Oracle® Retail Predictive Application Server
Installation Guide
Release 13.2

July 2010

ORACLE®

Oracle® Retail Predictive Application Server Installation Guide, Release 13.2

Value-Added Reseller (VAR) Language

Oracle Retail VAR Applications

The following restrictions and provisions only apply to the programs referred to in this section and licensed to you. You acknowledge that the programs may contain third party software (VAR applications) licensed to Oracle. Depending upon your product and its version number, the VAR applications may include:

(i) the software component known as **ACUMATE** developed and licensed by Lucent Technologies Inc. of Murray Hill, New Jersey, to Oracle and imbedded in the Oracle Retail Predictive Application Server – Enterprise Engine, Oracle Retail Category Management, Oracle Retail Item Planning, Oracle Retail Merchandise Financial Planning, Oracle Retail Advanced Inventory Planning, Oracle Retail Demand Forecasting, Oracle Retail Regular Price Optimization, Oracle Retail Size Profile Optimization, Oracle Retail Replenishment Optimization applications.

 (ii) the **MicroStrategy** Components developed and licensed by MicroStrategy Services Corporation (MicroStrategy) of McLean, Virginia to Oracle and imbedded in the MicroStrategy for Oracle Retail Data Warehouse and MicroStrategy for Oracle Retail Planning & Optimization applications.

(iii) the **SeeBeyond** component developed and licensed by Sun MicroSystems, Inc. (Sun) of Santa Clara, California, to Oracle and imbedded in the Oracle Retail Integration Bus application.

(iv) the **Wavelink** component developed and licensed by Wavelink Corporation (Wavelink) of Kirkland, Washington, to Oracle and imbedded in Oracle Retail Mobile Store Inventory Management.

(v) the software component known as **Crystal Enterprise Professional and/or Crystal Reports Professional** licensed by SAP and imbedded in Oracle Retail Store Inventory Management.

(vi) the software component known as **Access Via™** licensed by Access Via of Seattle, Washington, and imbedded in Oracle Retail Signs and Oracle Retail Labels and Tags.

(vii) the software component known as **Adobe Flex™** licensed by Adobe Systems Incorporated of San Jose, California, and imbedded in Oracle Retail Promotion Planning & Optimization application.

(viii) the software component known as **Style Report™** developed and licensed by InetSoft Technology Corp. of Piscataway, New Jersey, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.

(ix) the software component known as **DataBeacon™** developed and licensed by Cognos Incorporated of Ottawa, Ontario, Canada, to Oracle and imbedded in the Oracle Retail Value Chain Collaboration application.

You acknowledge and confirm that Oracle grants you use of only the object code of the VAR Applications. Oracle will not deliver source code to the VAR Applications to you. Notwithstanding any other term or condition of the agreement and this ordering document, you shall not cause or permit alteration of any VAR Applications. For purposes of this section, "alteration" refers to all alterations, translations, upgrades, enhancements, customizations or modifications of all or any portion of the VAR Applications including all reconfigurations, reassembly or reverse assembly, re-engineering or reverse engineering and recompilations or reverse compilations of the VAR Applications or any derivatives of the VAR Applications. You acknowledge that it shall be a breach of the agreement to utilize the relationship, and/or confidential information of the VAR Applications for purposes of competitive discovery.

The VAR Applications contain trade secrets of Oracle and Oracle's licensors and Customer shall not attempt, cause, or permit the alteration, decompilation, reverse engineering, disassembly or other reduction of the VAR Applications to a human perceivable form. Oracle reserves the right to replace, with functional equivalent software, any of the VAR Applications in future releases of the applicable program.

Contents

Send Us Your Comments

Oracle Retail Predictive Application Server Installation Guide, Release 13.2

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document.

Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

> **Note:** Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the new Applications Release Online Documentation CD available on My Oracle Support and www.oracle.com. It contains the most current Documentation Library plus all documents revised or released recently.

Send your comments to us using the electronic mail address: retail-doc_us@oracle.com

Please give your name, address, electronic mail address, and telephone number (optional).

If you need assistance with Oracle software, then please contact your support representative or Oracle Support Services.

If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at www.oracle.com.

Preface

Oracle Retail Installation Guides contain the requirements and procedures that are necessary for the retailer to install Oracle Retail products.

Audience

This document is intended for the users and administrators of Oracle Retail Predictive Application Server. This may include merchandisers, buyers, and business analysts.

This Installation Guide is written for the following audiences:

- Database administrators (DBA)
- System analysts and designers
- Integrators and implementation staff

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible to all users, including users that are disabled. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at http://www.oracle.com/accessibility/.

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

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 following documents in the Oracle Retail Predictive Application Server Release 13.2 documentation set:

- *Oracle Retail Predictive Application Server Release Notes*
- *Oracle Retail Predictive Application Server Licensing Information*
- *Oracle Retail Predictive Application Server Administration Guide*
- *Oracle Retail Predictive Application Server User Guide for the Classic Client*
- *Oracle Retail Predictive Application Server Online Help for the Classic Client*
- *Oracle Retail Predictive Application Server User Guide for the Fusion Client*
- *Oracle Retail Predictive Application Server Online Help for the Fusion Client*
- *Oracle Retail Predictive Application Server Configuration Tools User Guide*
- *Oracle Retail Predictive Application Server Configuration Tools Online Help*

Supplemental Documentation on My Oracle Support

The following supplemental documentation is also available in the My Oracle Support Knowledge Base.

My Oracle Support Note ID 1132783.1 – Oracle Retail Fashion Planning Bundle Reports Documentation

The Oracle Retail Fashion Planning Bundle Reports package includes role-based Oracle Business Intelligence (BI) Enterprise Edition (EE) reports and dashboards that provide an illustrative overview highlighting the Fashion Planning Bundle solutions. These dashboards can be leveraged out-of-the-box or can be used along with other dashboards and reports that may have already been created to support a specific solution or organizational needs. This package includes dashboards for the Assortment Planning, Item Planning, Item Planning Configured for COE, Merchandise Financial Planning Retail Accounting, and Merchandise Financial Planning Cost Accounting applications.

The Oracle Retail Fashion Planning Bundle Reports documentation set includes the following documents that describe how you can install and use the reports and dashboards:

- *Oracle Retail Fashion Planning Bundle Reports Installation Guide* – This guide describes how you can download and install the Fashion Planning Bundle reports. This guide is intended for system administrators and assumes that you are familiar with the Oracle Retail Predictive Application Server (RPAS) and Oracle BI EE.
- *Oracle Retail Fashion Planning Bundle Reports User Guide* – This guide describes the reports and dashboards included for the Oracle Retail Fashion Planning Bundle solutions.

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:

https://support.oracle.com

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Review Patch Documentation

When you install the application for the first time, you install either a base release (for example, 13.1) or a later patch release (for example, 13.1.2). If you are installing the base release and additional patch and bundled hot fix releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch and bundled hot fix releases can contain critical information related to the base release, as well as information about code changes since the base release.

Oracle Retail Documentation on the Oracle Technology Network

Documentation is packaged with each Oracle Retail product release. Oracle Retail product documentation is also available on the following Web site:

http://www.oracle.com/technology/documentation/oracle_retail.html

(Data Model documents are not available through Oracle Technology Network. These documents are packaged with released code, or you can obtain them through My Oracle Support.)

Documentation should be available on this Web site within a month after a product release.

Conventions

Navigate: This is a navigate statement. It tells you how to get to the start of the procedure and ends with a screen shot of the starting point and the statement "the Window Name window opens."

```
This is a code sample
    It is used to display examples of code
```

Introduction

Welcome to the Oracle Retail Predictive Application Server (RPAS) Installation Guide. This chapter outlines the contents of this guide, discusses the updated components with respect to the previous version, lists hardware and software requirements, and defines commonly used notations and terms.

About This Document

This document contains two parts:

- Part I: Full Installation. Refer to this section if you are performing a full installation.
- Part II: Patch Installation. Refer to this section if you are performing a patch installation.

Please read this entire document before beginning the installation process to ensure you understand the installation process and have all the necessary documentation, hardware, and software available.

Requirements

The following hardware and software requirements are for the RPAS Server, Client, Configuration Tools, and ODBC/JDBC Clients.

Hardware and Software Requirements

The following table provides hardware and software requirement information for the current release.

Requirements	Details
RPAS Server and Compilers For more information on installing the RPAS Server, see the chapter Installing on UNIX and Linux Environments or Installing on a Windows Environment.	
Supported OS	Oracle Solaris 10: GCC 4.2.3 (32 bit) AIX 5.3 (TL5 or greater): GCC 4.1.1 (32 bit) AIX 6.1 (TL4): GCC 4.3.3 (32 bit) HP-UX 11.31 (Itanium): ACC 6.20 (64 bit) Oracle Enterprise Linux 5, Update 3 (OEL 5.3): GCC 4.1.2 (64 bit) Red Hat Enterprise Linux 5.3: GCC 4.1.2 (64 bit)
Additional Oracle Software (For Single Sign-On)	Oracle WebLogic Server 11g Release 1 (Release 10.3.2) Oracle Application Development Runtime (11.1.1.2.0) Oracle Web Tier Utilities 11g (11.1.1.20) Oracle Identity Management 10g Release 3 (10.1.4) for Oracle Application Server Single Sign-On (OSSO) Oracle Identity Management 11g (11.1.1.20) for Oracle HTTP Server
Required 3rd Party Software	Java Development Kit (JDK) 1.5 (for the Configuration Tools and server machines as well as the JDBC Client) For AIX, the JDK version must be 1.5 SR1 or higher. **Note**: This version of RPAS is also certified with JDK 1.6, but it is not necessary to upgrade to JDK 1.6.
Included Application Versions	RPAS Server 13.2 RDF Server 13.2 RPAS Classic Client 13.2 RPAS Fusion Client 13.2 RDF Plug-ins 13.2 Config Tools 13.2 ODBC Server 13.2 ODBC Client 13.2

Requirements	Details
RPAS Classic Client For more information on installing the RPAS Classic Client, see the chapter Installing and Configuring the RPAS Classic Client.	
Supported OS	Microsoft Windows XP and Vista
Client System Requirements	800x600 or higher display resolution 1GHz or higher processor 512 MB or higher memory Intranet network connectivity with at least 10Mbps data rate
Web Browser Requirements	Microsoft Internet Explorer 6.0 Java Plug-in 1.5 to support the RPAS Web application, including the In-Context Launch feature.
RPAS Fusion Client For more information on installing the RPAS Fusion Client, see the Installing the RPAS Fusion Client.	
Supported OS (Client)	Microsoft Windows XP Professional SP3 with Microsoft Office 2003
Web Browser Requirement	Microsoft Internet Explorer 7.0 with Adobe Flash Player 9.0 or higher
Application Server	Oracle WebLogic Server 11gR1 (Release 10.3.2) with: – Oracle Application Development Runtime (11.1.1.2.0) – Oracle Application Development Framework (ADF) Runtime Patch 9329357. For more information, see Installing the Oracle ADF Run Time Patch.
Additional Oracle Software (For Single Sign-On)	Oracle Web Tier Utilities (11.1.1.20) Oracle Identity Management 10g Release 3 (10.1.4) for Oracle Application Server Single Sign-On (OSSO) Oracle Identity Management 11g (11.1.1.20) for Oracle HTTP Server
Supported OS (Application Server)	IBM AIX 6.1 Technology Level 4 (TL4) Oracle Enterprise Linux 5 Update 3 (OEL 5.3) Oracle Solaris 10 Update 4, with time zone patch 122032-01 or later and libc patch 119689-07 or later HP-UX 11.31 Itanium
JVM	For IBM AIX 6.1 TL4 – IBM JDK 1.6 SR6 (64-bit) For Oracle Solaris 10 Update 4 – Sun JDK 1.6 Update 18 (64-bit) For Oracle Enterprise Linux 5 Update 3 – Sun JDK 1.6 Update 18 (64-bit) For HP-UX 11.31 Itanium – HP JDK 1.6_07 (64-bit)

Note: The operating systems you choose for the RPAS server and the WebLogic server for the RPAS Fusion Client need not be the same.

- Once the RPAS server and client are installed, you will need to build and set up an RPAS domain or install an RPAS solution. For more information on setting up an RPAS domain, refer to the *Oracle Retail Predictive Application Server Administration Guide*. For more information on installing an RPAS solution, refer to the relevant Installation Guide included with the RPAS solution package.

- You will need to install Java Development Kit (JDK) version 1.5 or version 1.6 if you are installing the Configuration Tools. For AIX, you must use the 32-bit version of Java 1.5 SR1 or higher.

    > **Note:** Users should avoid enabling AutoUpdate when installing Java because it may update the Java version without prompting.

- If you are installing the RPAS Server on Windows, you must install the MKS Toolkit in order to emulate UNIX commands (required for starting the RPAS Server on Windows). You can find more information about downloading this product at http://www.mks.com. If running Windows XP, you should use MKS version 8.7 since users running older versions of MKS encountered problems on Windows XP.

- Perl is an interpreted language that is included on all supported UNIX platforms (included with MKS Toolkit for Windows). Perl is used by the patch sets, which are used to install an RPAS patch.

- An application for unzipping (.zip) components on UNIX must be installed and used for extracting the RPAS Configuration Tools. Unzip is an open source software package that can be used for this process.

The following table indicates which software components are needed for each task. The reference to Windows refers Windows XP or Vista.

Task	Typical User	Platforms	RPAS Server	RPAS Clients	Configuration Tools	Java
Log in to an existing (built) RPAS domain for the primary purpose of building workbooks.	End User	Windows	No	Yes	No	No
Use the Configuration Tools to create or modify solutions.	Solution/ Product Administrator	Windows	Yes	No	Yes	Yes
Use the Configuration Tools to build configured solutions.	Solution/ Product Administrator	Windows UNIX Linux	Yes	No	Yes	Yes

Java can be acquired from http://java.sun.com for Oracle Solaris and Microsoft Windows or from the respective vendor's Web site for IBM and HP.

Environment variables are automatically set when using the Oracle Retail Installer to install the RPAS components on a UNIX environment.

Supported Oracle Retail Products

For information on the version of the RPAS platform that an RPAS application uses, see that application's documentation.

Terms

The following terms are used in this guide:

- **RPAS** – The Oracle Retail Predictive Application Server provides the foundation for Oracle Retail solutions such as Oracle Retail Demand Forecasting (RDF), Merchandise Financial Planning (MFP), and Advanced Inventory Planning (AIP). RPAS does not include any business logic, but it enables the solutions to store, manipulate and retrieve data. It provides the solutions with a standard interface based on wizards, templates, workbooks, and batch processes.

- **RPAS solution** – The software that uses RPAS. RPAS solutions are added on to RPAS domains as separate modules. All the business logic is encapsulated in the solution. An RPAS domain can support solutions.

- **RPAS domain** – The collection of server-side directories and files containing data and procedures that comprise the RPAS solution. Refer to the *RPAS Administration Guide* and the *RPAS Configuration Tools User Guide* for additional information.

- **RPAS Classic Client** – The Windows-based client interface for end users and system administrators of an RPAS domain. An administrator may perform maintenance work in a domain using the RPAS Classic Client, server-side RPAS utilities.

- **RPAS Fusion Client** – The RPAS Fusion Client is the Web-based Rich Client for the Retail Predictive Application Server (RPAS) platform developed using the Oracle Application Development Framework (ADF).

- **RPAS Configuration Tools** – The tools used to configure an RPAS solution. See the *RPAS Configuration Tools User Guide* for more information.

Part I
Full Installation

Part I of this guide details the steps needed to perform a full installation of RPAS.

Part I contains the following chapters:

- Chapter 1: Getting Started
- Chapter 2: Installing on UNIX and Linux Environments
- Chapter 3: Installing on a Windows Environment
- Chapter 4: RPAS Web Deployment
- Chapter 5: Installing and Configuring the RPAS Classic Client
- Chapter 6: Installing the RPAS Fusion Client

For information about a patch installation, see Part II: Patch Installation.

1
Getting Started

This chapter provides:

- An overview of the RPAS platform
- Typical installation scenarios
- An overview of the installation contents

RPAS Platform Overview

RPAS 13.2 is comprised of many components. In addition, there are solutions that have been developed using the RPAS 13.2 foundation. These solutions must be installed separately. Examples of these solutions include Oracle Retail Merchandise Financial Planning (MFP) and Oracle Retail Advanced Inventory Planning (AIP).

The components of the RPAS software include the following:

- RPAS Server and related utilities
- RPAS Classic Client
- RPAS Fusion Client
- RPAS Configuration Tools
- Sample configurations (Curve and Grade)
- Documentation
- Supported Translations

Installation Process Flow

A typical RPAS Server-based installation is illustrated below. For instructions on installing on a Windows machine, refer to Installing on a Windows Environment.
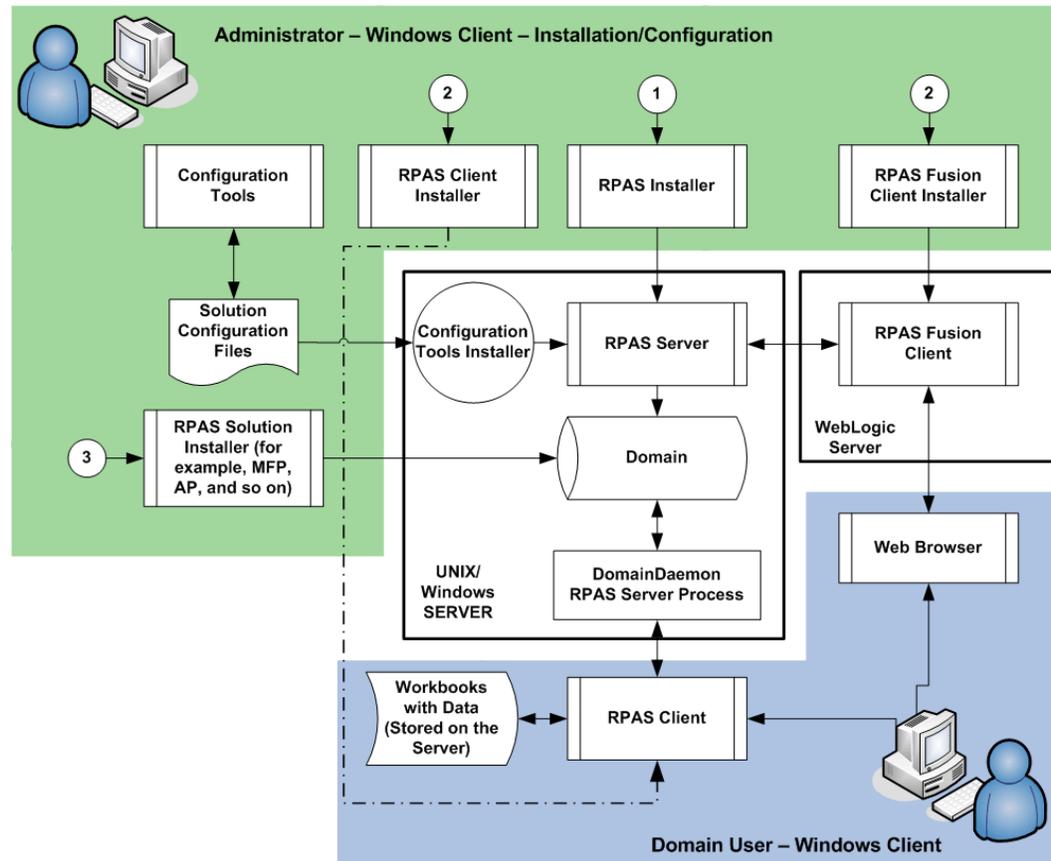
RPAS Environment

The illustration above displays a typical RPAS Server-based installation and provides the following information:

- RPAS and the Configuration Tools may also be installed on a single Windows stand-alone machine.
- Numbers represent the order in which you must install the RPAS components.
- The RPAS Classic Client Installer and RPAS Fusion Client Installer processes have the same number. This indicates that you can choose to install the RPAS Classic Client on the domain user systems or the RPAS Fusion Client on an Oracle WebLogic Server instance.
- Before you install an RPAS solution, you must have the RPAS Server and RPAS Clients installed. The RPAS solution installers include the taskflow configuration and online help files that require the RPAS Fusion Client to be already installed.
- A domain user can choose to log on to an RPAS domain/solution using the RPAS Classic Client or by logging on to the RPAS Fusion Client through a Web browser.

Downloading and Extracting the RPAS Media Pack

> **Note**: The scripts for Oracle Retail Demand Forecasting (RDF) are packaged within the RPAS/RDF server installation. See the RDF documentation for more information.

The following procedure provides information about extracting the RPAS Media Pack and its contents.

1. Create a directory to store the RPAS Media Pack and download the media pack to this location.

2. Extract the media pack to this location. Once extracted, two folders appear, CDROM and DOCS.
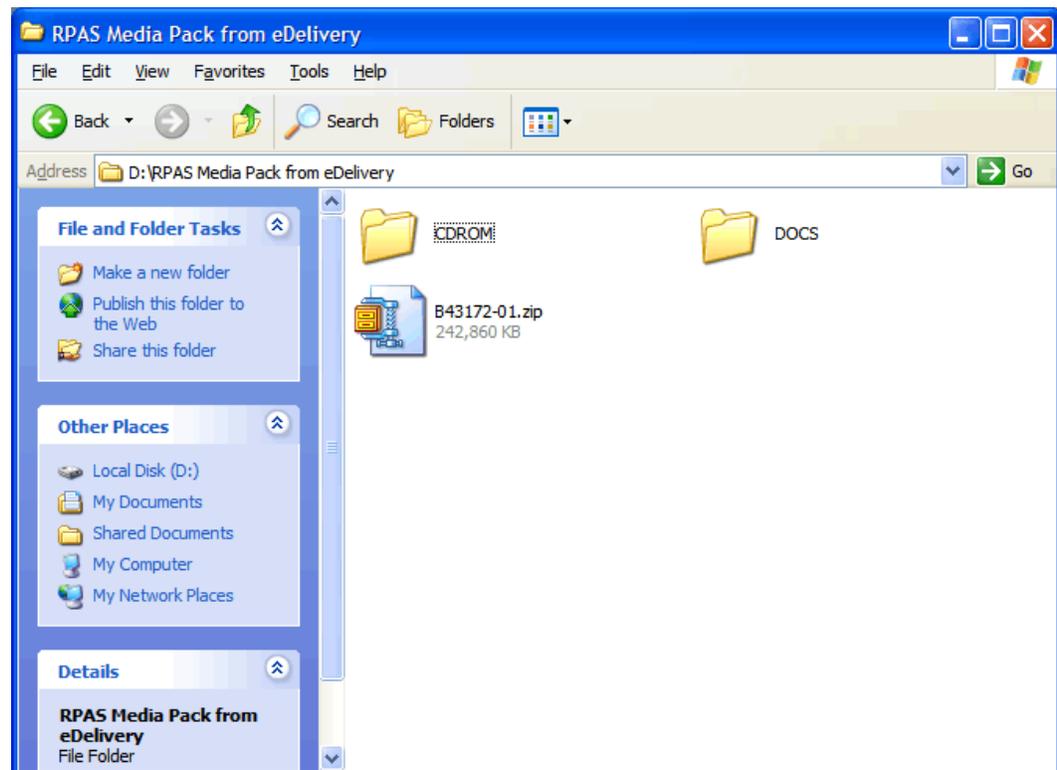
Example of CDROM and DOCS Folder Created by Extracting Media Pack ZIP file

The CDROM folder contains three ZIP files: FusionClient.zip, RPAS-13.2-unix.zip and RPAS-13.2-windows.zip.

- The FusionClient.zip file contains the RPAS Fusion Client installer.
- The RPAS-13.2-unix.zip file contains all the RPAS components to be installed on your UNIX server.
- The RPAS-13.2-windows.zip contains the RPAS components that can be installed on a Windows environment. Refer to Installing on UNIX Environments and Installing on a Windows Environment for information on performing installations.

The DOCS folder has folders within it that contain the RPAS documentation in PDF format.

2

Installing on UNIX and Linux Environments

The installation of the server-side RPAS components on UNIX or Linux operating systems is accomplished by using a Java-based installation program that is included with the installation package.

This program automates the following:

- Installation of the RPAS Server
- Installation of Configuration Tools on the server
- Creation of sample domains
- Definition of DomainDaemon port

Preparation

The RPAS components included in this installation process are available inside the media pack of the solution downloaded from Oracle's E-Delivery Web site, http://edelivery.oracle.com/.

Overview

The RPAS components included in this installation process are available inside the media pack of the solution downloaded from Oracle's E-Delivery Web site.

There are two RPAS archives inside the media pack, one RPAS archive for UNIX and Linux and one for Windows.

Java Environment

Ensure that Java Development Kit (JDK) has been installed on the machine where RPAS will run and that the JAVA_HOME environment variable is properly set.

AIX and Solaris versions of RPAS are only compatible with a 32-bit version of Java (for the RPAS Configuration Tools).

Linux is only compatible with a 64-bit version of Java.

HP Itanium does not release separate 32-bit and 64-bit versions of Java. Therefore, you need to set the 64-bit Configuration Tools environment variable for Java as shown below:

```
export RIDE_OPTIONS=-d64
```

Ride Options

The RIDE_OPTIONS environmental variable has been defined to allow users to pass information into the rpasInstall process. Unlike the regular arguments passed on the command line to rpasInstall (such as -fullinstall and -updatestyles), arguments defined in RIDE_OPTIONS are passed to every rpasInstall instance that runs in the environment.

Described below are the three supported properties for use with RIDE_OPTIONS.

- **Xmx** – used for Java
- **HP 64-bit mode Java (-d64)** – used for HP Itanium
- **Drpas.maxProcesses** – used for RPAS

For Java

Xmx - By default, the Java Virtual Machine requests on the order of 268 MB of RAM from the OS to allocate for its heap. Large domains that are built from complex configurations can potentially exhaust this limited amount of memory. This is even more of an issue in patch installations than in builds since a patch installation requires two different versions of a configuration to be held in memory simultaneously.

By using the -Xmx option, you can instruct the Java Virtual Machine to request more memory from the OS to prevent situations when all allocated memory is exhausted. The syntax of the property is:

`-Xmx###m`, where ### is the amount, in megabytes, of memory the JVM is to request. Common values for this argument are `-Xmx512m` or `-Xmx1024m`.

For HP Itanium

HP 64-bit mode Java (-d64) - The HP distribution of Java does not consist of separate executables for 32-bit and 64-bit operating systems. Instead, there is a single distribution of Java that can run in either 32-bit or 64-bit mode. By default, the HP Java runs in 32-bit mode. Because RPAS is built as a 64-bit executable on the Itanium OS, the RPAS libraries are unable to link with Java if it is running in 32-bit mode.

By adding the -d64 property to RIDE_OPTIONS, the HP Java distribution is 64-bit mode enabled and the RPAS libraries link successfully.

It is often the case that users may want to use or more different properties in conjunction with RIDE_OPTIONS. When this is the case, all desired properties should be included within the environmental variable definition separated by white space with the entire definition enclosed in double quotes. An example of this is shown below:

`export RIDE_OPTIONS="-d64 -Xmx1024m -Drpas.maxProcesses=8"`

For RPAS

Drpas.maxProcesses - Several RPAS server utilities are designed to take advantage of multi-processor hardware to improve their performance. These utilities attempt to perform operations in parallel, each process running on a distinct processor. The -Drpas.maxProcesses argument is used to instruct RPAS how many processors it should attempt to run in parallel when executing one of the server utilities that has multi-processor support when that utility is executed as a part of the rpasInstall process.

Note that the -Drpas.maxProcesses argument only affects those calls to server utilities made from within the rpasInstall process and does not affect calls to server utilities made from the command line or as part of a batch job. The syntax of the property is:

`-Drpas.maxProcesses=###`, where ### is the number of sub-processes the RPAS server utility should attempt to run in parallel. The number of processes to use should be determined by the administrator of the hardware system based on the physical number of processors available and the amount of load that is acceptable for the rpasInstall process to place on the system.

Before You Begin

Before starting the RPAS Installer, the following software must be installed on your system:

- Java (5) 1.5 or Java 1.6
- Unzip utility

Running the RPAS Installer

1. Locate and extract RPAS-13.2-unix.zip into the current directory, which is referred to in this document as [RPAS_Installer].

2. Begin the Installer by changing to the [RPAS_Installer]/rpas directory and running the following command:

   ```
   ./install.sh
   ```

   > **Note:** The command must be executed with the preceding period and forward slash.

   If this process is being run on an X-Windows emulator (such as Exceed), a graphical user interface to the Installer appears. If you are running in console mode through a terminal emulator, a text interface to the Installer appears.

   In both cases, the requested information is identical, but displayed differently. In the GUI, a checkbox may appear to indicate whether you want a component installed. In text mode, you are prompted for a response of **yes** or **no**.

   > **Note:** In text mode, the default value appears in square brackets. To use the default value and continue, press **Enter**. If you want to use a different value, enter the new value. When prompted to create a directory, respond with **y** or **yes** and press **Enter**.

3. The RPAS Installer screen appears and displays the components that can be installed to your system. Click **Next** when ready.

RPAS Installer Screen

4. The Oracle Customer Information screen appears.

If you want to receive emails from My Oracle Support about security updates, enter your email address and My Oracle Support password and ensure that the check box is selected. Click **Next** to continue.

Oracle Customer Information Screen

The security updates are provided through Oracle Configuration Manager (OCM). The Oracle Retail OCM collector is included in the installer and is shown in the figure above. The collector only needs to be installed once per ORACLE_HOME, WAS_HOME, or installation root directory. After the initial installation, the OCM collector automatically performs self-updates.

For more information about Oracle Retail OCM, see the following guide:

Oracle Configuration Manager Installer Guide (Note ID: 1071030.1)

This guide describes the procedures and interface of the Oracle Retail OCM collector that is a part of Oracle Retail full releases.

This document is available through My Oracle Support. Access My Oracle Support at the following URL:

https://support.oracle.com

The OCM documentation is located at the following URL:

http://www.oracle.com/technology/documentation/ocm.html

> **Note**: If you select to receive security updates but do not provide email and password information or lack an internet connection, addition screens appear. For more information about these screens, see the *Oracle Configuration Manager Installer Guide* described above.

5. The Install Requirements screen appears.

This screen displays the software required to complete this installation. You should already have installed this software on your system. If you have not installed these items, please perform the necessary installations before continuing.

Click **Next** to continue.

Install Requirements Screen

6. The RPAS Base Path screen appears.

Enter the path where the RPAS Server and components will be installed, and click **Next**. This path is used when creating your domains, should you choose to create them.

> **Note:** If this directory does not exist, the Installer will prompt you to create it.
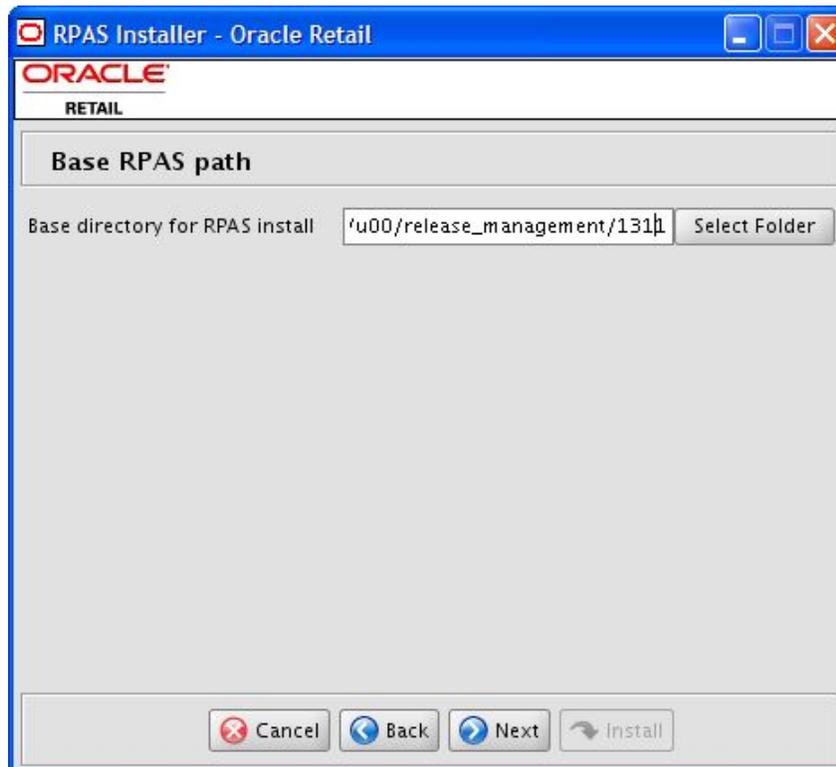
Base RPAS Path Screen

7. The RPAS Installations Paths screen appears.

Enter the following path information and click **Next**:

- RPAS Server path – Enter the target directory for your RPAS Server.
- RPAS Tools path – Enter the target directory for your RPAS Configuration Tools.
- Grade Config path – Enter the target directory for your Grade configuration.
- Curve Config path – Enter the target directory for your Curve configuration.
- Directory for Retail login script – Enter the target path where the retaillogin.ksh file will be created on your system.

RPAS Installation Paths Screen

8. The Install Tasks screen appears.

Select the options to be performed by the RPAS Installer, enter the DomainDaemon port number, and click **Next**.

▪ To create the domains for Grade and Curve, select the appropriate options on the Install tasks screen. These options are selected by default, meaning that they will be created.

▪ Enter the port where the RPAS DomainDaemon will run. This port needs to be configured for use with the RPAS Clients.

– For the RPAS Classic Client, this is done with the EConfigure utility as documented in the RPAS Classic Client Installation and Configuration chapter.

– For the RPAS Fusion Client, this is done during the RPAS Fusion Client installation as documented in the Installing the RPAS Fusion Client chapter.

The Installer will validate that this port is not in use. The DomainDaemon will not be running at the end of this installation process, but can be started by using the `startrpas` alias created in the environment setup script.

> **Note:** If you choose to create domains, they are created in a directory called domains under the **Base directory path** you defined on the Base RPAS path screen.
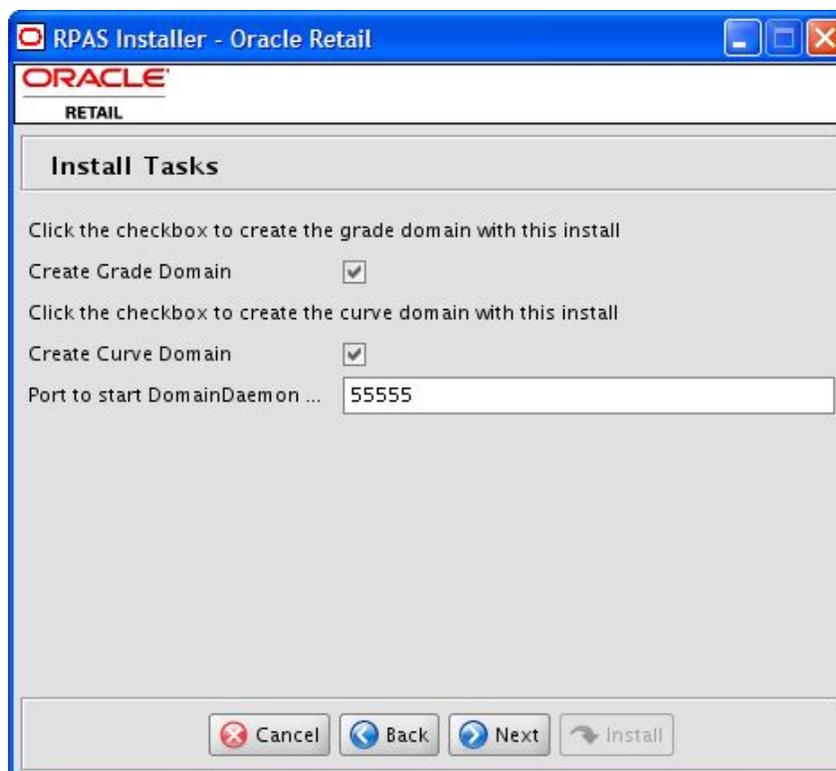
Install Tasks Screen

9. The Installation Progress screen appears.

To display the progress of the components and tasks being performed by the Installer, select **Show Details**. Click **Install** to start the installation process.

You can view the detailed mode at any time during or after the installation.

> **Note:** The installation process can vary depending on your environment. If you chose to create the domains, installation time might take 10 to 30+ minutes depending on server.
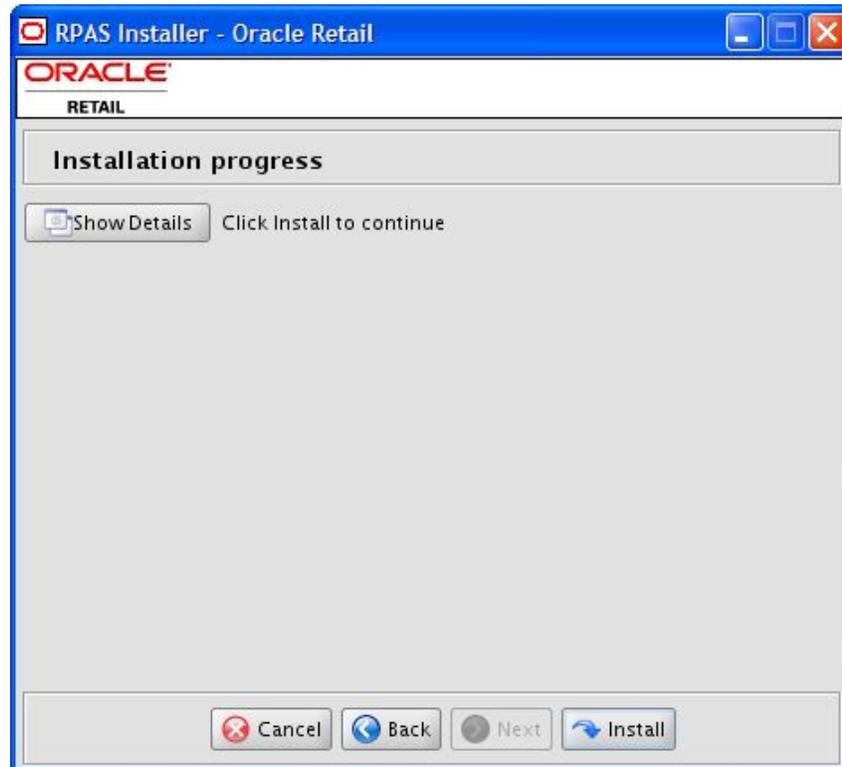
Installation Progress Screen

10. When the installation process is complete, the Complete screen appears with Message dialog box.

Click **OK** to close the dialog box.
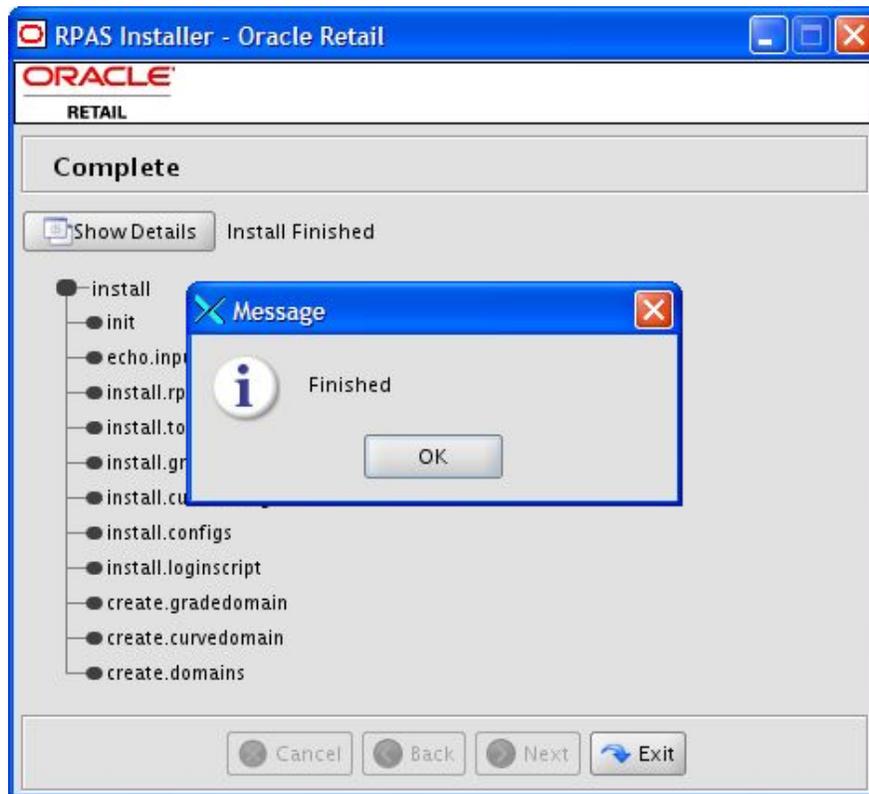
Complete Screen

11. To view the installation details, select the **Show Details** button. The screen displays two tabs: the Output tab and the Error tab. It is recommended that you review these tabs for any issues that may have occurred during the installation process.

If you wish to view the log again at a later date, a text copy was saved in the directory [RPAS_Installer]. The log file will be named based on the product, platform, and a timestamp, followed by the .log extension.

12. Click **Exit** to close the Installer.

Environment Variable Setup Script

To begin using RPAS, run the retaillogin.ksh script. The script is located in the root of the base directory where RPAS was installed unless the default was overwritten when specifying directory paths.

Source the script from inside the directory where the script is located:

```
. ./retaillogin.ksh
```

OR

Include the full path after the period ".":

```
. /<base_directory>/retaillogin.ksh
```

> **Note:** The preceding period and space (". ") must be included at the beginning of the command when executing the script.
>
> **Note:** Include this path and script in the .profile in your home directory (~/.profile) if you want to have this environment setup script run during login.

This script will set up environment variables, such as RPAS_HOME and RIDE_HOME, which are required for RPAS to run properly.

Installing ODBC Server and Client Components

After the RPAS Server has been installed and the RPAS_HOME environment variable has been set, the RPAS ODBC Server can be installed. The ODBC Server is required only if you have ODBC or JDBC applications that use the RPAS domain as data source, or if you want an SQL interface to the RPAS domain.

To install the ODBC Server, change directory to RPAS_HOME/odbc and run the shell script customInstall.sh. Although the installation script customInstall.sh works for non-root users, it is strongly suggested that the script be run by a root user so that the RPAS ODBC Agent can utilize the OS logon authentication method.

Refer to the *RPAS Administration Guide* for information about the ODBC server configuration.

Both 32-bit and 64-bit ODBC Clients are available. They are delivered in zip files named odbcclient32.tar.zip and odbcclient64.tar.zip respectively. To install, copy the appropriate zip file to your preferred location. Unzip and untar the file, and then refer to the *RPAS Administration Guide* for more information about the ODBC Client configuration.

Installing JDBC Client

Perform the procedure below to install the JDBC client driver.

Unzip and untar the jdbcclient.tar.zip from the RPAS_HOME directory.

Refer to the *RPAS Administration Guide* for addition information on the JDBC Server.

DomainDaemon

The RPAS DomainDaemon is the process that must be running on the server for a user to log into an RPAS domain. Before beginning the installation process, a port was specified where the DomainDaemon will run.

Use the aliases `startrpas` and `stoprpas` to start and stop the DomainDaemon on the port specified before installation. This alias is an automated mechanism of starting the DomainDaemon. Alternatively, you can start the DomainDaemon manually. Instructions for the DomainDaemon are included in the *RPAS Administration Guide*.

3

Installing on a Windows Environment

RPAS Server and Tools Installation on Windows

Installation Notes

For the purposes of this section, **/** is used to delineate directories and files in paths. Users in a Windows Command Prompt environment will need to either use **** as the delineation character or use double quotes around paths.

> **Note:** Paths on Windows <u>are not</u> case-sensitive.

Extracting the RPAS Package

Unzip the RPAS-13.2-windows.zip to a newly created directory on the Windows machine. The RPAS-13.2-windows.zip contains all the RPAS components.

Once extracted, the following directories appear:

- ClassicClient – This directory contains the setup.exe used to install the RPAS Classic Client.
- Curve – This directory contains the Curve base configuration file provided with RPAS.
- FusionClient – This directory contains the installer used to install the RPAS Fusion Client.
- Grade – This directory contains the Grade base configuration file provided with RPAS.
- OCM – This directory contains the stand-alone OCM installer.
- ODBC – This directory contains the JDBC and ODBC client drivers.
- RPAS – This directory will be referred to later in this document as **RPAS_HOME**.
- Tools – This directory will be referred to later in this document as **RIDE_HOME**.
- Translations – This folder contains the files for the various languages supported by RPAS.
- Web – This directory contains the files required for an RPAS Web deployment.

Java Environment

During the Java installation, a directory is created to store the Java software. This directory is referred to later in this document as **JAVA_HOME**.

Install ODBC Server Components (Optional)

Perform the procedure below to install the ODBC server:

1. Run setup.exe from Rpas/ODBCServerInstall/iwinnt folder where you extracted the RPAS-13.2-windows.zip file.

2. Follow the installation wizard to proceed to the Server Setup window. In this window, enter the destination folder path.

3. The Server Configuration window appears. If the default values need to be modified, enter the agent service name, agent service port, and the Windows username used to administer this installation of the server.

4. Proceed to the next window, Service Configuration. In this window, enter the service name and service port if the default values need to be modified.

5. Follow the rest of the installation wizard to finish the installation process.

Refer to the *RPAS Administration Guide* for addition information on the ODBC Server.

Install ODBC or JDBC Client Components (Optional)

Perform the procedure below to install the ODBC client driver.

1. To install the ODBC client software, run setup.exe from the ODBC\ODBCClient directory where you extracted the RPAS-13.2-windows.zip file.

2. Follow the installation wizard to proceed to the Oracle RPAS ODBC Driver Setup window. Enter the destination folder if the default values need to be modified.

3. Click **Next**. The Data Source Configuration window appears. If the default values need to be modified, enter the data source name, description, service host name, service port, and service data source name.

4. Follow the rest of the installation wizard to finish the installation process.

Perform the procedure below to install the JDBC client driver.

1. Unzip and untar the jdbcclient.tar.zip from the ODBC/JDBC Client directory where you extracted the RPAS-13.2-windows.zip file to a target destination directory.

Refer to the *RPAS Administration Guide* for addition information on the ODBC Server.

Install MKS Developer Toolkit 8.7

MKS version 8.7 is required if the RPAS Server is to be installed on Windows operating systems. Oracle Retail provides no support or discounts to customers for the license. This must be done directly through MKS. See the following Web site for pricing:

http://www.mks.com/

Follow the vendor instructions for Windows installation.

Determine the Path for the Domain(s)

1. Determine the location(s) of the domain(s) to be installed.

2. Create a directory at the root of the domain to be installed.

Installing the RPAS Server

The procedures below provide information about creating the necessary folders on your Windows PC and copying the RPAS Server components to them.

1. On your C drive, create a folder named **Oracle**.

2. Open the Oracle folder and create a folder named **RPAS13.2**.

3. Open the RPAS13.2 folder and create a folder named **RpasServer**.
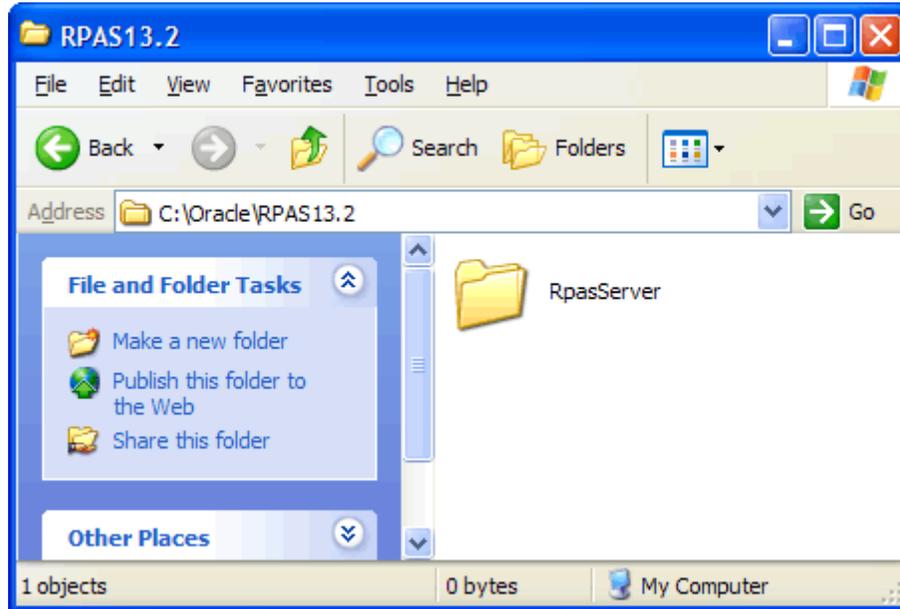
Example of RpasServer Folder Path

4. Copy all files and folders from the Rpas folder where you extracted the Media Pack to the C:\Oracle\RPAS13.2\RpasServer folder.
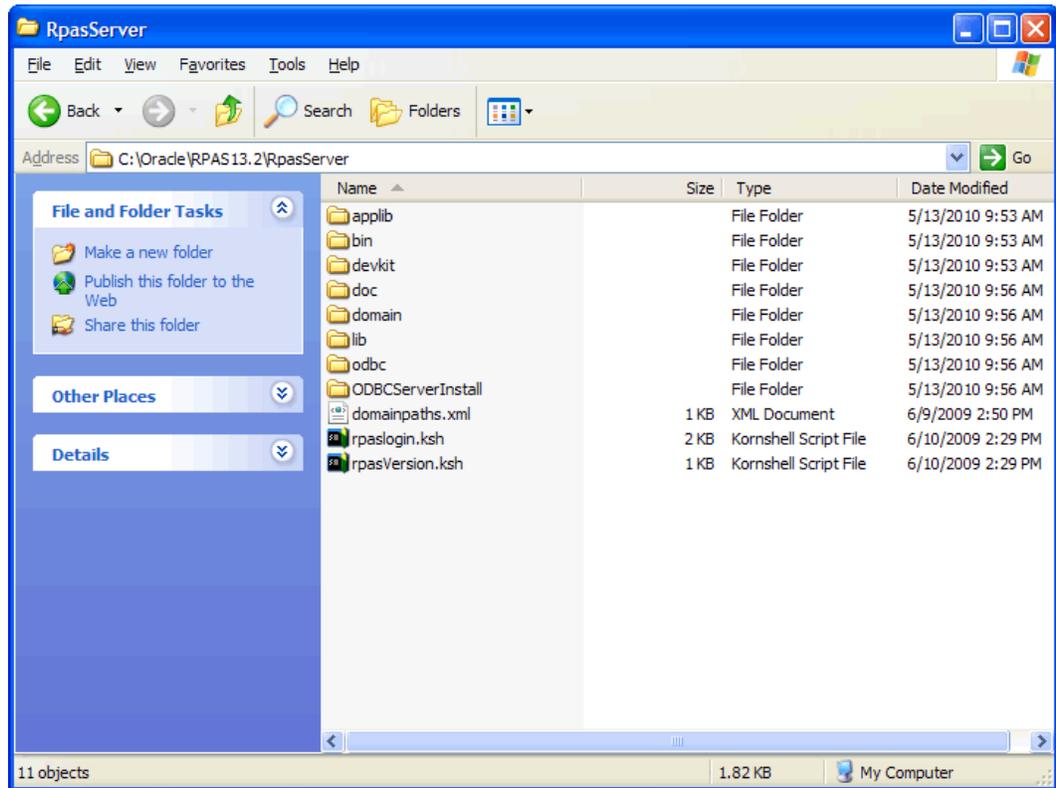
RpasServer Folder with All RPAS Server Components

This location is referred to as RPAS_HOME. An environment variable is defined on your Windows PC to point to this location so that RPAS will function correctly. Refer to Creating the Required Environment Variables for information on creating the necessary RPAS variables.

Installing Configuration Tools

The procedures below provide information about creating the necessary folders on your Windows PC and copying the Configuration Tools components to them.

1. Using Windows Explorer, navigate to your C drive, create a folder named **Oracle\RPAS13.2** folder, which you created in the Installing the RPAS Server section.

2. Create a folder named **ConfigTools**.
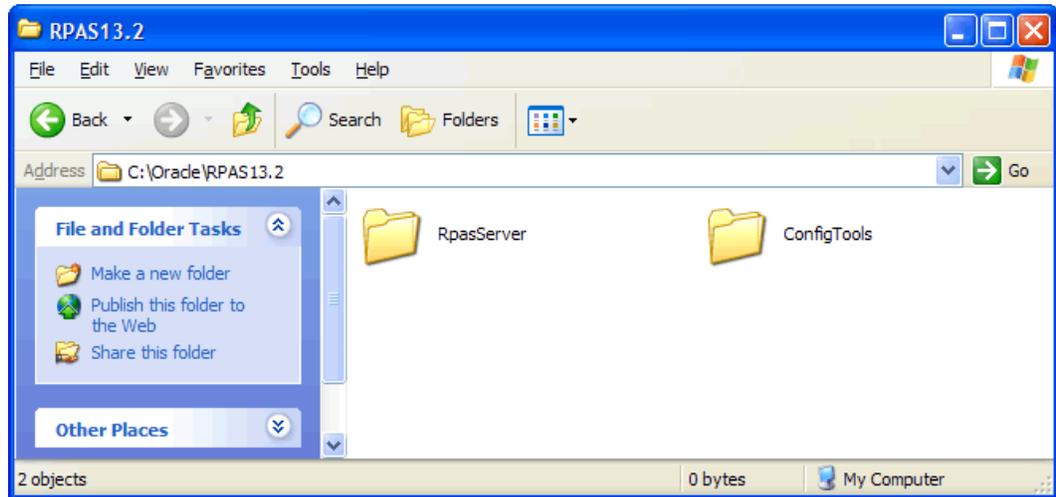
Example of ConfigTools Folder Path

3. Copy all files and folders from the CDROM\Tools folder where you extracted the Media Pack to the C:\Oracle\RPAS13.2\ConfigTools folder.
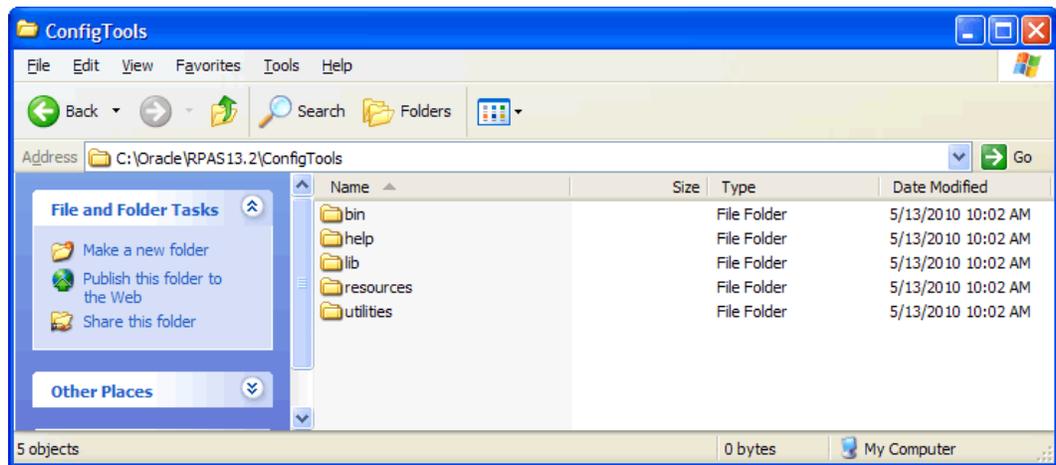
ConfigTools Folder with All Configuration Tools Components

This location is referred to as RIDE_HOME. An environment variable will be defined on your Windows PC to point to this location so that RPAS will function correctly. Refer to Creating the Required Environment Variables section for information on creating the necessary RPAS variables.

Oracle Configuration Manager (OCM)

The Oracle Retail OCM installer is packaged in the CDROM\OCM directory. The collector only needs to be installed once per ORACLE_HOME, WAS_HOME, or installation root directory. After the initial installation, the OCM collector automatically performs self-updates.

For more information about Oracle Retail OCM, see the following guide:

Oracle Configuration Manager Installer Guide (Note ID: 1071030.1)

This guide describes the procedures and interface of the Oracle Retail OCM collector that is a part of Oracle Retail full releases.

This document is available through My Oracle Support. Access My Oracle Support at the following URL:

https://support.oracle.com

OCM Documentation Link:

http://www.oracle.com/technology/documentation/ocm.html

Creating Start Menu Shortcuts to RPAS Applications and Utilities

The procedures below provide information on creating shortcuts to the following applications:

- Configuration Tools
- Configuration Converter

1. Open Windows Explorer and navigate to C:\Documents and Settings\All Users\Start Menu\Programs. The Programs window displays all applications and shortcuts available to all users accessing the PC.

2. Right-click the window and select **New – Folder**. Name this folder **Oracle**.
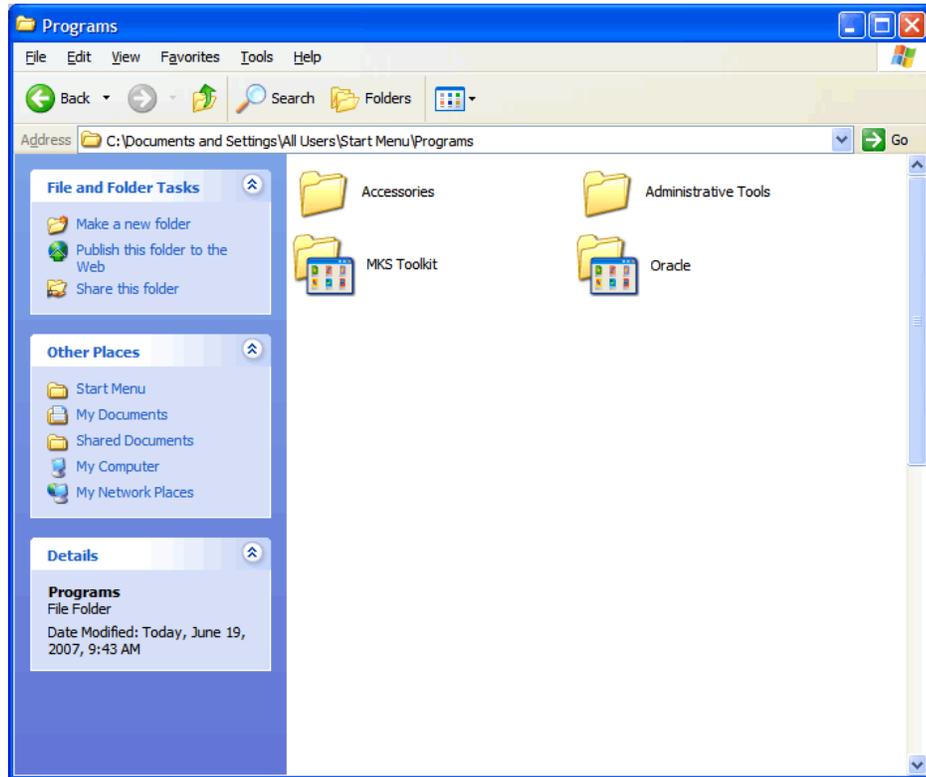
Programs Windows with Oracle Folder

3. Double-click the Oracle folder. The folder opens in Windows Explorer.

4. Right-click the Oracle window and select **New – Folder**. Name the folder **RPAS 13.2**.

5. Create a shortcut to Configuration Tools:

   a. Double-click the RPAS 13.2 folder, right-click in the folder window, and select **Shortcut**. The Create Shortcut wizard dialog box appears.
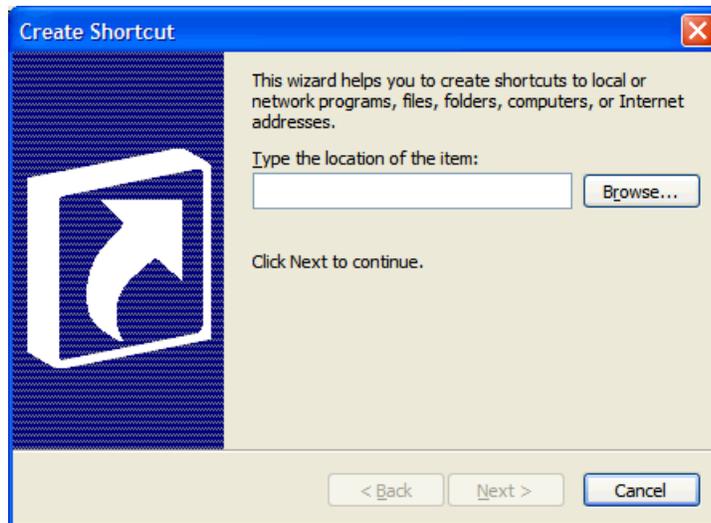
Create Shortcut Wizard Dialog Box

   b. Click **Browse** and navigate to the Oracle\RPAS13.2\ConfigTools\bin folder on your C drive.

    c. Select **ConfigTools.exe** and click **OK**. The selected path appears in the Create Shortcut wizard.

    d. Click **Next**. The Select a Title for the Program wizard screen appears. By default, this screen displays the file name and extension selected.

    e. In the text field, enter **Configuration Tools** as the shortcut name and click **Finish**. The shortcut wizard closes and the Oracle window displays the shortcut to the Configuration Tools.

6. Create a Utilities folder in the Oracle window. Right-click the window and select **New – Folder**. Name this folder **Utilities**.

7. Double-click the **Utilities** folder. The folder opens in Windows Explorer.

8. Create a shortcut for the Configuration Converter:

    a. Right-click the Utilities folder window and select **Shortcut**. The Create Shortcut wizard dialog box appears.

    b. Click **Browse** and navigate to the Oracle\RPAS13.2\ConfigTools\utilities folder on your C drive.

    c. Select **RpasConverter.exe** and click **OK**. The selected path appears in the Create Shortcut wizard.

    d. Click **Next**. The Select a Title for the Program wizard screen appears.

    e. In the text field, enter **Configuration Converter – g** as the shortcut name and click **Finish**. The **–g** after the name is required to display the Windows interface for the converter. The shortcut wizard closes and the Oracle window displays the shortcut to the Installer.

9. Verify your shortcuts appear in the Start menu. From the Start menu, select **All Programs – Oracle – RPAS 13.2**. The Configuration Tools and Installer shortcuts should appear. Select the **Utilities** folder and verify the Configuration Converter shortcut appears.

Now that the necessary files and shortcuts are defined, you need to create the necessary environment variables in order to open the applications.

Creating the Required Environment Variables

The following steps outline the process to follow and environment variables required to support the RPAS installation and domain install.

1. From the Control Panel, open the System window.

   a. If your system is using Category view, from the Windows XP Start menu, go to **Control Panel – Performance and Maintenance – System**. If your system is using the Classic view, from the Windows XP Start menu, select **Control Panel** and double-click the **System** icon.

      The System Properties window appears.

   b. Select the **Advanced** tab.

   c. At the bottom of the window, click **Environment Variables.**
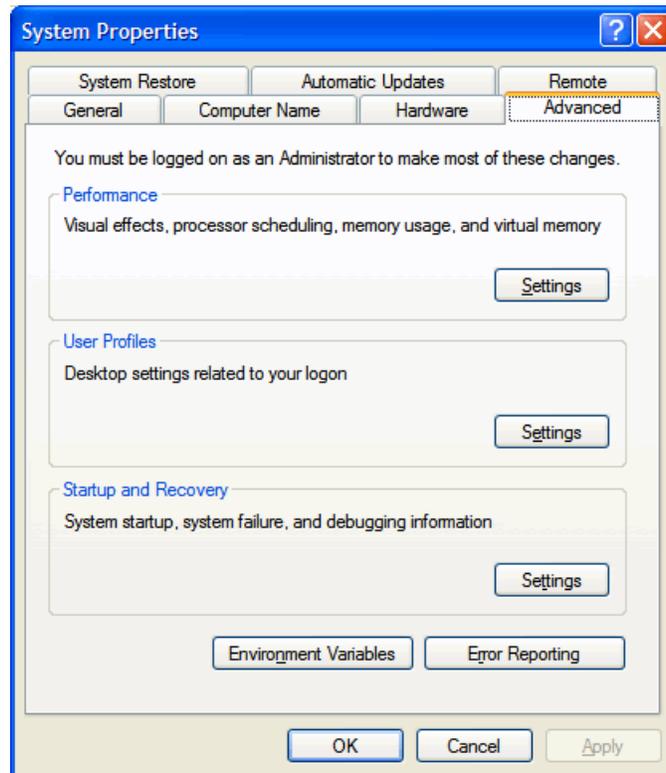
System Properties – Advanced Tab

d. The Environment Variables window appears.
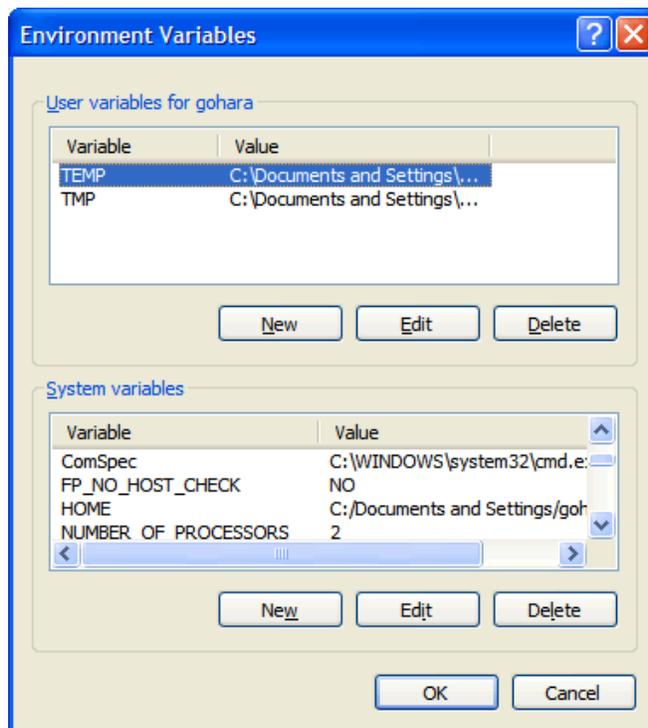
Environment Variables Window

2. Create the RPAS_HOME environment variable.

a. Under the System variables box, click **New**. The New System variable dialog box appears.

b. Enter **RPAS_HOME** in the **Variable** name field.

c. Enter the path the RPAS Server folder in the **Variable value** field.
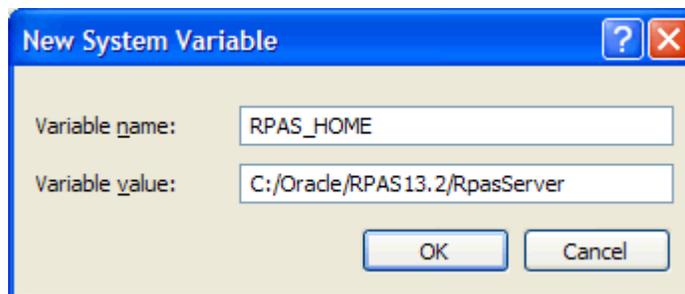
Example of RPAS_HOME Variable

d. Click **OK**. **RPAS_HOME** now appears in the System variables box.

3. Create the RIDE_HOME environment variable.

   a. Under the System variables box, click **New**. The New System variable dialog box appears.

   b. Enter **RIDE_HOME** in the **Variable name** field.

   c. Enter the path the ConfigTools folder in the **Variable value** field.

New User Variable	
Variable name:	RIDE_HOME
Variable value:	C:/Oracle/RPAS13.2/ConfigTools
	OK Cancel
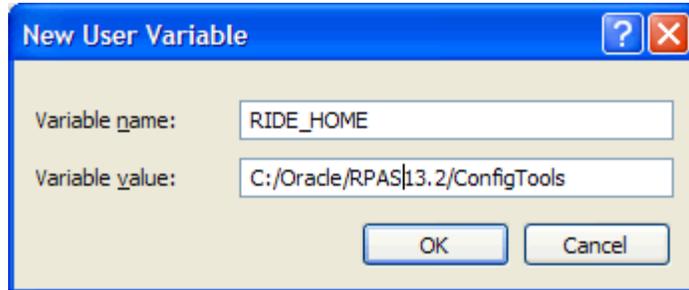
Example of RIDE_HOME Variable

   d. Click **OK**. **RIDE_HOME** now appears in the System variables box.

4. Create the JAVA_HOME environment variable.

   a. Under the System variables box, click **New**. The New System variable dialog box appears.

   b. Enter **JAVA_HOME** in the **Variable name** field.

   c. Enter the path the Java folder under Program Files in the **Variable value** field.

New User Variable	
Variable name:	JAVA_HOME
Variable value:	C:/Oracle/RPAS13.2/jdk1.5
	OK Cancel
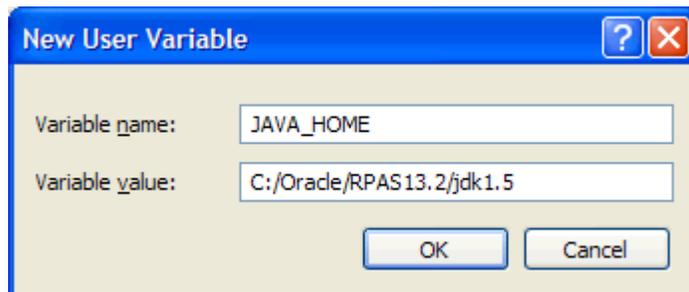
Example of JAVA_HOME Variable

   d. Click **OK**. **JAVA_HOME** now appears in the System variables box.

5. Update the Path variable.

   a. Under the System variables section, select the **Path** environment variable and click **Edit**.

   b. Insert the complete paths for **RPAS_HOME**, **RIDE_HOME**, and **JAVA_HOME** as shown below:

   %RPAS_HOME%/bin; %RPAS_HOME%/applib; %RPAS_HOME%/lib; %RIDE_HOME%/bin; %RIDE_HOME%/lib; %JAVA_HOME%/bin; %JAVA_HOME%/bin/client; %JAVA_HOME%/lib;

   > **Note:** Remember to separate all path statements with semicolons (;).

   c. Select **OK** to save your changes.

6. Close all open windows.

Create a Global Domain Configuration Directory (Optional)

If installing a Global Domain environment, an xml file may be created to determine how the domains will be partitioned and the label of each domain. The following is an example of the structure of the globaldomainconfig.xml file. The items in the example below are as follows:

Path: The location of the root of the domain.

Partitiondim: The partition dimension. Using the below example, pgrp (Group) is the dimension in which the local domains are partitioned. There can only be one partition dimension.

Subpath: The path and name of the local (sub-domain) that contains a specific partition position. ldom+# is the default name given by RPAS to local domains.

Subposition: The position from the partition dimension that is located in the local domain. For example, ldom0 includes all product positions at or below pgrp 1100.

Example file structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<rpas>
    <globaldomain>
        <path>/Domains/RDF132/D01</path>
        <partitiondim>pgrp</partitiondim>
        <subdomain>
            <subpath>/Domains/RDF132/ldom0</subpath>
            <subpositions>1100</subpositions>
        </subdomain>
        <subdomain>
            <subpath>/Domains/RDF132/ldom1</subpath>
            <subpositions>1300</subpositions>
        </subdomain>
        <subdomain>
            <subpath>/Domains/RDF132/ldom2</subpath>
            <subpositions>2500</subpositions>
        </subdomain>
    </globaldomain>
</rpas>
```

Configure the RPAS Clients to Use the Domain

The RPAS Clients must be configured to point to the newly created domain(s).

Refer to the *RPAS Administration Guide* for instructions on how to configure the RPAS Clients.

Using Multiple Versions of RPAS on the Same Windows Machine

If you have multiple versions of RPAS installed on your PC, it is important to note that the environment variables will reference RPAS 13.2 after the installation process is complete.

> **Note:** Previously set environment variables for other versions or installations of RPAS will still exist in the Path System variable, but Windows uses the first set of variables defined in the path, which is where the installation process places them.

To switch to a different version of RPAS that is installed on your machine, you will need to manually update the environment variables each time you want to switch. You can either insert the path to the version you want to use and leave the path to 13.2, or delete the path and either reinstall the 13.2 components or manually reinsert the paths when you want to revert back to 13.2.

Base Configuration Installation

Overview and Setup

There are three base configurations available with the RPAS archive that can be used to build a domain. These configurations are initially stored in the following folders that were created in the CDROM folder when you extracted the RPAS-13.2-windows.zip file in the location where you downloaded the RPAS Media Pack.

- Grade – Grade is a clustering tool that provides insight into how various parts of a retailer's operations can be grouped together.
- Curve – Curve is a profile generation tool used to produce ratios (profiles) from historical data at user-specified intersections.

The following section describes how to use these configurations to build a domain.

Process Overview

The diagram below shows an overview of the steps involved in using a configuration to build and an RPAS domain. This section describes each of the steps in this diagram.
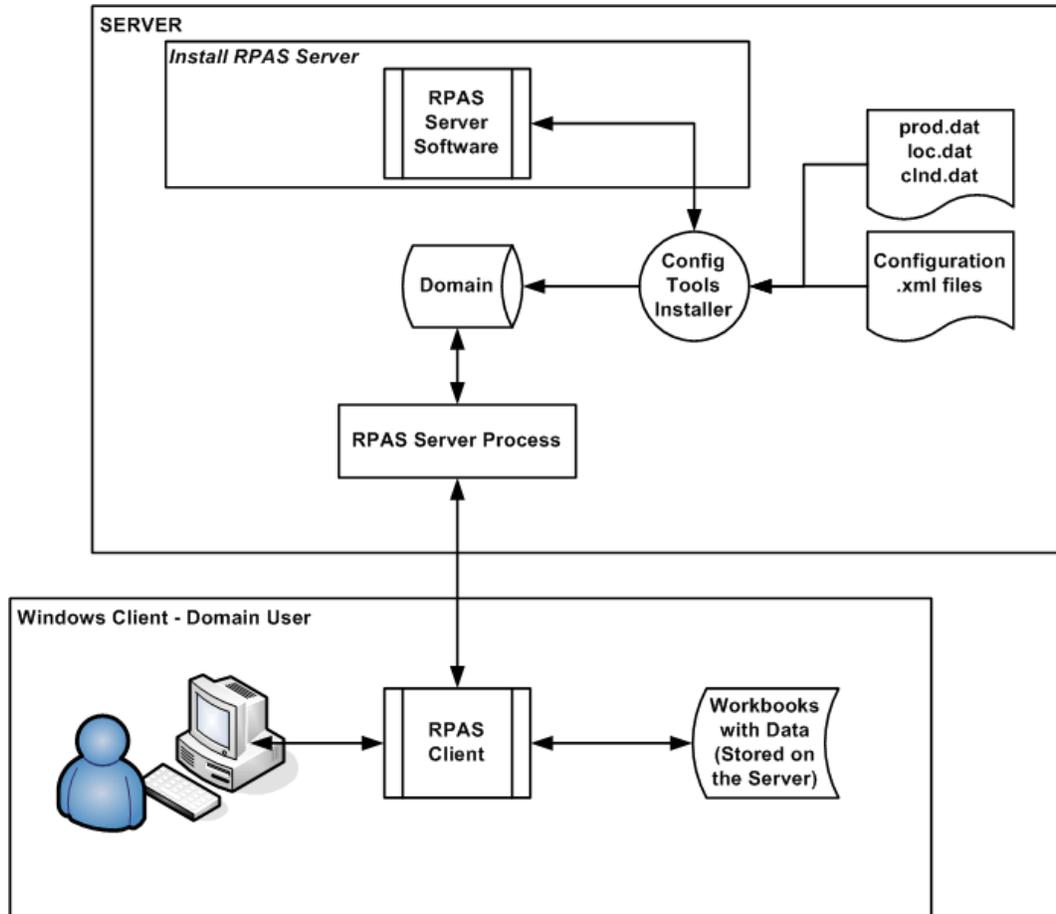
Process Overview Diagram

Verify the Environment Variable Settings

Prior to beginning the domain build process you should have installed RPAS and the Configuration Tools on your server. During that process, you should have set up the necessary environment variables for RPAS and the Configuration Tools.

Perform the following steps to verify that environment variables have been successfully configured.

Open an MKS KornShell window. Use the commands below to verify your environment settings:

```
echo $RPAS_HOME
echo $RIDE_HOME
echo $JAVA_HOME
echo $PATH
```

> **Note:** The path for the RPAS_HOME variable may change from release to release.

If you make any changes to the environment variable settings, remember to exit and restart your UNIX session in order to execute your .profile and make the changes effective. This step is very important before you continue to the remaining steps.

> **Note:** The paths for your RIDE_HOME and RPAS_HOME variables cannot have spaces in them, unless short file naming conventions are utilized. Given this restriction, do not place your Tools build, Tool Configurations or RPAS installation under Program Files or My Documents. If you do, define all RPAS related environment variables using short (8dot3) file names.

Setting Up Base Configuration Files

Locate and copy/move the desired configuration zip file to a location on your machine. For the purposes of these instructions assume that location is called C:/root/testenv/<Configuration>.

The following subfolders will be created in C:/root/testenv/<Configuration>:

- data/ – hierarchy and sample data files (this path is used in conjunction with the –in [input] option of the rpasInstall command)
- configuration/<Configuration_Name> – Configuration files for use in building the domains where <Configuration_Name> will be Sample_Configuration, Grade, or Curve.

  Do not change the directory name for the configuration or alter the contents in any way.
- scripts – Scripts used to complete the domain build process.
- resources – Contains the plug-ins for the Configuration Tools. When this resource directory is supplied, it must be copied in its entirety to the RIDE_HOME location. This must be done in order for the Configuration Tools to build domains.

Building the Domain on your Windows PC

This section provides instructions for how to create a domain from the base configurations.

Because building an RPAS domain on Windows is currently a manual process, the person building the domain should be skilled in administering UNIX or Windows servers and should have scripting skills.

> **Note:** The Configuration Tools are supported on all platforms (HP-UX, AIX, and Windows); however, they require Java 1.5 or 1.6. Make sure that the server you will be using has this version of Java.

1. Create a **testenv** (test environment) folder on your C drive.
2. Copy the Curve and Grade folders from the CDROM directory, which is located where you extracted the RPAS-13.2-windows.zip file, to the testenv folder.

Sample Data Files

The domain build process requires the following data files to be available:

- prod.dat
- loc.dat
- clnd.dat
- input data files for measures (<measure>.ovr)

These files should be located in the C:/root/testenv/<Configuration>/data directory. This directory path will be used during the domain build process as the input directory.

Domain Environment Setup

The path that the domain will be created must exist prior to running the domain build process.

For the domain, manually create the directory structure:

C:/root/testenv/domain

The name of the domain will automatically be created under the domain path based on the configuration name. So, for the above domain path, the full path to the domain will be as follows once the domain build process is completed.

C:/root/testenv/domain/<Configuration>

Build the Domain

Use the Tools Installer, the rpasInstall script, to build the domain. This executable is located in bin directory of your Tools installation. There are different scripts to run based on which configuration is being used to build a domain.

Refer to the *RPAS Configuration Tools User Guide* for more information on the Tools Installer and the specific options available when using the `rpasInstall` command.

> **Note:** The `rpasInstall` script only loads the hierarchy files and builds the domain. It does not load any measure data. The hierarchy files are copied to the /input/processed directory of the domain and appended with a time-date stamp.

Grade

Enter the following command to build a domain for the Grade configuration:

```
rpasInstall -fullinstall -dh <path to the domain> -cn Grade -ch <path to the
configuration> -in <path to the data files> -log <path to the location and name of
the installation log> -rf AppFunctions -rf ClusterEngine -p pgrp
```

After the domain installation has completed the sales data must be loaded into the domain using the `loadmeasure` utility. Open a command prompt from the master domain (/Grade) and type the following commands:

```
loadmeasure -d . -measure dpos
loadmeasure -d . -measure rsal
loadmeasure -d . -measure csal
loadmeasure -d . -measure psal
```

Open a command prompt from the local domain (/Grade/ldom0) and type the following command:

```
mace -d . -run -group common_batch
```

Repeat this step for each of the remaining local domains (/Grade/ldom1, /Grade/ldom2).

Curve

Enter the following command to build a domain for the Curve configuration:

```
rpasInstall -fullinstall -dh <path to the domain> -cn Curve -ch <path to the
configuration> -in <path to the data files> -log <path to the location and name of
the installation log> -rf AppFunctions -rf ClusterEngine -p pgrp
```

After the domain installation has completed the sales data must be loaded into the domain using the `loadmeasure` utility. Open a command prompt from the master domain (/Curve) and type the following commands:

```
loadmeasure -d . -measure dpos
loadmeasure -d . -measure rsal
loadmeasure -d . -measure csal
loadmeasure -d . -measure psal
```

Open a command prompt from the local domain (/Curve/ldom0) and type the following command:

```
mace -d . -run -group common_batch
```

Repeat this step for each of the remaining local domains (/Curve/ldom1, /Curve/ldom2).

Start the RPAS Server (DomainDaemon)

In order to use the domains built from the sample configurations, the RPAS Server must be running on the server/machine where the domain is located.

The RPAS Server is started by executing the RPAS DomainDaemon executable, which provides a centralized process for managing domain connections between the client and the server.

Below are the basic instructions for running the DomainDaemon, which will allow a user to connect to the RPAS Server and a domain using the RPAS Clients. Complete information about the Domain Daemon is located in the *RPAS Administration Guide*.

Execute the following command from a UNIX command line (or using MKS on Windows). If the environment variables paths have been properly set, this command can be run from any directory.

```
DomainDaemon –port <port_number> –start
```

Where `<port_number>` is an integer between 1025 and 65535.

This port number must be used in the configuration file for the RPAS Classic Client. Refer to the Installing and Configuring the RPAS Classic Client chapter for additional information.

4

RPAS Web Deployment

The RPAS Classic Client can be deployed through traditional installation or through Web-based environments. This chapter describes the RPAS Web deployment installation process.

> **Note:** Accessing RPAS through a Web-based deployment is different from the RPAS Fusion Client. For more information on the RPAS Fusion Client, see Installing the RPAS Fusion Client.

Web-based deployment allows you to perform the following:

- Use a Web browser to install the RPAS Classic Client application to the user's computer.
- Launch the RPAS Classic Client when it has already been installed.
- Reinstall the RPAS Classic Client when an updated version is available.
- Use the RPAS Web Launch applet to facilitate In-Context Launch integration.

Web deployment has been tested and is supported for the following components:

- Oracle WebLogic Server 11gR1 (Release 10.3.2) with Oracle Application Development Runtime 11g (11.1.1.2.0) and JDK 1.6. If Oracle Single Sign-On (SSO) is used, the WebLogic server must be registered with an OID provider.
- Apache Tomcat version 6.0 with JDK 1.5 or 1.6.
- Microsoft Internet Explorer version 6.0/7.0 with Sun JVM plug-in of Java version 1.5.

These instructions assume that the software specified above has been properly installed and configured. Consult the documentation of each component for installation and configuration information, as well as hardware and software requirements.

For the RPAS Web deployment to function properly, users must have sufficient access to their PCs (typically administrator rights) which allow them to install software, unless the administrator configures the applet to launch only preinstalled RPAS Classic Client. Specifically, they need permission to write into the Windows Registry.

Installation and Configuration Process Overview

The following is an overview of the process that must be followed to install RPAS for Web deployment.

- Install the RPAS Web Application. This installation is completed onto the Web server and involves two components that are included with the RPAS archive (RPAS.war or RPAS_osso.war, and RPASWebData.tar).
- Install multiple versions of RPAS Classic Client files on Web server (as needed).
- Configure the RPAS Servlet by using the deployment descriptor web.xml to specify servlet properties.
- Configure Oracle Single Sign-On for RPAS Web application (if Oracle SSO is used).
- Start the RPAS Web Configuration Utility. Using the URL of the RPAS Web Launch application, administrators and users follow this process to log in to the system.

- Configure Web Launch and Web Tunneling: using the Enterprise Configuration component of the Administration Console, the administrator indicates whether Web tunneling is to be used.

- Perform other Web client administration activities. Once the Web deployment environment is prepared, additional configuration and administration activities, such as domain configuration and managing administrative users, may need to be performed.

Installing the RPAS Web Application

Installing the RPAS Web Application consists of the following procedures:

- Preparing your environment
- Installing the necessary files and configuring the environment based on your type of installation. Three different processes may be used for RPAS Web deployment:
    - Installing on WebLogic Server with SSO Support
    - Installing on WebLogic Server without SSO Support
    - Installing on Apache Tomcat (a standalone server that is not part of the Single Sign-On (SSO) infrastructure)
- Configuring the RPAS Servlet
- Configure and Administer the Web application

Preparing Your Environment

1. Log in to the UNIX server and determine where the RPAS Web files will be installed. A minimum of 50 MB disk space available is required for the application installation files. More space may be needed if multiple versions of RPAS Classic Client are supported on the Web server.

2. Copy the RPAS Web files (RPAS.war, RPAS_osso.war and RPASWebData.tar), located in [RPAS Installation]/Web/ directory, to a newly created staging directory on the UNIX server. This directory will be referred to as STAGING_DIR.

3. Extract the RPASWebData.tar to the appropriate location. This location is referred to as [RPAS_WEB_DATA_DIR] in this document. If the Web server is running in a load balance environment with multiple servers, the RPASWebData files must be deployed to a network drive accessible to all Web server instances. A new directory RPASWebData/ and three subdirectories (client/, db/, and logs/) are created. Verify that the client directory has read permissions and that the db and logs directories have read and write permissions.

4. For each release of RPAS Classic Client, there are two files: buildNumber.txt and client.zip. These files are not part of RPAS Web files. They generally come with RPAS release package. The default installation location for the files is [RPAS_WEB_DATA_DIR]/RPASWebData/client. If multiple client versions are to be supported, both files of each version must be placed under [RPAS_WEB_DATA_DIR]/RPASWebData/client/[VERSION] where [VERSION] is the version number of that release (for example, 13.2, 12.0.10).

5. Perform the necessary procedures based on your type of implementation.

Installing on WebLogic Server with SSO Support

Perform the following procedure if you are implementing RPAS Web on a WebLogic server with Single Sign-On (SSO) Support. This process consists of several steps:

- Step 1: Meet the Prerequisites for RPAS Web Deployment Using Oracle Single Sign-On (SSO)
- Step 2: Configure the mod_weblogic Module
- Step 3: Register the RPAS HTTP Server with the OSSO Server
- Step 4: Configure the mod_osso Module to Protect the RPAS Root
- Step 5: Add providers to your WebLogic domain for OSSO
- Step 6: Set Up the WAR File
- Step 7: Deploy the WAR File
- Step 8: Set RPAS Role for Oracle Single Sign-On Logins

Step 1: Meet the Prerequisites for RPAS Web Deployment Using Oracle Single Sign-On (SSO)

Make sure the following procedures have been performed before installing RPAS Web using Oracle Single Sign-on:

1. Install the Oracle Application Server Single Sign-On (OSSO) referring to the *Oracle Application Server Installation Guide* included within the *Oracle Identity Management 10g Release 3 (10.1.4)* documentation.

2. Install the Oracle Identity Management Infrastructure server, including the Oracle Internet Directory (OID) LDAP. For more information, refer to the *Oracle Fusion Middleware Installation Guide for Oracle Identity Management 11g Release 1 (11.1.1)* and *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory 11g Release 1 (11.1.1)*.

3. Obtain the OID information (TCP/IP address and port, whether SSL is used as a transport mechanism and the realm name) from Oracle SSO server administrator. You will also need an administrative login and password, such as that used by the orcladmin user.

4. Install the Oracle HTTP Server 11g as a front end to the RPAS application server by referring to the *Oracle Fusion Middleware Installation Guide for Oracle Web Tier 11g Release 1 (11.1.1)*.

5. Install the Oracle WebLogic Server, create a WebLogic domain, and extend it with the JRF template. For more information, refer to the Oracle WebLogic Server documentation.

Step 2: Configure the mod_weblogic Module

Configure the mod_weblogic module using the following steps:

1. The Oracle HTTP Server uses the **httpd.conf** file as its base configuration file. Ensure that the **httpd.conf** references the mod_weblogic module configuration file (**mod_wl_ohs.conf**).

2. Navigate to the location where the **mod_wl_ohs.conf** file exists and open it for editing. For example, `$ORACLE_INSTANCE/config/<COMPONENT_TYPE>/ <COMPONENT_NAME>`

3. Update the file based on the following examples:

4. For a single WebLogic instance, specify:
    ```
    <Location /console>
       SetHandler weblogic-handler
       WebLogicHost server1
       WeblogicPort 7001
    </Location>
    ```
    This will forward `/console` from the HTTP server to `/console` on the WebLogic Server with the host name and port number, server1:7001.

5. For Weblogic instances in a cluster, specify:
    ```
    <Location /myServerURL>
        SetHandler weblogic-handler
       WebLogicCluster server1:7010,server2:7010
    </Location>
    ```
    This will forward `/myServerURL` from the HTTP server to `/myServerURL` on the WebLogic Clusters with the host names and port numbers, server1:7010 and server2:7010.

    > **Note:** In the examples above, myServerURL, server1 and server 2 have been used for illustrative purposes. Ensure that you use relevant host names, port numbers, and context roots based on your implementation.

Step 3: Register the RPAS HTTP Server with the OSSO Server

Register the RPAS HTTP server with the OSSO server via the ssoreg.sh script. The output of this command will be a binary file, denoted here as the osso.conf file. Copy osso.conf to the RPAS HTTP server (*ORACLE_INSTANCE/config/OHS/<ohs_name>/osso/osso.conf*) and configure the RPAS HTTP Server to enable the mod_osso module. For more information, refer to the following documentation:

- *Oracle Application Server Single Sign-On Administrator's Guide 10g Release 3 (10.1.4)*.
- *Oracle Identity Management Application Developer's Guide 10g Release 3 (10.1.4)*.

Step 4: Configure the mod_osso Module to Protect the RPAS Root

Perform the following to protect the RPAS root location in the Oracle HTTP Server configuration. You must configure the mod_osso module to protect the Web resources:

1. Copy the **mod_osso.conf** file from the disabled directory to the moduleconf directory for editing. For example:
   From:
   ```
   ORACLE_INSTANCE/config/OHS/<ohs_name>/disabled/mod_osso.conf
   ```
   To:
   ```
   ORACLE_INSTANCE/config/OHS/<ohs_name>/moduleconf/mod_osso.conf
   ```

2. Copy the **osso.conf** file from the location where it was generated to the following location:
   ```
   ORACLE_INSTANCE/config/OHS/<ohs_name>/osso/
   ```

3. Edit the **mod_osso.conf** file and add the following information using values for your deployment. For example, using Oracle HTTP Server as an example :
   ```
   LoadModule osso_module "${ORACLE_HOME}/ohs/modules/mod_osso.so"
   <IfModule osso_module>
       OssoIpCheck off
       OssoIdleTimeout off
       OssoSecureCookies off
       OssoConfigFile
   ORACLE_INSTANCE/config/OHS/<ohs_name>/osso/osso.conf
     <Location /[CONTEXT_ROOT]>
         require valid-user
         AuthType Osso
     </Location>
   </IfModule>
   ```

4. Navigate to the following location:
   ```
   ORACLE_INSTANCE/config/OHS/<ohs_name>/httpd.conf
   ```

5. Edit the **httpd.conf** file and confirm that the mod_osso.conf file path for your environment is included. For example:
   ```
   include
   /ORACLE_INSTANCE/config/OHS/<ohs_name>/moduleconf/mod_osso.conf
   ```

6. Restart the Oracle HTTP Server.

> **Note:** Protect /[CONTEXT_ROOT]/web instead of /[CONTEXT_ROOT] to let through /[CONTEXT_ROOT]/tunnel for Web tunneling.

Step 5: Add providers to your WebLogic domain for OSSO

In addition to the OSSO Identity Asserter, Oracle recommends the following Authentication providers:

- DefaultAuthenticator
- OID Authenticator

To add providers to your WebLogic domain for OSSO Identity Assertion:

1. Log on to the WebLogic Administration Console.

2. Under the **Domain Structure** (left navigation pane), click **Security Realms**. The **Summary of Security Realms** screen appears.

3. On the **Summary of Security Realms** screen, click the default security realm (myrealm). The **Settings for myrealm** screen appears.

4. On the **Settings for myrealm** screen, click the **Providers** tab, and then click **New**. The **Create a New Authentication Provider** screen appears.

5. Enter a provider name for the OSSO Identity Asserter, select the relevant type, and then click **OK**. For example,
   Name: OSSO Identity Asserter
   Type: OSSOIdentityAsserter
   The new provider is added to the list of providers and appears on the Settings for myrealm screen.

6. Click the name of the provider you just added.

7. On the **Common** tab, set the relevant values for the parameter, set the **Control Flag** value to **Sufficient**, and then click **Save**.

8. On the **Providers** tab, click **DefaultAuthenticator**. The **Settings for DefaultAuthenticator** screen appears.

9. Set the **Control Flag** value to **Optional** and click **Save**.

10. On the **Providers** tab, click **New**. The **Create a New Authentication Provider** screen appears.

11. Enter a provider name for the **OID Authenticator**, select the relevant type, and then click **OK**. For example,
    Name: OID Authenticator
    Type: OracleInternetDirectoryAuthenticator
    The new provider is added to the list of providers and appears on the Settings for myrealm screen.

12. Click the name of the provider you just added and review the settings. Do not change the Control Flag value until you have verified that the Oracle Internet Directory configuration is valid.

> **Note:** If OID Authenticator is the only provider, to ensure that the WebLogic domain starts properly, the WebLogic Server user account and its granted group memberships must be created in the Oracle Internet Directory.

13. On the **Provider Specific** tab, specify relevant values in the following fields:

- **Host** – specify the host name of the Oracle Internet Directory.
- **Port** – specify the port number associated with the Oracle Internet Directory.
- **Principal** – specify an LDAP administrative user. For example, cn=orcladmin.
- **Credential** – specify the password associated with the LDAP administrative user.
- **Confirm Credential** – enter the password again to confirm the credential.
- **User Base DN** – specify the distinguished name (DN) of the tree in the Oracle Internet Directory that contains the users.
- Use Retrieved User Name as Principal – select this check box.
- **Group Base DN** – specify the distinguished name (DN) of the tree in the Oracle Internet Directory that contains the groups.
- Propagate Cause For Login Exception – select this check box.

14. Click **Save**.

15. The order in which providers populate a subject with principals is significant. You may want to reorder the list of all providers in your realm and bring the newly added provider to the top of the list, similar to the following:

- OSSO Identity Asserter
- OID Authenticator
- Default Authenticator
- Default Identity Asserter

16. Save all configuration settings and restart the WebLogic server for the changes to take effect.

17. Log on to the WebLogic Administration Console and navigate to the **Settings for myrealm** screen. See steps a through c.

18. Click the **Users and Groups** tab to view a list of users and groups included in the configured Authentication providers. You should see user names from the Oracle Internet Directory configuration, which verifies that the configuration is valid and working:

- If the Oracle Internet Directory instance is configured successfully, you can change the Control Flag.
- If the Oracle Internet Directory authentication is sufficient for an application to identify the user, then choose the SUFFICIENT flag. SUFFICIENT means that if a user can be authenticated against Oracle Internet Directory, no further authentication is processed. REQUIRED means that the Authentication provider must succeed even if another provider already authenticated the user.

> **Note:** In case the application requires the user names to be in the same case as stored in the Oracle Internet Directory, select the Use Retrieved User Name as Principal check box in the Provider Specific tab. See step 13.

19. Save and activate the changes.

20. Restart the WebLogic server.

Step 6: Set Up the WAR File

Perform the following procedure to set up and deploy the WAR file to the WebLogic Server.

1. **Configure the Application for the OSSO Identity Asserter** – The WebLogic Server supports adding multiple authentication-methods. If you are setting up an OSSO Identity Asserter in the WebLogic Application Console, the Web application using the OSSO Identity Asserter must have its auth-method set to CLIENT-CERT. After deploying the application on the WebLogic Server, all web.xml files in the application EAR file must include CLIENT-CERT in the element auth-method for the appropriate realm. To edit web.xml for the OSSO Identity Asserter

   a. Locate the **web.xml** file in the application WAR file. For example:
   ```
   WEB-INF/web.xml
   ```

   b. Locate the auth-method for the appropriate realm and enter CLIENT-CERT. For example:
   ```
   <login-config>
     <auth-method>CLIENT-CERT</auth-method>
     <realm-name>myRealm</realm-name>
   </login-config>
   ```

   c. Save the file.

2. **Configure the RPAS Web Launch** – To configure RPAS Web Launch, you need to modify one property file (propfile) located within the WEB-INF/config directory of the RPAS_osso.war file.

   a. Locate the following information in **propfile** and replace [RPAS_WEB_DATA_DIR] with the actual location and [HOSTNAME] with the host name of the server)
   ```
   dbPath=[RPAS_WEB_DATA_DIR]/RPASWebData/db
   clientSourceDir=[RPAS_WEB_DATA_DIR]/RPASWebData/client
   tunnelLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/tunnel.[HOSTNAME].log
   webLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/rpasPortal.[HOSTNAME].log
   isOSSO=true
   debug=false
   classicMode=false
   launchPreinstalledOnly=false
   supportMultipleVersions=true
   ```

   > **Note:** The isOSSO flag must be set to true. Set launchPreinstalledOnly to true if only pre-installed RPAS Classic Client can be launched. Set classicMode to true to support RPAS Classic Client release 9.4. To support multiple versions of RPAS Classic Client, set supportMultipleVersions to true.

   b. Save the file and the WAR archive.

Step 7: Deploy the WAR File

Perform the following procedure to deploy the WAR file to the WebLogic Server:

1. Log on to the WebLogic Administration Console.

2. Under the **Domain Structure** (left navigation pane), select **Deployments**. The **Summary of Deployments** screen appears.

3. On the **Summary of Deployments** screen, click **Install**. The **Install Application Assistant** screen appears.

4. On the **Install Application Assistant** screen, navigate to the location where you extracted the **RPAS_osso.war** ([STAGING_DIR]/RPAS_osso.war), select the file, and click **Next**.

5. Click the **Install this deployment as an application** option and then click **Next**. The next screen displays optional settings. You can choose to set them up or accept the default values and proceed.

6. Optional. Enter relevant information for the optional settings.

7. Click **Finish**. The WAR file is deployed and it appears listed in the **Summary of Deployments** screen.

8. On the **Summary of Deployments** screen, click the deployment you just added. The **Settings for <deployment-name> screen** appears.

9. On the **Configuration** tab, under **General**, enter a relevant value in the **Context Root** field. You can choose to type RPAS or any other context root. This name is referred to as [CONTEXT_ROOT] in this document.

10. Click **Save**. The **Save Deployment Plan Assistant** screen appears.

11. Enter or select a location for the deployment plan, and click **OK**.

12. Restart your deployment for the changes to take effect.

Step 8: Set RPAS Role for Oracle Single Sign-On Logins

There are two types of roles for RPAS Web Launch users: RPAS_ADMIN_ROLE and RPAS_USER_ROLE.

Both roles can launch the RPAS Classic Client and connect to a domain. Only RPAS_ADMIN_ROLE has the privilege to access the ADMIN interface.

It is recommended that RPAS_USER_ROLE be assigned to most Oracle Single Sign-On (OSSO) users (such as planner) and RPAS_ADMIN_ROLE be assigned for a few power users (such as executive). This needs to be performed on the LDAP server storing the OSSO user information.

The roles can be created manually by using the OID DAS application. The oidadmin application or LDIF scripts may also be used to create users and roles. See the OID documentation for more details.

Creating a Group Using the DAS Application

Use the following procedure to use the DAS application to create the RPAS_USER_ROLE and RPAS_ADMIN_ROLE accounts.

1. Access the DAS application.

   The DAS application is found in the following location:

   http://<host>:<port>/oiddas

   where <host> and <port> are the infrastructure or Oracle Identity Management OAS.

   Example: http://mspdev65.us.oracle.com:7778/oiddas

2. Click the **login** link and log in as **orcladmin** or another privileged user.

3. On the right-side of the page, select the **Directory** tab, and on the left side, select the **Groups** link.

4. Click **Create**.

5. Enter the name of the group to create (for example, RPAS_ADMIN_ROLE), the Display name, and a description.

6. Make sure the **Group Visibility** option is set to **Public**.

7. If you would like, add additional users. Scroll to the **Members** section and select the **Add User** button to add users to this group. You can also nest other groups as well. Members can be added at a later time as needed.

8. When all members have been added, click the **Submit** button.

Creating Groups from an LDIF Script

Alternatively, you can create the groups using an LDIF script. A template is given below. Note that the following token @BASE_REALM_DN@ needs to be replaced with installation specific value of the Realm Distinguished Name. Also, this script creates the group with a single member, orcladmin, as part of the group. Additional members may be added via more uniquemember attributes. You can execute the script via the ldapadd command supplied with the Oracle Identity Management infrastructure OAS server.

Example:

```
# The LDIF template for creating RPAS_ADMIN_ROLE and RPAS_USER_ROLE groups in OID.
# RPAS_USER_ROLE
dn: cn=RPAS_USER_ROLE,cn=groups,@BASE_REALM_DN@
objectclass: top
objectclass: groupOfUniqueNames
objectclass: orclGroup
cn: RPAS_USER_ROLE
displayname: RPAS user role
description: RPAS user role
orclisvisible: true
owner: cn=orcladmin,cn=users,@BASE_REALM_DN@
uniquemember: cn=orcladmin,cn=users,@BASE_REALM_DN@

# RPAS_ADMIN_ROLE
dn: cn=RPAS_ADMIN_ROLE,cn=groups,@BASE_REALM_DN@
objectclass: top
objectclass: groupOfUniqueNames
objectclass: orclGroup
cn: RPAS_ADMIN_ROLE
displayname: RPAS Administrator role
description: RPAS Administrator role
orclisvisible: true
owner: cn=orcladmin,cn=users,@BASE_REALM_DN@
uniquemember: cn=orcladmin,cn=users,@BASE_REALM_DN@
```

Once the RPAS groups have been created via the LDIF script, you could use the OID DAS application to add more members to them.

Installing on WebLogic Server without SSO Support

Perform the following procedure if you are implementing RPAS Web on a WebLogic Server instance without Single Sign-On (SSO) Support. This process consists of several steps:

- Step 1: Configuring RPAS Web Launch
- Step 2: Deploying the WAR File

Step 1: Configuring RPAS Web Launch

To configure RPAS Web Launch, you need to modify one property file (propfile) located within the WEB-INF/config directory of the RPAS.war file.

1. Locate the following information in **propfile** and replace `[RPAS_WEB_DATA_DIR]` with the actual location and `[HOSTNAME]` with the host name of the server)

   ```
   dbPath=[RPAS_WEB_DATA_DIR]/RPASWebData/db

   clientSourceDir=[RPAS_WEB_DATA_DIR]/RPASWebData/client

   tunnelLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/tunnel.[HOSTNAME].log

   webLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/rpasPortal.[HOSTNAME].log

   isOSSO=false

   debug=false

   classicMode=false

   launchPreinstalledOnly=false

   supportMultipleVersions=true
   ```

   Please note that `isOSSO` flag must be set to `false`. Set `launchPreinstalledOnly` to `true` if only pre-installed RPAS Classic Client can be launched. Set `classicMode` to `true` to support RPAS Classic Client release 9.4. Set `supportMultipleVersions` to `true` to support multiple versions of RPAS Classic Client.

2. Save the file and WAR archive.

Step 2: Deploying the WAR File

Perform the following procedure to deploy the WAR file to the Oracle Application Server without SSO.

1. Log on to the WebLogic Administration Console.

2. Under the **Domain Structure** (left navigation pane), select **Deployments**. The **Summary of Deployments** screen appears.

3. On the **Summary of Deployments** screen, click **Install**. The **Install Application Assistant** screen appears.

4. On the **Install Application Assistant** screen, navigate to the location where you extracted the **RPAS.war** ([STAGING_DIR]/RPAS.war), select the file, and click **Next**.

5. Click the **Install this deployment as an application** option and then click **Next**. The next screen displays optional settings. You can choose to set them up or accept the default values and proceed.

6. Optional. Enter relevant information for the optional settings.

7. Click **Finish**. The WAR file is deployed and it appears listed in the **Summary of Deployments** screen.

8. On the **Summary of Deployments** screen, click the deployment you just added. The **Settings for <deployment-name> screen** appears.

9. On the **Configuration** tab, under **General**, enter a relevant value in the **Context Root** field. You can choose to type RPAS or any other context root. This name is referred to as [CONTEXT_ROOT] in this document.

10. Click **Save**. The **Save Deployment Plan Assistant** screen appears.

11. Enter or select a location for the deployment plan, and click **OK**.

12. Restart your deployment for the changes to take effect.

Installing on Apache Tomcat

Perform the following procedure if you are deploying RPAS Web launch on a standalone Apache Tomcat server, which implies a non-SSO environment.

Installing RPAS Web Launch on Apache Tomcat consists of two steps:

- Step 1: Deploying the RPAS WAR File
- Step 2: Configuring RPAS Web Launch on Apache Tomcat

Step 1: Deploying the RPAS WAR File

Please refer to your Apache Tomcat documentation for more details of how to deploy a Web archive.

1. Log on to the Tomcat Web server URL: http://server:port/manager/html.

2. Scroll down to **Deploy directory or WAR file located on serve**r section.

3. Type **/RPAS** (or anything else you choose) in the **Context Path** field.
   This location is referred to (without the "/") as [CONTEXT_ROOT] in this document.

4. Type [STAGING_DIR]/RPAS.war in the **WAR or Directory URL** field.

5. Click **Deploy**.

The display name should show **RPAS Web Launch** for a successful deployment. In the event you need to a re-deploy RPAS Web Launch, it is recommended that the following be performed:

- Undeploy the Web application.
- Restart the Web server to clear any caching.
- Re-deploy the Web application.

Step 2: Configuring RPAS Web Launch on Apache Tomcat

To configure RPAS Web Launch, you need to modify one property file (propfile). This file is located in the following path:

[TOMCAT_INSTALL_DIR]/webapps/[CONTEXT_ROOT]/WEB-INF/config

where [TOMCAT_INSTALL_DIR] is the installation location of the Tomcat Web server. If the Web server is running in a load balance environment with multiple servers, this file must be modified for all Web server instances.

1. Locate the following information in propfile and replace `[RPAS_WEB_DATA_DIR]` with the actual location and `[HOSTNAME]` with the host name of the server.

   ```
   dbPath=[RPAS_WEB_DATA_DIR]/RPASWebData/db
   clientSourceDir=[RPAS_WEB_DATA_DIR]/RPASWebData/client
   tunnelLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/tunnel.[HOSTNAME].log
   webLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/rpasPortal.[HOSTNAME].log
   isOSSO=false
   debug=false
   classicMode=false
   launchPreinstalledOnly=false
   supportMultipleVersions=true
   ```

   Please note that `isOSSO` flag must be set to `false`. Set `launchPreinstalledOnly` to `true` if only pre-installed RPAS Classic Client can be launched. Set `classicMode` to `true` to support RPAS Classic Client release 9.4. Set `supportMultipleVersions` to `true` to support multiple versions of RPAS Classic Client.

2. Restart the RPAS Web Launch application.

Migrating from Previous Versions

If you have been running an older version of RPAS Web Launch, here are the steps to migrate old data to the new deployment.

1. Migrate client binary:

   Copy buildNumber.txt and client.zip files to the location specified by property `clientSourceDir`. If multiple versions are supported, they should be copied to `clientSourceDir/[ VERSION]` where [VERSION] is the version number of that release (12.1.2, 11.1.15 etc.).

2. Migrate admin user data:

   Copy userdata.dat file to the location specified by property `dbPath`.

3. Migrate domain registration data:

   Copy domaindata.dat to the location specified by property `dbPath`.

4. Restart Web application **RPAS Web Launch.**

Please note that after the migration, if an admin user fails to log on, that would indicate that the userdata.dat file is corrupt. Please remove the file, and log on the administration interface using default user **adm** (default password **adm**) and re-create all admin users.

Configuring the RPAS Servlet

The class for the RPAS servlet is com.retek.mdap.servlet.ServletManager. The servlet properties have been configured in the deployment descriptor web.xml that is originally archived in RPAS_osso.war or RPAS.war.

This deployment descriptor provides two sets of initialization parameters to the RPAS servlet.

> **Note:** The deployment descriptor should not be modified. All of the servlet initialization parameters should not be modified, except the "timeout" and "sleep" parameters (which specify the time in seconds) for Web tunneling.

After the servlet is configured, load it into your Web server. You might be required to reload your Web server to activate the new servlet.

Configuring and Administering the Web Application

The following topics provide information on accessing the RPAS Web Administration console to perform administrative tasks such as defining the RPAS enterprise configuration, and adding, modifying and deleting domain configurations.

Start the RPAS Web Configuration Utility – Administration Console

1. To access the RPAS Web configuration utility, start a Web browser (Internet Explorer 6 recommended) and go to the following location:

    `http://[WEB_SERVER_ADDRESS]/[CONTEXT-NAME]/web`

    where

    `WEB_SERVER_ADDRESS` is the address you use to access your Web server.

    `CONTEXT_NAME` is the value you defined for the **Context Root** field as described in each of the three installation processes listed in the Installing the RPAS Web Application section.

    > **Note:** The Web application support internationalization. It uses the locale from the browser to determine the appropriate language to display in the Web interface. The default language is English.

    Example: `http://rpasweb.oracle.com:13085/RPAS/web`

Depending the type of RPAS deployment being implemented (with SSO or without SSO), one of the following screens appears.

Login Screen after OSSO Authentication

Login Screen for non-OSSO Configuration

> **Note:** If there is a very long list of domains, use URL `http://[WEB_SERVER_ADDRESS]/[CONTEXT-NAME]/web?app=[AppID]` to filter domains on the login page. Only domains with an application ID field matching `AppID` will be displayed in the list.

2. Perform one of the following:

- If you are using an SSO environment, select **ADMIN** as the domain and click **Login** to access the Administration Console.

- If you are not using an SSO environment, enter an Administrator user name and password (the initial administration user name is **adm** and the password is **adm**). Select **ADMIN** as the domain and click **Login** to access the Administration Console.

A security warning dialog box appears.

Security Warning on Internet Explorer

3. Click **Run**. To avoid seeing this message in the future, make sure **Always trust content from this publisher** option is selected. The RPAS Web Administration console appears.

RPAS Web Administration Console in SSO Environment

RPAS Web Administration Console without SSO

4. Refer to the following topics to configure RPAS Web Launch or perform other administration activities.

Configure Web Launch and Web Tunneling – Enterprise Configuration

The following section describes how to configure the use of the Web launch or the Web tunneling architecture. Both the Web launch and Web tunneling architectures allow domain location setup, client application installation, and application launch processes to be initiated from a Web browser. The difference between the two architectures is in how data is communicated between the RPAS Classic Client application that runs on a user's PC and the RPAS domain that runs on the database server.

The Web tunneling architecture sends all data through the Web server as it travels from a user's PC to the database server. This method allows PCs that are located outside a company's network to communicate through the Internet to a database server that is located inside a company's network.

The Web launch architecture sends all data directly from a user's PC to the database server. This architecture assumes that the database server is on a network directly accessible by each user's PC (that is, the company's LAN).

1. Click **Enterprise** to open the RPAS Enterprise Configuration window.

    This dialog allows you to define the communications architecture that connects client PCs to the database server.

    From a configuration perspective the key differentiator, between the two options is in the value of the Web Server Name field (described below). To use the Web tunneling architecture, this field must be populated; if it is empty, the Web launch architecture is used.

2. To configure the Web launch architecture, make sure the **Web Server Name** field in the RPAS Enterprise Configuration dialog is empty, and click the **Confirm** button. All other fields in this window are ignored.

RPAS Enterprise Configuration Window

3. To configure the Web tunneling architecture, the RPAS Enterprise Configuration window must be filled with appropriate values following the table below.

Filed Name	Value Description
Web Server Name	The hostname or the IP address of the Web server and the port number of the Web server. They must be entered sequentially with a colon in between. If the **Force SSL** checkbox is checked, replace the port with the SSL port number. Required.
Tunnel Servlet Name	The path to the servlet that tunnels the information between the client and server. Formatting: /[**CONTEXT_NAME**]/tunnel. Required.
Proxy Server Name	The hostname or the IP address of the proxy server.
Proxy Server Port	The port number on which the proxy server is active. Must be an integer between 1 and 65535.
Staging Server Name	Leave blank. Not used right now.
Staging Input Path	Leave blank. Not used right now.
Staging Output Path	Leave blank. Not used right now.

Filed Name	Value Description
Socks Port	If HTTP 1.1 is being used along with a proxy server, then the proxy server must enable SOCKS protocol. Must be an integer between 1 and 65535.
SSL Encryption Level	If SSL is to be used, this value should be 128 Bit US, or 64 Bit International encryption level. 128 bit encryption should be preferred.
Message Timeout	Used in HTTP 1.1 to specify the number of milliseconds of inactive communication after which the client will timeout and reconnect. Must be an integer between 1 and 65535.
Compression Threshold	The number of bytes above which client and server will be using compression.
Force SSL	This is a check box that specifies whether SSL is used for transferring data between client and server.
Use HTTP 1.1	This is a check box that specifies whether HTTP 1.1 should be used. If not selected, HTTP 1.0 will be used.

Sample Web Tunneling Configuration

Other Web Client Administration Activities

Adding, Modifying and Deleting Domain Configuration

1. Click **Domains** in the RPAS Web Administration Console. The RPAS Domain Dialog appears. This dialog is used to specify the location of RPAS domains. Each domain that can be accessed by a user must be specified with the dialog.

RPAS Domain Dialog

2. To add a new domain, click **New**, enter the following information, and click **Confirm**.

Field Name	Value Description
Description	This is displayed to users when they are selecting a domain to log in to. Required.
Application ID	Used in domain filtering. Can be any string without spaces. Leave blank if preferred.
Client Version	The version number of the RPAS Classic Client to launch. It must match **exactly** the version number in the path of the client files on the Web server. Leave blank if multiple version support is not enabled.
Path	The full path to the directory containing the domain on the database server. Required.
Database Server Name	The hostname of the database server containing the domain. Required.

Field Name	Value Description
Daemon Port	The port number of the DomainDaemon process running on the database server. The port must be between 1025 and 65535 (inclusive). Required.
Memory Size	Leave Blank. Not used right now.
Start Port	Start of the range of ports used by a client PC (Web launch architecture) or the Web server (Web tunneling architecture) to connect to the database server. This value must be great than (>) 1025. If it not specified, the RPAS database server attempt to find a free port whenever a client connects.
End Port	End of the range of ports used by a client PC (Web launch architecture) or the Web server (Web tunneling architecture) to connect to the database server. This value cannot be greater than 65535.

3. To change an existing domain configuration, select the domain from the **Domains List**, modify the fields as necessary, and click the **Confirm** button. Select the **Cancel** button to discard any changes that have been made.

4. To remove a domain, select a domain from the **Domains List** and click **Delete**. The selected domain configuration is removed.

5. To copy all of the domain settings of a domain, perform the following:

   a. Select the domain from the **Domains List** and click **Copy**.

   b. Selecting another domain from the **Domains List** and click **Paste**. The domain is updated the domains settings you have copied.

   c. Click **Confirm** to save the updated information.

Changing Administrator Password

Perform the following procedure from the RPAS Web Administration Console.

1. Click **Change Password**. The RPAS Change Password window appears. This allows the currently logged in administrator to change his/her password that allows access to the administrative console.

2. Enter the current password in the **Old Password** field. Passwords should not exceed 30 characters in length.

3. Enter the new password in the **New Password** and **Confirm New Password** fields.

4. Click **Confirm** to save the new password.

Adding a New Administrator Account

Perform the following procedure from the RPAS Web Administration Console.

1. Click **Add Admin User** to open the RPAS Add Admin User window. This window is used to add another RPAS administrative user.

2. Enter the administrative user's name in the **User Name** field. The user name must not be used by other people.

   If the user name has been used, an error dialog appears. Click **OK** on this error dialog if this occurs, and enter another name for this new administrative user.

3. Enter the initial password in the **Password** and **Confirm Password** fields.

4. Click **Confirm** to create the new administrator account.

Deleting an Administrator Account

Perform the following procedure from the RPAS Web Administration Console.

1. Click **Delete Admin User** to open the RPAS Delete Admin User window. This allows you to delete an RPAS administrative user.

2. Select the administrative user's name from the list in the window, and click **Confirm** to delete the user account.

Logging Out

From the RPAS Web Administration Console, click **Logout** to exit the administrative console. This returns you to the Login screen.

Install and Launch the RPAS Classic Client Application

Perform the following procedure the install the RPAS Classic Client and log in to a domain using RPAS Web Launch:

1. Start a Web browser (Internet Explorer 6 is recommended) and go to the following location/URL: `http://[WEB_SERVER_ADDRESS]/[CONTEXT_NAME]/web`

    Example: http://rpasweb.oracle.com:13085/RPAS/web

    This address is established during the initial installation and configuration. Administrators must provide this location/URL to end users. The `[WEB_SERVER_ADDRESS]` portion of the URL is the host address where the Java application service is running. This address may also include an alternate TCP/IP port number to communicate on (for instance, for port 8080, webss:8080). The login screen appears.

2. Perform one of the following based on your environment:

    ▪ If your environment is not using Oracle Single Sign-On (SSO), enter a user name and password, select a domain from the list, and then click **Login**.

    ▪ If you are using SSO, you will enter your SSO credentials for authentication. A login screen appears. Select a domain from the list and click **Login**. The user name must have been added to the domain to allow access.

    > **Note:** When using SSO, you can by-pass the login page by specifying the domain in the URL: `http://[WEB_SERVER_ADDRESS]/[CONTEXT_NAME]/web?domain=[Desc]`. The domain with a description field matching `Desc` will be launched automatically after the authentication. No spaces are allowed in the description field if this direct triggering mechanism feature is used.

    When the **Login** button is selected, the **DomainDaemon** on the database server is contacted to verify that the specified user is allowed to access the selected domain. Ensure that the **DomainDaemon** process is running on the database server before clicking on **Login**.

    If access to the domain is allowed, a security dialog window may appear.

3. If the security window appears, click **Run**.

    After you click **Run** in the security window, a check is made to see if the RPAS Classic Client application needs to be installed on the user's PC. The Web server administrator is able to define a common installation location of the RPAS Classic Client for all users' PCs.

This is accomplished by setting the appropriate value in the server-side clientPath.txt file (note the mixed-case filename) under the `clientSourceDir/[VERSION]` directory where the optional `[VERSION]` is the client version number if multiple versions are supported. The file clientPath.txt is an optional file which must reside under the same directory as buildNumber.txt does. RPAS Web installation files do not contain it. The administrator, or person responsible for installing RPAS Server components, must decide whether or not to define the installation location on user's PC by creating this file and specifying the full path of installation directory in the first line of the file. If `launchPreinstalledOnly` flag is set to `true`, the Web Launch applet will try to launch RPAS Classic Client from that location without downloading and installing the client. It will fail if the RPAS Classic Client has not been installed, and the applet will display an error message. If `launchPreinstalledOnly` flag is set to `false` and the user has not previously installed the RPAS Classic Client, or a newer version has become available on the server, the RPAS Classic Client will be downloaded and installed. If `launchPreinstalledOnly` flag is set to `false` and the RPAS Classic Client path is not specified, the user is prompted for an installation location for the RPAS Classic Client. The RPAS Classic Client installation directory must have at least 50 MB storage space.

4. If necessary, select a directory that has at least 50 MB of free storage for installing RPAS Classic Client, and click **OK**. A status dialog box appears as files are copied from the server to the user's PC. After the files have been copied, a RPAS installation program runs, and the RPAS Classic Client starts. If everything is successful, the user sees a **Login Successful** message in the bottom left corner of the RPAS Classic Client window.

> **Note:** If the RPAS Classic Client does not need to be installed on the user's PC after you click **Login**, the RPAS Classic Client immediately starts and connects the user to the selected domain.

Troubleshooting

If a problem is encountered when using RPAS Web Launch, review any log files and record the output to determine the causes. Any support ticket submitted to Oracle must have the logging output attached.

On the server side, the log files are specified by the properties `webLogFile` and `tunnelLogFile`. On the client side, logging output is written to Java Console which can be accessed via **Tools – Sun Java Console** from Internet Explorer and **Tools – Java Console** from Firefox.

If the browser fails to launch the client without displaying an error message or behaves abnormally, we recommend that the user clear all browser cookies and try again.

If an instance of RPAS Classic Client is already running when the Web Launch applet is trying to install RPAS Classic Client, the installation may fail. We recommend that the user stop all RPAS Classic Client processes and try again.

> **Note:** You can turn on the `debug` flag to obtain additional logging information by setting property `debug` to `true` in property file propfile and restarting the web application.

RPAS Web Launch and Oracle Retail Workspace

If you plan to implement RPAS Web Launch (including In-Context Launch) in conjunction with Oracle Retail Workspace or other web-based applications, refer to the *RPAS Administration Guide* as well as the Oracle Retail Workspace documentation for more information.

5

Installing and Configuring the RPAS Classic Client

Installation

This section describes the installation of the RPAS Classic Client on Windows machines, and describes how to configure the client to connect to a domain.

Make RPAS Classic Client Files Generally Accessible

Perform the following procedure to make the RPAS Classic Client available.

1. Create a directory on the network from where users will install the RPAS Classic Client.

    The location and the name of the directory are up to the system administrator's preferences. This directory is henceforth referred to as the [RPASCLIENT] directory.

2. Copy the files from the following directory on the server:

    [RPAS Installation]/Client

    to the [RPASCLIENT] directory.

Installing the RPAS Classic Client

The RPAS Classic Client installation procedure is the same for all of the RPAS applications. Perform the following procedures to install the application on a PC.

1. Run the setup.exe file located in the [RPASCLIENT] directory on the network.

2. The welcome page is displayed. Follow the installation procedures as prompted.

    The setup program exits after the installation is complete.

Configuration

After creating an RPAS domain and starting the DomainDaemon (see the *RPAS Administration Guide*), you must configure the RPAS Classic Client to connect to the domain on a server. This section provides instructions for configuring the RPAS Classic Client on a local computer using a Microsoft Windows operating system.

The EConfigure Utility

EConfigure is a Windows application that configures the client-server communication for RPAS. EConfigure lets you specify communication parameters and produces a file that is used as input to the client. These files must be in FCF (Foundation Configuration File) format/extension. The files contain the necessary information for the client to start up the communication with the server. These files can be stored on the client machine or on the network.

When the client is executed, a file named Foundation.FCF is expected in the same directory. If the file has a different name or if it is stored somewhere on the network, the path to this file must be passed in as an argument to the client.

EConfigure consists of a menu bar, a main view, and the advanced settings dialog box. Passwords saved in the FCF file are encrypted. To launch EConfigure, double-click the EConfigure.exe file, which is by default located in the root directory of the RPAS Classic Client.

The Menu Bar

The files produced by EConfigure may contain multiple connections. Each connection will be specific for a server with certain communication settings. Connections need to have unique descriptions, and they can be added and deleted using the menu bar.

The Main View

The main view has the basic connection parameters. On this view, three groups of controls are available:

- The connection group
- The domains group
- The Advanced Settings dialog

The Connection Group

Database Server: The hostname or the IP address of the server, for example, atldev03 or 10.2.1.23. This value should be **localhost** when running the RPAS Server on a Windows machine.

Daemon Port: The port number on which the domain daemon is listening. This must be an integer between 1025 and 65535 (for example, 55278).

The Domains Group

Domain: The name of the domain that is displayed to the user when logging in. Select a domain from the list or type the name of a new domain and click **Add Domain**. You can delete a domain from the list by selecting it and then clicking **Delete Domain**.

Domain Path: The full path to the directory containing the domain, for example, /root/testenv/domain/Sample_Project

User: Provide the user ID if you do not want to force the user to provide it when logging in. The user ID must be defined in the associated domain.

Password: provide the password for the above user if you do not want to force the user to provide it when logging in. This password must match the password defined in the domain for the associated user.

The Advanced Settings Dialog

Default Database Login

User: The database user that is used by the client if a domain specific user has not been entered, for example, adm.

Password: Like the default database user, default database password is used if a domain specific password has not been entered, for example, adm.

Database Port Range: Port range is used to specify the range of ports on which the RPAS Server processes is started by the DomainDaemon (the rpasDbServer processes). The port **Start** and port **End** fields are the lower and upper limits of this range respectively.

These fields must be integers between 1025 and 65535, which are also the default values if values are not specified, for example, Start: 40000, End: 45000.

Compression Threshold: The number of bytes above which client and server are using compression. Only advanced users should manipulate this number.

Web Tunneling: The configuration of Web tunneling.

Proxy Settings: The configuration of the RPAS Classic Client to support a proxy server is not completed in this utility.

6

Installing the RPAS Fusion Client

This chapter describes how you can install the RPAS Fusion Client. It includes the following sections:

- Overview of the RPAS Fusion Client
- Road Map for Installing the RPAS Fusion Client
- Planning
- Setting Up the WebLogic Server
- Installing the RPAS Fusion Client
- Post-Installation Tasks
- Troubleshooting

> **Note:** The RPAS Fusion Client is different from the RPAS Web Deployment. For more information, see RPAS Web Deployment.

Overview of the RPAS Fusion Client

The RPAS Fusion Client is the Web-based Rich Client for the Retail Predictive Application Server (RPAS) platform developed using the latest Oracle Application Development Framework (ADF). It includes all the features available in the RPAS Windows-based Client and delivers an enhanced user experience that meets the performance and scalability requirements set for the RPAS platform.

Overview of Oracle Wallet

As part of the Oracle Software Security Assurance (OSSA), sensitive information such as user credentials required for the RPAS Fusion Client installation will be encrypted and stored in a secure location called the Oracle Wallet.

When the installation starts, all the necessary user credentials will be retrieved from the Oracle Wallet based on the alias name associated with the user credentials.

Road Map for Installing the RPAS Fusion Client

This guide explains how you can install and set up the RPAS Fusion Client application, along with the required and optional software.

The instructions in this guide assume knowledge of application servers, databases, and application installation or administration, and are intended for system administrators and experienced IT personnel. Before carrying out any of these activities, ensure that you understand UNIX commands (including shell configuration and scripting), directory operations, and symlinks.

In order to install RPAS Fusion Client for production, you must perform the following tasks in a sequence:

Road Map for Installing the RPAS Fusion Client	
Task	**Description**
Pre-Installation Tasks	
1	Plan your environment, based on your business needs. For more information on the planning process and the supported configurations, see the chapter Getting Started.
2	Install and set up the RPAS Infrastructure. For more information, see the chapter Installing on UNIX and Linux Environments or Installing on a Windows Environment.
3	Set up the WebLogic server. For more information, see the section Setting Up the WebLogic Server.
Installation Task	
4	Access the RPAS Fusion Client installation software, set up the install.properties file, and run the Oracle installer. For more information, see the section Installing the RPAS Fusion Client.
Post-Installation Tasks	
5	Set up Single Sign-On. For more information, see the section Setting Up Single Sign-On.
6	Set up the configuration properties file, pivot table styles, and layout and formatting. For more information, refer to the *Oracle Retail Predictive Application Server Administration Guide for the Fusion Client*.
7	Install and set up the RPAS solution to work with the RPAS Fusion Client. For more information, refer to the Installation Guide of the relevant RPAS solution.

Planning

Before installing the RPAS Fusion Client, you must first determine the performance and availability goals for your business, and then plan the hardware, network, and storage requirements accordingly. This section provides some basic considerations for the installation. It also includes the list of hardware and software requirements.

This section includes the following topics:

- Planning Your Environment
- Supported Configurations

Planning Your Environment

Planning your implementation prior to an installation also gives you a better understanding of the environment, and enables you to adapt faster to any future changes in the environment setup.

Use the following steps to plan and prepare the product environment:

1. Plan and design the infrastructure, based on your business needs, for the installation. This includes:
   - Meeting the hardware and associated software requirements.
   - Acquiring the prerequisite software (and licensing).
   - Setting up the load balancers and clusters. For more information, see Considerations for Setting Up Load Balancers.
   - Gathering the capacity data.
   - Planning the data security policies.
   - Designing the backup and recovery strategies.
2. Determine the size of the implementation.
3. Identify source systems. Identify the systems that will exchange data with RPAS Fusion Client.

Considerations for Setting Up Load Balancers

You can choose to implement a software load balancer or network-based load balancer hardware.

> **Note:** Using a load balancer is recommended for scenarios where you need to use multiple servers because one server may not be able to handle the load. The RPAS Fusion Client can be installed and used without implementing a load balancer. This section states the considerations you must take into account when you choose to implement a load balancer.

Before you start setting up a load balancer, you must consider the following:

- SSL Termination at the load balancer – This establishes a Secure Socket Layer protocol at the load balancer and replaces the need for the Web server to set up the SSL. To set up SSL Termination at the load balancer, ensure that it is configured with an SSL certificate (self generated or signed by a certificate authority).

- Load Balancing Method – It is recommended to use a *Round Robin* load balancing method, coupled with session affinity. In the Round Robin method, requests are balanced across a list of available servers and servers are selected sequentially. By coupling with session affinity, subsequent requests from a specific user are redirected to the same server assigned for the previous requests from the user. This will avoid the excessive need for the application state to be replicated between the servers.

- KeepAlive – The load balancer uses the KeepAlive feature to test the servers before directing the users to an active server. This test typically involves setting up a keepalive page (such as index.html) or a custom page that the load balancer will attempt to load as per the test. You can choose to set up this feature or set up a monitor that checks the ports on the servers ensuring that they are active. Setting up a monitor is the preferred method.

For more information on setting up load balancers, refer to the documentation included with the Load Balancer.

Supported Configurations

For more information on the software and hardware requirements, refer to the RPAS Fusion Client section in the Hardware and Software Requirements table in the chapter Getting Started.

> **Note:** RPAS Fusion Client is included with the RPAS Release 13.2 installation media and requires that the RPAS Server and Configuration Tools are upgraded to Release 13.2.

Setting Up the WebLogic Server

The RPAS Fusion Client is a Web-based client for RPAS. When you run the Fusion Client installer, the installer will require a domain set up over the WebLogic Server to deploy the Fusion Client as an application.

Before installing the RPAS Fusion Client, you must install the WebLogic Server and set up a domain for the Fusion Client. This chapter describes how you can set up the WebLogic Server for the Fusion Client. It includes the following sections:

- Installing the WebLogic Server
- Installing the Oracle ADF Run Time Patch
- Setting Up a WebLogic Domain

> **Important:** Once you set up the WebLogic server and domain, you must take note of the location where you installed the WebLogic domain. You will need to set up this location as an environment variable, WEBLOGIC_DOMAIN_HOME, before running the Fusion Client installer.

Installing the WebLogic Server

Install the Oracle WebLogic Server Release 11gR1 (10.3.2) and Application Development Runtime Release 11g R1 (11.1.1.2.0) referring to the Oracle WebLogic Server Documentation for guidance.

In this guide, the WebLogic installation directory is referred to as the <WLS_HOME> directory.

Installing the Oracle ADF Run Time Patch

Before you set up a WebLogic domain, you must apply the Oracle Application Development Framework (ADF) Run Time Patch 9329357.

To download and apply the patch:

1. Log on to the My Oracle Support Web site and download the patch 9329357. To download this patch:

   a. In a Web browser, open the following URL:
      https://support.oracle.com/
      The My Oracle Support Web page appears.

   b. Select a language and sign on to the Web site by clicking **Sign In**.

   c. Once signed in, the **My Oracle Support | Dashboard** screen appears.

   d. Click the **Patches & Updates** tab.

   e. On the **Patch & Updates** screen, under **Patch Search**, click **Patch ID or Number**.

   f. In the **Patch ID or Number** is field, enter **9329357**.

   g. Optionally, you can also choose a platform from the **Platform** is drop-down list.

   h. Click **Search**. The **Patch Search Results** screen appears.

   i. In the **Patch Search Results** screen, under **Patch ID**, click the relevant patch.

   j. On the next screen, click **Download** (appears on the left side of the screen).

   > **Note:** On the **Patch Search Results** screen, you can also select the row that matches the patch description, and then click **Download** on the toolbar that appears under the selected row.

2. Unpack the ZIP file to a temporary directory and navigate to this location.

3. Set the ORACLE_HOME and PATH environment variables using the following commands:

   ```
   export $ORACLE_HOME=$WLS_HOME
   export PATH=$PATH:$WLS_HOME/oracle_common/OPatch
   ```

4. At the command prompt, run the following command to apply the patch:

   ```
   opatch apply
   ```

5. Follow the prompts to complete the patch installation. For detailed instructions, refer to the README.txt file included in the patch directory.

6. At the command prompt, run the following commands:

   ```
   cp $WLS_HOME/modules/oracle.adf.view_11.1.1/*
   $WLS_HOME/oracle_common/modules/oracle.adf.view_11.1.1/
   cp $WLS_HOME/modules/oracle.adf.model_11.1.1/*
   $WLS_HOME/oracle_common/modules/oracle.adf.model_11.1.1/
   cp $WLS_HOME/modules/oracle.adf.pageflow_11.1.1/*
   $WLS_HOME/oracle_common/modules/oracle.adf.pageflow_11.1.1/
   cp $WLS_HOME/modules/oracle.mds_11.1.1/*
   $WLS_HOME/oracle_common/modules/oracle.mds_11.1.1/
   ```

You can now set up your WebLogic domain. For more information, see Setting Up a WebLogic Domain.

Setting Up a WebLogic Domain

Use the WebLogic Configuration Wizard to create and set up a domain on the WebLogic Server. This section describes how you can create and set up a domain. It also introduces the steps to configure the managed servers and clusters on the application server. For more information on the WebLogic Configuration Wizard and customizing the domain environments with managed servers and clusters, refer to the *Oracle Fusion Middleware 11g Creating Domains Using the Configuration Wizard*.

> **Note:** For headless installations, ensure that you set up the WebLogic Startup script with the java.awt.headless parameter. For more information, see Troubleshooting.

To set up a WebLogic domain:

1. Navigate to the **<WLS_HOME>/common/bin** directory, and run the following command to start the WebLogic Configuration Wizard in the graphical mode:

   ```
   sh config.sh
   ```

2. On the WebLogic Configuration Wizard, follow the steps listed in the table below:

Steps to Set Up a WebLogic Domain		
Step	**Screen**	**Task**
1.	*Welcome Screen*	
		Click the **Create a new WebLogic domain** option, and then click **Next**.
2.	*Select Domain Source Screen*	
		Click the **Generate a domain configured automatically to support the following products** option, select the **Oracle JRF - 11.1.1.0 [oracle_common]** check box, and then click **Next**.
		Note that the **Basic WebLogic Server Domain - 10.3.2.0 [wlserver_10.3]** check box is automatically selected and greyed out.
3.	*Specify Domain Name and Location Screen*	
		Enter a domain name in the **Domain Name** field.
		In the **Domain location** field, specify the location where you want to install the domain.
		This location is referred to as the **WEBLOGIC_DOMAIN_HOME** all through this document.

Steps to Set Up a WebLogic Domain

Step	Screen	Task
4.	*Configure Administrator User Name and Password Screen*	
		Set up an administrative user name and password. **Important:** Please keep a note of the user name and password. You must specify this user name and password in the install.properties file. The Oracle Installer uses this user account to connect to the WebLogic Server during the RPAS Fusion Client installation.
5.	*Configure Server Start Mode and JDK Screen*	
		Under **WebLogic Domain Startup Mode**, click **Production Mode**.
		Under **JDK Selection**, select the relevant JDK.
		Click **Next**.
6.	*Select Optional Configuration Screen*	
		Select the configurations you want to customize and click **Next**. Go to Step 7.
		OR
		To proceed directly to creating your domain. Skip the following steps and go to Step 15.
7.	*Configure the Administration Server Screen*	
		Enter relevant information in the following fields: **Name** – Valid server name. (String of characters that can include spaces.) **Listen address** – Listen address for a server instance. **Listen port** – Valid value for the listen port. **SSL listen port** – Valid value to be used for secure requests. **SSL enabled** – Select this check box to enable SSL. You can enter values in the SSL listen port field once you select this check box.
		Click **Next**.

Steps to Set Up a WebLogic Domain		
Step	**Screen**	**Task**
8.	*Configure Managed Servers Screen*	
		Click **Add**, and then enter relevant information in the following fields: **Name** – Valid server name. (String of characters that can include spaces.) **Listen address** – Listen address for a server instance. **Listen port** – Valid value for the listen port. **SSL listen port** – Valid value to be used for secure requests. Repeat this step to add more managed servers.
		Click **Next**.
9.	*Configure Clusters Screen*	
		This window appears, once you specify the managed servers. Click **Add**, and then enter relevant information in the following fields: **Name** – Valid cluster name. (String of characters that can include spaces.) **Multicast address** – Address used by the cluster members to communicate with each other. **Multicast port** – Port used by the cluster members to communicate with each other. **Cluster address** – Address that identifies the Managed Servers in the cluster. Repeat this step to specify more clusters.
		Click **Next**.
10.	*Assign Servers to Clusters Screen*	
		Use the arrow buttons and assign the servers to the clusters specified in the domain.
		Click **Next**.
11.	*Configure Machines Screen*	
		Click **Add**, and then add the machine (Unix-based) information where the Fusion Client will be deployed. In a clustered installation involving multiple machines, this includes all the systems where the RPAS Fusion Client will be deployed.
		Click **Next**.

Steps to Set Up a WebLogic Domain		
Step	**Screen**	**Task**
12.	*Assign Servers to Machines Screen*	
		Use the arrow buttons and assign the managed servers to the machines specified in the domain.
		Click **Next**.
13.	**Target Deployments to Clusters or Servers**	
		In the left pane, select the clusters or servers, and then select the relevant application check boxes in the right pane to target them to the specific cluster or managed server.
		For each cluster and managed server, select the **Library** check box. The WebLogic domain must be set up in such a manner that all the clusters and the relevant managed servers include all the libraries included with the WebLogic server.
14.	**Target Services to Clusters or Servers**	
		In the left pane, select the clusters or servers, and then select the relevant services check boxes in the right pane to target them to the specific cluster or managed server.
15.	*Configuration Summary Screen*	
		Review and confirm the configuration summary, and then click **Next**.
16.	*Creating Domain Screen*	
		Displays the domain configuration progress.
		Once the configuration is complete, click **Done**.

Setting Up the Maximum Heap Size

Once you have set up the WebLogic domain, ensure that you set up the maximum heap size for the WebLogic server. Setting a maximum heap size depends on your implementation.

For a server system with 4GB RAM and a 64-bit JVM running a single instance of the WebLogic server, it is recommended to have a maximum heap size of 3800MB. In a similar manner, a system with a 2GB RAM must have a maximum heap size of 1600MB.

For more information on heap sizing, refer to the Sun Java documentation on Java Performance Tuning and the *Oracle Fusion Middleware Performance and Tuning for Oracle WebLogic Server*.

Configuring the Node Manager for Clusters-based Installation

In case you want to deploy the application to a target server other than the administrative server, the default method that the node manager starts the managed servers is not the same as the way the startWebLogic.sh script starts the managed servers on the command line. A managed server started in the default method may not read all the necessary classes the RPAS Fusion Client references. This may cause failures during the installation. To avoid this issue, you must change the way the node manager starts the managed servers.

To change the way the node manager starts the managed servers:

1. Navigate to the following location on the WebLogic Server:

   `<WLS_HOME>/common/nodemanager`

   This location is also called the default node manager root directory.

2. Open the **nodemanager.properties** file for editing and set the following parameters:
   - **StartScriptEnabled** – set to **true**.
   - **StartScriptname** – set to **startWebLogic.sh**.

3. Navigate to the **WEBLOGIC_DOMAIN_HOME** directory, copy the **startWebLogic.sh**, and place it in the following location:

   `WEBLOGIC_DOMAIN_HOME/bin/service_migration/`

   The node manager will use the **startWebLogic.sh** script to start the managed servers.

4. Restart all the node managers and managed servers.

Installing the RPAS Fusion Client

Once you have the WebLogic Server and RPAS installed, you can start installing the RPAS Fusion Client. This chapter describes how you can install the RPAS Fusion Client. It also includes instructions on any post-installation tasks you may need to perform to get the application running.

This section includes the following topics:

- Accessing the Installation Media
- Overview of the Installation Process
- Setting Up Your Installation Properties File
- Setting Up Environment Variables
- Installing RPAS Fusion Client in Silent Mode
- Installing RPAS Fusion Client Using the Swing or Text Mode

> **Note:** Before running the RPAS Fusion Client Installer, ensure that the WebLogic Server and RPAS server are configured and running.

Accessing the Installation Media

The RPAS Fusion Client installation media is included with the RPAS Release 13.0.4.26 installation media. The installation files for the RPAS Fusion Client are available at the following location in the <RPAS_CD_IMAGE> directory:

`<RPAS_CD_IMAGE>/fusion/`

> **Note:** <RPAS_CD_IMAGE> is the temporary location where the RPAS installation media files were unpacked.

Overview of the Installation Process

The RPAS Fusion Client Installation media includes an Oracle installer that you must run to install the RPAS Fusion Client. The installer installs the application based on the parameters specified in an installation properties file. You can install the application in the following modes:

- Swing or Text mode - In swing or text mode, the Oracle Installer will prompt you to enter or modify the value of properties specified in the installation properties file.
- Silent mode - In silent mode, the installer processes the values set in the properties file with no manual intervention required.

Whichever mode you use, it is recommended that you set up the installation properties file.

Setting Up Your Installation Properties File

In order to install the RPAS Fusion Client, it is recommended that you set up the installation properties file (ant.install.properties) before running the installer.

> **Note:** For an installation in silent mode, you must set up the installation properties file before running the installer.

To set up your install.properties file:

1. Navigate to the RPAS Fusion Client directory, copy the **ant.install.properties.template** file to the same directory, and rename it **ant.install.properties**.

2. Edit the **ant.install.properties** file using any Text editor, specifying values as described within the file, and save it. For more information on the parameters, see Installation Properties File Parameter Reference.

> **Note:** Ensure that the ant.install.properties file is available in the same directory with the install.sh script.

Installation Properties File Parameter Reference

The following table describes the parameters in the ant.install.properties file that you must set up before you install the RPAS Fusion Client application:

Installation Properties File Parameter Reference	
Parameter Name	**Description**
Target Installation Directory	
input.install.target.dir	Specify the location where you want to install the RPAS Fusion Client.
Logs and Temporary Directories	
input.app.log.dir	Specify the location for the application log files.
input.install.log.dir	Specify the location for the installation log files.
input.install.tmp.dir	Specify the location for the temporary file directory used during installation.
WebLogic Admin Server Information	
input.appserver.host	Specify the host name of the application server.
input.admin.server.port	Specify the port number associated with the application server.
input.admin.username	Specify the administrative user name for the application server.
input.admin.username.alias	Specify an alias name for the administrative user. Specifying an alias name for the administrative user enhances the security for the application. When left blank, the alias name will default to the administrative user name.
input.admin.password	Specify the password associated with administrative user name.
Application Configuration Information	
input.is.multiple.hosts	Specify whether you want to install the application on a cluster of hosts (set the value to *yes*). To install the application on a single server instance, set the value to *no*.
input.sso.enabled	Specify whether you want to install the application to be Single Sign-On enabled (set the value to *yes*). To install the application without configuring Single Sign-On, set the value to *no*. For more information on setting up Single Sign-On, refer to the *Oracle Retail Application Server Administration Guide*.
Retrieve SSH Credential Applies to cluster-based installations only.	
input.ssh.retrieve.credentials	Specify whether you want to retrieve the existing SSH credentials.

Installation Properties File Parameter Reference	
Parameter Name	**Description**
SSH Credentials Applies to cluster-based installations only.	
input.ssh.authentication.mode	Specify one of the following authentication methods: *password* - Use the specified password (associated with the SSH User Name) to connect to the remote hosts for copying the files. *passphrase* - Use the specified passphrase (associated with the SSH User Name) along with the SSH Key to connect to the remote hosts. *default* - Connect to the remote hosts without a user name, password, or passphrase.
input.ssh.username	Specify the SSH use name to connect to the remote hosts.
input.ssh.username.alias	Specify the alias name associated with the SSH user name.
input.ssh.keyfile	In case you set the value *passphrase* for the *input.ssh.authentication.mode* parameter, enter the location of the SSH key file. When left blank, the installer will retrieve the file from `${user.home}/.ssh/id_dsa` directory, where `user.home` is the your home directory. To use this default location, ensure that you have the private DSA key stored at this location.
input.ssh.pwOrPassphrase	Based on the authentication method you set, enter the relevant SSH password or passphrase.
Application Server Information	
input.target.server.name	Specify the cluster or server name where you want install the RPAS Fusion Client.
input.target.server.port	Specify the port associated with the cluster or server.
Single Sign-On User Information	
input.sso.username1 input.sso.username2 input.sso.username3 input.sso.username4 input.sso.username5	Enter up to five enterprise user account names or user group names for Single Sign-On. To support Single Sign-On, the Web deployment descriptors need to be configured to allow access pages to SSO-authenticated requests. During the application installation, the names entered here will be added to the Web deployment descriptor file (weblogic.xml) as <principal-user> under <security-role-assignment> tag. The RPAS Fusion Client application roles are mapped to the enterprise roles or groups in this deployment descriptor file. For more information on setting up Single Sign-On, refer to the Oracle Retail Predictive Application Server Administration Guide.

Installation Properties File Parameter Reference	
Parameter Name	**Description**
Application Deployment Information	
input.app.name	Specify an application name. The RPAS Fusion Client will be deployed over the WebLogic Server with this name.
input.app.context.root	Specify the context root for the application. Once deployed, the RPAS Fusion Client will be available on the Web browser using this context path. For example, in case you set the context root to *rav*, you can access the application using the URL *http://<hostname>:<port>/rav*.
input.app.image.repository	Specify the location or a network path where the images used in the application are located.
RPAS Information	
input.rpas.details.known	Specify whether you know the details of the RPAS infrastructure and domain.
input.rpas.connection.spec	Specify the connection specification name for the RPAS domain.
input.rpas.server.name	Specify the host name where the RPAS infrastructure is installed.
input.rpas.server.port	Specify the post associated with the RPAS installation.
input.rpas.domain.name	Specify the name of the RPAS domain.
input.rpas.domain.path	Specify the location where the RPAS domain is installed.

> **Note:** When the installation starts, values set for all the user credentials will be encrypted and stored in the Oracle Wallet, and then cleared from the ant.install.properties file.

Setting Up Environment Variables

Before you start the installation, ensure that the following environment variables are set in the system:

- JAVA_HOME – Location where the Java is installed.
- ORACLE_HOME – Location where the WebLogic Server is installed.
- WEBLOGIC_DOMAIN_HOME – Location where the WebLogic domain is installed. For more information, see Setting Up the WebLogic Server.

Although it is recommended that these variables be set up in relevant bash shell startup files (*.bash_profile*) of the system, you can also set up the variables using the *EXPORT* command at the UNIX prompt. For more information on setting up these variables in the startup files, refer to the operating system documentation.

To set up the environment variables for the current session, at the UNIX prompt type the following commands in sequence:

```
export ORACLE_HOME=<path where the WebLogic Server is installed>
For example, /u01/app/oracle/middleware

export WEBLOGIC_DOMAIN_HOME=<path where the WebLogic domain is installed>
For example, /u01/app/oracle/middleware/user_projects/domains/base_domain
```

Installing RPAS Fusion Client in Silent Mode

This section describes how to install RPAS Fusion Client in silent mode. Silent mode is non-interactive.

> **Note**: If you are reinstalling the Fusion Client after installing an RPAS application, you must backup the rgbu_planning_home/Help/ohwconfig.xml file and restore it after the installation. Otherwise, access to the application's help files is lost.

To install RPAS Fusion Client in silent mode:

1. Ensure that you have completed Setting Up Your Installation Properties File.

> **Note:** Ensure that the ant.install.properties file is available in the same directory with the install.sh script.

2. Ensure that the RPAS Domain and WebLogic Server are running.
3. Navigate to the RPAS Fusion Client installation folder, enter the following command:

   ```
   ksh install.sh silent
   ```

install.sh

The install.sh command enables you to install RPAS Fusion Client.

Syntax

install.sh <mode name>

Arguments

Use any arguments listed below as needed.

a. Argument	b. Description
c. <mode name>	d. Use this argument to specify the installation mode. You can specify the following:
	... **swing** – to launch a graphical installer. This is the default installation mode. In case you do not specify a mode, the installer defaults to swing mode.
	... **text** – to launch the installer with instructions that appear as text on screen.
	... **silent** – to start the installation based on the parameters set up in the ant.install.properties file. No manual intervention is required.

Output

The RPAS Fusion Client installation creates the application directory structure, populates it with appropriate files, and when the installation finishes, it generates a log file and two properties files.

Installing RPAS Fusion Client Using the Swing or Text Mode

If you prefer to use a guided user interface, you can use the Oracle Installer in the swing or text mode. Although this section describes how you can install the RPAS Fusion Client in swing mode, the same on-screen instructions appear as text instructions in the text mode.

> **Note**: If you are reinstalling the Fusion Client after installing an RPAS application, you must backup the rgbu_planning_home/Help/ohwconfig.xml file and restore it after the installation. Otherwise, access to the application's help files is lost.

To install RPAS Fusion Client using the Swing Mode:

1. Ensure that you have completed Setting Up Your Installation Properties File.

   > **Note:** Although you can run the installation without setting up the installation properties file, ensure that you set up the installation properties file, and then start the installation.

2. Ensure that the RPAS Domain and WebLogic server are running.

3. If you are viewing the installer from a Windows client:

   - On the **Windows** client, start an **Xserver** program that enables you to emulate the X terminal.

   - On the application server, set the display for the Windows client where you want the Oracle Installer to display as follows:

     ```
     export DISPLAY=<IP address>:0.0
     ```

4. From your application server machine, enter the following command:

```
ksh install.sh
```

> **Note:** For more information about this command, see
> Installing RPAS Fusion Client in Silent Mode.

The **Oracle Retail Predictive Application Server Fusion Client** screen appears.

Oracle Retail Predictive Application Server Fusion Client Screen

5. Click **Next**. The **Target Install Directory Details** screen appears.
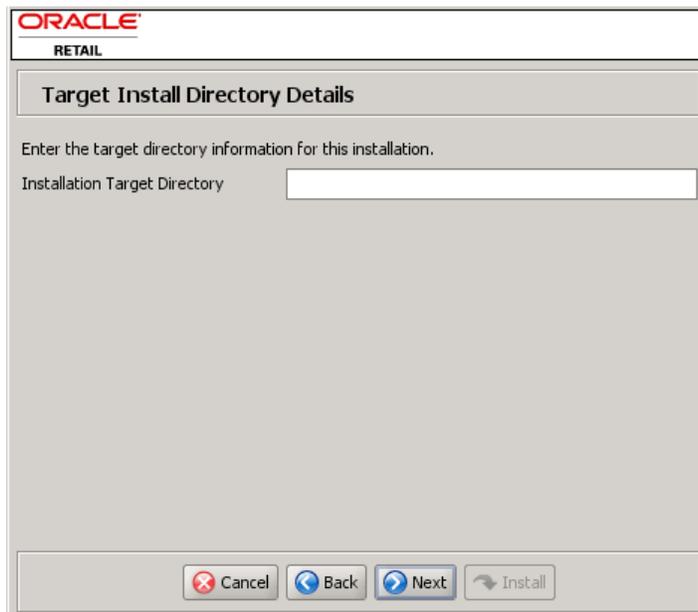
Target Install Directory Details Screen

6. In the **Installation Target Directory** field, specify the location where you want to install the RPAS Fusion Client, and click **Next**. The **Installation Log/Temp Directory Details** screen appears.

Installation Log/Temp Directory Details Screen

7. Enter the relevant information in the following fields:

- **Application Log Directory** – Specify the location for the application log files.
- **Local Install Log Directory** – Specify the location for the installation log files.
- **Local Install Temp Directory** – Specify the location for the temporary file directory used during installation.

> **Note:** By default, the fields are pre-populated based on the installation directory you specified in the Target Installation Directory screen.

8. Click **Next**. The **WebLogic Admin Details** screen appears.

WebLogic Admin Server Details Screen

9. On the **WebLogic Admin Details** screen, enter appropriate information for the following fields:

   ▪ **Admin Server Host Name** - Specify the host name of the application server.

   ▪ **Admin Server Port Number** - Specify the port number associated with the application server.

   ▪ **Admin User Name** - Specify the administrative user name for the application server.

   ▪ **Admin User Name Alias** - Specify an alias name for the administrative user. Specifying an alias name for the administrative user enhances the security for the application. When left blank, the alias name will default to the administrative user name.

   > **Note:** As part of the Oracle Software Security Assurance, sensitive information such as user credentials for the RPAS Fusion Client are encrypted and stored in a secure location in the application installation directory. This location is called the Oracle Wallet.
   >
   > When the installation starts, the administrative user credentials will be retrieved from the Oracle Wallet based on the alias name specified in this screen.

   ▪ **Admin Password** - Specify the password associated with administrative user name.

10. Click **Next**. The **Application Configuration** screen appears.

Application Configuration Screen

11. On the **Application Configuration** screen, specify whether you are installing the application over a cluster of hosts:

- Select **Yes** to indicate an installation over clusters and go to **Step 13**.
- Select **No** to indicate an installation on a single target server and go to **Step 16**.

12. Specify whether you want to use the Single Sign-On (SSO) feature to log on to the application. Select **Yes** to indicate that you want use this feature. Go to **Step 18**.

> **Note:** For more information on the setting up Single Sign-On, see the section Setting Up Single Sign-On.

13. Click **Next**. The **Retrieve SSH Credentials?** screen appears.
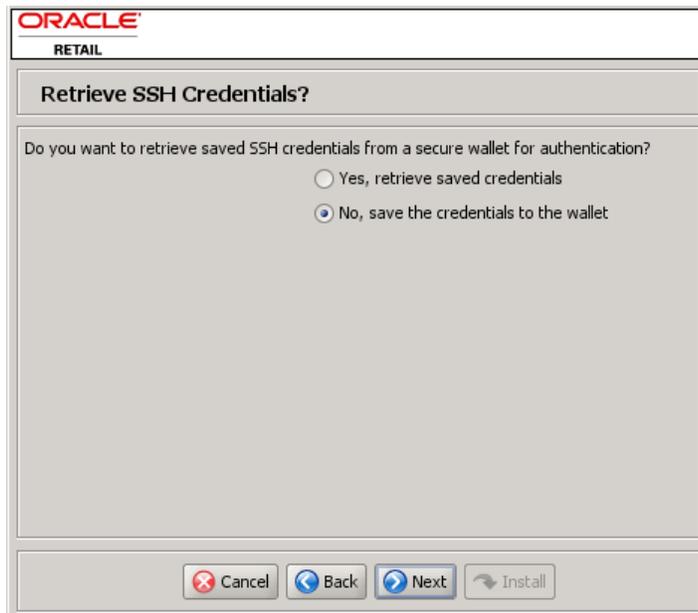
Retrieve SSH Credentials Screen

14. On the **Retrieve SSH Credentials?** screen, specify whether you want to retrieve the existing SSH credentials, and click **Next**. The **SSH Credentials** screen appears.
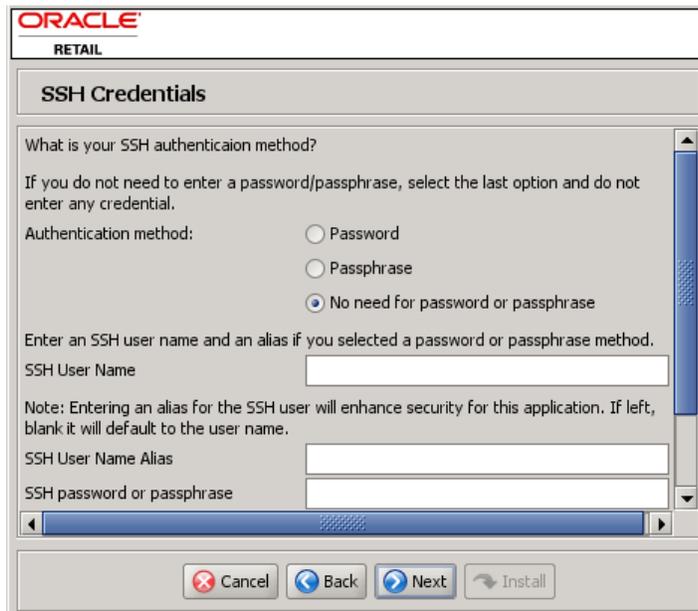
SSH Credentials Screen

15. On the **SSH Credentials** screen, enter the relevant information in the following fields:

- **Authentication method** - Select one of the following authentication methods:
  - **Password** - Use the specified password (associated with the SSH User Name) to connect to the remote hosts for copying the files.
  - **Passphrase** - Use the specified passphrase (associated with the SSH User Name) along with the SSH Key to connect to the remote hosts.
  - **No need for password or passphrase** - Default option - Connect to the remote hosts without a user name, password, or passphrase.
- **SSH User Name** - Specify the SSH user name to connect to the remote hosts.
- **SSH User Name Alias** - Specify the alias name associated with the SSH user name. Specifying an alias name enhances the security for the application. When left blank, the alias name will default to the administrative user name.

  > **Note:** As part of the Oracle Software Security Assurance, sensitive information such as user credentials are encrypted and stored in a secure location in the application installation directory. This location is called the Oracle Wallet.
  >
  > When the installation starts, the SSH user credentials will be retrieved from the Oracle Wallet based on the alias name specified on this screen.

- **SSH password or passphrase** - Based on the authentication method you selected, enter the relevant SSH password or passphrase.
- **SSH Key File Path** - In case you selected the Passphrase option in the **Authentication Method** field, enter the location of the SSH key file.

  When left blank, the installer will retrieve the file from `${user.home}/.ssh/id_dsa` directory, where `user.home` is the your home directory. To use this default location, ensure that you have the private DSA key stored at this location.

  > **Note:** The **SSH User Name** and **SSH password or passphrase** fields do not appear when you choose to retreive the existing SSH credentials (the **Yes, retrieve saved credentials** option in the **Retrieve SSH Credentials?** screen).
  >
  > The existing SSH user credentials will be retrieved based on the alias name for the SSH user.

16. Click **Next**. The **Application Server Details** screen appears.

Application Server Details Screen

17. Enter the cluster or server name and associated port number where you want to deploy the application, and click **Next**. The **Single Sign-On** screen appears.

Single Sign-On Screen

> **Note:** The **Single Sign-On** screen appears only when you select the **Yes** option for Single Sign-On in the **Application Configuration** screen.

18. On the **Single Sign-On** screen, enter up to five enterprise user account names or user group names for Single Sign-On.

> **Note:** To support Single Sign-On, the Web deployment descriptors need to be configured to allow access pages to SSO-authenticated requests. During the application installation, the names entered here will be added to the Web deployment descriptor file (weblogic.xml) as `<principal-user>` under `<security-role-assignment>` tag. The RPAS Fusion Client application roles are mapped to the enterprise roles or groups in this deployment descriptor file.

19. The **Application Deployment Details** screen appears.

Application Deployment Details Screen

20. Enter relevant information for the following fields and click **Next**:

- **Application Name** – Specify an application name. The RPAS Fusion Client will be deployed over the WebLogic Server with this name.

- **Application Context Root** – Specify the context root for the application. Once deployed, the RPAS Fusion Client will be available on the Web browser using this context path. For example, in case you set the context root to *rav*, you can access the application using the URL *http://<hostname>:<port>/rav*.

- **Absolute Path to the Image Repository** – Specify the location or a network path where the images used in the application are located.

21. Click **Next**. The **RPAS Server Details** screen appears.

RPAS Server Details Screen

22. On the **RPAS Server Details** screen, select one of the following options:

- Select **Yes** to enter RPAS Server and Domain details in the Installer. During the installation, the relevant RPAS Fusion Client configuration files will be updated based on the information you enter here. Go to **Step 21**.

- Select **No** to skip adding the RPAS Server and Domain details and add them later manually. For more information on adding this configuration manually, refer to the Oracle Retail Predictive Application Server Fusion Client Administration Guide. Go to **Step 23**.

23. Click **Next**. The **RPAS Server Details** screen appears again with fields to collect RPAS Server information.

RPAS Server Details Screen

24. Enter relevant information for the following fields:

- **RPAS Connection Specification** - Specify the connection specification name for the RPAS domain.

- **RPAS Server Name** - Specify the host name where the RPAS infrastructure is installed.

- **RPAS Server Port** - Specify the post associated with the RPAS installation.

- **RPAS Domain Name** - Specify the name of the RPAS domain.

- **RPAS Domain Path** - Specify the location where the RPAS domain is installed.

25. Click **Next**. The **Installation Summary** screen appears.

Installation Summary Screen

26. Review the installation summary and click **Next**. The **Installation Progress** screen appears.

Installation Progress Screen

27. Click **Install** to start the installation.

28. Once the installation is complete, click **Exit** to close the Installer.

29. Restart the WebLogic server, and then verify that the application is accessible over the network. In a Web browser, enter the following URL in the **Address** bar, and press **Enter**:

```
http://<hostname>:<portnumber>/<contextroot>
```

> **Note:** In the URL above, `<hostname>`, `<portnumber>`, and `<contextroot>` represent the host name, port, and context root you set up for the application during the installation. You must specify the relevant values in the Address bar.

Post-Installation Tasks

Before you log on to the application, you must set up the Fusion Client based on your business need. This includes the following tasks:

- Set up Single Sign-On. For more information, see Setting Up Single Sign-On.
- Set up the configuration properties file, pivot table styles, and layout and formatting. For more information, refer to the *Oracle Retail Predictive Application Server Administration Guide*.
- Set up the RPAS solution to work with the RPAS Fusion Client. For more information, refer to the Installation Guide of the relevant RPAS solution.

Setting Up Single Sign-On

RPAS can be set up on a Oracle Single Sign-on infrastructure that enables users already connected/authenticated to the Oracle Single Sign-On to directly access the RPAS Fusion Client. To set up single sign-on:

1. Set Up the RPAS Web Deployment for Single Sign-On. For more information, see the chapter RPAS Web Deployment.

2. Ensure that you have a WebLogic domain and extended with the JRF template. This was already done before you installed the RPAS Fusion Client. For more information, see the section Setting Up the WebLogic Server.

3. During the RPAS Fusion Client installation, specify that you want to use the Single Sign-On feature to log on to the application and specify the single sign-on user account or group names. For more information, see the section Installation Properties File Parameter Reference or see steps 12, 17, and 18 in the section Installing RPAS Fusion Client Using the Swing or Text Mode.

4. Install the Oracle Fusion Middleware 11g Web Tier Utilities referring to the *Oracle Fusion Middleware Installation Guide for Oracle Web Tier 11g Release 1 (11.1.1)*.

5. Install the Oracle Identity Management Infrastructure server, including the Oracle Internet Directory (OID) LDAP and Oracle Single Sign-On (OSSO) servers. For more information, refer to the *Oracle Fusion Middleware Installation Guide for Oracle Identity Management 11g Release 1 (11.1.1)*.

6. Register the Oracle HTTP server with the OSSO server via the ssoreg.sh script. The output of this command will be a binary file, denoted here as the osso.conf file. Copy osso.conf to the Oracle HTTP server (ORACLE_HOME/Apache/Apache/conf/osso/osso.conf) and configure the Oracle HTTP Server to enable the mod_osso module. See the Oracle Single Sign-On documentation for further details.

7. Obtain the OID information (TCP/IP address and port, whether SSL is used as a transport mechanism and the realm name) from Oracle SSO server administrator. You will also need an administrative login and password, such as that used by the orcladmin user.

8. Configure the mod_osso module to protect the Web resources:

   a. Copy the **mod_osso.conf** file from the disabled directory to the moduleconf directory for editing. For example:
   From:
   ```
   ORACLE_INSTANCE/config/OHS/<ohs_name>/disabled/mod_osso.conf
   ```
   To:
   ```
   ORACLE_INSTANCE/config/OHS/<ohs_name>/moduleconf/mod_osso.conf
   ```

   b. Copy the **osso.conf** file from the location where it was generated to the following location:
   ```
   ORACLE_INSTANCE/config/OHS/<ohs_name>/osso/
   ```

   c. Edit the **mod_osso.conf** file and add the following information using values for your deployment. For example, using Oracle HTTP Server as an example :
   ```
   LoadModule osso_module "${ORACLE_HOME}/ohs/modules/mod_osso.so"
   <IfModule osso_module>
       OssoIpCheck off
       OssoIdleTimeout off
       OssoSecureCookies off
       OssoConfigFile
   ORACLE_INSTANCE/config/OHS/<ohs_name>/osso/osso.conf
     <Location />
         require valid-user
         AuthType Osso
     </Location>
   </IfModule>
   ```

   d. Navigate to the following location:
   ```
   ORACLE_INSTANCE/config/OHS/<ohs_name>/httpd.conf
   ```

   e. Edit the **httpd.conf** file and confirm that the mod_osso.conf file path for your environment is included. For example:
   ```
   include
   /ORACLE_INSTANCE/config/OHS/<ohs_name>/moduleconf/mod_osso.conf
   ```

   f. Restart the Oracle HTTP Server.

9. Add providers to your WebLogic domain for OSSO. In addition to the OSSO Identity Asserter, Oracle recommends the following Authentication providers:

   - DefaultAuthenticator
   - OID Authenticator

   To add providers to your WebLogic domain for OSSO Identity Assertion:

   a. Log on to the WebLogic Administration Console.

   b. Under the **Domain Structure** (left navigation pane), click Security Realms. The **Summary of Security Realms** screen appears.

   c. On the **Summary of Security Realms** screen, click the default security realm (myrealm). The **Settings for myrealm** screen appears.

   d. On the **Settings for myrealm** screen, click the **Providers** tab, and then click **New**. The **Create a New Authentication Provider** screen appears.

e. Enter a provider name for the OSSO Identity Asserter, select the relevant type, and then click OK. For example,
Name: OSSO Identity Asserter
Type: OSSOIdentityAsserter
The new provider is added to the list of providers and appears on the Settings for myrealm screen.

f. Click the name of the provider you just added.

g. On the **Common** tab, set the relevant values for the parameter, set the **Control Flag** value to **Sufficient**, and then click **Save**.

h. On the **Providers** tab, click **DefaultAuthenticator**. The **Settings for DefaultAuthenticator** screen appears.

i. Set the **Control Flag** value to **Optional** and click **Save**.

j. On the **Providers** tab, click **New**. The **Create a New Authentication Provider** screen appears.

k. Enter a provider name for the OID Authenticator, select the relevant type, and then click **OK**. For example,
Name: OID Authenticator
Type: OracleInternetDirectoryAuthenticator
The new provider is added to the list of providers and appears on the Settings for myrealm screen.

l. Click the name of the provider you just added and review the settings. Do not change the Control Flag value until you have verified that the Oracle Internet Directory configuration is valid.

> **Note:** If OID Authenticator is the only provider, to ensure that the WebLogic domain starts properly, the WebLogic Server user account and its granted group memberships must be created in the Oracle Internet Directory.

m. On the **Provider Specific** tab, specify relevant values in the following fields:

  – **Host** – specify the host name of the Oracle Internet Directory.

  – **Port** – specify the port number associated with the Oracle Internet Directory.

  – **Principal** – specify an LDAP administrative user. For example, cn=orcladmin.

  – **Credential** – specify the password associated with the LDAP administrative user.

  – **Confirm Credential** – enter the password again to confirm the credential.

  – **User Base DN** – specify the distinguished name (DN) of the tree in the Oracle Internet Directory that contains the users.

  – **Use Retrieved User Name as Principal** – select this check box.

  – **Group Base DN** – specify the distinguished name (DN) of the tree in the Oracle Internet Directory that contains the groups.

  – **Propagate Cause For Login Exception** – select this check box.

n. Click **Save**.

o. The order in which providers populate a subject with principals is significant. You may want to reorder the list of all providers in your realm and bring the newly added provider to the top of the list.

p. Save all configuration settings and restart the WebLogic server for the changes to take effect.

    q. Log on to the WebLogic Administration Console and navigate to the **Settings for myrealm** screen. See steps a through c.

    r. Click the **Users and Groups** tab to view a list of users and groups included in the configured Authentication providers. You should see user names from the Oracle Internet Directory configuration, which verifies that the configuration is valid and working.

       – If the Oracle Internet Directory instance is configured successfully, you can change the Control Flag.

       – If the Oracle Internet Directory authentication is sufficient for an application to identify the user, then choose the SUFFICIENT flag. SUFFICIENT means that if a user can be authenticated against Oracle Internet Directory, no further authentication is processed. REQUIRED means that the Authentication provider must succeed even if another provider already authenticated the user.

> **Note:** In case the application requires the user names to be in the same case as stored in the Oracle Internet Directory, select the Use Retrieved User Name as Principal check box in the Provider Specific tab. See step m.

    s. Save and activate the changes.

    t. Restart the WebLogic server.

10. Configure the Application for the OSSO Identity Asserter. The WebLogic Server supports adding multiple authentication-methods. If you are setting up an OSSO Identity Asserter in the WebLogic Application Console, the Web application using the OSSO Identity Asserter must have its auth-method set to CLIENT-CERT. After deploying the application on the WebLogic Server, all web.xml files in the application EAR file must include CLIENT-CERT in the element auth-method for the appropriate realm. To edit web.xml for the OSSO Identity Asserter

    a. Locate the **web.xml** file in the application EAR file. For example:
```
WEB-INF/web.xml
```

    b. Locate the auth-method for the appropriate realm and enter CLIENT-CERT. For example:
```
<login-config>
  <auth-method>CLIENT-CERT</auth-method>
  <realm-name>myRealm</realm-name>
</login-config>
```

    c. Save the file.

    d. Redeploy and restart the application.

    e. Repeat for each **web.xml** file in the application EAR file.

11. Update the **mod_wl_ohs.conf** file to send requests to the WebLogic server. To update the **mod_wl_ohs.conf** file:

    a. Navigate to the location where the mod_wl_ohs_conf file exists and open it for editing. For example, `$ORACLE_INSTANCE/ config/ <COMPONENT_TYPE>/ <COMPONENT_NAME>`

    b. Update the file based on the following examples:

       – For a single WebLogic instance, specify:
```
<Location /console>
    SetHandler weblogic-handler
    WebLogicHost server1
    WeblogicPort 7001
</Location>
```

This will forward `/console` from the HTTP server to `/console` on the WebLogic Server with the host name and port number, server1:7001.

– For Weblogic instances in a cluster, specify:

```
<Location /myServerURL>
    SetHandler weblogic-handler
    WebLogicCluster server1:7010,server2:7010
</Location>
```

This will forward `/myServerURL` from the HTTP server to `/myServerURL` on the WebLogic Clusters with the host names and port numbers, server1:7010 and server2:7010.

> **Note:** In the examples above, server1 and server 2 are the host names used for illustrative purposes. Ensure that you use relevant host names, port numbers, and context roots based on your implementation.

Troubleshooting

This section lists possible solutions for some issues that may occur when using the application.

Error Occurs When Users Access the Charting Feature in the RPAS Fusion Client

In case the users try accessing the application from a system that does not have a connected Display/Video card, they may encounter the following error message when they try using the charting feature for the first time:

```
Sun.awt.X11GraphicsEnvironment (initialization failure)
For more information, please see the server's error log for an entry beginning with: Server
Exception during PPR, #
```

To avoid this issue, you must set up the WebLogic Startup script with the java.awt.headless parameter using the following steps:

1. Navigate to the following location on the system where the application server is installed:

    `<WEBLOGIC_DOMAIN_HOME>/bin/`

2. In a Text Editor, open the **startWeblogic.sh** script for editing.

3. Append the following parameters to the **set JAVA_OPTIONS = %SAVE_JAVA_OPTIONS%** statement:

    `-Djava.awt.headless=true`

    Once set up, the JAVA_OPTIONS statement will appear as the example below:

    `set JAVA_OPTIONS=%SAVE_JAVA_OPTIONS% -Djava.awt.headless=true`

4. Save and close the file.
5. For the changes to take effect, restart the WebLogic Server.

Part II

Patch Installation

Part II of this guide details the steps needed to perform a patch installation of RPAS.

Part II contains the following chapters:

- Chapter 1: RPAS Package Extraction
- Chapter 2: RPAS Patch Installation Instructions
- Chapter 3: RPAS Classic Client Installation

For information about a full installation, see Part I: Full Installation.

Upgrading Process

RPAS upgrades can be applied directly to an existing installation of the same major release. RPAS does not require customers to incrementally upgrade their installation.

An important aspect of upgrading is updating the existing RPAS domain to be compatible with the most recent upgrade that has been applied. This can be done with the RPAS utility upgradeDomain.

Though RPAS encourages customers to stay up-to-date with releases, upgrades, and patches, it is possible that some customers may not have been able to update to the current upgrade or patch. At the time of the 13.2 release, Oracle Retail is aware of customer implementations that are still below version 12.1. Oracle Retail advises such customers to be sure to follow the process outlined in the 12.1 version of the *RPAS Installation Guide* to convert their pre-12.1 domain to a post-12.1 domain. Fundamental changes have been made to RPAS's storage layer, and pre-12.1 domains are not upgradeable to 13.2 domains simply with the use of the upgradeDomain utility.

RPAS Package Extraction

The first step in upgrading to the most recent installation is to download the 13.2 release from the My Oracle Support Web site (https://support.oracle.com) to a staging folder (such as $PACKAGEDIR) that is accessible to all components of your current RPAS environment.

Example Package Extraction

The following example walks through a sample upgrade installation. These sample commands are provided to guide you through the file extraction process and to identify the files provided in this upgrade.

```
$ mkdir packagedir
$ cp rpas.zip packagedir
$ cd packagedir
$ export PACKAGEDIR=`pwd`
$ unzip rpas.zip
```

The following items may be extracted to the current directory:

- ARPOPlatform-13.2.0.aix53.tar.zip
- ARPOPlatform-13.2.0.aix61.tar.zip
- ARPOPlatform-13.2.0.sun10.tar.zip
- ARPOPlatform-13.2.0.linux.tar.zip
- ARPOPlatform-13.2.0.nt.zip
- ARPOPlatform-13.2.0.clients.zip

> **Note:** ARPOPlatform-13.2.clients.zip is an archive of the RPAS Classic Client and ODBC Client for all platforms.

- Curve13.2.0.zip
- Grade13.2.0.zip
- FusionClient.zip
- README.html
- DOCS folder

At this point, you must choose which package you wish to extract, based on your current server platform and version. AIX 6.1 is used for the purpose of the example below.

Next, run the following commands.

```
$ unzip ARPOPlatform-13.2.aix61.tar.zip
$ tar -xf ARPOPlatform-13.2.aix61.tar
```

Now the package directory should contain a subdirectory named ARPOPlatform. You have successfully completed extracting the upgrade.

2

RPAS Patch Installation Instructions

RPAS Upgrade Prerequisites

In order to upgrade RPAS, first verify the following criteria for the RPAS system:

- Verify that RPAS is currently installed.
- Verify that UNIX operating system is updated to the currently supported version, which can be found in the Hardware and Software Requirements section.
- Verify that the environment variables are correctly set; if they are not, follow these instructions to set them:
  - Change directories to the original RPAS installation directory (such as the one created by the most recent installer), and execute retaillogin.ksh to set all environment variables. For example:

```
$ cd /retail
$ . ./retaillogin.ksh
```

> **Notes:**
>
> Once you have run the script, verify that the environment variables all point to the correct locations on your environment.
>
> If you have updated Java since the last installation of RPAS, verify that the JAVA_HOME path is correct. If not, please update your retaillogin.ksh script and source it again as outlined above.

Java Environment

Ensure that Java Development Kit (JDK) has been installed on the machine where RPAS will run and that the JAVA_HOME environment variable is properly set.

AIX, Solaris, and Windows (for the RPAS Configuration Tools) versions of RPAS are only compatible with a 32-bit version of Java.

Linux is only compatible with a 64-bit version of Java.

HP Itanium does not release separate 32-bit and 64-bit versions of Java. Therefore, you need to set the 64-bit Configuration Tools environment variable for Java as shown below:

```
export RIDE_OPTIONS=-d64
```

> **Note**: Users should avoid enabling AutoUpdate when installing Java because it may update the Java version without prompting.

Ride Options

The RIDE_OPTIONS environmental variable has been defined to allow users to pass information into the rpasInstall process. Unlike the regular arguments passed on the command line to rpasInstall (such as -fullinstall and -updatestyles), arguments defined in RIDE_OPTIONS are passed to every rpasInstall instance that runs in the environment.

Described below are the three supported properties for use with RIDE_OPTIONS.

- **Xmx** – used for Java
- **HP 64-bit mode Java (-d64)** – used for HP Itanium
- **Drpas.maxProcesses** – used for RPAS

For Java

Xmx - By default, the Java Virtual Machine requests on the order of 268 MB of RAM from the OS to allocate for its heap. Large domains that are built from complex configurations can potentially exhaust this limited amount of memory. This is even more of an issue in patch installations than in builds since a patch installation requires two different versions of a configuration to be held in memory simultaneously.

By using the -Xmx option, you can instruct the Java Virtual Machine to request more memory from the OS to prevent situations when all allocated memory is exhausted. The syntax of the property is:

`-Xmx###m`, where `###` is the amount, in megabytes, of memory the JVM is to request. Common values for this argument are `-Xmx512m` or `-Xmx1024m`.

For HP Itanium

HP 64-bit mode Java (-d64) - The HP distribution of Java does not consist of separate executables for 32-bit and 64-bit operating systems. Instead, there is a single distribution of Java that can run in either 32-bit or 64-bit mode. By default, the HP Java runs in 32-bit mode. Because RPAS is built as a 64-bit executable on the Itanium OS, the RPAS libraries are unable to link with Java if it is running in 32-bit mode.

By adding the -d64 property to RIDE_OPTIONS, the HP Java distribution is 64-bit mode enabled and the RPAS libraries link successfully.

It is often the case that users may want to use or more different properties in conjunction with RIDE_OPTIONS. When this is the case, all desired properties should be included within the environmental variable definition separated by white space with the entire definition enclosed in double quotes. An example of this is shown below:

```
export RIDE_OPTIONS="-d64 -Xmx1024m -Drpas.maxProcesses=8"
```

For RPAS

Drpas.maxProcesses - Several RPAS server utilities are designed to take advantage of multi-processor hardware to improve their performance. These utilities attempt to perform operations in parallel, each process running on a distinct processor. The -Drpas.maxProcesses argument is used to instruct RPAS how many processors it should attempt to run in parallel when executing one of the server utilities that has multi-processor support when that utility is executed as a part of the rpasInstall process.

Note that the -Drpas.maxProcesses argument only affects those calls to server utilities made from within the rpasInstall process and does not affect calls to server utilities made from the command line or as part of a batch job. The syntax of the property is:

`-Drpas.maxProcesses=###`, where `###` is the number of sub-processes the RPAS server utility should attempt to run in parallel. The number of processes to use should be determined by the administrator of the hardware system based on the physical number of processors available and the amount of load that is acceptable for the rpasInstall process to place on the system.

RPAS Upgrade Process

The following process outlines how to upgrade the RPAS server environment to the current version.

1. In a command prompt, change to location of the base directory of this upgrade.

   – `$ cd $PACKAGEDIR/ARPOPlatform/13.2.0`

2. Run RSP Manager to upgrade your environment:

   ▪ If the platform is Linux, use the following command:

      – `$ ./rsp_manager.linux –install –sp linux –no_domain`

   ▪ For all other platforms, use the following command:

      – `$ ./rsp_manager –install –sp [PLATFORM] –no_domain`

      > **Notes:**
      >
      > [PLATFORM] represents your current platform and should be replaced with the correct label, such as **aix53**.
      >
      > -no_domain indicates that there no domain in need of upgrading. For instructions on upgrading domains, see the Domain Administration chapter of the *RPAS Administration Guide*.

3. Verify that none of the files failed during the upgrade; this can be determined based on the output of RSP Manager. For example, a successful output message would read:

   – `Validation complete...`

   – `Files Checked: 106`

   – `Files Passed: 106`

   – `Files Failed: 0`

The RPAS upgrade process is complete.

Domain Upgrade Process

For instructions on upgrading domains, see Appendix: Building and Patching Domains. For additional information, see the Domain Administration chapter of the *RPAS Administration Guide*.

ODBC/JDBC Upgrade Process

This section describes how to save and migrate your existing ODBC/JDBC configurations to the new version. If you do not have any existing configurations to migrate, you can uninstall the old version and install the new one.

ODBC Server

Upgrading from 13.0.x

On all platforms, the 13.0.x ODBC Server configurations are stored in openrda.ini and oadrd.ini.

1. Before upgrading $RPAS_HOME, save a copy of openrda.ini and oadrd.ini to a temporary location.
2. Uninstall the 13.0.x version of the ODBC Server. To do this on Windows, run setup.exe and choose the **Remove** option. On UNIX platforms, the ODBC directory should be automatically overlaid when you upgrade your $RPAS_HOME.
3. Install the new version (13.1.2 or later) of the ODBC Server. Use the information below to migrate the 13.0.x configuration to the new ODBC Server.

Migrating Server Configuration

The table below shows the mapping of the configurations between 13.0.x and the new version (13.1.2 or later) of the ODBC Server

13.0.x Server Configurations	Corresponding Server Configurations (13.1.2 and Later)
INITIAL_SIZE	ServiceSQLDiskCacheInitialSize
INCREMENT_SIZE	ServiceSQLDiskCacheIncrementSize
MAX_SIZE	ServiceSQLDiskCacheMaxSize
DATABLOCK_SIZE	ServiceSQLDiskCacheDataBlockSize
CacheMemSize	ServiceSQLDiskCacheMemSize
FETCHBLOCK_SIZE	ServiceSQLFetchBlockSize
JOINBLOCK_SIZE	ServiceSQLJoinBlockSize
QueryMaxSize	ServiceSQLQueryMaxSize

The figure below shows the new ODBC Manager with the configuration attributes that are listed in the previous table.
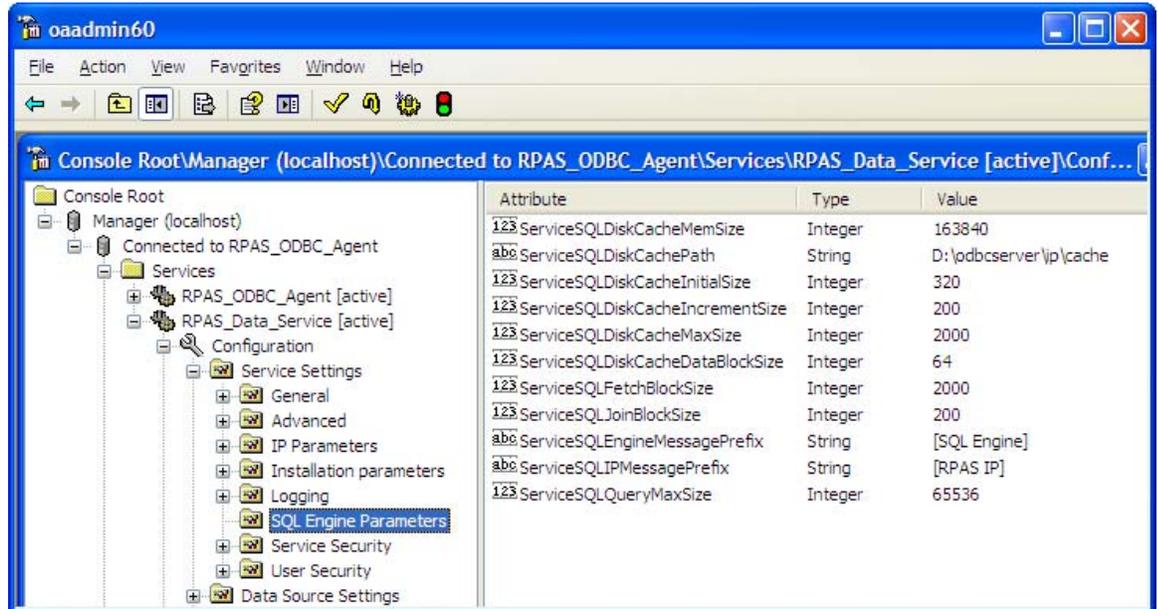
Server Configuration Attributes (Versions13.1.2 and Later)

Migrating Data Source Information

A data source in oadrd.ini looks like the sample below.

```
ADDRESS=mspdev41
PORT=1710
CONNECT_STRING=/vol.nas/u08/aip_triage/hany/Position_parent/croad_SR
TYPE=BTREE
SCHEMA_PATH=
REMARKS=
```

The attributes that you need to migrate are ADDRESS, PORT, and CONNECT_STRING. CONNECT_STRING in 13.0.x maps to DOMAIN_PATH in the new version. The figures below show where they are in the new Server configuration.
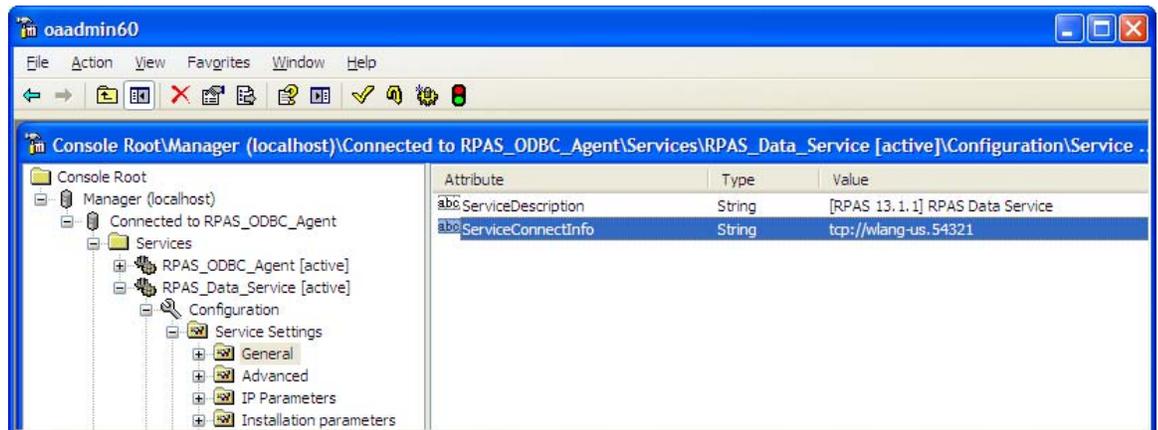
Server Address and Port Number (Versions13.1.2 and Later)
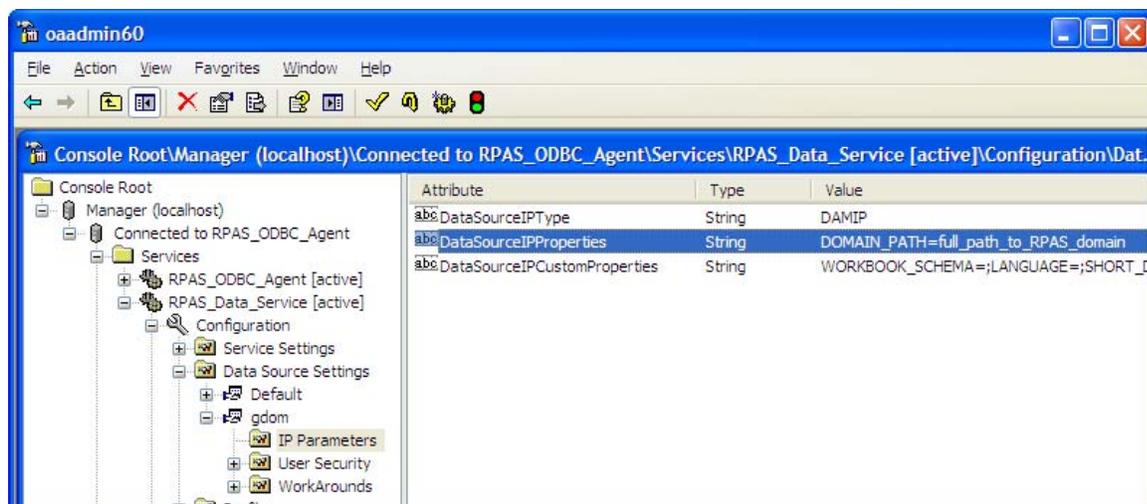
DOMAIN_PATH (Versions13.1.2 and Later)

Upgrading from 13.1.1.x

1. Before uninstalling 13.1.1.x, take screenshots of the server configuration and server address as shown in three previous figures: **Server Configuration Attributes**, **Server Address and Port Number**, and **DOMAIN_PATH**. These figures show the server's connecting and configuration information as well as the data sources you have.

2. Uninstall 13.1.1.x ODBC Server. To do this on Windows platform, run setup.exe in the server installation package and choose the **Remove** option. On UNIX platforms, delete the ODBC directory under $RPAS_HOME.

3. Install the new version (13.1.2 or later) ODBC Server. Use the information saved in the screenshots created in Step 1 to complete the server and data source configuration.

ODBC Client

UNIX Platform

In 13.0.x, the client configuration information to be migrated is stored in oadrd.ini and odbc.ini. Note that odbc.ini is not required by the 13.0.x version of the RPAS ODBC Client, but it may be required by your ODBC application (such as OBIEE).

Below is a sample data source definition in oadrd.ini.

```
ADDRESS=mspdev41
PORT=54321
REMARKS=
```

To migrate SampleDataSource to the new version (13.1.2 or later) of the ODBC Client, create an entry for SampleDataSource in odbc.ini:

```
[ODBC Data Sources]
SampleDataSource=Oracle Retail RPAS ODBC Driver

[SampleDataSource]
Driver=PATH_TO_ODBC_CLIENT/odbcclient32/lib/ivoa22.so
Description=Oracle Retail RPAS ODBC Driver
Host=mspdev41
Port=54321
ServerDataSource=gdom
UseLDAP=0
DistinguishedName=
Encrypted=0
LoadBalancing=0
AlternateServers=
ConnectionRetryCount=0
ConnectionRetryDelay=3
CustomProperties=
```

The customProperties entry in odbc.ini can be copied to the same entry in the new version of odbc.ini.

Windows Platform

The figure below shows a sample data source in the 13.0.x version of the ODBC Client.
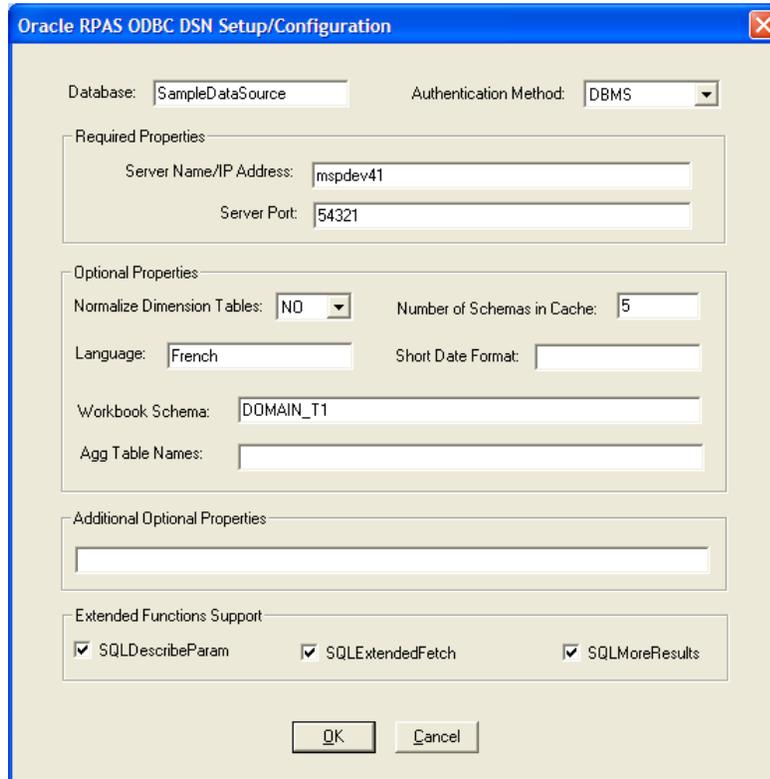
RPAS ODBC DSN Setup/Configuration for 13.0.x

In 13.1.2 and later versions, the Microsoft ODBC Administrator is used for creating and configuration the ODBC data source.
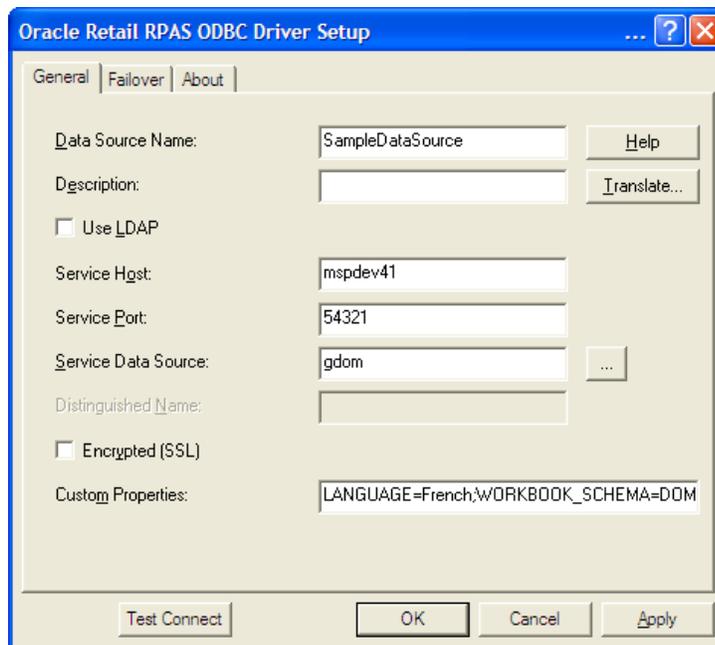
RPAS ODBC Driver Setup (Versions13.1.2 and Later)

All properties in **Optional Properties** and **Additional Optional Properties** in 13.0.x map to the **Custom Properties** in the new version (13.1.2 or later). The properties are listed below.

- NORMALIZE_DIM_TABLES
- SCHEMA_IN_CACH
- LANGUAGE
- WORKBOOK_SCHEMA
- AGG_TABLE_NAMES
- SHORT_DATE_FORMAT
- DEFAULT_SCHEMA
- LOG_FILE
- RPAS_LOG_LEVEL

JDBC Client

Upgrading from 13.0.x

1. Before uninstalling 13.0.x JDBC Client, record the data sources that you want to migrate to the new version (13.1.2 or later).
   - To do this on Windows platforms, open the Admin Tool (shown in Step 3), gather the name, IP address, and port (of the server).
   - On UNIX platforms, use the command line Admin utility rpasjdbcclientadmin to gather the same information.

   You should also collect the optional custom connection properties that may exist in your JDBC URLs if you use URL in your JDBC applications.

2. Uninstall 13.0.x JDBC Client.
   - To do this on Windows, run setup.exe and choose the **Remove** option.
   - On UNIX, delete the jdbcclient directory.

3. Install the new version (13.1.2 or later) of the JDBC Client. For instructions, see the RPAS ODBC/JDBC Driver chapter in the *RPAS Administration Guide*. Then use the information gathered in Step 1 to construct the URLs for your JDBC applications.
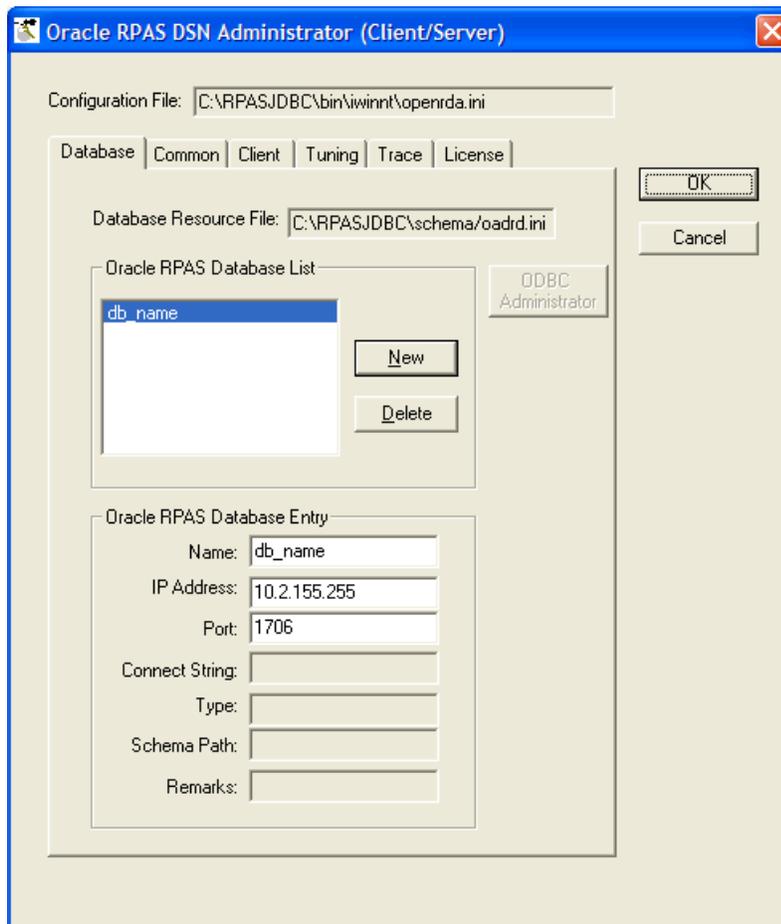
RPAS DSN Administrator (Client/Server) Window

Upgrading from 13.1.1.x

1. Gather the information for the server's IP address, port number, data source name, and any custom connection properties in the 13.1.1.x JDBC URLs.

2. Delete the 13.1.1.x version of the JDBC Client.

3. Install the new version (13.1.2 or later) JDBC Client.

4. Use the information gathered in Step 1 to construct the JDBC URLs for the new JDBC Client.

RPAS Classic Client Installation

The RPAS Classic Client can be installed through either of the following methods:

- Windows installer
- Web-based deployment

The following sections describe the installation processes for these two methods.

Windows Installer Method

This section describes the installation of the RPAS Classic Client on Windows machines, and describes how to configure the client to connect to a domain.

Make RPAS Classic Client Files Generally Accessible

Perform the following procedure to make the RPAS Classic Client available.

1. Create a directory on the network from where users will install the RPAS Classic Client.

   The location and the name of the directory are up to the system administrator's preferences. This directory is henceforth referred to as the [RPASCLIENT] directory.

2. Extract the client from the ARPOPlatform-13.2.0.clients.zip included in the main package to the [RPASCLIENT] directory.

Installing the RPAS Classic Client

The RPAS Classic Client installation procedure is the same for all of the RPAS applications. Perform the following procedures to install the application onto a PC.

1. Run the setup.exe file located in the [RPASCLIENT] directory on the network.

2. The welcome page is displayed. Follow the installation procedures as prompted.

   The setup program exits after the installation is complete.

Configuration

After creating an RPAS domain and starting the DomainDaemon (see the *RPAS Administration Guide*), you must configure the RPAS Classic Client to connect to the domain on a server. This section provides instructions for configuring the RPAS Classic Client on a local computer using a Microsoft Windows operating system.

The EConfigure Utility

EConfigure is a Windows application that configures the client-server communication for RPAS. EConfigure lets you specify communication parameters and produces a file that is used as input to the client. These files must be in FCF (Foundation Configuration File) format/extension. The files contain the necessary information for the client to start up the communication with the server. These files can be stored on the client machine or on the network.

When the client is executed, a file named Foundation.FCF is expected in the same directory. If the file has a different name or if it is stored somewhere on the network, the path to this file must be passed in as an argument to the client.

EConfigure consists of a menu bar, a main view, and the advanced settings dialog box. Passwords saved in the FCF file are encrypted. To launch EConfigure, double-click the EConfigure.exe file, which is by default located in the root directory of the RPAS Classic Client.

The Menu Bar

The files produced by EConfigure may contain multiple connections. Each connection will be specific for a server with certain communication settings. Connections need to have unique descriptions, and they can be added and deleted using the menu bar.

The Main View

The main view has the basic connection parameters. On this view, three groups of controls are available:

- The connection group
- The domains group
- The Advanced Settings dialog

The Connection Group

Database Server: The hostname or the IP address of the server, for example, atldev03 or 10.2.1.23. This value should be **localhost** when running the RPAS Server on a Windows machine.

Daemon Port: The port number on which the domain daemon is listening. This must be an integer between 1025 and 65535 (for example, 55278).

The Domains Group

Domain: The name of the domain that is displayed to the user when logging in. Select a domain from the list or type the name of a new domain and click **Add Domain**. You can delete a domain from the list by selecting it and then clicking **Delete Domain**.

Domain Path: The full path to the directory containing the domain, for example, /root/testenv/domain/Sample_Project

User: Provide the user ID if you do not want to force the user to provide it when logging in. The user ID must be defined in the associated domain.

Password: provide the password for the above user if you do not want to force the user to provide it when logging in. This password must match the password defined in the domain for the associated user.

The Advanced Settings Dialog

Default Database Login

User: The database user that is used by the client if a domain specific user has not been entered, for example, adm.

Password: Like the default database user, default database password is used if a domain specific password has not been entered, for example, adm.

Database Port Range: Port range is used to specify the range of ports on which the RPAS Server processes is started by the DomainDaemon (the rpasDbServer processes). The port **Start** and port **End** fields are the lower and upper limits of this range respectively.

These fields must be integers between 1025 and 65535, which are also the default values if values are not specified, for example, Start: 40000, End: 45000.

Compression Threshold: The number of bytes above which client and server are using compression. Only advanced users should manipulate this number.

Web Tunneling: The configuration of Web tunneling.

Proxy Settings: The configuration of the RPAS Classic Client to support a proxy server is not completed in this utility.

Web-Based Deployment Method

This section describes the installation of the RPAS Classic Client Web deployment installation process.

Web-based deployment allows you to perform the following:

- Use a Web browser to install the RPAS Classic Client application to the user's computer.
- Launch the RPAS Classic Client when it has already been installed.
- Reinstall the RPAS Classic Client when an updated version is available.
- Use the RPAS Web Launch applet to facilitate In-Context Launch integration.

Web deployment has been tested and is supported for the following components:

- Oracle Application Server (OAS) version 10.1.3.3, which includes JDK 1.5. If Oracle Single Sign-On (SSO) is used, the OAS server must be registered with an OID provider.
- Apache Tomcat version 6.0 with JDK 1.5 or 1.6.
- Microsoft Internet Explorer version 6.0/7.0 with Sun JVM plug-in of Java version 1.5. These instructions assume that the software specified above has been properly installed and configured. Consult the documentation of each component for installation and configuration information, as well as hardware and software requirements.

For the RPAS Web deployment to function properly, users must have sufficient access to their PCs (typically administrator rights) which allow them to install software, unless the administrator configures the applet to launch only preinstalled RPAS Classic Client. Specifically, they need permission to write into the Windows Registry.

Installation and Configuration Process Overview

The following is an overview of the process that must be followed to install RPAS for Web deployment.

- Install the RPAS Web Application. This installation is completed onto the Web server and involves two components that are included with the RPAS archive (RPAS.war or RPAS_osso.war, and RPASWebData.tar).
- Install multiple versions of RPAS Classic Client files on Web server (as needed).
- Configure the RPAS Servlet by using the deployment descriptor web.xml to specify servlet properties.
- Configure Oracle Single Sign-On for RPAS Web application (if Oracle SSO is used).
- Start the RPAS Web Configuration Utility. Using the URL of the RPAS Web Launch application, administrators and users follow this process to log in to the system.
- Configure Web Launch and Web Tunneling: using the Enterprise Configuration component of the Administration Console, the administrator indicates whether Web tunneling is to be used.
- Perform other Web client administration activities. Once the Web deployment environment is prepared, additional configuration and administration activities, such as domain configuration and managing administrative users, may need to be performed.

Installing the RPAS Web Application

Installing the RPAS Web Application consists of the following procedures:

- Preparing Your Environment
- Installing the necessary files and configuring the environment based on your type of installation. Three different processes may be used for RPAS Web deployment:
  - Installing on Oracle Application Server with SSO Support
  - Installing on Oracle Application Server without SSO Support
  - Installing on Apache Tomcat (a standalone server that is not part of the Single Sign-On (SSO) infrastructure)
- Configuring the RPAS Servlet
- Configuring and Administering the Web Application

Preparing Your Environment

1. Log in to the UNIX server and determine where the RPAS Web files will be installed. A minimum of 50 MB disk space available is required for the application installation files. More space may be needed if multiple versions of RPAS Classic Client are supported on the Web server.

2. Copy the RPAS Web files (RPAS.war, RPAS_osso.war and RPASWebData.tar), located in [RPAS Installation]/Web/ directory, to a newly created staging directory on the UNIX server. This directory will be referred to as STAGING_DIR.

3. Extract the RPASWebData.tar to the appropriate location. This location is referred to as [RPAS_WEB_DATA_DIR] in this document. If the Web server is running in a load balance environment with multiple servers, the RPASWebData files must be deployed to a network drive accessible to all Web server instances. A new directory RPASWebData/ and three subdirectories (client/, db/, and logs/) are created. Verify that the client directory has read permissions and that the db and logs directories have read and write permissions.

4. For each release of RPAS Classic Client, there are two files: buildNumber.txt and client.zip. These files are not part of RPAS Web files. They generally come with RPAS release package. The default installation location for the files is [RPAS_WEB_DATA_DIR]/RPASWebData/client. If multiple client versions are to be supported, both files of each version must be placed under [RPAS_WEB_DATA_DIR]/RPASWebData/client/[VERSION] where [VERSION] is the version number of that release (for example, 13.2.1 or 12.0.10).

5. Perform the necessary procedures based on your type of implementation.

Installing on Oracle Application Server with SSO Support

Perform the following procedure if you are implementing RPAS Web on an Oracle Application Server with Single Sign-On (SSO) Support. This process consists of several steps:

- Step 1: Ensure Prerequisites Are Met
- Step 2: Deploying the WAR File
- Step 3: Configuring RPAS Web Launch
- Step 4: Protect RPAS Root
- Step 5: Setting RPAS Role for Oracle Single Sign-On Logins

Step 1: Ensure Prerequisites Are Met

Make sure the following procedures have been performed before installing RPAS Web using Oracle Single Sign-On:

1. Install the Oracle Identity Management Infrastructure server, including the Oracle Internet Directory (OID) LDAP and Oracle Single Sign-On (OSSO) servers.

2. Register the RPAS HTTP server with the OSSO server via the ssoreg.sh script. The output of this command will be a binary file, denoted here as the osso.conf file. Copy osso.conf to the RPAS HTTP server ($ORACLE_HOME/Apache/Apache/conf/osso/osso.conf) and configure the RPAS HTTP Server to enable the mod_osso module. See the Oracle Single Sign-On documentation for further details.

3. Obtain the OID information (TCP/IP address and port, whether SSL is used as a transport mechanism and the realm name) from Oracle SSO server administrator. You will also need an administrative login and password, such as that used by the orcladmin user.

4. Set the instance security provider for the RPAS OC4J to Oracle Identity Management (the OID server). You will need to use the information gathered in step 3. Verify this by checking the file,
$ORACLE_HOME/j2ee/<RPAS_OC4J_INSTANCE>/config/jazn.xml.

An example file is shown below.

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<jazn xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="http://xmlns.oracle.com/oracleas/schema/jazn-
10_0.xsd" schema-major-version="10" schema-minor-version="0" provider="LDAP"
location="ldap://myhost.mycompany.com:636" default-realm="us">
    <property name="ldap.cache.purge.initial.delay" value="1200000"/>
    <property name="ldap.password"
value="{903}lDjczxpuY0o2BQg2MqM0YReAax9p+Po0wuU0oKU67as="/>
    <property name="ldap.cache.initial.capacity" value="20"/>
    <property name="ldap.user"
value="orclApplicationCommonName=jaznadmin2,cn=JAZNContext,cn=products,cn=Orac
leContext"/>
    <property name="ldap.cache.policy.enable" value="true"/>
    <property name="ldap.cache.purge.timeout" value="1200000"/>
    <property name="ldap.cache.realm.enable" value="true"/>
    <property name="ldap.cache.session.enable" value="true"/>
</jazn>
```

> **Note:** Only LDAP specific properties are listed above. Your values of these may also differ. See the Oracle Application Server administration documentation for further details.

5. Restart the RPAS OC4J to incorporate your changes.

Step 2: Deploying the WAR File

Perform the following procedure to deploy the WAR file to the Oracle Application Server.

1. Log on Oracle Enterprise Manager/Application Server Control as oc4jadmin.

2. Select the intended application group for your deployment.

3. Click **Deploy**.

4. Select **Archive is already present on the server where Application Server Control is running** (second option) and type the following in **Location on Server** field:

[STAGING_DIR]/RPAS_osso.war

5. Click **Next**.

6. Type **RPAS Web Launch** in the **Application Name** field.

7. Type **RPAS** (or anything you choose) in **Context Root** field.

This name is referred to as [CONTEXT_ROOT] in this document.

8. Click **Next**.

9. Click the pen icon for **Select Security Provider**, and select **Oracle Identity Management** from the list.

10. Select **Enable SSO Authentication** check box.

11. Click **OK**.

12. Click **Deploy**.

Step 3: Configuring RPAS Web Launch

To configure RPAS Web Launch, you need to modify one property file (propfile). This file is located in the following path:

[OAS_INSTALL_DIR]/j2ee/home/applications/RPAS Web Launch/[CONTEXT_ROOT] /WEB-INF/config

where [OAS_INSTALL_DIR] is the installation location of the OAS server.

1. Locate the following information in propfile and replace `[RPAS_WEB_DATA_DIR]` with the actual location and `[HOSTNAME]` with the host name of the server)

   ```
   dbPath=[RPAS_WEB_DATA_DIR]/RPASWebData/db
   clientSourceDir=[RPAS_WEB_DATA_DIR]/RPASWebData/client
   tunnelLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/tunnel.[HOSTNAME].log
   webLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/rpasPortal.[HOSTNAME].log
   isOSSO=true
   debug=false
   classicMode=false
   defaultInstallDir=C:\\RPAS Client
   ```

   Please note that `isOSSO` flag must be set to `true` to enable OSSO. `defaultInstallDir` is the default location where the RPAS Classic Client will be installed on the Windows workstation. Set `classicMode` to `true` to support RPAS Classic Client release 9.4.

2. Restart RPAS Web Launch Application from the Oracle Enterprise Manager/Application Server Control screen.

Step 4: Protect RPAS Root

Perform the following to protect the RPAS root location in the Oracle HTTP Server configuration.

1. In the file $ORACLE_HOME/Apache/Apache/conf/mod_osso.conf, add the following protected resource to `<IfModule mod_osso.c>` section.

   ```
   <Location /[CONTEXT_ROOT]/web>
   require valid-user
   AuthType Basic
   </Location>
   ```

2. Restart the Oracle HTTP Server to ensure the modification is applied.

> **Note:** Protect `/[CONTEXT_ROOT]/web` instead of `/[CONTEXT_ROOT]` to let through `/[CONTEXT_ROOT]/tunnel` for Web tunneling.

Step 5: Setting RPAS Role for Oracle Single Sign-On Logins

There are two types of roles for RPAS Web Launch users: RPAS_ADMIN_ROLE and RPAS_USER_ROLE.

Both roles can launch the RPAS Classic Client and connect to a domain. Only RPAS_ADMIN_ROLE has the privilege to access the ADMIN interface.

It is recommended that RPAS_USER_ROLE be assigned to most Oracle Single Sign-On (OSSO) users (such as planner) and RPAS_ADMIN_ROLE be assigned for a few power users (such as executive). This needs to be performed on the LDAP server storing the OSSO user information.

The roles can be created manually by using the OID DAS application. The oidadmin application or LDIF scripts may also be used to create users and roles. See the OID documentation for more details.

Creating a Group Using the DAS Application

Use the following procedure to use the DAS application to create the RPAS_USER_ROLE and RPAS_ADMIN_ROLE accounts.

1. Access the DAS application.

   The DAS application is found in the following location:

   http://<host>:<port>/oiddas

   where <host> and <port> are the infrastructure or Oracle Identity Management OAS.

   Example: http://rpas.us.oracle.com:7778/oiddas

2. Click the **login** link and log in as **orcladmin** or another privileged user.

3. On the right-side of the page, select the **Directory** tab, and on the left side, select the **Groups** link.

4. Click **Create**.

5. Enter the name of the group to create (for example, RPAS_ADMIN_ROLE), the display name, and a description.

6. Make sure the **Group Visibility** option is set to **Public**.

7. If you would like, add additional users. Scroll to the **Members** section and select the **Add User** button to add users to this group. You can also nest other groups as well. Members can be added at a later time as needed.

8. When all members have been added, click the **Submit** button.

Creating Groups from an LDIF Script

Alternatively, you can create the groups using an LDIF script. A template is given below. Note that the following token `@BASE_REALM_DN@` needs to be replaced with installation specific value of the Realm Distinguished Name. Also, this script creates the group with a single member, orcladmin, as part of the group. Additional members may be added via more `uniquemember` attributes. You can execute the script via the `ldapadd` command supplied with the Oracle Identity Management infrastructure OAS server.

Example:

```
# The LDIF template for creating RPAS_ADMIN_ROLE and RPAS_USER_ROLE groups in OID.
# RPAS_USER_ROLE
dn: cn=RPAS_USER_ROLE,cn=groups,@BASE_REALM_DN@
objectclass: top
objectclass: groupOfUniqueNames
objectclass: orclGroup
cn: RPAS_USER_ROLE
displayname: RPAS user role
description: RPAS user role
orclisvisible: true
owner: cn=orcladmin,cn=users,@BASE_REALM_DN@
uniquemember: cn=orcladmin,cn=users,@BASE_REALM_DN@

# RPAS_ADMIN_ROLE
dn: cn=RPAS_ADMIN_ROLE,cn=groups,@BASE_REALM_DN@
objectclass: top
objectclass: groupOfUniqueNames
objectclass: orclGroup
cn: RPAS_ADMIN_ROLE
displayname: RPAS Administrator role
description: RPAS Administrator role
orclisvisible: true
owner: cn=orcladmin,cn=users,@BASE_REALM_DN@
uniquemember: cn=orcladmin,cn=users,@BASE_REALM_DN@
```

Once the RPAS groups have been created via the LDIF script, you could use the OID DAS application to add more members to them.

Installing on Oracle Application Server without SSO Support

Perform the following procedure if you are implementing RPAS Web on an Oracle Application Server with Single Sign-On (SSO) Support. This process consists of several steps:

- Step 1: Deploying the WAR File
- Step 2: Configuring RPAS Web Launch

Step 1: Deploying the WAR File

Perform the following procedure to deploy the WAR file to the Oracle Application Server without SSO.

1. Log on Oracle Enterprise Manager/Application Server Control as oc4jadmin.
2. Select the intended application group for your deployment.
3. Click **Deploy**.
4. Select **Archive is already present on the server where Application Server Control is running** (second option) and type the following in **Location on Server** field:

   [STAGING_DIR]/RPAS.war
5. Click **Next**.
6. Type **RPAS Web Launch** in the **Application Name** field.
7. Type **RPAS** (or anything you choose) in **Context Root** field.

   This name is referred to as [CONTEXT_ROOT] in this document.
8. Click **Next**.
9. Click **Deploy**.

Step 2: Configuring RPAS Web Launch

To configure RPAS Web Launch, you need to modify one property file (propfile). This file is located in the following path:

[OAS_INSTALL_DIR]/j2ee/home/applications/RPAS Web Launch/[CONTEXT_ROOT] /WEB-INF/config

where [OAS_INSTALL_DIR] is the installation location of the OAS server.

1. Locate the following information in propfile and replace [RPAS_WEB_DATA_DIR] with the actual location and [HOSTNAME] with the host name of the server)

   ```
   dbPath=[RPAS_WEB_DATA_DIR]/RPASWebData/db
   clientSourceDir=[RPAS_WEB_DATA_DIR]/RPASWebData/client
   tunnelLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/tunnel.[HOSTNAME].log
   webLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/rpasPortal.[HOSTNAME].log
   isOSSO=false
   debug=false
   classicMode=false
   defaultInstallDir=C:\\RPAS Client
   ```

   Please note that isOSSO flag must be set to false. defaultInstallDir is the default location where the RPAS Classic Client will be installed on the Windows workstation. Set classicMode to true to support RPAS Classic Client release 9.4.
2. Restart RPAS Web Launch Application from the Oracle Enterprise Manager/Application Server Control screen.

Installing on Apache Tomcat

Perform the following procedure if you are deploying RPAS Web launch on a standalone Apache Tomcat server, which implies a non-SSO environment.

Installing RPAS Web Launch on Apache Tomcat consists of two steps:

- Step 1: Deploying the RPAS WAR File
- Step 2: Configuring RPAS Web Launch on Apache Tomcat

Step 1: Deploying the RPAS WAR File

Please refer to your Apache Tomcat documentation for more details of how to deploy a Web archive.

1. Log on to the Tomcat Web server URL: http://server:port/manager/html.
2. Scroll down to **Deploy directory or WAR file located on server** section.
3. Type **/RPAS** (or anything else you choose) in the **Context Path** field.

   This location is referred to (without the "/") as [CONTEXT_ROOT] in this document.
4. Type [STAGING_DIR]/RPAS.war in the **WAR or Directory URL** field.
5. Click **Deploy**.

The display name should show **RPAS Web Launch** for a successful deployment. In the event you need to a re-deploy RPAS Web Launch, it is recommended that the following be performed:

- Undeploy the Web application.
- Restart the Web server to clear any caching.
- Re-deploy the Web application.

Step 2: Configuring RPAS Web Launch on Apache Tomcat

To configure RPAS Web Launch, you need to modify one property file (propfile). This file is located in the following path:

[TOMCAT_INSTALL_DIR]/webapps/[CONTEXT_ROOT]/WEB-INF/config

where [TOMCAT_INSTALL_DIR] is the installation location of the Tomcat Web server. If the Web server is running in a load balance environment with multiple servers, this file must be modified for all Web server instances.

1. Locate the following information in propfile and replace [RPAS_WEB_DATA_DIR] with the actual location and [HOSTNAME] with the host name of the server.

   ```
   dbPath=[RPAS_WEB_DATA_DIR]/RPASWebData/db
   clientSourceDir=[RPAS_WEB_DATA_DIR]/RPASWebData/client
   tunnelLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/tunnel.[HOSTNAME].log
   webLogFile=[RPAS_WEB_DATA_DIR]/RPASWebData/logs/rpasPortal.[HOSTNAME].log
   isOSSO=false
   debug=false
   classicMode=false
   defaultInstallDir=C:\\RPAS Client
   ```

   Please note that isOSSO flag must be set to false. defaultInstallDir is the default location where the RPAS Classic Client will be installed on the Windows workstation. Set classicMode to true to support RPAS Classic Client release 9.4.

2. Restart the RPAS Web Launch application.

Configuring the RPAS Servlet

The class for the RPAS servlet is com.retek.mdap.servlet.ServletManager. The servlet properties have been configured in the deployment descriptor web.xml that is originally archived in RPAS.war.

This deployment descriptor provides two sets of initialization parameters to the RPAS servlet.

> **Note:** The deployment descriptor should not be modified. All of the servlet initialization parameters should not be modified, except the timeout and sleep parameters (which specify the time in seconds) for Web tunneling.

After the servlet is configured, load it into your Web server. You might be required to reload your Web server to activate the new servlet.

Configuring and Administering the Web Application

The following topics provide information on accessing the RPAS Web Administration console to perform administrative tasks such as defining the RPAS enterprise configuration, and adding, modifying and deleting domain configurations.

Start the RPAS Web Configuration Utility – Administration Console

1. To access the RPAS Web configuration utility, start a Web browser (Internet Explorer 6 recommended) and go to the following location:

   `http://[WEB_SERVER_ADDRESS]/[CONTEXT-NAME]/web`

   where

   `WEB_SERVER_ADDRESS` is the address you use to access your Web server.

   `CONTEXT_NAME` is the value you defined for the **Context Root** field in the Installing the RPAS Web Application procedure.

   > **Note:** The Web application support internationalization. It uses the locale from the browser to determine the appropriate language to display in the Web interface. The default language is English.

   Example: `http://rpasweb.oracle.com:13085/RPAS/web`

Depending the type of RPAS deployment being implemented (with SSO or without SSO), one of the following screens appears.

Login Screen after OSSO Authentication

Login Screen for Non-OSSO Configuration

> **Note:** If there is a very long list of domains, use URL `http://[WEB_SERVER_ADDRESS]/[CONTEXT-NAME]/web?app=[AppID]` to filter domains on the login page. Only domains with an application ID field matching `AppID` will be displayed in the list.

2. Perform one of the following:

- If you are using an SSO environment, select **ADMIN** as the domain and click **Login** to access the Administration Console.

- If you are not using an SSO environment, enter an Administrator user name and password (the initial administration user name is **adm** and the password is **adm**). Select **ADMIN** as the domain and click **Login** to access the Administration Console.

A security warning dialog box appears.

Security Warning on Internet Explorer

3. Click **Run**. To avoid seeing this message in the future, make sure **Always trust content from this publisher** option is selected. The RPAS Web Administration console appears.

RPAS Web Administration Console in SSO Environment

RPAS Web Administration Console without SSO

4. Refer to the topics below to configure RPAS Web Launch or perform other administration activities.

Configure Web Launch and Web Tunneling – Enterprise Configuration

The following section describes how to configure the use of the Web launch or the Web tunneling architecture. Both the Web launch and Web tunneling architectures allow domain location setup, client application installation, and application launch processes to be initiated from a Web browser. The difference between the two architectures is in how data is communicated between the RPAS Classic Client application that runs on a user's PC and the RPAS domain that runs on the database server.

The Web tunneling architecture sends all data through the Web server as it travels from a user's PC to the database server. This method allows PCs that are located outside a company's network to communicate through the Internet to a database server that is located inside a company's network.

The Web launch architecture sends all data directly from a user's PC to the database server. This architecture assumes that the database server is on a network directly accessible by each user's PC (that is, the company's LAN).

1. Click **Enterprise** to open the RPAS Enterprise Configuration window.

This dialog allows you to define the communications architecture that connects client PCs to the database server.

From a configuration perspective the key differentiator, between the two options is in the value of the Web Server Name field (described below). To use the Web tunneling architecture, this field must be populated; if it is empty, the Web launch architecture is used.

2. To configure the Web launch architecture, make sure the **Web Server Name** field in the RPAS Enterprise Configuration dialog is empty, and click the **Confirm** button. All other fields in this window are ignored.

RPAS Enterprise Configuration Window

3. To configure the Web tunneling architecture, the RPAS Enterprise Configuration window must be filled with appropriate values following the table below.

Filed Name	Value Description
Web Server Name	The hostname or the IP address of the Web server and the port number of the Web server. They must be entered sequentially with a colon in between. If the **Force SSL** checkbox is checked, replace the port with the SSL port number. Required.
Tunnel Servlet Name	The path to the servlet that tunnels the information between the client and server. Formatting: /[CONTEXT_NAME]/tunnel. Required.
Proxy Server Name	The hostname or the IP address of the proxy server.
Proxy Server Port	The port number on which the proxy server is active. Must be an integer between 1 and 65535.
Staging Server Name	Leave blank. Not used right now.
Staging Input Path	Leave blank. Not used right now.
Staging Output Path	Leave blank. Not used right now.
Socks Port	If HTTP 1.1 is being used along with a proxy server, then the proxy server must enable SOCKS protocol. Must be an integer between 1 and 65535.

Filed Name	Value Description
SSL Encryption Level	If SSL is to be used, this value should be 128 Bit US, or 64 Bit International encryption level. 128 bit encryption should be preferred.
Message Timeout	Used in HTTP 1.1 to specify the number of milliseconds of inactive communication after which the client will timeout and reconnect. Must be an integer between 1 and 65535.
Compression Threshold	The number of bytes above which client and server will be using compression.
Force SSL	This is a check box that specifies whether SSL is used for transferring data between client and server.
Use HTTP 1.1	This is a check box that specifies whether HTTP 1.1 should be used. If not selected, HTTP 1.0 will be used.

Sample Web Tunneling Configuration

Other Web Client Administration Activities

Adding, Modifying and Deleting Domain Configuration

1. Click **Domains** in the RPAS Web Administration Console. The RPAS Domain Dialog appears. This dialog is used to specify the location of RPAS domains. Each domain that can be accessed by a user must be specified with the dialog.

RPAS Domain Dialog

2. To add a new domain, click **New**, enter the following information, and click **Confirm**.

Field Name	Value Description
Description	This is displayed to users when they are selecting a domain to log in to. Required.
Application ID	Used in domain filtering. Can be any string without spaces. Leave blank if preferred.
Client Version	The version number of the RPAS Classic Client to launch. It must exactly match the version number in the path of the client files on the Web server. Leave blank if multiple version support is not enabled.
Path	The full path to the directory containing the domain on the database server. Required.
Database Server Name	The hostname of the database server containing the domain. Required.

Field Name	Value Description
Daemon Port	The port number of the DomainDaemon process running on the database server. The port must be between 1025 and 65535 (inclusive). Required.
Memory Size	Leave blank. Not used right now.
Start Port	Start of the range of ports used by a client PC (Web launch architecture) or the Web server (Web tunneling architecture) to connect to the database server. This value must be great than (>) 1025. If it not specified, the RPAS database server attempt to find a free port whenever a client connects.
End Port	End of the range of ports used by a client PC (Web launch architecture) or the Web server (Web tunneling architecture) to connect to the database server. This value cannot be greater than 65535.

3. To change an existing domain configuration, select the domain from the **Domains List**, modify the fields as necessary, and click the **Confirm** button. Select the **Cancel** button to discard any changes that have been made.

4. To remove a domain, select a domain from the **Domains List** and click **Delete**. The selected domain configuration is removed.

5. To copy all of the domain settings of a domain, perform the following:

   a. Select the domain from the **Domains List** and click **Copy**.

   b. Selecting another domain from the **Domains List** and click **Paste**. The domain is updated the domains settings you have copied.

   c. Click **Confirm** to save the updated information.

Changing Administrator Password

Perform the following procedure from the RPAS Web Administration Console.

1. Click **Change Password**. The RPAS Change Password window appears. This allows the currently logged in administrator to change his/her password that allows access to the administrative console.

2. Enter the current password in the **Old Password** field. Passwords should not exceed 30 characters in length.

3. Enter the new password in the **New Password** and **Confirm New Password** fields.

4. Click **Confirm** to save the new password.

Adding a New Administrator Account

Perform the following procedure from the RPAS Web Administration Console.

1. Click **Add Admin User** to open the RPAS Add Admin User window. This window is used to add another RPAS administrative user.

2. Enter the administrative user's name in the **User Name** field. The user name must not be used by other people.

   If the user name has been used, an error dialog appears. Click **OK** on this error dialog if this occurs, and enter another name for this new administrative user.

3. Enter the initial password in the **Password** and **Confirm Password** fields.

4. Click **Confirm** to create the new administrator account.

Deleting an Administrator Account

Perform the following procedure from the RPAS Web Administration Console.

1. Click **Delete Admin User** to open the RPAS Delete Admin User window. This allows you to delete an RPAS administrative user.

2. Select the administrative user's name from the list in the window, and click **Confirm** to delete the user account.

Logging Out

From the RPAS Web Administration Console, click **Logout** to exit the administrative console. This returns you to the Login screen.

Install and Launch the RPAS Classic Client Application

Perform the following procedure the install the RPAS Classic Client and log in to a domain using RPAS Web Launch:

1. Start a Web browser and go to the following location/URL:
   `http://[WEB_SERVER_ADDRESS]/[CONTEXT_NAME]/web`

   Example: http://rpasweb.oracle.com:13085/RPAS/web

   This address is established during the initial installation and configuration. Administrators must provide this location/URL to end users. The `[WEB_SERVER_ADDRESS]` portion of the URL is the host address where the Java application service is running. This address may also include an alternate TCP/IP port number to communicate on (for instance, for port 8080, webss:8080). The login screen appears.

2. Perform one of the following based on your environment:

   - If your environment is not using Oracle Single Sign-On (SSO), enter a user name and password, select a domain from the list, and then click **Login**.

   - If you are using SSO, you will enter your SSO credentials for authentication. A login screen appears. Select a domain from the list and click **Login**. The user name must have been added to the domain to allow access.

     > **Note:** When using SSO, you can by-pass the login page by specifying the domain in the URL:
     > `http://[WEB_SERVER_ADDRESS]/[CONTEXT_NAME]/web?domain=[Desc]`. The domain with a description field matching `Desc` will be launched automatically after the authentication. No spaces are allowed in the description field if this direct triggering mechanism feature is used.

   When the **Login** button is selected, the **DomainDaemon** on the database server is contacted to verify that the specified user is allowed to access the selected domain. Ensure that the **DomainDaemon** process is running on the database server before clicking on **Login**.

   If access to the domain is allowed, a security dialog window may appear.

3. If the security window appears, click **Run.**

   After you click **Run** in the security window, a check is made to see if the RPAS Classic Client application needs to be installed on the user's PC.

4. If necessary, select a directory that has at least 50 MB of free storage for installing RPAS Classic Client, and click **OK**. A status dialog box appears as files are copied from the server to the user's PC. After the files have been copied, a RPAS installation program runs, and the RPAS Classic Client starts. If everything is successful, the user sees a **Login Successful** message in the bottom left corner of the RPAS Classic Client window.

> **Note:** If the RPAS Classic Client does not need to be installed on the user's PC after you click **Login**, the RPAS Classic Client immediately starts and connects the user to the selected domain.

RPAS Web Launch and Oracle Retail Workspace

If you plan to implement RPAS Web Launch in conjunction with Oracle Retail Workspace, refer to the *RPAS Administration Guide* as well as the Oracle Retail Workspace documentation for more information.

Appendix: Building and Patching Domains

Build a Domain

After a fully defined configuration is created, an RPAS domain can be installed. Since building an RPAS domain is a manual process, it is expected that this process is supported by UNIX administration if installing the domain on a UNIX platform. If the domain is being installed on Windows servers for prototyping and demonstration purposes, it can be built using the RPAS Configuration Tools GUI installer.

Prerequisites

The following are the prerequisites for building a domain:

- MKS 8.7 Developer's Toolkit installed
- Installation of RPAS on the server that will store the domain(s).
- Installation of the Configuration Tools on the server that will store the domains.
- A configuration built using the Configuration Tools.
- A collection of hierarchy input files that contain positions for the domain. A hierarchy data file (name.dat) is required for each defined hierarchy.

Client-Side Procedures

Export the Configuration Project from the Configuration Tools

To begin the domain build process, a configuration project built using the Configuration Tools is required. This can be a packaged template or a configuration created with the customer's specific hierarchies, measures, and workbooks. If using a new configuration, be sure to note the path where the configuration is saved on the local disk.

> **Note:** The remainder of the section assumes that the domains are being built on a different server than Windows while the configuration is created on the Windows platform. If the domain is being built on the same server as the configuration, the steps regarding adding the configuration to the zip file and transferring to a different server can be eliminated.

Zip up the Configuration Project Folder

1. Find the location where the configuration project is saved.

2. Using Windows Explorer, go to the path of the configuration project.

3. Right-click on the **Configuration** folder, and select **Add to Zip**. Package the entire contents of the project beginning with the configuration project root folder such that the zip file will include all Solution(s). It is important to zip the entire configuration project for the entire directory structure and not just the specific .xml files. Do not change the name of the configuration project folder or alter the contents of the folder in any way.

   In the following example, TPGA is the configuration selected to create the TPGA.zip.

4. Using FTP, transfer the .zip file over to the server in binary mode. This can be placed in the home directory for now.

Load Measure Data

> **Note:** The following is optional. If installing a packaged template that contains a script to load data, the following section can be skipped. Proceed with the installation process of the solution template.

During the initial domain build process, all of the hierarchy and measure data files in the input home directory will be copied to the input directory domain. If necessary, move or copy any new measure data files to the input directory of the domain. The measure data file must have a valid measure filename, such as xxx.ovr, xxx.rpl, xxx.inc, or xxx.clr, where xxx is the measure name.

The meanings of the extensions are as follows:

- ovr – The data from the incoming file will overlay the data that is already present at the base intersection for the measure. If a particular cell at the base intersection does not receive a new record from the incoming file, that cell's current value will be preserved.

- inc – The data from the incoming file will be added to any existing data at the base intersection of the measure.

- rpl – All data at the base intersection for the measure will be removed before cells are populated with the data from the incoming file.

- clr – Data at the base intersection of a measure will be partially cleared based on incoming data and the clearint attribute for the measure. The clearint attribute defines an intersection above the base intersection. All cells at the base intersection that are descended from a given position at the clearint level will be removed if there is data in the incoming file for at least one of those descending positions.

Example:

Measure A has a base intersection of SKU and a clearint of dept.

If there is data for only a few SKUs (3, 5, and 11) in the incoming file, and SKUs 3 and 5 roll up to dept1 while sku11 rolls up to dept3, the data in all of the SKUs that rolls into dept1 and dept3 will be cleared.
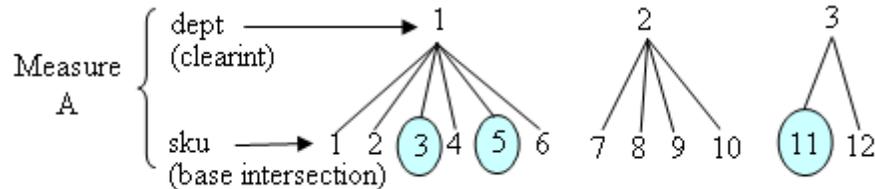
- The base intersection is SKU.
- The clearint is dept.
- Data is present for SKUs 3, 5, and 11; which fall under dept 1 and dept3.
- Data will be cleared for dept1 (SKUs 1, 2, 3, 4, 5, 6) and dept3 (SKUs 11, and 12).
- Data for SKUs in dept2 (7, 8, 9, and 10) will be untouched.

Procedure

Refer to the *RPAS Administration Guide* for the following procedures:

- Loading data using the `loadmeasure` utility.
- Disabling the timestamp header.
- Information on Measure Loading Properties.

Server-Side Procedures

Import the Configuration to RPAS

> **Note:** If building the domain directly from the GUI Installer, this section may be omitted.

After the configuration project is exported, it can be imported to the server and begin building the domain. A new domain can be built or an existing domain can be updated (patched).

> **Note:** Though the RPAS Configuration Tools are supported only on the Windows platforms, the installation tools are supported on all platforms However, they require Java 1.5. Make sure that the server being used for the domain install has the correct version of Java.

Unzip the Configuration File

1. Find the location where to save the configuration project file.

> **Note:** Always put an updated configuration project in a new directory path. Do not overwrite an existing configuration project.

2. Move the <Configuration Project–.zip file to this location.

3. Unzip the <Configuration Project–.zip file using the UNIX command:

   `unzip a <Configuration Project–.zip`

4. Do not change the directory name for the configuration project or alter the contents in any way.

Verify the Environment Variable Settings

Prior to this step, RPAS and the Configuration Tools should be installed on the server that will store the domain(s). During that process, the necessary environment variables for RPAS and the Configuration Tools should be defined. Refer to Environment Variable Setup Script if the environment variables below have not been set up. Additional details on environment variables can also be found in the *RPAS Administration Guide*.

Log in to the server. Use the commands below to verify the environment settings:

`echo $RPAS_HOME`

`echo $RIDE_HOME`

`echo $JAVA_HOME`

`echo $PATH`

> **Note:** The path for the RPAS_HOME variable changes with each new RPAS release.

If any changes to the environment variable settings, remember to exit and restart the UNIX session in order to execute the corrected .profile. This step is very important before continuing with the remaining steps.

Get the Input Files Ready

1. Designate a directory for the location of the input files, and move the files into this directory.

> **Note:** As a recommendation, use the directory name **to_rpas** as a standard for the location of input files. At a minimum, the hierarchy files (product, location, and calendar hierarchy files) are needed to build the domain. At this time, a calendar file must be loaded.

2. If necessary, rename the hierarchy files to prod.dat, loc.dat, and clnd.dat. These file names are required. The format of these files must match the hierarchy configuration specified using the Configuration Tools.

Building the Domain Manually or by Using a Command-Line Interface

Run the rpasInstall script to build the domain. This executable is located in the path to RIDE_HOME/bin. The syntax for the rpasInstall script is as follows:

```
rpasInstall [-version | -testinstall | -fullinstall | -patchinstall] cn
<config_name- ch <config_home- dh <domain_home- in <input_directory-
[-rf <function_name-] log <logfile_name-
```

Required Syntax:

- `[-fullinstall | -patchinstall | -testinstall]` – The type of installation to be performed.

  where:

  `-fullinstall` – Builds a full domain and loads the hierarchy data files.

  `-patch install` – Patches an existing domain. Updates or unregisters/registers measures that have changed (as necessary).

  `-testinstall` – Used for testing only. Only generates configuration files.

- `ch <config_home—` Where `<config_home>` is path to the directory that contains the configuration.

- `-cn <config_name>` – Where `<config_name>` is the name of the configuration.

- `-in <input_home>` – Where `<input_home>` is the directory that contains the input files for the domain to be created.

- `-log <log_name>` – Where `<log_name>` is the name of the log file to be created.

Optional Syntax:

- `-v-version` – Provides the version number of the Tool build as it relates to the release or patch number.

- `-rf <function_name>` – Where `<function_name>` is the filename of the function to be registered. This pairing may be repeated for multiple functions.

- `-updatestyles` - Updates the saved Template style with the configuration settings. Saved settings that do not conflict with the configuration will be retained.

- `-verbose` - Results in more detailed log information.

Conditional Syntax:

- `-configdir <config_directory>` – Where `<config_directory>` is the path to the directory that contains the xml files that are used by RPAS. This is a required argument if supplying a globaldomainconfig.xml or calendar.xml.

- `-dh <domain_home>` – Where `<domain_home>` is the path to the directory where the domain will be created. This does not include the root of the domain. This is a required option if globaldomainconfig.xml is not used.

- `-p <dim_name>` – Where `<dim_name>` is the partitioning dimension. Use this if the global domain is being implemented without the use of globaldomainconfig.xml.

> **Note:** When building a domain for the first time, an installs directory is created inside the domain. The installs directory is essential for the patch process and should not be removed, moved, or renamed.

> **Note:** When sending in an issue to Oracle Retail Customer Support, if asked to provide a domain, be sure to provide the installs directory as well. The following information should be provided in order to help Customer Support better diagnose the issue:
>
> - The configuration
> - The script used to run the rpasInstall script
> - The domain
> - The log output file

Validate Domain Build Results

Once the domain build process is complete, the logfile should be reviewed to verify that the process executed successfully. Search for the words "ERROR," "FAILURE," and "exception" inside the logfile. The end of the logfile should look similar to the output below:

Time: 58.451

COMPLETE

After Building the Domain

After building the domain and loading measure data, perform the following procedures:

1. Use the RPAS EConfigure utility to specify the location of the domain on the server and designate a port number where the RPAS Server (DomainDaemon) is running.

2. Begin the RPAS Server process (DomainDaemon) with the port number specified in the EConfigure utility. Refer to the *RPAS Administration Guide* for instructions on executing the DomainDaemon.

3. Log on to the domain using the RPAS Clients.

4. Set up the appropriate permissions on the measures in the domain using the Measure Administration workbook, and view the measures by building a Measure Analysis workbook. Refer to the *RPAS Administration Guide* for instructions on using these workbooks.

Patch a Domain

In order to patch the RPAS domain with changes to the configuration project, perform one of the following options:

- Use the -patchinstall option when running the command-line installer.
- Select the **Patch Install** option if using the RPAS Configuration Installer.

Before beginning the patchinstall process, it is recommended that you perform the following:

- Save all workbooks.
- Create a backup copy of the domain.
- Verify that the -patchinstall option in the rpasInstall command is being used instead of the -fullinstall option.

> **Note:** Change ONLY the fullinstall option to patchinstall inside the call to rpasInstall. No other options in the rpasInstall call must be changed when running a patchinstall.

Patching a domain does not update any hierarchy or dimension changes in the configuration with the exception of user-defined dimensions. It does not patch changes to the hierarchy purge age, the security dimension, or change the multi-language setting for a domain.

> **Note:** If updating the hierarchy purge age inside an existing domain, use the `loadHier` RPAS utility in batch mode to update the current settings. Refer to the *RPAS Administration Guide* for further details regarding the usage of the `loadHier` utility.

Patching a domain allows for any changes to measure properties, rule sets, rule groups, and workbook templates. During the process, the rule sets, rule groups, and rules are completely rebuilt, but measures and templates are updated with the changes.

> **Note**: If you removed a template from the configuration and then patch the domain, the formatting for that template will be deleted.

Applying a New Tools Build Patch Release

When there is a new release of the RPAS Configuration Tools, replace the entire Tools directory with the new release. Make a backup copy of the existing configuration before using it with the new Tools release. Also, create a new directory for the new Tools release rather than overlaying the old release. Remember to update the RIDE_HOME environment variable as needed to point to the new Configuration Tools release. For additional information, refer to Environment Variable Setup Script. Additional details on environment variables can also be found in the *RPAS Administration Guide*.

Patching Measure Properties

Certain measure properties cannot be updated without unregistering and reregistering measures, which results in the loss of measure data. Updateable measure properties are those that can be modified, and not updateable measures are those cannot be modified. If all of the measure properties that are changed are updateable, simply update the measure properties, and measure data will not be lost in the domain during the patch process. If even one of the measure properties that change are not updateable, the patch process results in un-registration and re-registration of the measure. Therefore, the data that was in the domain for that measure before the patch process will not be there after the patch process is complete.

Appendix: Bandwidth Requirements

Understanding Bandwidth Requirements

The bandwidth requirements for a Web-based deployment of the RPAS Classic Client are minimal. The only large data transfer that occurs in this configuration is installation of the RPAS Classic Client to a PC (approximately 5 MB of data). This happens very infrequently. The client software is installed the first time a PC tries to connect to a domain or if the PC has an older version of the software that needs to be upgraded.

C

Appendix: RPAS Sizing and Partitioning Considerations

This appendix provides guidelines and information on what to consider when sizing and partitioning RPAS domains. This appendix is not specific to any one solution. It is meant to give general information that will help you size and partition your solutions to achieve optimal performance.

RPAS Sizing

The number of positions within the hierarchies of a solution has an effect on the on-line and batch performance of a domain. When using a global domain, the positions along the partitioned hierarchy will be split among local domains. This partitioning will help in certain areas but is not a reason to include large numbers of positions in a single global domain environment. While there is no hard limit on how big a single global domain environment should be, the number of positions within the lowest level of each hierarchy should not be excessive. There are certain batch operations (loading hierarchies, reshaping arrays, repartitioning data between domains) that will be affected no matter how many local domains are created.

For example, assume that there is a solution that has a product, location and calendar hierarchy. In one environment, you have a single global domain instance with the product hierarchy having 1 million positions at the lowest level, the location hierarchy having 100 positions and the calendar hierarchy having 5 years. In a second environment, you have two global domain instances each with 500,000 product positions, 100 locations and 5 years of data. The loading of the product hierarchy in the first environment will be longer in than the second environment no matter how the local domains are partitioned.

Partitioning Considerations

The purpose of using a global domain and partitioning data across multiple domains is to help reduce contention, provide smaller domains for most users to interact with and to allow for parallel processing during batch. If the partitioning is not done correctly, it can lead to unnecessary contention or poor performance.

Here are some key considerations to make when determining how to partition a global domain environment.

- The hierarchy that you partition on should allow the users the ability to work in a single local domain. If users require access to all positions within a hierarchy, that is not a good candidate for partitioning. For example, it does not make sense to partition on the location hierarchy if your business process requires all users to include all locations in each workbook.

- The partition level should also be above the level at which most of the data is stored. If most data is stored at the division level or below in the product hierarchy, the partition level should be at the division level or above. When data is based above the partition level of the domain, the data will be stored in the master domain. All users across the local domains that require this data will

have contention from all of the users and not just the users of the local domain they are working in.

- The partitioning should be set such that the business requirements do not require high usage of the master domain. The performance of a workbook built from the master domain will never match that of a local domain workbook. The heavy usage of workbooks should take place across the local domains. For example, if most of the users only need to see data within a division then the partitioning should not be done below that level.

- The number of users that are in a single local domain should be evenly distributed across all the domains in a global domain environment. If there are a larger number of users in a single local domain than others, it will not matter how many partitions you create. The domain with the largest user group will always have the potential to experience more contention issues and poor performance. If possible, create more domains and separate more users across those domains.

Workbook Sizing Considerations

The impact of size for the end user is not limited to just the size of the domain or where they are building a workbook from. The size of the individual workbooks will have a direct affect on the performance they experience. The workbook size is a result of the number of measures and number of positions from each of the hierarchies included in the built workbook.

The number of measures for a workbook template is static based on what is configured. The more measures that are configured in a template the larger the workbook becomes. As workbooks get larger, workbook operations will take longer. Specifically, operations like save and open are directly related to the overall size of the workbook.

Since the number of measures in a given workbook template are static based on what is configured, the number of positions in each hierarchy is the only factor that the end user controls from workbook to workbook using the same template. Two workbooks for the same template may have completely different performance based on how many positions are included.

The simplest way to compare the size of two workbooks for the same template is to multiply the number of positions for each hierarchy at the base intersection of the template and the measures. For example, assume that there is a workbook that has the majority of measures based at the week/style-color/channel. This workbook always contains 500 measures so that is a constant. If there is one workbook that contains 52 weeks (1 year), 300 style colors and 3 channels, the total possible positions at the base level would be slightly over 23 million cells. This does not include any aggregate values a user may view. If a user built the same workbook for 2 years (104 weeks), the total possible positions double to over 46 million cells. Going back to the first example and just including 450 style colors instead of 300, the total possible base level cells would increase to over 35 million. Although there is no maximum number of cells that should be contained in a workbook, the number does have an impact on performance and therefore should be considered during design. If workbooks contain a total possible number of positions at the base level in the hundreds of millions, not only will the workbook performance be less than ideal but also the user will not be able to manage that level of detail.

Appendix: rsp_manager Usage

Overview

The rsp_manager (Retail Service Pack Manager) is a Perl script system that is capable of currently patching the following:

- RPAS
- Tools
- Domains
- Solution Environments (AIP_HOME, SCI_HOME, etc)

This system will automatically run any creates, scripts or procedures that need to be run when a patch is applied.

Prerequisites

You must have Perl 5.005 or later installed on your system. Most Unix variants will have this installed by default. On Windows, an installation of MKS is required.

Applying a Service Pack

The following instructions describe how to install a service pack.

1. Copy component-ver.os.tar.zip

> **Note:** This component will be named "-ver.os.zip" for Windows.

The service pack is shipped as a compressed .tar or .zip, depending on the platform. The file will be named based on the release level of the code contained within. Copy the service pack .tar.zip or .zip file to a standard service pack directory that you have previously set up.

Example

Create a service pack directory at:

`/files1/service_packs`

Then, copy the service pack file to:

`cp ./ARPOplatform-13.2.sun.tar.zip /service_packs`

…where `/service_packs` is a user-created directory for archived service packs. In Windows, this directory would resemble the directory `C:\service_packs`.

2. Unpack the service pack from the .tar.zip or .zip file from step 1.

   Example

   The following are example Unix commands to unpack the service pack.

   ```
   cd /service_packs
   unzip ARPOplatform-13.2.sun.tar.zip
   tar –xvf
   ```

   This will create a subdirectory in your service pack directory named the same as the service patch/pack version, which contains a directory for the platform. In this directory, you will see subdirectories for each of the modules this service pack is updating. For example, if this service pack has updates to RPAS, domains, and tools, the following module directories could be created:

   ```
   /service_packs/ARPOplatform/13.2/sun/rpas
   /service_packs/ARPOplatform/13.2/sun/domain
   /service_packs/ARPOplatform/13.2/sun/tools
   ```

   Additionally, this document, Release Notes, and a copy of any service pack installation scripts/libraries will be copied to a location such as:

   ```
   /service_packs/ARPOplatform/13.2
   ```

   > **Note:** In Windows, you may use WinZip or a similar unzipping tool for this step.

3. Apply the service pack on a staging or production server. After extracting the service pack, you will have to apply the service pack to the installed components and any domains that have been built. Note that the service pack installation should be carried out on the same operating system as that on which the product resides.

   The syntax of applying a service pack with *rsp_manager* is:

   ```
   rsp_manager –install –sp <sp path> –domain <domain path>
   ```

   Example 1

   To apply service pack 13.2 for ARPOplatform and domain /domain1, use the following commands:

   ```
   cd /service_packs/ARPOplatform/13.2/
   ./rsp_manager –install –sp sun –domain /domain1
   ```

   Example 1

   To turn on file logging of the output and store the results of the application in domain1.log, use the following commands:

   ```
   cd /service_packs/ARPOplatform/13.2/
   ./rsp_manager –install –sp sun –domain /domain1 –log domain1.log
   ```

   Following installation, a validation process will be run against your patched install.

Applying Service Packs on Multiple Domains

If you have more that one domain running off the same ARPOplatform, it is possible to create a domain list file and supply that file path, instead of the domain path, as an argument. This will be a text file with a full path to a domain on each line.

The additional syntax of *rsp_manager* is:

```
rsp_manager –install –sp <sp path> –domain <domain_list_file>
```

Example

To install service pack 13.1.2 for ARPOplatform and all domains listed in /files/domain_list.txt, use the following commands:

```
cd /service_packs/ARPOplatform/13.2/
./rsp_manager –install –sp sun –domain /files/domain_list.txt
```

…where /files/domain_list.txt looks similar to this:

```
cat /files/domain_list.txt
/domains/domain1
/domains/domain2
/domains/domain3
```

> **Note:** Logging will work with multiple domains, but only one file will be created and written to. This single log will contain the output from all updated modules and domains.

Optional Arguments or Commands for rsp_manager

rsp_manager has optional arguments that will allow you to perform tasks such as an installation version report, install or patch validation, and patch application forcing. The following sections provide details on these arguments.

-no_rpas

This flag stops your RPAS_HOME from being patched. This can be used in conjunction with –no_tools, but still passing domains, in order to upgrade a domain to your RPAS_HOME code level without performing an RPAS upgrade.

-no_tools

This flag stops your RIDE_HOME from being patched. This can be used in conjunction with –no_rpas, but still passing domains, in order to upgrade a domain to your RPAS_HOME code level without performing a tools upgrade.

-no_domain

This flag stops the patch from being applied to any domains.

-log <logfile>

Although logging is done by default, the log will be saved to the current working directory as a date-stamped filename. This flag allows you to change the name of the log file created to the argument you pass.

-force

This flag enforces the application of the patch/pack regardless of the versions that the components report. This allows you to reapply a patch that has already been applied, while also running any update scripts that might have already been run.

Example

To force reinstallation of the 13.2 service patch onto your installation and a single domain, with logging:

```
cd /service_packs/ARPOplatform/13.2/
./rsp_manager –install –sp sun –domain /domain1 –log domain1.log -force
```

-validate

This flag is run by default at the end of all –install processes. The purpose of this flag is to validate components of the service patch/pack against your installation. Currently, this will only check your core binaries and libraries in both RPAS_HOME and RIDE_HOME. Tests include permissions comparisons and file checksum validation, which are represented in the output as "P" or "C" respectively upon errors.

Example

To validate the 13.2 Sun service patch against your installation any time after patching:

```
cd /service_packs/ARPOplatform/13.2/
./rsp_manager –validate –sp sun
Validating your updated install against the service pack/patch -
..........................................................................
....
.......................
Validation complete...
Files Checked: 106
Files Passed: 106
Files Failed: 0
```

Note that the number of files checked might not match the above number, as it changes quantity based on platform and patch version. If any files fail, a listing of those failed files will be presented, each being preceded by flags ("C" or "P") to indicate which check(s) failed.

-report

This flag checks each component of your installation, including domain(s) that you pass in, and reports the current service pack/patch level of each. If you believe that a patch has been applied, yet you are still having an issue that is reported to be resolved, the output of this flag will confirm whether the patch has actually been applied.

Example

To check versions of installed components and domains listed in the /files/domain_list.txt text file:

```
./rsp_manager -report -domain /files/domain_list.txt
rpas level: 13.2
tools level: 13.2
/domains/domain1: 13.2
/domains/domain2: 13.2
/domains/domain3: 13.2
```

This output shows that RPAS_HOME, RIDE_HOME, and the domains listed have all been patched up to 13.2.

This report output, along with the output of a –validate execution, can be of great use to support when trying to debug an issue.

Optional Environment Variables

> **Note:** The following process is not a suggested installation process, but Oracle Retail acknowledges that it may be more efficient in some limited cases.

Since rsp_manager relies on the Retek.pm library, this file must normally be in the same directory as that from which you run rsp_manager. You may use an environment variable to point to the path that contains the library so that they can be split from each other. A useful instance would be setting up a directory in your path and placing rsp_manager inside, while using the RSP_HOME environment variable to point to the directory that contains the Retek.pm file. This would allow you to run rsp_manager from anywhere on the system.

Example

To be able to run rsp_manager from anywhere:

```
> cd /service_packs/ARPOplatform/13.2/
> ls
rsp_manager        Retek.pm
> mkdir ~/bin
> cp ./rsp_manager ~/bin/
> export PATH=~/bin:$PATH
> export RSP_HOME=/service_packs/ARPOplatform/13.2
```

At this point, you can cd to anywhere on the disk and run rsp_manager.

Please keep in mind that if you do choose to split these files, when you obtain new copies of the script and library, you will need to place them into the locations you reference in $PATH and $RSP_HOME.