\Ericom Software\PowerTerm**.

If one of these editions of the PowerTerm emulator is installed in any other directory or on any other drive, you must modify this default path in **MfrmList.ini**. This file can only be edited using the Oracle Enterprise Single Sign-On Administrative Console.

1. On the Tools menu, point to **Modify Configuration**, then click **MfrmList**.
2. In the INI editor, select Ericom PowerTerm Lite/Plus/InterConnect from the **Section** drop-down list.
3. For **ValueName=** edit the path to the emulator as needed.
4. Click **Save** (click **OK** to restart the Agent if prompted), then **Close**.

G&R Glink

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

To set up G&R Glink to work with Logon Manager:

Configure short names in the *glHLLAPI.ini* file, which is found in the GLWin\WHLLAPI directory within the G&R Glink installation path. This file must be copied to the user's *%WinDir%* directory to take effect. Oracle recommends that the default values be left as they are, except for those values that refer to the short names, which take the form of:

```
A]
Name=HLLAPI long name
Config=config file name
```

where '`A`' represents the short name.

Hummingbird Host Explorer

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

To set up Hummingbird HostExplorer to work with Logon Manager:

In the emulator:

1. Select **API Settings** from the **Options** menu.
2. Under **HLLAPI Options**, select **Update screen after PS update**.
3. Under **EHLLAPI Compatibility**, select **Attachmate**
4. Click **OK**.

IBM Client Access

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Logon Manager supports IBM Client Access. No steps are necessary to set up IBM Client Access to work with Logon Manager.

IBM Client Access Express

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Logon Manager supports IBM Client Access Express. No steps are necessary to set up IBM Client Access Express to work with Logon Manager.

IBM Host On-Demand

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Logon Manager support for IBM Host On-Demand is tested with Microsoft Windows, Microsoft Internet Explorer or Mozilla Firefox, and the updated JVM (Java Virtual Machine). If Microsoft Internet Explorer is installed, the JVM should not have to be updated.

> One issue with these methods is that clients might not be able to save configured sessions, and entering the auto-start name each time a session is used is quite tedious. Alternatively, administrators can replicate the existing sessions that are available to the client, and HLLAPI-enable these sessions as explained below. Clients can then be offered both standard and HLLAPI-enabled sessions.

To set up IBM Host On-Demand to work with Logon Manager:

In Microsoft Internet Explorer or Mozilla Firefox

1. Launch the browser.
2. Go to IBM FixCentral at http://www-933.ibm.com/support/fixcentral/and download the Host On-Demand EHLLAPI Bridge Download for the particular version of IBM Host On-Demand.
3. Unzip the downloaded file to the Logon Manager installation directory.
4. Install Ehllapibridge.exe.
5. Select **Internet Options** from the Tools menu.
6. Select the **Advanced** tab.
7. Under Microsoft VM, select **Java console enabled (requires restart)**.
8. Click **Apply**, then **OK**. If necessary, exit the browser.
9. Restart the computer.

In Host On-Demand

1. Configure each individual session to run the HLLAPI enabler through the Host On-Demand applet.
2. Select **Properties** from the menu.
3. Select the **Advanced** tab.
4. Select **Applet** from the Auto-Start drop-down list box.
5. Enter `com.ibm.eNetwork.hllbridge.HLLAPIEnabler` in the **Name** text box.
6. Enter `ENABLE_PCSAPI=YES` in the **Parameter (Optional)** text box.
7. Select **Yes** in the **Auto-start HLLAPI Enabler** check-box.
8. Alternatively, run this applet after the session starts by selecting **Assist**, then **Run applet**.

IBM Personal Communications

> For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

To set up IBM Personal Communications to work with Logon Manager:

1. From the **Edit** menu in the emulator, point to **Preferences** and select **API Settings**.
2. Select the **DDE/EHLLAPI** checkbox.
3. Click **OK**.

Jolly Giant QWS3270 PLUS

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Logon Manager supports Jolly Giant QWS3270 PLUS emulator. No steps are necessary to set up Jolly Giant QWS3270 PLUS to work with Logon Manager.

NetManage Rumba

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Setting Up NetManage in the Emulator

1. Select **API** from the **Options** menu.
2. Select the **Identification** tab.
3. Set the **Session Short Name**.
4. Click **OK**.

NetManage Rumba appears to have an incomplete implementation of HLLAPI. NetManage Rumba connects and sees the Presentation Space (emulator screen), but it does not appear to support connections for more than one session. Logon Manager can only provide single sign-on support to the last session started.

Net Soft NS/Elite

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Logon Manager supports Net Soft NS/Elite. No steps are necessary to setup NS/Elite to work with Logon Manager.

Newhart Systems BLUES 2000

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Logon Manager supports Newhart Systems BLUES 2000 emulator. No steps are necessary to set up Newhart Systems BLUES 2000 to work with Logon Manager.

Novell LAN Workplace

For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

In order to enable Logon Manager support for Novell LAN Workplace Pro, the complete and exact path to the emulator must be specified in the Agent's host/mainframe-configuration file, **MfrmList.ini**. The default path in the mainframe configuration is **c:\Program Files\Novell\LAN Workplace\Terminals\Bin**.

If the Novell LAN Workplace emulator is installed in any other directory or on any other drive, you must modify this default path in **MfrmList.ini**. This file can only be edited using the **Oracle Enterprise Single Sign-On Administrative Console.**

1. On the Tools menu, point to **Modify Configuration**, then click **MfrmList**.
2. In the INI editor, select Novell LAN Workplace Pro 5.2 from the **Section** dropdown list.
3. For **ValueName=** edit the path to the emulator as needed.
4. Click **Save** (click **OK** to restart the Agent if prompted), then **Close**.

PuTTY


For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Creating Application Templates for the PuTTY Terminal Emulator

Due to the way PuTTY and support for PuTTY in Logon Manager have been designed, you must keep the following information in mind when creating templates for applications accessed via PuTTY.


Use PuTTY's Copy All to Clipboard feature when creating a PuTTY-based template.

PuTTY Treats Fixed-Screen Applications as Scrolling-Screen

Because PuTTY treats all applications as scrolling-screen, you must create scrolling-screen templates even if the application in question is fixed-screen.

PuTTY Does Not Support Detection or Setting of Cursor Position

Because PuTTY cannot detect nor set the cursor position, you must do the following when creating templates:

- **Fixed-screen applications.** Configure the template to manually position the cursor into the target row and column by sending appropriate keyboard characters such as tabs and spaces.
- **Scrolling-screen applications.** Configure the template with the assumption that the cursor is always positioned after the last character on the last line of the screen, plus a separating space.

Screen Updates in PuTTY Are Not Immediate

Because PuTTY does not update its screen display immediately due to host echo (text entered is first sent to the server then returned back to the terminal and displayed), it is necessary to add delays when switching fields and/or submitting the credentials, depending on the latency of the echo. If you need to delay the "Submit" action, you must disable the "Auto Submit" feature.

Scanpak Aviva for Desktops


For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Logon Manager supports Scanpak Aviva for Desktops (formerly Eicon Aviva). To set up Scanpak Aviva for Desktops to work with Logon Manager:

In the emulator:

1. Select **Settings**, then **Properties** from the menu.
2. Select **Automation**.
3. Ensure the **Choose first available short name** checkbox is selected.


Only the session and destination parameters must be configured.

WRQ Reflection


For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

To set up WRQ Reflection to work with Logon Manager:

In the Emulator:

1. Select **Setup**, then **Terminal** from the menu.
2. Set the **HLLAPI names** for **Short** and **Long**. (**Short** must be unique, **Long** can be anything the program permits.)
3. Click **OK**.

Zephyr PC to Host


For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

To set up Passport to work with Logon Manager:

In the emulator:

1. Select **Communication,** then **Setup** from the menu.
2. Select **HLLAPI** (If **Automatically Select** is checked there is not additional steps necessary. If **Manually Specify** is checked, you must select either a **Short Na**me or **Long Name**.

Zephyr Web to Host


For a complete list of supported versions, please refer to the latest *Oracle Enterprise Single Sign-On Suite Plus Release Notes*.

Logon Manager supports Passport Web to Host. No steps are necessary to setup Web to Host to work with Logon Manager.

SAP Configuration

Logon Manager supports SAP applications. In order for Logon Manager to work with SAP applications, scripting must be turned on. (Note that in your environment, scripting may be turned off by default.) The following configuration changes must be made to all SAP desktops that will run Logon Manager. If these configuration changes are not made, end users will receive an SAP error unless Logon Manager is shut down.

To set up SAP to work with Logon Manager:

Configuring the Client

- Open the SAP Client and log on (SAPGUI Front End).
- On the SAP Easy Access screen, open the **Options** dialog box. (Click Alt F12 or select **Customizing of local layout** from the Standard Toolbar on any SAP screen).
- Select the **Scripting** tab.
- Under **User Settings**, make sure that **Enable Scripting** is checked and that **Notify when a script attaches to a running GUI** is not checked.
- Click **Apply**.

Configuring the Server

- Open the SAP Application Server.
- Start transaction RZ11.
- On the **Maintain Profile Parameters** screen, in the **Param. Name**, enter sapgui/user_scripting and click **Display**.
- On the **Display Profile Parameter Attributes** screen, select **Change Value** from the Application Toolbar.
- On the **Change Parameter Value** screen, enter TRUE in the **New Value** field.
- Click **Save** (lower left hand corner).

Editing the Registry

- Open the Registry.
- Drill down to *HKCU\software\SAP\SAPGUI Front\SAP Frontend Server\Security:WarnOnAttach*.
- Set the **WarnOnAttach** value to 0.
- Push out this change to all desktops that will use SAP applications with Logon Manager.

The SAP Helper must be present for this process. Run the Logon Manager Agent Installer, select **Custom Setup**, expand the **Extensions** tree and drill down to **Logon Manager**. Select **SAP Helper** and choose **This Feature will be installed on the local hard drive**. Select **Next** and follow the onscreen instructions to complete the installation.

Border Values for Web Logon Credential Fields

Values for **Feedback Color** follow the standard for the **border** attribute in cascading style sheets (CSS). The table below lists valid colors and their RGB values. See Web Applications (End-User Experience - Response) for the **Feedback Color** setting in which these values are used.

<table>
<tr><th>Attribute</th><th>Possible Values</th></tr>
<tr><td>Width</td><td>• Thin
• Medium
• Thick
• A unit of pixels, inches, etc (examples: 3px.).</td></tr>
<tr><td>Style</td><td>• none
• dotted
• dashed
• solid
• double
• groove
• ridge
• inset
• outset</td></tr>
<tr><td>Color</td><td>A color keyword or RGB value; common examples include the following:
<table>
<tr><th>Keyword</th><th>RGB Equivalent</th><th></th><th>Keyword</th><th>RGB equivalent</th></tr>
<tr><td>aqua</td><td>#00FFFF</td><td></td><td>navy</td><td>#000080</td></tr>
<tr><td>black</td><td>#000000</td><td></td><td>olive</td><td>#808000</td></tr>
<tr><td>blue</td><td>#0000FF</td><td></td><td>purple</td><td>#800080</td></tr>
<tr><td>fuchsia</td><td>#FF00FF</td><td></td><td>red</td><td>#FF0000</td></tr>
<tr><td>gray</td><td>#808080</td><td></td><td>silver</td><td>#C0C0C0</td></tr>
<tr><td>green</td><td>#008000</td><td></td><td>teal</td><td>#008080</td></tr>
<tr><td>lime</td><td>#00FF00</td><td></td><td>white</td><td>#FFFFFF</td></tr>
<tr><td>maroon</td><td>#800000</td><td></td><td>yellow</td><td>#FFFF00</td></tr>
</table></td></tr>
</table>

Understanding the Logon Manager Secondary Authentication API

Overview

The secondary authentication API allows a third party application to programmatically supply a passphrase to the Windows Authenticator v2 (a.k.a. MSAuth) during an authentication session. This eliminates the need for interaction with the user and automates the authentication process.

The API consists of the following functions:

- **SecondaryAuthKey.** Allocates the passphrase answer buffer, fills the buffer with the passphrase answer, and returns a pointer to the answer buffer.
- **FreeSecondaryAuthKey.** Clears the answer buffer once the answer is no longer needed by third party code.

The custom secondary authentication library must be validated and digitally signed by Oracle; otherwise, it will not be accepted by Logon Manager. For assistance with this process, please contact Oracle Support.

The SecondaryAuthKey Method

This method is used to obtain the user's passphrase answer (in our example, the user's AD SID) and store it in memory at a specified address for later retrieval.

```
BOOL SecondaryAuthKey( LPBYTE* pbAnswer, LPDWORD pdwSize )
{

     BOOL fRetVal = FALSE;

     // check for invalid parameters
     if ( NULL != pbAnswer )
     {

       // obtain user's SID - it will be used as passphrase answer
       CSid sid;
       CString strSid( sid.Sid() );

       // allocate the memory buffer
       LPBYTE pByte = new BYTE[strSid.GetLength() + 1];

       // copy the SID to the buffer
       ::memcpy( pByte, strSid.GetBuffer(), strSid.GetLength() );

       // save the address of the buffer to the passed pointer
       *pbAnswer = pByte;

       // save the size of the buffer to the passed pointer
       if ( NULL != pdwSize )
       {

         *pdwSize = strSid.GetLength() + 1;

       }

       // set successful return code
       fRetVal = TRUE;

     }

     return fRetVal;

}
```

The FreeSecondaryAuthKey Method

This method is used to clear the passphrase answer buffer after SecondaryAuthKey has been successfully called.

```
void FreeSecondaryAuthKey( LPBYTE pbAnswer )

{

     // free the memory buffer
     delete[] pbAnswer;

}
```

Example Implementation

Below is an example of using the secondary authentication API to programmatically supply the passphrase answer to the authenticator.

```
BOOL CResetDlg::SecondaryAuth( LPCTSTR pszDllPath )
{

     BOOL fRetVal = FALSE;

     // load SecondaryAuth.dll
     HMODULE hSecondaryAuth = LoadLibrary( pszDllPath );

     If ( NULL != hSecondaryAuth )
     {

       SECONDARYAUTHKEY pfnSecondaryAuthKey = (SECONDARYAUTHKEY) GetProcAddress(
       hSecondaryAuth, "SecondaryAuthKey" );
       if ( NULL != pfnSecondaryAuthKey )
       {

         LPBYTE pbByte = NULL;
         DWORD dwAnswerSize = 0;

         // call SecondaryAuthKey to get the passphrase answer
         BOOL bAnswerResult = pfnSecondaryAuthKey( &pbByte, &dwAnswerSize );

         // use the returned answer – pbByte
         // ...

         // call FreeSecondaryAuthKey to let the library free the memory
         FREESECONDARYAUTHKEY pfnFreeSecondaryAuthKey = (FREESECONDARYAUTHKEY)
         GetProcAddress( hSecondaryAuth, "FreeSecondaryAuthKey" );
         if ( NULL != pfnFreeSecondaryAuthKey )
         {

         pfnFreeSecondaryAuthKey( pbByte );

         }

         // set successful return code
         fRetVal = TRUE;

       }

       // unload SecondaryAuth.dll
       FreeLibrary( hSecondaryAuth );

     }

     return fRetVal;

}
```

Switching Secondary Authentication Methods

You have the ability to change the method used by Windows Authenticator v2 (WinAuth v2) to verify the user's identity to another method if necessary. The following scenarios are supported:

- WinAuth v2 built-in secondary authentication to external secondary authentication
- External secondary authentication to WinAuth v2 built-in secondary authentication
- One external secondary authentication library to another

Switching from Built-In Secondary Authentication to External Secondary Authentication

To configure WinAuth v2 for recovery via custom secondary authentication library, do the following:

1. Start the Oracle Enterprise Single Sign-On Administrative Console.
2. In the tree in the left pane, right-click the **Global Agent Settings** node and select **Import** > **From Live HKLM** from the context menu.
3. Under the "Live" settings set, navigate to **Authentication** > **Windows v2**.

   If you have previously configured Logon Manager to use either the user's AD SID or a secure random key as a secondary authentication method, revert back to interactive passphrase by deselecting the check box next to the **Recovery Method** option. (This reverts the option to its default value, **User passphrase**.)
4. Create a directory named identically to the GUID of your custom library in the following directory:

   `<oracle_install_dir>\v-GO SSO\AUI\Recovery\`

   Substitute the full path of the directory in which Oracle Enterprise Single Sign-On products are installed for <oracle_install_dir>.

   For example, if your library's `GUID is {B623C4E7-A383-4194-A719-7B17D074A70F}`, you would create the following directory:

   `<oracle_install_dir>\v-GO SSO\AUI\Recovery\{B623C4E7-A383-4194-A719-7B17D074A70F}`
5. Place your custom library file in the directory you created in step 4.
6. Add a GUID entry to the Logon Manager secondary authentication methods list for your custom library.
   a. Create a key named identically to the GUID of your custom library under the following registry location:
      - On 32-bit systems:

        `HKEY_LOCAL_MACHINE\Software\Passlogix\AUI\MsAuth\RecoveryMethods\`
      - On 64-bit systems:

        `HKEY_LOCAL_MACHINE\Software\Wow6432Node\Passlogix\AUI\MsAuth\RecoveryMethods\`

For example, if your library's GUID is `{B623C4E7-A383-4194-A719-7B17D074A70F}`, you will create the following key on a 32-bit system:

HKEY_LOCAL_MACHINE\Software\Passlogix\AUI\MsAuth\RecoveryMethods\
`{B623C4E7-A383-4194-A719-7B17D074A70F}`

7. Set the Logon Manager recovery method to your custom secondary authentication library. If it does not already exist, create a string value named `ResetMethodGUID` under `HKEY_LOCAL_MACHINE\Software\Passlogix\AUI\MsAuth\RecoveryMethods\` and set it to the GUID of your custom library.
8. Reinitialize the WinAuth v2 settings with the newly selected configuration:
   a. Launch Logon Manager, double-click its system tray icon, and select **Settings** in the left-hand pane of the window that appears.
   b. Select the **Authentication** tab, then click **Change**. The Setup Wizard appears.
   c. Follow the prompts in the wizard. When prompted to select your primary logon method, make sure that **Windows Logon v2** remains selected.
   d. Complete the remaining steps in the wizard.

Switching from External Secondary Authentication to Built-In Secondary Authentication

To configure WinAuth v2 for recovery via one of Logon Manager's built-in secondary authentication methods, do the following:

1. Start the Oracle Enterprise Single Sign-On Administrative Console.
2. In the tree in the left pane, right-click the **Global Agent Settings** node and select **Import** > **From Live HKLM** from the context menu.
3. Under the "Live" settings set, navigate to **Authentication** > **Windows v2**.
4. Select the check box next to the **Recovery Method** option and do one of the following:
   - To use the interactive passphrase prompt with a user-supplied passphrase for secondary authentication , select **User passphrase** from the drop-down list
   - To use silent secondary authentication using the user's AD SID as the passphrase answer, select **Passphrase suppression using user's SID** from the drop-down list
   - To use silent secondary authentication with a secure random key as the passphrase answer, select **Passphrase suppression using secure key** from the drop-down list
5. Save your changes locally or publish them to the repository, as applicable.
6. Reinitialize the WinAuth v2 settings with the newly selected configuration:
   a. Launch Logon Manager, double-click its system tray icon, and select **Settings** in the left-hand pane of the window that appears.
   b. Select the **Authentication** tab, then click **Change**. The Setup Wizard appears.
   c. Follow the prompts in the wizard. When prompted to select your primary logon method, make sure that **Windows Logon v2** remains selected.
   d. Complete the remaining steps in the wizard.

Switching from One External Secondary Authentication Library to Another

If you are currently using one external secondary authentication library and want to switch to a different external library, repeat the steps in Switching from WinAuth v2 Built-In Passphrase Support to External Secondary Authentication.

Configuring the Windows Authenticator Version 2

This section describes how to install and configure the Windows Authenticator v2 for each of the secondary authentication methods described earlier in this document. It covers the following topics:

- Migrating a WinAuth v1 Installation to WinAuth v2
- Configuring WinAuth v2 for Authenticator Key Management via Windows DPAPI
- Configuring WinAuth v2 for Recovery via Interactive Passphrase Prompt
- Configuring WinAuth v2 for Recovery via the Secondary Authentication API
- Resetting the User-Provided Passphrase Answer

The steps in this section illustrate how to manually perform the procedures listed above. If you wish to automate and/or customize any of those processes, see the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide* and/or request the assistance of Oracle Support to develop a deployment plan tailored specifically to your environment.

Migrating a WinAuth v1 Installation to WinAuth v2

To manually migrate from an existing WinAuth v1 deployment to WinAuth v2, do the following:

1. Reconfigure the First-Time Use wizard so that WinAuth v2 is the only available logon method:
   a. Start the Oracle Enterprise Single Sign-On Administrative Console.
   b. In the tree in the left pane, right-click the **Global Agent Settings** node and select **Import** > **From Live HKLM** from the context menu.
   c. Under the "Live" settings set, navigate to User Experience > Setup Wizard.
   d. Select the check box next to the Selected Authenticator option and select Windows v2 from the drop-down list.
   e. Save your changes locally or publish them to the repository, as applicable.
2. Using a plain text editor, create a batch (.cmd) file with the following content:

```
##Install WinAuth v2

<esso-lm_installer> /s /v"/qb RUNVGO="YES" ADDLOCAL="MSauth""

##Initiate primary logon method change

"<oracle_install_dir>\v-GO SSO\ssoShell.exe" /shellLoad Themes /shellLock
```

Substitute the full path and name of the Logon Manager installer executable in place of <esso-lm_sso_installer>, as well as the full path of the directory in which Oracle Enterprise Single Sign-On products are installed for <oracle_install_dir>.

3. Save and close the file.
4. Run the file on the target machine.
5. When the FTU wizard appears, follow the displayed instructions to complete the migration process.

Configuring WinAuth v2 for Authenticator Key Management via Windows DPAPI

To configure WinAuth v2 for authenticator key management via Windows DPAPI, complete the steps below.

This procedure assumes WinAuth v2 has already been installed and configured to work with your Logon Manager deployment.

Before you begin, ensure that your environment meets the following minimum software requirements in order for secondary authentication via Windows DPAPI to function:

- Domain controllers: Windows Server 2003 SP1 and above.
- Client machines running Logon Manager:
  - Windows XP SP2 and above
  - Windows Server 2003 SP1 and above
  - Windows Server 2008 and above
  - Windows 7

Windows XP SP2, Windows Server 2003 SP1, and Windows Server 2008 require KB907247: Credential Roaming Software Update available at http://support.microsoft.com/kb/907247.

The following Microsoft Developer Network and TechNet articles provide detailed information on Windows DPAPI and credential roaming:

- Windows Data Protection: http://msdn.microsoft.com/en-us/library/ms995355.aspx
- Credential Roaming: http://technet.microsoft.com/en-us/library/cc700815.aspx

If your environment meets the listed minimum requirements, configure WinAuth v2 to use Windows DPAPI as the secondary authentication method as follows:

1. Start the Oracle Enterprise Single Sign-On Administrative Console.
2. In the tree in the left pane, right-click the **Global Agent Settings** node and select **Import** > **From Live HKLM** from the context menu.
3. Under the "Live" settings set, navigate to **Authentication** > **Windows v2**.
4. If you have previously configured Logon Manager to use either the user's AD SID or a secure random key as a secondary authentication method, revert back to interactive passphrase by deselecting the check box next to the **Recovery Method** option. (This reverts the option to its default value, User passphrase.)
5. Enable Windows DPAPI for WinAuth v2. Select the check box next to the **Use Windows Data Protection (DPAPI)** option, then select **Yes** from the drop-down list.
6. Save your changes by publishing them to the repository.
7. Test your configuration. The tests below ensure proper configuration of Logon Manager and your environment to handle credential roaming, password changes, and keyset rotation:
   a. Enroll a new user with Logon Manager by completing the First Time Use (FTU) wizard; during enrollment, Logon Manager will prompt for the user name and password but should not prompt to select a passphrase answer.
   b. Enroll an application with Logon Manager and store a set of credentials for the application.

c. Close and re-open the application. Logon Manager should automatically respond and log you on to the application without prompting for a passphrase answer.

d. Log out of the machine and log on to another machine as the same user. Logon Manager should behave exactly as on the original machine, without prompting for a passphrase answer or any other extraneous information.

e. Use the **Log on using Logon Manager** option (accessed by right-clicking the Logon Manager system tray icon) to confirm that application response functions as desired.

f. Open the properties dialog for the application within the Agent and use the Reveal Password option to reveal the stored password. There should be no prompt for the passphrase answer.

g. Change the user's Windows password before the Agent is launched, and then again while the Agent is running. There should be no prompt for the passphrase answer; stored credential should remain accessible.

h. Log on to a third machine and confirm that stored credentials remain accessible.

i. Test that the 90-day keyset rotation enforced by Windows DPAPI functions correctly. Advance the machine's clock, as well as the domain controller's clock, by 120 days, then log on to at least two different machines and confirm that the stored credentials remain accessible.

Configuring WinAuth v2 for Recovery via Interactive Passphrase Prompt

To configure WinAuth v2 for authenticator key recovery via interactive passphrase prompt, simply install WinAuth v2 as described in Installing WinAuth v2. The "Recovery Method" option in the Console defaults to **User passphrase** unless manually changed.

This procedure assumes WinAuth v2 has already been installed and configured to work with your Logon Manager deployment.

1. Start the Oracle Enterprise Single Sign-On Administrative Console.
2. In the tree in the left pane, right-click the **Global Agent Settings** node and select **Import** > **From Live HKLM** from the context menu.
3. Under the "Live" settings set, navigate to **Authentication** > **Windows v2**.
4. If you have previously configured Logon Manager to use either the user's AD SID or a secure random key as a secondary authentication method, revert back to interactive passphrase by deselecting the check box next to the Recovery Method option. (This reverts the option to its default value, User passphrase.)
5. Configure the user warning that appears during recovery. This warning should emphasize the importance of remembering the passphrase answer:

   a. Under the "Live" settings, navigate to **Authentication** > **Windows v2** > **Passphrase**.

   b. Select the check box next to the **Message** option and enter a message explaining the importance of remembering the passphrase answer to the user. (When filling in the fields in the steps below, use the \n character sequence to indicate a line break.)

      This message appears during enrollment and requires the user to check a check box and click the **OK** button in order to continue.

c. Select the check box next to the **Message Dialog Title** option and enter the desired window title for the dialog.

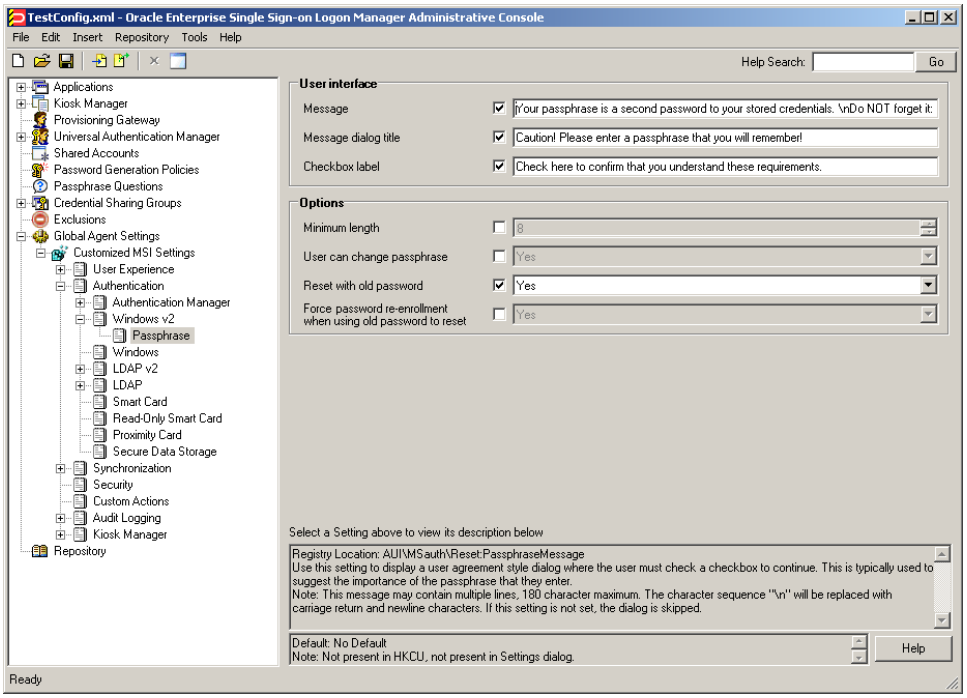
d. Select the check box next to the **Checkbox Label** option and enter the desired label for the check box that appears in the dialog.

e. Select the check box next to the **Reset with old password** option and select **Yes** from the drop-down list. This option allows the user to recover access to their credential store using the old (most recent) password.

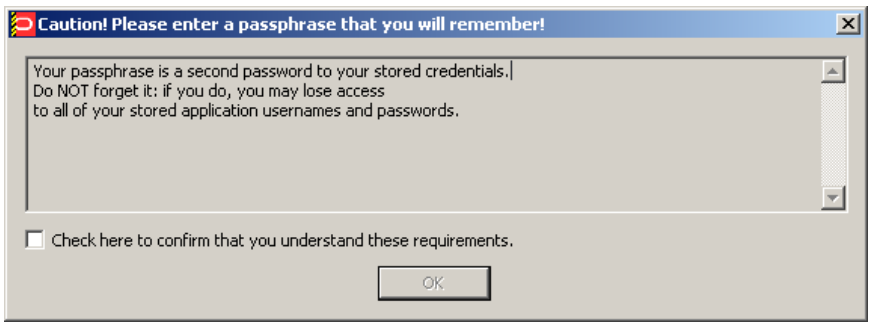
f. Ensure that the check box next to the **Force password re-enrollment when using old password** to reset option is not selected (i.e., option is at its default value of Yes).

This setting forces Logon Manager to re-enroll the user when the **Reset with old password** option is in effect, and the user has used the old (most recent) password as the passphrase answer during recovery.

For example, if you configure the warning as follows:



It will appear as follows when the user is prompted for the passphrase answer during recovery:



6. Save your changes locally or publish them to your repository, as appropriate.

Configuring WinAuth v2 for Recovery via Logon Manager Secondary Authentication API

To configure WinAuth v2 for recovery via the Logon Manager secondary authentication API, complete the instructions in one of the following sections.

- Recovery via Custom Secondary Authentication Library
- Recovery via a Built-In Silent Secondary Authentication Method

Recovery via Custom Secondary Authentication Library

Before starting this procedure, make sure you have done the following:

1. Written your custom secondary authentication library according to the section "Understanding the Logon Manager Secondary Authentication API" in the *Oracle Enterprise Single Sign-On Suite Plus Administrator's Guide*.
2. Know your custom library's GUID and made sure that library returns that GUID to Logon Manager via its `GetID` method.
3. Submitted your custom library file to Oracle to obtain a digital signature and received a digitally signed copy of the file back from Oracle. Logon Manager will not load the custom file without a valid digital signature.

To configure WinAuth v2 for recovery via custom secondary authentication library, do the following:

1. Start the Oracle Enterprise Single Sign-On Administrative Console.
2. In the tree in the left pane, right-click the **Global Agent Settings** node and select **Import** > **From Live HKLM** from the context menu.
3. Under the "Live" settings set, navigate to **Authentication** > **Windows v2**.

   If you have previously configured Logon Manager to use either the user's AD SID or a secure random key as a secondary authentication method, revert back to interactive passphrase by deselecting the check box next to the **Recovery Method** option. (This reverts the option to its default value, User passphrase.)
4. Create a directory named identically to the GUID of your custom library in the following directory:

   ```
   <oracle_install_dir>\v-GO SSO\AUI\Recovery\
   ```

   Substitute the full path of the directory in which Oracle Enterprise Single Sign-On products are installed for `<oracle_install_dir>`.

   For example, if your library's GUID is `{B623C4E7-A383-4194-A719-7B17D074A70F}`, you would create the following directory:

   ```
   <oracle_install_dir>\v-GO SSO\AUI\Recovery\{B623C4E7-A383-4194-A719-
   7B17D074A70F}
   ```
5. Place your custom library file in the directory you created in step 4.
6. Add a GUID entry to Logon Manager's secondary authentication methods list for your custom library.

a. Create a key named identically to the GUID of your custom library under the following registry location:

- On 32-bit systems:

  ```
  HKEY_LOCAL_MACHINE\Software\Passlogix\AUI\MsAuth\RecoveryMethods\
  ```

- On 64-bit systems:

  ```
  HKEY_LOCAL_MACHINE\Sof-
  tware\Wow6432Node\Passlogix\AUI\MsAuth\RecoveryMethods\
  ```

  For example, if your library's GUID is `{B623C4E7-A383-4194-A719-7B17D074A70F}`, you will create the following key on a 32-bit system:

  ```
  HKEY_LOCAL_MACHINE\Software\Passlogix\AUI\MsAuth\RecoveryMethods\{B623C4E7-
  A383-4194-A719-7B17D074A70F}
  ```

b. Under the key you created in step 6a, create a string value named Path and set it to the full path and file name of your custom library. In our example, you would set it to:

  ```
  <oracle_install_dir>\v-GO SSO\AUI\Recovery\{B623C4E7-A383-4194-A719-
  7B17D074A70F}\<MyCustomLibrary.dll>
  ```

  Where `<oracle_install_dir>` is the full path of the directory in which Oracle Enterprise Single Sign-On products are installed and `<MyCustomLibrary.dll>` is the file name of your custom library.

7. Set Logon Manager's recovery method to your custom secondary authentication library.

   If it does not already exist, create a string value named `ResetMethodGUID` under `HKEY_LOCAL_MACHINE\Software\Passlogix\AUI\MsAuth\RecoveryMethods\` and set it to the GUID of your custom library.

8. Reinitialize the WinAuth v2 settings with the newly selected configuration:
   a. Launch Logon Manager, double-click its system tray icon, and select **Settings** in the left-hand pane of the window that appears.
   b. Select the **Authentication** tab, then click **Change**. The Setup Wizard appears.
   c. Follow the prompts in the wizard. When prompted to select your primary logon method, make sure that **Windows Logon v2** remains selected.
   d. Complete the remaining steps in the wizard.

Recovery via a Built-In Silent Secondary Authentication Method

To configure WinAuth v2 for recovery via one of Logon Manager's built in silent secondary authentication methods, do the following:

1. Start the Oracle Enterprise Single Sign-On Administrative Console.
2. In the tree in the left pane, right-click the **Global Agent Settings** node and select **Import** > **From Live HKLM** from the context menu.
3. Under the "Live" settings set, navigate to **Authentication** > **Windows v2**.

4. Select the check box next to the **Recovery Method** option and do one of the following:
   - To use the user's AD SID for silent secondary authentication, select **Passphrase suppression using user's SID** from the drop-down list
   - To use a secure random key for silent secondary authentication, select **Passphrase suppression using secure key** from the drop-down list
5. Save your changes locally or publish them to the repository, as applicable.

Resetting the User-Provided Passphrase Answer

To force a user to provide a new passphrase answer based on new passphrase questions, do the following as a user with administrative privileges:

1. Using the Oracle Enterprise Single Sign-On Administrative Console, do the following:
   a. Disable existing questions that are no longer desired.
   b. Add the new questions.
2. 2. For each user, perform the following steps on the target machine as the target user:
   a. Delete the following registry key and its contents:

      `HKEY_CURRENT_USER\Software\PassLogix\AUI\msauth\ResetMethods`

   b. Execute the following command:

      <oracle_install_dir>\v-GO SSO\ssoshell.exe /forceverify now

Substitute the full path of the directory in which Oracle Enterprise Single Sign-On products are installed for `<oracle_install_dir>`.

When automating the above steps, Oracle highly recommends that you:

- Create a script to manage the process
- Provide end-user instructions that explain what is happening
- Include a logging capability that centrally records the success or failure of each step, including:
  - Script launch
  - Old registry key deletion
  - New registry key creation
  - Passphrase answer entry by user
- Include reporting capability to audit recorded data for users who have successfully completed passphrase answer change
- Once all users have completed the change, delete the unwanted passphrase questions.

Enabling WinAuth v2 Strong Authentication Device Support

The following instructions apply to Windows 7 only.

If you are planning to use strong authentication devices, such as SmartCards, to authenticate to Windows 7, you must configure Windows to permit the hand-off of strong authentication events to third-party credential providers, such as Logon Manager deployed with WinAuth v2. Otherwise,

Logon Manager will not be able to communicate with the device and you will not be able to authenticate to Logon Manager.

To do so, complete the following steps:

1. Launch the Windows registry editor and navigate to the following path:

   `HKEY_LOCAL_MACHINE\Software\Microsoft\WindowsNT\CurrentVersion\Winlogon\Notify`
2. Under the above key, create a `DWORD` value named `SmartCardLogonNotify`.
3. Set the above value to `1`.
4. Restart the machine.

Smart Card Monitor Utility (ssoSCDetect.exe)

The utility program **ssoSCDetect** monitors a workstation's smart card reader, making it possible to use the workstation as a multiple-user "kiosk" that can access and synchronize the remote SSO credential store of any user authenticated by a smart card.

When a user inserts a card into the reader, the **ssoSCDetect** utility starts the Agent and prompts for the user's primary logon credentials. It then synchronizes the user's credentials with the remote repository. When the user logs out of the workstation (for example, by removing the card from the reader), **ssoSCDetect** shuts down the Agent.

To run the utility, copy the executable file ssoSCDetect.exe from the Utilities directory of the Logon Manager CD to the installation directory (%ProgramFiles%/Passlogix/v-GO SSO) then launch the program.

Recommended Global Agent Settings for SSO Kiosk Operation

For best performance and security, the following global Agent settings should be applied to the Logon Manager Agent running on a workstation configured as a kiosk:

User Paths	(Active Directory only) For best performance, specify one or more fully-qualified paths to begin searching for user accounts. See the Advanced options, under Synchronization\Active Directory.

Global Agent Settings

Various functions and behaviors of Logon Manager can be centrally defined by using the Settings dialog, setting Windows registry settings on the local workstation, and specifying administrative overrides via a Synchronizer extension.


Configure these settings in the Oracle Enterprise Single Sign-On Administrative Console. The table is provided only for reference.

Registry settings can be set by the Agent, by the Oracle Enterprise Single Sign-On Administrative Console, with the RegEdit Windows utility, and via a centrally managed software distribution mechanism. Registry settings are located in the following Windows Registry locations:

- HKLM**...**\ for computer-specific settings
- HKCU**...**\ for user-specific settings

Administrative override objects from Synchronizer extensions specify settings that override HKLM**...**\ Windows Registry settings, which in turn overrides the HKCU**...**\ Windows Registry settings.

	Example:
Synchronizer extension object	Extensions\AccessManager:MFEnable=DWORD:0
overrides	
Computer-specific Registry Location (HKLM\...\)	HKLM**...**\Extensions\AccessManager:MFEnable
overrides	
User-specific Registry Location (HKCU\...\) *or* **User setting in Settings dialog in** Logon Manager Mainframe Enable	HKCU**...**\Extensions\AccessManager:MFEnable

Setting Registry Settings and Administrative Overrides

The Oracle Enterprise Single Sign-On Administrative Console can be used to configure HKLM\&\ values and deploy them to synchronizer extensions.

1. In the Oracle Enterprise Single Sign-On Administrative Console, create a new set of settings (right click Global Agent Settings and choose **New Settings**), load a saved set of settings (right click Agent Settings and select **Import**), or select an existing set of settings (by selecting it in the left pane).
2. In the left pane, select and open the set of settings, and select and open the desired registry key.


Registry entries beginning with Extensions\ are displayed in the Oracle Enterprise Single Sign-On Administrative Console without the leading Extensions\.

3. In the right pane, select the desired registry value, select the checkbox, and enter the desired value.
4. Export to the desired format (Admin Override or HKLM Registry format):

5. Select the set of settings in the left pane
6. Choose Export from the File menu and choose an export format.

To deploy an administrative overrides file to a synchronizer extension, see the following topics:

- Directory Server Support
- Database Synchronization Support
- File Server Support.

To use an HKLM Registry format file, either launch it (for example, double-click on the file from Explorer), import it (for example, from RegEdit), or deploy it using your deployment tool.

Refer to the *Global Agent Settings Reference Guide* for a complete description of these settings, including:

- Screen layouts
- Setting names
- Setting descriptions
- Registry names
- Setting options and defaults
- Registry and Data Types

MSI Package Contents

This section documents the basic contents of each package feature. The Feature Name and Title are as in the Custom display of the Installer. For the exact feature details, review the package.

Any child feature requires its parent feature. For example, DOSHelper requires MainframeEmulators.

Mandatory contents:

- The Core application
- The English language pack.

  If you wish to create a custom MSI, *never* deselect a mandatory feature.

Required selection:

- You must install at least one authenticator.

Although the above features are all that is required for installation, Oracle recommends installation of Internet Explorer support.

Also note:

- Feature names are case-sensitive.
- Not all features are packaged in all installers.
- SSOGINA and SSONP are mutually exclusive.
- SMGina and SSONP are mutually exclusive.
- SSOGINA and SMGina are mutually exclusive.
- ADDLOCAL installs ONLY features that are specified (plus their parents). Be certain to include all required and desired features directly (by name) or indirectly (by specifying a child feature).

  For example, in a custom MSI, if you want to install PuttySupport, you must also install DOSHelper and MainframeEmulators; but if using ADDLOCAL from the command line, you only need to specify PuttySupport.

  See the features below for required and prohibited combinations.

Application Support

Title (as seen in installer)	Feature Name	Feature Parent	Additional Information
Application Support	Core	_TopLevel Feature	Mandatory
	ssobhohelper	Core	Hidden. Regkeys for WTS system
Microsoft Internet Explorer	InternetExplorer	Core	x86 only
Microsoft Internet Explorer	InternetExplorer.x64	Core	x64 only
Java	JavaHelper.x86	Core	x86 only
Java	JavaHelper.x64	Core	x64 only
Mozilla Firefox	Mozilla	Core	
SAP	SAP	Core	
SoftID	SoftIdHO	Core	
Host/Mainframe Emulators	MainframeEmulators	Core	
Mozilla Firefox	MozillaHO	Web Integration	
OAM Support	OAM Support	Web Integration	
Windows	Win	Application Support	
Console Windows	DOSHelper	Host/Mainframe Emulators	
PuTTY	PuttySupport	Host/Mainframe Emulators	
Java	JHO	Application Support	
SAP	SAPHO	Application Support	
SoftID	SIDHO	Application Support	
Password Reset Client	PasswordReset	Application Support	
Provisioning Gateway Client	ProvisioningGateway	Application Support	
Credential Delegation	Credential Delegation	Provisioning Gateway Client	

Authenticators

Title (as seen in installer)	Feature Name	Feature Parent	Additional Information
Authenticators	Authenticators	_TopLevel Feature	Installs SecureDataStorage.dll
Windows Logon	SLA	Authenticators	
Windows Logon v2	MSauth	Authenticators	
LDAP	LDAP	Authenticators	
LDAP v2	LDAPauth	Authenticators	
Network Provider	SSONP.x64	Authenticators	x64 only Cannot be installed with SSOGina.
Network Provider	SSONP	Authenticators	x86 only Cannot be installed with SSOGina or SMGina.
GINA	SSOGina	MSauth	x86 only Cannot be installed with SMGina or Network Provider.
GINA	SSOGina.x64	MSauth	x64 only Cannot be installed with Network Provider.
GINA	SMGina	MSauth	x86 only Cannot be installed with SSOGina or Network Provider.
Proximity Card	ProxCardAuth	Authenticators	
Smart Card	SCAuth	Authenticators	
Smart Card (Read-Only)	ROSCAuth	Authenticators	
RSA SecurID	SecurID	Authenticators	
Local Authentication Toolkit (LAT)	LocalAuthToolkit	RSA SecurID	
Authentication Manager	MultiAuth	Authenticators	

Synchronizers

Title (as seen in installer)	Feature Name	Feature Parent	Additional Information
Synchronizers	SyncMgr	_TopLevel Feature	Installs syncmgr.dll. Requires at least one synchronizer.
Microsoft Active Directory	AD_Sync	SyncMgr	
Microsoft AD LDS (ADAM)	ADAM_sync	SyncMgr	
LDAP	LDAP_Sync	SyncMgr	
Database	DB_Sync	SyncMgr	
Roaming Profile	Roam_Sync	SyncMgr	
File System	File_Sync	SyncMgr	

Audit Logging Methods

Title (as seen in installer)	Feature Name	Feature Parent	Additional Information
Audit Logging Methods	EventMgr	_TopLevel Feature	Installs eventmgr.dll Requires at least one logging method.
ESSO Reporting Server	ReportingExt_Release	EventMgr	
Windows Event Manager	WindowsEventExt	EventMgr	
Syslog Server	SyslogEventExt	EventMgr	
XML File	LocalFileExt	EventMgr	
Database	DatabaseEventExt	EventMgr	

Backup/Restore

Title (as seen in installer)	Feature Name	Feature Parent	Additional Information
Backup/Restore	BackupMgr	_TopLevel Feature	

Languages

Title (as seen in installer)	Feature Name	Feature Parent	Additional Information
Languages	Languages	_TopLevel Feature	
English	English_Pack	Languages	Mandatory Automatically selected if any other language is selected with ADDLOCAL
Chinese (Simplified)	Chinese_Simplified_ Pack	Languages	
Traditional Chinese	Chinese_Traditional_ Pack	Languages	
Czech	Czech_Pack	Languages	
Danish	Danish_Pack	Languages	
Dutch	Dutch_Pack	Languages	
Finnish	Finnish_Pack	Languages	
French	French_Pack	Languages	
German	German_Pack	Languages	
Greek	Greek_Pack	La nguages	
Hungarian	Hungarian_Pack	Languages	
Italian	Italian_Pack	Languages	
Japanese	Japanese_Pack	Languages	
Hungarian	Norwegian_Pack	Languages	
Korean	Korean_Pack	Languages	
Polish	Polish_Pack	Languages	
Portuguese (Brazil)	Portuguese_Brazilian_ Pack	Languages	
Portuguese (Portugal)	Portuguese_Portugal_ Pack	Languages	
Romanian	Romanian_Pack	Languages	
Russian	Russian_Pack	Languages	
Slovak	Slovak_Pack	Languages	
Spanish	Spanish_Pack	Languages	
Swedish	Swedish_Pack	Languages	
Thai	Thai_Pack	Languages	
Turkish	Turkish_Pack	Languages	

Unclassified

Feature Name	Feature Parent	Title (as seen in installer)	Additional Information
Not_WTS	_TopLevel Feature		Hidden Adds a Start menu shortcut for running the background process at startup (use with non-WTS/metaframe systems only)
SMAgent_Files	_TopLevel Feature	Kiosk Manager	
SMGina	SMAgent_Files	Kiosk Manager GINA	

Backing Up and Restoring

It is possible to back up or restore your information either from the command line or from a file. See Command Line Options or File-Based Backup/Restore for more information on these procedures.

Directory Server Schema Definition

The following are Directory Server Container and Class Objects, their rights, and their attributes.

vGOSecret

Stores all user secrets. This includes an object that stores all deleted objects and their logon credentials. This is added to the SSOUserData object as an auxiliary class. All users can read this object, but only the owner can write to this object, and only the owner or administrator can delete this object.

Rights: The rights are inherited from the vGOUserData object.

Attribute Name	Syntax	Flag
vGOSecretData	Case Ignore String	Singled Valued, Synchronize
vGOSharedSecretDN	Not Used	
Other optional attributes	ou, dn, cn, o	

vGOUserData Object

A container allowing users to store their individual/personal secured credentials.

Rights: Users have write access to these attributes for their own user objects. The administrator has full rights but will not be able to read the secrets due to encryption.

Attribute Name	Syntax	Flag
vGOSecretData	Case Ignore String	Singled Valued, Synchronize
vGORoleDN	Not Used	
Other optional attributes	ou, dn, cn, o	

vGOConfig Object

Used to hold all configuration information that the Agent needs. This includes the application-supported list, mainframe/host application supported list, first-time use setup instructions, Password Policies, and admin overrides. All of these settings control Agent behavior.

Rights: All users have read-only rights to the attributes within this object. The administrator has full rights.

Attribute Name	Syntax	Flag
vGOConfigType	Case Ignore String	Singled Valued, Synchronize
vGOConfigData	Case Ignore String	Singled Valued, Synchronize
vGORoleDN	Not Used	
Other optional attributes	ou, dn, cn, o	

vGOLocatorClass

This is used to specify where to store user credentials.

Rights: All users have read/compare/search access to these attributes for all of this class of object. The administrator has full rights.

Attribute Name	Syntax	Flag
vGOLocatorAttribute	Case Ignore String	Single Valued
Other optional attributes	dn, cn, o	

Configuring Logon Manager Event Logging for IBM DB2 Database Support

Overview

In order to configure Logon Manager to store event log data in a table in an IBM DB2 database, you must complete the following steps:

1. If you have not already done so, install and configure the IBM DB2 database as described in the vendor's documentation. Use the "Typical" installation scenario when prompted.
2. Set up the event log data table.
3. Install the Database Event Extension component for Logon Manager.
4. Configure Logon Manager to store its event log data in the table you created.
5. Test your event logging configuration.

Step 1: Installing and Configuring the IBM DB2 Database

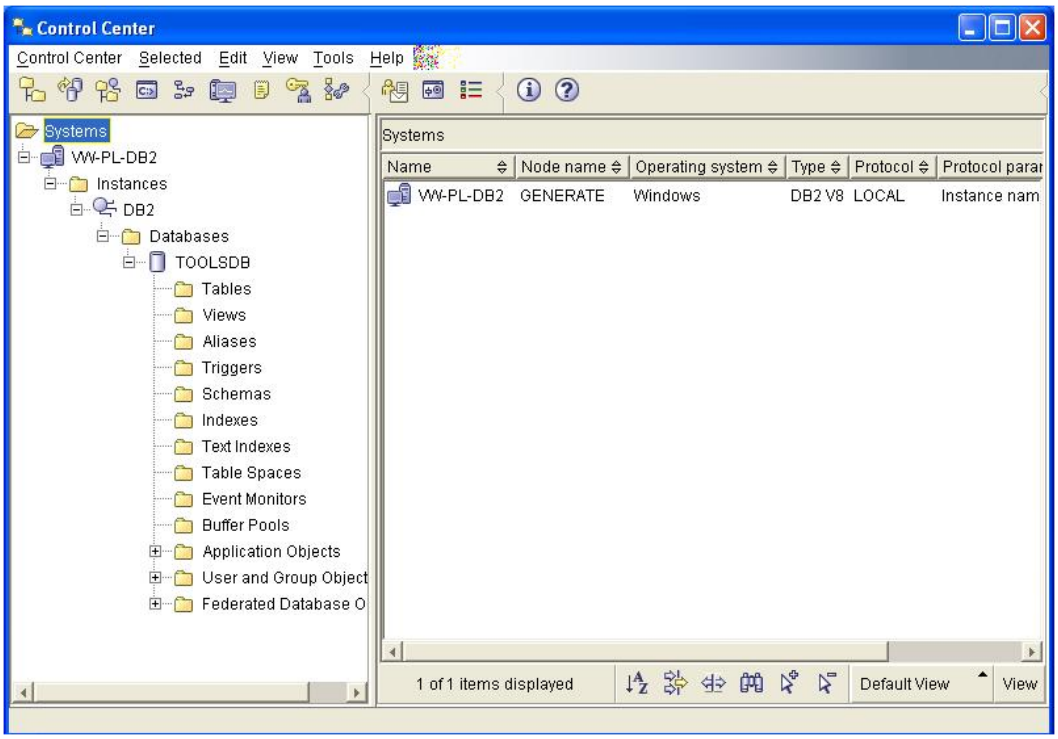
Before you begin configuring Logon Manager event logging, install and configure an instance of the IBM DB2 database as described in the vendor's documentation, if you have not already done so. Unless your environment dictates otherwise, select the "Typical" installation scenario when prompted by the installer.

Step 2: Setting Up the Event Log Data Table

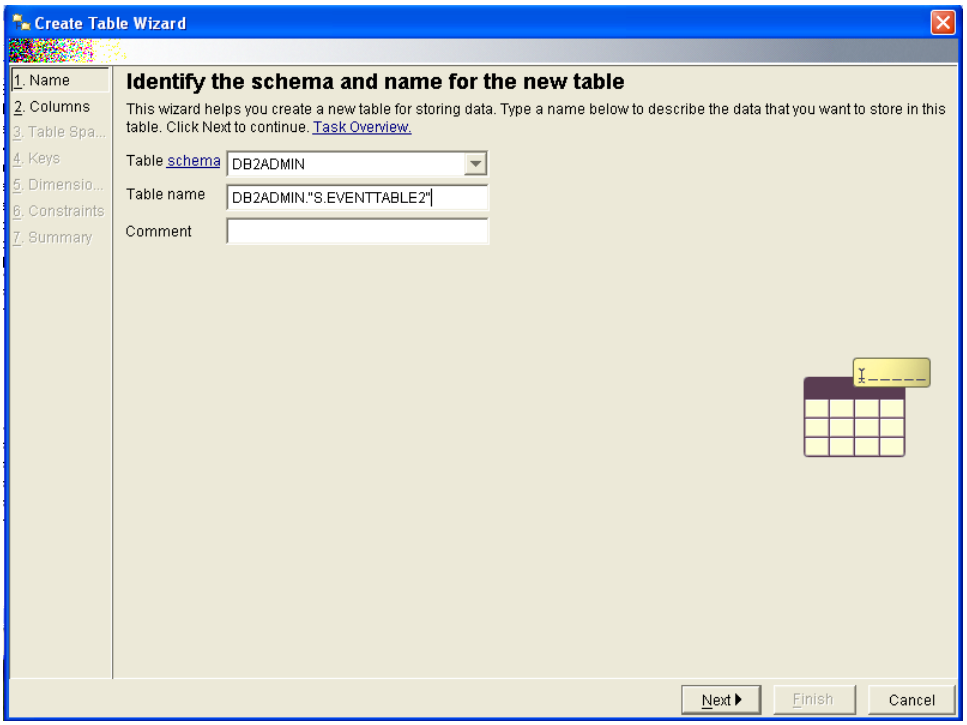
Before Logon Manager can store event log data in the database, you must set up a table that will store the data. The steps are as follows:

1. Launch the IBM DB2 Control Center application. By default, the application is located in

   `C:\Program Files\IBM DB2\General Administration Tools`.

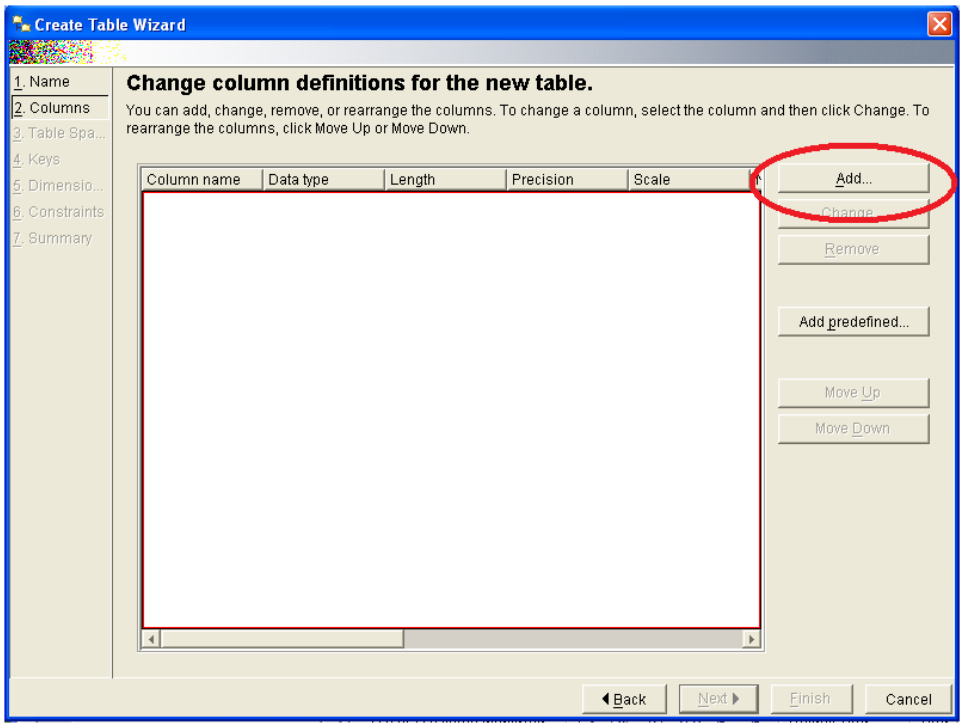


2. Within the database of your choice, create a table that will store Logon Manager event log data:
   a. Under the selected database, right-click **Tables** and select **Create...** from the context menu.
   b. In the "Create Table Wizard" that appears, name the table in accordance with the vendor's naming schema, then click **Next**.

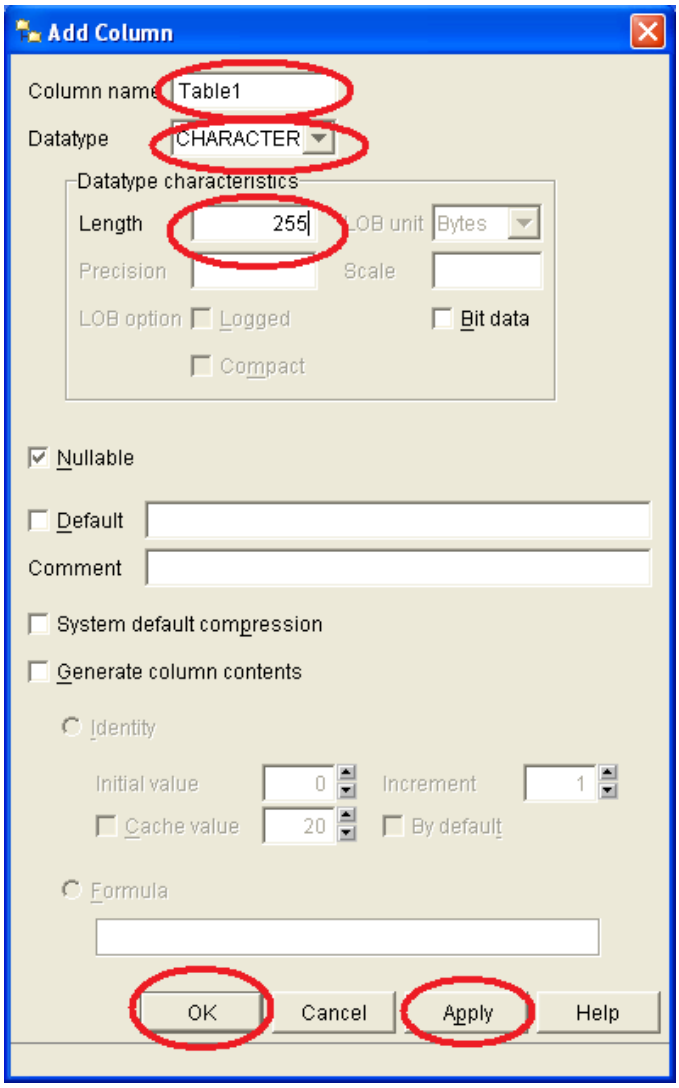


c. Set up the required table columns. For each required column, do the following:

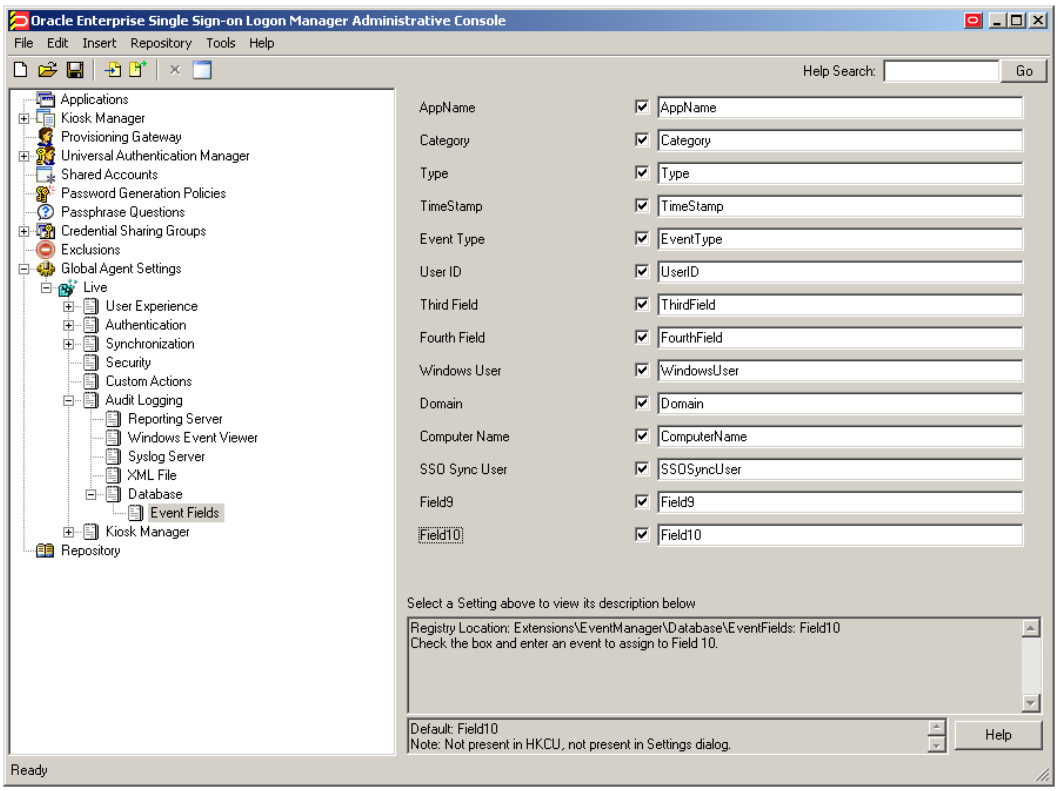
I. In the "Change column definitions for the new table" dialog, click **Add**.



The "Add Column Dialog" appears.



II. Name the column. These column names will correspond to event log field names shown below that you will configure later in this document using the Oracle Enterprise Single Sign-On Administrative Console.



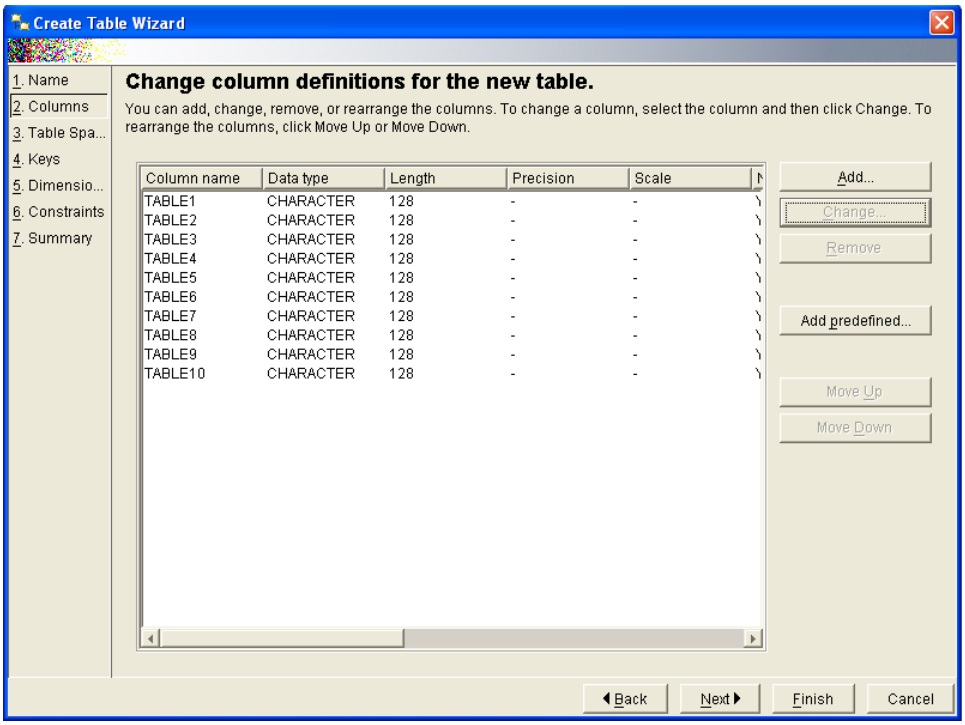
> Each event log field must have a corresponding column with an identical name in the event log data table. Otherwise, event data will not be recorded.

III. Select CHARACTER as the data type.

IV. Set the data length to 128.

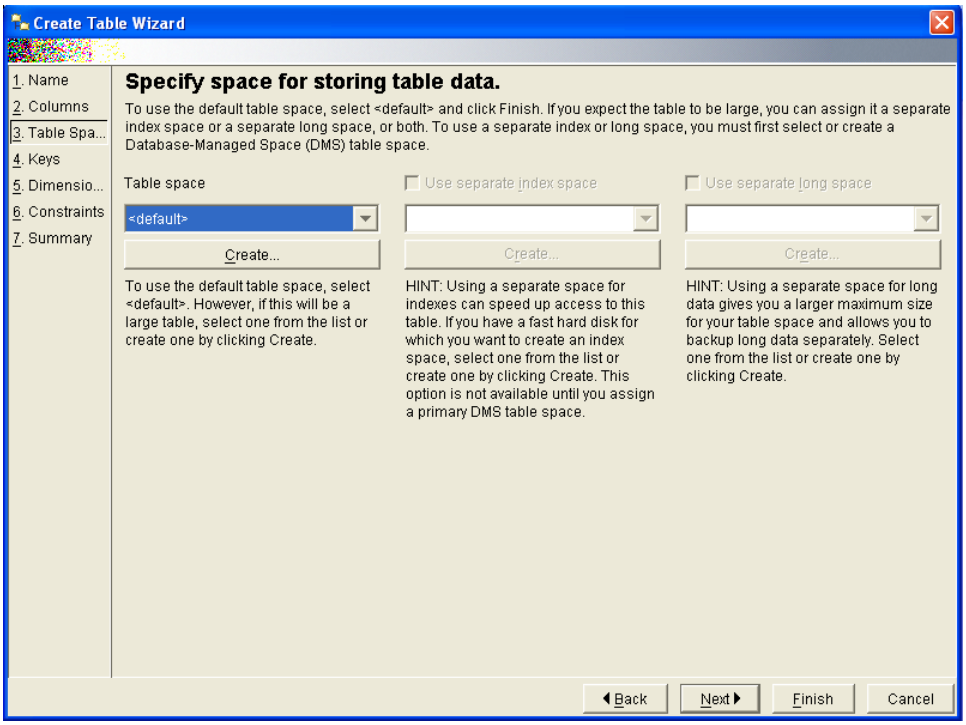
V. When you have populated the appropriate fields, click **Apply**, then **OK**.

When you have finished, the table configuration will look as follows:



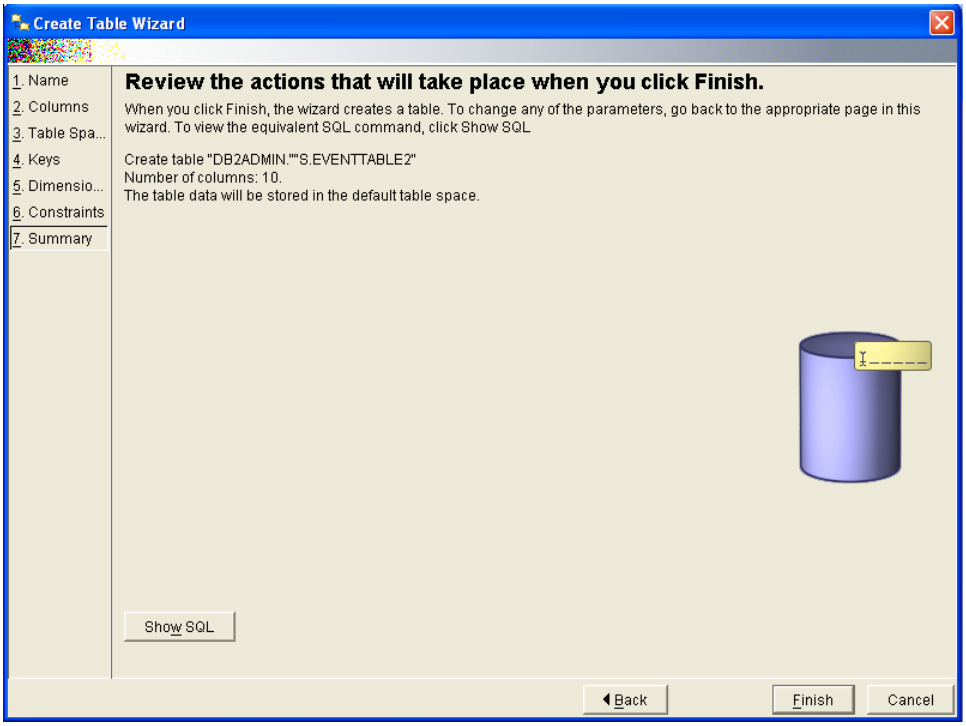
d. If you need to make any changes, select the desired column in the list and click **Change**.Whe the table configuration is complete, click **Next**.

e. When prompted to configure the table space, make a selection that is most appropriate to the level of Logon Manager event logging required by your environment, then click **Next**.



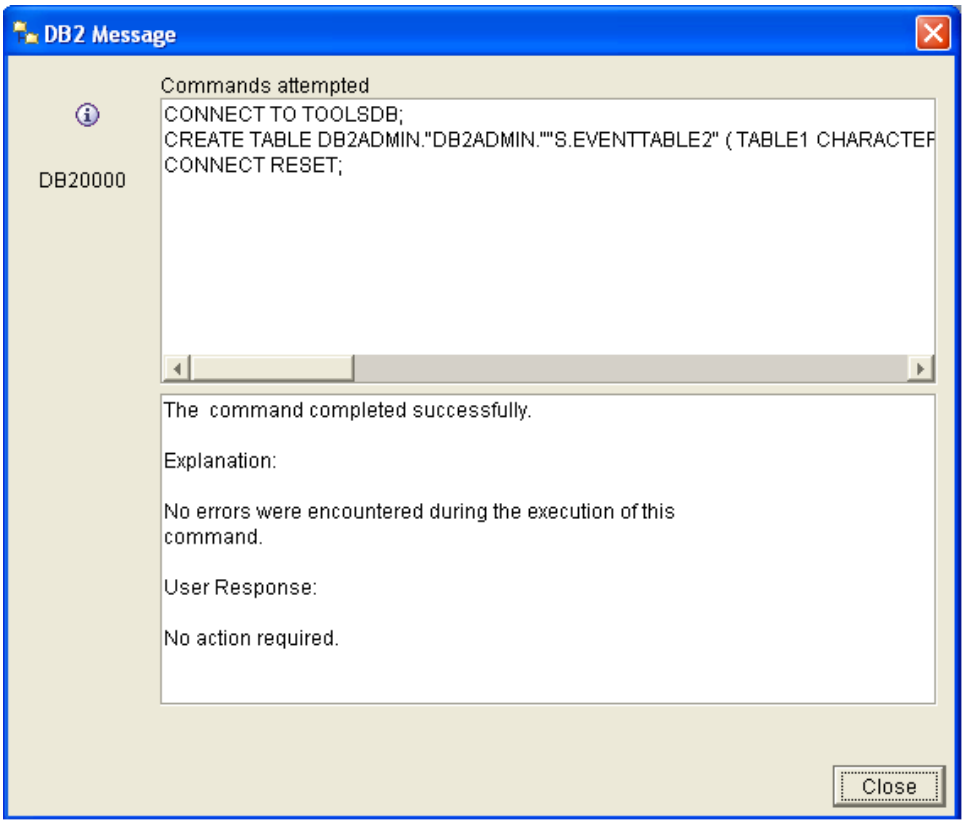
f. For the remainder of the wizard, click **Next** to accept the defaults presented in each screen.

g. In the configuration summary dialog, click **Finish**.



The table is created. Depending on the speed of your system, this can take a few moments.

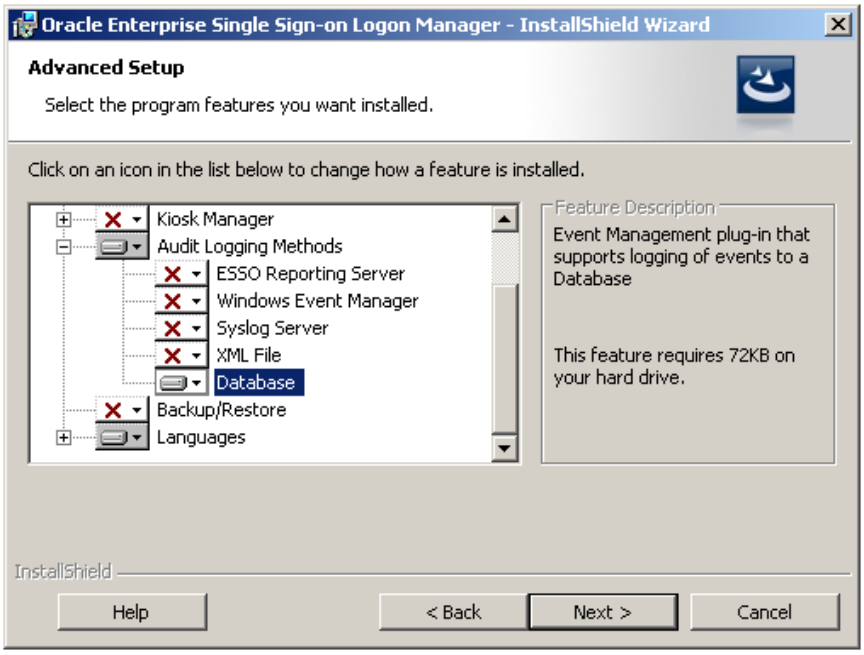
h. Monitor the table creation process by checking the database log. When the table has been created successfully, the log will show the following:


DB2 Message
Commands attempted
DB20000
CONNECT TO TOOLSDB;
CREATE TABLE DB2ADMIN."DB2ADMIN.""S.EVENTTABLE2" (TABLE1 CHARACTER
CONNECT RESET;
The command completed successfully.
Explanation:
No errors were encountered during the execution of this command.
User Response:
No action required.
Close

Step 3: Installing the Database Event Extension Component for Logon Manager

The Database Even Extension component must be installed in order for Logon Manager to store event log data in the database. To install the component, do the following:

1. Click **Start** > **Settings** > **Control Panel**.
2. In the Control Panel, double-click the **Add/Remove Programs** icon.
3. In the **Add/Remove Programs** applet, navigate to the **Logon Manager Agent** entry and click **Change**.
4. In the **Logon Manager Agent** installer, click **Next**.
5. In the "Program Maintenance" dialog, select **Modify** and click **Next**.
6. In the "Advanced Setup" dialog, expand the **Audit Logging Methods** node.
7. Under the **Audit Logging Methods** node, click the button next to **Database Event Extension** and select **This feature will be installed on local hard drive** from the context menu.

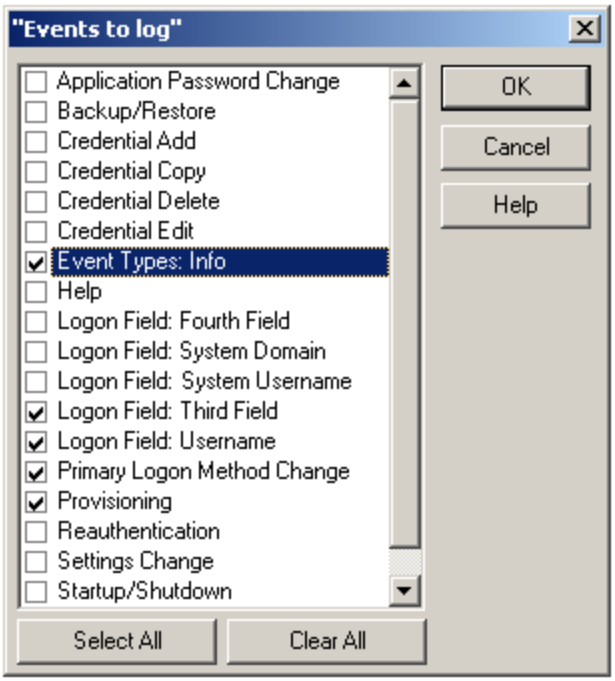


8. Click **Next**; then, in the dialog that follows, click **Install** and wait for the installation to complete.
9. When the installation completes successfully, click **Finish**.

Step 4: Configuring Logon Manager Event Logging for Database Support

1. Launch the **Oracle Enterprise Single Sign-On Administrative Console** and load your current configuration set.
2. In the tree, navigate to **Global Agent Settings** > ***[Current Configuration Set]*** > **Audit Logging** > **Database**.
3. Select the check box next to **Events to log** and click the **[...]** button.
4. In the "Events to log" dialog, select the types of events you want to log.

> You must select the Event Types: Info item; otherwise, no data will be logged.

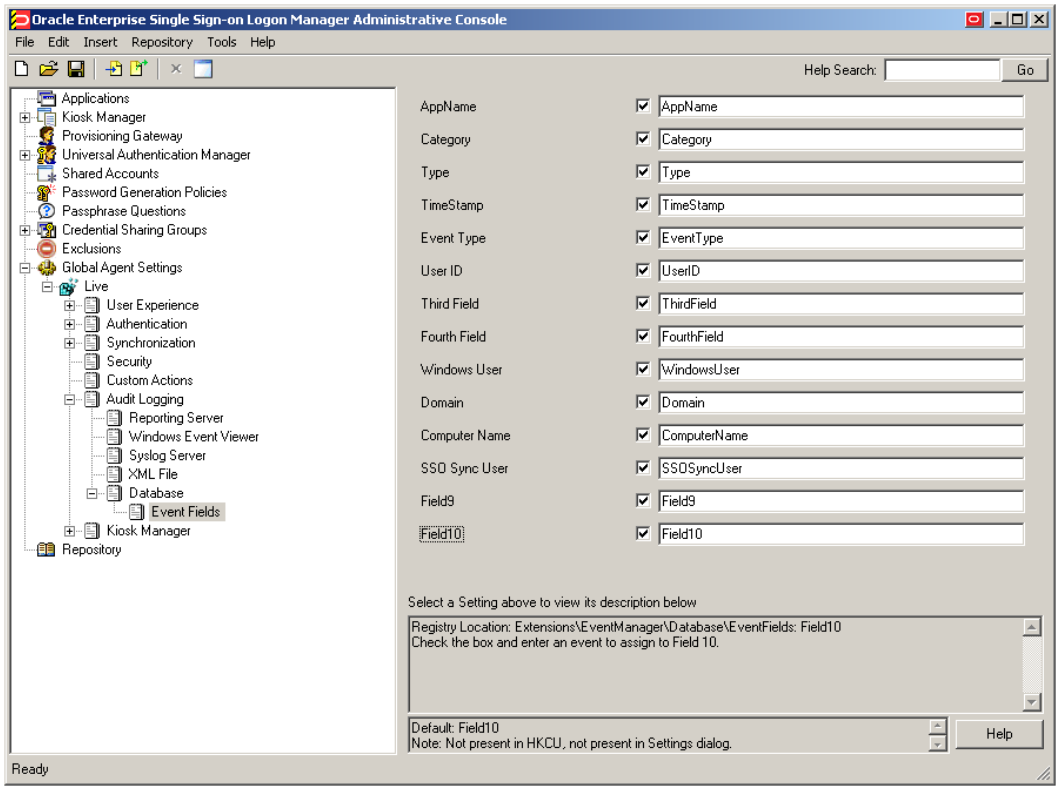


5. Under the **Audit Logging** node in the tree, select **Database** and configure Logon Manager as follows:

Servers	Provider=<db2_provider_name>;Password=<db2_admin_ user_password>;User ID=<db2admin_user_name>;Data Source=<database_name>
Default server	URL to your database server instance.
Default table	Name of the event log data table created earlier in this section. (DB2ADMIN."S.EVENTTABLE2" in our example)
Retry interval	Set to the desired retry interval. See Global Agent Settings for more information.
Events to log	Configure to exactly match the event types chosen in step 4.

6. Under the **Database** node in the tree, select **Event Fields**.
7. For each field, enter the name of the corresponding column in the event log data table. The names must match the names you specified for the database table columns.

> Do not alter the values of the AppName, Category, TimeStamp, and Type parameters.

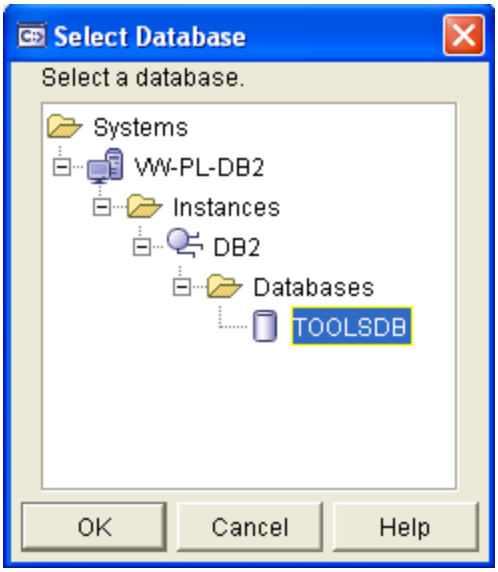


8. When finished, push the modified configuration set to your directory or write them to the local registry, whichever option suits your environment.
9. Proceed to the next section to test your event logging configuration.

Step 5: Testing Your Event Logging Configuration

This simple test procedure allows you to check whether Logon Manager is properly logging event data to the database. In our example, you will press the **Help** button in Logon Manager and check the database to see if the button press is logged.

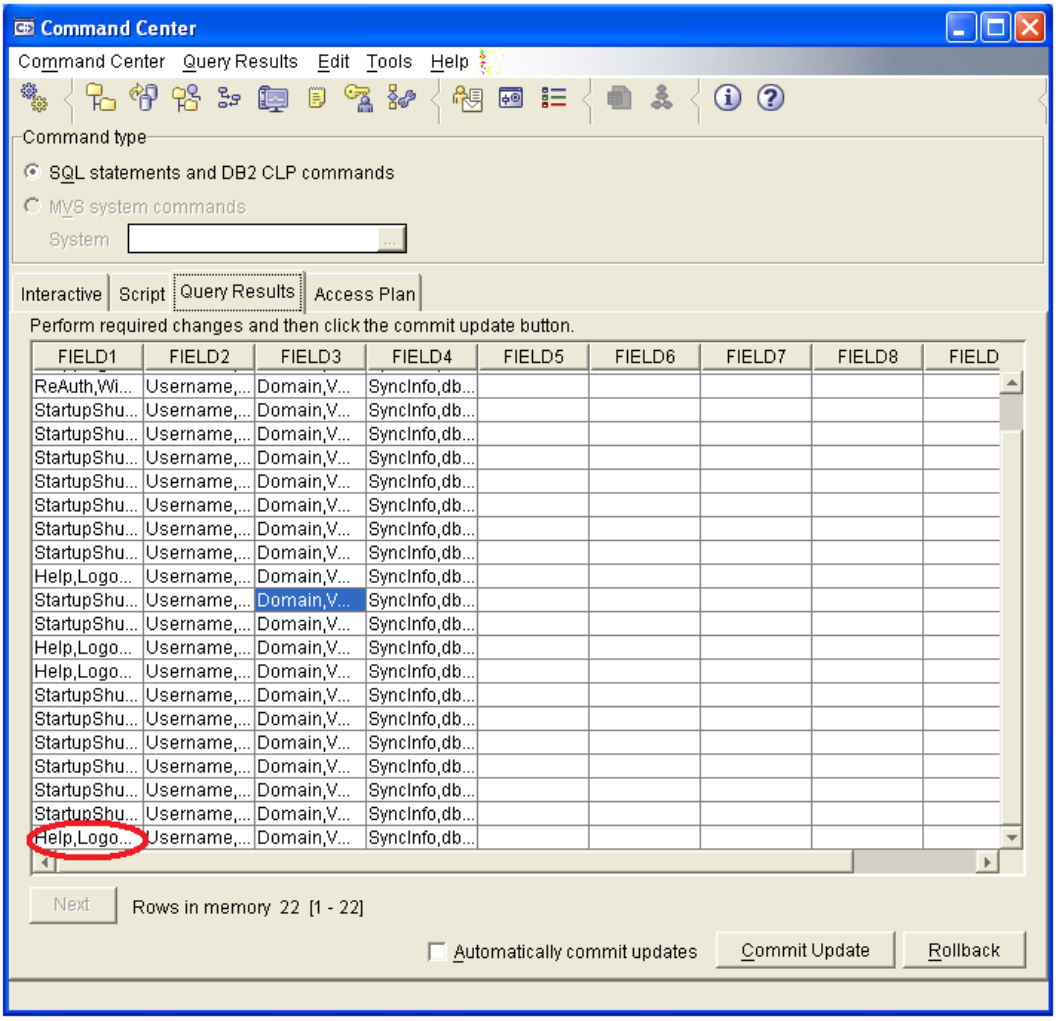
1. Open Logon Manager and click **Help**.
2. Start the IBM DB2 Command Center. Typically, the shortcut is located in **Start** > **Program Files** > **IBM DB2** > **Command Line Tools**.
3. Under **Database Connection**, click the **[...]** button.
4. In the "Select a Database" dialog, navigate to the target database, select it, and click **OK**.



5. Under **Command**, enter the following, then press **Enter**:

   ```
   SELECT * FROM <name_of_event_log_data_table>;
   ```

6. The Command Center displays all Logon Manager events that have been logged in the database so far. The **Help** button press event should appear near or at the end of the list, as shown below.



If the Help button press event does not appear, retrace your steps and check your database and Logon Manager configurations.

Configuring Logon Manager Event Logging with MS SQL Server 2005

Overview

In order to configure Logon Manager to store event log data in a table in an MS SQL Server 2005 database, you must complete the following steps:

1. If you have not already done so, install and configure MS SQL Server 2005 as described in the vendor's documentation.
2. Set up the event log data table.
3. Install the Database Event Extension component for Logon Manager.
4. Configure Logon Manager to store its event log data in the table you created.
5. Test your event logging configuration.

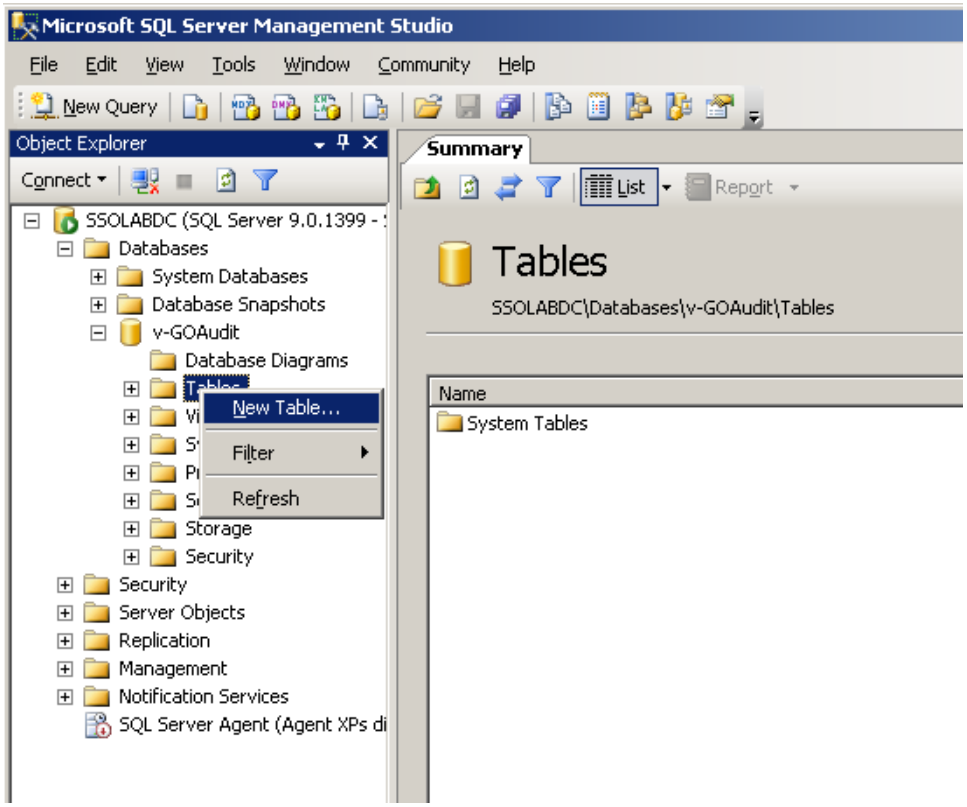
Step 1: Installing and Configuring MS SQL Server 2005

Before you begin configuring Logon Manager event logging, install and configure an instance of the MS SQL Server 2005 database as described in the vendor's documentation, if you have not already done so. Unless your environment dictates otherwise, select the "Typical" installation scenario when prompted by the installer.

Step 2: Setting Up the Event Log Data Table

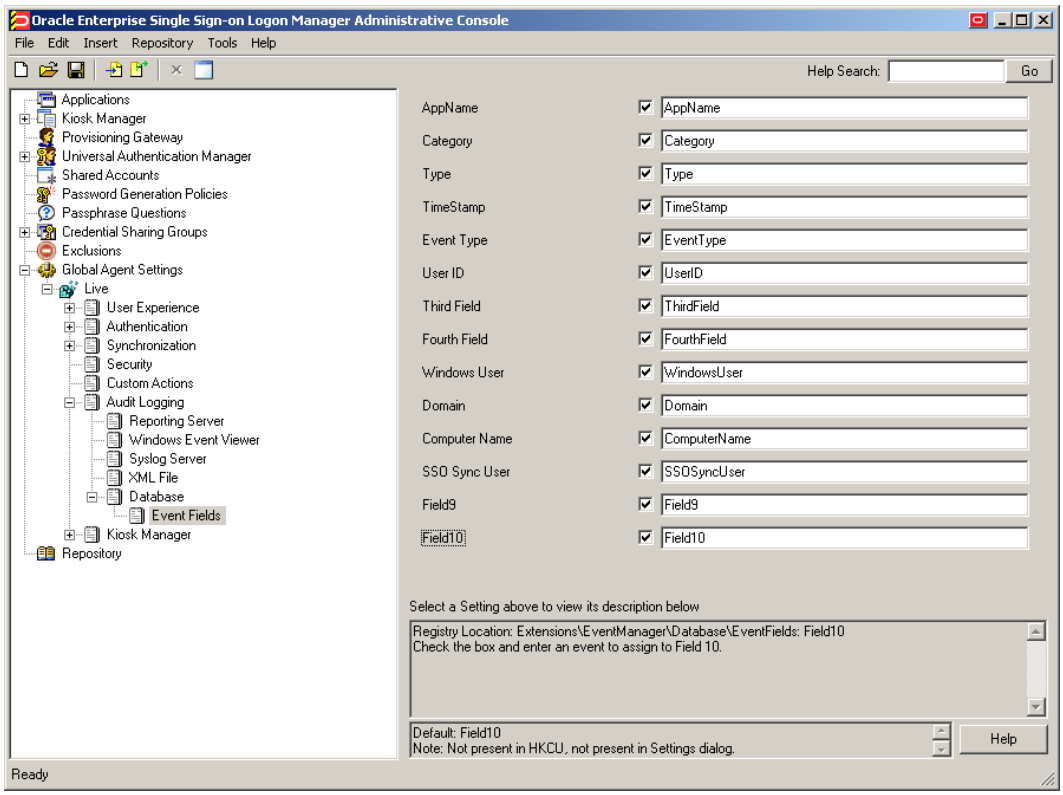
Before Logon Manager can store event log data in the database, you must set up a table that will store the data. The steps are as follows:

1. Launch the SQL Server Management Studio application and navigate the left-hand tree to expand the database of your choice.
2. Within the selected database, create a table that will store Logon Manager event log data:
   a. Under the selected database, right-click **Tables** and select **New Table...** from the context menu. MS SQL Server creates a table with a default name (for example, Table_1).



   b. Rename the table as desired using the **Name** field in the **Properties** pane on the right-hand side. You will supply this table name to Logon Manager later in this document.
   c. Set up the required table columns. For each required column, do the following:
      I. Name the column. These column names will correspond to event log field names shown below that you will configure later in this document using the Oracle Enterprise Single Sign-On Administrative Console.

> Each event log field must have a corresponding column with an identical name in the event log data table. Otherwise, event data will not be recorded.



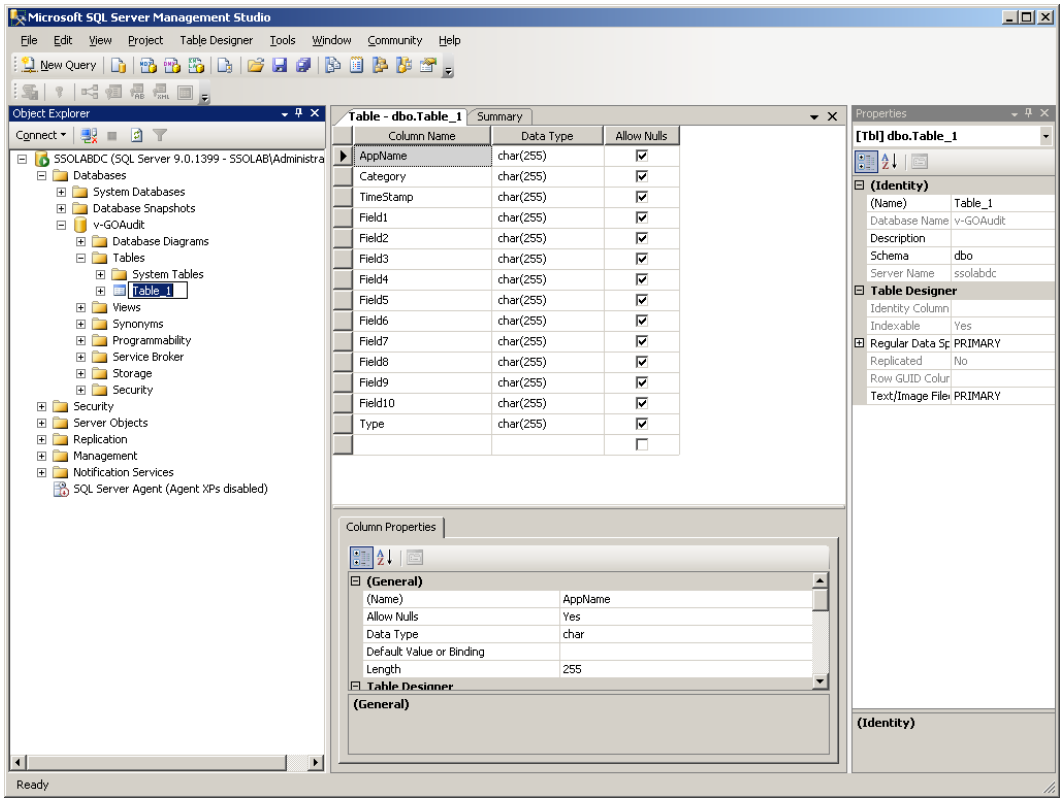
II. Select **char** as the data type.

III. Set the data length to 255.

IV. Enable the **Allow Nulls** option.

V. When you have finished, save your changes (**File** > **Save Table**).

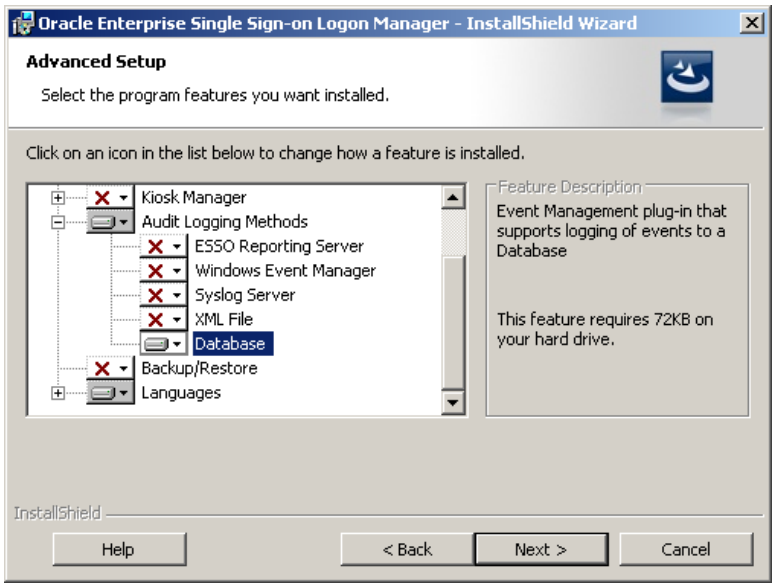
When complete, the table configuration will look as follows:



Step 3: Installing the Database Event Extension Component for Logon Manager

The Database Event Extension component must be installed in order for Logon Manager to store event log data in the database. To install the component, do the following:

1. Click **Start** > **Settings** > **Control Panel**.
2. In the **Control Panel**, double-click the **Add/Remove Programs** icon.
3. In the Add/Remove Programs applet, navigate to the Logon Manager Agent entry and click Change.
4. In the Logon Manager Agent installer, click **Next**.
5. In the "Program Maintenance" dialog, select **Modify** and click **Next**.
6. In the "Advanced Setup" dialog, expand the **Audit Logging Methods** node.
7. Under the **Audit Logging Methods** node, click the button next to **Database** and select **This feature will be installed on local hard drive** from the context menu.

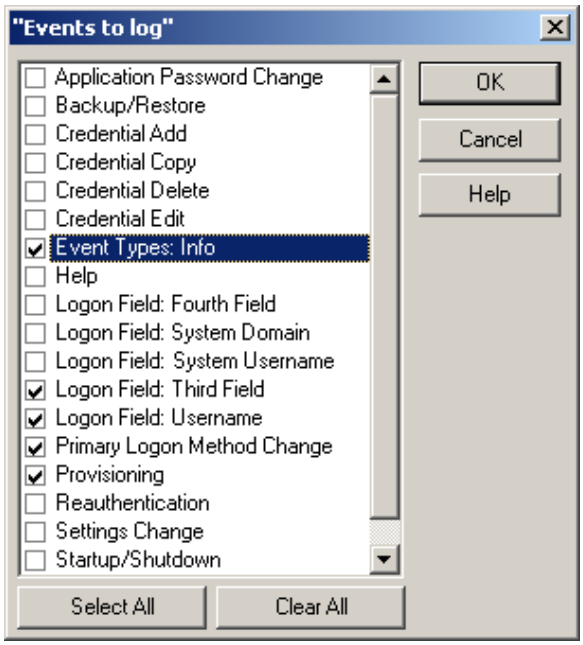


8. Click **Next**; then, in the dialog that follows, click **Install** and wait for the installation to complete.
9. When the installation completes successfully, click **Finish**.

Step 4: Configuring Logon Manager Event Logging for Database Support

1. Launch the Oracle Enterprise Single Sign-On Administrative Console and load your current configuration set.
2. In the tree, navigate to **Global Agent Settings** > ***[Current Configuration Set]*** > **Audit Logging Methods**.
3. Select the check box next to the **Events to log** option and click the [...] button.
4. In the "Events to log" dialog, select the types of events you want to log.

> You must select the Event Types: Info item; otherwise, no data will be logged.



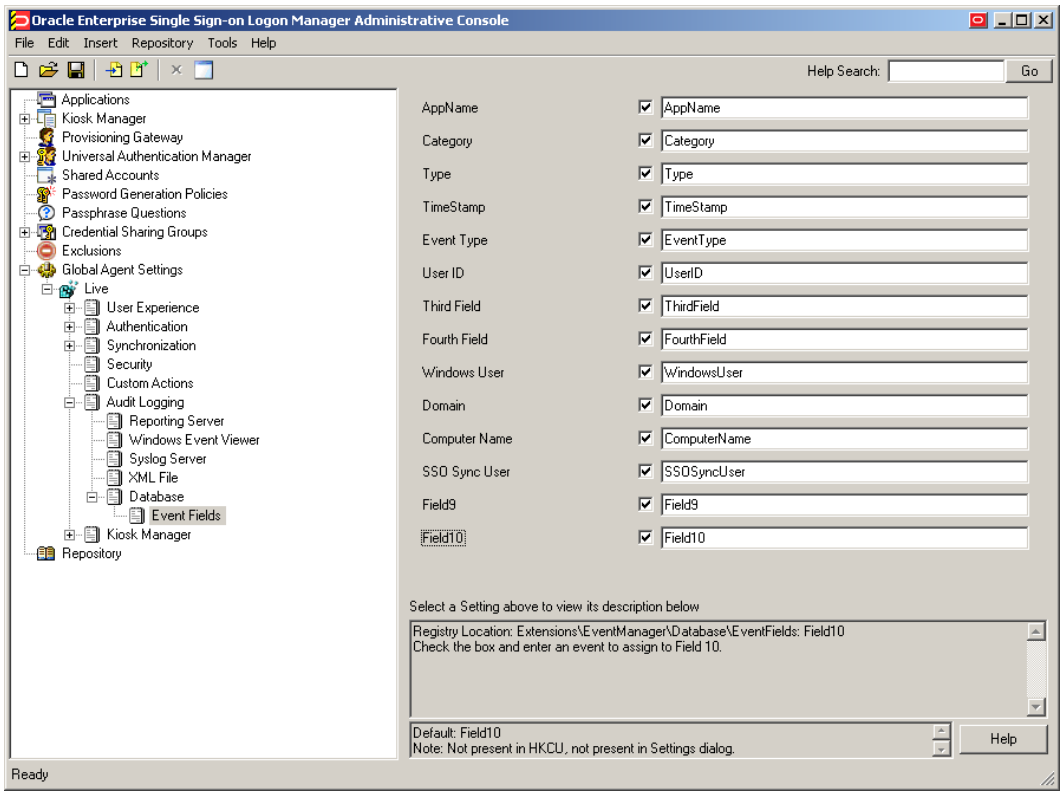
5. Under the **Audit Logging** node in the tree, select **Database** and configure Logon Manager as follows:

Servers	Provider=<SQL_provider_name>;Password=<SQL_admin_user_password>;User ID=<SQLadmin_user_name>;Data Source=<database_name>
Default server	URL to your database server instance. This will be **Server1**.
Default table	Name of the event log data table created earlier in this section. (Table_1 in our example)
Retry interval	Set to the desired retry interval. See Global Agent Settings for more information.
Events to log	Configure to exactly match the event types chosen in step 4.

6. Under the **Database** node in the tree, select **Event Fields**.

7. For each field, enter the name of the corresponding column in the event log data table. The names must match the names you specified for the database table columns.

> **!** Do not alter the values of the AppName, Category, TimeStamp, and Type parameters.

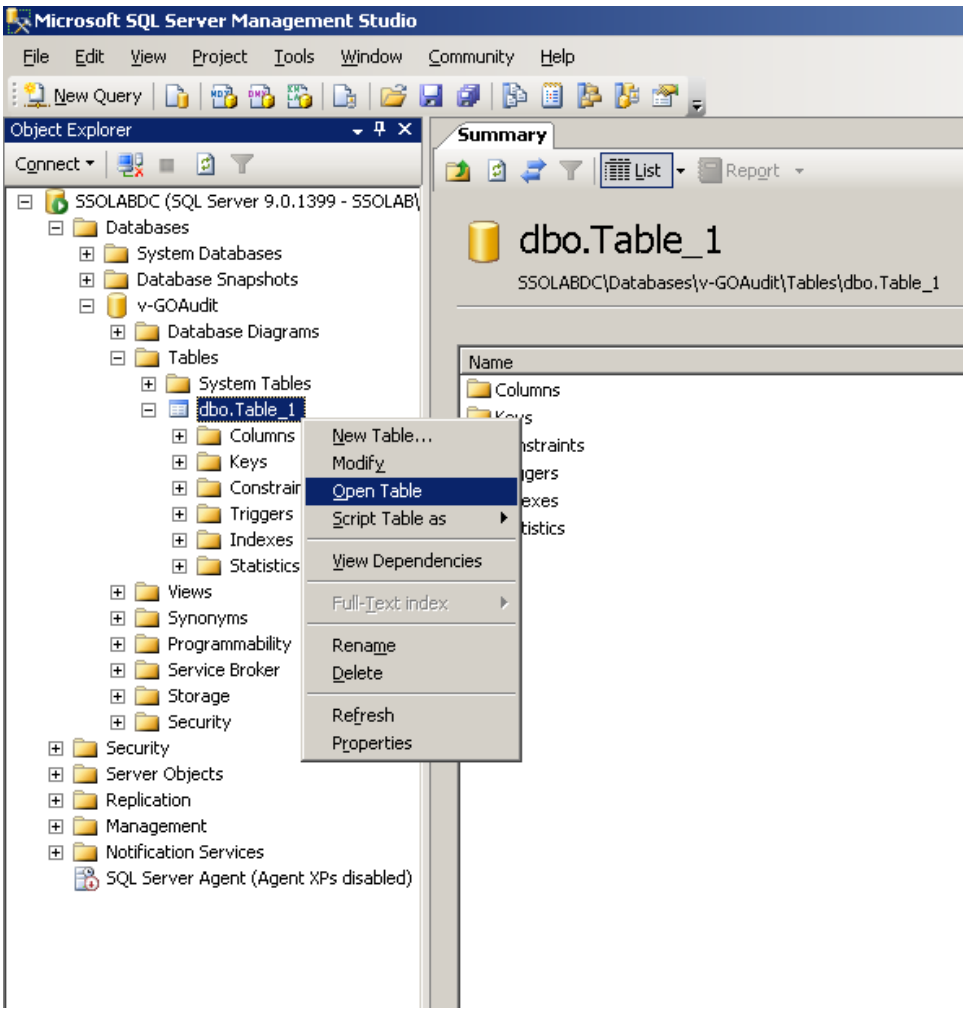


8. When finished, push the modified configuration set to your directory or write them to the local registry, whichever option suits your environment.
9. Proceed to the next section to test your event logging configuration.

Step 5: Testing Your Event Logging Configuration

This simple test procedure allows you to check whether Logon Manager is properly logging event data to the database. In our example, you will press the **Help** button in Logon Manager and check the database to see if the button press is logged.

1. Open Logon Manager and click **Help**.
2. Start the Microsoft SQL Server Management Studio application. Typically, the shortcut is located in **Start** > **Program Files** > **Microsoft SQL Server 2005**.
3. In the left-hand tree, navigate to the event log data table.
4. Right-click the event log data table and select **Open Table** from the context menu.



The Microsoft SQL Server Management Studio will display all Logon Manager events that have been logged in the database so far. The **Help** button press event should appear near or at the end of the list, as shown below.

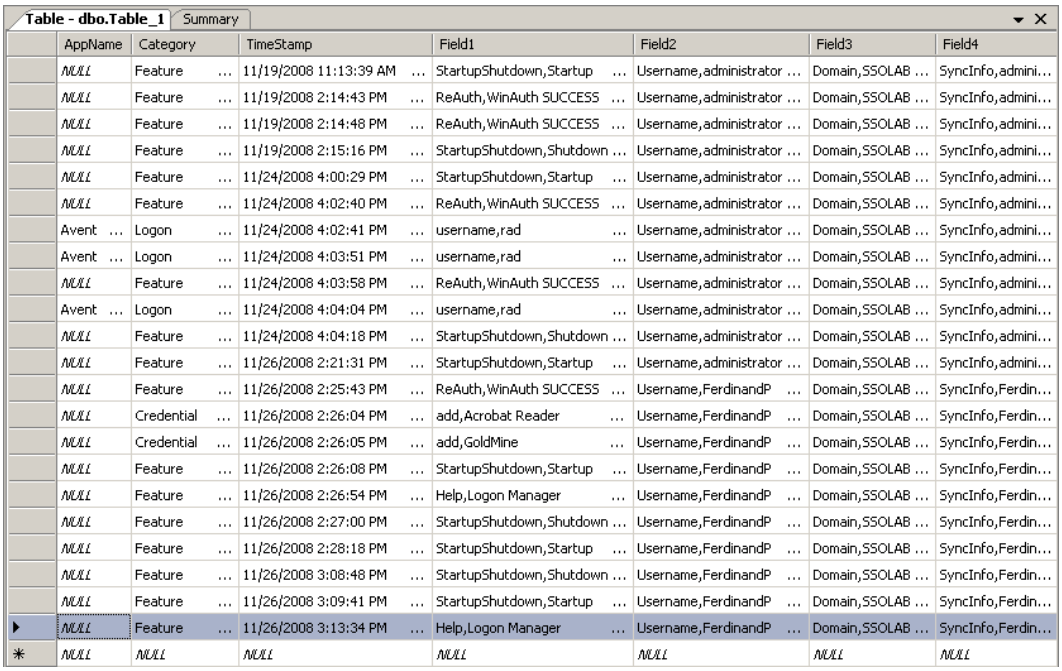


Table - dbo.Table_1 | Summary

	AppName	Category	TimeStamp	Field1	Field2	Field3	Field4
	NULL	Feature	11/19/2008 11:13:39 AM	StartupShutdown,Startup	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	NULL	Feature	11/19/2008 2:14:43 PM	ReAuth,WinAuth SUCCESS	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	NULL	Feature	11/19/2008 2:14:48 PM	ReAuth,WinAuth SUCCESS	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	NULL	Feature	11/19/2008 2:15:16 PM	StartupShutdown,Shutdown	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	NULL	Feature	11/24/2008 4:00:29 PM	StartupShutdown,Startup	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	NULL	Feature	11/24/2008 4:02:40 PM	ReAuth,WinAuth SUCCESS	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	Avent	Logon	11/24/2008 4:02:41 PM	username,rad	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	Avent	Logon	11/24/2008 4:03:51 PM	username,rad	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	NULL	Feature	11/24/2008 4:03:58 PM	ReAuth,WinAuth SUCCESS	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	Avent	Logon	11/24/2008 4:04:04 PM	username,rad	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	NULL	Feature	11/24/2008 4:04:18 PM	StartupShutdown,Shutdown	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	NULL	Feature	11/26/2008 2:21:31 PM	StartupShutdown,Startup	Username,administrator	Domain,SSOLAB	SyncInfo,admini...
	NULL	Feature	11/26/2008 2:25:43 PM	ReAuth,WinAuth SUCCESS	Username,FerdinandP	Domain,SSOLAB	SyncInfo,Ferdin...
	NULL	Credential	11/26/2008 2:26:04 PM	add,Acrobat Reader	Username,FerdinandP	Domain,SSOLAB	SyncInfo,Ferdin...
	NULL	Credential	11/26/2008 2:26:05 PM	add,GoldMine	Username,FerdinandP	Domain,SSOLAB	SyncInfo,Ferdin...
	NULL	Feature	11/26/2008 2:26:08 PM	StartupShutdown,Startup	Username,FerdinandP	Domain,SSOLAB	SyncInfo,Ferdin...
	NULL	Feature	11/26/2008 2:26:54 PM	Help,Logon Manager	Username,FerdinandP	Domain,SSOLAB	SyncInfo,Ferdin...
	NULL	Feature	11/26/2008 2:27:00 PM	StartupShutdown,Shutdown	Username,FerdinandP	Domain,SSOLAB	SyncInfo,Ferdin...
	NULL	Feature	11/26/2008 2:28:18 PM	StartupShutdown,Startup	Username,FerdinandP	Domain,SSOLAB	SyncInfo,Ferdin...
	NULL	Feature	11/26/2008 3:08:48 PM	StartupShutdown,Shutdown	Username,FerdinandP	Domain,SSOLAB	SyncInfo,Ferdin...
	NULL	Feature	11/26/2008 3:09:41 PM	StartupShutdown,Startup	Username,FerdinandP	Domain,SSOLAB	SyncInfo,Ferdin...
▶	NULL	Feature	11/26/2008 3:13:34 PM	Help,Logon Manager	Username,FerdinandP	Domain,SSOLAB	SyncInfo,Ferdin...
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Understanding the Logon Manager Event Notification API

Overview

The Logon Manager Notification Service (referred to as "the service" for the remainder of this document) allows the sending and receiving of event data between Oracle Enterprise Single Sign-On applications. The service runs as a Windows system service and acts as a global events repository and an event router.

The service runs as a Windows system service and distinguishes between the following application roles:

- **Producer.** An application that sends events to other applications
- **Consumer.** An application that receives events from other applications

Event Handling Tasks

The service handles events as follows:

- **Store events received from producers.** The service enumerates and retains 1000 latest events received for each producer and each running session. Once the event buffer is full, the oldest event is discarded for each new event that enters the buffer. Each event can be uniquely identified by producer GUID, session GUID, and its consecutive position in the buffer.
- **Transmit events to consumers.** The service uses the following interface to transmit events:

```
[

  object,
  uuid(DD9E48CA-63D2-4106-876D-4DDEAA063B6F),
  dual,
  nonextensible,
  helpstring("Allows Consumers to access to the information about event"),
  pointer_default(unique)
  ]
  interface ISSONotificationEvent: IDispatch

{

  [propget, id(1), helpstring("Gets event order number")]
  HRESULT Number([out, retval] ULONG* pVal);

  [propget, id(2), helpstring("Gets notification event code")]
  HRESULT NotificationCode([out, retval] ULONG* pVal);

  [propget, id(3), helpstring("Gets progress value")]
  HRESULT Progress([out, retval] LONG* pVal);

  [propget, id(4), helpstring("Gets event importance level")]
  HRESULT Level([out, retval] ULONG* pVal);



  [propget, id(5), helpstring("Gets additional data")]
  HRESULT AdditionalData([out, retval] BSTR* pVal);

  [propget, id(6), helpstring("Gets event time")]
  HRESULT Time([out, retval] DATE* pVal);
```

```
};
```

The SSONotificationService Co-Class

The following IDL code describes the service's co-class used by producers and consumers:

```
[

  uuid(FBB13217-02AB-42DF-8867-69B8DD935BA9),
  helpstring("SSO Notification Service class")

]
coclass SSONotificationService
{

  // Allows Consumers to subscribe for event notifications:
  [default] interface ISSONotificationService;

  // Allows Consumers to access to the information about events:
  interface ISSONotificationEventReader;

  // Allows Producers to obtain ISSONotificationEventWriter pointer for event
  raising:
  interface ISSOWriterManager;

};
```

Sending Data (Producer)

Producers should follow the guidelines below to properly interface with the service.

Producer Identification

A producer must implement the `ISSOProducerInfo` interface to uniquely identify itself to the service:

```
[

  object,
  uuid(4961B340-D358-4A0E-B8FB-6E2A4BF2DFDD),
  dual,
  nonextensible,
  helpstring("Provides information about Producer"),
  pointer_default(unique)

]
interface ISSOProducerInfo : IDispatch
{

  [propget, id(1), helpstring("Gets Terminal Services session identifier")]
  HRESULT SessionId([out, retval] ULONG* pVal);

  [propget, id(2), helpstring("Gets Producer GUID")]
  HRESULT ProducerGuid([out, retval] BSTR* pVal);

  [propget, id(3), helpstring("Gets Producer description")]
  HRESULT ProducerDescription([out, retval] BSTR* pVal);

};
```

Event Notification

When an event occurs, the producer passes the event data to the service via the `ISSONotificationEventWriter` COM interface:

```
[

  object,
  uuid(72A23F33-927D-4e01-8B50-759262519076),
  dual,
  nonextensible,
  helpstring("Allows Producers to raise new events"),
  pointer_default(unique)

]
interface ISSONotificationEventWriter : IDispatch
{

  [id(1), helpstring("Raises new event")]
  HRESULT AddEvent([in] ULONG nNotificationCode, [in] LONG nProgress, [in]
  ULONG nLevel, [in] BSTR sAdditionalData);

};
```

To obtain a pointer to this interface, the producer must implement the `ISSOProducerInfo` interface mentioned earlier and pass its pointer into the `GetWriter` method of the service's `ISSOWriterManager` interface shown below:

```
[

  object,
  uuid(4490B430-81FD-48f5-BCD9-F9F0A82C6832),
  dual,
  nonextensible,
  helpstring("Allows Producers to obtain ISSONotificationEventWriter pointer
  for event raising"),
  pointer_default(unique)

]

interface ISSOWriterManager : IDispatch

{

  [id(1), helpstring("Returns ISSONotificationEventWriter pointer for
  specified Producer")]

  HRESULT GetWriter([in] IDispatch* pProducerInfo, [out,retval] IDispatch**
  pEventWriter);

};
```

Security Measures

The service only accepts events from producers whose executables have been signed by Oracle.

A producer requesting a pointer to the `ISSONotificationEventWriter` using the `ISSOWriterManager::GetWriter` method is validated as follows:

1. The producer's process identifier (PID) is obtained (based on the producer's `ISSOProducerInfo` data passed into the method via the `CoGetServerPID` function).
2. The signature of the producer executable corresponding to the retrieved PID is checked against the information stored in the Windows registry or through the COM Security Initialization process.

The service cannot guarantee a valid signature check when the producer executable is remote.

Additionally, Oracle highly recommends that producers and consumers validate the service's signature as follows:

1. Obtain the service's PID using the `CoGetServerPID` function from one of the `ISSO-NotificationService` sub-interfaces (`ISSONotificationEventReader`, `ISSOWriterManager`, `ISSONotificationEventWriter`, or `ISSONotificationEvent`).
2. Check the signature of the executable corresponding to the retrieved PID.

Receiving Data (Consumer)

Consumers can receive data using either the "push" or "pull" model.

Receiving Data in a "Push" Model

In the "push" model, consumers must do the following to receive event data:

1. Implement the `_ISSONotificationServiceEvents` interface to handle events:

```
[

  uuid(88AD71A0-0A9A-4916-BE26-E82C4F41BF3F),
  helpstring("Sink interface to handle events")

]
dispinterface _ISSONotificationServiceEvents
{

  properties:
  methods:
  [id(1), helpstring("Handles notification event")]
  HRESULT HandleEvent([in] IDispatch* pEvent);

};
```

The `pEvent` parameter referenced above stores the pointer to the object implementing the `ISSONotificationEvent` and `ISSOProducerInfo` interfaces described earlier:

```
[

  uuid(C8DCA6F1-2009-4A04-9E4C-BA7CB4CBA86C),
  helpstring("SSO Event class")
```

```
]
coclass SSONotificationEvent
{

  [default] interface ISSONotificationEvent;
  interface ISSOProducerInfo;

};
```

2. Subscribe to the service event stream by passing the `_ISSONotificationServiceEvents` event handler interface into the method of the `ISSONotificationService` interface:

```
[

  object,
  uuid(079F0093-99CB-4FCF-900E-18DAD87ED316),
  dual,
  nonextensible,
  helpstring("Allows Consumers to subscribe and unsubscribe for events"),
  pointer_default(unique)

]
interface ISSONotificationService : IDispatch
{

  [id(1),

  helpstring("Subscribes event handler to events from specified producer and
  user and returns subscription cookie")]

  HRESULT SubscribeToEvents([in] ULONG nSessionId, [in] BSTR sProducerGuid,
  [in] IUnknown* pEventHandler, [out,retval] ULONG* pCookie);

  [id(2),
  helpstring("Unsubscribes event handler from events from specified producer
  and user using cookie returned by SubscribeToEvents method")]
  HRESULT UnsubscribeFromEvents([in] ULONG nSessionId, [in] BSTR
  sProducerGuid, [in] ULONG nCookie);

};
```

When a new event arrives, the service transmits the event data to all subscribed consumers.

Receiving Data in a "Pull" Model

In the "pull" model, a consumer receives the latest events from a producer using the service's ISSONotificationEventReader interface:

```
[

  object,
  uuid(5C4C57D9-D0B1-46AC-A45C-E41C55A7FEF8),
  dual,
  nonextensible,
  helpstring("Allows Consumers to get the information about latest events"),
  pointer_default(unique)
```

```
]
interface ISSONotificationEventReader : IDispatch
{

  [id(1), helpstring("Gets the latest event from specified producer and
  user")]

  HRESULT GetLastEvent([in] ULONG nSessionId, [in] BSTR sProducerGuid, [out,
  retval] IDispatch** pVal);

  [id(2), helpstring("Returns array containing specified number of latest
  events from specified producer and user")]

  HRESULT GetLatestEventsList([in] ULONG nSessionId, [in] BSTR sProducerGuid,
  [in] ULONG nCount, [out, retval] VARIANT* eventsArray);

};
```

The service returns event data as pointer (or a safe array of pointers) to the implementations of the `ISSONotificationEvent` interface described earlier.

Using the Trace Controller Utility

The Trace Controller utility allows you to monitor and log events occurring within an Oracle Enterprise Single Sign-On application. You have the choice to monitor events as they occur in real-time, or log them to a file for later review.

The basic components of trace logging are:

- **Provider.** An Oracle Enterprise Single Sign-On application that supports trace logging. Each application represents a separate provider and establishes a separate logging session when trace logging is enabled.
- **Consumer.** An application that parses, interprets, and displays the logged events, such as the Trace Controller utility (tracecontroller.exe) or Windows Event Viewer

The Trace Controller utility serves the following purposes:

- Control and configure the logging of Logon Manager events. This involves creating a session and enabling logging in the desired provider(s)
- Display the logged events in the desired format, including filtering by a number of criteria.

After you enable logging for a provider, it remains enabled even when Trace Controller, the provider application, or Windows itself is shut down. When Windows starts back up and/or the provider application is relaunched, event capture continues until you explicitly disable it.

Oracle Enterprise Single Sign-On applications support the following log verbosity levels:

Level	Level Name	Description
1	Critical	Abnormal exit or termination
2	Error	Server errors that need logging
3	Warning	Warnings such as allocation failure
4	Information	Includes non-error cases (for example, Entry-Exit)
5	Debug	Detailed traces from intermediate steps

When capture is complete, the Trace Controller utility allows you to display one or more event logs in a single viewer that organizes the events in chronological order. For example, you can view Logon Manager and Authentication Manager events in a single list, which can then be filtered by a number of custom criteria.

Using the Trace Controller Utility in Graphical Mode

This section explains how to use the Trace Controller utility in its graphical (interactive) mode. Using the utility via command line is explained in the section, Using the Trace Controller Utility in Command Line Mode.

Enabling Trace Logging for an Application

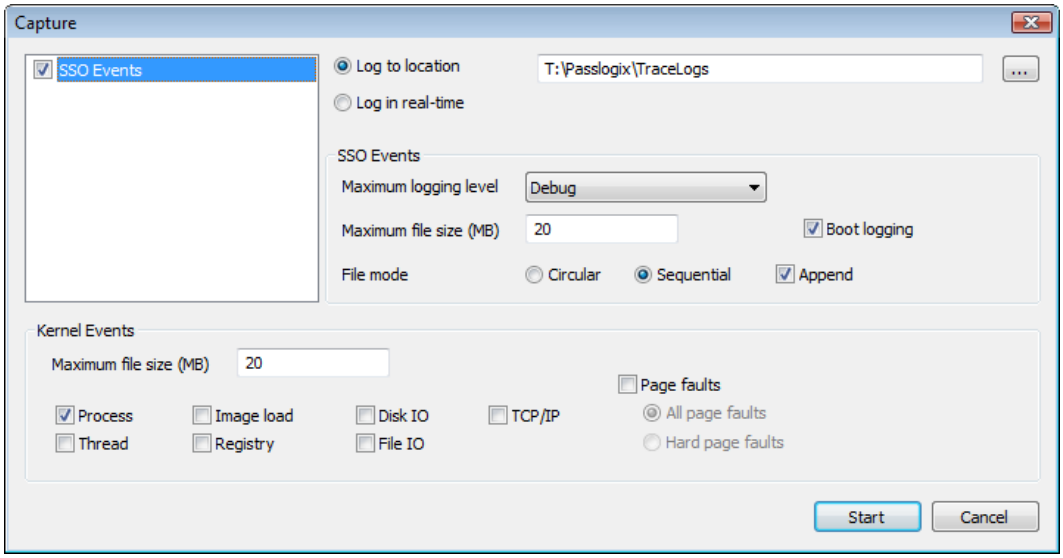
To enable trace logging for an Oracle Enterprise Single Sign-On application, you must use the Trace Controller utility.

The utility allows you to select the desired provider, logging method, and the desired event types, as well as configure additional logging options.

You must have administrative privileges to run the Trace Controller utility. If you are not logged on as a user with administrative privileges, the utility will prompt you for administrative credentials when launched.

To enable trace logging:

1. Launch **TraceController.exe**.
2. If prompted, enter the credentials of an account with administrative privileges.
3. Select **Capture Events** from the **File** menu. The "Capture" window appears.



4. In the "Capture" window, do the following:
   a. Select the provider whose events you want to log. By default, SSO Events, the main Logon Manager logging provider, is selected.
   b. Select whether you would like to log events to a file or display them in real-time. If logging to a file, click the **Browse** (**...**) button and specify the path and file to which you want to log.
   c. Specify the Maximum logging level (see table on page 6 for a list of available logging levels) for the SSO Events provider.
   d. Specify the Maximum file size for the SSO Events provider. The default value is 20MB.
   e. Select the desired log file write mode:
      - **Circular.** After the maximum log file size is reached, the utility begins overwriting old data in chronological order. The log is cleared each time logging is started.
      - **Sequential.** After the maximum log file size is reached, the utility stops logging. The log is cleared each time logging is started, unless you select the Append check box.
   f. If you want logging to begin at boot time, select the **Boot logging** check box. When this feature is enabled, events will be logged as soon as Windows completes startup and will not require a user logon.
   g. For the Kernel Events provider, select the types of events you would like to log, and the maximum log file size (the default value is 20MB). In most cases, only kernel process events should be logged for Logon Manager troubleshooting.

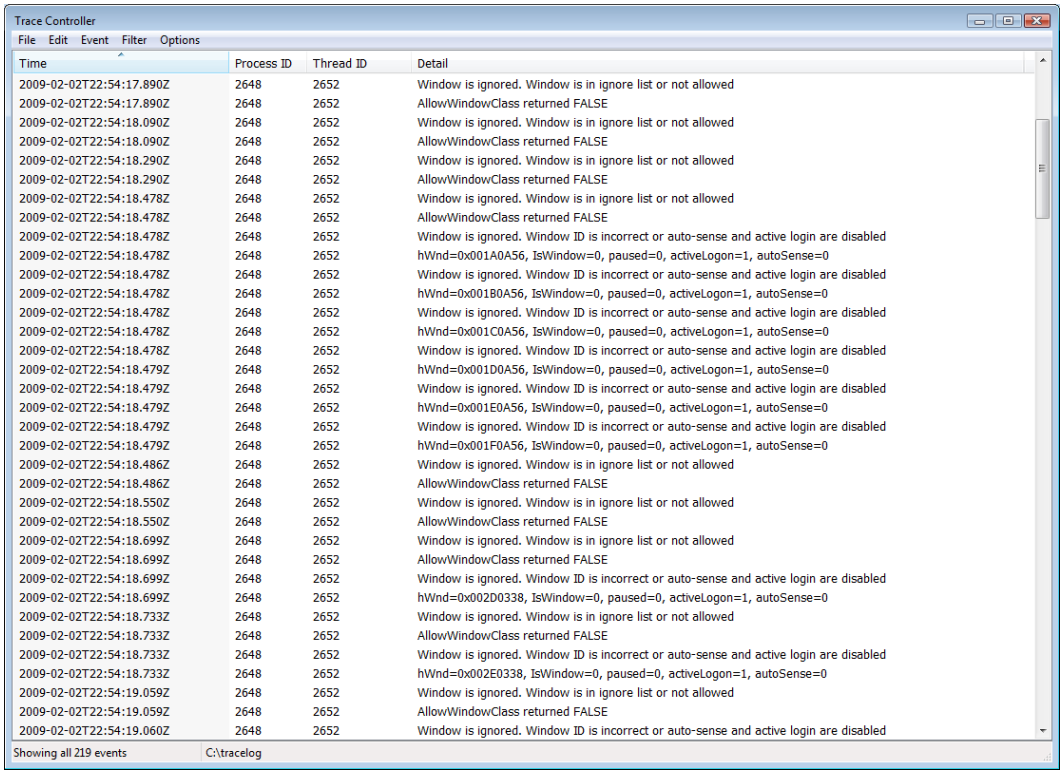
5. Click **Start** to begin logging events. Note the following:
   - Logging will remain enabled until you explicitly disable it.
   - When the Trace Controller utility is running, its system tray icon animates to indicate events are being captured.

> After you have configured your initial capture settings, you can configure the Trace Controller utility to start and stop event capture using hot keys. To set up the hot keys, see Configuring Event Capture Hot Keys.

Viewing Logged Events

To view events logged to a file, do the following in the Trace Controller utility:

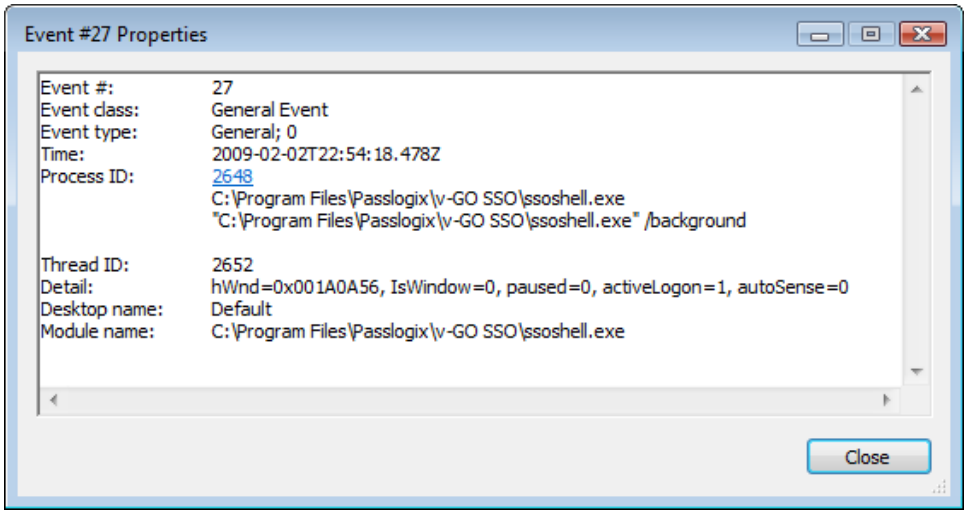
1. Open the desired log file:
   a. From the File menu, select **Open Events**.
   b. Browse to the desired provider's log file and click **Open**. The events stored in the log file are displayed as a list in chronological order.
   c. If you want to view events from multiple log files simultaneously, repeat steps 1a and 1b for each additional file you want to open. The events from all open log files are displayed in the list in chronological order.



> To reverse the sort order, click the **Time** column header. An arrow in the header indicates the currently selected sort direction.

2. To view details for a specific event, navigate to it in the list and double-click it. The details are

displayed in a pop-up window.



When you are finished viewing the event details, click **Close** to return to the event list.

If you are viewing events from multiple log files, you can see which log files are currently open by selecting **Show Open Log Files** from the **File** menu.

Customizing the Event List View

You can customize the following aspect of the event list:

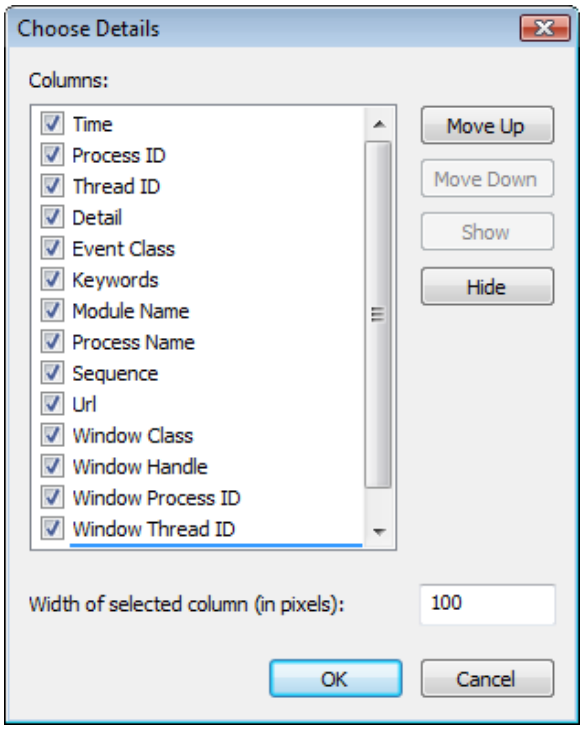
- Event list columns
- Event filter
- Font style and size
- Timestamp format

Customizing Event List Columns

You can select which columns will be displayed in the event list and in what order as follows:

1. Select **Choose Details** from the **Options** menu.

   The "Choose Details" window appears.



2. In the **Columns** list, select the check box next to each column you want to be visible; deselect the check box to hide the column.
3. To move a column left in the event list, select it in the **Columns** list and click **Move Up**; to move a column right, select it and click **Move Down**.
4. To set a column's width, select it in the **Columns** list and enter the desired width (in pixels) into the **Width of selected column** field.
5. When you have finished, click **OK** to save your changes.

Filtering Events

The Trace Controller utility allows you to filter the displayed events by one or more criteria of your choice. To enable filtering, do the following:

1. From the **Filter** menu, select **Filter**.
2. In the window that appears, configure your first criterion as follows:
   a. Select the parameter to filter against.
   b. Select the operator (is, is not, less than, greater than, and so on).
   c. Enter the value to match the parameter against. Plain text strings as well as regular expressions are supported.
   d. Select whether this criterion should include or exclude matches from the results.
   e. Click **Add**.
3. Repeat step 2 to add more criteria.
4. When you are finished, click **OK**. Your results are updated to reflect the filtering criteria you have configured.

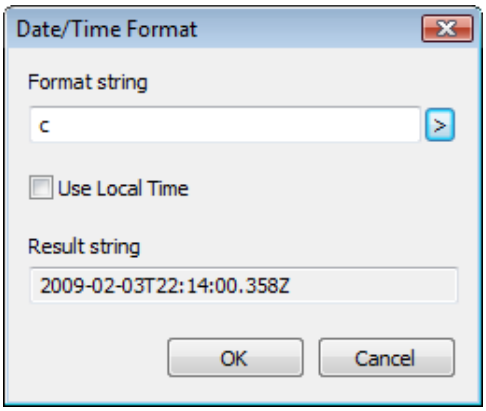
The Advanced Filter option is a special feature reserved for developers. Use the standard filter to filter your event list.

Customizing the Timestamp Format

You can customize the event timestamp format as follows:

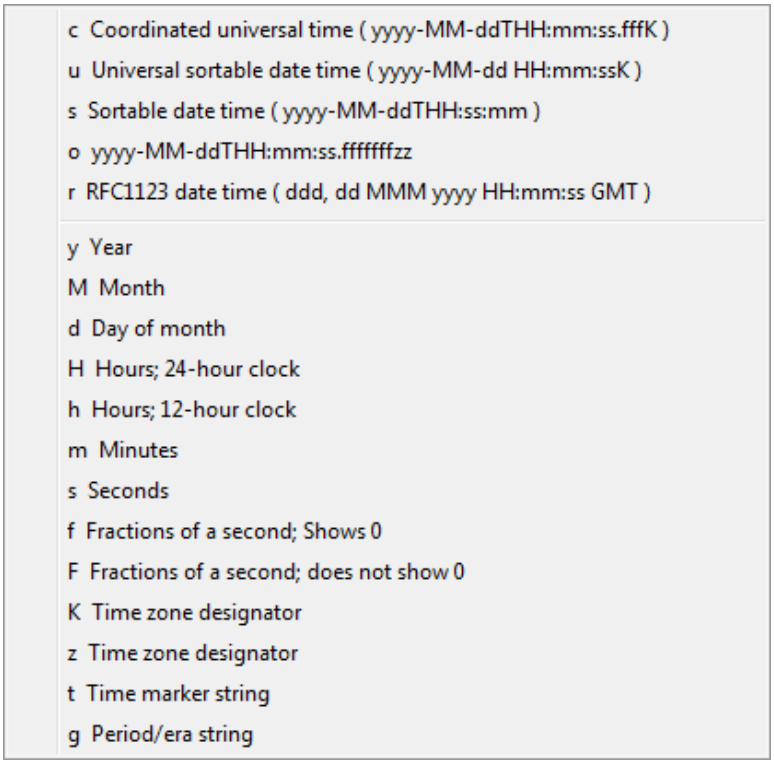
1. From the **Options** menu, select **Date/Time Format**.

   The "Date/Time Format" window appears.



2. Select or enter the desired timestamp format string as follows:
   - If you want to choose one of the preset timestamp formats, click the arrow button to the right of the **Format string** field and select it from the upper section of the menu.
   - If you want to enter a custom string, click the arrow button to the right of the **Format string** field and examine the legend in the lower section of the menu, then construct your

custom string using the building blocks of your choice.



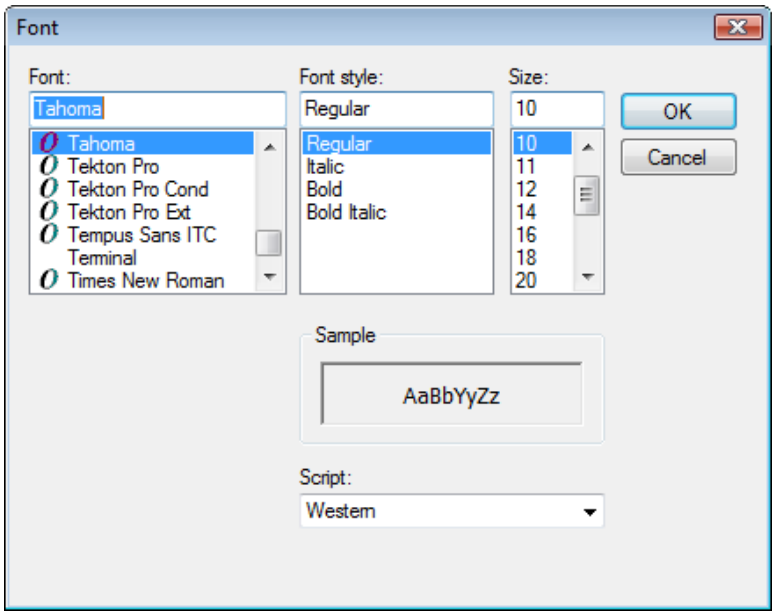
3. When you have finished, click **OK** to save your changes.

Customizing the Event List Font

You can customize the font used to display the events in the list as follows:

1. From the **Options** menu, select **Font**.

   The "Font" window appears.

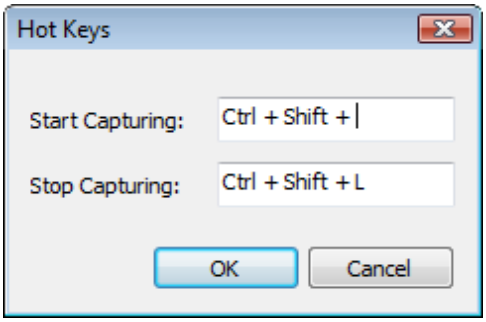


2. In the "Font" window, make your changes, then click **OK**.

Configuring Event Capture Hot Keys

You can configure the Trace Controller utility to start and stop event capture using hot keys as follows:

1. From the **Options** menu, select **Hot Keys**. The "Hot Keys" window appears:



2. Configure the **Start Capturing** hot key:
   a. Click within the **Start Capturing** field.
   b. Press the desired key combination. The combination will appear in the field.
3. Configure the **Stop Capturing** hot key:
   a. Click within the **Stop Capturing** field.
   b. Press the desired key combination. The combination will appear in the field.
4. Click **OK** to save your changes.

Using the Trace Controller Utility in Command Line Mode

The Trace Controller utility can be launched and configured from the command line without the need to interact with its graphical interface. This part explains the command-line syntax accepted by the utility.

Command Line Switch Reference

The Trace Controller utility accepts the following command-line switches. Required switches are shown in bold; non-bold switches are optional.

Switch	Purpose
/start	Start logging
/stop	Start logging
/boot	Start logging on boot
/noui	Start in silent mode (suppress graphical interface)
/path	Specifies the path in which log files will be stored in the following format: /path "<path_to_log_files>. If not specified, log files will be written to %SYSTEMROOT%\System32\LogFiles\Vgo. (This default folder is only accessible to users with administrative privileges.)
/event	Specifies the event type(s) to log in the following format: /event "EventType1 " *[verbosity level] [write mode]* *[log file size]* If omitted, events of all currently supported types (except kernel) will be logged.
/level	Specifies the maximum logging verbosity level in the following format: /level x where x is an integer from 1 - 5. The available verbosity levels are: 1 – Critical, 2 – Error, 3 – Warning, 4 – Information, 5 – Debug (The default verbosity level is 4.)
/circular	Specifies the log file write mode to be circular. In this mode, once the maximum log file size is reached, the utility begins overwriting old data in chronological order. The log is cleared each time logging is started. This is the default mode.
/sequential	Specifies the log file write mode to be sequential. In this mode, once the maximum log file size is reached, the utility stops logging. The log is cleared each time logging is started, unless you also specify the /append switch.
/append	If /sequential is used, the utility will continue writing to the log file at the end of the existing data instead of clearing it.
/fsize	Specifies the maximum size of the log file in megabytes in the following format: /fsize x (The default size is 20MB.
filename	Specifies the log file name to open for viewing in the following format: TraceController.exe "<path_to_log_file>\<log_file_name>"

Command-Line Use Examples

The following are examples of operating the Trace Controller utility from the command line.

Starting Logging

To start logging, use the `/start` switch, plus one of the optional startup switches.

```
TraceController.exe /start [/noui] [/boot] [/path "<log_file_path>"]
```

For most troubleshooting scenarios, you will want to log all supported event types at the debug verbosity level and using Oracle-specified defaults for all other configuration options:

```
TraceController.exe /start /level 5
```

Specifying Logging Options for Multiple Event Types

When specifying more than one event type, you have the option to specify custom logging options for each individual type, as shown below. You can also specify them globally after specifying the event types, in which case all event types will be logged with the same configuration options.

Custom configuration options for each event type:

```
TraceController.exe /start /noui /path "T:\Oracle\TraceLogs"

/event "EventType1" /level 2 /circular /fsize:10 /event "EventType2" /level 3
/sequential /append
```

Global configuration options for all event types:

```
TraceController.exe /start /noui /path "T:\Oracle\TraceLogs"

/level 2 /circular /fsize 10 /event "EventType1" /event "EventType2"
```

Stopping Logging

To stop logging, use the `/stop` switch:

```
TraceController.exe /stop
```

Viewing a Log File

You can open one or more log files for viewing as follows:

```
TraceController.exe "logfile1" "logfile2" … "logfile3"
```

Authentication Manager Error Messages

This section lists the messages logged in Authentication Manager during smart card authentication.

Warning Level Messages

Event Message	Description
Failed to retrieve the random password from the registry	This message can be ignored if the user has just completed the First Time Use (FTU) process, otherwise this indicates that information expected to be in the registry is missing. Check previous logs to ensure the random password was successfully saved and verify that synchronization process has completed successfully.
Failed to retrieve the PIN from the registry	This message can be ignored if the user has just completed the FTU process, or the first time after configuration was changed to store the PIN. Otherwise this indicates that information expected to be in the registry is missing. Check previous logs to ensure the PIN was successfully saved and verify that synchronization process has completed successfully.
Failed to retrieve the certificate passphrase from the registry	This message can be ignored if the user has just completed the FTU process, otherwise this indicates that information expected to be in the registry is missing. Check previous logs to ensure the passphrase was successfully saved and verify that synchronization process has completed successfully.

Error Level Messages

Event	Description
Smart card selection failed	Either the user canceled out of the smart card selection dialog, or the inserted smart card was not recognized by the system. Check to ensure that the proper middleware for the smart card is installed and configured correctly.
Exporting session key failed	Could not export a session key off of the smart card. Verify that the "SmartcardAPI" console setting is configured properly for the middleware. Some middleware may not support exporting session keys.
Importing session key failed	Could not import a session key onto the smart card. Verify that the "SmartcardAPI" console setting is configured properly for the middleware and verify that synchronization process has completed successfully.
Failed to set application data on the smart card	Application data could not be stored on the smart card. This message can be ignored if Kiosk Manager is not in use. Verify that the middleware includes support for PKCS #11 and the smart card is not "read only."
Failed to get application data from the smart card	This error message is usually encountered when application data could not be successfully stored on the smart card.
Failed to get the smart card serial number	The middleware does not support retrieving the smart card serial number. This message can be ignored if Kiosk Manager is not in use.
Failed to enumerate encryption certificate key containers	The Cryptographic Service Provider (CSP) installed by the middleware does not support enumerating key containers on the smart card.
Failed to locate logon certificate	A smart card logon certificate could not be located on the card. Verify that the logon certificate is present on the card and is the default certificate.
Failed to locate encryption certificate	If this error is encountered during FTU, no encryption certificates could be located on the card. The smart card logon certificate cannot be used for this purpose. Verify that a separate, non-logon encryption certificate is present on the card. If this error is encountered after successful FTU, verify that the encryption certificate used during FTU is present on the card and available for use.
Failed to obtain exchange key	The exchange key could not be obtained for use. If configured for logon certificates, verify that the certificate is available on the card for use. If SSO keys are configured, verify that the SSO container has been created on the card and contains keys.
Failed to create session key	A session key could not be created on the card. Verify that the "SmartcardAPI" console setting is configured properly for the middleware and the smart card is not "read only."

Regular Expression Syntax

The following operators and meta-characters can be used to specify a text string pattern that the Agent uses to detect specific application windows. See Add Edit Window Title for more information.

The following explanations are adapted for the .NET regular expression reference. The complete description and syntax of regular expressions can be found on the Microsoft Developer Network website (www.msdn.microsoft.com).

Grouping	
[ ]	Indicates a character class that matches any character inside the brackets. Example: **[abc]** matches "a," "b," and "c."
( )	Indicates a character grouping operator. Example: **(\d+,)*\d+** matches a list of numbers separated by commas (such as "1" or "1,23,456").
{ }	Indicates a match group. Example: {0-9+}-{0-9+} matches "100-1234", where the two match groups are "100" and "1234," respectively.
|	Separates two expressions, exactly one of which matches. Example, **T|the** matches "The" or "the").

Matching	
.	Matches any single character.
^	If **^** occurs at the start of a character class, it negates the character class. A negated character class matches any character *except* those inside the brackets. Example, **[^abc]** matches all characters except "a", "b", and "c"). If **^** is at the beginning of the regular expression, it matches the beginning of the input. Example, **^[abc]** will only match input that begins with "a," "b," or "c").
$	At the end of a regular expression, **$** matches the end of the input. Example: **[0-9]$** matches a digit at the end of the input.
-	In a character class, a hyphen indicates a range of characters. Example: **[0-9]** matches any of the digits "0" through "9."

Repeat operators	
!	Negates the expression that follows.
?	Indicates that the preceding expression is optional: it matches once or not at all. Example: **[0-9][0-9]?** matches "2" and "12").
+	Indicates that the preceding expression matches one or more times. Example: **[0-9]+** matches "1," "13," "666," and so on.
*	Indicates that the preceding expression matches zero or more times.
??, +?, *?	"Non-greedy" versions of **?**, **+**, and *****. These match as little as possible, unlike the greedy versions which match as much as possible. Example: given the input "<abc><def>," **<.*?>** matches "<abc>" while **<.*>** matches "<abc><def>."

Escape and abbreviation	
\	*Escape* character that forces the next character to be interpreted literally. Example: **[0-9]+** matches one or more digits, but **[0-9]\+** matches a digit followed by a plus character). If **** is followed by a number *n*, it matches the *n*th match group (starting from 0). Example: **<{.*?}>.*?</\0>** matches "<head>Contents</head>". The **** is also used for *abbreviations* as described in the following table.

Abbreviation	Meaning	Matches
\a	Any alphanumeric character	[a-z A-Z 0-9]
\b	White space (blank)	[\\t]
\c	Any alphabetic character	[a-z A-Z]
\d	Any decimal digit	[0-9]
\h	Any hexadecimal digit	[0-9 a-f A-F]
\n	New line	\r|\r?\n
\q	A quoted string	\"[^\"]*\"|\'[^\']*\'
\w	A simple word	[a-z A-Z]+
\z	An integer	[0-9]+

Command-Line Options

You can invoke Logon Manager from the command line to perform certain tasks.


Items in [brackets] are optional in this section only.

Task	Use/Description	
Backup	**ssoshell.exe** /mobility /backup [*path*] /silent [confirm]	
	Example: [*path*]	The actual path to the directory where the backup file is placed. (Default: the last directory in which a command line backup file was stored, or where Shell:AutoBackupPath points.)
	Example: silent	Do not show the **Backup/Restore Wizard** when performing the backup.
	Example: [confirm]	Show all dialog boxes. When doing a silent backup where the confirm switch is not present, the user does not see the **Yes/No** dialog box and the Agent defaults to **Yes**. (Example of a confirm dialog: "Overwrite backup file?
Logon Manager	**ssoshell.exe**	
	Example	Show Logon Manager

Task	Use/Description	
No FTU	**ssoshell.exe** /background /noftu	
	Description	Prevents the Agent from starting twice when logging on to the computer. Enable in the Userinit registry key, which is located in HKLM\Software\Microsoft\ Windows NT\Current Version\Winlogon.
	Description	Prevents the Agent from starting twice when logging on to the computer. Enable in the Userinit registry key, which is located in HKLM\Software\Microsoft\ Windows NT\Current Version\Winlogon.
	Description	Using /noftu ensures that the Agent does not run for users who do not have it in their Windows Startup folder. This allows the administrator to roll out Logon Manager to only specific (not all) users of a particular computer.
	Description	This command applies only to Microsoft Windows XP.
Options	**ssoshell.exe** /options	
	Example	Show the **Settings** property page.
Restore	**ssoshell.exe** /mobility /restore [*path*] /silent [confirm]	
	Example:[*path*]	The actual path to the directory where the backup file exists. (Default: the last directory to which a command line backup file was stored, or where Shell:AutoBackupPath points.)
	Example: silent	Do not show the **Backup/Restore Wizard** when performing the backup.
	Example: [confirm]	Show all dialog boxes. When doing a silent backup and the `confirm` switch is not present, the user will not see the **Yes/No** dialog box and the Agent will default to **Yes**. (Example of a confirm dialog: "Backup file has been restored")
	Example: Notes	The restore password submitted by default is the Windows password. The restore command is executed with a startup task (see Custom Actions).
Setup	**ssoshell.exe** /setupmgr	
	Example	Show the **Setup Wizard**.
Shutdown	**ssoshell.exe** /shutdown	
Startup	**ssoshell.exe** /background	
Synchronize	**ssoshell.exe** /syncmgr /sync	Execute synchronization with the first synchronizer in the Sync Order list (see Synchronization in Global Agent Settings); displays a logon to connect to the first-listed synchronizer.

Character Codes

Codes for VTabKeyN (Windows)

Code	Meaning
`DELAY=*N*`	*N* is the number of milliseconds to delay
`VKEY=*N*`	*N* is the virtual key code to send

Example sending a Tab, End, Space, a 1.5 second delay, Logon username , Space, the username/ID, Home, a 0.35 second delay, Tab, and then the password:

```
VTabKey1=`VKEY=9``VKEY=35` `DELAY=1500`Logon username`VKEY=32`

VTabKey2=`VKEY=36``DELAY=350``VKEY=9`
```

Codes for VirtualKeyCode and VKEY (Windows)

These codes are used in the application configuration file (*entlist.ini*) to send specific keystrokes to Windows logon or password change form fields. They are listed here for reference only. Use the SendKeys (Windows) dialog box to specify keystrokes for a Windows application. See Adding Windows Applications for more information.

Key	Code		Key	Code		Key	Code		Key	Code
Break	3		5	53		V	86		F5	116
Backspace	8		6	54		W	87		F6	117
Tab	9		7	55		X	88		F7	118
Clear	12		8	56		Y	89		F8	119
Enter	13		9	57		Z	90		F9	120
Shift	16		A	65		Left Windows	91		F10	121
Ctrl	17		B	66		Right Windows	92		F11	122
Alt	18		C	67		NumPad 0	96		F12	123
Caps Lock	20		D	68		NumPad 1	97		F13	124
Esc	27		E	69		NumPad 2	98		F14	125
Spacebar	32		F	70		NumPad 3	99		F15	126
Page Up	33		G	71		NumPad 4	100		F16	127
Page Down	34		H	72		NumPad 5	101		F17	128
End	35		I	73		NumPad 6	102		F18	129
Home	36		J	74		NumPad 7	103		F19	130
Left	37		K	75		NumPad 8	104		F20	131

Key	Code		Key	Code		Key	Code		Key	Code
Up	38		L	76		NumPad 9	105		F21	132
Right	39		M	77		Asterisk (*)	106		F22	133
Down	40		N	78		Plus (+)	107		F23	134
Print Scrn	44		O	79		Minus (-)	109		F24	135
Help	47		P	80		Period (.)	110		Num Lock	144
0	48		Q	81		Slash (/)	111		Scroll Lock	145
1	49		R	82		F1	112		Left Shift	160
2	50		S	83		F2	113		Right Shift	161
3	51		T	84		F3	114		Left Ctrl	162
4	52		U	85		F4	115		Right Ctrl	163

Codes for PreKey and TabKey (Host/HLLAPI)

These codes are used in the application configuration file (**entlist.ini)** to send specific keystrokes to HLLAPI-enabled Mainframe/Host logon or password change form fields. They are listed here for reference only. Use the SendKeys (Host/Mainframe) dialog box to specify keystrokes for a host application. See Adding Host/Mainframe Applications for more information.

Char/Cmd	Code		Char/Cmd	Code		Char/Cmd	Code
Alt Cursor	@$		Local Print	@P		PF12/F12	@c
Backspace	@<		Reset	@R		PF13/F13	@d
@	@@		Shift	@S		PF14/F14	@e
Alt	@A		Dup	@S@x		PF15/F15	@f
Field -	@A@-		Field Mark	@S@y		PF16/F16	@g
Field +	@A@+		Tab (Right Tab)	@T		PF17/F17	@h
Field Exit	@A@E		Cursor Up	@U		PF18/F18	@i
Alt Cursor	@$		Cursor Down	@V		PF19/F19	@j
Erase Input	@A@F		Cursor Left	@L		PF20/F20	@k
Sys Request	@A@H		Cursor Right	@Z		PF21/F21	@l
Insert Toggle	@A@I		Page Up	@u		PF22/F22	@m
Cursor Select	@A@J		Page Down	@v		PF23/F23	@n
Attention	@A@Q		End	@q		PF24/F24	@o
Print Screen	@A@T		Home	@0		PA1	@x

Char/Cmd	Code		Char/Cmd	Code		Char/Cmd	Code
Hexadecimal	@A@X		PF1/F1	@1		PA2	@y
Cmd/Func Key	@A@Y		PF2/F2	@2		PA3	@z
Print (PC)	@A@t		PF3/F3	@3		PA4	@+
Back/Left Tab	@B		PF4/F4	@4		PA5	@%
Clear	@C		PF5/F5	@5		PA6	@&
Delete	@D		PF6/F6	@6		PA7	@'
Enter	@E		PF7/F7	@7		PA8	@(
Erase EOF	@F		PF8/F8	@8		PA9	@)
Help	@H		PF9/F9	@9		PA10	@*
Insert	@I		PF10/F10	@a			
New Line	@N		PF11/F11	@b			

Error Loop Quick Reference

This section serves as a quick-reference to the basic Error Loop settings.

Configure these settings in the Oracle Enterprise Single Sign-On Administrative Console. The table is provided only for reference.

The settings are inherited downward from global to application type to application. More-specific settings override more-general (application overrides application type, which overrides global).

For security settings (for example, MaskPW), the most-secure setting is used, regardless of whether it is set globally, for an application type, or for an application.

Place the application-type settings in the entlist.ini [*Root] section.

Example

[*Root]

AppsTimeout=8

WebMaxRetry=3

Place the Application settings in the specific application's entlist.ini section.

Example

[Payroll]

WindowTitle1=Payroll

MaxRetry=3

Timeout=30

IDCtrl=203

...

Global (Registry)	Application Type ([*Root])					
Parameter Purpose	**Extensions\ AccessManager\ Dlg**	**Windows**	**Web**	**Host/Mainframe**	**Application**	**Default**
Max # of retries (after first try) before **Error Loop**dialog box appears	MaxRetry	AppsMaxRetry	WebMaxRetry	MainframeMaxRetry	MaxRetry	0
Max time between successive logon attempts before**Error Loop** dialog box appears	Timeout	AppsTimeout	WebTimeout	MainframeTimeout	Timeout	30
Setting to indicate whether to hide the password confirmation field in the**Error Loop** dialog box	HideConfirmPW	AppsHideConfirmPW	WebHideConfirmPW	MainframeHideConfirmPW	HideConfirmPW	0 (do not hide)

ftulist.ini Keys

ftulist.ini determines special actions the Agent will take the first time a user starts it. The file can exist as a local file or as a directory server or database object. If it is deployed using synchronization, ftulist.ini is placed in the %AppData/Passlogix% directory.

All Logon Manager configuration files (including *entlist.ini* and *ftulist.ini*) can only be created and edited using the Administrative Console. The information in the topics listed below is provided only for reference.

The tables in the following topics list the keys and acceptable values for each section of ftulist.ini:

- Root Keys for ftulist.ini
- Password Windows Section Keys
- My Logons Section Keys
- Bulk Add Logon Section Keys

Root Keys

These settings are used strictly within the [FTU] section and are *required*.

Example

[FTU]

Ver=20020523

Step1=Password Windows

Step2=My Logons

First-Time Use Keys	Description	Acceptable values
Ver = %s	Required. String of the date of the last ftulist.ini file. If the value of this key is higher (newer) than the decimal value in the user's registry (in HKCU\&\Extensions\SetupManager:Completed), then the user will see the bulk add list the next time the user starts up the Agent. Example: 20020523	%s = string representing the decimal equivalent of a date in yyyymmdd (year-month-date) format, as in 20020523 for May 23, 2002.
Step1 = %s	Required, do not alter. Calls the section that launches Primary Logon Method. This module forces the user to select an authenticator.	%s = "Password Windows"
Step2 = %s	Required, do not alter. Calls the section that launches Access Manager. This module enables bulk adding of credentials.	%s = "My Logons"

Password Windows Section Keys

These settings are required and used strictly within the **Password Windows** section.

Example

[Password Windows]

ExtensionName=<core>

Action1=Password Window

First-Time Use Keys	Description	Acceptable values
ExtensionName = %s	Required, do not alter. Internal name of the extension module.	%s = "<core>"
Action1 = %s	Required, do not alter. Launches primary logon method. This module forces the user to select an authenticator.	%s = "Password Window"

My Logons Section Keys

These settings are required and used strictly within the [My Logons] section.

Example

[My Logons]

ExtensionName=AccessManager

Section1=Corporate Win App

Section2=Intranet

&

First-Time Use Keys	Description	Acceptable values
ExtensionName = %s	Required, do not alter. Internal name of the extension module.	%s = "AccessManager"
Section%d = %s	Required, do not alter. Specifies logons to include in the bulk add wizard.	%d = consecutive integers %s = application logon section name; link to relevant logon class section

Bulk Add Logon Section Keys

These settings are required and used in each bulk-add logon section.

Example

```
[My Logons]
ExtensionName=AccessManager
Section1=Corporate Win App
Section2=Intranet
```

```
[Intranet]
ConfigKey=*Other Webs
ConfigName=Corporate Intranet
FTU_NeedID=0
FTU_NeedOther=0
FTU_NeedPwd=1
FTU_CONFIRMID=0
FTU_CONFIRMOTHER=0
FTU_CONFIRMPASSWORD=1
URL=Corp Intranet
```

First-Time Use Keys	Description	Acceptable Values
ConfigKey = %s	Link to logon configuration in entlist.ini	%s = application logon section name in entlist.ini or applist.ini. Use [*Mainframe] for host/mainframe logons, [*Other Webs] for Web logons, [*Online Services] for Online service logons, and [*Other Apps] for other Windows application logons.
ConfigName = %s	The name to use in the First-Time Use Wizard to describe the logon.	%s = application logon name
Description = %s	The name to use in Logon Manager to describe the logon.	%s = application logon name
FTU_CONFIRMID = %b	Flag indicating if the First-Time Use Wizard will require the user to confirm username/ID (optional).	%b = 0, user will not have to confirm username/ID (default) %b = 1, user will have to confirm username/ID
FTU_ CONFIRMOTHER = %b	Flag indicating if the First-Time Use Wizard will require the user to confirm a third field, if one exists (optional).	%b = 0, user will not have to confirm third field (default) %b = 1, user will have to confirm third field
FTU_ CONFIRMPASSWORD = %b	Flag indicating if the First-Time Use Wizard will require the user to confirm password (optional).	%b = 0, user will not have to confirm password (default) %b = 1, user will have to confirm password
FTU_NeedID = %b	Flag to indicate whether the application requires a username/ID.	%b = 0, application does not require a username/ID %b = 1, logon requires a username/ID (default)
FTU_NeedOther = %b	Flag to indicate whether the application requires a third field (optional).	%b = 0, application does not require a third field (default) %b = 1, application requires a third field
FTU_NeedPwd = %b	Flag to indicate whether the application requires a password.	%b = 0, application does not require a password %b = 1, logon requires a password (default)
URL = %s	Section name in entlist.ini for a Web or Host application, or URL for a Web site that is not predefined in entlist.ini.	%s = Web/Host section name or Web URL

Keys for *entlist.ini*

The administrator designates the directory where the entlist.ini file resides. In most instances, this should be a subdirectory under the Logon Manager program directory.

All Logon Manager configuration files (including entlist.ini and ftulist.ini) can only be created and edited using the Oracle Enterprise Single Sign-On Administrative Console. The information in the topics listed below is provided only for reference.

This is also the format for synchronizer objects that override local entlist.ini files.

A directory-based object causes the Agent to ignore any local entlist.ini file. The remote object (if it exists) overwrites a local entlist.ini file when downloaded.

Then, entlist.ini is merged with applist.ini to create a new file (aelist.ini) in the %AppData%\Passlogix directory. The aelist.ini file is overwritten periodically, including when Logon Manager launches, when it re-merges applist.ini and entlist.ini. The Agent then uses aelist.ini to detect known applications.

The tables in the following topics list the keys and acceptable values for each section of entlist.ini.

- Root Keys for entlist.ini
- Windows Application Keys
- Web Application Keys
- Host/Mainframe Application Keys
- Password Policy Keys

Root Keys

These settings are used strictly within the [*Root] section.

Example

[*Root]

Section1=*Other Apps

Section2=*Other Webs

Section3=*Mainframe

AppsMaxRetry=1

WebMaxRetry=3

HostMaxRetry=2

WebTimeout=90

&

Global Application Keys	Description	Acceptable values
[*Root]	Root section, from which application types (logon classes) are derived.	N/A
AppsHideConfirmPW = %b	Indicates whether to hide the password confirmation field in the Logon Error dialog for all Windows applications.	%b = 0; do not hide confirmation field (default) %b = 1; hide confirmation field
AppsMaxRetry = %d	Indicates the number of logon retries for all Windows applications the Agent makes before displaying the **Logon Error** dialog box.	%d = the number of retries (default: 0)
AppsTimeout = %d	Indicates the maximum time between successive logon attempts that will trigger Error Loop detection for all Windows applications.	%d = amount of time in seconds (default: 30)
MainframeHideConfirmPW = %b	Indicates whether to hide the password confirmation field in the **Logon Error** dialog box for all Host applications.	%b = 0; do not hide confirmation field (default) %b = 1; hide confirmation field
MainframeMaxRetry = %d	Indicates the number of logon retries for all Host applications the Agent makes before displaying the **Logon Error** dialog box.	%d = the number of retries (default: 0)

Global Application Keys	Description	Acceptable values
MainframeTimeout = %d	Indicates the maximum time between successive logon attempts that will trigger Error Loop detection for all Host applications.	%d = amount of time in seconds (default: 30)
Section%d = %s	Declaration of supported subsections. Because *Other Webs, *Online Services, and *Other Apps are defined in *applist.ini*, they need not be defined in [*Root] in *entlist.ini*.	%d = consecutive integers %s = *Other Apps (Windows applications) %s = *Mainframe (Host/Mainframe applications) %s = *Other Webs (Predefined Web applications) %s = *Online Services
WebHideConfirmPW = %b	Indicates whether to hide the password confirmation field in the Logon Error dialog for all Web applications.	%b = 0; do not hide confirmation field (default) %b = 1; hide confirmation field
WebMaxRetry = %d	Indicates the number of logon retries for all Web applications the Agent makes before displaying the **Logon Error** dialog box.	%d = the number of retries (default: 0)
WebTimeout = %d	Indicates the maximum time between successive logon attempts that will trigger Error Loop detection for all Web applications.	%d = amount of time in seconds (default: 30)

Application Type Section Keys

These settings are used for the Windows, Web, and Host application sections that delineate the list of predefined applications.

Example

[*Other Apps]

Section1=Corporate WinApp

&

[*Other Webs]

Section1=Corporate Intranet

&

[*Mainframe]

Section1=Corporate Mainframe

Global Application Keys	Description	Acceptable Values
[%s]	Section heading that identifies an application category section.	%s = [*Other Apps] (Windows applications) %s = [*Mainframe] (Host/Mainframe applications) %s = [*Other Webs] (Predefined Web applications)
Section%d = %s	Declaration of application sections.	%d = consecutive integers %s = section name

Windows Application Keys

These settings are used within applications delineated in the [*Other Apps] section.

Example

[*Other Apps]

Section1=Corporate WinApp

&

[Corporate WinApp]

(the keys below)

Windows Application Keys	Description	Acceptable Values
AllowReveal = %b	Flag that enables or disables the **Reveal** button for password in Wizards and property pages.	%b = 0; disabled %b = 1; enabled (default)
AppPathKey%d = %s	Windows registry key identifying the application associated with a logon to match against running processes. Used in combination with the WindowTitle for exact matching of logon requests. %d is replaced with a number, starting at 1, so that multiple registry keys can be associated with a single logon.	%d = consecutive integers %s = application name string used in Windows registry (typically corresponds to executable name)
AutoOK = %b	Flag instructs the Agent to automatically select **OK** for this application logon after insertion of logon data.	%b = 0; disabled %b = 1; enabled (default)
ChangeTitle%d = %s	Text matched against password change window titles to identify password change requests. %d is replaced with a number, starting at 1, so that multiple windows can be identified for a single password change request. There must be a duplicate WindowTitle entry for each ChangeTitle entry.	%d = consecutive integers %s = window title string
ChgCtrl0 = %d	Control ID used to identify the username/ID field in a password-change request window.	%d = -1; change request does not require a username/ID %d = 1; change request requires a username/ID, but it will be sent to the application using Send Keys. If this value is 1, all other Control IDs (IDCtrl, PassKeyCtrl, OtherCtrl1, OtherCtrl2, OKCtrl, ChgCtrl1, ChgCtrl2, and ChgCtrl3) must also be 1 or -1. %d = 2 - 99,999; control ID value
ChgCtrl1 = %d	Control ID used to identify the old password field in a password change request window.	%d = -1; change request does not require an old password %d = 1; change request requires a password, but it will be sent to the application using Send Keys. If this value is 1, all other Control IDs must also be 1 or -1. %d = 2 - 99,999; control ID value

Windows Application Keys	Description	Acceptable Values
ChgCtrl2 = %d	Control ID used to identify the new password field in a password change request window.	%d = -1; change request does not require a new password. %d = 1; change request requires a password, but it will be sent to the application using Send Keys. If this value is 1, all other Control IDs must also be 1 or -1. %d = 2 - 99,999; control ID value
ChgCtrl3 = %d	Control ID used to identify the password confirmation field in a password change request window.	%d = -1; change request does not require a "confirm new password" entry. %d = 1; change request requires a "confirm new password" entry, but it will be sent to the application using SendKeys. If this value is 1, all other Control IDs must also be 1 or -1. %d = 2 - 99,999; control ID value
ConfigName = %d	Control ID identifying the control that contains the text used to create the initial configuration name when the user adds this logon.	%d = 1 - 99,999; control ID value

Windows Application Keys	Description	Acceptable Values
CPWFlag = %d	Determines the behavior of the Password Change Wizard, for specific applications, when a user encounters a password-change request. This key is specified in the application's root section, *not* in a password-change subsection.  This setting can also be set globally, for all applications, via the Registry. See for instructions.	%d = 1; Prompts user with Password Change Wizard (default). %d = 2; Prompts user to manually enter a new password, but also provides the option of having the Agent automatically generate the password. %d = 4; Generates the new password automatically, but also provides the option of manually creating the new password. %d = 10; Prompts user to manually enter a new password, without providing the option of having the Agent automatically generate the password. %d = 12; Generates the new password automatically, without providing the option of manually creating the new password.
CtrlOrder = %s1, %s2, %s3&	Determines the order in which fields are sent when UseSendKeys is enabled. For example, specifying CtrlOrder = OtherCtrl1, IDCtrl, PassKeyCtrl tells the Agent that the tab order in the dialog box should be OtherCtrl1, then IDCtrl, followed by PassKeyCtrl. For logons, the default order is IDCtrl, PassKeyCtrl, OtherCtrl1, OtherCtrl2. Tony/Drew: What is CtrlOrder default for password change scenario? For password changes, the default order is ChgCtrl0, ChgCtrl1, ChgCtrl2, ChgCtrl3.  This setting applies only when UseSendKeys is enabled and works only with Windows applications.	%s1 = The first field sent %s2 = The second field sent %s3 = The third field sent etc.
Description = %s	Text describing this application, also stored in the Description field in Logon Manager.	%s = any string
ExtMap = %s	Windows file extension associated with a logon. Allows the Agent to map an icon to the configuration.	%s = three-character string for file extension

Windows Application Keys	Description	Acceptable Values
ForceReauth = %b	Force the user to reauthenticate before providing credentials to this application.  Applies to all subsections; the user would have to reauthenticate multiple times in a multiple-section password change scenario.	%b = 0; do not require reauthentication (default) %b = 1; require reauthentication
Group = %s	Group section name that this application is a part of. Used when configuring for credential sharing groups. Special values include: LDAP: Application uses LDAP Directory Server authenticator password. Domain: Application uses the Windows authenticator password.  Must set Windows Registry entry PWSEnable=1 to enable Groups	%s = the section name of the application group that the application belongs to.
HideConfirmPW = %b	Determines whether to hide the password confirmation field in the **Logon Error** dialog box.	%b = 0; do not hide confirmation field (default) %b = 1; hide confirmation field
IDCtrl = %d	Identifies the username/ID control field and/or the mechanism to provide the username/ID data to the appropriate username/ID control.	%d = 0; the user must use the Agent's "teaching tool" mechanism during application setup (default) %d = -1; application does not require a username/ID %d = 1; application requires a username/ID, but it will be sent to the application using Send Keys. If this value is set to 1, all other Control IDs (PassKeyCtrl, OtherCtrl1, OtherCtrl2, OKCtrl, ChgCtrl0, ChgCtrl1, ChgCtrl2, and ChgCtrl3) must also be 1 or -1. %d = 2 - 99,999; username/ID control ID value
IDCtrlType = %d	Identifies the control type of the username/ID control field.	%d = 0; *edit* control (default) %d = 1; *combobox* control %d = 2; *listbox* control

Windows Application Keys	Description	Acceptable Values
IgnoreClassName = %s	Identifies the class name of the logon or password-change window that should be ignored when submitting credentials. Used in cases where an application contains a second, hidden logon or password-change window.	%s = class name string
InteractionMode = %b	Prevents the Agent from attaching to the application's window's message queue.	%b = 0; disabled (default) %b = 1; enabled
Match%d = %s	Maps to a matching section for the application. Use this method if the same application has multiple logon and password change screens. This is most useful when one set of user credentials is for multiple screens within an application. By using this method, the matching sections could be set up for logons, password change (pick and manual), and ignores.	%d = consecutive integers %s = application logon name (logon definition sections)
MaxRetry = %d	Determines the number of logon retries the Agent makes before displaying the **Logon Error** dialog box.	%d = the number of retries (default: 0)
ModuleName%d = %s	Application module name associated with a logon to match against running processes. Used in conjunction with WindowTitle key to identify a specific application logon or password-change request. %d is replaced with a number, starting at 1, so that multiple application modules can be associated with a single logon.	%d = consecutive integers %s = application name string (typically corresponds to executable name)
OKCtrl = %d	Identifies the control ID of the OK button for this application.	%d = 1; use the Agent's internal logic (default) %d = 2 - 99,999; OK button control ID %d = -1; requires the user to manually select OK

Windows Application Keys	Description	Acceptable Values
OtherCtrl1 = %d	Identifies the control ID of a third logon field and/or the mechanism to provide the additional field data to the appropriate control.	%d = -1; application does not require a third field %d = 1; application requires a third field, but it will be sent to the application using Send Keys. If this value is set to 1, all other Control IDs must also be 1 or -1. %d = 2 - 99,999; third field control ID value; can be any value if Send Keys is used
OtherCtrl1Type = %d	Identifies the control type of a third logon field.	%d = 0; *edit* control (default) %d = 1; *combobox* control %d = 2; *listbox* control
OtherCtrl2 = %d	Identifies the control ID of a fourth logon field and/or the mechanism to provide the additional field data to the appropriate control.	%d = -1; application does not require a fourth field %d = 1; application requires a fourth field, but it will be sent to the application using Send Keys. If this value is set to 1, all other Control IDs must also be 1 or -1. %d = 2 - 99,999; fourth field control ID value; can be any value if Send Keys is used
OtherCtrl2Type = %d	Identifies the control type of a fourth logon field.	%d = 0; *edit* control (default) %d = 1; *combobox* control %d = 2; *listbox* control
OtherLabel1 = %s	The text label used by the Agent when displaying a third logon field.	%s = the text the Agent will display
OtherLabel2 = %s	The text label used by the Agent when displaying a fourth logon field.	%s = the text the Agent will display
ParentKey1 = %s	Maps a subsection to its parent section.	%s = parent application/section name

Windows Application Keys	Description	Acceptable Values
PassKeyCtrl = %d	Identifies the password control field and/or the mechanism to provide the password data to the appropriate password control.	%d = 0; the user must use the Agent's "teaching tool" mechanism during application setup %d = -1; application does not require a password %d = 1; application requires a password, but it will be sent to the application using Send Keys. If this value is set to 1, all other Control IDs must also be 1 or -1. %d = 2 - 99,999; password control ID value; can be any value if Send Keys is used
PassKeyCtrlType = %d	Identifies the control type of the password control field.	%d = 0; *edit* control (default) %d = 1; *combobox* control %d = 2; *listbox* control
PassPolicy = %s	Identifies which password policy section to associate with this application logon configuration.	%s = Policy Section Name
PresetFocusAll = %b	Specifies whether to set the focus to a logon field before the Agent actually places data in that field.	%b = 0; disabled (default) %b = 1; enabled
QuietGenerator = %b	When set, this flag instructs the Agent to handle password change requests automatically and not inform the user that a password change request has been handled.	%b = 0; do not use quiet generator, use standard password change process with user intervention (default) %b = 1; use quiet generator
Section%d = %s	Declaration of application subsections.	%d = consecutive integers %s = subsection name

Windows Application Keys	Description	Acceptable Values
SystemLogon = %b	RESERVED. Flag identifying if a logon section is a system logon section.	%b = 0; not a system logon section (default) %b = 1; system logon section
Timeout = %d	Determines the maximum time period between successive logon attempts that will trigger Error Loop detection.	%d = amount of time in seconds (default: 30)
UseSendKeys = %b	Send fields via keystrokes to the application. If UseSendKeys is selected, then IDCtrl, PassKeyCtrl, OtherCtrl1, OtherCtrl2, and (if present) ChgCtrl0, ChgCtrl1, ChgCtrl2, and ChgCtrl3 variables must all be set to 1, if needed.	%b = 0; do not use Send Keys; use control IDs (default) %b = 1; use Send Keys
VTabKey%d0 = %d1	Specifies the character/delay sequence to send before/after each credential field.  Fields are sent in the order specified by CtrlOrder. UseSendKeys must also be enabled. To send nothing for the specified value, specify a value of `` (two back-quotes in a row).	%d0 = 1; sequence to send before the first credential field %d0 = 2; sequence to send after the first field, before the second - so on; %d is not bound. %d1 = Code sequence to send (see) (default: standard tab key)
VTabKeyPWC%d0 = %d1	Specifies the character/delay sequence to send before/after each credential field.  Fields are sent in the order specified by CtrlOrder. UseSendKeys must also be enabled. To send nothing for the specified value, specify a value of `` (two back-quotes).	%d0 = 1; sequence to send before the first credential field %d0 = 2; sequence to send after the first field, before the second - so on; %d is not bound. %d1 = Code sequence to send (see) (default: standard tab key)
WindowTitle%d = %s	Text matched against logon window titles to identify logon requests. %d is replaced with a number, starting at 1, so that multiple windows can be identified for a single logon.	%d = consecutive integers %s = window title string

Windows Application Keys for Section*N* Subsection

These settings are used within subsections delineated by SectionN.

Example

[Corporate WinApp]

Section1=~Corporate WinApp Logon

Section2=~Corporate WinApp Password Change

&

[~Corporate WinApp Logon]

(the keys below)

Windows Application Keys	Description	Acceptable values
AppPathKey%d = %s	(See in parent section, above)	(See in parent section, above)
ChangeTitle%d = %s	(See in parent section, above)	(See in parent section, above)
ChgCtrl0 = %d	(See in parent section, above)	(See in parent section, above)
ChgCtrl1 = %d	(See in parent section, above)	(See in parent section, above)
ChgCtrl2 = %d	(See in parent section, above)	(See in parent section, above)
ChgCtrl3 = %d	(See in parent section, above)	(See in parent section, above)
CtrlOrder = %s1, %s2, %s3&	(See in parent section, above)	(See in parent section, above)
IDCtrl = %d	(See in parent section, above)	(See in parent section, above)
IDCtrlType = %d	(See in parent section, above)	(See in parent section, above)
IgnoreClassName = %s	(See in parent section, above)	(See in parent section, above)
InteractionMode = %b	(See in parent section, above)	(See in parent section, above)
Match%d = %s	(See in parent section, above)	(See in parent section, above)
ModuleName%d = %s	(See in parent section, above)	(See in parent section, above)
OKCtrl = %d	(See in parent section, above)	(See in parent section, above)
OtherCtrl1 = %d	(See in parent section, above)	(See in parent section, above)
OtherCtrl1Type = %d	(See in parent section, above)	(See in parent section, above)
OtherCtrl2 = %d	(See in parent section, above)	(See in parent section, above)
OtherCtrl2Type = %d	(See in parent section, above)	(See in parent section, above)
ParentKey1 = %s	(See in parent section, above)	(See in parent section, above)

Windows Application Keys	Description	Acceptable values
PassKeyCtrl = %d	(See in parent section, above)	(See in parent section, above)
PassKeyCtrlType = %d	(See in parent section, above)	(See in parent section, above)
VTabKey%d0 = %d1	(See in parent section, above)	(See in parent section, above)
VTabKeyPWC%d0 = %d1	(See in parent section, above)	(See in parent section, above)
UseSendKeys = %b	(See in parent section, above)	(See in parent section, above)
WindowTitle%d = %s	(See in parent section, above)	(See in parent section, above)

Windows Application Keys for Match*N* Subsection

These settings are used within subsections delineated by Match*N*.

Example

[Corporate WinApp

Section1=~Whatever subsection

Match1=~Corporate WinApp Logon Match

Match2=~Corporate WinApp Ignore Match

&

[~Corporate WinApp Ignore Match]

(the keys below)

<table>
<tr><th>Match Section Keys</th><th>Description</th><th>Acceptable values</th></tr>
<tr><td>ChangeTitle%d = %s</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
<tr><td>ChgCtrl0 = %d</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
<tr><td>ChgCtrl1 = %d</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
<tr><td>ChgCtrl2 = %d</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
<tr><td>ChgCtrl3 = %d</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
<tr><td>Field%d0 = %d1,%s1,%s2,%s3</td><td>The match criteria for the fields. %d1 is replaced with a number, starting at 1, so that multiple matching criteria could be set up for one screen. %d2 is replaced with the control ID of the matching criteria. %s1 is replaced with the control type. %s2 is replaced with the comparison operator. %s3 is replaced with the compare value.</td><td>%d0 = consecutive integers

%d1 = control ID of the matching criteria

%s1 = the control type could be the following, with the appropriate value in %s3:

<table><tr><td>text</td><td>actual text from the control</td></tr><tr><td>style</td><td>numeric value for the style of the control</td></tr><tr><td>class</td><td>the class of the control, usually Edit or Static</td></tr></table>
<table><tr><td>Edit</td><td>edit or combobox controls</td></tr><tr><td>Static</td><td>static controls (for example, text labels).</td></tr></table>
%s2 = the comparison operator could be the following:

<table><tr><td>EQ</td><td>equals</td></tr><tr><td>NE</td><td>not equal</td></tr></table>
%s3 = compared value</td></tr>
<tr><td>IDCtrl = %d</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
<tr><td>OKCtrl = %d</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
</table>

<table>
<tr><th>Match Section Keys</th><th>Description</th><th>Acceptable values</th></tr>
<tr><td>OtherCtrl1 = %d</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
<tr><td>OtherCtrl2 = %d</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
<tr><td>ParentKey1 = %s</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
<tr><td>PassKeyCtrl = %d</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
<tr><td>Type = %s</td><td>The type of event.</td><td>%s = string for the type:<table><tr><td>Logon</td><td>logon events</td></tr><tr><td>Change</td><td>password change events</td></tr><tr><td>Confirm</td><td>confirm the new password</td></tr><tr><td>Ignore</td><td>bypass all events for the application</td></tr></table></td></tr>
<tr><td>WindowTitle%d = %s</td><td>(See in parent section, above)</td><td>(See in parent section, above)</td></tr>
</table>

Host/Mainframe Application Keys

These settings are used within applications delineated in the [*Mainframe] section.

For all keys below that have row/column values, the row/column value starts at 1 (that is, top-left is 1,1).


For Telnet the value must be 1,1.

Example

[*Mainframe]

Section1=Corporate Mainframe

&

[Corporate Mainframe]

(the keys below)

Host Application Keys	Description	Acceptable values
AllowReveal = %b	Flag that enables or disables the **Reveal** button for password in Wizards and property pages.	%b = 0; disabled %b = 1; enabled (default)
AltTabKey = %d	Flag to indicate how to send credentials to the host emulator. Normally, credentials are sent through a direct HLLAPI call but this setting specifies using another method. If this is set to 1, then `Enter` is pressed in between two fields. This is usually used for password change screens that separate the new password and confirmation password into two screens.  %d=1 is usually used for password-change scenarios that separate the new-password field and confirm-password into two screens.	%d = 0; Use HLLAPI to submit credentials directly to the credential fields (default). %d = 1; Replace the `Tab` key with the `Enter` key between two fields. %d = 2; Use HLLAPI SendKeys and enable support for CtrlOrder, PreKey, and TabKeyN. This is useful for logon scenarios with non-standard credential delimiters.
AutoOK = %b	Flag instructs the Agent to automatically send `Enter` for this application logon after insertion of logon data.	%b = 0; disabled %b = 1; enabled (default)

Host Application Keys	Description	Acceptable values
CPWFlag = %d	Determines the behavior of the Password Change Wizard, for specific applications, when a user encounters a password-change request. This key is specified in the application's root section, *not* in a password-change subsection.  This setting can also be set globally, for all applications, via the Registry. See for instructions.	%d = 1; Prompts user with Password Change Wizard (default). %d = 2; Prompts user to manually enter a new password, but also provides the option of having the Agent automatically generate the password. %d = 4; Generates the new password automatically, but also provides the option of manually creating the new password. %d = 10; Prompts user to manually enter a new password, without providing the option of having the Agent automatically generate the password. %d = 12; Generates the new password automatically, without providing the option of manually creating the new password.

Host Application Keys	Description	Acceptable values
CtrlOrder = %s1,%s2,%s3,%s4,%s5	Determines the order in which fields are sent when AltTabKey=2. For example, specifying CtrlOrder=OtherField1,IDField,PassField tells the Agent that the order in the dialog box should be OtherField1, then IDField, followed by PassField.	%s1 = The first field sent (default: IDField) %s2 = The second field sent (default: PassField) %s3 = The third field sent (default: OtherField1) %s4 = The fourth field sent (default: NewPWField) %s5 = The fifth field sent (default: NewPWField2) %s5 = The sixth field sent (default: OtherField2)
DelayField = %d	Numeric value in milliseconds for the Agent to delay between actions (entering value into a field).	%d = integer value in milliseconds
Description = %s	Text describing this application, also stored in the Description field in Logon Manager.	%s = any string
Field%d0 = %d1, %d2, %s	Strings to match against text fields as displayed on the screen for identifying a host/mainframe logon. %d0 is replaced with a number, starting at 1, so that multiple text strings can be used to uniquely identify a logon. For Telnet applications, the values must be 1,1.	%d0 = consecutive integers %d1 = row of first text string character %d2 = column of first text string character %s = text string
ForceReauth = %b	Force the user to reauthenticate before providing credentials to this application.  Applies to all subsections; the user would have to reauthenticate multiple times in a multiple-section password change scenario.	%b = 0; do not require reauthentication (default) %b = 1; require reauthentication

Host Application Keys	Description	Acceptable values
Group = %s	Group section name that this application is a part of. Used when configuring for credential sharing groups. Special values include: LDAP: Application uses LDAP Directory Server authenticator password. Domain: Application uses the Windows authenticator password. Refer to for detailed instructions.  Must set Windows Registry entry PWSEnable=1 to enable Groups.	%s = the section name of the application group that the application belongs to.
HideConfirmPW = %b	Determines whether to hide the password confirmation field in the Logon Error dialog.	%b = 0; do not hide confirmation field (default) %b = 1; hide confirmation field
IDField = %d1, %d2	Location of first input character of username/ID field as displayed on a host/mainframe logon screen. For Telnet applications, this value is ignored and is optional. Set to 1,0 if the field is not present.	%d1 = row of first text string character %d2 = column of first text string character
MaxRetry = %d	Determines the number of logon retries the Agent makes before displaying the Logon Error dialog.	%d = the number of retries (default: 0)
NewPWField = %d1,%d2	This is the key-value pair that identifies the location of the new password field.	%d1 = row of first text string character %d2 = column of first text string character
NewPWField2 = %d1,%d2	This is the key-value pair that identifies the location of the new password confirmation field. This is optional. This is not necessary if only one new password field is required.	%d1 = row of first text string character %d2 = column of first text string character
OtherField1 = %d1, %d2	Location of first input character of third logon field as displayed on a host/mainframe logon screen. For Telnet applications, this value is ignored and is optional.	%d1 = row of first text string character %d2 = column of first text string character
OtherField2 = %d1, %d2	Location of first input character of fourth logon field as displayed on a host/mainframe logon screen. For Telnet applications, this value is ignored and is optional.	%d1 = row of first text string character %d2 = column of first text string character

Host Application Keys	Description	Acceptable values
OtherLabel1 = %s	The label presented within the Agent for the third logon field.	%s = text string
OtherLabel2 = %s	The label presented within the Agent for the fourth logon field.	%s = text string
Page%d = %s	Pointer to subsections used for multiple pages for one host/mainframe application. One application logon may have multiple pages.	%d = consecutive integers %s = name of the subsection
ParentKey1 = %s	Maps a subsection to its parent section.	%s = parent application/section name
PassField = %d1, %d2	Location of first input character of password field as displayed on a host/mainframe logon screen. For Telnet applications, the values must be 1,1. Set to 1,0 if the field is not present.	%d1 = row of first text string character %d2 = column of first text string character
PassPolicy = %s	Identifies which password policy section to associate with this application logon configuration.	%s = Policy Section Name
PreKey = %d	A string of characters and mnemonics defining what should be sent prior to any credential submission.	Any combination of characters and/or ASCII mnemonics. Maximum length is 25 characters.
QuietGenerator = %b	When set, this flag instructs the Agent to handle password change requests automatically and not inform the user that a password change request has been handled.	%b = 0; do not use quiet generator, use standard password change process with user intervention (default) %b = 1; use quiet generator
TabKey1 = %d	A string of characters and mnemonics defining what should be sent after IDField is submitted.	Any combination of characters and/or ASCII mnemonics. Maximum length is 25 characters.

Host Application Keys	Description	Acceptable values
TabKey2 = %d	A string of characters and mnemonics defining what should be sent after PassField is submitted.	Any combination of characters and/or ASCII mnemonics. Maximum length is 25 characters.
TabKey3 = %d	A string of characters and mnemonics defining what should be sent after OtherField1 is submitted.	Any combination of characters and/or ASCII mnemonics. Maximum length is 25 characters.
TabKey4 = %d	A string of characters and mnemonics defining what should be sent after NewPWField is submitted.	Any combination of characters and/or ASCII mnemonics. Maximum length is 25 characters.
TabKey5 = %d	A string of characters and mnemonics defining what should be sent after NewPWField2 is submitted.	Any combination of characters and/or ASCII mnemonics. Maximum length is 25 characters.
TabKey6 = %d	A string of characters and mnemonics defining what should be sent after OtherField2 is submitted.	Any combination of characters and/or ASCII mnemonics Maximum length is 25 characters.
Timeout = %d	Determines the maximum time period between successive logon attempts that will trigger error loop detection.	%d = amount of time in seconds (default: 30)

Host Applications: Keys for Page*N* Subsection

These settings are used within subsections delineated by PageN.

Example

[Corporate Mainframe]

Page1=~Corporate Mainframe Logon

Page2=~Corporate Mainframe Password Change

[~Corporate Mainframe Logon]

(the keys below)

Host Application Keys	Description	Acceptable values
AllowReveal = %b	(See in parent section, above)	(See in parent section, above)
AltTabKey = %d	(See in parent section, above)	(See in parent section, above)
AutoOK = %b	(See in parent section, above)	(See in parent section, above)
CPWFlag = %d	(See in parent section, above)	(See in parent section, above)
CtrlOrder = %s1,%s2,%s3,%s4,%s5	(See in parent section, above)	(See in parent section, above)
DelayField = %d	(See in parent section, above)	(See in parent section, above)
Description = %s	(See in parent section, above)	(See in parent section, above)
Field%d0 = %d1, %d2, %s	(See in parent section, above)	(See in parent section, above)
ForceReauth = %b	(See in parent section, above)	(See in parent section, above)
Group = %s	(See in parent section, above)	(See in parent section, above)
HideConfirmPW = %b	(See in parent section, above)	(See in parent section, above)
IDField = %d1, %d2	(See in parent section, above)	(See in parent section, above)
MaskPW = %b	(See in parent section, above)	(See in parent section, above)
MaxRetry = %d	(See in parent section, above)	(See in parent section, above)
NewPWField = %d1,%d2	(See in parent section, above)	(See in parent section, above)
NewPWField2 = %d1,%d2	(See in parent section, above)	(See in parent section, above)
OtherField1 = %d1, %d2	(See in parent section, above)	(See in parent section, above)
OtherField2 = %d1, %d2	(See in parent section, above)	(See in parent section, above)
OtherLabel1 = %s	(See in parent section, above)	(See in parent section, above)

Host Application Keys	Description	Acceptable values
OtherLabel2 = %s	(See in parent section, above)	(See in parent section, above)
Page%d = %s	(See in parent section, above)	(See in parent section, above)
ParentKey1 = %s	(See in parent section, above)	(See in parent section, above)
PassField = %d1, %d2	(See in parent section, above)	(See in parent section, above)
PassPolicy = %s	(See in parent section, above)	(See in parent section, above)
PreKey = %d	(See in parent section, above)	(See in parent section, above)
QuietGenerator = %b	(See in parent section, above)	(See in parent section, above)
TabKey1 = %d	(See in parent section, above)	(See in parent section, above)
TabKey2 = %d	(See in parent section, above)	(See in parent section, above)
TabKey3 = %d	(See in parent section, above)	(See in parent section, above)
TabKey4 = %d	(See in parent section, above)	(See in parent section, above)
TabKey5 = %d	(See in parent section, above)	(See in parent section, above)
Timeout = %d	(See in parent section, above)	(See in parent section, above)

Web Application Keys

These settings are used within applications delineated in the [*Other Webs] section.

Example

[*Mainframe]

Section1=Corporate Mainframe

&

[Corporate Mainframe]

(the keys below)

Web Application Keys	Description	Acceptable values
AllowReveal = %b	Flag that enables or disables the Reveal button for password in Wizards and property pages.	%b = 0; disabled %b = 1; enabled (default)
AutoOK = %b	Flag instructs the Agent to automatically send `Enter` for this application logon after insertion of logon data.	%b = 0; disabled %b = 1; enabled (default)
CPWFlag = %d	Determines the behavior of the Password Change Wizard, for specific applications, when a user encounters a password-change request. This key is specified in the application's root section, *not* in a password-change subsection. This setting can also be set globally, for all applications, using the Registry.	%d = 1; Prompts user with Password Change Wizard (default). %d = 2; Prompts user to manually enter a new password, but also provides the option of having the Agent automatically generate the password. %d = 4; Generates the new password automatically, but also provides the option of manually creating the new password. %d = 10; Prompts user to manually enter a new password, without providing the option of having the Agent automatically generate the password. %d = 12; Generates the new password automatically, without providing the option of manually creating the new password.
Description = %s	Text describing this application, also stored in the Description field in Logon Manager.	%s = any string
ForceReauth = %b	Force the user to reauthenticate before providing credentials to this application. Applies to all subsections; the user would have to reauthenticate multiple times in a multiple-section password change scenario.	%b = 0; do not require reauthentication (default) %b = 1; require reauthentication

Web Application Keys	Description	Acceptable values
Group = %s	Group section name that this application is a part of. Used when configuring for credential sharing groups. Special values include: LDAP: Application uses LDAP Directory Server authenticator password. Domain: Application uses the Windows authenticator password. Refer to for detailed instructions.  Must set Windows Registry entry PWSEnable=1 to enable Groups.	%s = the section name of the application group that the application belongs to.
HideConfirmPW = %b	Determines whether to hide the password confirmation field in the Logon Error dialog.	%b = 0; do not hide confirmation field (default) %b = 1; hide confirmation field
IDField = %s1,%s2,%s3,%s4	Identification of the field for entering a username/ID.  If a frame/form/field name consists solely of digits, the enumerated value *must* be used.	%s1 = Frame name/number %s2 = Form name/number %s3 = Field name/number %s4 = Field type (text/password)
MaxRetry = %d	Determines the number of logon retries the Agent makes before displaying the Logon Error dialog.	%d = the number of retries (default: 0)
NewPWField = %s1,%s2,%s3,%s4	Identification of the field for entering a new password.	%s1 = Frame name/number %s2 = Form name/number %s3 = Field name/number %s4 = Field type (text/password)

Web Application Keys	Description	Acceptable values
NewPWField2 = %s1,%s2,%s3,%s4	Identification of the field for confirming a new password.	%s1 = Frame name/number %s2 = Form name/number %s3 = Field name/number %s4 = Field type (text/password)
OtherField1 = %s1,%s2,%s3,%s4	Identification of the third logon field.	%s1 = Frame name/number %s2 = Form name/number %s3 = Field name/number %s4 = Field type (text/password)
OtherField2 = %s1,%s2,%s3,%s4	Identification of the fourth logon field.	%s1 = Frame name/number %s2 = Form name/number %s3 = Field name/number %s4 = Field type (text/password)
OtherLabel1 = %s	The label presented within the Agent for a third logon field.	%s = text string
OtherLabel2 = %s	The label presented within the Agent for a fourth logon field.	%s = text string
ParentKey1 = %s	Maps a subsection to its parent section.	%s = parent application/section name
PassField = %s1,%s2,%s3,%s4	Identification of the field for entering the password.	%s1 = Frame name/number %s2 = Form name/number %s3 = Field name/number %s4 = Field type (text/password)
PassPolicy = %s	Identifies which password policy section to associate with this application logon configuration.	%s = Policy Section Name

Web Application Keys	Description	Acceptable values
QuietGenerator = %b	When set, this flag instructs the Agent to handle password change requests automatically and not inform the user that a password change request has been handled.	%b = 0; do not use quiet generator, use standard password change process with user intervention (default) %b = 1; use quiet generator
Section%d = %s	Declaration of application subsections.	%d = consecutive integers %s = subsection name
StrictURLCheck = %b	Determines whether to require an exact (case-insensitive) URL match or to use substring matching.	%b = 0; use substring matching (default) %b = 1; use precise matching
SubmitField = %s1,%s2,%s3,%s4	Identification of the Submit button (or equivalent). The value format is frame name/number, form name/number, field name/number/URL, and Field type. If the field type is image, the field name must be the entire/exact URL.  This entry is optional. If not specified, the Agent uses its own internal search logic to locate and press this button.	%s1 = Frame name/number %s2 = Form name/number %s3 = Field name/number/URL %s4 = Field type (submit/image)
Timeout = %d	Determines the maximum time period between successive logon attempts that will trigger Error Loop detection.	%d = amount of time in seconds (default: 30)
URL%d = *%s*	The address(es) of a Web site's logon page(s). Note: If the web address consists of spaces or special characters, use the URL quoting method (RFC 2396) to define the web address. This means substituting %20 for each space in the URL and substituting similar "%"-escaped ASCII hexadecimal values for all characters other than the following: : / , . = ? @	%d = consecutive integers starting with 1 *%s* = Web URL

Web Application Keys for Section*N* Subsection

These settings are used within subsections delineated by Section*N*.

Example

[Corporate WebApp]

Section1=~Corporate Intranet Logon #1

Section2=~Corporate Intranet Logon #2

&

[~Corporate Intranet Logon #1]

(the keys below)

Web Application Keys	Description	Acceptable values
IDField = %s1,%s2,%s3,%s4	(See in parent section, above)	(See in parent section, above)
NewPWField = %s1,%s2,%s3,%s4	(See in parent section, above)	(See in parent section, above)
NewPWField2 = %s1,%s2,%s3,%s4	(See in parent section, above)	(See in parent section, above)
OtherField1 = %s1,%s2,%s3,%s4	(See in parent section, above)	(See in parent section, above)
OtherField2 = %s1,%s2,%s3,%s4	(See in parent section, above)	(See in parent section, above)
ParentKey1 = %s	(See in parent section, above)	(See in parent section, above)
PassField = %s1,%s2,%s3,%s4	(See in parent section, above)	(See in parent section, above)
SubmitField = %s1,%s2,%s3,%s4	(See in parent section, above)	(See in parent section, above)
URL%d = %s	(See in parent section, above)	(See in parent section, above)

Password Policy Keys

These settings are used within subsections delineated by Section*N* in the [*PasswordPolicies] section.

Example

[*PasswordPolicies

Section1=A policy

Section2=PIN

Section3=Windows

&

[A policy]

(the keys below)

Password Policy Keys	Description	Acceptable Values
ALPHA = %s	Flag instructing the Agent to use alphabetic characters when generating a password.	%s = U; use upper case alphabetic characters only %s = L; use lower case alphabetic characters only %s = UL; use upper and lower characters (default) %s = (nothing); use no alphabetic characters
NAME = %s	Descriptive name of this password policy.	%s = any string
NUMCONSMAX = %d	Number of times a given character can be repeated consecutively (adjacent to itself).	%d =0 - 127 (default: 8)
NUMERIC = %b	Flag instructing the Agent to use numeric characters when generating a password.	%b = 0; do not use numeric characters (default) %b = 1; use numeric characters
NUMFLAGFIRST = %b	Flag indicating if a numeric character can start a password.	%b = 0; numeric character cannot start (default) %b = 1; numeric character can start
NUMFLAGLAST = %b	Flag indicating if a numeric character can end a password.	%b = 0; numeric character cannot end (default) %b = 1; numeric character can end
NUMRPTMAX = %d	Number of times a character can be repeated in a password.	%d =0 - 127 (default: 8)
NUMSIZE = %d	Maximum number of numeric characters.	%d =0 - 128 (default: 0)
NUMSIZEMIN = %d	Minimum number of numeric characters.	%d =0 - 128 (default: 0)

Password Policy Keys	Description	Acceptable Values
SBYE = %s	List of special characters to exclude when generating this password.	%s = any string of special characters, to exclude, such as: !@#$ The Windows registry key pair that holds the list of special characters normally used, but which can be excluded, is AccessManager:SpecialChars.
SCHARFLAGFIRST = %b	Flag specifying if a special character can start a password.	%b = 0; special character cannot start (default) %b = 1; special character can end
SCHARFLAGLAST = %b	Flag specifying if a special character can end a password.	%b = 0; special character cannot end (default) %b = 1; special character can start
SCHARS = %b	Flag instructing the Agent to use special characters when generating a password.	%b = 0; do not use special characters (default) %b = 1; use special characters
SCHARSIZE = %d	Maximum number of special characters.	%d =0 - 128 (default: 0)
SCHARSIZEMIN = %d	Minimum number of special characters.	%d =0 - 128 (default: 0)
SIZE = %d	Maximum total length of a password.	%d = 1 255 (default: 8)
SIZEMIN = %d	Minimum total length of a password.	%d = 1 255 (default: 8)

Understanding Password Reset Data Structures

Overview

This section shows examples of the data stored in the database by Password Reset during its operation, and how this data is stored in the database. The following types of data are illustrated:

- Password Reset Database Tables
- Main Configuration Data (SYSTEMPARAMETERS Table)
- Logging Configuration Data (SYSTEMPARAMETERS Table)
- System Challenge Question Data (SYSTEMPARAMETERS Table)
- User Enrollment Data (ENROLLMENTINFORMATION, USERQUESTIONS, and USER Tables)
- Password Reset Data (RESETINFORMATION Table)
- Log Message Data (SYSLOG)

This information is intended as a reference only and does not provide the actual configuration steps the results of which are illustrated in the examples shown. For information on how to access the configuration forms and settings described in this guide, see the *Oracle Enterprise Single Sign-On Suite Plus Installation Guide*.

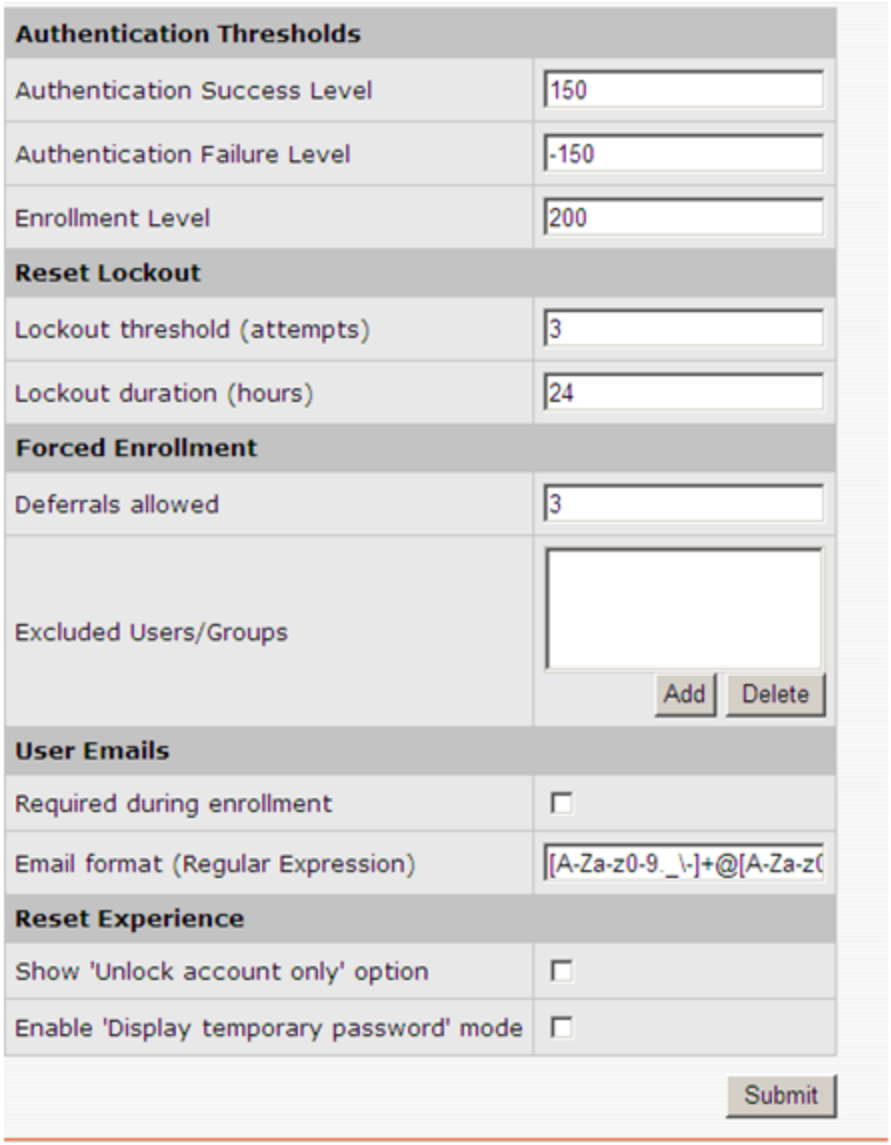
Password Reset Database Tables

The Password Reset database schema initialization process results in the creation of the following tables:

- **SYSTEMPARAMETERS.** Stores main Password Reset configuration data.
- **ENROLLMENTINFORMATION.** Stores user enrollment data.
- **RESETINFORMATION.** Stores password reset data.
- **USERQUESTIONS.** Stores user-created enrollment challenge questions.
- **USER.** Stores user accounts enrolled with Password Reset.
- **SYSTEMQUESTIONS.** Stores mandatory system-wide enrollment challenge questions.

Main Configuration Data (SYSTEMPARAMETERS Table)

In this example, we configure Password Reset as shown below and submit the changes to the server.



When you click **Submit**, the following data is written to the SYSTEMPARAMETERS table as an XML string:

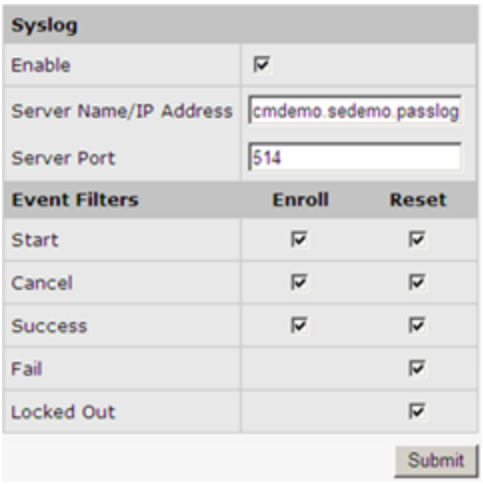
- `AuthSuccessLevel="150"`
- `AuthFailureLevel="-150"`
- `EnrollLevel="200"`
- `UserQuestionCorrectResponseWeight="0"`
- `UserQuestionWrongResponseWeight="0"`
- `MinUserDefinedQuestions="0"`
- `MaxUserDefinedQuestions="0"`
- `AdminServiceStatus="0"`
- `OperationalServiceState="0"`
- `UserLockoutCount="3"`
- `UserLockoutHours="24"`
- `ByPassForceEnrollment="3"`
- `ExcludedUsers=""`
- `UserEmailRequired="0"`
- `UserEmailFormat="[A-Za-z0-9._\-]+@[A-Za-z0-9._\-]+[.][A-Za-z][A-Za-z][A-Za-z]?"`
- `ShowUnlockOption="false"`
- `EnableTempPasswordMode="false"`

Additionally, the following logging configuration data is written to the SYSTEMPARAMETERS table as an XML string:

- `SyslogEnable="false"`
- `SyslogPort="514"`
- `EventFilter="0"`

Logging Configuration Data (SYSTEMPARAMETERS Table)

In this example, we configure Password Reset logging as shown below and submit the changes to the server.

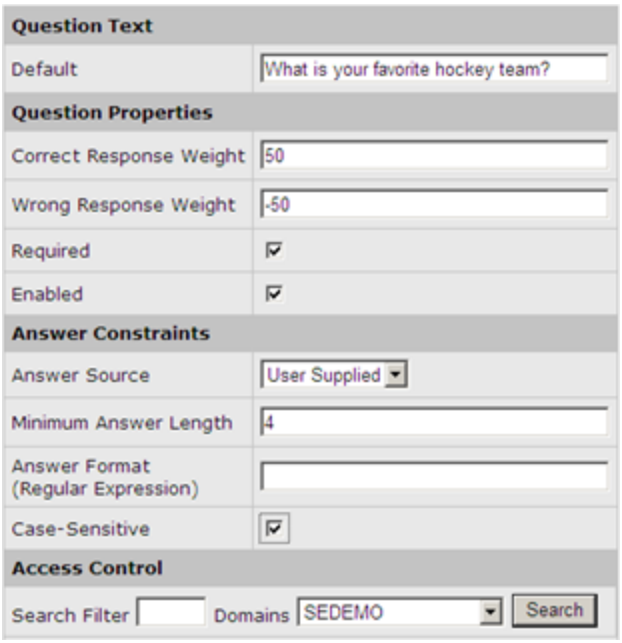


When you click **Submit**, the following data is written to the SYSTEMPARAMETERS table as an XML string:

- `SyslogEnable="true"`
- `SyslogServer="cmdemo.sedemo.passlog"`
- `SyslogPort="514"`
- `EventFilter="2031623"`

System Challenge Question Data (SYSTEMPARAMETERS Table)

In this example, we configure Password Reset system challenge questions as shown below and submit the changes to the server.



When you click Submit, the following data is written to the SYSTEMPARAMETERS table as XML strings:

QUID	99a96ea2-671c-4db6-941c-058a6986123b
QUESTION	QuestionText="What is your favorite hockey team?" AnswerSource="1" CorrectResponseWeight="50" DisableState="1" Required="true" SystemQUID="99a96ea2-671c-4db6-941c-058a6986123b" QUID="99a96ea2-671c-4db6-941c-058a6986123b" WrongResponseWeight="-50" Flags="1" Language="" MinLength="4" RegExp=""

A new row is added for each system challenge question created.

User Enrollment Data (ENROLLMENTINFORMATION, USERQUESTIONS, and USER Tables)

The following example illustrates the data written to the database during user enrollment.

1. User accesses the enrollment page via the following URL:

   `http://<hostname>:<port>/vgoselfservicereset/enrollmentclient/ enrolluser.aspx`

   The Password Reset enrolment page is displayed.

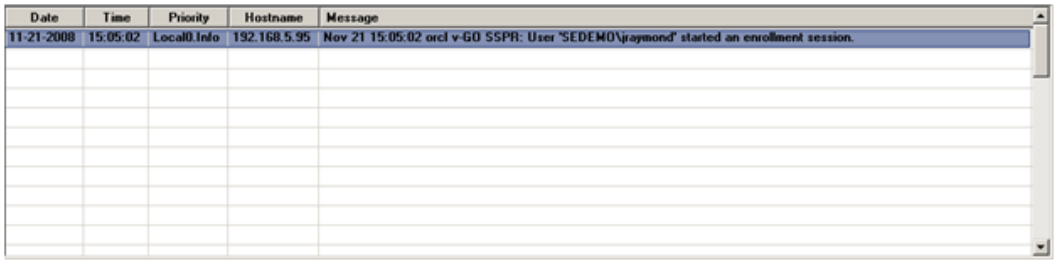
2. User clicks **Start**. A new row with the following data (in XML string format) is written to the USER table:

USER.USERSID	S-1-5-21-1607104245-2398925301-1456127008-1137
USER.ENROLLED	FALSE
USER.USERINFORMATION	UserName="SEDEMO\jraymond" strSid="S-1-5-21-1607104245-2398925301-1456127008-1137" bEnrolled="false" LockOutTime="0001-01-01T00:00:00-05:00" LockoutCount="0" Email="" EnrollmentByPassCount="0" <Language /> <ConnectorUsername />

3. When the user answers the required challenge question, a confirmation screen is displayed and a row with the following data is added to the ENROLLMENTINFORMATION table:

USERSID	S-1-5-21-1607104245-2398925301-1456127008-1137
ENROLLMENTINFORMATION	StartTime="2008-11-21T15:05:02.8386162-05:00" EndTime="0001-01-01T00:00:00-05:00" Weight="0" Activity="1" State="2" UserNameSelect="SEDEMO\jraymond" GUID="d9d3c610-dd78-4292-924c-f21f9c9b9217"
CREATETIME	21- NOV-08

4. When the user clicks **Next** to begin answering the optional challenge questions, the following message is logged:

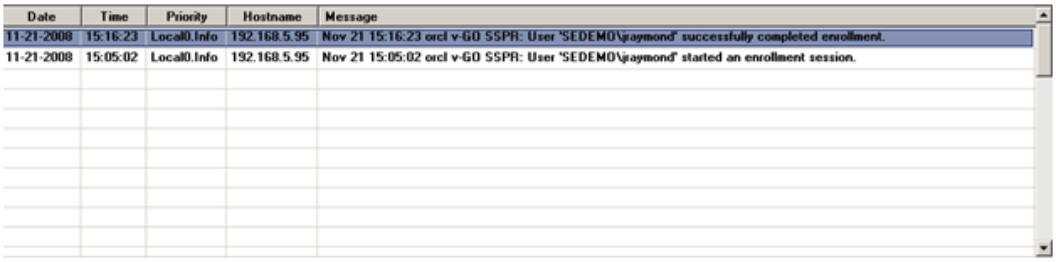


Date	Time	Priority	Hostname	Message
11-21-2008	15:05:02	Local0.Info	192.168.5.95	Nov 21 15:05:02 orcl v-GO SSPR: User 'SEDEMO\jraymond' started an enrollment session.

When the user has answered the optional questions (six in our example), the "Enrollment Finished" screen appears.

5. When the user clicks **Close**, the following events occur:

   a. A message is logged:



Date	Time	Priority	Hostname	Message
11-21-2008	15:16:23	Local0.Info	192.168.5.95	Nov 21 15:16:23 orcl v-GO SSPR: User 'SEDEMO\jraymond' successfully completed enrollment.
11-21-2008	15:05:02	Local0.Info	192.168.5.95	Nov 21 15:05:02 orcl v-GO SSPR: User 'SEDEMO\jraymond' started an enrollment session.

   b. A row for each answered question is added to the USERQUESTIONS table with the following data:

USERSID	S-1-5-21-1607104245-2398925301-1456127008-1137
QUID	53412afd-af16-4a1a-9ddb-ecdf5414ff51
USERQUESTIONS	QuestionAnswer="BoNGMYmBe5KUp5Zqzu5QtOGylJl6QJtnupKIkQ8TxSnQGIU0" SystemQuestion="true" SystemQUID="99a96ea2-671c-4db6-941c-058a6986123b" QUID="53412afd-af16-4a1a-9ddb-ecdf5414ff51"

c. The following data is written to the USER table:

USER.USERSID	S-1-5-21-1607104245-2398925301-1456127008-1137
USER.ENROLLED	TRUE
USER.USERINFORMATION	UserName="SEDEMO\jraymond" Sid="S-1-5-21-1607104245-2398925301-1456127008-1137" Enrolled="true" LockOutTime="0001-01-01T00:00:00-05:00" LockoutCount="0" Email="" EnrollmentByPassCount="0" Language /> ConnectorUsername />

d. The following data is written to the ENROLLMENTINFORMATION table:

USERSID	S-1-5-21-1607104245-2398925301-1456127008-1137
ENROLLMENTINFORMATION	StartTime="2008-11-21T15:05:02.8386162-05:00" EndTime="2008-11-21T15:16:23.1736578-05:00" Weight="200" Activity="1" State="6" UserNameSelect="SEDEMO\jraymond" GUID="71c2739f-b192-42b3-a326-271bec9323da"
CREATETIME	21- NOV-08

Password Reset Data (RESETINFORMATION Table)

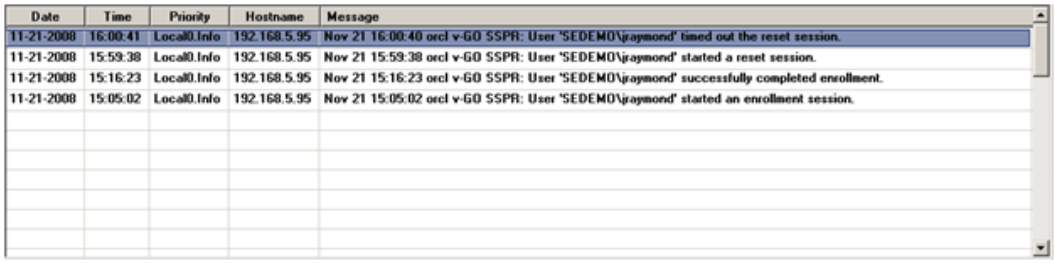
The following example illustrates the data written to the database during password reset.

1. User accesses the password reset page via the following URL:

   `http://<hostname>:<port>/vgoselfservicereset/resetclient/default.aspx`

   The Password Reset logon page appears.

2. When the user enters the required information and waits too long before clicking the **OK** button, the "Session is invalid" screen appears providing a link allowing the user to reset the enrollment session. At this point, the following message is logged:

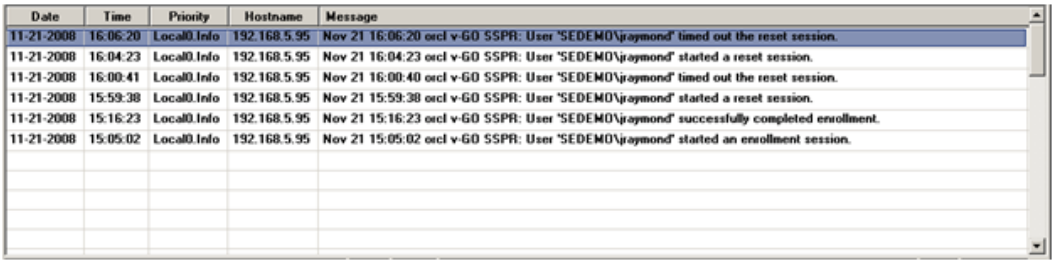


Date	Time	Priority	Hostname	Message
11-21-2008	16:00:41	Local0.Info	192.168.5.95	Nov 21 16:00:40 orcl v-GO SSPR: User 'SEDEMO\jraymond' timed out the reset session.
11-21-2008	15:59:38	Local0.Info	192.168.5.95	Nov 21 15:59:38 orcl v-GO SSPR: User 'SEDEMO\jraymond' started a reset session.
11-21-2008	15:16:23	Local0.Info	192.168.5.95	Nov 21 15:16:23 orcl v-GO SSPR: User 'SEDEMO\jraymond' successfully completed enrollment.
11-21-2008	15:05:02	Local0.Info	192.168.5.95	Nov 21 15:05:02 orcl v-GO SSPR: User 'SEDEMO\jraymond' started an enrollment session.

3. When the user retries the reset procedure and arrives at the password reset page, the following data is written to the RESETINFORMATION table:

USERSID	S-1-5-21-1607104245-2398925301-1456127008-1137
RESETINFORMATION	StartTime="2008-11-21T15:59:38.436503-05:00" EndTime="2008-11-21T16:00:40.5771384-05:00" Weight="0" State="2" HostAddress="192.168.5.101"
CREATETIME	21-NOV-08

At this point, the following message is logged:

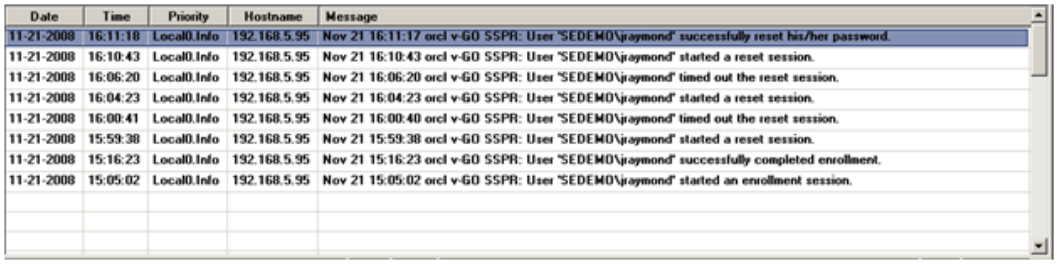


Date	Time	Priority	Hostname	Message
11-21-2008	16:06:20	Local0.Info	192.168.5.95	Nov 21 16:06:20 orcl v-GO SSPR: User 'SEDEMO\jraymond' timed out the reset session.
11-21-2008	16:04:23	Local0.Info	192.168.5.95	Nov 21 16:04:23 orcl v-GO SSPR: User 'SEDEMO\jraymond' started a reset session.
11-21-2008	16:00:41	Local0.Info	192.168.5.95	Nov 21 16:00:40 orcl v-GO SSPR: User 'SEDEMO\jraymond' timed out the reset session.
11-21-2008	15:59:38	Local0.Info	192.168.5.95	Nov 21 15:59:38 orcl v-GO SSPR: User 'SEDEMO\jraymond' started a reset session.
11-21-2008	15:16:23	Local0.Info	192.168.5.95	Nov 21 15:16:23 orcl v-GO SSPR: User 'SEDEMO\jraymond' successfully completed enrollment.
11-21-2008	15:05:02	Local0.Info	192.168.5.95	Nov 21 15:05:02 orcl v-GO SSPR: User 'SEDEMO\jraymond' started an enrollment session.

4. When the user has successfully reset the password, Password Reset displays a message confirming the successful password reset and the following data is written to the RESETINFORMATION table:

USERSID	S-1-5-21-1607104245-2398925301-1456127008-1137
RESETINFORMATION	StartTime="2008-11-21T16:10:43.7618874-05:00" EndTime="0001-01-01T00:00:00-05:00" Weight="100" State="6" HostAddress="192.168.5.101"
CREATETIME	21-NOV-08

At this point, the following message is logged:



Date	Time	Priority	Hostname	Message
11-21-2008	16:11:18	Local0.Info	192.168.5.95	Nov 21 16:11:17 orcl v-GO SSPR: User 'SEDEMO\jraymond' successfully reset his/her password.
11-21-2008	16:10:43	Local0.Info	192.168.5.95	Nov 21 16:10:43 orcl v-GO SSPR: User 'SEDEMO\jraymond' started a reset session.
11-21-2008	16:06:20	Local0.Info	192.168.5.95	Nov 21 16:06:20 orcl v-GO SSPR: User 'SEDEMO\jraymond' timed out the reset session.
11-21-2008	16:04:23	Local0.Info	192.168.5.95	Nov 21 16:04:23 orcl v-GO SSPR: User 'SEDEMO\jraymond' started a reset session.
11-21-2008	16:00:41	Local0.Info	192.168.5.95	Nov 21 16:00:40 orcl v-GO SSPR: User 'SEDEMO\jraymond' timed out the reset session.
11-21-2008	15:59:38	Local0.Info	192.168.5.95	Nov 21 15:59:38 orcl v-GO SSPR: User 'SEDEMO\jraymond' started a reset session.
11-21-2008	15:16:23	Local0.Info	192.168.5.95	Nov 21 15:16:23 orcl v-GO SSPR: User 'SEDEMO\jraymond' successfully completed enrollment.
11-21-2008	15:05:02	Local0.Info	192.168.5.95	Nov 21 15:05:02 orcl v-GO SSPR: User 'SEDEMO\jraymond' started an enrollment session.

Log Message Data (SYSLOG)

When enabled, the logging feature of Password Reset will write the following data to SYSLOG:

- Date
- Time
- Priority
- Host name
- Message

The following are examples of typical log messages generated by Password Reset during normal operation.

Example User Enrollment Log Messages

```
Nov 21 16:21:46 orcl v-GO SSPR: User 'SEDEMO\lchristine' started an enrollment
session.

Nov 21 16:22:42 orcl v-GO SSPR: User 'SEDEMO\lchristine' cancelled the enrollment
session.

Nov 21 15:16:23 orcl v-GO SSPR: User 'SEDEMO\jraymond' successfully completed
enrollment.
```

Example Password Reset Log Messages

```
Nov 21 16:10:43 orcl v-GO SSPR: User 'SEDEMO\jraymond' started a reset session.

Nov 24 11:21:51 orcl v-GO SSPR: User 'SEDEMO\jraymond' cancelled the reset
session.

Nov 21 16:11:17 orcl v-GO SSPR: User 'SEDEMO\jraymond' successfully reset his/her
password.

Nov 24 09:43:08 orcl v-GO SSPR: User 'SEDEMO\jraymond' failed the reset quiz.

Nov 24 10:00:15 orcl v-GO SSPR: User 'SEDEMO\jraymond' has been locked out!

Nov 21 16:06:20 orcl v-GO SSPR: User 'SEDEMO\jraymond' timed out the reset
session.

Nov 24 10:13:28 orcl v-GO SSPR: User 'SEDEMO\jraymond' successfully unlocked
his/her account.
```

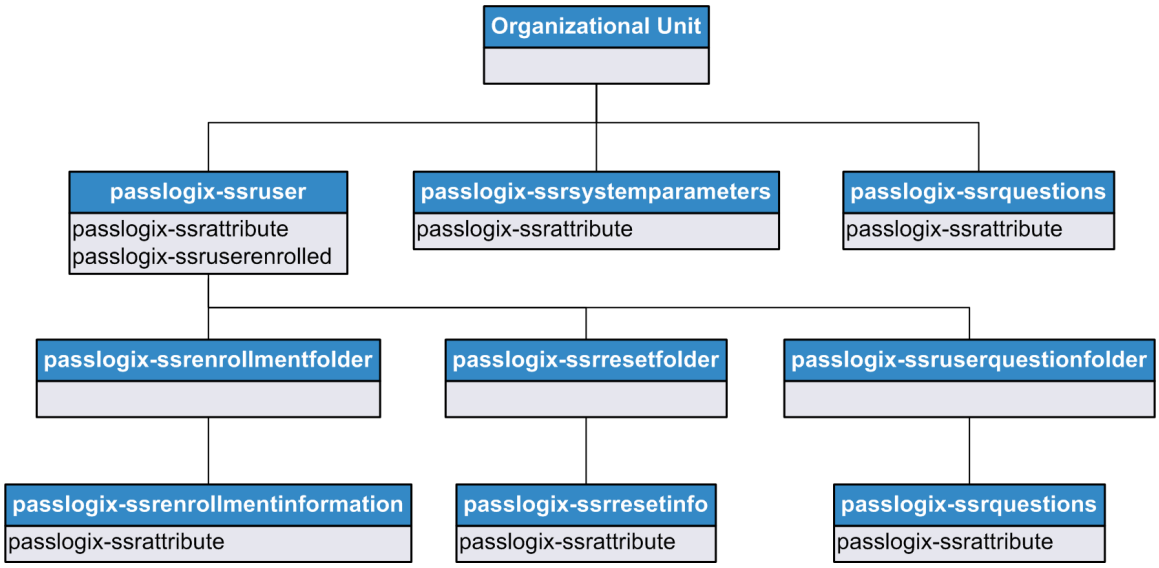
For additional information on logging see the Password Reset section of this guide.

Schema Diagram

This diagram shows the object classes that Password Reset adds when extending the schema.

- Each box represents a class.
- The class name is displayed in the top of the box.
- The attributes the class can have are displayed in the bottom of the box.

Each link represents the child classes a class can contain.



Rights and Security

At a minimum, the Password Reset Web Service account requires permission to create, delete, and modify the classes shown in the schema diagram. These permissions should be granted for the OU=SSPR organizational unit and be inherited to all child objects.

Object Classes

passlogix-ssruser

This class contains enrollment, reset, and question response objects, and serves as a container to hold all the information about an Password Reset user. An instance of this class will be created for each user under `OU=SSPR,OU=Users`. The instance name will be the user's SID.

Attribute Name	Syntax	Flag
passlogix-ssrattribute	Case Ignore String	Single Valued
passlogix-ssruserenrolled	Cast Ignore String	Single Valued
Other optional attributes	cn, dn	

passlogix-ssrenrollmentfolder

This class contains `passlogix-ssrenrollmentinformation` objects, and can only exist as a child of a `passlogixssruser` object.

Attribute Name	Syntax	Flag
Other optional attributes	cn, dn	

passlogix-ssrenrollmentinformation

This class stores information about an enrollment event, and typically exists as a child of `passlogix-ssrenrollmentfolder`. The instance name will be a randomly generated GUID.

Attribute Name	Syntax	Flag
passlogix-ssrattribute	Case Ignore String	Single Valued
Other optional attributes	cn, dn	

passlogix-ssruserquestionfolder

This class contains `passlogix-ssrquestions` objects, and can only exist as a child of a `passlogix-ssruser` object.

Attribute Name	Syntax	Flag
Other optional attributes	cn, dn	

passlogix-ssrquestions

This class stores information about a question or a response, and typically exists as a child of `passlogixssruserquestionfolder` if it represents the user answer to a question. If it represents a system question, it will exist under `OU=SSPR`, `OU=SystemQuestions`. The instance name will be a randomly generated GUID.

Attribute Name	Syntax	Flag
passlogix-ssrattribute	Case Ignore String	Single Valued
Other optional attributes	cn, dn	

passlogix-ssrresetfolder

This class contains `passlogix-ssrresetinfo`objects, and can only exist as a child of a `passlogix-ssruser` object.

Attribute Name	Syntax	Flag
Other optional attributes	cn, dn	

passlogix-ssrresetinfo

This class stores information about a reset event, and typically exists as a child of `passlogix-ssrresetfolder`. The instance name will be a randomly generated GUID.

Attribute Name	Syntax	Flag
passlogix-ssrattribute	Case Ignore String	Single Valued
Other optional attributes	cn, dn	

passlogix-ssrsystemparameters

This class stores Password Reset system settings information. An instance of this class is typically created under `OU=SSPR` and will be named `CN=SystemParameters`.

Attribute Name	Syntax	Flag
passlogix-ssrattribute	Case Ignore String	Single Valued
Other optional attributes	cn, dn	

Attributes

passlogix-ssrattribute

This attribute provides data storage for an Password Reset object. Generally, this data will be an XML-formatted string.

passlogix-ssruserenrolled

This attribute indicates if the user is currently enrolled in Password Reset. It will be set to either TRUE or FALSE.

Configuring Password Reset for Data Storage in an Oracle Database

Follow the guidelines below when preparing your Oracle database instance for Password Reset:

- Create a dedicated simple tablespace in a simple database instance with initial size of 200MB and auto-extend enabled.
- Create a dedicated application user whose only role is to allow Password Reset to connect to and store data in the database. Do not use the `SYSTEM` user for interfacing Password Reset with the database.

> The specifics of configuring your Oracle database are beyond the scope of this document. Oracle highly recommends that you engage your organization's DBA team to determine how to integrate Password Reset into your existing Oracle database infrastructure.

Step 1: Configuring the Database Schema for Password Reset Data

Complete the steps below to configure the database schema for Password Reset:

1. Locate the Password Reset DDL script file:

   ```
   %PROGRAM FILES%\Passlogix\v-GO SSPR\WebServices\OracleTables.txt
   ```

2. If you have not already done so, replace all instances of the `SYSTEM` user in the `OracleTables.txt` script with the dedicated Password Resetapplication user you created when preparing your Oracle database instance.
3. Launch the Oracle SQL*Plus client and log on to the Password Reset database instance.
4. Execute the `OracleTables.txt` script create the required data structures:

   ```
   @ "<ESSO-PR_server_install_path>\WebServices\OracleTables.txt"
   ```

Step 2: Configuring Password Reset to Store Data in the Database

1. Log in to the Oracle Enterprise Single Sign-On Administrative Console by pointing your Web browser at the following URL:

   ```
   http://<hostname>:<port>/vGoSelfServiceReset/ManagementClient/storage.aspx
   ```

   > If you have configured Password Reset to accept SSL connections, replace http with https in the above URL.

2. In the left hand pane, click **Storage**.
3. On the "Storage" page, do the following:
   a. From the **Storage Type** drop-down list, select **Oracle Database**.
   b. In the Connection String field, enter the connection string for the target database instance, then click **Add**. The syntax is as follows (on a single line):

      ```
      Provider=OraOLEDB.Oracle;Data Source=<datasource>;User Id=<user_id>;Password=<password>
      ```

      Where:

- *<datasource>* is the name of the data source for the target instance,
- *<user_id>* is the ID of the dedicated application user account you created in your database instance for Password Reset,
- *<password>* is the password for the user chosen above.

c. In the **Database Timeout** field, enter a desired value in seconds. Oracle recommends 60 seconds as a default.

d. Click **Submit**.

Password Reset is now configured for storing its data in the selected database instance. See Understanding the Password Reset Data Structures for more information on, and examples of, the data Password Reset stores in the database, and how this data is organized.

Client Registry Settings

Under HKLM\Software\Passlogix\SSPR

Key	Value Name	Data Type	Data [URLRoot] : http://[host]/vgoselfservicereset
WindowsInterface	EnrollURL	string (REG_SZ)	URL of the Enrollment service default page: [URLroot]/enrollmentclient/enrolluser.aspx
	ResetURL	string (REG_SZ)	URL of the reset service default page: [URLroot]/resetclient/default.aspx
	StatusURL	string (REG_SZ)	URL of the checkstatus page (notifies reset client that reset service is available: [URLroot]/resetclient/checkstatus.aspx
	CheckEnrollURL	string (REG_SZ)	URL of Enrollment check service (checks if user is enrolled in service): [URLroot]/resetclient/checkenrollment.aspx
	AutomaticEnroll	dword (REG_DWORD)	Set to a non-zero value to offer enrollment option to enroll user at next logon. Set to 0 (default) not to offer enrollment upon logon.
	ForceEnrollment	dword (REG_DWORD)	Set to a non-zero value to require unenrolled user to enroll at next logon. Set to 0 (default) not to require enrollment upon logon.
	CheckForceEnrollment	string (REG_SZ)	URL of force enrollment check service (checks the number of times user can defer Enrollment): [URLroot]/resetclient/checkforceenrollment.aspx
	WindowHeight	dword (REG_DWORD)	Adjusts the Password Reset browser window height.
	WindowWidth	dword (REG_DWORD)	Adjusts the Password Reset browser window width.
	Bitmap	string (REG_SZ)	Add this key to the registry to replace the standard GINA bitmap with a custom bitmap. Specify the full path to the custom bitmap file. See the Oracle online documentation center for full instructions (Windows XP and earlier).
WindowsInterface\xx (where *xx* is the two-letter language code*)	LinkText	string (REG_SZ)	Enter desired text to instruct the user to click to reset password (Windows Server 2008 and Windows 7 only).
	WindowTitle	string (REG_SZ)	Enter desired text for the Enrollment and Reset Interface window titles.
WindowsInterface\xx \GinaWindows	WindowTitle1… WindowTitleX	string (REG_SZ)	Set to the window titles that should display the Password Reset banner (Windows XP).

Language Codes for WindowsInterface\xx

Language	Code	Language	Code
English (default)	en-US	Norwegian no	no
Brazilian Portuguese pt-BR	pt-BR	Polish pl-PL	pl-PL
Czech cs-CZ	cs-CZ	Portuguese pt	pt
Danish da	da	Romanian ro	ro
Dutch nl-NL	nl-NL	Russian ru	ru
Finnish fi-FI	fi-FI	Simplified Chinese zh-CHS	zh-CHS
French fr-FR	fr-FR	Slovak sk	sk
German de-DE	de-DE	Spanish es-ES	es-ES
Greek el	el	Swedish sv	sv
Hungarian hu	hu	Thai th	th
Italian it-IT	it-IT	Traditional Chinese zh-CHT	zh-CHT
Japanese ja-JP	ja-JP	Turkish tr	tr
Korean ko-KR	ko-KR		

Server Registry Settings

Under HKLM\Software\Passlogix\SSPR

Key	Value Name	Data Type	Data
SSPRService	CacheEnabled	dword REG_ DWORD	Set to 1 (default) to allow the server to cache user information. Set to 0 to disable caching user information. This setting specifically addresses a configuration with more than one Web server. For such configurations, use the 0 value to prevent user information from synchronizing incorrectly.
SSPRService	Reset_ ShowIntroduction	dword REG_ DWORD	Set to 1 to display the reset prompt. Set to 0 (default) to suppress the reset prompt.
SSPRService	Reset_ CustomizedErrorMsg	dword REG_ DWORD	Set to 1 to activate customizable reset error messages. Set to 0 (default) to use the built-in reset error messages.
SSPRService	SessionTimeoutMessage	dword REG_ DWORD	Set to 1 to activate a message notifying the user that the session will timeout within a specified period of time. Set to 0 (default) if you do not want this message to display.

Under HKLM\Software\Passlogix\SSPR\Storage\Extensions\

Key		Value Name	Data Type	Data
	ADAM	Root	string (REG_SZ)	*AD LDS (ADAM) partition root*
		Classname	string (REG_SZ)	AD LDS (ADAM)

Under HKLM\Software\Passlogix\SSPR\Storage\Extensions\ADAM\

Key		Value Name	Data Type	Data
	Servers	Server1	string (REG_ SZ)	*server:port (of the AD LDS (ADAM) instance)*

Under HKLM\Software\Passlogix\SSPR\Storage\Extensions\

Key		Value Name	Data Type	Data
	AD	Root	string (REG_SZ)	*AD root*
		Classname	string (REG_SZ)	AD

Under HKLM\Software\Passlogix\SSPR\Storage\Extensions\AD\

Key		Value Name	Data Type	Data
	Servers	Server1	string (REG_SZ)	*server:port*

Reporting Event Definition Table

This section describes the reporting event table and the values contained therein. Because field population depends on the product and context in which the event was generated, events will not always have every field populated. All fields are textual in nature, with the exception of time stamps and any fields specific to Oracle use. Some entries have specific enumerated values; these are included under the description when applicable.

Below is the SQL Server Script used to create the event log table.

```
CREATE TABLE [dbo].[tblEventsLog](
    [ID]                        [int] IDENTITY(1,1) NOT FOR REPLICATION NOT NULL,
    [GUID]                      [varchar](400) NOT NULL,
    [ProductName]               [varchar](400) NULL,
    [ProductVersion]            [varchar](400) NULL,
    [HostName]                  [varchar](400) NULL,
    [LogonMethod]               [varchar](400) NULL,
    [CredentialType]            [varchar](400) NULL,
    [Operation]                 [varchar](400) NULL,
    [SSOUserId]                 [varchar](400) NULL,
    [WindowsUserName]           [nvarchar](400) NULL,
    [ApplicationName]           [nvarchar](400) NULL,
    [ApplicationReference]      [nvarchar](400) NULL,
    [ApplicationUserId]         [nvarchar](400) NULL,
    [ApplicationThirdField]     [nvarchar](400) NULL,
    [ApplicationFourthField]    [nvarchar](400) NULL,
    [SAMAccountName]            [nvarchar](400) NULL,
    [Comment]                   [nvarchar](max) NULL,
    [EventtimeClient]           datetime NULL,
    [EventtimeServer]           datetime NULL,
    [HashType]                  [tinyint] NOT NULL,
    [HashValue]                 [varchar](400) NOT NULL,
    [HostFingerprint]           [nvarchar](max)
CONSTRAINT [PK_tblEventsLog] PRIMARY KEY CLUSTERED
(
    [ID] ASC
)WITH (PAD_INDEX  = OFF, STATISTICS_NORECOMPUTE  = OFF,
IGNORE_DUP_KEY = OFF,
ALLOW_ROW_LOCKS  = ON,
ALLOW_PAGE_LOCKS  = ON, FIsLLFACTOR = 90) ON [PRIMARY]
) ON [PRIMARY]
```

Definitions

GUID

A Globally Unique Identifier. Every event generated has an identifier that is unique to that specific event.

This field is generally not needed for reporting purposes but may be useful for accounting purposes.

ProductName

The name of the Oracle Enterprise Single Sign-On Suite Plus product that generated the event.

Current Values:

- SSO_Server
- SSO_Client
- SAM_Server
- SAM_Client
- PM_Server
- PM_Client
- SSPR
- AM
- SM
- UAM
- ODE
- NotificationService
- ReportingService

ProductVersion

The version of the Oracle Enterprise Single Sign-On Suite Plus product that generated the event.

HostName

The name of the host or machine that generated the event.

LogonMethod

The logon method that was used if applicable for the given event.

Current Values:

- WinAuth
- MsAuth
- LDAPv1
- LDAPv2
- MultiAuth

CredentialType

Denotes the type of credential if available.

Current Values:

- Standard
- Shared

Operation

This defines the nature of the event generated by a given Oracle Enterprise Single Sign-On Suite Plus product.

Current Values:

- Login
- CredentialChange_Username
- CredentialChange_Password
- CredentialChange_Third
- CredentialChange_Forth
- Pause
- Shutdown_Manual
- Shutdown_Programmatic
- Resume
- FirstTimeUse
- CredentialAdded
- CredentialDeleted
- CredentialAddAborted
- Auth_Failure
- Auth_Success
- Auth_Enrollment
- Auth_Unenrollment
- Start
- SM_AuthenticatorLogon
- SM_SessionStart
- SM_SessionLock
- SM_SessionUnlock
- SM_SessionEnd
- SM_SessionExpiration
- SM_MachineShutdown
- SM_MachineRestart
- SM_ManagerExit
- SM_SpecialActionExec
- SM_RunListExecNet
- SM_RunListExecScript
- SM_TerminateListExec
- Enrollment
- PasswordReset_Success
- PasswordReset_Fail
- Re-enrollment

SSOUserId

This is the User ID that Logon Manager uses for synchronization with the corporate repository, such as Active Directory or LDAP. If the generated event is from another Oracle Enterprise Single Sign-On Suite Plus product or a repository not in use, this field will be the user's Windows Logon name, for example `<domain>\<user>`.

WindowsUserName

This is the Windows logon name for the system that generated the event, for example <domain>\<user>. This may or may not be the same as SSOUserId.

ApplicationName

This is the name of the application that was the target of event generation, such as an Logon Manager logon to Outlook, AIM etc.

ApplicationReference

The application template reference for the credential used, if available.

ApplicationUserId

The User ID for the application this credential belongs to.

ApplicationThirdField

This field will be populated with the Third Field if the credential used contains additional information.

If the template is masked by definition, this field will contain "<masked>" to avoid exposing sensitive information.

ApplicationFourthField

This field will be populated with the Fourth Field if the credential used contains additional information.

If the template is masked by definition, this field will contain "<masked>" to avoid exposing sensitive information.

SAMAccountName

If this event was generated from a Shared Account, this will contain the name of that Shared Account.

Comment

Additional (and optional) information regarding this event.

EventtimeClient

This is the time (in GMT) format when the event was 'created' on the local system.

This time is sourced from the local system; while stored in GMT format, if the local system time is incorrect, it will be reflected/stored in this field.

EventtimeServer

This is the time (in GMT) format that the event was 'stored' in the database.

This field is sourced from the system that contains the database. The database itself creates this timestamp when the event is stored.

EventtimeEnrollment

This field is the time (in GMT format) that the user's cryptographic key was generated or updated. The cryptographic key is used to encrypt credentials when a user enrolls to an authenticator or changes the enrollment. This field is set only for the Auth_Enrollment and Auth_Unenrollment events.

HashType

Oracle internal use only.

HashValue

Oracle internal use only.

Obtaining a Certificate for SSL Connectivity

Before configuring applications for SSL connectivity, you must obtain an X.509 Certificate from a trusted certificate authority (CA). This trusted CA must be installed in the list of trusted Root CAs. The certificate must be valid for the current date and its subject must exactly match the network name (either its host name or fully-qualified URL containing a host name and domain suffix) that the various application instances will use when connecting to the corresponding server instance.

Refer to the following articles from the Microsoft Web site for information on installing certificates and setting up SSL:

- "How to: Obtain an X.509 Certificate" http://msdn2.microsoft.com/en-us/library/ms819929.aspx
- "How to: Set Up SSL on a Web Server" http://msdn2.microsoft.com/en-us/library/aa302411.aspx

If you use Microsoft Certificate Services to obtain the X.509 certificate, choose a Server Authentication Certificate. Also, enable the **Mark keys as exportable** and **Use local machine store** options under the **Key Options** section.

Part VII. Troubleshooting

Installation

Authenticators

An authenticator is not installed when selected

- By default, the installer does not install authenticators that will not work on the system. For example, if the Entrust Entelligence client is not installed, then the authenticator for the Entrust PKI will not be installed *(Entrust Entelligence is available with Authentication Manager only)*.

Synchronizer Extensions

The Microsoft Active Directory extension is not installed when selected

- By default, the installer does not install synchronizer extensions that will not work on the system. For example, if the Microsoft Active Directory client is not installed, then the synchronizer extension for the Microsoft Active Directory Server will not be installed.

Uninstall

User credentials remain after uninstall

- Only the current user's credentials can be removed by the standard uninstall. A simple batch file can handle removing other credentials. For Windows XP, for example:

  CD /D %UsersProfile%

  CD .

  For /D %Z in (*.*) do Del /F/S/Q "%Z\Application Data\SSO"

- You will need to manually delete registry entries for other users. This can be done in RegEdit or RegEdit32 (RegEdt32.exe), or you can push the following *.reg file to each user:

  Windows Registry Editor Version 5.00

  HKey_Current_User\Software\Passlogix]

Agent Performance

Application Response

The Agent responds slowly, applications are slowed, or specific functions within applications are slowed, when the Agent is running.

- Some antiviral software programs check Agent modules too aggressively. To resolve this, disable checks of *ssoshell.exe* and/or of the *%ProgramFiles%\Passlogix\v-GO SSO* directory tree.
- Some antiviral software programs check *.mdb files too aggressively. The Agent stores user credentials in *.mdb files. To resolve this, disable checks of *.mdb files, of the file *%UserName% aml.mdb*, and/or of files in the *%AppData%\Passlogix* directory.

Authentication

Initial Authentication

User logs onto a computer with different domain/workgroup accounts but sees the same credentials.

- The problem is that the local computer's Windows account provides the user's Registry Hive (HKCU), not the domain/workgroup account. There are two workarounds: use the CleanupOnShutdown feature or use a different Windows account for each domain/workgroup logon.

Reauthentication

Users are never asked to reauthenticate.

- Make sure Extensions\AccessManager:AutoLogin is set to the desired value. The value is in milliseconds; a value of 900000 (default for client-side installations) is 15 minutes.

Users have to reauthenticate too frequently.

- Make sure Extensions\AccessManager:AutoLogin is set to the desired value. The value is in milliseconds; a value of 900000 (default for client-side installations) is 15 minutes.
- Make sure other force-reauth settings are set appropriately. These settings include:
  - Overriding settings: Extensions\AccessManager:ReauthOnReveal.
  - Application configuration settings: ForceReauth.

Application Configuration

All Applications

The Agent doesn't recognize pre-existing logon credentials after an upgrade

After an upgrade of the Agent, users report that applications for which they have previously provided credentials no longer function. Instead, a message box appears, advising that the credentials do not correspond to configured logons. The applications appear in Logon Manager in gray, italicized text.

- Create a Bulk Add list to update the user's *entlist.ini*. Also note that in Logon Manager, pre-configured logons for Windows and Web applications are provided in Oracle Enterprise Single Sign-On Administrative Console templates, rather than in the Agent's *applist.ini*. Create the required application logons, using templates. then create the **Bulk Add** list to update the user's *entlist.ini*.

An application is not available in the list of predefined applications when you add credentials.

- Shut down the Agent making sure that no *ssoshell.exe* processes are running, and restart the Agent.

The Agent can be started and Logon Manager can be opened without the user authenticating.

- Shut down the Agent, kill any running *ssoshell.exe* or *SSObho.exe* processes, and restart the Agent.

Windows Applications

Predefined Windows Applications

The Agent does not recognize a password change window

The Agent does not respond to an application's configured password-change dialog

This can be remedied by adding the password-change form's window title to the main logon form's window-title matching list.

- In the Oracle Enterprise Single Sign-On Administrative Console, select the application in the left pane and click the **General** tab. Double-click the **Password Change** form for the application to open the form configuration dialog box. Note the **Window Titles** of the form, then click **Cancel**. Double-click the **Logon** form for the application and, under **Window Titles**, click **Add**. Enter the window title of the Password Change form, click **OK**, then click **OK** to close the form configuration dialog box.

Double-Logon or Wrong Window

The Agent responds twice to an application or responds to a previously-invisible window or to the wrong window

- Use one or more (additional) Match sections and Field keys to specify more precise matching criteria.

- Specify the window class that should be ignored in **Ignore this Window Class** in the **Miscellaneous** tab (see) on the application configuration.

The Agent does not respond to any Windows application.

- Shut down the Agent, kill any running *ssoshell.exe* or *SSObho.exe* processes, and restart the Agent.

The Agent does not respond to a specific Windows application

- Use fewer matching criteria.
- Check that the application configuration values that are numbers are in decimal, not hexadecimal.
- Check that the application configuration values that are strings are the exact ones in the application dialog boxes.
- If using multiple sections, try a test with just one section.

The Agent provides credentials but does not submit

- Verify that Auto Submit is set in the **Miscellaneous** tab of the application configuration and AutoOK is set in the specific set of credentials.

SendKeys Issues

Web Applications

In order for Logon Manager to respond correctly to ActiveX-based logon forms, you must configure these forms as Windows applications, with the template targeting the Web browser window.

Refer to the Oracle best practice document for Web templating for complete instructions.

Responding to Any Web Applications

The Agent does not detect or respond to a specific Web page

- Check that the page has a password field (Field Type of Password); without it, the Agent will ignore the page.
- Check that *SSObho.exe* is running.
- Try disabling Java, JavaScript, and/or ActiveX support.

The Agent responds slowly to a specific Web page

- Check that the page has finished loading. The Agent does not respond to a page until the page finishes loading *completely*.
- Try turning off images.
- Try disabling Java, JavaScript, and/or ActiveX support.

The Agent doesn't respond to a loaded Web Application

1. Start the Agent, then trigger the Agent from Title Bar Button.
2. Log On Using Logon Manager.
3. Refresh the Browser Page.

The Agent doesn't respond to a selected logon using Logon Manager

- There is a known issue in the Agent where it does not respond to Web Applications in this way. The Agent still responds via the other triggers.

If the browser is embedded within another application, the Agent might respond as if the browser is a Windows Application.

SSObho.exe does not run

If the Agent does not recognize web pages properly, make sure that SSObho.exe is running. If it is not, the Agent may think the user is in a Terminal Services session. To correct this:

1. Shut down the Agent. (Verify no SSO* tasks are running in Task Manager.)
2. Uninstall the Agent.
3. Make sure the following files are not present on the user's computer:
   - SSOwts.exe
   - SSOwts.exe
   - SSOwts.exe
4. Search using RegEdit in the system hives of the registry (for example, NOT in HKEY_CURRENT_USER or HKEY_USERS) for references to SSO, vGO, and Passlogix. Delete all inappropriate references, especially:

   HKEY_LOCAL_MACHINE\SOFTWARE\Passlogix and its children

   HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Explorer\Browser Helper Objects\{04EB19CE-B3B3-11D2-8A09-006008C7059E} and its children

   HKEY_CLASSES_ROOT\CLSID\{04EB19CE-B3B3-11D2-8A09-006008C7059E} and its children

   HKEY_CLASSES_ROOT\AppID\SSO WTS.EXE and its children

   HKEY_CLASSES_ROOT\AppID\{6B9E3EFF-C54A-472C-821B-6FC464B58235} and its children

   HKEY_CLASSES_ROOT\SSObho.HelperObject and its children

   HKEY_CLASSES_ROOT\SSObho.HelperObject.1 and its children
5. Reinstall the Agent.

When Predefining Web Applications

The Agent provides credentials but does not submit

- If a Submit field is of type Image, make sure that the URL is exact, including the protocol.
- If a Submit field is not present, add one.

Instead of submitting the page, the Agent triggers a link to another page or some other action (for example, cancel/clear).

- Add a Submit field to the application configuration.

The Web page uses more than three fields (for example, a Social Security # as three fields and a password).

- Break the logon up into two (or more) logons. Then the user will select (via the Logon Chooser) first the credential lacking the password (with Auto Submit disabled) and then the credential with the password.

Web Applications that are not predefined

The Agent provides credentials but does not submit

- Keep the system focus on the window that is requesting the credentials; if you switch to another window, the Agent will supply the credentials but not tell the page to submit.

Instead of submitting the page, the Agent triggers a link to another page or some other action (for example, cancel/clear)

- Turn off Auto Submit for that credential, and manually trigger page submission.
- Predefine the page, specifying the Submit field.

53. When adding credentials, the window title is stored instead of the URL.
    - Check that *SSObho.exe* is running. (See above.)

Host Applications

Responding to Any Host Applications

The Agent does not respond to any Host application

- Shut down the Agent, kill any running *ssoshell.exe* or *SSObho.exe* processes, and restart the Agent.
- Check that HLLAPI is properly enabled in the host emulator.
- Check that MFEnable=1.
- Check that the coordinates are relative to the top-left corner, where the top-left corner is (1,1) (row 1, column 1).

The Agent does not respond at all to any Telnet application

- Check that the Host emulator supports Telnet through HLLAPI or through a scripting language. Note: The Agent supports Telnet through HLLAPI only for ScanPak Aviva and NetManage Rumba

Responding to a Specific Host Application

One or more credential fields are not inserted, or are partially inserted

- Check that the coordinates are relative to the top-left corner, where the top-left corner is (1,1) (row 1, column 1).
- Check that application configuration coordinates are for the exact place where credentials are inserted; usually, there is a space after the field prompts (for example, "Username:Space"), and the credential field needs to be inserted *after* the space.
- If a special character sequence is used between fields, check that the sequence is valid, that Delay Field is set to a sufficiently-high value.

The Agent does not respond at all to a specific Host application.

- Check that the coordinates are relative to the top-left corner, where the top-left corner is (1,1) (row 1, column 1).
- Use fewer matching criteria.

The Agent does not respond at all to a specific Telnet application

- Check that the coordinates for all fields are set to (1,1).

Event Logging

All Extensions

No events are recorded

- The Filter setting is not set. For testing purposes, set to 0xFFFFFFFF (to log all events) and restart the Agent.
- The Agent has not reached the Retry setting (default: 30 minutes). To change the value from the default, set Extensions\EventManager:Retry or Extensions\EventManager\%Extension%:Retry to a lower value. To verify that the Event Logging is occurring, open the user's *%UserName% AML.mdb* file, look in the SSOSection column for entries with the name starting with CacheItem (for example, CacheItem1). These items are the events, cached until the retry time is reached. At the retry time, the cached events will be sent to the extension(s).

The wrong events are recorded

- The Filter setting is set improperly. Review the **Event Logging Filter**, note the precise bit order and conversion from binary to hexadecimal/decimal.

Windows Event Viewer

Credentials do not arrive at the server

- The server name is not properly set. Do not use leading "\\" characters. Specify the proper NetBIOS name (not the TCP/IP name).

Credentials do not arrive at the server

- The server name is not properly set. Do not use leading "\\" characters. Specify the proper NetBIOS name (not the TCP/IP name).

Credentials on the server are missing data; category and event labels are only numbers and the Description is similar to "The description for Event ID (###) in Source (Logon Manager) cannot be found.

The local computer may not have the necessary registry information or message DLL files to display messages from a remote computer. The following information is part of the event:"

- The server is not properly configured. See Windows Event Logging extension for instructions on configuring the server.

Credential Sharing Groups

Credential Sharing Groups are not working

- Make sure Extensions\AccessManager:PWSEnable=1.

A Password Change within an application in the Domain or LDAP groups does not notify the authenticator of the change

- Make sure AUI:ShareToAuth=1.

All Synchronizer Extensions

Directory Extensions—All Directory Support

User Connections

Cannot connect via SSL

- Make sure the directory connection works without SSL.

A user cannot create an object on the directory

- Make sure the user is connecting to the directory.
- Make sure UserPaths points to a valid location.
- A SSOlocator object for the user does not exist, either specifically for the user or as a default object. Put a default object in the location UserPaths points to; if this works, you can move the default object up the tree or put a user-specific object on the tree.

Admin Objects

Admin objects (vGOAdminOverride, vGOentlist, vGOftulist) cannot be altered.

Existing objects cannot be overwritten. Instead, delete the old objects and then push new ones.

User Objects

- Microsoft Active Directory Server
- Oracle Directory Server Enterprise Edition
- Novell eDirectory

File System Server

User connections

A user cannot create an object on the directory

- Make sure the user can connect to the File System share directly (for example, in Explorer).

OpenLDAP Manual Schema Extension Error

In the Connect to Repository dialog box, if **OpenLDAP Directory Server** is selected as the **Repository Type** and an Extend Schema Status error appears, the schema will have to be manually extended.

The Error message appears as follows:

```
============= ERROR =============
Automated schema extention is not supported by this server.
Use the file located at "C:\Program Files\Passlogix\v-GO SSO
Console\DirectorySchema\vgo\OLDAP\sso.schema" to extend the
schema manually.
Extend Schema ABORTED!
```

If you receive this error, follow these steps to extend the schema manually:

1. Copy the sso.schema file to the OpenLDAP server. The sso.schema file can be located in the following location:
   C:\Program Files\Passlogix\v-GO SSO Console\DirectorySchema\vgo\OLDAP\sso.schema
2. Place the sso.schema file in the following directory (or other schema directory for OpenLDAP configuration):
   /usr/local/etc/openldap/schema
3. The OpenLDAP configuration file must be modified to include the new schema file. Open the file, and add the following line:
   `include  <path>/sso.schema`
   where *<path>* is the path specified in the previous step.