

Oracle9iAS Discoverer

Configuration Guide

Version 9.0.2

May 2002

Part No. A95458-02

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Send Us Your Comments

Oracle9iAS Discoverer Configuration Guide, Version 9.0.2

Part No. A95458-02

Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this document. Your input is an important part of the information used for revision.

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Preface

Welcome to Oracle9iAS Discoverer!

This guide explains how to configure and customize Discoverer Plus and Discoverer Viewer after they have been installed as part of Oracle9i Application Server.

This guide does not explain how to install Oracle9iAS Discoverer. For information about installation, refer to the *Oracle9i Application Server Installation Guide*.

To use this guide effectively, we recommend that you are already familiar with HTTP servers and database concepts.

For the latest information, please read the Oracle9iAS Discoverer Release Notes in conjunction with this guide.

Intended Audience

This guide is intended for Discoverer Services tier (also referred to as Discoverer middle tier) managers and application server administrators.

Conventions

In this manual:

- EUL, the End User Layer™, refers to the metadata interface between the database and Discoverer.
- <ORACLE_HOME> refers to the directory where the Oracle HTTP Server and the OC4J servlet engine software are installed, along with the Oracle RDBMS.

Other conventions used in this manual are shown in the table below:

Convention	Meaning
. . . .	Vertical ellipses in examples indicate omitted information not necessary for the example.
...	Horizontal ellipses in statements or commands indicate omitted material not necessary for the statement or command.
boldface text	Boldface type in text indicates a field label on a Discoverer graphical user interface or internet page.
<i>italic text</i>	Italic type represents a variable.
< >	Angle brackets enclose user-supplied names.
[]	Brackets enclose optional clauses from which you can choose one or none.
Menu name Command	Text in this format conveys a sequence of choices, <i>i.e.</i> , choose the menu, then the command under that menu.
<code>Courier text</code>	Text in this format indicates a command line to be typed.

Note that Oracle9iAS Discoverer is supported on Windows NT, Windows 2000, and Unix (Solaris, 4P, AIX, Linux). Instructions for the Windows platform in this manual assume you are using Windows NT (unless stated otherwise). If you are using Windows 2000, replace Windows NT Start menu options with the equivalent Windows 2000 Start menu options. For example, to display the Services dialog:

- on Windows NT, you select Start | Settings | Control Panel, and double-click on the Services icon
- on Windows 2000, you select Start | Programs | Administrative Tools | Services

Related Documents

For more information, see the following manuals:

- *Oracle9iAS Discoverer Plus User's Guide*
- *Oracle9i Discoverer Administrator Administration Guide*
- *Oracle9iAS Security Guide*

- *Oracle Enterprise Manager Administrator's Guide*

Prerequisites to run Discoverer Plus and Discoverer Viewer

To run Discoverer Plus and Discoverer Viewer, you must have installed in the database a Discoverer End User Layer (EUL) version 5.1. The Discoverer manager must have created or upgraded the End User Layer using Oracle9i Discoverer Administrator (which is shipped as a component of Oracle9i Developer Suite Release 2).

Oracle9iAS Discoverer Navigation and Accessibility

Keyboard Navigation

Oracle9iAS Discoverer supports standard keyboard navigation. Standard keyboard navigation includes the use of the tab key, mnemonics (using the Alt key and the underlined character), and accelerators (such as Alt+F4 to exit a window).

Using the JAWS screen reader with Discoverer

If users will use Discoverer with a screen reader (e.g. JAWS), you might do the following to maximize usability:

- display Discoverer Plus in a separate window by deploying Discoverer Plus with the `framedisplaystyle` configuration value set to 'separate' (for more information, see [Section 8.6, "Discoverer Plus URL arguments"](#)).
- make sure that the screen reader has sufficient time to read a page before the page is refreshed by delaying the query progress page. You can do this in two ways:
 - on a per-user basis by deploying Discoverer Viewer with the `qpd` URL parameter value set to a number of seconds delay (for more information, see [Section 8.7, "Discoverer Viewer URL arguments"](#)).
 - on a global basis by using Oracle Enterprise Manager to specify a number of seconds delay (for more information see *Oracle Enterprise Manager Help*).

Note: You can also specify a number of seconds delay on a global basis using the `query_progress_delay` configuration value in the `configuration.xml` file (for more information, see [Section A.4, "List of configuration settings in configuration.xml"](#)).

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Introducing Oracle9iAS Discoverer

1.1 Introducing Oracle9iAS Discoverer

This chapter introduces Oracle9iAS Discoverer and contains the following topics:

- [Section 1.2, "About this guide"](#)
- [Section 1.3, "What is Oracle9iAS Discoverer?"](#)
- [Section 1.4, "About Oracle9iAS Discoverer and Oracle9i Application Server"](#)
- [Section 1.5, "What is the Oracle9iAS Discoverer architecture?"](#)
- [Section 1.6, "About the Discoverer client tier"](#)
- [Section 1.7, "About the Discoverer Services tier"](#)
- [Section 1.8, "About the Discoverer database tier"](#)
- [Section 1.9, "How does Oracle9iAS Discoverer work?"](#)

1.2 About this guide

This section explains how to find the information that you need to maintain and configure Discoverer. For example:

- you might have installed Oracle9iAS and want to run Discoverer Viewer and Discoverer Plus 'out of the box'
- you might have installed Oracle9iAS and now you want to set up a multi-machine configuration and use Web Cache to improve performance
- you might want to find out more about Discoverer's architecture

The table below lists configuration tasks and where to find information about each task.

What do you want to do?	Look in this chapter:
Change user preferences (e.g. query behavior, data format, default EUL)	Section 7.1, "Editing Discoverer preferences"
Configure Discoverer to work with firewalls and demilitarized zones	Section 13.1, "Maintaining data security with Discoverer"
Configure Discoverer using the Oracle Enterprise Manager (e.g. manage public connections, specify communications protocols for Discoverer Plus)	Section 2.1, "Using Discoverer with Oracle Enterprise Manager"
Customize the Discoverer Viewer user interface (e.g. fonts and styles)	Section 10.1, "Customizing Discoverer Viewer"
Deploy Oracle9iAS Discoverer in a multi-machine environment	Section 5.1, "Installing Oracle9iAS Discoverer in a multiple machine environment"
Deploy Oracle9iAS Discoverer with Oracle Applications	Section 14.2, "About Discoverer connections and Oracle Applications"
Deploy Oracle9iAS Discoverer with Oracle9iAS Portal	Section 11.1, "Using Discoverer with Oracle9iAS Portal"
Deploy Oracle9iAS Discoverer with Oracle9iAS Web Cache to improve performance	Section 9.1, "Using Discoverer with Oracle9iAS Web Cache"
Diagnose common problems with Oracle9iAS Discoverer	Section B.1, "Generating trace information in Discoverer"
Optimize Oracle9iAS Discoverer's performance (e.g. stylesheet pooling, query optimization)	Section 12.1, "Optimizing Discoverer performance and scalability"
Run Discoverer Plus or Discoverer Viewer to confirm a successful installation	Section 3.1, "Running Oracle9iAS Discoverer"
Run the Oracle9iAS demo in Discoverer	Section 3.2, "About the Oracle9iAS demo database"
Start Oracle9iAS Discoverer automatically from a Web URL or go straight to a particular workbook	Section 8.1, "Starting Discoverer using URL parameters"

The table below lists reference information chapters.

What do you want to find out more about?	Look in this chapter:
Oracle9iAS Discoverer configuration files (e.g. configuration.xml, blaf.css)	Section A.1, "Discoverer configuration files"
Oracle9iAS Discoverer maintenance (e.g. manually stopping and starting components)	Section 4.1, "Maintaining Oracle9iAS Discoverer"
Oracle9iAS Discoverer's architecture (e.g. Discoverer multi-tier structure)	Section 1.1, "Introducing Oracle9iAS Discoverer"
Frequently asked questions about Oracle9iAS Discoverer	Section C.1, "Frequently asked questions"
Oracle9iAS's CORBA components (e.g. session and preference components)	Section 6.1, "Managing the Discoverer CORBA components"

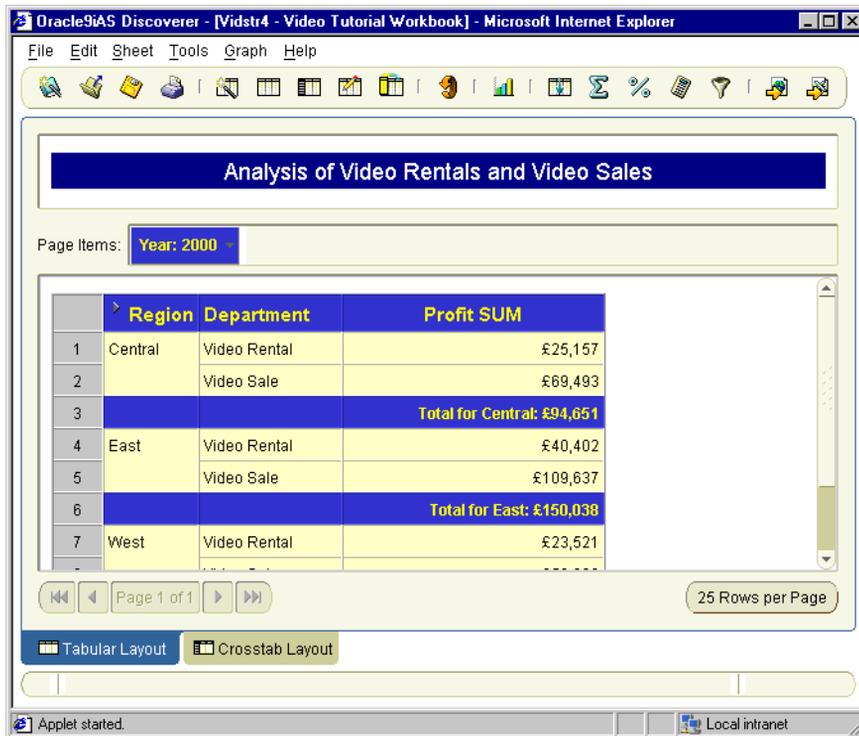
1.3 What is Oracle9iAS Discoverer?

Oracle9iAS Discoverer is a business intelligence tool for analyzing data and is a key component of Oracle9i Application Server (Oracle9iAS). Discoverer provides an integrated business intelligence solution comprising a set of intuitive ad-hoc query, reporting, analysis, and Web-publishing tools. These tools enable non-technical users to gain immediate access to information from data marts, data warehouses, and online transaction processing systems. Oracle9iAS Discoverer integrates seamlessly with Oracle9iAS Portal, enabling rapid deployment of Discoverer workbooks and worksheets to Web portals.

There are two Oracle9iAS Discoverer business analysis tools:

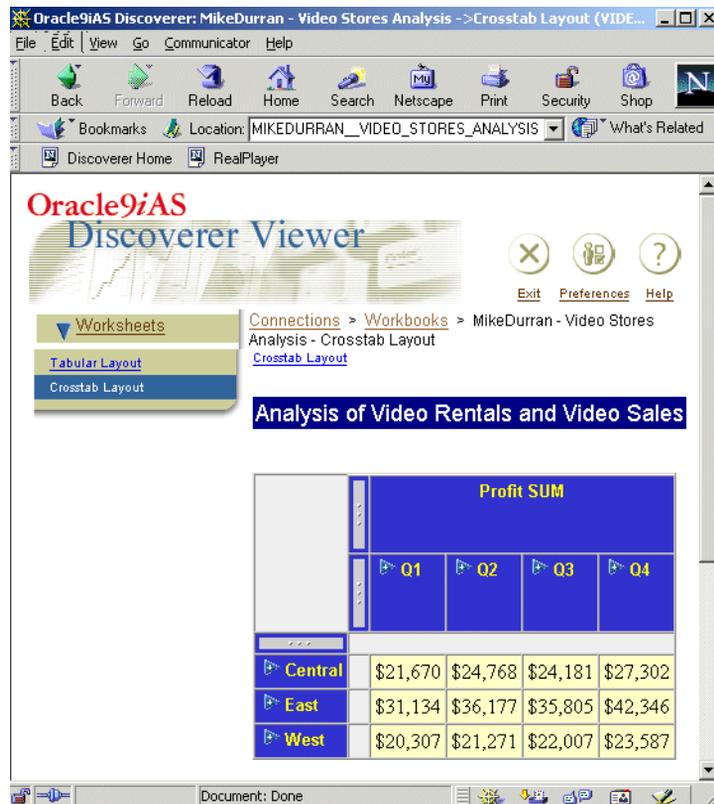
- Discoverer Plus is a Web tool enabling users to analyze data and create reports without having to understand difficult database concepts. Using Wizard dialogs and menus, Discoverer Plus guides users through the steps to create powerful reports and charts that can be accessed using Discoverer Plus or Discoverer Viewer.

Figure 1–1 Oracle9iAS Discoverer Plus



- Discoverer Viewer is a Web tool for accessing interactive reports and charts created using Discoverer Plus. Because Discoverer Viewer is implemented in HTML, users require only an Internet browser to run Discoverer Viewer. Discoverer Viewer can also be used to publish reports into a portal, and is easily customized to conform to a particular web site look and feel. Discoverer Viewer is optimized for performance and designed to minimize network traffic.

Figure 1–2 Oracle9iAS Discoverer Viewer



A typical workflow for Discoverer is:

- Discoverer Plus users (sometimes referred to as power users) create interactive reports and charts. Reports typically include powerful business intelligence components that enable end users to analyze data (e.g. parameters, drills, conditions, totals).
- Discoverer Viewer users access the interactive reports in read-only mode, though they can typically customize reports in a restricted number of ways (e.g. drilling to the data that they require, applying parameters and conditions).

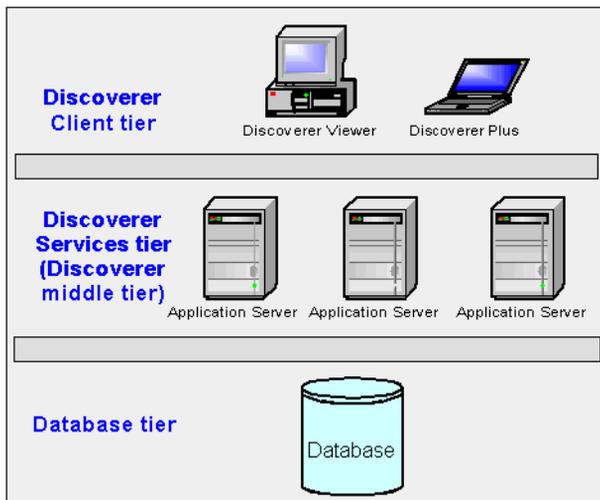
1.4 About Oracle9iAS Discoverer and Oracle9i Application Server

Oracle9iAS Discoverer is installed as part of Oracle9i Application Server. The default installation is to install all Discoverer components on a single machine. However, you can install different components on different machines to improve performance and reliability (for more information, refer to [Chapter 5.1, "Installing Oracle9iAS Discoverer in a multiple machine environment"](#)).

1.5 What is the Oracle9iAS Discoverer architecture?

Oracle9iAS Discoverer has a multi-tier architecture. This architecture takes advantage of the distributed nature of the Web environment. While it is possible to install all tiers of the Oracle9iAS Discoverer architecture on the same machine, we recommend distributing your installation over multiple machines to maximize performance and reliability.

Figure 1–3 Discoverer's multi-tier architecture



Note: Multiple application servers can be installed on the same machine.

Discoverer's multi-tier architecture comprises:

- The Discoverer client tier, from which Web browsers access Discoverer (for more information, see [Section 1.6, "About the Discoverer client tier"](#)).

- The Discoverer Services tier (also referred to as the Discoverer middle tier). For more information, see [Section 1.7, "About the Discoverer Services tier"](#).
- The Discoverer database tier, containing data and metadata (for more information, see [Section 1.8, "About the Discoverer database tier"](#)).

Notes:

- For more information about configuring Discoverer on multiple machines, see [Section 5.1, "Installing Oracle9iAS Discoverer in a multiple machine environment"](#).

1.6 About the Discoverer client tier

The Discoverer client tier is the Internet browser accessing Discoverer Plus or Discoverer Viewer. To run Discoverer Plus and Discoverer Viewer, you must provide end users with the appropriate URL (for more information, see [Section 3.1, "Running Oracle9iAS Discoverer"](#)).

1.6.1 About the Discoverer client tier and Discoverer Plus

For Discoverer Plus, the only requirement for the client machine is that it runs a Java-enabled Web browser (e.g. Microsoft Internet Explorer version 5 or later, or Netscape Navigator version 4.7 or later, both with Oracle JInitiator).

The first time that a machine is used to connect to Discoverer, the Discoverer Plus applet is downloaded from the Discoverer Services tier and cached on the client machine. The Discoverer Plus applet provides the Discoverer Plus user interface and functionality for analyzing business intelligence data. When the user logs on subsequently, the Discoverer Plus applet runs from the local cache and does not need to be downloaded.

Note: If you upgrade Discoverer, users might have to download the Discoverer Plus applet again to Discoverer client machines (for more information, see [Section 3.1, "Running Oracle9iAS Discoverer"](#)).

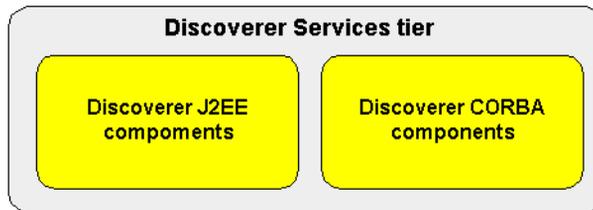
1.6.2 About the Discoverer client tier and Discoverer Viewer

For Discoverer Viewer, the minimum requirement for the client machine is that it can run HTML through a web browser (e.g. Microsoft Internet Explorer (version 5 or later), or Netscape Navigator (version 4.7 or later)). To make use of the JavaScript enhanced user interface (e.g. drag and drop), both JavaScript and cookies must be enabled in the browser.

1.7 About the Discoverer Services tier

The Discoverer Services tier is the portion of the Discoverer architecture that the Discoverer middle tier manager installs and maintains.

Figure 1–4 Discoverer Services tier



The Discoverer Services tier consists of:

- The Discoverer J2EE components (for more information, see [Section 1.7.1, "About the Discoverer J2EE components"](#))
- The Discoverer CORBA components (for more information, see [Section 1.7.2, "About the Discoverer CORBA components"](#))

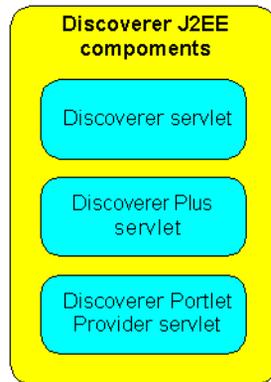
Notes:

- The Discoverer Services tier also stores the Discoverer Plus applet, which is downloaded to client machines.
- All machines running the Discoverer middle tier components must be on the same subnet.

1.7.1 About the Discoverer J2EE components

The Discoverer J2EE components comprise the following:

- the Discoverer servlet (for more information, see [Section 1.7.1.1, "What is the Discoverer servlet?"](#))
- the Discoverer Plus servlet (for more information, see [Section 1.7.1.2, "What is the Discoverer Plus servlet?"](#))
- the Discoverer Portlet Provider servlet (for more information, see [Section 1.7.1.3, "What is the Discoverer Portlet Provider servlet?"](#))

Figure 1–5 Discoverer J2EE components

A servlet comprises modules of Java code that run on a server machine to answer requests from client machines. Using a servlet minimizes client-side processing.

The Discoverer servlets are deployed into the OC4J (Oracle Components for Java) environment, which includes a servlet engine to run servlets.

1.7.1.1 What is the Discoverer servlet?

The Discoverer servlet generates HTML pages from HTTP requests using an XML/XSL processor.

1.7.1.2 What is the Discoverer Plus servlet?

The Discoverer Plus servlet provides the connection pages for Discoverer Plus and Discoverer Viewer.

The Discoverer Plus servlet forwards requests from the Discoverer Plus applet to the Discoverer servlet. The Discoverer Plus servlet adds a URL parameter to the request indicating that the Discoverer Plus applet was the originator of the request.

1.7.1.3 What is the Discoverer Portlet Provider servlet?

The Discoverer Portlet Provider servlet provides a user interface for publishing Discoverer worksheets and links to Discoverer workbooks on an Oracle9iAS Portal page. For more information about Discoverer Portlet Provider, see [Section 11.1, "Using Discoverer with Oracle9iAS Portal"](#).

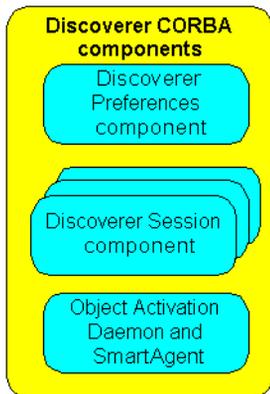
1.7.2 About the Discoverer CORBA components

CORBA (Common Object Request Broker Architecture) components are responsible for activating Discoverer when an end user starts a Discoverer session (i.e. when a user connects to Discoverer Plus or Discoverer Viewer).

The Discoverer CORBA components comprise the following:

- the Discoverer Session component (for more information, see [Section 1.7.2.1, "What is the Discoverer Session component?"](#))
- the Discoverer Preferences component (for more information, see [Section 1.7.2.2, "What is the Discoverer Preferences component?"](#))
- the Object Activation Daemon (OAD) and SmartAgent - these are third party Visibroker CORBA components (supplied by Inprise) that are installed with Discoverer (for more information, see [Section 1.7.2.3, "What is the Object Activation Daemon?"](#))

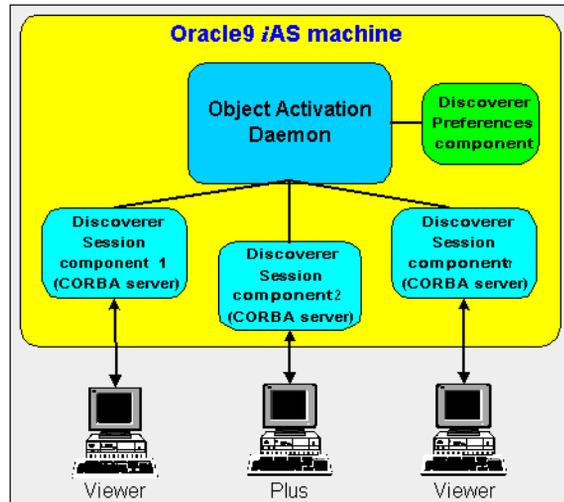
Figure 1–6 Discoverer CORBA components



1.7.2.1 What is the Discoverer Session component?

The Discoverer Session component (also referred to as a CORBA server) performs Discoverer operations such as connecting to the database or opening a workbook. The Discoverer Session component provides the link between the Discoverer servlet or applet and the database. There is one Discoverer Session component per active User Login session.

Figure 1–7 OAD, Preferences component, and Session components in a single machine Oracle9iAS install



1.7.2.2 What is the Discoverer Preferences component?

The Discoverer Preferences component provides a single location for preference settings for all Oracle9iAS Discoverer users (i.e. users of both Discoverer Plus and Discoverer Viewer). The Discoverer Services tier relies on stored preference settings to specify the default Discoverer behavior.

Note: In a multiple machine environment with different Discoverer Session components running on different machines, Discoverer uses a single Preferences component on one machine.

1.7.2.3 What is the Object Activation Daemon?

The Object Activation Daemon (OAD) is a background process that runs and manages Discoverer Session components.

The OAD is installed on each Oracle9iAS machine. A machine on which the OAD component has been installed can run multiple concurrent Discoverer Session components, each supporting a single User Login session.

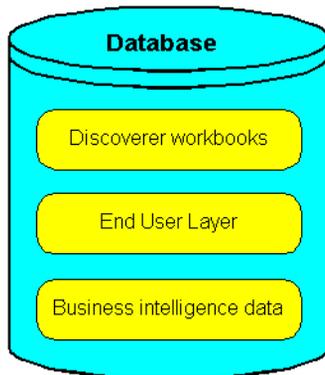
In a multiple machine environment (i.e. where you install Oracle9iAS on multiple application server machines), one OAD runs on each machine. Each machine can support multiple concurrent User Login Sessions and multiple Discoverer Session

components. This configuration typically improves Discoverer performance and reliability.

1.8 About the Discoverer database tier

The database tier of the Discoverer architecture contains data and metadata.

Figure 1–8 Discoverer database tier



The Discoverer database tier consists of:

- the Discoverer workbooks used to store reports and charts
- the End User Layer (EUL) that provides an easy-to-understand view of the data
- the business intelligence data that users want to analyze

You use Discoverer Administrator to create and maintain the EUL. For more information, see the *Discoverer9i Administrator Administration Guide* available with Oracle9iDS.

Notes:

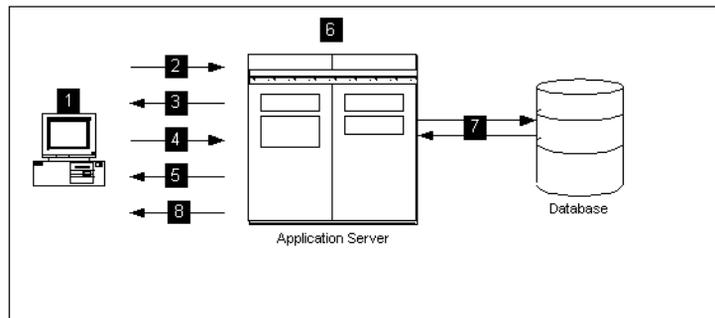
- Before users can use Discoverer to analyze data, the database **must** contain a Discoverer EUL Version 5.1. You must create or update the EUL with Oracle9i Discoverer Administrator Version 9.0.2 or later (shipped as part of Oracle9i Developer Suite).

1.9 How does Oracle9iAS Discoverer work?

This section provides information about how Discoverer Plus and Discoverer Viewer work.

1.9.1 How does Discoverer Plus work?

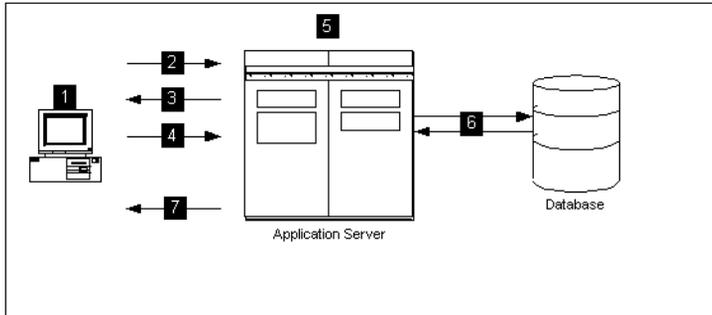
Figure 1–9 The Discoverer Plus Process



1. The user launches a Web browser on a client computer and types the URL of the Discoverer Plus servlet.
2. The Web browser accesses the Discoverer Plus servlet on the Application Server, which forwards the request to the Discoverer servlet.
3. The Discoverer servlet retrieves the Connection html page and returns this to the Discoverer Plus servlet, which in turn returns the page to the client.
4. The user selects a connection, which is returned to the Application Server and forwarded by the Discoverer Plus servlet to the Discoverer servlet.
5. The Discoverer applet is transmitted to the client computer (if it is not present already).
6. Meanwhile, the Discoverer servlet uses OAD to access the Session component on the Application Server machine and a Discoverer session starts.
7. The Discoverer session requests and receives data from the database.
8. The Discoverer session transmits data to the Discoverer servlet, which forwards it to the Discoverer Plus servlet which in turn forwards it to the client machine.

1.9.2 How does Discoverer Viewer work?

Figure 1–10 The Discoverer Viewer Process



1. The user launches a Web browser on a client computer and types the URL of the Discoverer servlet.
2. The Web browser accesses the Discoverer servlet on the Application Server.
3. The Discoverer servlet retrieves the Connection html page and returns this to the client.
4. The user selects a connection, which is returned to the Discoverer servlet on the Application Server.
5. The Discoverer servlet uses OAD to access the Session component on the Application Server machine and a Discoverer session starts.
6. The Discoverer session requests and receives data from the database.
7. The Discoverer session transmits data to the Discoverer servlet, which generates an HTML page and forwards it to the client machine.

Using Discoverer with Oracle Enterprise Manager

2.1 Using Discoverer with Oracle Enterprise Manager

This chapter describes how to deploy Oracle9iAS Discoverer with Oracle Enterprise Manager, and contains the following topics:

- [Section 2.2, "About Oracle Enterprise Manager"](#)
- [Section 2.3, "Why use Oracle Enterprise Manager?"](#)
- [Section 2.4, "How to start Oracle Enterprise Manager"](#)
- [Section 2.5, "How to create a public connection"](#)

2.2 About Oracle Enterprise Manager

Oracle Enterprise Manager (OEM) provides a single point of entry for configuring the middle tier for Oracle9iAS Discoverer. This enables an Oracle9iAS Discoverer manager to administer the Discoverer server without having to access and perform tasks through the server Operating System.

For more information about using Oracle9iAS Discoverer with Oracle Enterprise Manager, see *Oracle Enterprise Manager Help* and *Oracle Enterprise Manager Configuration Guide*.

Note: For more information about how to start OEM, see [Section 13.5.2.3, "How to display the Oracle9iAS Discoverer Plus Configuration page in OEM"](#).

2.3 Why use Oracle Enterprise Manager?

You use Oracle Enterprise Manager to do the following configuration tasks:

- Select the locale for public connections - for more information, see *Oracle Enterprise Manager Help*
- Enable or disable graphs in Discoverer Viewer and Discoverer Portlet Provider - for more information, see *Oracle Enterprise Manager Help*
- Manage public connections for Discoverer Plus and Discoverer Viewer - for more information, see [Section 2.5, "How to create a public connection"](#)
- Change database passwords - for more information, see *Oracle Enterprise Manager Help*
- Specify the maximum number of stylesheets to pool (in the cache) for Discoverer Viewer and Discoverer Portlet Provider, for more information, see [Section 12.5.4, "How to enhance Discoverer Viewer scalability using XSL stylesheet pooling"](#)
- Specify a delay value for the Query Progress page in Discoverer Viewer, see *Oracle Enterprise Manager Help*
- Specify communication protocols for the Discoverer Plus middle tier - for more information, see [Section 13.5.2.3, "How to display the Oracle9iAS Discoverer Plus Configuration page in OEM"](#).
- Specify the maximum number of Discoverer Portlet Provider sessions to pool, see *Oracle Enterprise Manager Help*

Notes:

- If you configure Discoverer using Oracle Enterprise Manager, you must restart Discoverer for the changes to take effect, as follows:
 - on a Unix platform, use the Oracle Enterprise Manager to restart Discoverer (for more information, see [Section 4.4, "How to stop standalone Oracle9iAS Discoverer components in Unix"](#))
 - on a Windows platform, use the startall.bat command (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#))

2.4 How to start Oracle Enterprise Manager

You use the Oracle Enterprise Manager to configure Oracle9iAS Discoverer. For example, if you want to encrypt Discoverer Plus data, you might want to configure Discoverer Plus to use the HTTPS communication protocol.

How to display the Oracle9iAS Discoverer Plus Configuration page in OEM:

1. Start a Web browser and display the Oracle9iAS Application Server main page.

If you are connected to the Oracle HTTP Server locally, the URL will be in the form:

`http://hostname:7777`



2. Select the Log on to **Oracle Enterprise Manager** link.

Tip: You can also go directly to the Oracle Enterprise Manager page using the 1810 port, i.e the URL will be in the form:

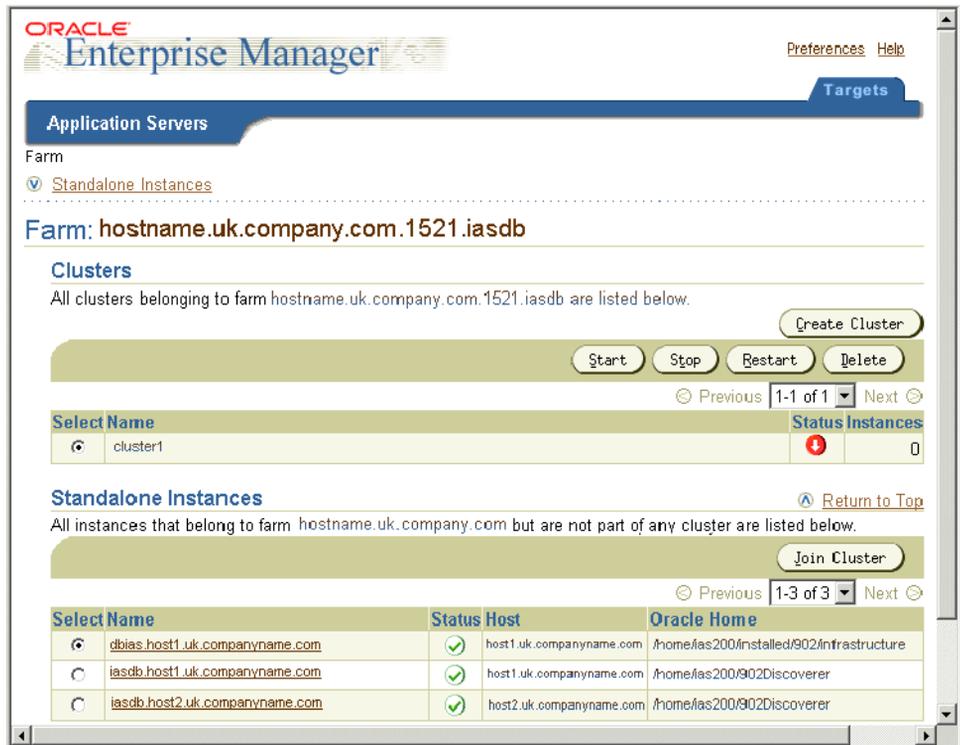
`http://hostname:1810`

Note: For more information about starting OEM, see *Oracle Enterprise Manager Configuration Guide*.

3. When prompted, enter a user name and password.

Note: If you need an OEM user name and password, contact the Oracle9iAS system manager.

4. Click OK to display the Oracle Enterprise Manager main page.



You can now monitor Oracle9iAS and manage the machines on your network such as Oracle9iAS Discoverer and Oracle9iAS Web Cache.

Notes:

- For more information about using Oracle Enterprise Manager, see the Oracle Enterprise Manager Help system, and Oracle Enterprise Manager Administrator's Guide

2.5 How to create a public connection

You create a public connection when you want to provide a pre-defined login to Discoverer Plus and Discoverer Viewer users. For example, you might create a public connection called 'Start tutorial', which connects to the tutorial database as a tutorial user. Or you might create a public connection that connects to the Oracle9iAS demo database.

You use Oracle Enterprise Manager to create public connections. For more information about Oracle Enterprise Manager, see the *Oracle9i Application Server Administrator's Guide*.

To create a public connection:

1. Start Oracle Enterprise Manager.

For more information about starting Oracle Enterprise Manager, see [Section 2.4, "How to start Oracle Enterprise Manager"](#)

2. In the **Name** column, select the instance that you want to update to display a list of components on that machine (e.g. iasdb.host1.uk.companyname.com).

A list of Oracle9iAS components on that machine is displayed (e.g. HTTP Server, OC4J_BI_Forms, Web Cache, OC4J_Portal).

3. In the **Name** column, select the **OC4J_BI_Forms** link to display the Oracle9iAS Discoverer Services Configuration page.

The Oracle9iAS Discoverer Services Configuration table contains a row for each part of Discoverer that you can configure.

4. Click the Update icon in the **General Discoverer** row to display the General Discoverer Configuration page.

5. Click Create Connection to display the Create Discoverer Public Connection page.

6. Enter the connection details, then click Apply to save the details.

The new connection that you created is displayed in the Discoverer Public Connections list on the General Discoverer Configuration page.

When Discoverer end users connect to Discoverer Plus or Discoverer Viewer, they will be able to select the connection that you have just created.

Notes:

- For more information about managing public connections, see *Oracle9i Discoverer Administrator Administration Guide*.

Running Oracle9iAS Discoverer

3.1 Running Oracle9iAS Discoverer

This chapter explains how to run Oracle9iAS Discoverer after you have completed an Oracle9iAS installation, and contains the following topics:

- [Section 3.2, "About the Oracle9iAS demo database"](#)
- [Section 3.3, "About running Discoverer Plus for the first time on a client machine"](#)
- [Section 3.4, "How to run Discoverer Plus in Microsoft Internet Explorer for the first time on a client machine"](#)
- [Section 3.5, "How to run Discoverer Plus in Netscape Navigator for the first time on a client machine"](#)
- [Section 3.6, "How to run Discoverer Viewer"](#)

For more information about installing Oracle9i Application Server, see the *Oracle9i Application Server Installation Guide*.

Note: Unless you are using the Oracle9iAS demo database, before users can use Discoverer to analyze data, the database must contain a Discoverer EUL Version 5. You must create or update the EUL with Oracle9i Discoverer Administrator Version 9.0.2 or later (shipped with Oracle9i Developer Suite).

3.2 About the Oracle9iAS demo database

When you install Oracle9iAS, a demo database is installed that contains everything you need to run reports using a sample set of intelligence data.

You can use the demo database and workbooks to quickly test the Oracle9iAS Discoverer install without having to use Oracle9i Discoverer Administrator to

create an End User Layer. In other words an EUL for the demo database is already created for you.

Discoverer Viewer and Discoverer Plus first time users can also use the demo database and workbooks to quickly become familiar with Discoverer workbooks and reports.

Notes:

- To provide access to the Oracle9iAS demo database, create a public Discoverer connection with the following details:
 - username - scott
 - password - tiger
 - database - discodemo
 - End User Layer - SCOTT
- When you run Discoverer using this connection, open the sample workbooks. For more information about how to create a public Discoverer connection, see [Section 2.5, "How to create a public connection"](#).
- When you install Oracle9iAS, a TNS entry for the demo database is automatically added to the tnsnames.ora file (for more information about configuration files, see [Section A.2, "List of Discoverer file locations"](#))

3.3 About running Discoverer Plus for the first time on a client machine

When you run Discoverer Plus for the first time on a client machine, you perform a one-time setup process to install Oracle JInitiator (if required) and initialize the Discoverer Plus software. This procedure is typically done when:

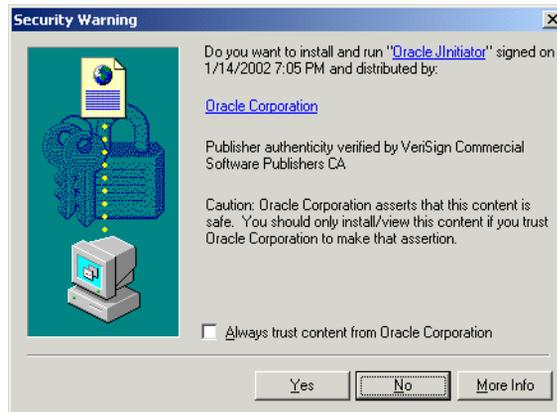
- you have installed Oracle9iAS and want to test that Discoverer is working
- a Discoverer end user wants to run Discoverer Plus for the first time on a client machine

Once the Discoverer Plus software is initialized, you do not have to perform any further setup when you run Discoverer Plus.

If you upgrade Discoverer, you might have to repeat the setup process. For example, you might install a new version of Discoverer Plus that requires a new version of Oracle JInitiator, or a new version of the applet.

Notes:

- The Discoverer Plus initialization procedure is different for Microsoft Internet Explorer and Netscape Navigator. Refer to the appropriate task:
 - for Microsoft Internet Explorer, see [Section 3.4, "How to run Discoverer Plus in Microsoft Internet Explorer for the first time on a client machine"](#)
 - for Netscape Navigator, see [Section 3.5, "How to run Discoverer Plus in Netscape Navigator for the first time on a client machine"](#)
- To run Discoverer Plus in Microsoft Internet Explorer, you must have the Security level set no higher than 'Medium' or custom equivalent (i.e. using the Security dialog in Microsoft Internet Explorer).
- If a Security Warning dialog is displayed when you run Discoverer, click Yes to install and run Oracle JInitiator. If you have previously configured the machine to always trust content from Oracle Corporation, this dialog is not displayed.

Figure 3–1 Security Warning dialog

- Discoverer Viewer requires no additional software to be installed on the client machine.
- If the Discoverer initialization takes longer than the session timeout (e.g. you might be accessing Discoverer over a 56K dial-up connection), set the Timeout value in Pref.txt on the middle tier to a higher value, save the file, then apply the preference. For more information, see [Section 7.7, "List of Discoverer user preferences"](#) and [Section 6.7, "How to start and stop the Preferences component"](#).

3.4 How to run Discoverer Plus in Microsoft Internet Explorer for the first time on a client machine

To run Discoverer Plus in Microsoft Internet Explorer for the first time on a client machine:

1. Start a Web browser and enter the Discoverer Plus URL containing the fully qualified host name (including port number if necessary) used by your own installation.

For example:

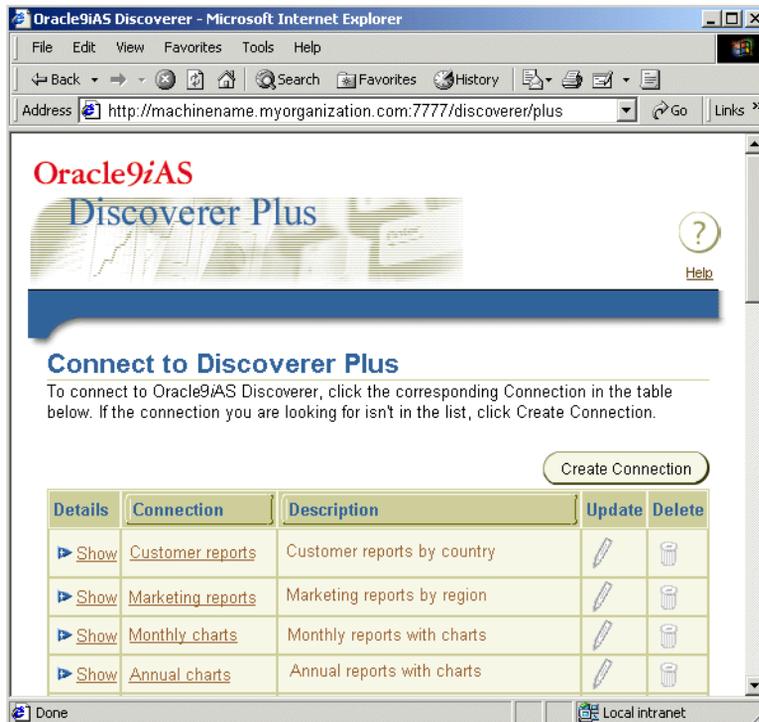
`http://machinename.myorganization.com:7777/discoverer/plus`

Where:

- `machinename.myorganization` is the hostname and domain on which the Oracle HTTP Server is installed
- `7777` (optional) is the port number on which the Oracle HTTP Server is installed if the default port number (i.e. port 80) has been changed
- `/discoverer/plus` is the URL command that starts Discoverer Plus

The Connect to Discoverer Plus page is displayed.

Figure 3–2 Connect to Discoverer Plus page



2. Select a connection in the **Connection** column.

Hint: If no connections are displayed in the **Connection** column, you will have to create a new connection before continuing. For more information about creating private connections, see *Oracle9iAS Discoverer Plus User's Guide*. You can also use public connections that have been created by the Discoverer Administrator (for more information, see [Section 2.5, "How to create a public connection"](#) and *Oracle9i Discoverer Administrator Administration Guide*).

Depending on the software already installed on the client machine, you might have to download and install Oracle JInitiator. If you are not prompted to download and install Oracle JInitiator, skip to step 5.

If you have to download and install Oracle JInitiator, the Oracle JInitiator Choose Destination Location dialog page is displayed.

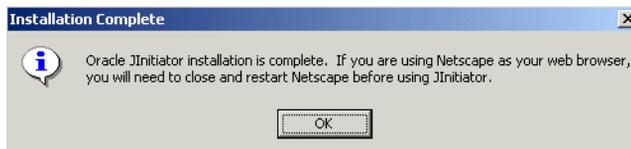
Figure 3–3 Choose Destination Location dialog



3. Click Next to accept the default Destination Folder (or change the default Destination Folder and click Next).

The installer program installs Oracle JInitiator in the specified location. When the Oracle JInitiator installation is complete, the Installation Complete dialog is displayed.

Figure 3–4 Installation Complete dialog



4. Click OK to close the Installation Complete dialog.
Oracle JInitiator is now installed on the client machine.
5. Wait for the Discoverer Plus applet to initialize.

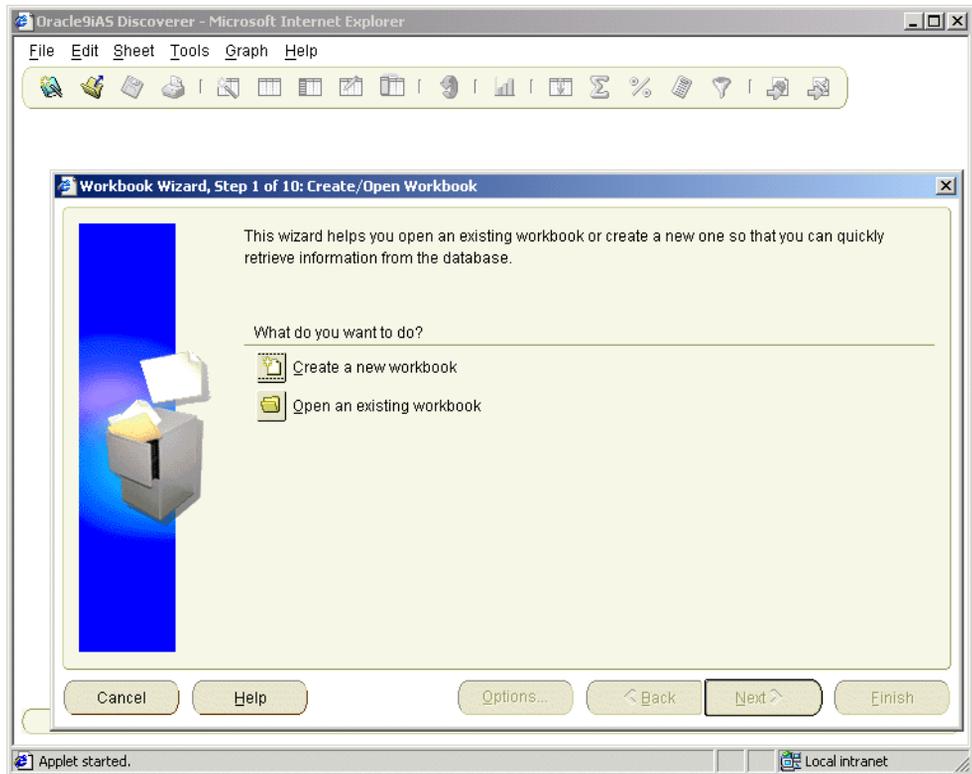
While the Discoverer Plus applet initializes, the Starting product: Discoverer Plus page is displayed.

Figure 3–5 Starting product: Discoverer Plus page



The Discoverer Plus applet is initialized and cached, then the Workbook Wizard dialog is displayed.

Figure 3–6 Discoverer Plus Workbook Wizard: Create/Open Workbook dialog



You are now running Discoverer Plus.

3.5 How to run Discoverer Plus in Netscape Navigator for the first time on a client machine

To run Discoverer Plus in Netscape Navigator for the first time on a client machine:

1. Start a Web browser and enter the Discoverer Plus URL containing the fully qualified host name (including port number if necessary) used by your own installation.

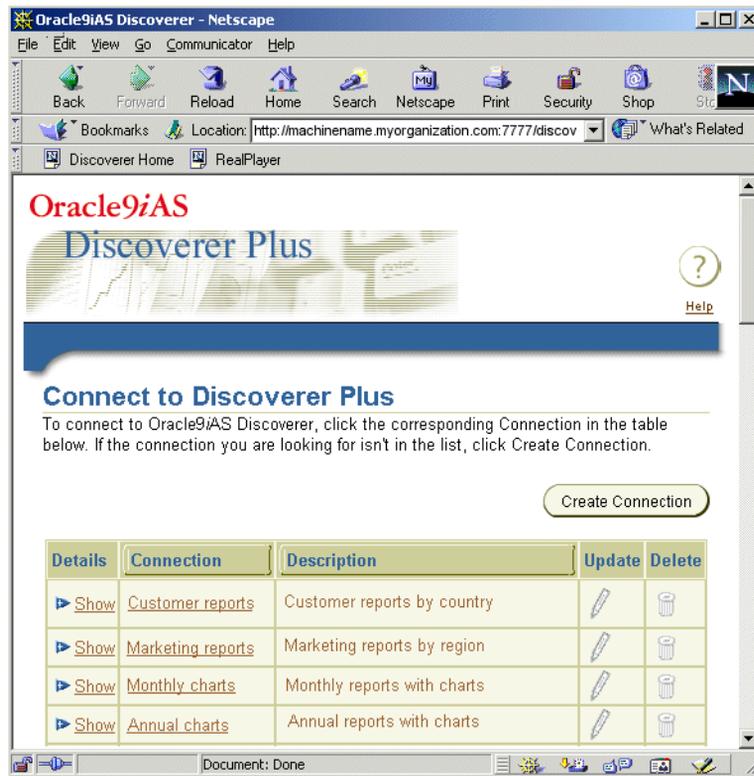
For example:

`http://machinename.myorganization.com:7777/discoverer/plus`

Where:

- `machinename.myorganization` is the hostname and domain on which the Oracle HTTP Server is installed
 - `7777` (optional) is the port number on which the Oracle HTTP Server is installed if the default port number (i.e. port 80) has been changed
 - `/discoverer/plus` is the URL command that starts Discoverer Plus
- The Connect to Discoverer Plus page is displayed.

Figure 3–7 Connect to Discoverer Plus page



2. Select a connection in the **Connection** column.

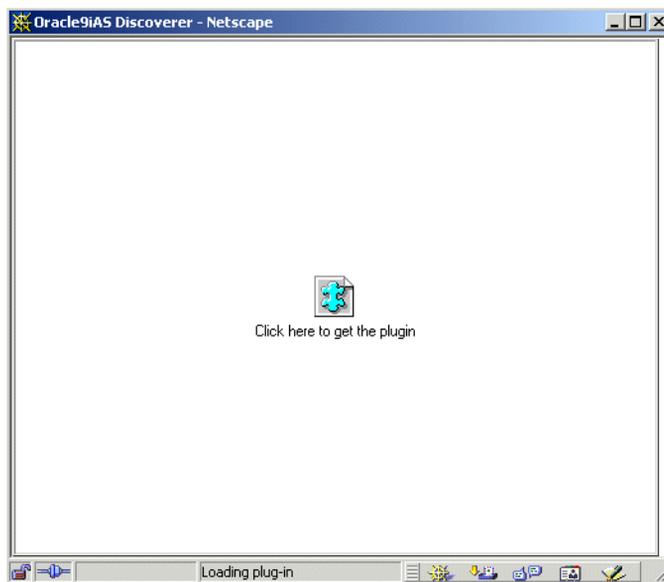
Hint: If no connections are displayed in the **Connection** column, you will have to create a new connection before continuing. For more information about creating private connections, see *Oracle9iAS Discoverer Plus User's Guide*. You

can also use public connections that have been created by the Discoverer Administrator (for more information, see [Section 2.5, "How to create a public connection"](#) and *Oracle9i Discoverer Administrator Administration Guide*).

Depending on the software already installed on the client machine, you might have to download and install Oracle JInitiator. If you are not prompted to download and install Oracle JInitiator, skip to step 10.

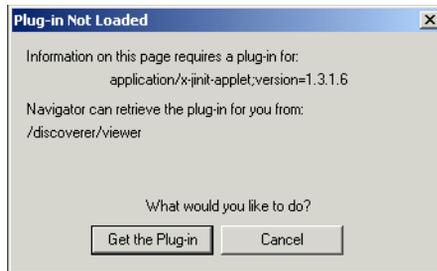
When you are using Netscape Navigator, if you have to download and install Oracle JInitiator, the Oracle9iAS Discoverer - Netscape page is displayed.

Figure 3–8 Oracle9iAS Discoverer - Netscape page



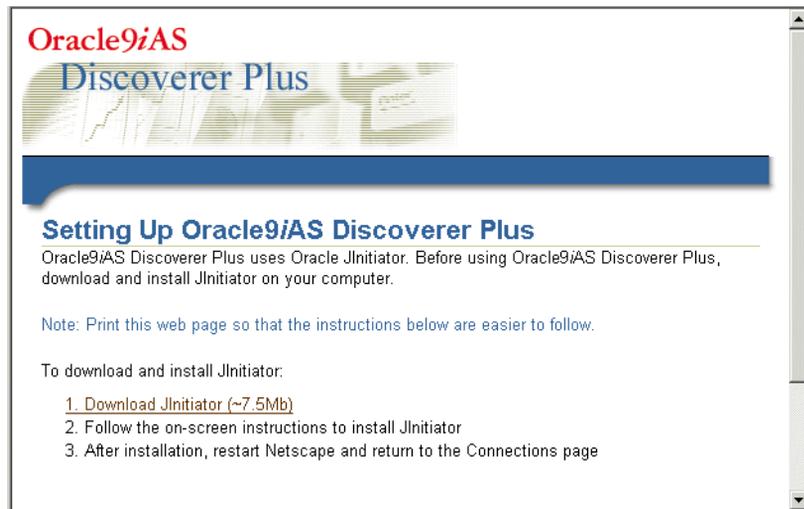
3. Click anywhere on the Oracle9iAS Discoverer - Netscape page to display the Plug-In Not Loaded dialog.

Figure 3–9 Plug-In Not Loaded dialog



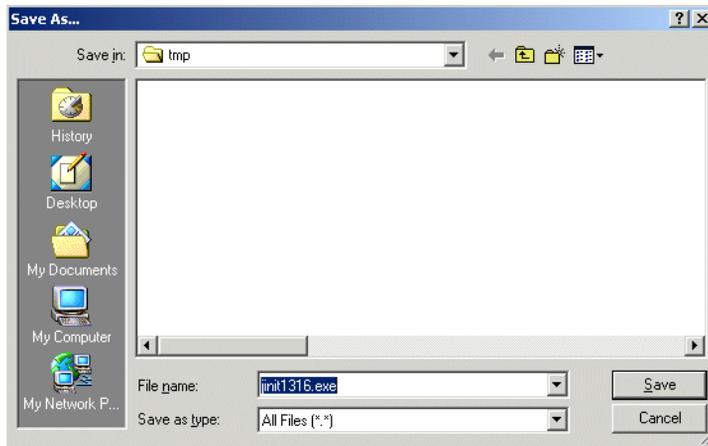
4. Click Get the Plug-in to display the Setting Up Oracle9iAS Discoverer Plus page.

Figure 3–10 Setting Up Oracle9iAS Discoverer Plus page



5. Select the **Download JInitiator (~<size> Mb)** link to display the Save as... dialog.

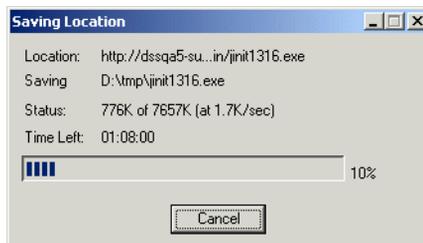
Figure 3–11 Save As... dialog for Oracle JInitiator



6. Click Save to save the Oracle JInitiator install file to the default save location (or change the default save location and click Save).

While the Oracle JInitiator install file is being saved, the Saving Location dialog is displayed.

Figure 3–12 Saving Location dialog



7. When the Oracle JInitiator install file has been saved, open the file, as follows:
 - a. Open a file browser and navigate to where the Oracle JInitiator install file was saved in the previous step.
 - b. Double-click the Oracle JInitiator install file to display the Choose Destination Location dialog.

- c. Click Next to accept the default Destination Folder (or change the default Destination Folder and click Next).

The installer program installs Oracle JInitiator in the specified location. When the Oracle JInitiator installation is complete, the Installation Complete dialog is displayed.

- d. Click OK to close the Installation Complete dialog.

Oracle JInitiator is now installed on the client machine.

8. Shut down the machine, then restart the machine.
9. Start Netscape and enter the Discoverer Plus URL containing the fully qualified host name.
10. Select a connection in the **Connection** column.
11. Wait for the Discoverer Plus applet to initialize.

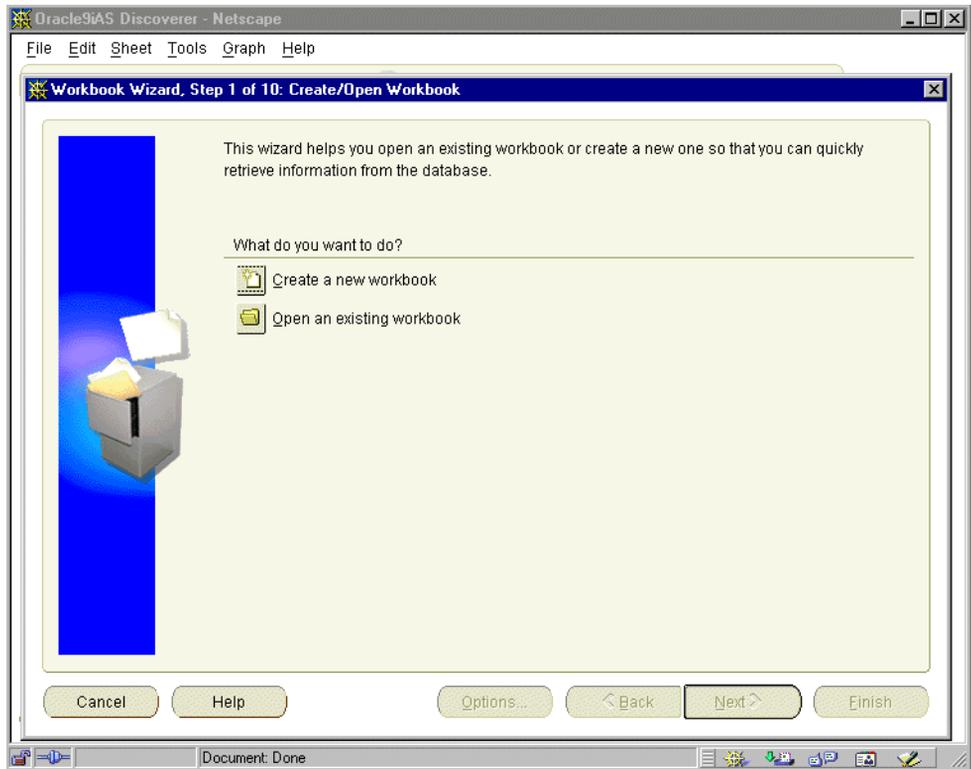
While the Discoverer Plus applet initializes, the Starting product: Discoverer 5i Plus page is displayed.

Figure 3–13 Starting product: Discoverer 5i Plus page



The Discoverer Plus applet is initialized and cached, then the Workbook Wizard dialog is displayed.

Figure 3–14 Discoverer Plus Workbook Wizard: Create/Open Workbook dialog



You are now running Discoverer Plus.

3.6 How to run Discoverer Viewer

To run Discoverer Viewer:

1. Start a Web browser and enter the Discoverer Viewer URL containing the fully qualified host name (including port number if necessary) used by your own installation.

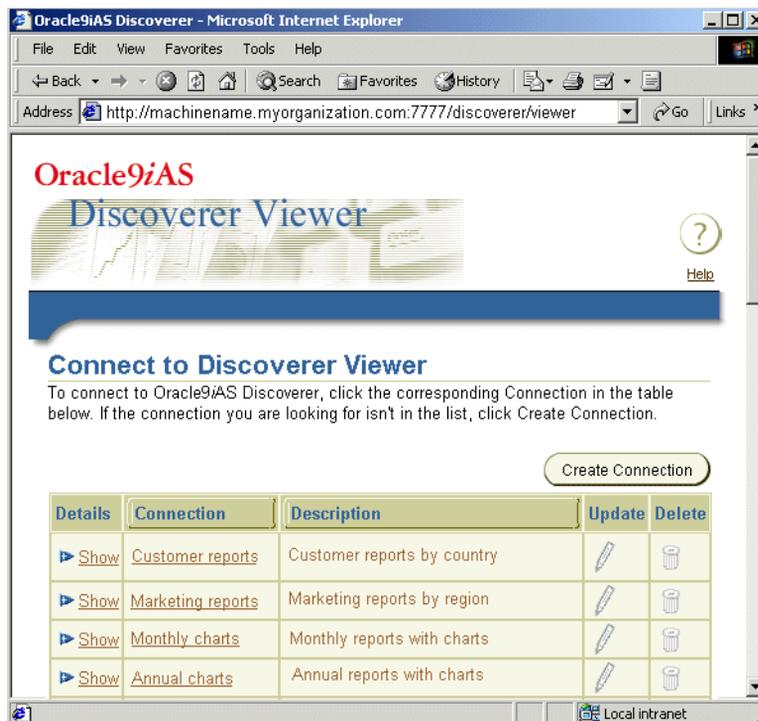
For example:

`http://machinename.myorganization.com:7777/discoverer/viewer`

Where:

- `machinename.myorganization` is the hostname and domain on which the Oracle HTTP Server is installed
 - `7777` (optional) is the port number on which the Oracle HTTP Server is installed if the default port number (i.e. port 80) has been changed
 - `/discoverer/viewer` is the URL command that starts Discoverer Viewer
- The Connect to Discoverer Viewer page is displayed.

Figure 3–15 Connect to Discoverer Viewer page



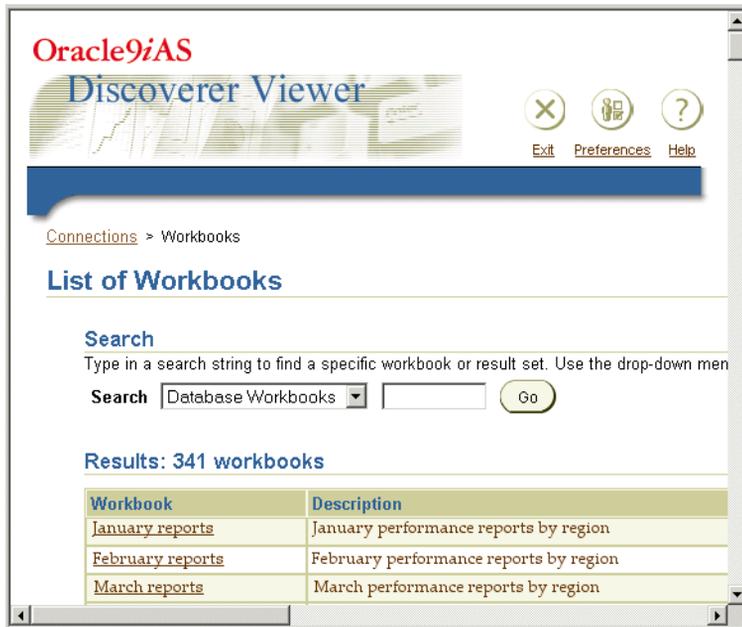
2. Select a connection in the **Connection** column.

Hint: If no connections are displayed in the **Connection** column, you will have to create a new connection before continuing. For more information about creating private connections, see *Oracle9iAS Discoverer Plus User's Guide*. You can also use public connections that have been created by the Discoverer

Administrator (for more information, see *Oracle9i Discoverer Administrator Administration Guide*).

The List of Workbooks page is displayed.

Figure 3–16 List of Workbooks page



You are now running Discoverer Viewer. Select a workbook from the Workbook list to display the workbook in Discoverer Viewer.

Figure 3–17 A workbook opened in Discoverer Viewer



Notes:

- If you install Oracle9iAS in a UNIX environment, an XWindow display must be available to the Discoverer Viewer servlet to support Discoverer Viewer's graphing and charting functionality. For more information about setting the DISPLAY environment variable to refer to the X Server, see the *Oracle9iAS Installation Guide*.

Maintaining Oracle9iAS Discoverer

4.1 Maintaining Oracle9iAS Discoverer

This chapter explains how to maintain Oracle9iAS Discoverer, and includes the following topics:

- [Section 4.2, "Starting and stopping the Discoverer Windows service"](#)
- [Section 4.3, "Shutting down the Discoverer system"](#)
- [Section 4.4, "How to stop standalone Oracle9iAS Discoverer components in Unix"](#)

4.2 Starting and stopping the Discoverer Windows service

If you are running Discoverer on Windows, a Windows service is created for Discoverer. To maintain Discoverer on Windows, you need to know how to start and stop the Discoverer Windows service as described in the following sections:

- [Section 4.2.1, "What is the Discoverer Windows service?"](#)
- [Section 4.2.2, "When does the Discoverer Windows service start?"](#)
- [Section 4.2.3, "How to start the Discoverer Windows service manually"](#)
- [Section 4.2.5, "How to change the Discoverer Windows service to manual startup"](#)
- [Section 4.2.6, "How to see Discoverer Windows service errors"](#)

4.2.1 What is the Discoverer Windows service?

The Discoverer Windows service is the Oracle9iAS Discoverer process that Windows starts automatically when the machine is started. Other typical Windows

services start networking and remote access procedures, server operations, and telephony processes.

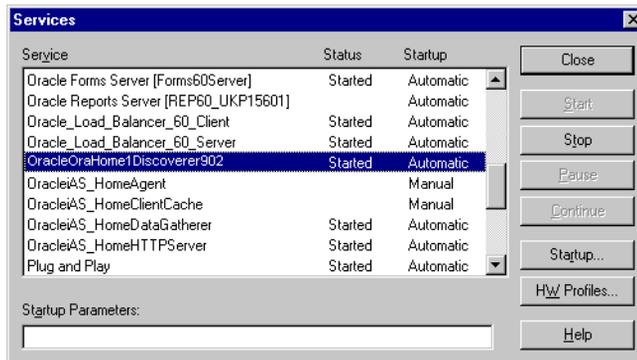
When you install Discoverer, the Discoverer Windows service is created as an automatic service called 'Oracle<Oracle_Install_Name>Discoverer902'.

For example, if your Oracle Installation directory is called OraHome1, the Discoverer Windows service is 'OracleOraHome1Discoverer902'.

The Discoverer Windows service automatically starts the Discoverer CORBA components whenever the Windows machine is started. Using the Discoverer Windows service, you can also stop all of these components by simply stopping the service from running.

A key benefit of having the Discoverer CORBA components started as a single Windows service is that you do not need to remain logged onto a machine for the service (and therefore the CORBA components) to stay running. If you launched each component individually, you would need to stay logged onto the machine(s) as the administrator. Logging off would automatically stop the components.

You can view the status of the Oracle Discoverer Windows service on the Services dialog.



The Status column indicates whether the service is started and running. If the service has not been started, the Status column is blank.

The Startup column indicates how the service is started, either manually or automatically.

4.2.2 When does the Discoverer Windows service start?

When you install Discoverer, the Discoverer Windows service's Startup property is set to Automatic. In other words, the service starts automatically whenever the machine is started. However, once the service has started automatically you can subsequently stop it and restart it manually.

If you do not want the Discoverer Windows service to start automatically when the computer is started, set the service's Startup property to Manual. For example, you might do this if your network requires special services that have to start and stop in a particular sequence.

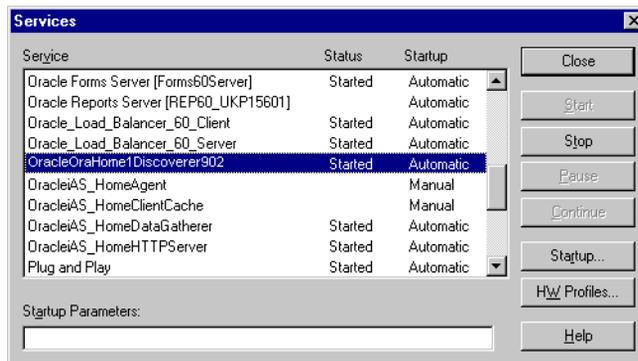
4.2.3 How to start the Discoverer Windows service manually

If the Startup property of the Discoverer Windows is set to 'Manual', this service will not start automatically when the machine is started. Therefore, you might want to start this service manually.

To start the Discoverer Windows service manually:

1. From the Windows Start menu, choose Settings | Control Panel and double-click on the Services icon to display the Services dialog box.

The Services dialog box contains Oracle9iASDiscoverer.



2. Select the Oracle<Oracle_Install_Name>Discoverer902 service.
3. Click Start to start the service.
4. Click close to close the Services dialog box.

Notes:

- For more information about changing the Discoverer Startup property, see [Section 4.2.5, "How to change the Discoverer Windows service to manual startup"](#).

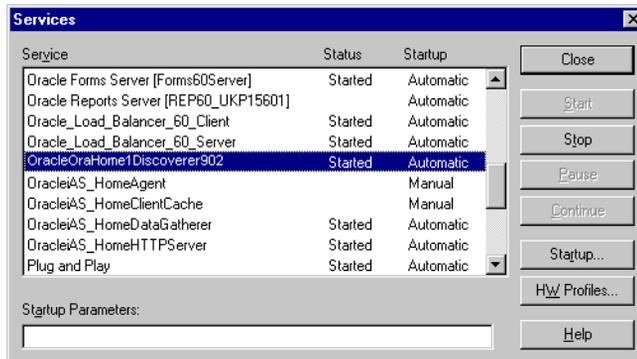
4.2.4 How to stop the Discoverer Windows service manually

If the Discoverer Windows service is running, you stop the service to stop Discoverer running. For example, you might want to restart the machine in a controlled way.

To stop the Discoverer Windows service manually:

1. From the Windows Start menu, choose Settings | Control Panel and double-click on the Services icon to display the Services dialog box.

The Services dialog box contains Oracle9iASDiscoverer.



2. Select the Oracle<Oracle_Install_Name>Discoverer902 service.
3. Click Stop to stop the service.
4. Click close to close the Services dialog box.

4.2.5 How to change the Discoverer Windows service to manual startup

To change the Discoverer Windows service to manual startup:

1. From the Windows Start menu, choose Settings | Control Panel and double-click on the Services icon.

The Services dialog box appears.

2. Select the Oracle<Oracle_Install_Name>Discoverer902 service.
3. Click Startup to display the Service dialog box.
4. In the Startup Type section of the Service dialog box, select Manual.
5. Click OK to close the Service dialog box.
6. Click Close to close the Services dialog box.

4.2.6 How to see Discoverer Windows service errors

If errors occur during the startup of the Discoverer Windows service, these errors are written to a log file.

To view the log file:

1. Choose Start | Programs | Administrative Tools (Common) | Event Viewer.

4.3 Shutting down the Discoverer system

This section explains why you might want to shut down Discoverer and when you might do this.

4.3.1 When to shut down the Discoverer system

There will probably be occasions when you need to take a server machine off line (e.g. to perform maintenance or to change hardware settings). This prevents users from starting sessions on that server while you work. You can shut down Discoverer in two ways:

- shut down individual server machines (Windows only)
- shut down the entire Discoverer system (Windows and UNIX)

Note: You do not need to shut down the Discoverer system to edit the Discoverer user preferences. However, if the machine you want to shut down for maintenance is the machine that runs the Preferences component, you will need to shut down the Discoverer system. Shutting down the machine running the Preferences component affects the entire Discoverer system because the Preferences component is used when creating a session.

4.3.2 How to shut down individual servers (Windows only)

If you are running Discoverer on Windows, you can shut down individual Discoverer servers in two ways:

- gradually, allowing current users to disconnect when they are ready
- immediately, forcing current users to end their Discoverer session

4.3.2.1 How to shut down individual servers gradually (Windows only)

If you are running Discoverer on Windows, you can shut down an individual Discoverer server gradually.

Shutting down a server gradually enables you to prevent new sessions from starting but allow current users to complete their sessions.

1. On the machine you want to shut down, stop the Oracle Discoverer Windows service (for more information, see [Section 4.2.4, "How to stop the Discoverer Windows service manually"](#))

Stopping the Oracle Discoverer Windows service stops the Discoverer CORBA components, which prevents any new sessions from being started on this machine. Sessions in progress are not affected by shutting down the Oracle Discoverer Windows service. Thus, users will not be interrupted while working.

After all the current users have disconnected from their sessions, you can perform your maintenance tasks. If you want to register or unregister components, the Oracle Discoverer Windows service must first be restarted.

To check that all users have disconnected, open the Windows NT Task Manager and make sure that no instances of the Session executable (dis51ws.exe) are running.

4.3.2.2 How to shut down individual servers immediately (Windows only)

If you are running Discoverer on Windows, you can shut down an individual Discoverer server immediately.

An immediate shut down stops new user sessions from starting and stops the current sessions. To do this, you stop the Oracle Discoverer Windows service on the machine (to prevent new sessions from being started) and then you stop the sessions currently running.

1. On the machine you want to shut down, stop the Oracle Discoverer Windows service (for more information, see [Section 4.2.4, "How to stop the Discoverer Windows service manually"](#))

2. Press Ctrl + Alt + Del to open the Windows NT Security dialog and click Task Manager.
3. Select the Processes tab.
4. Choose dis51ws.exe.
5. Click End Task.
6. Repeat steps 4 and 5 for each session (dis51ws.exe) running in the Task Manager.

4.3.3 How to shut down the entire Discoverer system (Windows and UNIX)

To shut down the entire Discoverer system, you shut down individual machines in a specific order.

You can shut down the entire Discoverer system in two ways:

- gradually, allowing current users to disconnect when they are ready
- immediately, forcing current users to end their Discoverer session

4.3.3.1 How to shut down the Discoverer system gradually

Regardless of whether you are running Discoverer on Windows or on UNIX, you can shut down the Discoverer system gradually.

Shutting down the Discoverer system gradually enables you to prevent new sessions from starting but allow current users to complete their sessions.

To shut down the Discoverer system gradually, you stop the CORBA components in turn.

On Windows:

1. On each machine, stop the Oracle Discoverer Windows service (for more information see [Section 4.2.4, "How to stop the Discoverer Windows service manually"](#)).

Stopping the Oracle Discoverer Windows service stops the Discoverer CORBA components, which prevents any new sessions from being started on this machine. Sessions in progress are not affected by shutting down the Oracle Discoverer Windows service. Thus, users will not be interrupted while working.

You now shut down the Preferences component.

Note: Do not shut down the Preferences component until all sessions are stopped. Shutting down the Preferences component while sessions are active can cause problems with active sessions.

2. Press Ctrl + Alt + Del to open the Windows NT Security dialog and click Task Manager.
3. Choose dis51pr.exe and click End Task to shut down the Preferences component.

On UNIX:

Note: You can also use OEM to start and stop Discoverer on Unix (for more information, see [Section 4.4, "How to stop standalone Oracle9iAS Discoverer components in Unix"](#))

1. At the command prompt, navigate to the directory containing the stopoad.sh and stoposagent.sh files.

For more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).

2. Type the following at the command prompt to stop the OAD:

```
> stopoad.sh
```

3. Type the following at the command prompt to stop the SmartAgent:

```
> stoposagent.sh
```

4. Type the following at the command prompt to stop the Discoverer Preference component:

```
> stoppreference.sh
```

5. Type the following at the command prompt to list the numeric identifier of every dis51pr Discoverer process that is currently running:

```
> ps -A|grep dis51pr
```

For example, the output might be:

```
18064 pts/3 0:01 dis51pr
18072 pts/4 0:08 dis51pr
```

6. Type the following at the command prompt to stop the first dis51pr process:

```
> kill -9 <process id>
```

where <process id> is the numeric identifier of the first dis51pr process.

For example, you might type the following:

```
> kill -9 18064
```

7. Repeat the previous step until you have stopped all the dis51pr processes.

When all of the current users have completed their sessions, the Discoverer server is shut down.

To make sure that no Discoverer sessions are active, type the following at the command prompt to list the numeric identifier of every dis5ws Discoverer process that is currently running:

```
> ps -A|grep dis5ws
```

To stop any Discoverer dis5ws processes that are still active, type the following at the command prompt:

```
> kill -9 <process id>
```

where <process id> is the numeric identifier of the dis5ws process.

4.3.3.2 How to shut down the Discoverer system immediately

An immediate shut down stops new user sessions from starting and stops the current sessions. To perform an immediate shut down, you:

- stop the Oracle Discoverer Windows service on each machine (to prevent new sessions from being started)
- stop the sessions currently running
- stop the Preferences component

On Windows:

1. On each machine, stop the Oracle Discoverer Windows service (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. On each machine:
 - a. Press Ctrl + Alt + Del to open the Windows NT Security dialog and click Task Manager.
 - b. Choose dis51ws.exe.
 - c. Click End Task to stop the Session component.

- d. Choose dis51pr.exe.
- e. Click End Task to stop the Preferences component.
- f. Repeat the above steps for each Session component (dis51ws.exe) and Preferences component (dis51pr.exe) running in the Task Manager.

On UNIX:

1. Type the following at the command prompt to stop OAD, OSAGENT, and the Discoverer Preference component:

```
> stopall.sh
```

Note: You can also use OEM to start and stop Discoverer on Unix (for more information, see [Section 4.4, "How to stop standalone Oracle9iAS Discoverer components in Unix"](#))

4.4 How to stop standalone Oracle9iAS Discoverer components in Unix

Using Oracle Enterprise Manager, you stop Oracle9iAS Discoverer running on a standalone machine in a component farm from any machine in the component farm. For example, you might want to perform maintenance tasks on a machine and need to stop Oracle9iAS Discoverer.

To stop standalone Oracle9iAS Discoverer components:

1. Start Oracle Enterprise Manager on any machine in the cluster (for more information about starting Oracle Enterprise Manager, see [Section 2.4, "How to start Oracle Enterprise Manager"](#)).
2. In the **Name** column under **Standalone Instances**, select the Oracle9iAS Discoverer that you want to stop to display the System Components page for that machine.
3. In the **Select** column, select the radio button next to OC4J_BI_Forms.

Note: Alternatively, select the **OC4J_BI_Forms** link to display the OC4J_BI_Forms page and click Start.

4. Do one of the following:
 - Click Stop to stop the component.
 - Click Start to start the component.

Note: If you want to stop and start the component, you can also use the Restart button.

Installing Oracle9*i*AS Discoverer in a multiple machine environment

5.1 Installing Oracle9*i*AS Discoverer in a multiple machine environment

This chapter explains how to configure Oracle9*i*AS Discoverer in a multiple machine environment, and contains the following topics:

- [Section 5.2, "Why install Oracle9*i*AS Discoverer on multiple machines?"](#)
- [Section 5.3, "About Oracle9*i*AS installations"](#)
- [Section 5.4, "About configuring Discoverer in a multiple machine installation"](#)
- [Section 5.5, "About specifying the machine that is going to run the Discoverer Preferences component"](#)
- [Section 5.6, "About configuring the tnsnames.ora file in a multiple machine installation"](#)
- [Section 5.7, "About using multiple Oracle HTTP Servers and OC4J components?"](#)

5.2 Why install Oracle9*i*AS Discoverer on multiple machines?

Installing Oracle9*i*AS Discoverer on multiple machines provides the following benefits:

- scalable capacity and performance
- high availability
- load balancing capability

5.3 About Oracle9iAS installations

Before you can configure Oracle9iAS Discoverer on multiple machines, you need to know about Oracle9iAS Discoverer installations (if you are already familiar with Oracle9iAS installations, skip to [Section 5.4, "About configuring Discoverer in a multiple machine installation"](#)).

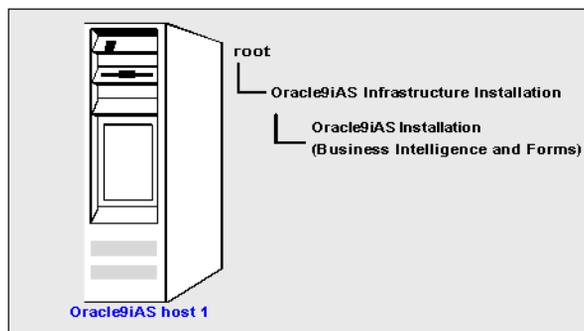
A typical Oracle9iAS Discoverer installation comprises the following:

- one Oracle9iAS Infrastructure Installation, containing the underlying databases, directory server, and management servers necessary for Oracle9iAS middle-tier components
- one or more Business Intelligence and Forms installations on one or more machines
- (optional) one J2EE and Web Cache Installation on one machine, to enable Oracle9iAS Web Cache to act as a proxy

Note: Business Intelligence and Forms and J2EE and Web Cache are both types of Oracle9iAS Installation. For more information, see *Oracle9iAS Installation Guide*.

In a single machine installation, the Oracle9iAS Infrastructure Installation and the Oracle9iAS Business Intelligence and Forms Installation are located on the same machine but in separate Oracle homes (see figure below).

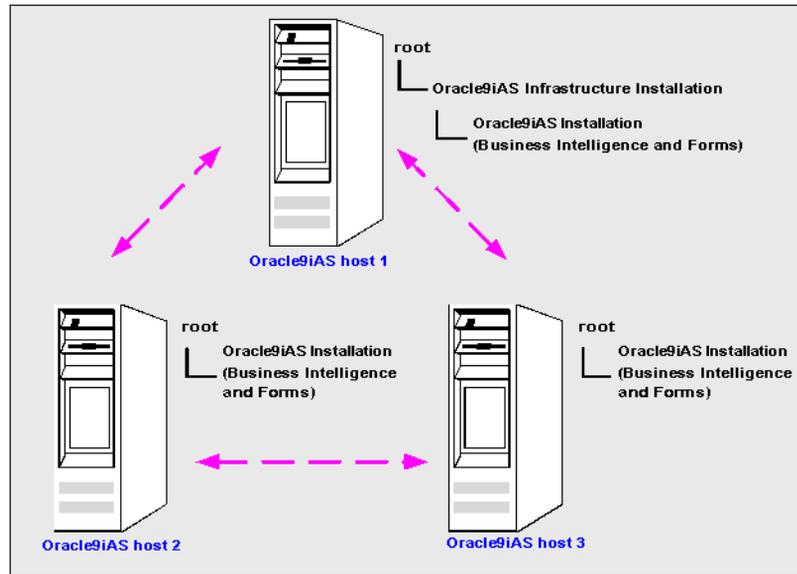
Figure 5–1 A single machine installation of Oracle9iAS Discoverer



In a multiple machine installation, the Oracle9iAS Infrastructure Installation and a Oracle9iAS Business Intelligence and Forms Installation are typically installed on one machine, and one or more Oracle9iAS Business Intelligence and Forms Installation are installed on other machines (see figure below). These standalone Oracle9iAS components are linked together in an Oracle9iAS farm.

Note: An Oracle9iAS farm is a collection of instances within a single metadata repository.

Figure 5–2 A typical multiple machine installation of Oracle9iAS Discoverer



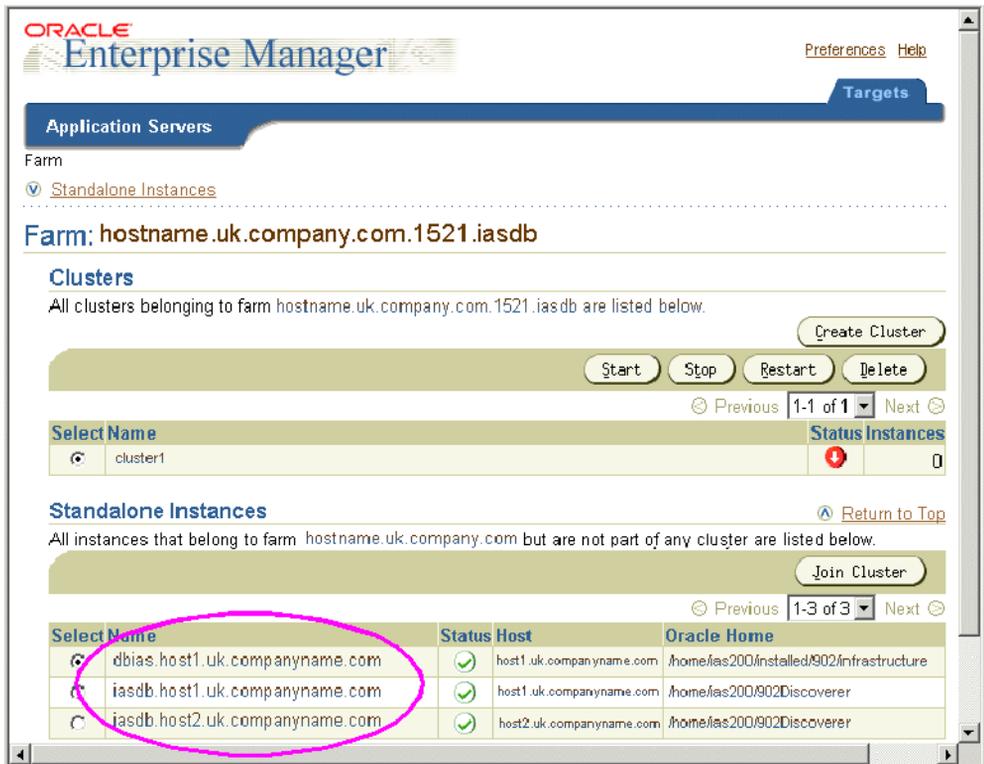
When you choose the Oracle9iAS Installation type during installation and select the 'Business Intelligence and Forms' option, the Discoverer Services tier is installed on that machine.

You can subsequently install the Business Intelligence and Forms component on other machines and link the standalone machines together in an Oracle9iAS 'farm'.

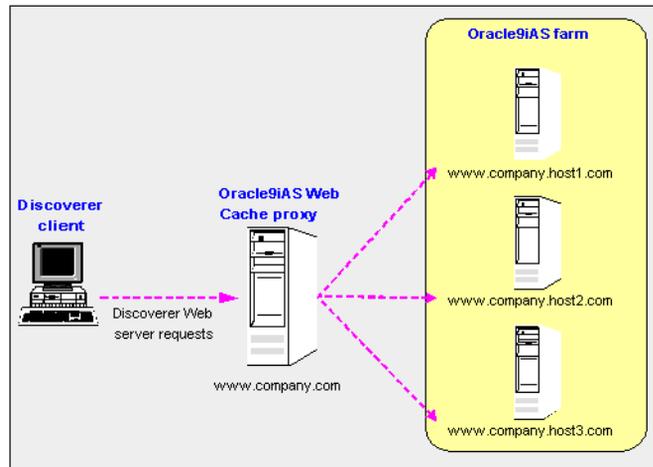
For example, you might have installed the following:

- one Oracle9iAS Infrastructure Installation on host 1 (e.g. in `/home/ias200/installed/902infrastructure`)
- one Oracle9iAS Installation (i.e. the Business Intelligence and Forms type) on host 1 (e.g. in `/home/ias200/installed/902Discoverer`)
- one Oracle9iAS Installation (i.e. the Business Intelligence and Forms type) on host 2 (e.g. in `/home/ias200/installed/902Discoverer`)

The figure below shows how this scenario would be represented in Oracle Enterprise Manager.



You typically use a Oracle9iAS Web Cache proxy on a single URL to distribute the Discoverer Web server requests to other Discoverer machines in the farm (see figure below).

Figure 5–3 Using a Web Cache proxy with an Oracle9iAS farm**Notes:**

- You can create Oracle9iAS farms using Oracle Enterprise Manager (for more information, refer to the Oracle Enterprise Manager Help system).
- In a multiple machine installation:
 - the Discoverer Services tier is installed on each machine
 - the Discoverer Preferences component is installed on each machine, but only one Preferences component is used (for more information, see [Section 1.7.2.2, "What is the Discoverer Preferences component?"](#) and [Section 5.5, "About specifying the machine that is going to run the Discoverer Preferences component"](#))
- You can also spread the Oracle9iAS Discoverer processing load equally across multiple machines (i.e. sometimes referred to as load balancing) using OC4J (see *Oracle9i Application Server Concepts* and *Oracle9iAS Containers for J2EE User's Guide*) or Oracle9iAS Web Cache (see *Oracle9iAS Web Cache Administration and Deployment Guide*).

5.4 About configuring Discoverer in a multiple machine installation

Before you starting configuring Oracle9iAS Discoverer in a multiple machine installation, you will have installed the following:

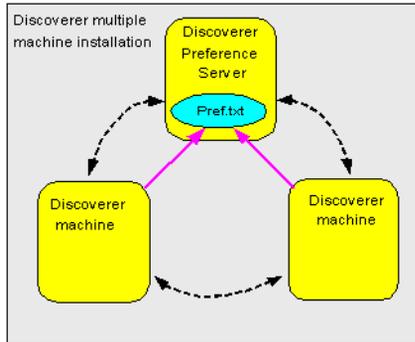
- an Oracle9iAS Infrastructure component
- one or more Oracle9iAS components (i.e. the Business Intelligence and Forms type) on one or more machines
- one Oracle9iAS components (i.e. the J2EE and Web Cache type) on one machine

To configure Discoverer in a multiple machine installation, do the following:

- if you have not already created a farm, use Oracle Enterprise Manager to create a new farm (for more information, see the Oracle Enterprise Manager Help system)
- use Oracle Enterprise Manager to add the Oracle9iAS Discoverer components to the farm (for more information, see the Oracle Enterprise Manager Help system)
- configure Oracle9iAS Web Cache to act as a proxy (for more information, see Oracle9iAS Web Cache Administration and Deployment Guide)
- specify the machine that is going to run the Discoverer Preferences component (for more information, see [Section 5.5, "About specifying the machine that is going to run the Discoverer Preferences component"](#))
- make sure that each machine contains the same database names and aliases information (for more information, see [Section 5.6, "About configuring the tnsnames.ora file in a multiple machine installation"](#))

5.5 About specifying the machine that is going to run the Discoverer Preferences component

In a multiple machine installation, only one machine runs the Discoverer Preferences component. This machine is referred to as the Preference Server machine. You must configure the other machines in a multiple machine installation to use the Preferences component running on the Preference Server machine, instead of running their own Preferences component. The diagram below shows how additional Discoverer machines reference the preferences on the Preference Server machine, which are stored in the file `pref.txt` ((for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#))).



To specify that other machines in a multiple machine installation use the Preferences component running on the Discoverer Preference Server machine, you:

- find out the name of the Discoverer Preference Server machine (for more information, see [Section 5.5.1, "How to find out the name of the Discoverer Preference Server machine"](#))
- modify the register session scripts of other machines in the multiple machine installation to use the Discoverer Preference Server machine (for more information, see [Section 5.5.2, "How to modify the register session scripts of other machines in the multiple machine installation to use the Preference Server machine"](#))

5.5.1 How to find out the name of the Discoverer Preference Server machine

To find out the name of the machine that you want to run the Preferences component (i.e. the Discoverer Preference Server machine):

1. On the machine that you want to designate as the Discoverer Preference Server machine, open the following register session file in a text editor:

- on UNIX, open the registersession.sh file
- on Windows, open the registersession.bat file

To find out the location of the file, see [Section A.2, "List of Discoverer file locations"](#).

2. Locate the '-preference' command in the register session script:

```
... -a -preference -a <current_machine_name>OracleDiscovererPreference9.0.2 ...
```

where <current_machine_name> is the name of the current machine.

3. Make a note of the `<current_machine_name>` value (i.e. the name of the current machine).

The `<current_machine_name>` is the name that you use to designate the current machine as the Discoverer Preference Server machine. You use this name in register session scripts of other machines in the multiple machine installation.

4. Close the text editor.

5.5.2 How to modify the register session scripts of other machines in the multiple machine installation to use the Preference Server machine

Having identified the name of the machine that is going to run the Preferences component (i.e. the Preference Server machine), you must now make sure that other machines do not run their own Preferences component.

To make sure other machines in the multiple machine installation use the Discoverer Preference Server machine, on every other machine in the installation do the following:

1. Stop the Preferences component (for more information, see [Section 6.7, "How to start and stop the Preferences component"](#)).
2. Unregister the Session component (for more information, see [Section 6.6, "How to register and unregister the Discoverer Session component with the OAD"](#)).
3. Open the following register session file in a text editor:
 - on UNIX, open the `registersession.sh` file
 - on Windows, open the `registersession.bat` file

To find out the location of the file, see [Section A.2, "List of Discoverer file locations"](#).

4. Locate the `'-preference'` command in the register session script:

```
... -a -preference -a <current_machine_name>OracleDiscovererPreference9.0.2  
where <current_machine_name> is the name of the current machine.
```

5. Remove the `<current_machine_name>` value and prefix `OracleDiscovererPreference9.0.2` with the name of the Discoverer Preference Server machine.

For example, if the Preference Server machine is called `mc_1234`, you would change the register session script to:

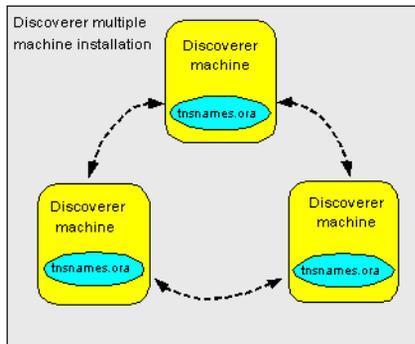
```
... -a -preference -a mc_1234OracleDiscovererPreference9.0.2 ...
```

6. Register the Session component (for more information about registering the Session component, see [Section 6.6, "How to register and unregister the Discoverer Session component with the OAD"](#)).

5.6 About configuring the tnsnames.ora file in a multiple machine installation

The tnsnames.ora file contains the names and aliases of all the databases that users can access using Oracle9iAS Discoverer.

Each server machine in a multiple machine Discoverer installation must have the same tnsnames.ora file.



If you install additional Discoverer Server machines, you must make sure that the tnsnames.ora files on the different machines are the same by doing one of the following:

- copy the tnsnames.ora file from an existing Discoverer Server machine to the same location on each additional Discoverer Server machine that you want to deploy, replacing the existing file (to find out the location of this file, see [Section A.2, "List of Discoverer file locations"](#))
- edit the tnsnames.ora file on each additional Discoverer Server so that it contains the same database names and aliases as an existing Discoverer Server machine, as follows:
 - a. Using a text editor, open the tnsnames.ora file on each additional Discoverer Server machine that you want to deploy (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).

- b. Edit the database names and aliases so that they match the database names and aliases in the tnsnames.ora file on an existing Discoverer Server machine.
- c. Save the tnsnames.ora file.

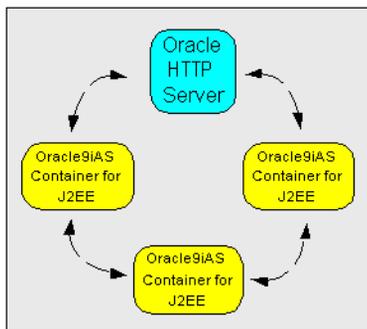
All Discoverer Servers now have access to the same database names and aliases.

Hint: Several versions of the tnsnames.ora file might exist on a machine. Make sure that you use the tnsnames.ora file listed in [Section A.2, "List of Discoverer file locations"](#).

5.7 About using multiple Oracle HTTP Servers and OC4J components?

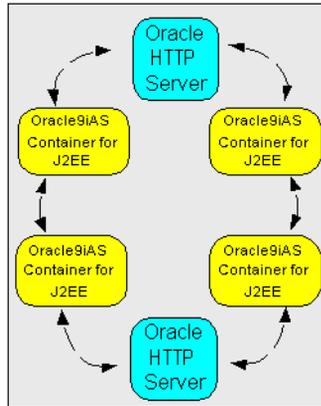
In addition to using multiple machine installations, you can enhance Oracle9iAS Discoverer performance by increasing the number of Oracle HTTP Servers and Oracle9iAS Container for J2EE (OC4J) components. Two typical configurations are:

- a single installation of the Oracle HTTP Server (and MOD_OC4J), and multiple installations of Oracle9iAS Container for J2EE (for more information, see [Section 5.7.1, "Using Oracle9iAS Discoverer with a single installation of the Oracle HTTP Server and multiple installations of Oracle9iAS Containers for J2EE"](#))



This type of configuration provides increased performance and high availability of the Oracle HTTP Server

- multiple installations of Oracle HTTP Server (and MOD_OC4J), and multiple installations of Oracle9iAS Container for J2EE (for more information, see [Section 5.7.2, "Using Oracle9iAS Discoverer with multiple installations of Oracle HTTP Server, and multiple installations of Oracle9iAS Containers for J2EE"](#))



This type of configuration provides increased performance and high availability of both the Oracle HTTP Servers and the Discoverer Servers.

5.7.1 Using Oracle9iAS Discoverer with a single installation of the Oracle HTTP Server and multiple installations of Oracle9iAS Containers for J2EE

In this scenario, you:

- install the Oracle HTTP Server component on a single machine (for more information, see *Oracle9i Application Server Installation Guide*).
- install Oracle9iAS Container for J2EE components on multiple machines (for more information, see *Oracle9i Application Server Concepts* and *Oracle9iAS Containers for J2EE User's Guide*)
- configure MOD_OC4J so that it is aware of the existence of all of the Oracle9iAS Container for J2EE machines (for more information, see *Oracle9i Application Server Concepts* and *Oracle9iAS Containers for J2EE User's Guide*)

5.7.2 Using Oracle9iAS Discoverer with multiple installations of Oracle HTTP Server, and multiple installations of Oracle9iAS Containers for J2EE

In this scenario, you:

- install Oracle HTTP Server components on multiple machines (for more information, see *Oracle9i Application Server Installation Guide*)

- install Oracle9iAS Container for J2EE components on multiple machines (for more information, see *Oracle9i Application Server Concepts* and *Oracle9iAS Containers for J2EE User's Guide*)
- configure each instance of MOD_OC4J so that each instance is aware of the existence of all of the Oracle9iAS Container for J2EE machines (for more information, see *Oracle9i Application Server Concepts* and *Oracle9iAS Containers for J2EE User's Guide*)

Managing the Discoverer CORBA components

6.1 Managing the Discoverer CORBA components

This chapter explains how to manage the Discoverer CORBA components. For example, when you install Oracle9iAS Discoverer on a new machine in a multiple machine environment you might want to manually register or unregister CORBA components. This section contains the following topics:

- [Section 6.2, "About the Discoverer CORBA components"](#)
- [Section 6.3, "About managing Discoverer CORBA components"](#)
- [Section 6.4, "How to confirm that the OAD is running and responding"](#)
- [Section 6.5, "How to view the registered components"](#)
- [Section 6.6, "How to register and unregister the Discoverer Session component with the OAD"](#)
- [Section 6.7, "How to start and stop the Preferences component"](#)

6.2 About the Discoverer CORBA components

The Discoverer Session and Discoverer Preferences components are installed on one or more application servers. For more information about the Discoverer Session component and the Discoverer Preferences component, see [Section 1.7.2, "About the Discoverer CORBA components"](#).

Notes:

- You can register and unregister the Discoverer Session component using the Windows Start menu or using the Unix command line.

- You can view the registered components for one machine or for the entire network.
- To register and unregister the Discoverer Session component (and to view registered components), the VisiBroker Object Activation Daemon (OAD) must be running and responding. For more information about confirming that the OAD is running, see [Section 6.4, "How to confirm that the OAD is running and responding"](#).

6.3 About managing Discoverer CORBA components

To manage the Discoverer CORBA components, you typically do the following:

- confirm that the OAD is running and responding (for more information, see [Section 6.4, "How to confirm that the OAD is running and responding"](#))
- find out what components are registered (for more information, see [Section 6.5, "How to view the registered components"](#))
- register or unregister the Discoverer Session component (for more information, see [Section 6.6, "How to register and unregister the Discoverer Session component with the OAD"](#))

6.4 How to confirm that the OAD is running and responding

How you confirm that the OAD is running and responding depends on the operating system on which you are running the Discoverer Server, as follows:

- if you are running the Discoverer Server on UNIX, see [Section 6.4.1, "How to confirm that the OAD is running and responding on UNIX"](#)
- if you are running the Discoverer Server on Windows, see [Section 6.4.2, "How to confirm that the OAD is running and responding on Windows"](#)

6.4.1 How to confirm that the OAD is running and responding on UNIX

If you are not sure whether the OAD is running on UNIX:

1. Type the following at the command prompt:

```
> oadutil list
```

If the OAD process is not running or the OSAGENT is not running, the following message is displayed:

Unable to bind to OAD

If the OAD process is not running, do the following to start OAD:

1. Navigate to the directory containing the stopall.sh and startall.sh files and type the following two commands at the command prompt:

```
> stopall.sh  
> startall.sh
```

To find out the location of the files, see [Section A.2, "List of Discoverer file locations"](#).

6.4.2 How to confirm that the OAD is running and responding on Windows

If you are not sure whether the OAD is running on Windows:

1. Press Ctrl + Alt + Del to open the Windows NT Security dialog and click Task Manager.
2. Display the Processes tab.

The Processes list should contain two java.exe processes (one for OC4J and one for OAD). Therefore, if both java.exe processes are running you can assume that the OAD is running. If you think that the OAD is running but not responding, stop and start the Discoverer service (see **If the OAD is running but not responding** below).

Note: The Processes list might contain more than two java processes.

If the OAD is not running, do the following to start OAD:

1. From the Windows Start menu, choose Settings | Control Panel and double-click on the Services icon to display the Services dialog box.
2. Select Disco9.0.2Service and click Start.
3. When the OAD has started, click Close to close the Services dialog box.

If the OAD is running but not responding, do the following:

1. From the Windows Start menu, choose Settings | Control Panel and double-click on the Services icon to display the Services dialog box.
2. Select Disco9.0.2Service.
3. Click Stop, then click Start.
4. When the OAD has started, click Close to close the Services dialog box.

6.5 How to view the registered components

To view the registered components:

1. Make sure the OAD is running (for more information, see [Section 6.4, "How to confirm that the OAD is running and responding"](#)).
2. Navigate to the Visibroker root directory. For example, `\VBROKER\BIN\`.
3. Specify which domain the osagent needs to look at by typing the following at the command prompt:

```
> oadutil list -VBJprop vbroker.agent.port=<port number>
```

Note: To find out the port number:

- On Windows, look at the value of the Windows Registry key `HKLM/Software/Oracle/<Oracle Home>/DC902_OSAGENT_PORT`.
- On UNIX, open the `startoad.sh` script in a text editor or look for the comment that starts the OAD (for more information about the location of script files, see [Section A.2, "List of Discoverer file locations"](#)).

Tip: The command contains `-VBJprop vbroker.agent.port=<port number>`.

4. View the registered components by typing the following at the command prompt:

```
> osfind -VBJprop vbroker.agent.port=<port number>
```

A list of the components running on the network is displayed.

6.6 How to register and unregister the Discoverer Session component with the OAD

How you register and unregister the Discoverer Session component with the OAD depends on the operating system on which you are running the Discoverer Server, as follows:

- if you are running the Discoverer Server on UNIX, you register the Discoverer Session component with the OAD using the command line (for more information, see [Section 6.6.1, "How to register and unregister the Discoverer Session component using the command line"](#))
- if you are running the Discoverer Server on Windows, you can register the Discoverer Session component with the OAD using:

- the command line (for more information, see [Section 6.6.1, "How to register and unregister the Discoverer Session component using the command line"](#))
- the Windows Start menu (for more information see [Section 6.6.2, "How to register and unregister the Discoverer Session component using the Windows Start menu"](#))

6.6.1 How to register and unregister the Discoverer Session component using the command line

When you use the command line to register the Discoverer Session component, you run scripts contained in files. The names of the files will depend on the operating system on which you are running the Discoverer Server, as follows:

Operating system	Session registration script
UNIX	registersession.sh
Windows	registersession.bat

To register the Discoverer Session component using the command line:

At the command prompt, navigate to the directory containing the Session component registration script (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).

1. At the command prompt, run the script as follows:

- on UNIX, type the following:

```
> registersession.sh
```
- on Windows, type the following:

```
> registersession.bat
```

6.6.1.1 To unregister the Discoverer Session component using the command line

When you use the command line to unregister the Discoverer Session component, you run scripts contained in files. The names of the files will depend on the operating system on which you are running the Discoverer Server, as follows:

Operating system	Session unregistration script
UNIX	unregistersession.sh
Windows	unregistersession.bat

To unregister the Session component using the command line:

1. At the command prompt, navigate to the directory containing the Session component unregistration script (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. At the command prompt, run the script as follows:
 - on UNIX, type the following:
> unregistersession.sh
 - on Windows, type the following:
> unregistersession.bat

6.6.2 How to register and unregister the Discoverer Session component using the Windows Start menu

If you are running the Discoverer Server on Windows, you can register and unregister the Discoverer Session component with the OAD using options on the Windows Start menu.

On the machine where you want to register or unregister the Discoverer Session component:

1. From the Windows Start menu, choose Programs | Oracle9iAS Discoverer Server Setup.
A number of register and unregister options are available.
2. Choose the component that you want to register or unregister.
A confirmation screen appears.

6.7 How to start and stop the Preferences component

How you start and stop the Discoverer Preferences component depends on the operating system on which you are running the Discoverer Server, as follows:

- if you are running the Discoverer Server on UNIX, see [Section 6.7.1, "How to start and stop the Discoverer Preferences component on UNIX"](#)
- if you are running the Discoverer Server on Windows, see [Section 6.7.2, "How to start and stop the Discoverer Preferences component on Windows"](#)

6.7.1 How to start and stop the Discoverer Preferences component on UNIX

To stop the Discoverer Preferences component on UNIX:

1. Navigate to the directory containing the stoppreference.sh file and type the following at the command prompt:

```
> stoppreference.sh
```

For more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#).

To start the Preferences component on UNIX:

1. Navigate to the directory containing the startpreference.sh file and type the following at the command prompt:

```
> startpreference.sh
```

For more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#).

6.7.2 How to start and stop the Discoverer Preferences component on Windows

To stop the Discoverer Preferences component on Windows:

1. Stop the Discoverer Windows service (for more information, see [Section 4.2.4, "How to stop the Discoverer Windows service manually"](#)).
2. From the Windows Start menu, select Run.
3. In the Run window, type `regedit` and press [Enter].
4. In the Registry Editor, open the HKEY_LOCAL_MACHINE/SOFTWARE/ORACLE/ key.
5. Change the value of the DC902_START_PREFERENCES from 1 to 0.

6. Start the Discoverer Windows service (for more information, see [Section 4.2.3, "How to start the Discoverer Windows service manually"](#)).

To start the Preferences component on Windows:

1. Stop the Discoverer Windows service (for more information, see [Section 4.2.4, "How to stop the Discoverer Windows service manually"](#)).
2. From the Windows Start menu, select Run.
3. In the Run window, type `regedit` and press [Enter].
4. In the Registry Editor, open the HKEY_LOCAL_MACHINE/SOFTWARE/ORACLE/ key.
5. Change the value of DC902_START_PREFERENCES from 0 to 1.
6. Start the Discoverer Windows service (for more information, see [Section 4.2.3, "How to start the Discoverer Windows service manually"](#)).

Editing Discoverer preferences

7.1 Editing Discoverer preferences

This chapter explains how to manage Oracle9iAS Discoverer preferences, and contains the following topics:

- [Section 7.2, "What are Discoverer preferences?"](#)
- [Section 7.3, "About Discoverer system preferences"](#)
- [Section 7.4, "About Discoverer user preferences"](#)
- [Section 7.5, "How to set user preferences for all users"](#)
- [Section 7.6, "How to set individual preferences for specific users"](#)
- [Section 7.7, "List of Discoverer user preferences"](#)
- [Section 7.8, "List of arguments to use with the dis51pr command line utility"](#)
- [Section 7.9, "List of Discoverer system preferences"](#)

7.2 What are Discoverer preferences?

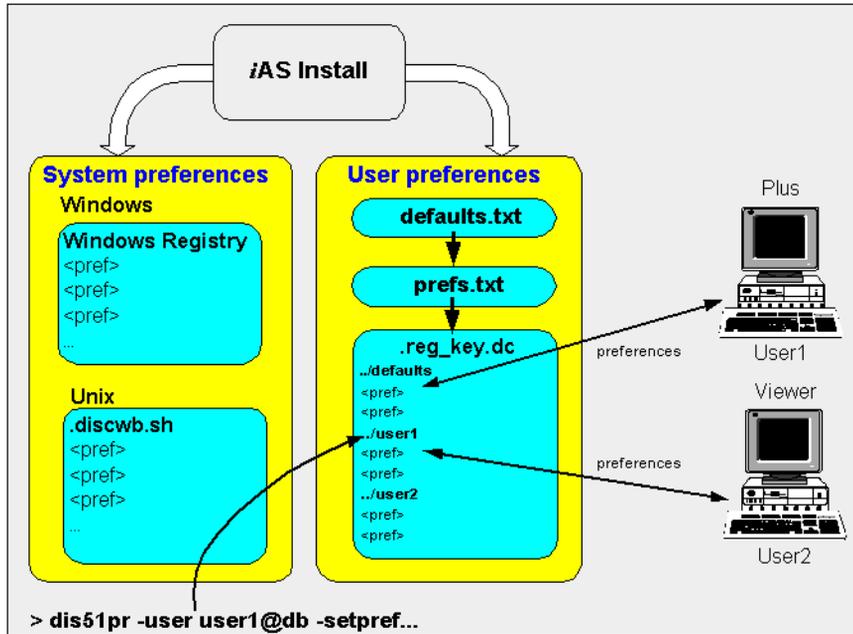
Discoverer preferences are settings that define the Discoverer environment and control the behavior of Discoverer Plus and Discoverer Viewer.

There are two types of Discoverer preference:

- Discoverer system preferences (for more information, see [Section 7.9, "List of Discoverer system preferences"](#))
- Discoverer user preferences (for more information, see [Section 7.7, "List of Discoverer user preferences"](#))

The relationship between the Discoverer system preferences and the Discoverer user preferences is shown in the diagram below:

Figure 7–1 Discoverer user preferences



7.3 About Discoverer system preferences

Discoverer system preferences are created and set during installation. Typically you will never have to modify the Discoverer system preferences. On UNIX systems, the Discoverer system preferences are stored in a file called discwb.sh. On Windows systems, the Discoverer system preferences are stored in the Windows Registry.

For more information about Discoverer system preferences, see [Section 7.9, "List of Discoverer system preferences"](#).

7.4 About Discoverer user preferences

During Oracle9iAS installation, Discoverer uses factory supplied default values (stored in defaults.txt) to create user preferences for all Discoverer users (stored in pref.txt).

When a new user starts an Oracle9iAS Discoverer session for the first time, the settings in the `pref.txt` file take effect as that user's default settings.

After installation, the user preferences can be changed in a number of ways:

- Discoverer end users can change their own user preferences using options within Discoverer Plus or Discoverer Viewer. For example, a Discoverer Viewer end user might click Preferences and change their personal preferences. These changes are stored in the `.reg_key.dc` file on the Discoverer Server.

When an individual user changes a preference, the setting of that preference for that user is saved in the `.reg_key.dc` file. Individual preferences are stored for each user as a unique combination of database and userid in the `.reg_key.dc` file, and loaded whenever the user starts a new session. Therefore, users can log on from different client machines and still have their individual settings take effect.

For example, a Discoverer Plus end user might select Tools | Options to display the Options dialog and change the **Number of rows per page** value to 15. The following entry would be stored in `.reg_key.dc` for that user:

```
"RowsPerHTML"=D4:4:0F,00,00,00
```

where '0F' is the hexadecimal value of 15.

Note: Unless a user changes a preference value, the value of that preference is as specified in the `pref.txt` file.

- You can change the default values of user preferences for all Discoverer users by changing the values in the `pref.txt` file. For the changes to take effect, you must 'apply' the preferences (for more information about the `applypreferences` scripts, see [Section A.2, "List of Discoverer file locations"](#)). The new default values are then written to the `.reg_key.dc` file (for more information, see [Section 7.5, "How to set user preferences for all users"](#)).

Note: Where a user has specified their own value for a preference, that value continues to override the new default.

- You can change an individual's preferences using the `dis51pr` command line utility. Changes that you make are stored in the `.reg_key.dc` file (for more information, see [Section 7.6, "How to set individual preferences for specific users"](#)).

Notes:

- The factory supplied default values for `pref.txt` are contained in the `defaults.txt` file (to find out the location of this file, see [Section A.2, "List of Discoverer file locations"](#)). If you make a mistake when editing the `pref.txt` file (or lose or

corrupt the file), refer to defaults.txt to restore the content of pref.txt to the original values.

- You can edit the pref.txt file without shutting down the Preferences component. In other words, users can continue working while you edit the pref.txt file.
- On Unix implementations, the .reg_key.dc is a hidden Unix file (i.e. the filename is prefixed with a '.'). Use the command 'ls -al' to list hidden files.

7.5 How to set user preferences for all users

To set user preferences for all users:

1. Open the pref.txt file in a text editor (to find out the location of this file, see [Section A.2, "List of Discoverer file locations"](#)).

Hint: If you are using Windows, you can open the pref.txt file in Notepad from the Windows Start menu by choosing Programs | Oracle9iAS Discoverer Server Setup | Edit Preferences.

2. Edit the items in the pref.txt file as required.
3. Save the file and close the text editor.

For the changes you have made to pref.txt to take effect, you must apply the preferences.

4. Apply the preference changes you have made, as follows:

- on UNIX, navigate to the directory containing the applypreferences.sh file and type the following at the command prompt:

```
applypreferences.sh
```

To find out the location of the file, see [Section A.2, "List of Discoverer file locations"](#).

- on Windows, from the Windows Start menu choose Programs | Oracle9iAS Discoverer Server Setup | Apply Preferences. Alternatively, type the following at the command line:

```
dis51pr -apply
```

Hint: If you suspect that the pref.txt file contains errors, check the error.txt file in the current directory.

7.6 How to set individual preferences for specific users

To set individual preferences for specific users:

1. From the command prompt, navigate to the directory containing the dis51pr executable file.

To find out the location of the file, see [Section A.2, "List of Discoverer file locations"](#).

2. Enter a command at the command line, using the following syntax:

```
dis51pr -user <user> -setpref "<pref category>" "<pref name>" <pref value>
-apply
```

where:

- <user> is the name of the user for which you want to set the preference value, followed by the @ symbol, followed by the name of the database
- <pref category> is the category of the preference you want to change
- <pref name> is the name of the preference you want to change
- <pref value> is the value you want the preference to have

Examples:

- if you wanted to set the default EUL for the user jchan, you would type the following:

```
dis51pr -user jchan@salesdb -setpref "Database" "DefaultEUL" "\sales" \
-apply
```

- if you wanted to set the maximum amount of heap memory allowed for the data cache to be 512000 for a user jchan, you would type the following:

```
dis51pr -user jchan@salesdb -setpref "Application" "MaxVirtualHeapMem"
512000 -apply
```

Notes:

- To display the dis51pr online help, type the following command at the command line:

```
dis51pr -help
```

- Preference names and values are case-sensitive.

- For a list of Discoverer preferences that you can set using the `dis51pr` command line utility, refer to [Section 7.7, "List of Discoverer user preferences"](#).
- For a list of other arguments that you can use with the `dis51pr` command line utility, refer to [Section 7.8, "List of arguments to use with the `dis51pr` command line utility"](#).

7.7 List of Discoverer user preferences

This table shows the category, description, default value, and valid values of Discoverer user preferences.

User preference name	Category	Description	Default value	Valid values
AppsFNDNAM	Database	Specifies the schema in which certain vital Oracle Applications data is stored.	APPS	Valid Apps foundation name
AppsGWYUID	Database	Specifies the public username and password for the AOL security DLL.	APPLSYSPUB/PUB	Valid Apps username and password
AvoidServerWildcardBug	Database	Set to 1 if running against RDBMS 7.3.2 with NLS_LANG set to Japanese_Japan.JA16SJIS to avoid certain list box appearing empty.	0	0 = not running against RDBMS 7.3.2 with NLS_LANG set to Japanese_Japan 1 = running against RDBMS 7.3.2 with NLS_LANG set to Japanese_Japan
Axis Style	Crosstab	Crosstab axis position.	2	1 = inline 2 = outline
BusinessAreaFastFetchLevel	Database	Controls the amount of pre-caching that occurs for components and items whenever a Business Area is fetched.	1	1
CacheFlushPercentage	Application	Percentage of cache flushed if the cache is full.	25	User specified
Cell X Gridline	Crosstab	Show horizontal gridlines.	0	0 = no 1 = yes

User preference name	Category	Description	Default value	Valid values
Cell X Gridline	Table	Show horizontal gridlines.	0	0 = no 1 = yes
Cell Y Gridline	Crosstab	Show vertical gridlines.	0	0 = no 1 = yes
Cell Y Gridline	Table	Show vertical gridlines.	0	0 = no 1 = yes
DataFormat	Application	Applies HTML formatting to data cells in worksheets.	"<fontFormat fontName="Dialog" pitch="10" bold="false" italic="false" underline="false" " strikethrough="false" foreground="0,0,0" background="255, 255, 255" halign="right" valign="top"></fontFormat>"	User specified
DefaultEUL	Database	Sets the EUL you want all users to connect to. Each user can override this default from the Discoverer Plus Options dialog.	Any EUL you have created.	Any valid EUL

User preference name	Category	Description	Default value	Valid values
DefaultUserTypeIsApps	Administrator	<p>Specifies whether Discoverer Plus and Discoverer Viewer users default to Oracle Applications.</p> <p>If the Oracle Applications User check box is displayed on the Create New Connection page, this setting is used to clear (0) or select (1) the check box by default.</p> <p>If the Oracle Applications User check box is not displayed on the Create New Connection page, this setting is used to set the default login type (0 for non-Oracle Apps, 1 for Oracle Apps).</p> <p>For more information, see Section 14.3, "About Discoverer configuration settings for Oracle Applications".</p>	0	0=No 1=Yes
DisableAutoOuterJoinsOnFilters	Database	<p>This setting toggles the behavior of Discoverer when running queries involving an outer join with a condition (or conditions) applied.</p> <p>The effect of this setting is fully explained in the <i>Oracle9i Discoverer Administrator Administration Guide</i>.</p>	0	0 = Do not disable outer joins on filters 1 = Disable outer joins on filters
DisableAutoQuery	Database	If set to 0, queries do not automatically run when a worksheet opens.	0	0 = on 1 = off
DisableFanTrapDetection	Database	Disables detection for fan trap in user queries.	0	0 = on 1 = off

User preference name	Category	Description	Default value	Valid values
DisableMultiJoinDetection	Database	<p>This setting toggles multiple join path detection when creating worksheets in Discoverer Plus.</p> <p>When this setting = 1, Desktop selects all join options when creating a worksheet.</p> <p>When this setting = 0 and multiple joins exist, Discoverer Plus displays the Join Folders dialog where you choose the join(s) to use for the worksheet.</p> <p>Note: It is recommended that Discoverer Plus users select all available joins for Discoverer to display accurate results data.</p>	0	<p>1 = Disable multiple join detection</p> <p>0 = Do not disable multiple join detection</p>
EnhancedAggregationStrategy	Database	<p>Determines if Enhanced Data Aggregation is to be switched on and if so, what SQL generation strategy to use.</p> <p>For more information about the values, see "About the EnhancedAggregationStrategy user preference setting".</p>	4	<p>0 = Off</p> <p>1 = Strict Grouping Sets</p> <p>2 = Optimized</p> <p>3 = Cube</p> <p>4 = Auto Determine</p>
ExcelVersion	Application	<p>Specifies the version of Excel to export to.</p> <p>Different versions of Excel impose different limits on the number of rows per sheet:</p> <ul style="list-style-type: none"> ■ the Excel95 limit is 16384 rows per sheet ■ the Excel97 limit is 65536 rows per sheet ■ the Excel2000 limit is 65536 rows per sheet <p>If the limit is exceeded, Discoverer places additional rows on additional Excel sheets.</p>	Excel95	<p>Excel95</p> <p>Excel97</p> <p>Excel2000</p>

User preference name	Category	Description	Default value	Valid values
HeadingFormat	Application	Applies HTML formatting to heading cells in worksheets.	"<fontFormat fontName="Dialog" pitch="10" bold="false" italic="false" underline="false" " strikethrough="false" foreground="0,0,0" background="204, 204, 204" halign="left" valign="top"></fontFormat>"	User specified
ItemClassDelay	Database	Fetch list of values for this amount of time before timing out.	15 (seconds)	User specified
MaterializedViewRedirectionBehavior	Database	Materialized view redirection.	0	0=always when available 1=always when summary data not stale 2=never
MaxVirtualDiskMem	Application	Maximum amount of disk memory allowed for the data cache.	1024000000	User specified
MaxVirtualHeapMem	Application	Maximum amount of heap memory allowed for the data cache.	1024000000	User specified
NullValue	Application	Specifies how null values are displayed in worksheets, for example, 'NULL', 'N/A', '0'.	NULL	User specified
ObjectsAlwaysAccessible	Database	Verify that Business Area objects and items exist in the database.	0	0=verify 1=do not verify and assume that the objects and items exist

User preference name	Category	Description	Default value	Valid values
PredictionThresholdSeconds	Database	Warn user if the predicted query time will exceed the number of seconds.	60 (seconds)	User specified
PredictionThresholdSecondsEnabled	Database	Query prediction threshold disabled (0) or enabled (1).	1	0 = disabled 1 = enabled
QPPAvgCostTimeAlgorithm	Database		2	
QPPCBOEnforced	Database	Will use cost-based optimizer if set to 1. Will use default optimizer if set to 0.	1	0 = use default optimizer 1 = use cost based optimizer
QPPCreateNewStats	Database	Records new statistics if set to 1.	1	0 = false 1 = true
QPPEnable	Database	Uses query prediction/performance (QPP) if set to 1.	1	0 = false 1 = true
QPPLoadStatsByObjectUseKey	Database	Records statistics for same objects first if set to 1.	1	0 = false 1 = true
QPPMaxObjectUseKey	Database	Affects the amount of statistics to cache in memory for query prediction.	30	User specified
QPPMaxStats	Database	Only loads this many previous statistics.	500	User specified
QPPMinActCpuTime	Database	Only records or uses statistics with a CPU time greater than this value.	0	User specified
QPPMinActElapsedTime	Database	Only records or uses statistics with an actual elapsed time greater than this value.	0	User specified
QPPMinCost	Database	Only records or uses statistics with a cost greater than this value.	0	User specified
QPPMinEstElapsedTime	Database	Only records or uses statistics with an estimated elapsed time greater than this value.	0	User specified

List of Discoverer user preferences

User preference name	Category	Description	Default value	Valid values
QPPObtainCostMethod	Database		1	
QPPUseCpuTime	Database	Query prediction uses CPU time within its algorithm.	1	0 = false 1 = true
QueryBehavior	Application	Action to take after opening a workbook.	0	0 = Run Query Automatically 1 = Do not Run Query 2 = Ask for Confirmation
QuerySQLFastFetchLevel	Database		1	
QueryTimeLimit	Database	Limit on query time in seconds.	1800 (seconds)	User specified
QueryTimeLimitEnabled	Database	Query time limit disabled (0) or enabled (1).	1	0 = disabled 1 = enabled
RdbFastSQLOff	Database		0	
Row Headings	Table	Display row numbers on table worksheets.	0	0 = no 1 = yes
RowFetchLimit	Database	The maximum number of rows fetched.	10000 (rows)	User specified
RowFetchLimitEnabled	Database	RowFetchLimit parameter is disabled (0) or enabled (1).	1	0 = disabled 1 = enabled
RowsPerFetch	Database	The number of rows to fetch at once.	100 (rows)	User specified
RowsPerHTML	Session Manager	Number of rows to display per HTML page.	10	User specified
ShowDialogBitmaps	Application	End users see the bitmap graphics on Discoverer Plus dialogs.	1	0 = off 1 = on

User preference name	Category	Description	Default value	Valid values
ShowUserTypeChoice	Administrator	Activates an end-user check box that allows users to specify whether they want to run Discoverer Plus against an Oracle Application.	0	0 = hide check box 1 = show check box
SQLTrace	Database	False (off).	0	0 = false 1 = true
SummaryObjectsUseCachedAccessibility	Database	Controls whether to access the summary-derived objects in the cache.	0	
SummaryThreshold	Database	Use summary table only if it is no older than this number of days.	30 (days)	User specified or 0 = do not use summary at all
SummaryThresholdEnabled	Database	If enabled (1), will use the value specified by SummaryThreshold. Otherwise, Discoverer will always use summary tables if they are available.	1	0 = disabled 1 = enabled
Timeout	Session Manager	Amount of time (in seconds) after which Discoverer disconnects an idle session from the database. Minimum time is 180 seconds.	1800	User specified
Title	Crosstab	Displays titles that were created in Discoverer 3.1 worksheets.	1	0 = no 1 = yes
Title	Table	Displays titles that were created in Discoverer 3.1 worksheets.	1	0 = no 1 = yes

User preference name	Category	Description	Default value	Valid values
TotalsFormat	Application	Applies HTML formatting to cells that contain totals in worksheets.	"<fontFormat fontName="Dialog" pitch="10" bold="false" italic="false" underline="false" " strikethrough="false" foreground="0,0,0" background="255, 255, 255" halign="left" valign="top"></fontFormat>"	User specified
UseOptimizerHints	Database	Will add optimized hints to SQL if set 1.	0	0 = off 1 = on

7.7.1 About the EnhancedAggregationStrategy user preference setting

The EnhancedAggregationStrategy user preference controls how Discoverer Plus and Discoverer Viewer make use of the Oracle9i database's enhanced aggregation functionality.

The settings affect the SQL that is generated for the query, dictating whether there should be an exact match between client request (from the Discoverer Server) and the aggregation levels retrieved or whether more aggregation levels are retrieved from the database than are requested by the client (from the Discoverer Server).

The table below explains the EnhancedAggregationStrategy user preference settings in more detail:

Value	Description
0	Off The generated SQL contains an ordinary GROUP BY clause.

Value	Description
1	<p>Strict Grouping Sets</p> <p>The generated SQL contains GROUPING SET requests that exactly match the GROUPING SET requests made by the Discoverer Server. The requests that the Discoverer Server makes are determined by how the end user created the worksheet.</p> <p>For example, the generated GROUP BY clause might be similar to the following: GROUP BY GROUPING SETS((Department, Region, Year),(Department),())</p>
2	<p>Optimized</p> <p>The generated SQL contains GROUPING SET requests with additional ROLLUP functions. The use of ROLLUP functions enables the SQL to fetch more aggregation levels than requested by the Discoverer Server. This typically enables the end user to add totals or pivot without needing to re-query the database.</p> <p>For example, the generated GROUP BY clause might be similar to the following: GROUP BY GROUPING SETS(ROLLUP(Department, Region, Year), ROLLUP(Region, Year))</p>
3	<p>Cube</p> <p>The generated SQL contains a Grouping Set request for a CUBE of the items requested. This is the highest pre-fetch strategy for aggregation levels from the database and should be used with caution as there may be a severe performance overhead in increased query time and resource usage.</p> <p>For example, the generated GROUP BY clause might be similar to the following: GROUP BY GROUPING SETS(CUBE(Department, Region, Year))</p>
4	<p>Auto Determine</p> <p>Discoverer automatically determines which of the above strategies to use (i.e. 1, 2, or 3 above).</p>

7.8 List of arguments to use with the dis51pr command line utility

You can use the following commands in conjunction with the dis51pr command line utility.

Note: To see online help on the dis51pr.exe utility, type

```
dis51pr -help
```

at the command line.

7.9 List of Discoverer system preferences

This table shows the description, default value, and valid values of Discoverer system preferences. The values of system preferences are stored in the Windows Registry (for Windows systems) or the discwb.sh file (for UNIX systems).

System preference name	Description	Default Value
DC902_ADM_PATH	Set during install.	<ORACLE_HOME>\adm
DC902_INSTANCE_NAME	Set during install. Discoverer Server Machine name.	machine name
DC902_OAD_LOG	Set during install.	<ORACLE_HOME>\discwb902\log
DC902_OSAGENT_PORT	Set during install.	14000
DC902_SERVER_HOME	Set during install.	<ORACLE_HOME>\discwb902\
DC902_START_OAD	Set during install.	1
DC902_START_OSAGENT	Set during install.	1
DC902_START_PREFERENCES	Set during install.	1
DC902_VBROKER_HOME	Set during install.	<ORACLE_HOME>\vbroker
DC902_VBROKER_JVM	Set during install.	Location of java executable
DISCWB902	Set during install.	The Discoverer install directory <ORACLE_HOME>\...

Starting Discoverer using URL parameters

8.1 Starting Discoverer using URL parameters

This chapter explains how to use Oracle9iAS Discoverer with URL arguments, and contains the following topics:

- [Section 8.2, "Why use Discoverer with URL arguments"](#)
- [Section 8.3, "What is the URL parameter syntax?"](#)
- [Section 8.4, "Examples of using URL parameters"](#)
- [Section 8.5, "Generic Discoverer URL arguments"](#)
- [Section 8.6, "Discoverer Plus URL arguments"](#)
- [Section 8.7, "Discoverer Viewer URL arguments"](#)

8.2 Why use Discoverer with URL arguments

Discoverer end users usually start Oracle9iAS Discoverer by manually choosing a Discoverer connection, opening a workbook, and optionally selecting parameter values. To speed up this process, you can create a URL to start Oracle9iAS Discoverer with specific settings (e.g. which workbook to open, which parameter values to use). For example, you might want to provide a URL to Discoverer end users that automatically logs into Discoverer and opens a particular workbook.

Using a URL to automatically start Discoverer saves your end users time by enabling them to quickly log in and run queries. You can also embed URL links in a Web page, which enables Web users to link to Discoverer workbooks.

Having created a URL that meets your requirements, you can:

- give the URL to end users to enter in their Web browser address box

- add the URL as a link to your organization's Intranet site so that end users can start Discoverer with a single click

8.3 What is the URL parameter syntax?

URL parameters must conform to the following syntax:

```
http://hostname.domain[port number]/application  
name?arg1=value1...&argN=valueN
```

where:

- hostname.domain is machinename.myorganization is the hostname and domain on which the Oracle HTTP Server is installed
- port number is the port number on which the Oracle HTTP Server is installed if the default port number (i.e. port 80) has been changed
- application name is one of the following (depending on whether you want to start Discoverer Plus or Discoverer Viewer):
 - discoverer/plus
 - discoverer/viewer
- ? - the question mark tells Discoverer that the remaining text contains URL parameters
- arg1=value1 is the first argument and the value specified for it. Note that subsequent URL parameters are prefixed with an ampersand character (&)

Notes:

- URL parameters are **not** case-sensitive. For example, 'Locale=' is the same as 'locale='.
- URL parameter values **are** case-sensitive. For example, 'workbooksource=Database' is not the same as 'workbooksource=DataBase'.
- The order of the URL arguments is not important.
- If the following mandatory arguments are not specified on the URL, end users are prompted for them:
 - username
 - password
 - database

- workbook name
- worksheet name
- parameters
- Where names contain spaces, concatenate the words with a plus symbol (+). For example, if a workbook is called 'January Analysis 2003', the URL parameter is &wb=January+Analysis+2003
- To include other special characters in a URL, you must replace those characters with the equivalent ASCII (or in some cases UNICODE) codes. This process is known as URL encoding. For example, to replace a vertical bar (|) you replace it with ~7c. Any characters not in the following lists must be URL encoded:
 - capital letters (i.e. A B C D E F G H I J K L M N O P Q R S T U V W X Y Z)
 - lower case letters (i.e. a b c d e f g h i j k l m n o p q r s t u v w x y z)
 - numerals (i.e. 0 1 2 3 4 5 6 7 8 9)
 - certain special characters (e.g. _ ! ~ () * ')

For more information about URL encoding, refer to any standard HTML guide.

- The maximum number of characters you can put in a URL depends on which Internet browser you are using, as follows:
 - Internet Explorer 4 and later - 2048 characters
 - Netscape Navigator 4 and later - no known limit.

Note: The Apache Web server has a limit of 8192 characters.

8.4 Examples of using URL parameters

This section contains examples of using URL parameters with Discoverer.

8.4.1 Example 1: To start Discoverer Viewer using URL parameters

To start Discoverer Viewer, connect automatically as *jchan*, and open a worksheet called 'January Analysis' in a workbook called 'Monthly Analysis', you might use the following URL:

```
http://hostname.domain/discoverer/viewer?us=jchan&pw=3829382&db=sales  
&wb=Monthly+Analysis&ws=January+Analysis
```

8.4.2 Example 2: To start Discoverer Plus using URL parameters

To start Discoverer Plus, connect automatically as *jchan* to the 'Sales' End User Layer, open a worksheet called 'January Analysis' in a workbook called 'Monthly Analysis', and enter the parameter value 'East', you might use the following URL:

```
http://hostname.domain/discoverer/plus ?us=jchan&pw=3829382&db=sales&eul=Sales&wb=Monthly+Analysis&ws=January+Analysis&param_regionparam=East
```

8.4.3 Example 3: To start Discoverer without exposing a password in the URL

You might want to end users to start Discoverer without being able to see the password in the URL that you supply. Typically, you would do this using a public connection.

To start Discoverer without exposing a password in the URL:

1. Find out what is the connection key of the public connection:
 - a. Start a Web browser.
 - b. Navigate to the Discoverer Connections page that contains the connection for which you want to look at the connection key.
 - c. Select the **Show XML** link at the bottom of the Discoverer Connections page.

You will see a list of XML tags, including tags for each Discoverer connection in the connections list.
 - d. Locate the connection for which you want to look at the connection key.
 - e. Identify the value of the connection's **key** tag.

For example, you might see **key="cf_m2"**. In this example, the key is cf_m2.

2. Create a URL using the following as an example:

```
http://myserver.com/discoverer/viewer/viewer?cn=<connection key>
```

Where *<connection key>* is the connection key that you looked at in the previous step (for more information about connection keys, see the `cn=` parameter in [Section 8.5, "Generic Discoverer URL arguments"](#)).

Notes:

- You can create public connections using Oracle9iAS Configuration Manager (for more information about creating public connections, see *Oracle9iAS Discoverer Administrator Administrator's Guide*).

8.5 Generic Discoverer URL arguments

This table defines generic URL parameters that can be used with Discoverer Plus and Discoverer Viewer.

Argument and Values	Description	Example
con_name=<connection_name>	Specifies the name for the connection being added / updated. Can be blank.	con_name=Weekly+Report
con_desc=<connection_description>	Specifies a description for the connection being added / updated. Can be blank.	con_desc=Weekly+performance+reports+by+region
con_db=<database>	Specifies the database the connection being added / updated should connect to.	con_db=Sales
con_us=<username>	Specifies the database username the connection being added / updated should use when connecting to the database.	con_us=jchan
con_pw=<password>	Specifies the database password the connection being added / updated should use when connecting to the database.	con_pw=382939382
con_eul=<eul>	Specifies the EUL the connection being added / updated should open once connected to the database.	con_eul=VIDEO
con_lm=<discoverer or applications>	Specifies the login method that should be used when connecting to the database. Can be either "discoverer" or "applications".	con_lm=discoverer

Argument and Values	Description	Example
con_rs=<responsibility>	Specifies the Applications Responsibility the connection being added / updated should open once connected to the database. (Only valid with Applications logins).	con_rs=Power+User
con_sg=<security_group>	Specifies the Applications Security Group the connection being added / updated should open once connected to the database. (Only valid with Applications logins).	con_sg=Marketing
con_nsl=<locale>	Specifies the default locale that should be associated with the connection being added / updated.	con_nsl=es_ES The language is Spanish, the country is Spain.
condel=<connection_key>	Deletes the connection specified by <connection_key>. For more information about connection keys, see "Notes:" section below).	condel=cf_m2
con_key=<connection_key>	Specifies a connection to update. For more information about connection keys, see "Notes:" section below).	con_key=cf_m2
cn=<connection_key>	Specifies a connection to open (for more information, see "Notes:").	cn=cf_m2
newpw1=<new password>	Specifies the password you want to change your database password to. Note: Associated connections will be updated accordingly if the change-password operation is successful. You identify which database account you want to change password on using either a "cn" or "con_key" URL parameter.	newpw1=3837282

Argument and Values	Description	Example
<code>newpw2=<new password></code>	Re-specifies the password you want to change your database password to. This password must match that given with <code>newpw1</code> before the change password operation will be attempted.	<code>newpw2=25363523</code>

Notes:

- Connection keys are unique codes that are used to identify Discoverer connections. Connection keys are generated automatically by Discoverer. To find out what a Discoverer connection's key is:
 - a. Start a Web browser.
 - b. Navigate to the Discoverer Connections page that contains the connection for which you want to look at the connection key.
 - c. Select the **Show XML** link at the bottom of the Discoverer Connections page.

You will see a list of XML tags, including tags for each Discoverer connection in the connections list.

Note: If the Show XML link is not visible, contact the Discoverer administrator or Discoverer Services manager.
 - d. Locate the connection for which you want to look at the connection key.
 - e. To see the connection key, look at the **key** tag value.

For example, a connection entry might have **key="cf_m2"**.

8.6 Discoverer Plus URL arguments

This table defines URL parameters that can be used with Discoverer Plus.

Argument and Values	Description	Example
<code>connect=[APPS_SECURE]<hostname_instancename></code>	For Oracle Applications end users, you can specify that they connect in secure mode. <code>hostname_instancename</code> refers to the database host name and the instance of the Applications server.	<code>connect=[APPS_SECURE]genledger_payables</code>

Argument and Values	Description	Example
<code>connect=<connection string></code>	Specify login details with which to connect to Discoverer using the connection details supplied. This argument bypasses the Connection Information dialog for end users.	<code>connect=username/password@demodb</code> or <code>connect=username/password@ODBC:demodb</code> for ODBC connections.
<code>database=<database name or alias></code>	Specify a database to which to connect when Discoverer starts. You can also use the <code>connect=</code> argument to specify a database, username, and password as a single argument.	<code>database=demodb</code> or <code>database=ODBC:demodb</code> for ODBC connections.
<code>framedisplaystyle=<separate></code>	Specifies that Discoverer's main window is launched as a separate frame from the browser (i.e. from the Discoverer Connections list). The browser window contains a Discoverer image and must remain open while Discoverer is being used. Note: To deploy Discoverer Plus in conjunction with a screen-reader (e.g. JAWS), set the value to 'separate'. For more information about accessibility and Discoverer, see Using the JAWS screen reader with Discoverer .	<code>framedisplaystyle=separate</code>
<code>lookandfeelname=system or oracle or browser</code>	Specifies a browser look-and-feel. For example, a user might need to be able to run Discoverer Plus using the Windows look-and-feel	<code>lookandfeelname=system</code>
<code>password=<string></code>	Specify a database password to authenticate the username used to connect to Discoverer. You can also use the <code>connect=</code> argument to specify a database, username, and password as a single argument.	<code>password=37282732</code>

Argument and Values	Description	Example
<code>username=<database username></code>	Specify a database username with which to connect to Discoverer. You can also use the <code>connect=</code> argument to specify a database, username, and password as a single argument.	<code>username=video_user</code>
<code>eul=<schema name></code>	Specifies the name of the database schema which contains the EUL that you want your end users to connect to by default. If you do not use this argument, Discoverer uses other methods to detect the default EUL (for example, from the end user's preference settings.) Note: EUL names are case-sensitive.	<code>eul=VIDEOEUL</code> Discoverer uses the EUL metadata that is found in the VIDEOEUL schema.
<code>locale=<language[_country][_variant]></code>	Specifies the language (and optionally the country and variant) that end users see when they use Discoverer. This argument overrides the locale setting of the end user's client machine. Use Java naming conventions to specify language, country, and variant.	<code>locale=es_ES</code> The language is Spanish, the country is Spain.
<code>nlsdateformat=<date format></code>	Formats dates for a specific region. For its value, type a SQL date format mask, such as DD-Mon-YY.	<code>nlsdateformat=DD-Mon-YY</code>
<code>nlsdatelanguage=<date language></code>	Selects the language for day and month names that end users see when they use Discoverer.	<code>nlsdatelanguage=Spanish</code>
<code>nlslang=<language></code>	Selects the language, territory, and character set end users see when they use Discoverer. Use Oracle naming conventions to specify language, territory, and character set.	<code>nlslang=Spanish</code>
<code>nlsnumeric_characters=<separator characters></code>	Selects decimal character and group separator for numbers.	<code>nlsnumeric_characters=.,</code>
<code>nlsort=<sort type></code>	Specifies a character sort sequence. For more information about the <code>nlsort</code> command, see <i>Oracle9i Globalization Support Guide</i> .	<code>nlsort=XSpanish</code>

Argument and Values	Description	Example
<code>opendb=<workbook name></code>	<p>Gives Discoverer the name of the workbook you want to open and assumes that it is stored in the database (instead of scheduled). If you use the <code>opendb</code> argument more than once in the URL, Discoverer uses the last one. This command is included for backward compatibility.</p> <p>Note: '<code>opendb=Video+Sales+Workbook</code>' is the equivalent of '<code>workbookname=Video+Sales+Workbook&workbooksource=Database</code>'.</p> <p>See also <code>workbookname</code> and <code>workbooksource</code>.</p>	<p><code>opendb=Video+Sales+Workbook</code></p> <p>Discoverer assumes the workbook is stored in the database and automatically opens it.</p>
<code>opendbid=<unique ID></code>	<p>Use <code>opendbid=</code> as an alternative to <code>opendb=</code>, to specify the unique ID of the workbook you want to open.</p> <p>For more information about how to find the unique ID of a workbook, see "Notes:"</p>	<code>opendbid=JanuarySales</code>
<code>param_<parameter_name>=<parameter_value></code>	<p>For workbooks that contain parameters, use this argument to select values. If the workbook does not contain a parameter by that name, Discoverer ignores the argument. Note that <code>param_</code> must precede the parameter's name.</p>	<p><code>param_regionparam=East</code></p> <p>Tells Discoverer to set the parameter named <code>regionparam</code> to the value <code>East</code>.</p>
<code>responsibility=<responsibility name></code>	<p>For Oracle Applications end users (e.g. Oracle General Ledger), you can specify their responsibility.</p>	<p><code>responsibility=Manager</code></p> <p>Discoverer bypasses the Responsibility dialog and assigns the end user an Oracle Applications responsibility of <code>Manager</code>.</p>
<code>sheet=<worksheetname></code>	<p>Gives Discoverer the name of the worksheet you want to open by default. If you use the <code>Sheet</code> argument more than once in the URL, Discoverer opens the last one.</p>	<p><code>sheet=Sales+Detail+Sheet</code></p> <p>Discoverer runs the query for the worksheet named <code>Sales Detail Sheet</code> and displays the results to the end user.</p>

Argument and Values	Description	Example
sheetid=<unique ID>	Specifies the unique identifier of the worksheet that you want to open.	sheetid=Lag&LeadAnalysis
windowheight=<pixel width>	Specifies the height in pixels of the Discoverer application frame. If you do not use this argument, Discoverer uses its own default value.	windowheight=600 The Discoverer frame is 600 pixels high.
windowwidth=<pixel width>	Specifies the width in pixels of the Discoverer application frame. If you do not use this argument, Discoverer uses its own default value.	windowwidth=800 The Discoverer frame is 800 pixels wide.
workbookname=<workbookname>	Specifies the name of the Discoverer workbook you want users to open by default. Note: Use this command in conjunction with workbooksource. E.g. 'workbookname=Video+Sales+Workbook&workbooksource=Database' is the equivalent of 'opendb=Video+Sales+Workbook'. See also opendb.	workbookname=Video+Sales+Workbook Discoverer starts and opens a workbook called Video Sales Workbook.
workbooksource=<Database or Scheduled>	Specifies the location of the workbook to open: <ul style="list-style-type: none"> ■ The value 'Database' specifies that the workbook is saved in the database. ■ The value 'Scheduled' specifies that the workbook is a scheduled workbook that is updated periodically. 	workbooksource=Database

Notes:

- To find out the unique ID of a workbook in Discoverer Viewer, look at the **key XML** tag:
 - a. Start a Web browser.
 - b. Run Discoverer Viewer and open the workbook.
 - c. Select the **Show XML** link at the bottom of the Discoverer Connections page.

You will see a list of XML tags, including tags for each Discoverer connection in the connections list.

Note: If the Show XML link is not visible, contact the Discoverer administrator or Discoverer Services manager.

- d. To see the workbook's unique ID, look at the value of the **key** tag value.
For example, a workbook entry might have **key="wb_02"**.
- To find out the unique ID of a workbook in Discoverer Plus, look at the workbook properties tab:
 - a. Start a Web browser.
 - b. Run Discoverer Plus and open the workbook.
 - c. Choose File | Manage Workbooks | Properties to display the Workbook Properties dialog.
 - d. Look at the Workbook Identifier to find out the unique workbook ID.

8.7 Discoverer Viewer URL arguments

This table defines URL parameters that can be used with Discoverer Viewer.

Argument and Values	Description	Example
<code>ansdf=<date format></code>	For Oracle Applications end users, you can override the default date format for the session.	<code>ansdf='MM/DD/YY'</code>
<code>ansdl=<date language></code>	For Oracle Applications end users, you can override the language to use for the spelling of day and month names and date abbreviations (AM, PM, AD, BC).	<code>ansdl=fr</code>
<code>ansl=<language></code>	For Oracle Applications end users, you can override the session language	<code>ansl=en-gb</code>

Argument and Values	Description	Example
<code>anlsnc=<separator characters></code>	For Oracle Applications end users, you can override the default characters to use as the group separator and decimal. You must specify the decimal separator first, followed by the group separator.	<code>anlsnc=',.'</code>
<code>anlss=<sortname or binary></code>	For Oracle Applications end users, you can override the session collating sequence for ORDER BY queries and string comparisons. Values are: the name of a linguistic sort sequence binary to specify a binary sort	<code>anlss=binary</code>
<code>aow=<true or false></code>	(Auto Open Worksheet) - Specifies whether to open the default worksheet when opening a workbook (the value can be true or false). Note: You can also use the <code>ws=</code> and <code>wsk=</code> parameters to specify which worksheet to open.	<code>aow=true</code>
<code>arq=<true or false></code>	(Auto Run Query) - Specifies whether to automatically run a worksheet's query when a worksheet is opened (the value can be true or false).	<code>arq=true</code>
<code>cp_height=<number_of pixels></code>	Specifies height of chart in pixels.	<code>cp_height=200</code>
<code>cp_show_legend=<true or false></code>	Specifies whether a chart title is displayed.	<code>cp_show_legend=true</code>
<code>cp_width=<number_of pixels></code>	Specifies width of chart in pixels.	<code>cp_width=300</code>
<code>cs=[APPS_SECURE] <hostname_instancename></code>	For Oracle Applications end users, you can specify that they connect in secure mode. <code>hostname_instancename</code> refers to the database host name and the instance of the Applications server.	<code>cs=[APPS_SECURE]genledger_payables</code>
<code>db=<databasename></code>	Specifies the database to connect to	<code>db=video</code>

Argument and Values	Description	Example
eul=< <i>eulname</i> >	Specifies the name of the EUL to connect as. You only need to specify this parameter if you want to override the default EUL. Note: EUL names are case-sensitive.	eul=myEUL
fm=< <i>exportformat</i> >	Specifies one of the following export formats: xml xls (Microsoft Excel) htm (HTML) txt (Text) csv (Comma Separated Values) prn (Formatted Text) dcs (Express) dif (Data Interchange Format) slk (Symbolic Link) wks (Lotus 1-2-3) sql (Structured Query Language) Note: You must run a query before you can use this parameter to export the data.	fm=xls
lm=< <i>applications</i> or <i>discoverer</i> >	Specifies the login method: Set to "applications" to login in as an Oracle Applications user. Set to "discoverer" to login in as a Discoverer user. If this parameter is not present, the default login method (as specified in the ui_config.xml configuration file) is used.	lm=applications
nsl=< <i>language</i> >	Specifies the language code for the language you want.	nsl=en-gb
pg=< <i>page_number</i> >	Specifies the page of the worksheet to view.	pg=4

Argument and Values	Description	Example
pi_ <pageitemname>=<pageitemvalue>	Specifies the name of a page item and the value to set it to.	pi_Region=West The above sets the "Region" page item to "West":
pw=<password>	Specifies the password corresponding to the specified user name for connecting to the specified database	pw=tiger
qp_<parameter_name>=<parameter_value>	Specifies the name of a query parameter and the value you want to set it to.	qp_City=Denver
qpd=<number_of_seconds>	Specifies the delay in seconds before a query progress page is displayed (or re-displayed). You might use this argument to avoid writing code to handle query progress pages when using the Discoverer Servlet to return data to an application you have written. Note: You can use this parameter to improve accessibility if you use a JAWS screen reader (for more information, see Using the JAWS screen reader with Discoverer). Note: You can also set this value on a global basis (i.e.in the middle tier) using the query_progress_delay parameter (for more information, see Section A.4, "List of configuration settings in configuration.xml").	qpd=60 The above specifies that a query progress page is to be displayed after the query has been running for 60 seconds. The query progress page will be re-displayed every 60 seconds until the query results are available.
rd=<number_of_seconds>	Specifies the delay in seconds before a browser is redirected to the original URL. Use this argument to prevent the browser timing out during export operations. Note that this argument only applies when a valid value has also been specified for the fm argument.	rd=90 The above specifies that the browser is redirected back to the original URL every 90 seconds until the export operation is complete.
rs=<responsibility>	Specifies the Oracle Applications Responsibility you want to connect with.	Rs=Manager

Argument and Values	Description	Example
<code>sg=<securitygroup></code>	Specifies the Oracle Applications Security Group you want to connect with.	<code>Sg=securityGroup</code>
<code>tsc_d!<index>=<direction></code>	Specifies the sort direction for the item identified by <index>. <direction> can be either "lh" (low to high) or "hl" (high to low).	<code>tsc_d!namesindex=lh</code>
<code>tsc_g!<index>=<type></code>	Specifies whether the sort applied to the item identified by <index> is a group sort or a normal sort.<type> can be either 'normal' or 'group'. Note: For more information about group sort, see <i>Oracle9iAS Discoverer Plus User's Guide</i> .	<code>tsc_g!namesindex=normal</code>
<code>tsc_h!<index>=<true or false></code>	Specifies whether the item identified by <index> is hidden (not visible on the worksheet) or not. <hidden> can be either "true" (hidden) or "false" visible.	<code>tsc_h!namesindex=true</code>
<code>tsc_i!<index>=<item_key></code>	Specifies an item to be sorted. <index> refers to the order sorts that should be applied. An <index> of "0" will be applied first followed by the item with <index> of "1" and so on.	<code>tsc_i!namesindex=0</code>
<code>tss_s!<index>=<direction>,<type>,<hidden>,<item_key></code>	Defines a sort on an item using a single URL parameter combining any of the <code>tsc_d!</code> , <code>tsc_g!</code> , <code>tsc_h!</code> , or <code>tsc_i!</code> parameters.	<code>tss_s!namesindex=lh,normal,true,0</code>
<code>us=<connectString></code>	Specifies the username and database plus further optional connection information. The connect string uses the following syntax: <code><username>[:<responsibility>[:<securityGroup>]][/<password>]@<database></code>	<code>us=scott/tiger@disco</code>
<code>us=<username></code>	Specifies the user name that you want to use.	<code>us=video5</code>
<code>wb=<workbookname></code>	Specifies the name (or ID) of the workbook that you want to open.	<code>wb=My+Workbook</code>

Argument and Values	Description	Example
wbd=<workbookdate>	When opening a scheduled workbook, this parameter specifies the date that the scheduled workbook was run.	wbd=31-OCT-00
wbk=<unique ID>	Specifies the unique identifier of the workbook that you want to open.	wbk=JanuarySales
wbr=<unique ID>	If you the workbook that you specify with the wbk= parameter is for a scheduled workbook, you must specify the unique run identifier of the workbook using wbr=.	wbr=SWB001
wbt=<workbooktime>	When opening a scheduled workbook, the parameter specifies the time that the scheduled workbook was run. If you specified the Scheduled Workbook's ID using the wb parameter, you don't need to use this parameter	wbt=4%3a00+PM The above specifies a time of 4:00 PM.
ws=<worksheetname>	Specifies the worksheet that you want to open.	ws=My+Worksheet
wsk=<unique ID>	Specifies the unique identifier of the worksheet that you want to open.	wsk=Lag&LeadAnalysis

Using Discoverer with Oracle9iAS Web Cache

9.1 Using Discoverer with Oracle9iAS Web Cache

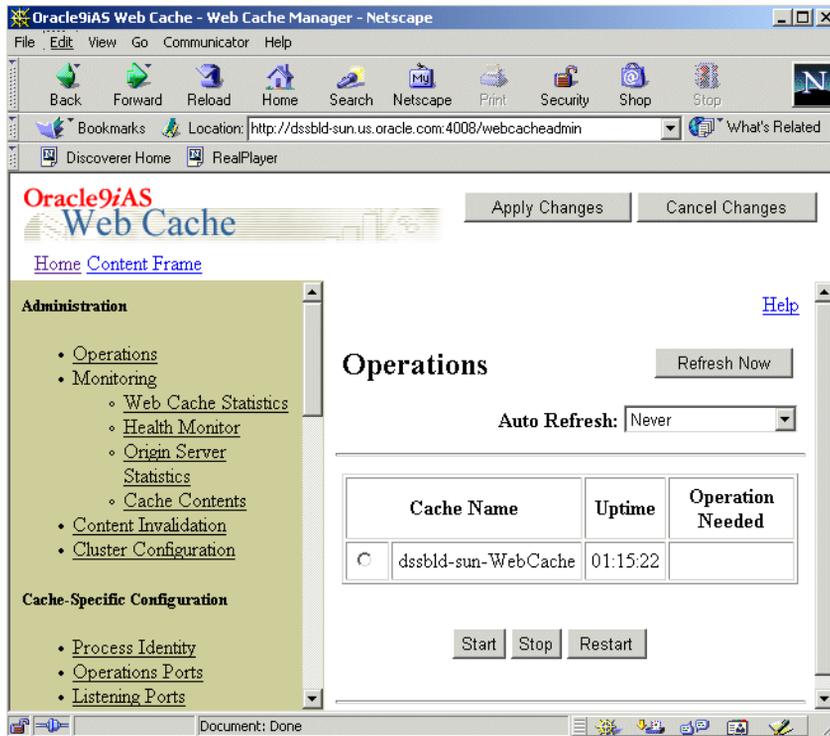
This chapter describes how to use Oracle9iAS Web Cache to enhance Discoverer Viewer performance, and contains the following topics:

- [Section 9.2, "About Oracle9iAS Web Cache"](#)
- [Section 9.3, "What are the benefits of Oracle9iAS Web Cache?"](#)
- [Section 9.4, "How does Oracle9iAS Web Cache work?"](#)
- [Section 9.5, "When to use Discoverer Viewer with Oracle9iAS Web Cache"](#)
- [Section 9.6, "How to use Discoverer Viewer with Oracle9iAS Web Cache"](#)
- [Section 9.7, "How to turn on Oracle9iAS Web Cache for Discoverer Viewer"](#)
- [Section 9.8, "How to display the Rerun Query link, hide the Preferences link, and hide the Presentation Options link"](#)
- [Section 9.9, "How to turn off Discoverer Viewer's 'sticky worksheet' behavior"](#)
- [Section 9.10, "Notes about using Discoverer Viewer with Oracle9iAS Web Cache"](#)

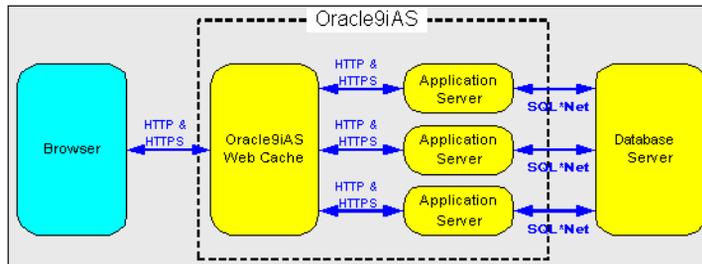
9.2 About Oracle9iAS Web Cache

Oracle9iAS Web Cache is a component of Oracle9i Application Server that improves the performance, scalability, and availability of Web sites. By storing frequently accessed pages in memory, Oracle9iAS Web Cache eliminates the need to repeatedly process requests for those pages on middle tier servers and databases. You manage Oracle9iAS Web Cache using the Oracle9iAS Web Cache Administration page.

Figure 9–1 Oracle9iAS Web Cache Administration page



Oracle9iAS Web Cache sits in front of application Web servers, caching their content, and providing that content to Web browsers that request it. When Web browsers access the Web site, they send HTTP protocol or HTTPS protocol requests to Oracle9iAS Web Cache. Oracle9iAS Web Cache, in turn, acts as a virtual server to the application Web servers. If the requested content has changed, Oracle9iAS Web Cache retrieves the new content from the application Web servers. The application Web servers may retrieve their content from an Oracle database.

Figure 9–2 Oracle9iAS Web Cache overview

For more information about Oracle9iAS Web Cache, see *Oracle9iAS Web Cache Administration and Deployment Guide*.

Notes:

- When deploying Discoverer, you typically add the Discoverer components to an Oracle9iAS farm, and use Oracle9iAS Web Cache as a proxy server (for more information, see [Section 5.1, "Installing Oracle9iAS Discoverer in a multiple machine environment"](#)).

9.3 What are the benefits of Oracle9iAS Web Cache?

Using Oracle9iAS Web Cache:

- improves performance

Running on inexpensive hardware, Oracle9iAS Web Cache can increase the throughput of a Web site by several orders of magnitude. In addition, Oracle9iAS Web Cache significantly reduces response time to browser requests by storing documents in memory and by serving compressed versions of documents to browsers that support the GZIP encoding method.

- improves scalability

In addition to unparalleled throughput, Oracle9iAS Web Cache can sustain thousands of concurrent browser connections, meaning that visitors to a site see fewer application Web server errors, even during periods of peak load.

- offers high availability

Oracle9iAS Web Cache supports content-aware (Layer 4 - Layer 7) load balancing and fall-over detection. These features ensure that documents not in the cache (referred to as 'cache misses') are directed to the most available,

highest-performing Web server in the cluster. Further features guarantee performance and provide surge protection when application Web server load increases.

- offers cost savings

Fewer application Web servers are required to meet the challenges posed by traffic spikes and denial of service attacks. As a result, Oracle9iAS Web Cache offers a simple and inexpensive means of reducing a Web site's cost for each request.

- reduces network traffic

Most requests are resolved by Oracle9iAS Web Cache, reducing traffic to the application Web servers. The cache also reduces traffic to backend databases located on computers other than the application Web server.

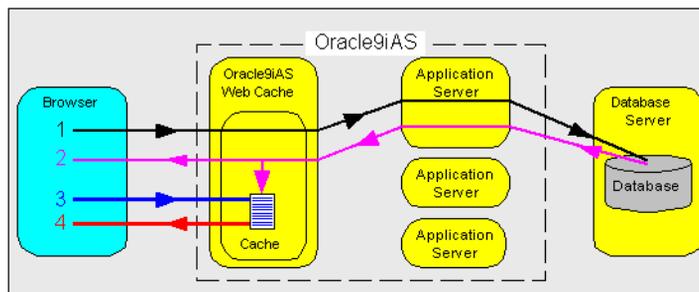
For more information about the benefits of using Oracle9iAS Web Cache, see *Oracle9iAS Web Cache Administration and Deployment Guide*.

9.4 How does Oracle9iAS Web Cache work?

Oracle9iAS Web Cache uses cacheability rules to determine which documents to cache. A cacheability rule indicates whether you want the documents specified within a particular URL to be cached or not cached. Cacheability rules are defined using regular expressions (for more information about Oracle's implementation of regular expressions, see *Oracle9iAS Web Cache Administration and Deployment Guide*).

The document specified within a URL included in a cacheability rule is not actually cached until a browser requests it.

Figure 9-3 The URL and document request process



Key to figure:

1. The first time a browser requests a particular URL, Oracle9iAS Web Cache detects that the required document is not in the cache (referred to as a cache miss). Oracle9iAS Web Cache therefore forwards the request to an application Web server, which sends the request to the database.
2. The database returns the data to the application Web server, which forwards a document and its URL to Oracle9iAS Web Cache. If the URL is specified as one of the URLs to cache, Oracle9iAS Web Cache caches the document for subsequent requests.
3. The next time a browser requests the URL, Oracle9iAS Web Cache detects that the document is already in the cache (referred to as a cache hit).
4. Oracle9iAS Web Cache serves the document from the cache to the browser.

9.5 When to use Discoverer Viewer with Oracle9iAS Web Cache

With Oracle9iAS Release 2, using Discoverer Viewer with Oracle9iAS Web Cache to improve Web site performance, scalability, and availability will be most appropriate in the following cases:

- web sites that only use public workbooks
- web sites where data is relatively static
- where the Discoverer manager and/or workbook creator has access to Oracle9iAS Web Cache and can refresh the cache after changes to workbooks

Oracle9iAS Web Cache is particularly suitable for optimizing Discoverer Viewer performance when controlling access to data is relatively unimportant (e.g. where the same public connections are used by several users to access workbooks).

Oracle9iAS Web Cache is less suitable in restricted environments where controlling access to data is an issue (e.g. where private connections are used by individuals to access their own workbooks). If you are considering using Oracle9iAS Web Cache in a restricted environment, note that a malicious user might be able to access pages that have been cached for another user.

In Oracle9iAS Release 2, using Discoverer Viewer and Oracle9iAS Web Cache together requires a number of compromises, as follows:

- the removal of the following links from Discoverer Viewer:
 - the Preferences link, which enables users to configure how Discoverer Viewer behaves

- the Presentation Options link, which enables users to change the appearance of Discoverer Viewer
- the inconsistent behavior of sticky worksheet functionality (for more information about sticky worksheet functionality, see [Section 9.9, "How to turn off Discoverer Viewer's 'sticky worksheet' behavior"](#))
- data synchronization issues might arise where cached data is not purged after changes in underlying database tables

Notes:

- For more information about Oracle9iAS Discoverer security in general, see [Section 13.1, "Maintaining data security with Discoverer"](#).

9.6 How to use Discoverer Viewer with Oracle9iAS Web Cache

To use Discoverer Viewer with Oracle9iAS Web Cache, you must perform the following configuration tasks:

- you must turn on Oracle9iAS Web Cache for Discoverer Viewer by editing the configuration.xml file (for more information, see [Section 9.7, "How to turn on Oracle9iAS Web Cache for Discoverer Viewer"](#)).
- you must edit the ui_config.xml file to:
 - display the Rerun Query link, hide the Preferences link, and hide the Presentation Options link (for more information, see [Section 9.8, "How to display the Rerun Query link, hide the Preferences link, and hide the Presentation Options link"](#)).
 - turn off Discoverer Viewer's 'sticky worksheet' behavior (for more information, see [Section 9.9, "How to turn off Discoverer Viewer's 'sticky worksheet' behavior"](#)).

Having specified that you want to use Discoverer Viewer with Oracle9iAS Web Cache, you might want to perform the following maintenance tasks:

- you might want to remove files from the cache because workbook data has changed (for more information, see [Section 9.10.1, "How to remove Discoverer Viewer documents from the cache"](#))
- where you deploy multiple browsers with multiple languages, you might want to check that the correct language and rendered page is delivered to each user's browser (for more information, see [Section 9.10.2, "How to check that the correct languages are being deployed"](#))

- although Oracle9iAS Web Cache is pre-configured to use Discoverer Viewer's authentication mechanism, you might want to:
 - specify that multiple documents with the same URL can be cached (for more information, see [Section 9.10.3.1, "How to specify that multiple documents with the same URL can be cached"](#))
 - create a session/personalized attribute related caching rule (for more information, see [Section 9.10.3.2, "How to create a session/personalized attribute related caching rule"](#))

Notes:

- Oracle9iAS Web Cache cacheability rules are specifically pre-configured for Discoverer Viewer and automatically installed with Oracle9iAS Web Cache.

9.7 How to turn on Oracle9iAS Web Cache for Discoverer Viewer

Although Oracle9iAS Web Cache is installed with Oracle9iAS, it is turned off by default. To make use of Oracle9iAS Web Cache, you must turn it on.

To turn on Oracle9iAS Web Cache for Discoverer Viewer:

1. Open the configuration.xml file in an XML editor or text editor (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. Change the value of the 'webcache' attribute of the Discoverer configuration element from 'false' to 'true' (i.e. webcache="true").

For example, after the change the configuration element might look like this:

```
<disco:configuration
xmlns:disco="http://oracle.com/xmlns/discoverer/configuration"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://oracle.com/xmlns/discoverer/configuration
configuration.xsd" locale="en" webcache="true" rmi="true">
```

3. Save the configuration.xml file and close the text editor.
4. Shut down and restart OC4J (for more information, see *Oracle9iAS Containers for J2EE (OC4J) User's Guide*).

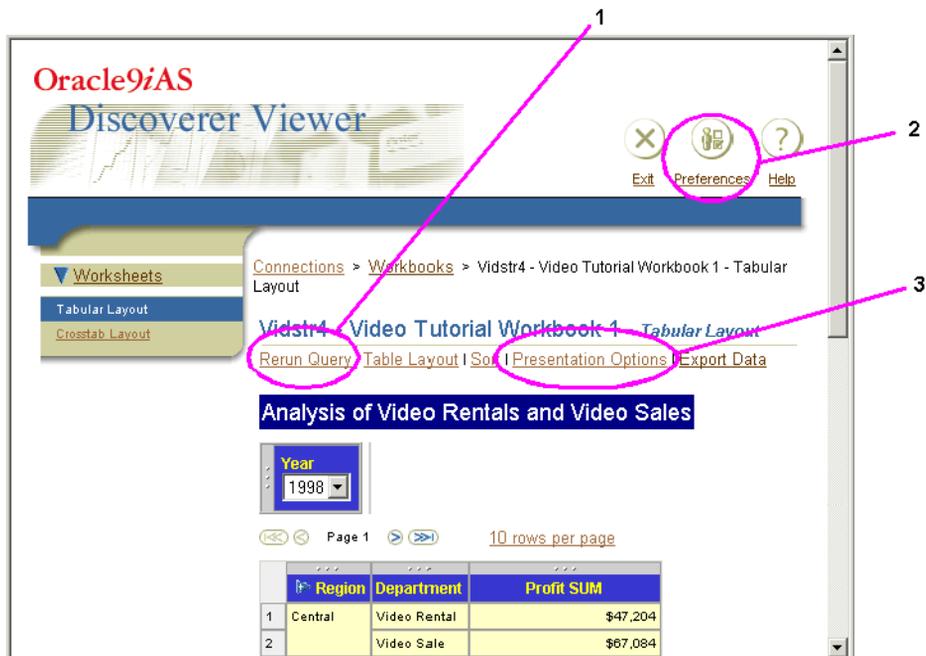
Oracle9iAS Web Cache is now turned on.

9.8 How to display the Rerun Query link, hide the Preferences link, and hide the Presentation Options link

When you use Discoverer Viewer with Oracle9iAS Web Cache, you must modify the Discoverer Viewer user interface by:

- displaying the Rerun Query link
- hiding the Preferences link
- hiding the Presentation Options link

Figure 9-4 Discoverer Viewer showing Rerun Query link, Preferences link, and Presentation Options link



Key to figure:

1. Rerun Query link
2. Preferences link
3. Presentation Options link

Removing these links prevents Discoverer Viewer end users accessing parts of the Discoverer Viewer user interface that interfere with Oracle9iAS Web Cache.

Notes:

- Displaying the Rerun Query link is recommended where data changes frequently and users will therefore want to execute a new server request instead of using cached data.
- Hiding the Preferences link and the Presentation Options link is recommended because Oracle9iAS Web Cache does not recognize changes in these values. Any such changes could therefore result in inconsistent workbook behavior and appearance.

To display and hide links:

1. Open the `ui_config.xml` file in a text editor (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. Locate the `<appearance>` tag in the file.
3. Change the value of the following `<appearance>` tags:
 - change the value of the `display_rerun_query_link` tag to true
 - change the value of the `display_preferences_link` tag to false
 - change the value of the `display_presentation_options_link` tag to false

After the change the tags will look like this:

```
.  
.  
<option id="display_rerun_query_link" state="true"/>  
<option id="display_preferences_link" state="false"/>  
<option id="display_presentation_options_link" state="false"/
```

4. Save and close the `ui_config.xml` file.

When end users next run Discoverer Viewer, the user interface will be updated accordingly.

9.9 How to turn off Discoverer Viewer's 'sticky worksheet' behavior

Discoverer Viewer enables worksheet drills and pivot operations to be remembered between worksheet visits in a single session. This functionality is sometimes

referred to as Discoverer Viewer's 'sticky worksheet' behavior. Discoverer Viewer's sticky worksheet behavior is not supported when used with Oracle9iAS Web Cache. You must therefore turn off this behavior.

To turn off Discoverer Viewer's sticky worksheet behavior:

1. Open the `ui_config.xml` file in a text editor (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. Locate the `<behavior>` tag in the file.
3. Change the value of the `sticky_worksheets` tag true to false.

After the change the element will look like this:

```
.  
.  <option id="sticky_worksheets" state="false"/>  
.  
.
```

4. Save and close the `ui_config` file.

When end users next run Discoverer Viewer, the sticky worksheet behavior will be turned off.

9.10 Notes about using Discoverer Viewer with Oracle9iAS Web Cache

This section contains miscellaneous information about using Oracle9iAS Web Cache with Oracle9iAS Discoverer.

9.10.1 How to remove Discoverer Viewer documents from the cache

You might want to remove Discoverer Viewer cached documents for a number of reasons, including:

- because the data in a workbook has changed
- because a calculation shared by multiple workbooks has changed

To remove a Discoverer Viewer document from the cache:

1. If it is not already running, start Oracle9iAS Web Cache Manager and login.

If you are not sure of the username and password to use, contact your Oracle9iAS system administrator.

2. Select the Content Invalidation link to display the Content Invalidation page.
3. In the Advanced Invalidation section:
 - a. Type `http://discoverer/` in the **URL Path Prefix** field.
 - b. Enter an appropriate regular expression in the **URL Regular expression** field.

The regular expression to enter will depend on the Discoverer Viewer document you want to remove from the cache. The table below gives some examples:

URL regular expression	Description
viewer	This will remove all cached Discoverer documents.
viewer.+(wbk=X)	Where X is the name of the workbook. This will remove cached Discoverer documents that have X as the workbook name.
viewer.+(eul=X)	Where X is the name of the EUL. This will remove cached Discoverer documents that have X as the EUL name.
viewer.+(ac=X)	Where X is the account name. This will remove cached Discoverer documents that have X as the account name.
viewer.+(nsl=en-us)	This will remove all United States English cached documents.

4. Click the Submit button to clear the selected documents from the cache.

9.10.2 How to check that the correct languages are being deployed

If you are using multiple browsers with multiple languages, it is important that the correct language and rendered page is delivered to each user's browser.

To make sure that there are as many copies of a cached page based on the same URL as there are different browsers and languages, the Accept-Language and User-Agent Oracle9iAS Web Cache options are automatically selected for the Discoverer Viewer cacheability rules.

To confirm that these options are selected:

1. If it is not already running, start Oracle9iAS Web Cache Manager and login.
Note: If you are not sure of the username and password to use, contact your Oracle9iAS system administrator.
2. Select the Cacheability Rules link.
3. Select the radio button beside the cacheability rule you want to verify.
4. Click the Edit... button to display the Edit Cacheability Rule page.
5. Confirm that the following check boxes in the Multiple Documents with Same URL by Other Headers section are selected:
 - Accept-Language
 - User-Agent
6. Click the Cancel button to close the Edit Cacheability Rule page.

9.10.3 How to prevent unauthorized users accessing cached pages

It is likely that Oracle9iAS Web Cache will cache HTML pages for different Discoverer Viewer users. To prevent unauthorized users accessing cached pages, Oracle9iAS Web Cache is pre-configured to use Discoverer Viewer's authentication mechanism, and requires no further configuration.

However, if you need to configure Oracle9iAS Web Cache manually, you follow a two step process:

- specify that multiple documents with the same URL can be cached (for more information, see [Section 9.10.3.1, "How to specify that multiple documents with the same URL can be cached"](#))
- create a session/personalized attribute related caching rule (for more information, see [Section 9.10.3.2, "How to create a session/personalized attribute related caching rule"](#))

9.10.3.1 How to specify that multiple documents with the same URL can be cached

To specify that multiple documents with the same URL can be cached:

1. If it is not already running, start Oracle9iAS Web Cache Manager and login.
If you are not sure of the username and password to use, contact your Oracle9iAS system administrator.

2. Select the **Multiple Documents with Same Selector by Cookies** link to display the Multiple Documents with Same Selector by Cookies page.
3. Click the Add... button to display the Edit/Create Multiple Documents with the Same Selector by Cookies Rule page.
4. Type `oracle-disco-account` in the **Enter cookie name:** field as the name of the Discoverer Viewer cookie name.
5. Select the **Yes** radio button in response to the question Also cache documents whose requests do not contain this cookie?
6. Click the Submit button.
You must now associate the Discoverer Viewer cookie with a 'selector' (cacheability rule).
7. Select the radio button beside the new entry in the Edit/Create Multiple Documents with the Same Selector by Cookies Rule page.
8. Click the Change Selector Association... button to display the Change Policy-Selector Association page.
9. From the list of selectors (cacheability rules), select all of the Discoverer selectors.
10. Click the Make Association button.
The Edit/Create Multiple Documents with the Same Selector by Cookies Rule page now shows the cacheability rules you have associated with the Discoverer Viewer cookie.
11. Click the Apply changes button to save the changes you have made.

9.10.3.2 How to create a session/personalized attribute related caching rule

To create a session/personalized attribute related caching rule:

1. If it is not already running, start Oracle9iAS Web Cache Manager and login.
If you are not sure of the username and password to use, contact your Oracle9iAS system administrator.
2. Select the Session/Personalized Attribute Definitions link to display the Session/Personalized Attribute Definitions page.
3. Click the Add... button to display the Create Session/Personalized Attribute Definition page.
4. Select the **This site only** radio button.

5. Type `ViewerCookie` in the **Session/Attribute Name** field.
6. Type `oracle-disco-account` in the **Cookie Name** field.
7. Type `Oracle Discoverer Viewer authentication related cookie` in the **Comment** field.
8. Click the **Submit** button to close the **Create Session/Personalized Attribute Definition** page.
9. Click the **Apply Changes** button to save the changes you have made.
10. Select the **Session/Personalized Attribute Related Caching Rules** link.
11. Click the **Create** button (or the **Add** button if one or more rules already exist) to display the **Add Session/Personalized Attribute Related Caching Rule** page.
12. Select options on the **Add Session/Personalized Attribute Related Caching Rule** page as follows:
 - a. Select `ViewerCookie` in the **Please select a session/attribute:** drop down list.
 - b. Select the **Yes** radio button in response to the question **Cache documents whose requests contain this session/attribute?**
 - c. Select the **Yes** radio button in response to the question **Cache documents whose requests do not contain this session/attribute?**
 - d. Select the **Yes** radio button in response to the question **Can the document whose request doesn't contain this attribute be derived from the document whose request does contain this attribute by using the default value of the attribute?**
13. Click the **Submit** button to close the **Add Session/Personalized Attribute Related Caching Rule** page.

The **Session/Personalized Attribute Related Caching Rules** page displays the rule you have just created. You must now associate this rule with a URL.
14. Select the radio button beside the new entry in the **Session/Personalized Attribute Related Caching Rules** page.
15. Click the **Change Selector Association...** button to display the **Change Policy-Selector Association** page.
16. From the list of selectors (cacheability rules), select all of the **Discoverer** selectors.
17. Click the **Make Association** button.

The Session/Personalized Attribute Related Caching Rules page now shows the cacheability rules you have associated with the Discoverer Viewer cookie.

18. Click the Apply changes button to save the changes you have made.
19. Restart Oracle9iAS Web Cache as follows:
 - a. Click the Operations link to display the Operations page.
 - b. Select the radio button beside the name of the cache that you want to restart.
 - c. Click the Restart button.

9.10.4 List of the Oracle9iAS Web Cache cacheability rules that are pre-configured for Discoverer Viewer?

A number of Oracle9iAS Web Cache cacheability rules are pre-configured for Discoverer Viewer. These cacheability rules are processed by Oracle9iAS Web Cache in the following order:

- do **not** cache the Rerun Query page
- do **not** cache the Scheduled Workbooks page (and any workbooks derived from it)
- do **not** cache Discoverer Plus pages
- do **not** cache query pages containing cached query parameters
- do **not** cache query pages containing cached drill specifications
- do **not** cache RMI commands
- do cache all pages served by the Viewer servlet (i.e. pages that the previous cacheability rules have not identified as not to be cached)

Each cacheability rule comprises a regular expression. Oracle9iAS Web Cache evaluates each expression to a string, and tests whether a particular URL contains that string. If the URL does contain the string, Oracle9iAS Web Cache performs the actions specified by the cacheability rule (e.g. cache or do not cache the page). If the URL does not contain the string, Oracle9iAS Web Cache evaluates the expression in the next cacheability rule.

Notes:

- Cacheability rules are configured automatically when you install Oracle9iAS. The following cacheability rules are included for reference only. Do not change

the Web Cache configuration unless explicitly advised to do so by Oracle Corporation.

9.10.4.1 Cacheability rule to not cache the Rerun Query page

If data changes frequently, Discoverer Viewer users will want to rerun queries to get the latest data. However, if Discoverer Viewer's Rerun Query page is cached, users will never see any additional or changed data.

This cacheability rule therefore forces the Rerun Query link to execute a new server request instead of using cached data.

Cacheability rule - discoverer\viewer.+(qv=[0-9]+)

Rule Details	Value
Method	GET, GET with query string
POST Body Expression	
Cache/Don't Cache	Don't Cache
ESI Output Permission	YES
Compression	On for non-Netscape browsers
Comment	This will not cache the ReRun query page

9.10.4.2 Cacheability rule to not cache the Scheduled Workbooks page (and any workbooks derived from it)

A Discoverer scheduled workbook contains data that is expected to change when the workbook is processed. However, if a scheduled workbook is cached, users will never see any additional or changed data.

This cacheability rule therefore prevents the caching of scheduled workbooks.

Cacheability rule - discoverer\viewer.+in=swb

Rule Details	Value
Method	GET, GET with query string
POST Body Expression	
Cache/Don't Cache	Don't Cache
ESI Output Permission	YES
Compression	On for non-Netscape browsers

Rule Details	Value
Comment	This will not cache Scheduled Workbooks page or workbooks derived from it

9.10.4.3 Cacheability rule to not cache Discoverer Plus pages

This cacheability rule prevents the caching of the Discoverer Plus applet. Oracle9iAS Web Cache cannot be used with Discoverer Plus.

Cacheability rule - discoverer\viewer. .release=true)

Rule Details	Value
Method	GET, GET with query string
POST Body Expression	
Cache/Don't Cache	Don't Cache
ESI Output Permission	YES
Compression	On for non-Netscape browsers
Comment	This will not cache any page whose URL contains the Discoverer Plus parameter

9.10.4.4 Cacheability rule to not cache query pages containing cached query parameters

This cacheability rule prevents the caching of query pages containing servlet-side cached query parameters.

In some cases, a URL including parameters can exceed the maximum allowed length. In these cases, the parameters and their values are stored in the Discoverer servlet for the current session only. When the current session ends, the parameters and their values are discarded. Any cached pages that reference the stored parameters will be invalid.

Cacheability rule - discoverer\viewer.+cqp=[0-9]+)

Rule Details	Value
Method	GET, GET with query string
POST Body Expression	
Cache/Don't Cache	Don't Cache

Rule Details	Value
ESI Output Permission	YES
Compression	On for non-Netscape browsers
Comment	Discoverer: do not cache query pages containing cached query parameters

9.10.4.5 Cacheability rule to not cache query pages containing cached drill specifications

This cacheability rule prevents the caching of query pages that contain cached drill specifications.

In some cases a URL including drill specifications can exceed the maximum allowed length. In these cases, the drill specifications are stored in the Discoverer servlet for the current session only. When the current session ends, the drill specifications are discarded. Any cached pages that reference the stored drill specifications will be invalid.

Cacheability rule - discoverer\viewer.+cde=[0-9]+ yCacheability rule to not cache RMI commands

This cacheability rule prevents the caching of RMI commands issued by the Discoverer Plus applet. Oracle9iAS Web Cache cannot be used with Discoverer Plus.

Cacheability rule - discoverer\viewer.+rmicmd=.+

Rule Details	Value
Method	GET, GET with query string
POST Body Expression	
Cache/Don't Cache	Don't Cache
ESI Output Permission	YES
Compression	On for non-Netscape browsers
Comment	Discoverer: do not cache RMI commands

9.10.4.6 Cacheability rule to cache all pages served by the Viewer Servlet

This cacheability rule caches all Discoverer Viewer pages (i.e. pages that the previous cacheability rules have not identified as not to be cached).

Cacheability rule - discoverer\viewer

Rule Details	Value
Method	GET, GET with query string
POST Body Expression	
Cache/Don't Cache	Cache
Expiration Policy	Default: Never Expire
Multiple Documents with the Same Selector by Cookies*	Cache based on value of cookie "oracle-disco-account", also cache documents whose requests don't contain this cookie
Multiple Documents with the Same Selector by Other Headers*	Accept-Language, User-Agent
Session/Personalized Attribute Related Caching Rules	For session/attribute "ViewerCookie": cache documents whose requests contain this session, AND cache documents whose requests don't contain this session.
Simple Personalization	NO
HTTP Error Caching	
ESI Output Permission	YES
Compression	On for non-Netscape browsers
Comment	Caches all pages served by the Viewer servlet

* For more information about this option, see [Section 9.10.3, "How to prevent unauthorized users accessing cached pages"](#).

Customizing Discoverer Viewer

10.1 Customizing Discoverer Viewer

This chapter explains how to provide a customized Discoverer Viewer look and feel to end users. For example, you might want to replace Discoverer's Oracle logo with your organization's logo, or change text colors and styles.

Note: Discoverer Viewer end users can also configure the user interface themselves on a per-session basis by setting their own presentation options (for more information, see "[About presentation options](#)").

This chapter contains the following topics:

- [Section 10.2, "What is Discoverer Viewer customization?"](#)
- [Section 10.3, "What tools do you need to customize Discoverer Viewer?"](#)
- [Section 10.4, "About updating Discoverer Viewer CSS files"](#)
- [Section 10.5, "About updating Discoverer Viewer XML files"](#)
- [Section 10.6, "About presentation options"](#)
- [Section 10.7, "About presentation templates"](#)
- [Section 10.8, "About the sample browser look-and-feel file \(blaf.htm\)"](#)
- [Section 10.9, "How to change the default Discoverer Viewer look and feel"](#)
- [Section 10.10, "How to change the default Discoverer Viewer logo"](#)
- [Section 10.11, "How to remove Discoverer Viewer user interface options"](#)
- [Section 10.12, "How to create a presentation template"](#)
- [Section 10.13, "How to run Discoverer Viewer with Javascript disabled"](#)

10.2 What is Discoverer Viewer customization?

You customize Discoverer Viewer to change the default look and feel that you provide to Discoverer Viewer end users, or to provide end users with pre-defined presentation templates. For example, you might want to:

- change Discoverer's font styles to match your organization's Internet look and feel (for more information, see "[How to change the default Discoverer Viewer look and feel](#)")
- change Discoverer's default logo to a logo or graphic of your choice (for more information, see "[How to change the default Discoverer Viewer logo](#)")
- provide presentation templates that add and remove user interface components (e.g. header and footers, drill icons, row numbers) from Discoverer Viewer (for more information, see "[About presentation options](#)" and "[How to create a presentation template](#)")
- run Discoverer Viewer with Javascript disabled (for more information, see "[How to run Discoverer Viewer with Javascript disabled](#)")

You customize Discoverer Viewer by changing values stored in the following types of industry standard files that Discoverer uses to configure the user interface.

- Cascading Style Sheet (CSS)
- Extensible Markup Language (XML)

Notes:

- If you do customize Discoverer Viewer, you are responsible for migrating customizations across Discoverer versions.
- You can also provide a customized Discoverer Viewer look and feel by providing a bookmarked URL to end users. The URL contains presentation option settings that you set in the original Discoverer session.
- For more information about XML files, refer to the W3C World Wide Web Consortium Web site at <http://www.w3.org/>.
- If your organization does not allow browsers to work with Javascript enabled, you can also disable Javascript. You can disable Javascript in two ways:
 - on a per-browser basis - for more information, refer to your browser's Help to find out about disabling Javascript
 - on a global basic for all users - for more information, see "[How to run Discoverer Viewer with Javascript disabled](#)"

10.3 What tools do you need to customize Discoverer Viewer?

To customize Discoverer Viewer, you need to edit text files on the Discoverer Web server using one of the following:

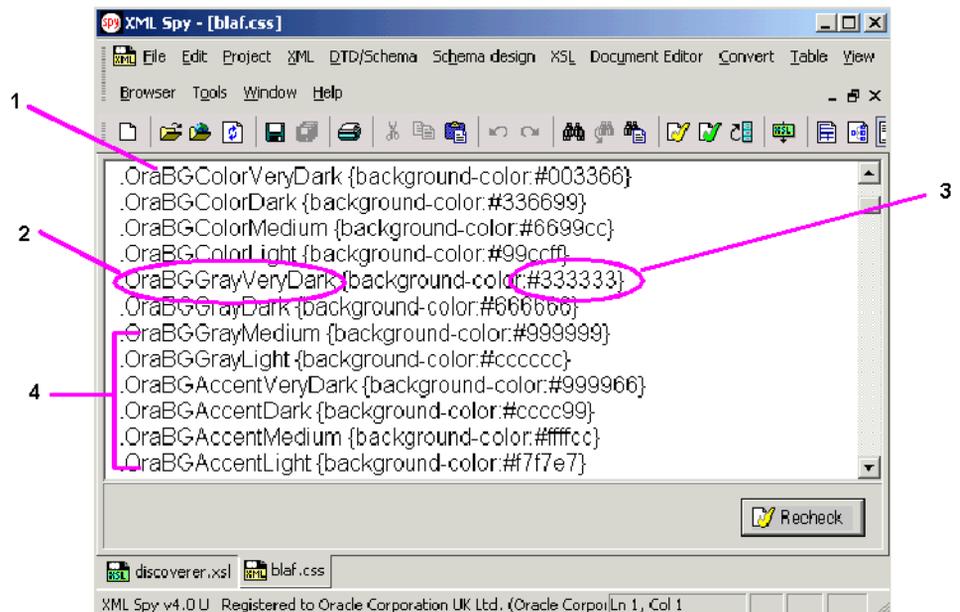
- a simple text editor
- a dedicated XML editor (e.g. Altova's XML Spy)

Note: Dedicated XML editors are preferable because they make XML files easier to navigate and amend.

10.4 About updating Discoverer Viewer CSS files

The Discoverer Viewer CSS file contains tags for each component of the Discoverer Viewer user interface that you can customize. The figure below shows an example of a blaf.css file.

Figure 10–1 An example of a blaf.css file displayed in an XML editor



Key to figure:

1. A blaf.css file opened in a dedicated XML editor

2. A tag (OraBGGreyVeryDark) for one of the Discoverer Viewer background colors.
3. The value of the tag (#333333), which is the RGB code for the color.
4. Tags for other Discoverer Viewer styles.

To customize Discoverer Viewer, you change the value of the tags.

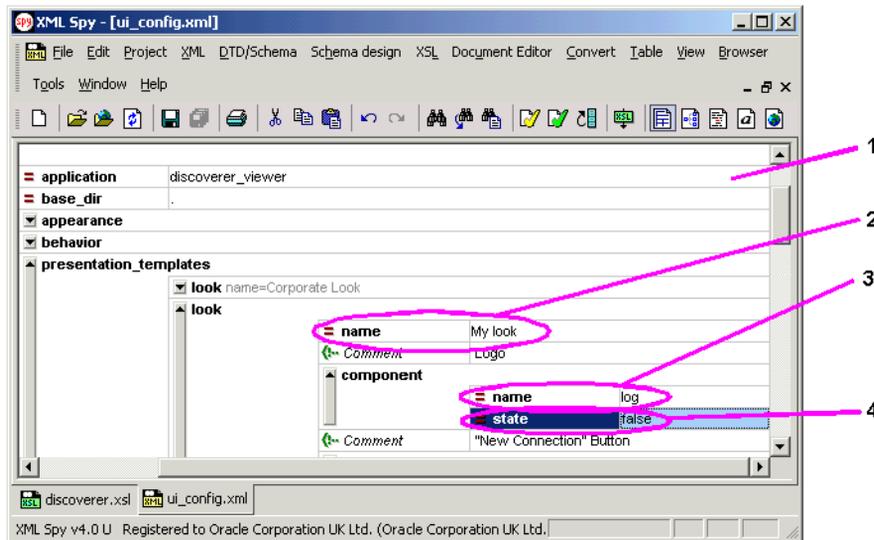
Notes

- For more information about RGB color codes, refer to any standard HTML reference manual.
- For more uniform results, use colors consistent across different browser types (i.e. safe colors) when customizing font styles.
- For more information about using the Discoverer Viewer cascading style sheet and its accompanying look-and-feel sample HTML file, see "[About the sample browser look-and-feel file \(blaf.htm\)](#)".

10.5 About updating Discoverer Viewer XML files

The Discoverer Viewer XML files contain tags for each component of the Discoverer Viewer user interface that you can customize (for more information, see "[About presentation options](#)"). The figure below shows an example of a ui_config.xml file.

Figure 10–2 An example of a `ui_config.xml` file displayed in an XML editor



Key to figure:

1. A `ui_config.xml` file opened in a dedicated XML editor.
2. A copy of the Corporate Look presentation template, called My Look.
3. A tab called 'log', which determines when the Discoverer Viewer logo is displayed.
4. The value of the 'log' tag (`false`), which means that the Discoverer Viewer logo or customized organization logo is not displayed. To change this tag value to true, double click the value field and choose 'true' from the drop down list.

If you use a dedicated XML editor, the XML tags are displayed in a structured way that you can expand or contract, and you can choose values using drop-down lists.

If you use a simple text editor to edit an XML file, tags are displayed in plain text format, without additional formatting.

Figure 10–3 The `ui_config.xml` file displayed in a simple text editor

```

<look name="My look">
  <!-- Logo -->
  <component name="log" state="false"/>
  <!-- "New Connection" Button -->
  <component name="con" state="true"/>
  <!-- "Open Workbook" Button -->
  <component name="owb" state="true"/>
  <!-- "Options" Button -->
  <component name="opt" state="false"/>
  <!-- "Exit" Button -->
  <component name="ext" state="true"/>
  <!-- "Help" Button -->
  <component name="hlp" state="false"/>
  <!-- Blue Bar (Top) -->
  <component name="bbt" state="false"/>
  <!-- List of worksheets -->
  <component name="lws" state="false"/>
  <!-- "Rerun Query" Link -->
  <component name="rrq" state="true"/>
  <!-- "Edit Layout" Link -->
  <component name="ely" state="true"/>
  <!-- "Edit Parameters" Link -->
  <component name="epa" state="true"/>
  <!-- "Export" Link -->
  <component name="exp" state="true"/>

```

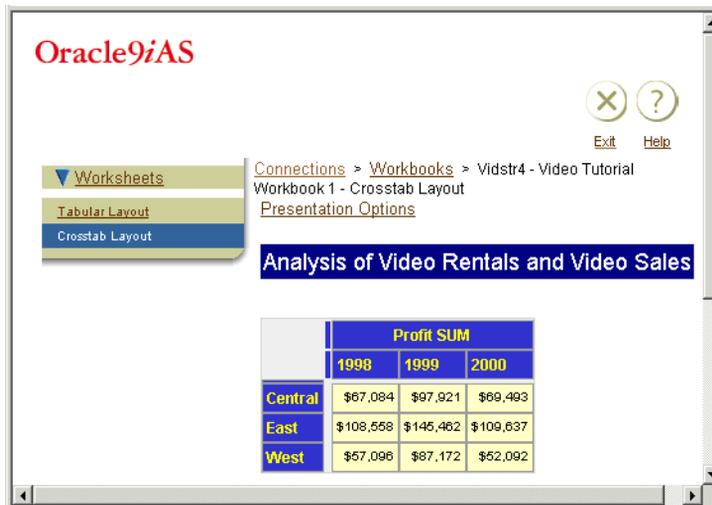
To update a tag value, simply replace the tag value with a new value. For example, to hide a user interface component, change its tag value from to 'true' to 'false'.

Note: The `ui_config.xml` file contains additional comments and tag labels to help you when making amendments. Comments are enclosed in the following tags: `<!-- Comments -->`

10.6 About presentation options

Presentation options define areas of the Discoverer Viewer user interface, such as headers, page areas, and footers. For example, in the worksheet area, you might not want to display worksheet headings or drill icons to Discoverer Viewer end users.

Figure 10–4 Discoverer Viewer customization using presentation options



In the figure above, Discoverer Viewer has been customized by removing the Discoverer logo, New Connection button, Open Workbook button, page footer, and export option.

You can also store presentation options in presentation templates and make them available to Discoverer end users (for more information, see [Section 10.7, "About presentation templates"](#)).

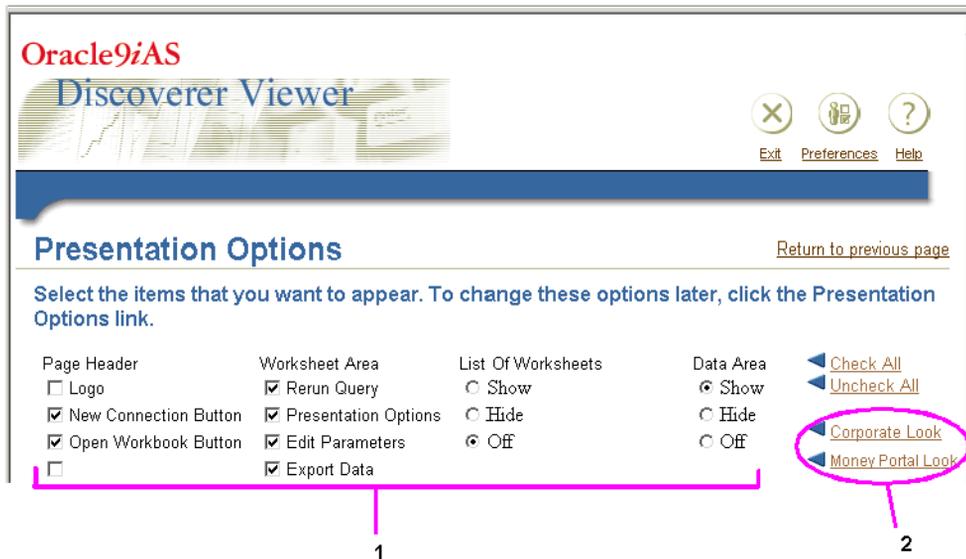
Note: You can also remove Discoverer UI components by editing the `ui_config.xml` file (for more information, see [Section 10.11, "How to remove Discoverer Viewer user interface options"](#)).

10.7 About presentation templates

Presentation templates are sets of pre-defined presentation options, and are used to enable Discoverer Viewer end users to customize the Discoverer Viewer UI with a single click.

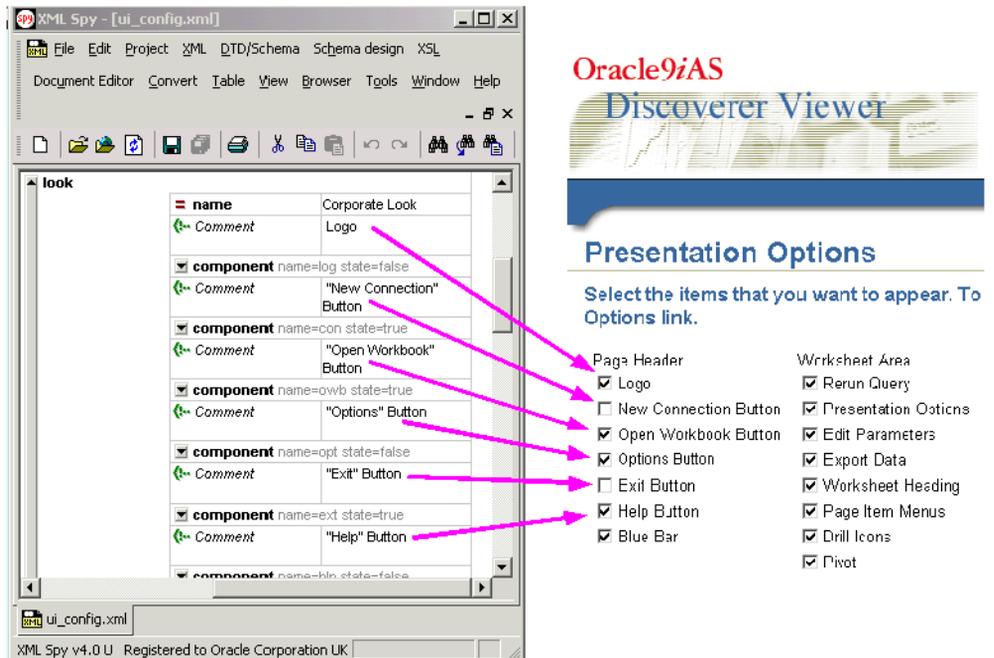
Note: Discoverer Viewer end users can also set their own presentation options on a per-session basis using the Presentation Options page in Discoverer Viewer.

Figure 10–5 Discoverer Viewer Presentation Options page



Key to figure:

1. Presentation options, which determine which Discoverer Viewer components are displayed. For example, the List Of Worksheets is turned off, and the Page Header Logo is turned off.
2. Presentation templates, which apply pre-defined presentation options. In this example, two presentation templates are available to Discoverer Viewer end users (Corporate Look and Money Portal Look). To apply the Money Portal Look presentation options to Discoverer Viewer, the user clicks the **Money Portal Look** option. The presentation options are then updated with the values stored in the ui_config.xml file.

Figure 10–6 The `ui_config.xml` file and the Presentation Options page

In the figure above, the state of the presentation options (i.e. true or false) is used to determine whether user interface components are displayed. These options are represented by check boxes on the Presentation Options page. For information about how to create presentation templates, see ["How to create a presentation template"](#).

Note: You can also remove Discoverer UI components globally by editing the `ui_config.xml` file (for more information, see [Section 10.11, "How to remove Discoverer Viewer user interface options"](#)).

10.8 About the sample browser look-and-feel file (blaf.htm)

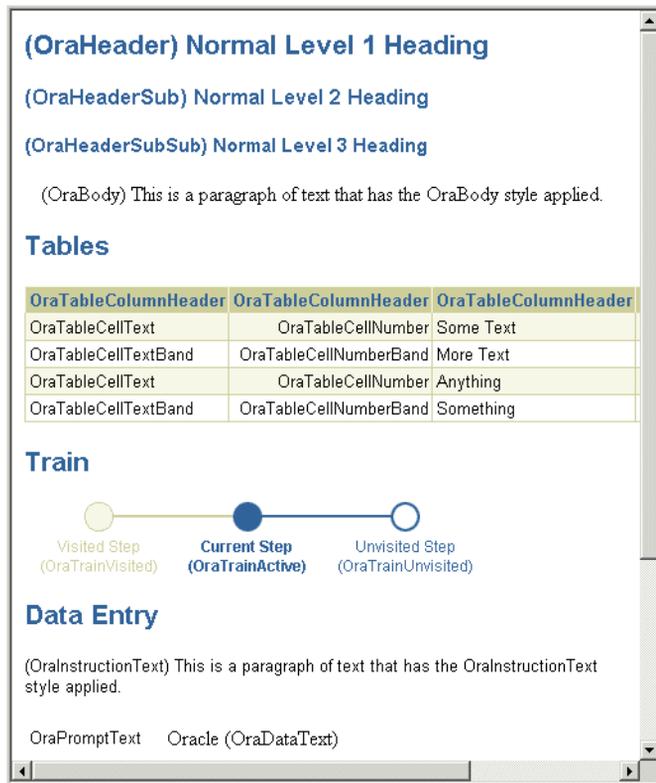
To help you customize Discoverer Viewer's look-and-feel, Discoverer is installed with a sample browser look-and-feel file (`blaf.htm`). The `blaf.htm` file displays the current look-and-feel settings for each display tag defined in the Discoverer Viewer cascading stylesheet (`blaf.css`).

Note: For more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#).

If you update the display tags in blaf.css, you can see changes reflected immediately in blaf.htm. You can use blaf.htm to find out which browser look-and-feel tags you need to change.

In the example below, the tag names in brackets or in the Tables section (e.g. OraHeader) are the display tags that you change in blaf.css.

Figure 10–7 Discoverer Viewer sample HTML file (blaf.htm)



10.9 How to change the default Discoverer Viewer look and feel

You change the default Discoverer Viewer look and feel when you want to provide a customized Discoverer Viewer look and feel to end users. For example, you might want to change the background UI color or UI fonts.

To change the default Discoverer Viewer look and feel:

1. Using a text editor or XML editor, open the blaf.css file (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).

You can update any of the tag values in the blaf.css file.

2. Update the values in the blaf.css file as required.

For example, to change the paragraph style from black to blue, change the `.OraBody{background-color:#000000}` tag to `.OraBody{background-color:#0000FF}`

Tip: Use the blaf.htm file to find out which tags to change in blaf.css (for more information, see ["About the sample browser look-and-feel file \(blaf.htm\)"](#)).

3. Save the blaf.css file.

Tip: Use the blaf.htm file to preview changes that you make in the blaf.css file (for more information, see ["About the sample browser look-and-feel file \(blaf.htm\)"](#)).

4. Run Discoverer Viewer and open a workbook.

Hint: If you have an existing Discoverer Viewer session running, refresh the browser to update Discoverer Viewer with changes that you have made.

The look and feel changes that you made will be applied.

Notes:

- In Japanese installations, blaf.css is called blafjp.css.

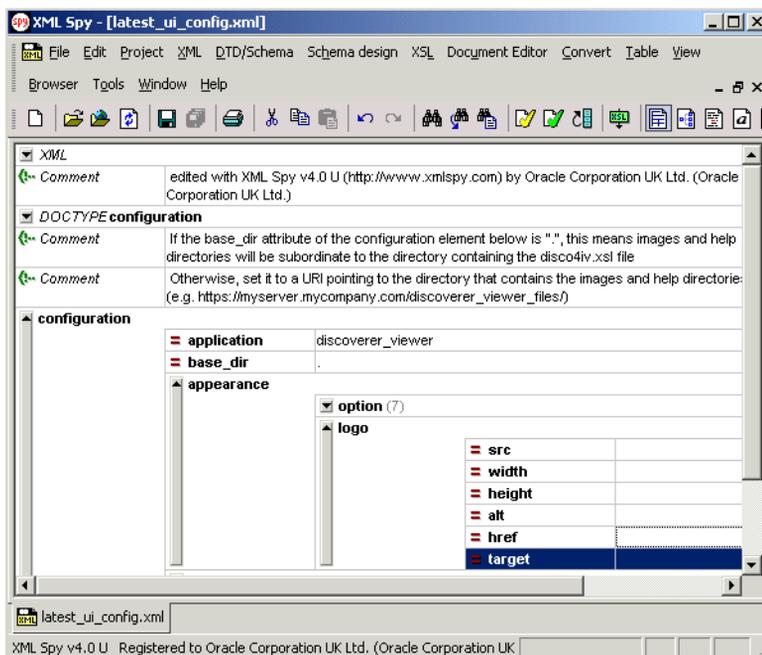
10.10 How to change the default Discoverer Viewer logo

You change the default Discoverer Viewer logo when you want to replace it with a logo or graphic of your choice. For example, you might want to change the logo displayed by Discoverer Viewer.

To change the default Discoverer Viewer logo:

1. Using a text editor or XML editor, open the ui_config.xml file (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. Locate the logo tag in the configuration\appearance section of the ui_config.xml file.

Figure 10–8 A `ui_config.xml` file showing the presentation templates area expanded



3. Update the logo tag attributes as required.

To insert a logo, insert the URL of the graphic into the **src** attribute value field. For example, to replace the default Oracle logo with a logo stored in `<ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl/my_logo.gif`, the URL of the logo file can be either be 'common/xsl/my_logo.gif' (i.e. using a relative path), or 'http://www.server.com:777/discoverer/common/xsl/clock.gif' (i.e. an absolute path).

4. Save the `ui_config.xml` file.
5. Run Discoverer Viewer and open a workbook.

Note: If you have an existing Discoverer Viewer session running, refresh the browser to update Discoverer Viewer with changes that you have made.

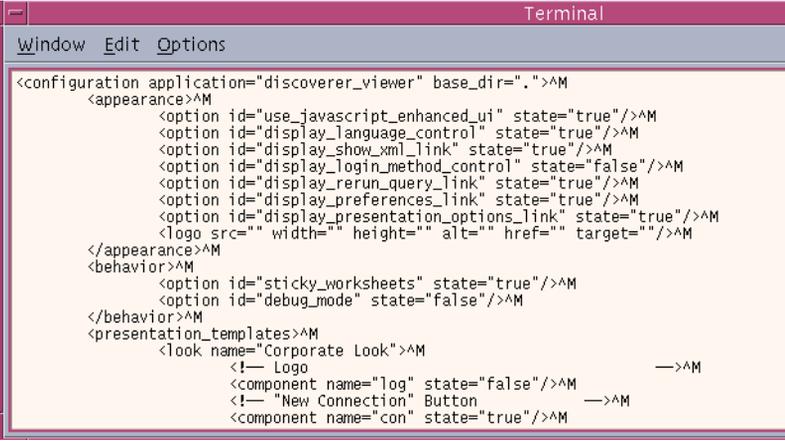
The logo or graphic that you specified will appear in Discoverer Viewer.

10.11 How to remove Discoverer Viewer user interface options

If you want to deploy a basic Discoverer Viewer interface without particular user interface (UI) options (e.g. Rerun Query or Presentation Options), you might change which options are displayed. For example, you may want to remove the Presentation Options link so that end users cannot change the Discoverer Viewer UI options displayed.

To remove Discoverer Viewer options:

1. Using a text editor or XML editor, open the `ui_config.xml` file (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. Locate the `configuration\appearance` section of the `ui_config.xml` file.



```
Terminal
Window Edit Options
<configuration application="discoverer_viewer" base_dir=".">^M
  <appearance>^M
    <option id="use_javascript_enhanced_ui" state="true"/>^M
    <option id="display_language_control" state="true"/>^M
    <option id="display_show_xml_link" state="true"/>^M
    <option id="display_login_method_control" state="false"/>^M
    <option id="display_rerun_query_link" state="true"/>^M
    <option id="display_preferences_link" state="true"/>^M
    <option id="display_presentation_options_link" state="true"/>^M
    <logo src="" width="" height="" alt="" href="" target="" />^M
  </appearance>^M
  <behavior>^M
    <option id="sticky_worksheets" state="true"/>^M
    <option id="debug_mode" state="false"/>^M
  </behavior>^M
  <presentation_templates>^M
    <look name="Corporate Look">^M
      <!-- Logo -->^M
      <component name="log" state="false"/>^M
      <!-- "New Connection" Button -->^M
      <component name="con" state="true"/>^M
    </look>^M
  </presentation_templates>^M
</configuration>
```

3. Update the configuration \appearance tag attributes as required.

For example:

- to hide the Rerun Query link, change the value of the display_rerun_query_link attribute to 'false'.
- to hide the Presentation Options link, change the value of the display_rerun_presentation_options_link attribute to 'false'.

4. Save the ui_config.xml file.
5. Run Discoverer Viewer and open a workbook.

Note: If you have an existing Discoverer Viewer session running, refresh the browser to update Discoverer Viewer with changes that you have made.

The logo or graphic that you specified will appear in Discoverer Viewer.

Note: Discoverer Viewer end users can also remove Discoverer UI components on a per-session basis using presentation options (for more information, see [Section 10.6, "About presentation options"](#)).

10.12 How to create a presentation template

You create a presentation template when you want to enable end users to configure the Discoverer Viewer user interface themselves using pre-defined presentation

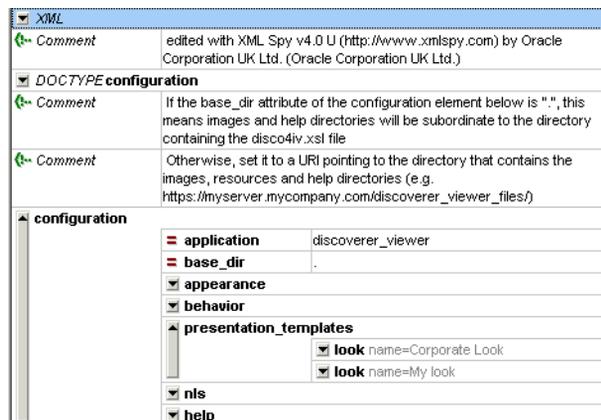
options. For more information about presentation options and presentation templates, see ["About presentation options"](#) and ["About presentation templates"](#).

The easiest way to create a presentation template is to cut and paste the Corporate Look template that is included in the `ui_config.xml` file, then edit the copy to suit your needs.

To create a presentation template:

1. Using a text editor or XML editor, open the `ui_config.xml` file (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. Locate the Corporate Look presentation template in the configuration section of the `ui_config.xml` file.

Figure 10–9 A `ui_config.xml` file showing the presentation templates area expanded



3. Select the Corporate Look presentation template.
4. Cut and paste the Corporate Look presentation template into the `ui_config.xml` file, immediately after the original Corporate Look presentation template.

You should now have two presentation templates, both called Corporate Look.

Note: If you are using a simple text editor, copy all of the text between the tags `<look name="Corporate Look">` and the first `</look>` tag that follows. For example:

```
<look name="Corporate Look">
```

```
<!-- Logo-->
<component name="log" state="false"/>
etc.
.
.
</look>
```

5. In the second copied version of Corporate Look, change the name value to your preferred template name (note that the name you specify will be visible to users). For example, change **<look name="Corporate Look">** to **<look name="Money Portal look">**.
6. Change the various component values of the new presentation template to true or false as required. You can update all of the tags located beneath the new presentation template.

For example:

- to display the Discoverer Viewer logo, set the **log** value to true
- to remove the New Connection button from the user interface, set the **con** value to false

Note: To help you identify tags in the `ui_config.xml` file, each tag has a comment label that tells you which part of the Discoverer Viewer user interface the tag relates to.

7. Save the `ui_config.xml` file.
8. Re-start the Web server that runs Discoverer.

Re-starting the Web server ensures that the latest version of the customization file is stored in the cache.

Note: If the `stylesheet_pool` 'maximum' value is set to zero in your `configuration.xml` file, omit this step. When the 'maximum' value is set to zero, pages are not cached, which means that changes are applied immediately.

Discoverer Viewer is updated with the presentation options that you have selected.

Notes:

- Discoverer Viewer end users can now select the new presentation template as follows:
 - a. Run Discoverer Viewer and open a workbook.
 - b. Click **Presentation Options** to display the Presentation Options page.

The available Presentation templates are displayed at the right hand side of the page below the **Uncheck All** option (see [Figure 10–5, "Discoverer Viewer Presentation Options page"](#)).

- c. At the right hand side of the page, click the presentation template name of the look and feel that you want to use.
- d. Click Apply.

10.13 How to run Discoverer Viewer with Javascript disabled

In order to increase Web security, some organizations only run Discoverer Viewer in pure HTML mode with Javascript disabled. This means that Javascript code cannot be used to change the HTML being displayed, or interfere with data. For more information about the Javascript enhanced user interface, see [Section 4.4, "How to stop standalone Oracle9iAS Discoverer components in Unix"](#).

To run Discoverer Viewer with Javascript disabled:

1. Using a text editor or XML editor, open the `ui_config.xml` file (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. Locate the `configuration.appearance.option.use_javascript_enhanced_ui` tag.

Figure 10–10 A `ui_config.xml` file showing the `use_javascript_enhanced_ui` tag

XML	
DOCTYPE configuration	
Comment	If the base_dir attribute of the configuration element below is ".", this means images and help directories will be subordinate to the directory containing the disco4iv.xsl file
Comment	Otherwise, set it to a URI pointing to the directory that contains the images and help directories (e.g. https://myserver.mycompany.com/discoverer_viewer_files)
configuration	
application	discoverer_viewer
base_dir	.
appearance	
option (7)	
id	state
1 use_javascript_enhanced_ui	true
2 display_language_control	true
3 display_show_xml_link	true
4 display_login_method_control	true
5 display_rerun_query_link	true
6 display_preferences_link	true
7 display_presentation_options_link	true

3. Change the `use_javascript_enhanced_ui` tag value from 'true' to 'false'.
4. Save the `ui_config.xml` file.
5. Re-start the Web server that runs Discoverer.

Re-starting the Web server ensures that the latest version of the customization file is stored in the cache.

Note: If the `stylesheet_pool` 'maximum' value is set to zero in your `configuration.xml` file, omit this step. When the 'maximum' value is set to zero, pages are not cached, which means that changes are applied immediately.

Using Discoverer with Oracle9iAS Portal

11.1 Using Discoverer with Oracle9iAS Portal

This chapter describes how to use Oracle9iAS Discoverer with Oracle9iAS Portal, and contains the following topics:

- [Section 11.2, "What is Oracle9iAS Portal?"](#)
- [Section 11.3, "How to use Oracle9iAS Discoverer with Oracle9iAS Portal"](#)
- [Section 11.4, "How to register the Discoverer Portlet Provider with Oracle9iAS Portal"](#)
- [Section 11.5, "How to edit the Discoverer Portlet Provider"](#)
- [Section 11.6, "About changing the default performance settings for Oracle9iAS Discoverer"](#)

11.2 What is Oracle9iAS Portal?

Oracle9iAS Portal is a component of Oracle9iAS that enables non-technical business users to create portals. Portals are internet or intranet sites that provide a personalized, single point of interaction with a company's suite of applications. Portals also enable you to provide a consistent look and feel to users.

The Discoverer Portlet Provider is the content delivery mechanism used to publish Discoverer data in Oracle9iAS Portal. The Discoverer Portlet Provider enables portal users to publish two types of Discoverer portlet:

- Worksheet portlet - displays a worksheet in a portal.
- List of Workbook portlet - displays a list of workbooks in a portal.

The figure below shows a portal page containing a Discoverer portlet called Analyze Sales Reports. Analyze Sales Reports contains links to Discoverer workbooks that enable portal users to quickly access Discoverer workbooks.

The screenshot shows a portal page with a navigation bar at the top containing links for Home, Budget, Org Chart, New Employees, and Customize. Below the navigation bar are several portlets:

- News**: Contains three news items with headlines like "Oracle Buys Thinking Machines", "Oracle Gets Analytical With Data Mining Acquisition", and "Informix Continues to Cry the Blues".
- My Picks**: A list of links including People Search, Scheduler, BugDEF, Legal, Internal Orders, Corporate Cafes, Y2K Initiative, and Customer Newsgroups.
- Analyze Sales Reports**: A table with columns for Name, Updatec, Accessed, Scheduled, and Description. It lists three reports: Video Analysis, Regional Analysis, and Mike's sales areas.
- Announcements**: Contains three announcements with headlines like "Festival of Colors", "The 8th Annual 5K Fun Run", and "Oracle Gets Analytical With Data Mining Acquisition".
- HR**: Contains links for My Benefits, Corporate Holidays, Vacation Balance, and 401k Portfolio.
- Expenditures**: A table with columns for Dept and Total.

Notes:

- For more information about Oracle9iAS Portal, see *Oracle9iAS Portal Configuration Guide*.
- For more information about Discoverer portlets, see *Oracle9i Discoverer Administrator Administration Guide*.

11.3 How to use Oracle9iAS Discoverer with Oracle9iAS Portal

Before portal users can add Discoverer portlets to an Oracle9iAS portal, you have to register the Discoverer Portlet Provider with Oracle9iAS Portal.

You register the Discoverer Portlet Provider using the Add Portlet Provider page in Oracle9iAS Portal.

To use Oracle9iAS Discoverer with Oracle9iAS Portal, do the following:

- register Discoverer Portlet Provider with Oracle9iAS Portal (for more information, see Section 11.4, "How to register the Discoverer Portlet Provider with Oracle9iAS Portal")

- (optional) change the default cache settings for Discoverer Portlet Provider if required, see [Section 11.6, "About changing the default performance settings for Oracle9iAS Discoverer"](#)

Notes:

- For more information about using Oracle9iAS Portal to register portlet providers, see Oracle9iAS Portal Help.

11.4 How to register the Discoverer Portlet Provider with Oracle9iAS Portal

You register the Discoverer Portlet Provider to enable portal end users to use it to add Discoverer portlets to their portal pages.

To register the Discoverer Portlet Provider with Oracle9iAS Portal:

1. Open a Web browser and go to the main Portal page.

For more information about displaying the main Portal page, contact the Oracle9iAS Portal administrator.

2. Select the Builder icon to display the Portal Design-Time pages.

The screenshot displays the Oracle9iAS Portal administration interface. At the top, there are tabs for 'Build', 'Administer', and 'Administer Database'. The main content area is divided into three sections:

- Page Groups:** This section has a 'Page Group' input field and 'View', 'Edit', and 'Create' buttons. It includes instructions on selecting a page group and links for 'Create a Page', 'Create a Style', 'Edit Page', and 'Create Page Template'. There is also a 'Mobile Enabling your Pages' link.
- Providers:** This section contains links for 'Register a Portlet Provider' and 'Edit a Portlet Provider'. It includes a 'Name' input field and 'Edit' and 'Delete' buttons.
- Provider Group:** This section contains links for 'Add a Provider Group' and 'Edit a Provider Group'. It includes a 'Name' input field and an 'Edit' button.

3. Select the **Register a Portlet Provider** link to display the Add Provider page.

Home Help

Add Provider

Step 1 of 3 >>>

Provider Information

Enter a unique name for the provider, the timeout (in seconds), the timeout message, and the provider implementation style. The timeout message is presented to the user when a portlet takes longer than the specified time to execute.

Name

Display Name

Timeout seconds

Timeout Message

Implementation Style

Next > Cancel

Done Internet

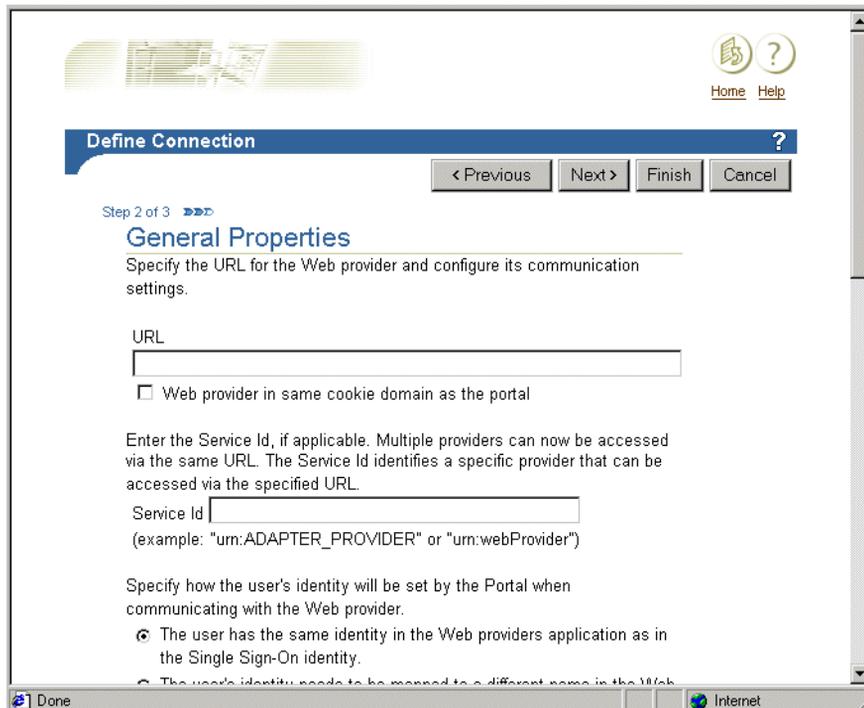
4. Enter the Portlet Provider details.

Note: You can assign any Name and Display Name to the Discoverer Portlet Provider as required. The Name and Display Name can be different.

Hint: Give the Portlet Provider a useful display name because Portal users will see this when they add a Discoverer portlet to a portal page.

5. Choose Web from the **Implementation Style** drop down list.

6. Click Next to display the Define Connection page.



7. Enter the Portlet Provider general properties as follows:

- a. Enter the URL of the Discoverer Portlet Provider in the **URL** field, in the form:

`http://<hostname[:port]>/discoverer/portletprovider` (e.g.
`http://server:8080/discoverer/portletprovider`)

- b. If Oracle9iAS Portal and the Discoverer Portlet Provider are in the same cookie domain, select the **Web Provider in same cookie domain as the portal** check box.

Note: The Oracle9iAS Portal and the Discoverer Portlet Provider are typically in the same cookie domain.

- c. Select the **The user has the same identity in the Web providers application as in the Single Sign-On identity** radio button.

8. Click Next to display the Control Access page.



Unless you want to change the default Grant Access settings, you do not need to enter details in the Control Access page.

9. Click Finish.

End users can now use the Discoverer Portlet Provider to add portlets to an Oracle9iAS Portal page.

11.5 How to edit the Discoverer Portlet Provider

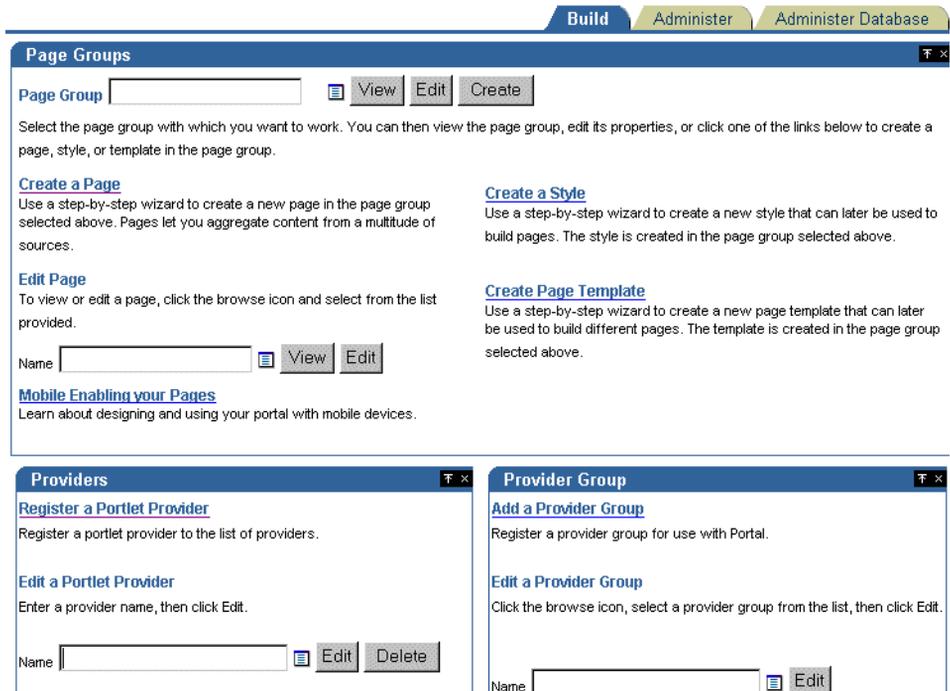
You edit the Discoverer Portlet Provider when you want to change the way that it works. For example, you might want to change the Discoverer Portlet Provider Display Name, or change its Control Access settings.

To edit the Discoverer Portlet Provider:

1. Open a Web browser and go to the main Portal page.

For more information about displaying the main Portal page, contact the Oracle9iAS Portal administrator.

2. Select the Builder icon to display the Portal Design-Time pages.



3. Enter the name of the Discoverer Portlet Provider (i.e. its Display Name) in the **Name** field, and click Edit to display the Edit Provider page.

Hint: If you are not sure of the name of the Discoverer Portlet Provider,

- a. Click the Browse Providers icon to the right of the Name field.
- b. Choose the Discoverer Portlet Provider name from the list of Portlet Providers displayed.

Hint: The name that you choose is the Display Name that was specified when you registered the Discoverer Portlet Provider (for more information, see [Section 11.4, "How to register the Discoverer Portlet Provider with Oracle9iAS Portal"](#)).

- c. Click Edit to display the Edit Portlet Provider page.
4. Make the necessary changes, as follows:
 - use the Main tab to change provider information (e.g. the Display Name of the Discoverer Portlet Provider).
 - use the Connection tab to change general properties (e.g. the URL of the Discoverer Portlet Provider).
 - use the Access tab to change the access privileges (e.g. the Control Access settings of the Discoverer Portlet Provider).
5. Click OK to save the changes you have made.

The portlet is updated according to changes you have made.

11.6 About changing the default performance settings for Oracle9iAS Discoverer

When you use Oracle9iAS Discoverer with Oracle9iAS Portal, you might want to:

- increase the number of sessions that can run at one time by changing the maximumSessions setting (for more information, see [Section A.4, "List of configuration settings in configuration.xml"](#))
- change the way that stylesheets are pooled in memory (for more information, see [Section 12.5.4, "How to enhance Discoverer Viewer scalability using XSL stylesheet pooling"](#))

Optimizing Discoverer performance and scalability

12.1 Optimizing Discoverer performance and scalability

This chapter describes how to optimize Discoverer performance and scalability, and contains the following topics:

- [Section 12.2, "About Discoverer and performance"](#)
- [Section 12.3, "About Discoverer and scalability"](#)
- [Section 12.4, "How to improve Discoverer's performance"](#)
- [Section 12.5, "How to take advantage of Discoverer's scalable architecture"](#)

12.2 About Discoverer and performance

The performance of a Discoverer system refers to the time Discoverer takes to complete a specific task. This might be the time taken to return the results of a query, to perform a pivot or drill, or to add a new user to the system.

An example of a performance issue might be if Discoverer cannot complete a specified task for a given number of users in an acceptable time.

The main factors that determine Discoverer's performance are:

- the number of concurrent users
- the available server resources (CPU, memory, disk)
- the size and complexity of each user's workload
- the time needed to complete tasks

12.3 About Discoverer and scalability

The scalability of a Discoverer system refers to Discoverer's ability to handle increasing numbers of users or tasks without compromising performance.

An example of a scalability issue might be if Discoverer's performance degrades as more users attempt the same task.

To take advantage of Discoverer's inherently scalable architecture, you can install Discoverer on multiple machines and share the workload between those machines. For more information, see [Chapter 5.1, "Installing Oracle9iAS Discoverer in a multiple machine environment"](#).

The main factors that determine Discoverer's scalability are:

- the number of concurrent users
- the number of server CPUs
- the distribution of processing across CPUs
- the total server memory (both RAM and virtual memory)
- the specific tasks requested by each user (individual workload)

12.4 How to improve Discoverer's performance

Discoverer's performance is largely determined by how well the database has been designed and tuned for queries. A well-designed database will perform significantly better than a poorly designed database. In addition, you can achieve significant performance improvements by making appropriate use of:

- summary tables
- indexes
- database parameter settings
- network bandwidth

For more information about tuning the database for queries, see *Oracle8i Designing and Tuning for Performance Release 2 (8.1.6)*.

In addition to a well-designed and well-tuned database, there are some things you can do within Discoverer to improve performance, as described in the following sections:

- [Section 12.4.1, "How to improve Discoverer performance by using worksheets and page items appropriately"](#)

- Section 12.4.2, "How to improve Discoverer performance by reducing the time taken to display business areas and folders"
- Section 12.4.3, "How to improve Discoverer performance by using summary folders"
- Section 12.4.4, "How to improve Discoverer performance by providing a method to provide a select all parameter values' option that does not use a DECODE statement"
- Section 12.4.5, "How to improve Discoverer performance by using Discoverer Administrator hints"
- Section 12.4.6, "How to improve Discoverer performance by setting the Case Storage item property appropriately"
- Section 12.4.7, "How to improve Discoverer performance by increasing the size of the array used to fetch rows from the database"
- Section 12.4.8, "How to improve Discoverer performance by basing lists of values on tables containing distinct values"
- Section 12.4.9, "How to improve Discoverer performance by changing cache settings for your system"

12.4.1 How to improve Discoverer performance by using worksheets and page items appropriately

The time that Discoverer takes to fetch and display data can differ depending on the type of worksheet (i.e. table or crosstab) and whether or not the worksheet uses page items.

For example:

- When populating a table worksheet that does not contain page items, Discoverer fetches the data in batches of rows at a time (e.g. 100 rows) and displays the data immediately. The data is displayed immediately because the data is placed in the Discoverer cache and is not indexed.
- When populating a table worksheet that contains page items or a crosstab worksheet, Discoverer will take longer to display the data, regardless of the number of rows fetched at a time. The data takes longer to display because the data is indexed in the Discoverer cache before it is displayed.

To enhance performance, try to avoid the following:

- very wide crosstab worksheets

- table worksheets that have page items with thousands of values
- worksheets containing tens of thousands of rows

To enhance performance, try to do the following:

- use parameters to reduce the number of rows retrieved in worksheets

12.4.2 How to improve Discoverer performance by reducing the time taken to display business areas and folders

When a Discoverer Plus end user builds a query, Discoverer displays a list of the business areas, folders, and items to which that user has access. Before displaying the list, Discoverer makes a database security check to confirm that the user has access to the tables referenced in the folders. Although the security check makes sure that user cannot create workbooks that they cannot run, it can increase the time taken to display the list.

To override the database security check, edit the `pref.txt` file and set `ObjectsAlwaysAccessible` to 1 as follows:

```
ObjectsAlwaysAccessible = 1
```

If the value of `ObjectAlwaysAccessible` is not 0, Discoverer does not perform the security check and assumes that the tables are accessible. As a result, Discoverer displays the list of folders more quickly. Disabling the security check is likely to be more appropriate on systems where users' access rights change relatively infrequently.

Note: If a user selects a folder based on a table to which they do not have database access, Discoverer always displays an error message when the query runs.

12.4.3 How to improve Discoverer performance by using summary folders

When used correctly, Discoverer summary folders improve query response times by several orders of magnitude. Queries that use summary folders might take only seconds to run, whereas queries that return the same result set but do not use summary folders might take several hours. Summary folder management is the key to good performance with Discoverer implementations.

Summary folders can be based on materialized views or summary tables, with the following differences in behavior:

- if a Discoverer query includes a summary folder that is based on a materialized view, the database automatically rewrites the query to use the materialized view
- if a Discoverer query includes a summary folder that is based on a summary table, Discoverer automatically rewrites the query to use the summary table (providing the summary table has been registered with the EUL)

Use the SQL Inspector dialog to view the path taken by the query, and to find out whether the database has rewritten the query.

For more information about how Discoverer manages summary folders, see *Oracle9i Discoverer Administrator Administration Guide*.

12.4.4 How to improve Discoverer performance by providing a method to provide a select all parameter values' option that does not use a DECODE statement

By default, Discoverer does not provide users with a 'select all parameter values' option for a worksheet parameter. It is possible to provide users with a 'select all parameter values' option by placing a DECODE function around the parameter. However, using a DECODE function makes it impossible to use a database index (and the performance benefits of using an index are therefore not available).

An alternative approach (which is equally effective and which does not prevent the use of database indexes) is to create a custom folder based on SQL that includes a 'SELECT '<ALL>' from DUAL' statement.

For example, to give users the ability to select all regions from the Region dimension of the Video Stores data, you might:

1. Create a custom folder to list all regions and based on the following SQL statement:

```
select region from store
union
select '<All>' from dual
```

2. Edit the item class for the Region item so that it uses the above custom folder for its list of values.
3. Create a parameter for Region in Discoverer Plus.
For example, 'Region Parameter'.
4. Create an associated condition in Discoverer Plus as follows:

```
Region IN :Region Parameter
```

```
OR
:Region Parameter = '<All>'
```

When a user includes the Region item in a worksheet, the user can select regions from the LOV or can select the <All> value to select all regions.

For more information about how to create a custom folder, how to create a condition, and how to edit an item class, see *Oracle9i Discoverer Administrator Administration Guide*. For more information about how to create a parameter, see *Oracle9iAS Discoverer Plus User's Guide*

12.4.5 How to improve Discoverer performance by using Discoverer Administrator hints

To improve Discoverer performance, you can add hints to SQL statements in Discoverer Administrator to force the database optimizer to use a specific path. For more information, see *Oracle9i Discoverer Administrator Administration Guide*.

12.4.6 How to improve Discoverer performance by setting the Case Storage item property appropriately

When a user adds a condition to a query, they can select the **Match Case** option. If the **Match Case** option is cleared, Discoverer performs a case insensitive search by placing an Upper function around both sides of the condition. For example, a condition such as:

```
where Department in ('VIDEO SALES', 'VIDEO RENTALS')
```

becomes:

```
where Upper(Department) in (Upper('VIDEO SALES'), Upper('VIDEO RENTALS'))
```

However, using an UPPER function makes it impossible to use a database index (and the performance benefits of using an index are therefore not available).

If you know that the data is stored in the database as all uppercase or all lowercase, you can manage this issue by using Discoverer Administrator to set the **Case Storage** property of items.

For example, you might know that all the Region data is stored in uppercase in the database. In Discoverer Administrator, set the **Case Storage** property of the Region item to Uppercase. Discoverer now assumes that the data is stored in uppercase and does not put the UPPER function on the left hand side of the condition (i.e. around the column name). So the original condition:

```
where Department in ('VIDEO SALES', 'VIDEO RENTALS')
```

becomes:

```
where Department in (Upper('VIDEO SALES'), Upper('VIDEO RENTALS'))
```

Because the UPPER function is not around the column name, the query will use whatever database indexes are available.

12.4.7 How to improve Discoverer performance by increasing the size of the array used to fetch rows from the database

If it is likely that Discoverer will fetch large numbers of rows (e.g. in the order of thousands) from the database, you can improve performance by increasing the size of the array that Discoverer uses to fetch the rows.

To change the default size of the array, edit the `pref.txt` file and set `RowsPerFetch` to the required value, as follows:

```
RowsPerFetch = <value>
```

If you anticipate Discoverer retrieving thousands of rows, set `RowsPerFetch` to 500 or 1000 to increase the size of the array.

Note that Discoverer end users can override the default value specified by `RowsPerFetch` in `pref.txt` as follows:

- in Discoverer Plus, by choosing Tools | Options | Query Governor
- in Discoverer Viewer, by choosing Options

Note: In the case of table worksheets, there is a trade off between perceived performance and actual performance. Table worksheets display the data immediately after the first array is retrieved. If `RowsPerFetch` is set to 100, a Discoverer end user sees the first 100 rows more quickly than if `RowsPerFetch` is set to 1000.

12.4.8 How to improve Discoverer performance by basing lists of values on tables containing distinct values

By default, a Discoverer list of values (LOV) is populated using a `SELECT DISTINCT` statement in the query on the underlying data (or 'fact') table. To populate the LOV, all of the rows must be scanned before the list of distinct values can be displayed. However, this default query is inefficient if the LOV is populated from a column that has a large number of rows but relatively few distinct values.

To improve performance, avoid creating LOVs on items based on columns in the fact table. Instead, consider the following options:

- Create LOVs for items based on columns in small 'dimension' tables (containing only distinct allowable values) attached to the fact table. If such tables do not already exist, create and populate them using SQL*Plus.
- If the list of allowable values is small and/or changes relatively infrequently, define the LOV within Discoverer Administrator by creating a custom folder based on SQL statements that select the allowable values from SYS.DUAL.

For example, to create an LOV that contains all regions in the Video Stores data, you might:

1. Create a custom folder to list all regions and based on the following SQL statement:

```
Select `NORTH' Region FROM sys.dual
UNION
Select `SOUTH' Region FROM sys.dual
UNION
Select `EAST' Region FROM sys.dual
UNION
Select `WEST' Region FROM sys.dual
```

2. Edit the item class for the Region item so that it uses the above custom folder for its list of values.

For more information about how to create custom folders and item classes, see *Oracle9i Discoverer Administrator Administration Guide*.

12.4.9 How to improve Discoverer performance by changing cache settings for your system

Data retrieved from the database is stored in the Discoverer cache. The cache supports Discoverer's rotation, drilling, and local calculation capabilities.

You can control the performance of the cache using the following settings in the `pref.txt` file:

Setting name	Default value	Description
CacheFlushPercentage	25	Percentage of cache flushed, if cache is full.

Setting name	Default value	Description
MaxVirtualDiskMem	1024000000	Maximum amount of disk memory allowed for the data cache
MaxVirtualHeapMemory	5120000	Maximum amount of heap memory allowed for the data cache.

The default settings for the cache are large to enable Discoverer to take advantage of the available memory. If the system has more resources available, you can increase the default memory values (although this is only likely to be beneficial for users whose queries return large result sets). Note that the default values are the requirements for each user, but you can change the values for specific users using the `dis51pr` command line utility (for more information, see [Section 7.6, "How to set individual preferences for specific users"](#)).

Be aware that an increase in the system resources available to one Discoverer user might have a detrimental impact on other Discoverer users, or on users of other applications.

12.4.10 How to improve Discoverer performance by scheduling worksheets to run overnight

If your data needs to be accurate on a daily basis, you can improve Discoverer performance by scheduling worksheets to be processed at off-peak times, avoiding overburdening the server during peak times. For more information about scheduling workbooks, see the *Oracle9iAS Discoverer Plus User's Guide*.

12.4.11 How to improve Discoverer performance by using Oracle9iAS Web Cache

If your workbooks remain relatively stable, Web Cache can greatly improve Discoverer performance. For more information about Oracle9iAS Web Cache, see [Section 9.1, "Using Discoverer with Oracle9iAS Web Cache"](#).

12.5 How to take advantage of Discoverer's scalable architecture

You can take advantage of Discoverer's inherently scalable architecture by:

- exploiting the scalability features of Oracle9iAS (for more information, see [Section 12.5.1, "How to take advantage of Discoverer's scalable architecture using the scalability features of Oracle9iAS"](#))

- making use of Discoverer Viewer scalability features (for more information, see [Section 12.5.4, "How to enhance Discoverer Viewer scalability using XSL stylesheet pooling"](#))

12.5.1 How to take advantage of Discoverer's scalable architecture using the scalability features of Oracle9iAS

The scalable architecture of Oracle9iAS enables you to install the Discoverer Services tier on multiple machines (for more information about installing Oracle9iAS Discoverer on multiple machines, see [Chapter 5.1, "Installing Oracle9iAS Discoverer in a multiple machine environment"](#)).

You can balance the load between the different machines using:

- Oracle9iAS Web Cache (recommended)
- standard HTTP/IP Router load balancers

To further enhance load balancing, you can run multiple instances of Oracle HTTP Server and OC4J. For more information about:

- multiple machine installation, see [Chapter 5.7, "About using multiple Oracle HTTP Servers and OC4J components?"](#)
- Oracle9iAS Web Cache, see *Oracle9iAS Web Cache Administration and Deployment Guide*

12.5.2 How to enhance Discoverer scalability by specifying OC4J memory usage parameters

For more information, see Chapter 6 "Optimizing J2EE Applications in OC4J" in the *Oracle9i Application Server Performance Guide*.

12.5.3 How to enhance Discoverer scalability by specifying the number of OC4J processes

For more information, see Chapter 6 "Optimizing J2EE Applications in OC4J" in the *Oracle9i Application Server Performance Guide*.

12.5.4 How to enhance Discoverer Viewer scalability using XSL stylesheet pooling

Discoverer Viewer uses XSL stylesheets to define the layout of Discoverer Viewer pages. However, processing and storing XSL stylesheets is both CPU and memory intensive.

Note: XSL stylesheet pooling is also used by the Discoverer Portlet Provider. For more information about the Discoverer Portlet Provider, see [Section 11.1, "Using Discoverer with Oracle9iAS Portal"](#).

Pooling XSL stylesheets enables one or more Discoverer Viewer sessions to share one or more stylesheets, significantly reducing CPU usage, memory consumption, and transaction time. Pooling XSL stylesheets also increases the number of concurrent Discoverer Viewer users that the Discoverer Services tier will support. In addition, stylesheet pooling provides control over exactly how many stylesheets are in memory, and therefore how many requests for HTML pages can be processed at any given time.

The text below shows an extract from a configuration.xml file showing XSL example stylesheet pooling settings:

```
<!-- configuration for xsl processing. -->
- <xsl_translator path="../common/xsl/discoverer.xsl" processor="oracle"
cache="true">
  <stylesheet_pool minimum="1" maximum="1" log="false" tolerance="1.0"
period="-1" />
</xsl_translator>
```

Stylesheet pooling settings are held in the configuration.xml file and are shown in the table below:

Setting	Use this setting to:	Default	Allowed
cache	specify that you want to use stylesheet pooling	true	true or false
minimum	specify the minimum number of XSL stylesheets to hold in memory at any given time	1	zero or positive integer up to 32768
maximum	specify the maximum number of XSL stylesheets to hold in memory at any given time	1	zero or positive integer up to 32768

Setting	Use this setting to:	Default	Allowed
tolerance	<p>specify how much to optimize the pool for concurrent processing of user requests for HTML pages:</p> <ul style="list-style-type: none"> ▪ a low number optimizes the number of stylesheets in memory towards the number of concurrent requests (i.e. low memory, low concurrency) ▪ a high number optimizes the number of stylesheets in memory towards the number of concurrent user sessions (i.e. high memory, high concurrency) 	1.0	floating point number between 0.0 and 0.1
period	specify (in milliseconds) the period over which pool optimization takes place	-1	<p>zero or positive integer up to 4294967296</p> <p>if set to -1, uses algorithm to optimize this period.</p>
log	<p>specify that the stylesheet pooling statistics be written to the servlet log file.</p> <p>Note: This can significantly degrade performance. Do not set this option to <code>true</code> unless performing scalability and performance diagnostics in a non-production environment</p>	false	true or false

If you set `log=true` in the `configuration.xml` file, stylesheet pooling statistics are written to the servlet log file when one or more of the following events occur:

Event	Description
create object	a stylesheet has just been created
remove object	a stylesheet has been removed
passivate object	a stylesheet has been passivated (put back in the pool ready for use)
activate object	a stylesheet has been activated (taken out of the pool to be used)
starvation	a request was unable to retrieve a stylesheet from the pool (because all available stylesheets are active) and could not create one because the pool is at capacity (the request therefore has to wait until a stylesheet is passivated)

Event	Description
optimize pool	the optimizer has detected an opportunity to add or remove stylesheets

The following stylesheet pooling statistics are written to the servlet log file when one of the above events occurs:

Stylesheet pooling information	Description
active objects	the number of activated stylesheets (i.e. the stylesheets in use)
passive objects	the number of stylesheets ready for use
total objects	the number of all created stylesheets (i.e. the total number of active and passive objects)
peak objects	the highest number of objects created in the lifetime of the pool (i.e. since the servlet started)
hits	the number of pool hits (i.e. the number of times a stylesheet was activated with a passive object)
misses	the number of times no passive object was available, the stylesheet had to be created, or had to wait for passivation
hitrate	hits / (hits + misses) i.e. the number of hits divided by the sum of the number of hits and the number of misses (the higher the number, the better)
optimal objects	the optimal number of stylesheets to pool (maintained at the number of sessions + 1)
max capacity	the capacity of the pool (i.e. the same as the 'maximum' stylesheet pool setting in configuration.xml)
min capacity	the minimum number of stylesheets to pool (i.e. the same as the 'minimum' stylesheet pool setting in configuration.xml)
starvations	the number of times that starvation events occurred in the lifetime of the pool (i.e. since the servlet started)

Stylesheet pooling information	Description
starving threads	the number of threads currently waiting for a passivation (because the pool is at capacity)

For example, you might see the following stylesheet pooling information output to the servlet log file:

```
discoverer pool: optimize pool removing 1 objects
discoverer pool: remove object oracle.xml.parser.v2.XSLStyleSheet@b9bc9519
discoverer pool: dumpstats=http://machine.oracle.com/viewer/discoverer.xml
active objects=0
passive objects=2
total objects=2
peak objects=3
hits=7
misses=0
hit rate=100
optimal objects=1
maximum capacity=5
minimum capacity=1
starvations=0
starving threads=0
```

Maintaining data security with Discoverer

13.1 Maintaining data security with Discoverer

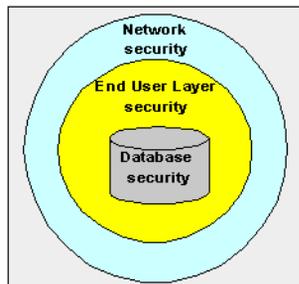
This chapter describes the different security mechanisms that protect data accessed by Discoverer users, and contains the following topics:

- [Section 13.2, "About Discoverer and data security"](#)
- [Section 13.3, "About Database security"](#)
- [Section 13.4, "About End User Layer security"](#)
- [Section 13.5, "About network security"](#)
- [Section 13.6, "Frequently asked questions about security"](#)

13.2 About Discoverer and data security

Discoverer supports a number of security mechanisms to prevent unauthorized access to data.

The diagram below describes the different levels of security protecting data accessed by Discoverer users:



Security is applied at three separate levels:

- database security, such as database privileges, roles, and usernames (for more information, see [Section 13.3, "About Database security"](#)).
- End User Layer (EUL) security, such as business areas, connections, and Single Sign-On (for more information, see [Section 13.4, "About End User Layer security"](#)).
- network security, such as JRMP, HTTP, and HTTPS (for more information, see [Section 13.5, "About network security"](#)).

13.3 About Database security

At the most basic level, a user must log on to a database using a database username and password. Beyond that, access to information is regulated by the database privileges granted to the database user. The database privileges might be granted explicitly to the database user or indirectly by a database role. Discoverer users never see information to which they do not have database access.

Typically, you will set up database security using SQL*Plus or a DBA tool.

13.4 About End User Layer security

This section explains the Discoverer's End User Layer (EUL) security mechanisms.

13.4.1 About business areas

Discoverer managers can control access to information by creating and managing business areas. Discoverer users can only access information to which they have been granted access through a business area. Discoverer users can share information amongst themselves using shared workbooks, but they never see information to which they do not have database access.

Discoverer managers use Discoverer Administrator to set up EUL security. For more information about creating and maintaining business areas, see *Oracle9i Discoverer Administrator Administration Guide*.

13.4.2 About Discoverer connections

Discoverer managers can further control users' access to information by defining Discoverer connections, which contain Discoverer login information. Each connection specifies an End User Layer containing one or more business areas.

Discoverer users can be restricted to using public connections or can be given permission to create their own private connections (see *Oracle9i Discoverer Administrator Administration Guide*).

Discoverer managers use Oracle9iAS Enterprise Manager to create public connections and give end users permission to create their own private connections. For more information about creating and maintaining Discoverer connections, see *Oracle9i Discoverer Administrator Administration Guide*.

13.4.3 About Single Sign-On

This section describes the relationship between Oracle9iAS Discoverer and Oracle9iAS Single Sign-On.

13.4.3.1 What is Oracle9iAS Single Sign-On?

Oracle9iAS Single Sign-On is a component of Oracle9i Application Server that enables users to log in to all features of the Oracle9iAS product complement, as well as to other Web applications, using a single user name and password that is entered once.

Note: Oracle9iAS Single Sign-On is implemented using Oracle Sign-On Server.

13.4.3.2 About Single Sign-On and Discoverer

When you install Oracle9i Application Server, the Oracle9iAS Single Sign-On service is installed automatically, but it is not enabled by default.

Discoverer connections work in both Single Sign-On and non-Single Sign-On environments. In an Oracle9iAS Single Sign-On environment, if a Discoverer end user starts Discoverer without having been authenticated by Oracle9iAS Single Sign-On, the user is challenged for Single Sign-On details (username and password). Having provided Single Sign-On details, the user can display the Discoverer connections page and start Discoverer without having to enter a username or password again.

Note: To enable Single Sign-On, open the `mod_osso.conf` file and enable SSO for `/discoverer/viewer` and `/discoverer/plus`. Because Discoverer relies on Oracle9iAS Portal to protect the `/discoverer/portlet` provider URL, do **not** enable SSO for `/discoverer/portlet` provider.

13.4.3.3 About authentication in non-Single Sign-on environments

If you are not deploying Discoverer with Single Sign-On, when a Discoverer end user chooses a private connection for the first time in a browser session, they are

prompted to confirm the database password. They are not prompted for SSO login details.

If the end user closes their browser and then starts it again (i.e. creates a new browser session), they will be prompted to confirm their database password. End users must confirm the database password each time a private connection is used. End users do not have to confirm passwords for public connections (for more information, see *Oracle9i Discoverer Administrator Administration Guide*).

Notes:

- In non-SSO environments, Discoverer end users can only access private connections created using the current machine (and Web browser). In other words, if an end user connects to Discoverer from a different machine or Web browser, they do not have access to private connections created on a different machine. In this scenario, end users must re-create the private connections on the new machine.
- To store private Discoverer connections in non-SSO environments, cookies must be enabled in the Web browser.

13.4.4 About Discoverer and Portal security

When you publish Discoverer content in a portlet produced using Oracle9iAS Portal, you give portal users access to the workbooks. However, portal users accessing Discoverer workbooks only see data to which they have database access. In other words, two different users accessing the same workbook might see different data, depending on their database privileges. For more information, see [Section 11.1, "Using Discoverer with Oracle9iAS Portal"](#).

13.5 About network security

You can use Discoverer in different network environments that might or might not include firewalls using different communication protocols (i.e. JRMP, HTTP, HTTPS).

The most appropriate network environment depends on both existing network strategies in your organization as well as your requirements for:

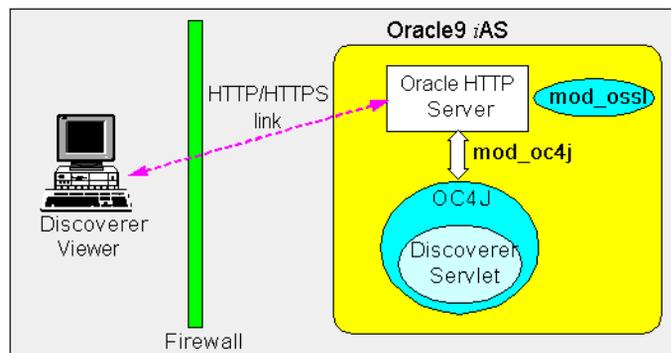
- performance (how long it takes to display information)
- accessibility (whether data has to be accessed through a firewall)
- security (how secure the data needs to be during transmission)

Discoverer Viewer and Discoverer Plus require different security configuration:

- For information about configuring security for Discoverer Viewer, see [Section 13.5.1, "About Discoverer Viewer security"](#).
- For information about configuring security for Discoverer Plus, see [Section 13.5.2, "About Discoverer Plus security"](#).

13.5.1 About Discoverer Viewer security

Discoverer Viewer uses standard HTTP or HTTPS protocols to connect Discoverer clients to the Discoverer servlet.



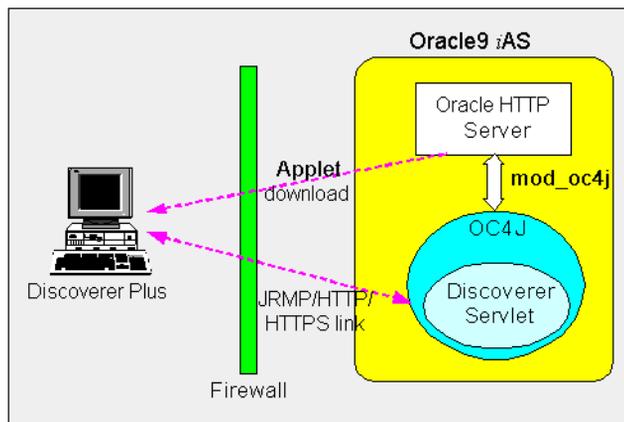
Note: Discoverer Viewer client machines require only a standard Web browser to run Discoverer Viewer.

In an out-of-the-box Oracle9iAS install, Discoverer Viewer is configured as follows, depending on the environment:

- In an Intranet environment (i.e. inside firewalls), no additional security configuration is required
- In a HTTP environment, no additional security configuration is required. If you are using a firewall, a typical firewall security policy allows HTTP traffic to pass through (e.g. on the default port 80).
- In a HTTPS environment, you need to configure the `mod_ossll` file on the Oracle9iAS machine (for more information, see *Oracle9iAS Security Guide*). If you are using a firewall, a typical firewall security policy allows HTTPS traffic to pass through (e.g. on the default port 443).
- In a HTTPS environment, Discoverer uses security certificates on the client machine's browser.

13.5.2 About Discoverer Plus security

Discoverer Plus uses standard Java Remote Method Protocol (JRMP), HTTP or HTTPS protocols to connect clients to the Discoverer servlet.



Discoverer Plus uses two communication channels:

- when a Discoverer Plus client first connects to the Discoverer servlet, the Discoverer Plus applet is downloaded to the client machine
- after the Discoverer Plus applet is installed on the Discoverer client machine, the Discoverer Plus client machine uses one of JRMP, HTTP, or HTTPS to communicate with the Discoverer servlet

In an out-of-the-box Oracle9iAS install, Discoverer Plus is configured as follows, depending on the environment:

- In an Intranet environment (i.e. inside firewalls), no additional security configuration is required. Discoverer Plus clients connect to the Discoverer servlet using the JRMP protocol (i.e. the default Discoverer Plus communication protocol).

Make sure that the default Discoverer Plus communication protocol (i.e. Default) is selected (for more information, [Section 13.5.2.4, "How to set up Discoverer Plus to use the default communication protocol"](#)).

- In a HTTP environment, no additional security configuration is required. If you are using a firewall, a typical firewall security policy allows HTTP traffic to pass through (e.g. on the default port 80).

Although a HTTP connection will work with the Discoverer Plus communication protocol option set to Default (i.e. JRMP), you can improve performance by specifying the Tunneling option on the Discoverer Plus communication protocol page (for more information, [Section 13.5.2.5, "How to set up Discoverer Plus to use the Tunneling communication protocol"](#)).

- In a HTTPS environment, you might need to configure the certdb.txt file on the clients if you are using a non-standard signing authority (for more information, see [Section 13.5.2.1, "About configuring Discoverer Plus for a non-standard signing authority"](#)). If you are using a firewall, a typical firewall security policy allows HTTPS traffic to pass through (e.g. on the default port 443).

Although a HTTPS connection will still work with Discoverer Plus communication protocol option set to Default (i.e. JRMP), you can improve performance by specifying the Tunneling option or Secure Tunneling option on the Discoverer Plus communication protocol page (for more information, [Section 13.5.2.2, "About specifying a Discoverer Plus communication protocol"](#)).

Notes:

- Discoverer Plus client machines require browser certificates and JInitiator (for more information, see [Section 3.3, "About running Discoverer Plus for the first time on a client machine"](#)).
- You typically use the same communication protocol to download the Discoverer applet as you do for communication with the Discoverer servlet (for more information, see [Section 13.5.2.2, "About specifying a Discoverer Plus communication protocol"](#)).

- In a HTTPS environment, security certificates have to be installed for JInitiator to provide SSL support for the Discoverer Plus applet.

13.5.2.1 About configuring Discoverer Plus for a non-standard signing authority

If you are deploying Discoverer Plus using a non-standard or private SSL signing authority, you need to make sure that the certificate information is in the `\lib\security\certdb.txt` file on each client machine. This additional configuration is required because Discoverer ignores the browser's signing authority and uses Oracle JInitiator's SSL technology.

13.5.2.2 About specifying a Discoverer Plus communication protocol

Using Oracle Enterprise Manager, you can specify which communication protocol the Discoverer Plus applet (i.e. the Discoverer client) and the Discoverer servlet (i.e. on the Discoverer server) use to communicate. The three communication protocol options are:

- Default

Specify this option if you want the Discoverer Plus applet to attempt to use JRMP and if this fails, to use HTTP or HTTPS (depending on the URL) to communicate with the Discoverer servlet. This option works regardless of whether the applet is running inside or outside a firewall. However, it will be slower outside the firewall because JRMP will be tried first.

For more information about specifying this Discoverer Services Configuration option, see [Section 13.5.2.4, "How to set up Discoverer Plus to use the default communication protocol"](#).

- Tunneling

Specify this option if you want the Discoverer Plus client to connect using the same method to communicate with the Discoverer servlet as was originally used to download the applet itself (i.e. either HTTP or HTTPS depending on the URL). This option works regardless of whether a firewall is being used.

For more information about specifying this Discoverer Services Configuration option, see [Section 13.5.2.5, "How to set up Discoverer Plus to use the Tunneling communication protocol"](#).

- Secure Tunneling

Specify this option if you want the Discoverer Plus client to always use HTTPS to communicate with the Discoverer servlet.

For more information about specifying this Discoverer Services Configuration option, see [Section 13.5.2.6, "How to set up Discoverer Plus to use the Secure Tunneling communication protocol"](#).

13.5.2.3 How to display the Oracle9iAS Discoverer Plus Configuration page in OEM

You use the Discoverer Plus Configuration page in Oracle Enterprise Manager to specify a Discoverer Plus communication protocol. For example, if you want to encrypt Discoverer Plus data, you might want to configure Discoverer Plus to use the HTTPS communication protocol.

How to display the Oracle9iAS Discoverer Plus Configuration page in OEM:

1. Start Oracle Enterprise Manager.

If you are connected to the Oracle HTTP Server locally, the URL will be in the form:

```
http://hostname:1810
```

If you are connecting to the Oracle HTTP server remotely, contact the Oracle9iAS system manager for information about which URL to use.

Note: For more information about starting OEM, see *Oracle Enterprise Manager Configuration Guide*.

2. When prompted, enter a user name and password.

Note: If you need an OEM user name and password, contact the Oracle9iAS system manager.

3. Click OK to start Oracle Enterprise Manager.

The Oracle Enterprise Manager main page is displayed.

ORACLE Enterprise Manager Preferences Help

Application Servers Targets

Farm

[Standalone Instances](#)

Farm: hostname.uk.company.com.1521.iasdb

Clusters

All clusters belonging to farm hostname.uk.company.com.1521.iasdb are listed below.

Create Cluster

Start Stop Restart Delete

Previous 1-1 of 1 Next

Select Name	Status	Instances
<input checked="" type="radio"/> cluster1	!	0

Standalone Instances [Return to Top](#)

All instances that belong to farm hostname.uk.company.com but are not part of any cluster are listed below.

Join Cluster

Previous 1-3 of 3 Next

Select Name	Status	Host	Oracle Home
<input checked="" type="radio"/> dbias.host1.uk.companyname.com	✓	host1.uk.companyname.com	/home/ias200/installed/902/infrastructure
<input type="radio"/> iasdb.host1.uk.companyname.com	✓	host1.uk.companyname.com	/home/ias200/902/Discoverer

4. In the **Name** column, select the instance that you want to update to display a list of components on that machine (e.g. iasdb.host1.uk.companyname.com).
A list of Oracle9iAS components on that machine is displayed (e.g. HTTP Server, OC4J_BI_Forms, Web Cache, OC4J_Portal).
5. In the **Name** column, select the **OC4J_BI_Forms** link to display the Oracle9iAS Discoverer Services Configuration page.

Figure 13–1 Oracle9iAS Discoverer Services Configuration page

ORACLE
Enterprise Manager

Preferences Help

Application Servers

Application Server: IAS-1 > Oracle9iAS Discoverer

Oracle9iAS Discoverer Services Configuration

Oracle9iAS Discoverer empowers business users at all levels of the organization with on-demand access to information from datamarts, data warehouses, or OLTP systems. Utilizing any standard web browser, Oracle9iAS Discoverer provides users with ad hoc query, reporting, analysis, graphing and web-publishing capabilities in order to make faster and more informed e-business decisions.

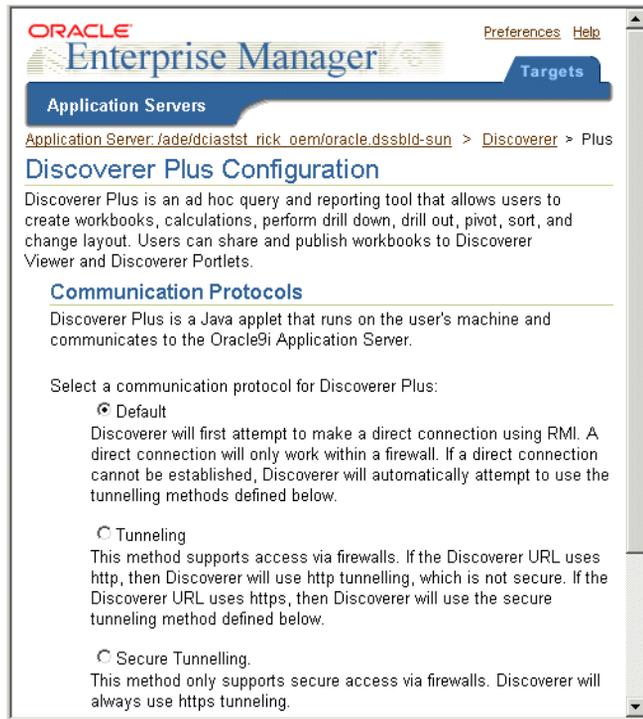
Configuration	Description	Update
General Discoverer	Locale, graph and connection options	
Discoverer Viewer	Stylesheet and progress page options	
Discoverer Plus	Communication protocol options	
Discoverer Portlet Provider	Session and stylesheet pooling options	

Targets | Preferences | Help

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The Oracle9iAS Discoverer Services Configuration table contains a row for each part of Discoverer that you can configure.

- In the **Update** column, select the Update icon in the Discoverer Plus row to display the Discoverer Plus configuration page.

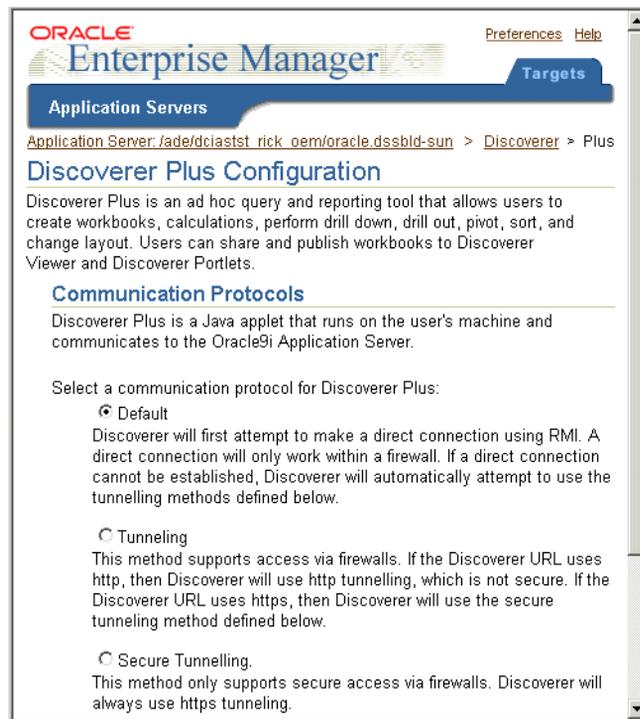


The Discoverer Plus configuration page enables you to change the Discoverer Plus communication protocol (for more information, [Section 13.5.2.2, "About specifying a Discoverer Plus communication protocol"](#)).

13.5.2.4 How to set up Discoverer Plus to use the default communication protocol

To set up Discoverer Plus to use the default communication protocol:

1. Start Oracle Enterprise Manager and navigate to the Oracle9iAS Discoverer Plus Configuration page (for more information, see [Section 13.5.2.3, "How to display the Oracle9iAS Discoverer Plus Configuration page in OEM"](#)).



2. Select the Default radio button from the **Select a communication protocol for Discoverer Plus** options.

The Discoverer Plus applet will attempt to use JRMP. If JRMP is not available, the Discoverer Plus applet will use HTTP or HTTPS (depending on the URL) to communicate with the Discoverer servlet.

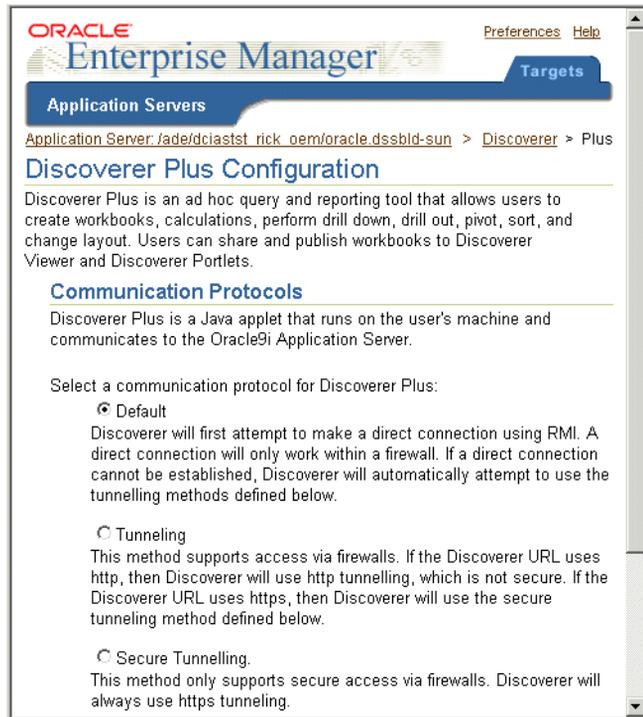
Note: This option works regardless of whether the applet is running inside or outside a firewall. However, it will be slower outside the firewall because JRMP will be tried first. For more information about the other options on this page, refer to "[About specifying a Discoverer Plus communication protocol](#)"

3. Click Apply to save the details and display the Oracle9iAS Discoverer Services Configuration page.
4. Give Discoverer Plus users the URL of the Discoverer servlet:
For example, `http://machinename.myorganization.com:7777/discoverer/plus`

13.5.2.5 How to set up Discoverer Plus to use the Tunneling communication protocol

To set up Discoverer Plus to use the tunneling communication protocol:

1. Start Oracle Enterprise Manager and navigate to the Oracle9iAS Discoverer Plus Configuration page (for more information, see [Section 13.5.2.3, "How to display the Oracle9iAS Discoverer Plus Configuration page in OEM"](#)).



2. Choose the Tunneling radio button from the **Select a communication protocol for Discoverer Plus** options.

The Discoverer Plus applet will use the same protocol to communicate with the Discoverer servlet as was originally used to download the applet itself (i.e. either HTTP or HTTPS). This option works regardless of whether a firewall is being used.

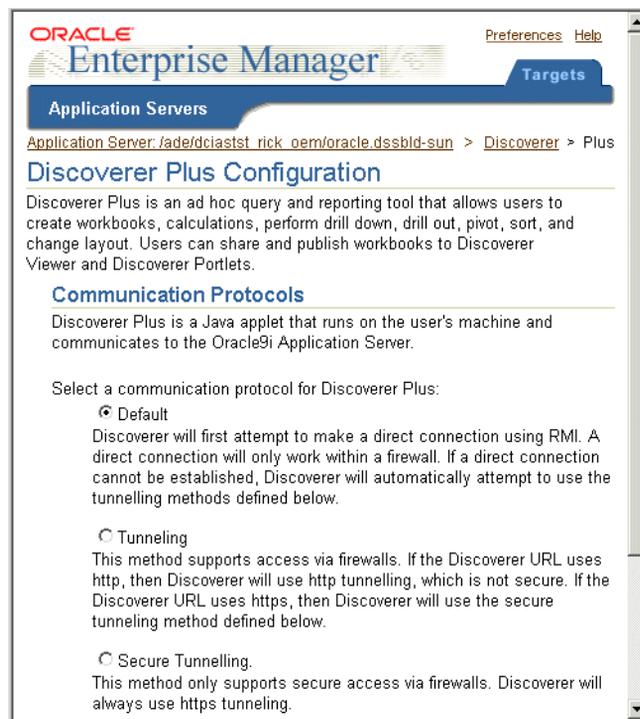
3. Click Apply.

4. Open the appropriate port on the Oracle HTTP Server to accept HTTP or HTTPS traffic as appropriate.
5. Give Discoverer Plus users the URL of the Discoverer servlet:
For example, `http://machinename.myorganization.com:7777/discoverer/plus`

13.5.2.6 How to set up Discoverer Plus to use the Secure Tunneling communication protocol

To set up Discoverer Plus to use the secure tunneling communication protocol:

1. Start Oracle Enterprise Manager and navigate to the Oracle9iAS Discoverer Plus Configuration page (for more information, see [Section 13.5.2.3, "How to display the Oracle9iAS Discoverer Plus Configuration page in OEM"](#)).



2. Choose the Secure Tunneling radio button from the **Select a communication protocol for Discoverer Plus** options.

The Discoverer Plus applet will use the HTTPS protocol to communicate with the Discoverer servlet.

3. Click Apply.
4. Open the appropriate port on the Oracle HTTP Server to accept HTTPS traffic.
5. Give Discoverer Plus users the URL of the Discoverer servlet:

For example, <https://machinename.myorganization.com:7777/discoverer/plus>

13.5.3 What are the differences between Oracle9iAS Discoverer Plus version 9.0.2 and version 4.1

Oracle9iAS Discoverer Plus does not require Visibroker Gatekeeper.

13.5.4 About security vulnerabilities

If you are deploying Oracle9iAS Discoverer with Oracle9iAS Web Cache, there are security implications for some restricted user environments.

For more information, see:

- [Section 9.5, "When to use Discoverer Viewer with Oracle9iAS Web Cache"](#)
- *Oracle9i Application Server Security Guide*

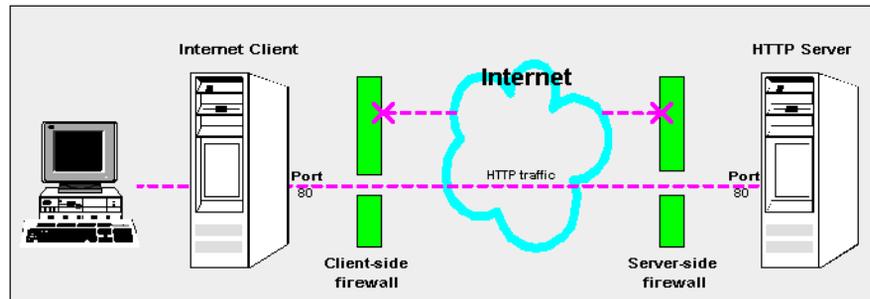
13.6 Frequently asked questions about security

13.6.1 What is a firewall?

A firewall is one system or a group of several systems put in place to enforce a security policy between the Internet and an organization's network.

In other words, a firewall is an electronic 'fence' around a network to protect it from unauthorized access.

Figure 13–2 A typical Internet connection with a Client-side and Server-side firewall

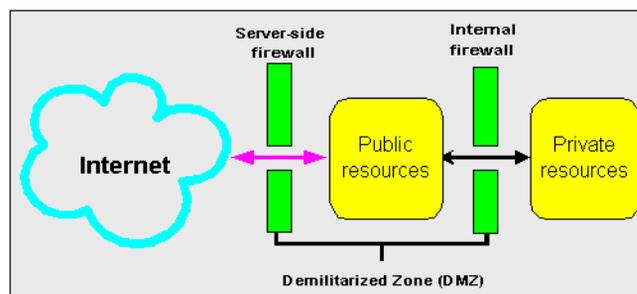


Typically, an organization using a Web Server machine that communicates across the Internet has a firewall between its Oracle HTTP Server machine and the Internet. This is known as a Server-side firewall. Other organizations (or remote parts of the same organization) connecting to this Web Server machine typically have their own firewall, known as a Client-side firewall. Information that conforms to the organization's firewall policy is allowed to pass through the firewalls enabling server machines and client machines to communicate.

13.6.2 What is a demilitarized zone (DMZ)?

A demilitarized zone (DMZ) is a firewall configuration that provides an additional level of security. In this configuration, the DMZ is an extra network placed between a protected network and the Internet. Resources residing within the DMZ are visible on the public Internet, but are secure. DMZs typically hold servers that host a company's public web site, File Transfer Protocol (FTP) site, and Simple Mail Transfer Protocol (SMTP) server.

Figure 13–3 A Demilitarized Zone (DMZ)



Firewall policies vary across organization and there are a wide variety of bespoke and off-the-shelf firewall packages in use.

A good firewall configuration assumes that resources in the DMZ will be breached, and should minimize damage to the internal network and any sensitive data residing on the network when this happens. This involves two steps:

- move sensitive private resources (at a minimum, databases and application logic) from the DMZ to the internal network behind the internal firewall
- restrict access to sensitive private resources from the DMZ itself, as well as from internal networks

Notes:

- An alternative security solution is to deploy the Oracle HTTP Server in the DMZ and deploy the Discoverer Server and the database behind the internal firewall. Note that this configuration is not supported.

13.6.3 What is HTTPS and why should I use it?

The HTTPS protocol uses an industry standard protocol called Secure Sockets Layer (SSL) to establish secure connections between clients and servers.

The SSL protocol enables sensitive data to be transmitted over an insecure network, such as the Internet, by providing the following security features:

- authentication - a client can determine a server's identity and be certain that the server is not an impostor (and optionally, a server can also authenticate the identity of its client applications)
- privacy - data passed between the client and server is encrypted so that if a third party intercepts their messages, the third party will not be able to unscramble the data
- integrity - the recipient of encrypted data will know if a third party has corrupted or modified that data

You can tell when SSL is enabled in Discoverer as follows:

- the URL to start Discoverer Plus begins with `https://` and a closed padlock appears at the left hand side of the applet's status bar
- the URL to start Discoverer Viewer starts with `https://` and a closed padlock or other equivalent symbol (browser dependent) appears in the browser's status bar

13.6.4 How do I configure Discoverer to work in an intranet

You configure Discoverer to work in an intranet as follows:

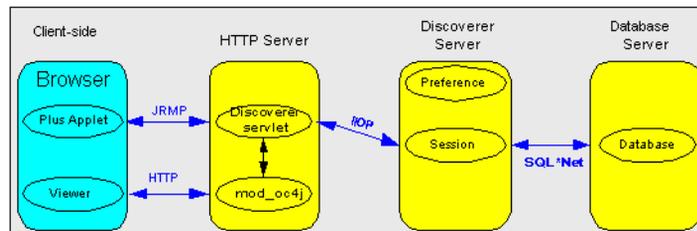
- Discoverer Viewer

Deploying Discoverer Viewer in an intranet (i.e. inside a firewall) requires no additional configuration after an Oracle9iAS installation. Discoverer Viewer uses a HTTP connection.

- Discoverer Plus

Deploying Discoverer Plus in an intranet (i.e. inside a firewall) requires no additional configuration after an Oracle9iAS installation. Discoverer Plus uses a direct connection using JRMP (i.e. the Discoverer default communication protocol).

Figure 13–4 A typical network configuration for Discoverer in an intranet



13.6.5 How do I configure Discoverer to work through a firewall?

You configure Discoverer to work through firewalls as follows:

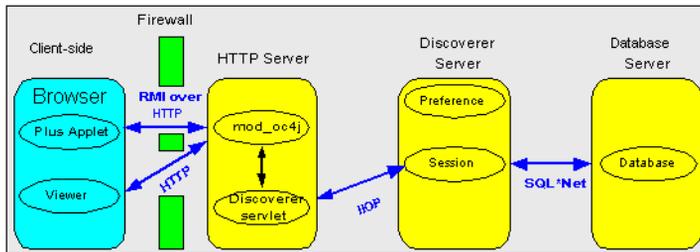
- Discoverer Viewer

Discoverer Viewer with no encryption (i.e. HTTP) requires no additional security configuration as long as the firewall allows HTTP traffic to pass through (e.g. on the default port 80).

- Discoverer Plus

Discoverer Plus with no encryption (i.e. HTTP) requires no additional security configuration. To improve performance, you might want to change the Discoverer Plus communication protocol to tunneling to prevent the Discoverer client from first trying to connect using JRMP, then by HTTP (for more information, see [Section 13.5.2.5, "How to set up Discoverer Plus to use the Tunneling communication protocol"](#)).

Figure 13–5 A typical firewall configuration for Discoverer using HTTP



13.6.6 Can I configure Discoverer to work through multiple firewalls?

Yes, if you are using HTTP or HTTPS Discoverer will work through multiple firewalls (for more information, see [Section 13.6.5, "How do I configure Discoverer to work through a firewall?"](#)).

13.6.7 How do I configure Discoverer to use encryption in an intranet?

You configure Discoverer to use encryption as follows:

- Discoverer Viewer

Configure mod_ossl to use HTTPS (for more information, see *Oracle9iAS Security Guide*) and deploy Discoverer Viewer on a HTTPS URL.
- Discoverer Plus

Deploy Discoverer Viewer on a HTTPS URL. To improve performance, you might want to change the Discoverer Plus communication protocol to Secure Tunneling to prevent the Discoverer client from first trying to connect using JRMP, then by HTTP, then by HTTPS (for more information, see [Section 13.5.2.6, "How to set up Discoverer Plus to use the Secure Tunneling communication protocol"](#)).

13.6.8 How do I configure Discoverer to use encryption through firewalls?

You configure Discoverer to use encryption through firewalls as follows:

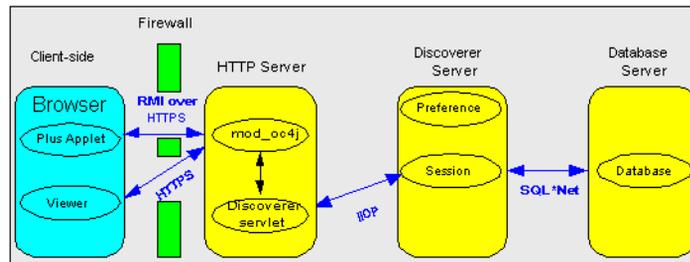
- Discoverer Viewer

Configure Discoverer Viewer to work through a firewall (for more information, see [Section 13.6.5, "How do I configure Discoverer to work through a firewall?"](#)). Then, make sure that your firewall(s) allow HTTPS traffic to pass through (e.g. on the default port 443).

- Discoverer Plus

Configure Discoverer Plus to work through a firewall (for more information, see [Section 13.6.5, "How do I configure Discoverer to work through a firewall?"](#)). Then, make sure that your firewall(s) allow HTTPS traffic to pass through (e.g. on the default port 443).

Figure 13–6 A typical firewall configuration for Discoverer using HTTPS



13.6.9 How can I verify that Discoverer is encrypting communications?

In Discoverer Viewer, make sure that client browsers displays a closed padlock or key symbol in the bottom left-hand corner of the Discoverer Viewer browser window.

In Discoverer Plus, make sure that the client displays a closed padlock symbol in the bottom left-hand corner of the Discoverer Plus applet window.

13.6.10 Can I configure Discoverer for both SSL and non-SSL communication?

Yes, you can configure Discoverer for both SSL and non-SSL communication. For example, you might use the default Discoverer Plus communication protocol that uses a direct JRMP connection inside the firewall, but automatically uses a HTTP or HTTPS for users outside the firewall.

13.6.11 Can I configure Discoverer for both intranet users and users accessing Discoverer through a firewall?

Yes. Discoverer can be configured to first attempt a JRMP connection, then HTTP and HTTPS connection. Users inside a firewall will connect using JRMP, but because JRMP is a direct connection that only works inside a firewall, users outside the firewall are connected as HTTP or HTTPS (depending on the URL).

13.6.12 Can I use Discoverer with a NAT device?

You can deploy Discoverer using any standard Network Address Translation (NAT) device.

Oracle9*i*AS Discoverer and Oracle Applications

14.1 Oracle9*i*AS Discoverer and Oracle Applications

This chapter explains how Oracle9*i*AS Discoverer provides capabilities for integrating with Oracle Applications, and contains the following topics:

- [Section 14.2, "About Discoverer connections and Oracle Applications"](#)
- [Section 14.3, "About Discoverer configuration settings for Oracle Applications"](#)
- [Section 14.4, "How to configure Discoverer for an Oracle Applications only environment"](#)
- [Section 14.5, "How to configure Discoverer for a mixed application environment"](#)

14.2 About Discoverer connections and Oracle Applications

When you want Oracle Applications end users to use Discoverer Viewer and Discoverer Plus, you can deploy Discoverer in two ways:

- If you are using Discoverer in an Oracle Applications only environment, you can set the default connection type to Oracle Applications (for more information, see [Section 14.4, "How to configure Discoverer for an Oracle Applications only environment"](#)).
- If you are using Discoverer in a mixed application environment (i.e where some users use Oracle Applications and some do not), you can give end users a choice of connection type. In this type of deployment, you also set the default private connection type (for more information, see [Section 14.5, "How to configure Discoverer for a mixed application environment"](#)).

In the figure below, Discoverer is deployed in a mixed application environment. Therefore, the Create Connection: Connection Details page displays an **Oracle Applications User** check box to enable end users to specify Oracle Applications connections. Oracle Applications connections enable a user to specify an Oracle Applications user ID and responsibility as their connection details. In Oracle Applications-only environments, you can remove the **Oracle Applications User** check box from the page (for more information, see [Section 14.4, "How to configure Discoverer for an Oracle Applications only environment"](#)).

Figure 14–1 Create Connection: Connection details page with Oracle Applications check box

Create Connection: Connection Details
Enter a connection name that is easy to remember. Add a description for this connection, followed by the database account details.

Connection Name and Description

Connection Name

Connection Description

Locale

Database Account Details

User Name

Password

Database

Oracle Applications User

Cancel Apply

Notes:

- You can also create public Oracle Applications connections using Oracle Enterprise Manager. For more information, refer to *Oracle9i Discoverer Administrator Administration Guide* or *Oracle9iAS Enterprise Manager Help*.

- A default Oracle Applications Gateway User ID, password, and Foundation Name is specified in the pref.txt configuration file (for more information, see [Section 14.3, "About Discoverer configuration settings for Oracle Applications"](#))

14.3 About Discoverer configuration settings for Oracle Applications

When you deploy Discoverer in an Oracle Applications environment, there are two preference settings that you can override in the pref.txt file:

- AppsGWYUID - this preference specifies a Gateway User ID and Password (the default value is 'APPLSYSPUB/PUB')
- AppsFNDNAM - this preference specifies a Foundation Name (the default value is 'APPS')

Notes:

- If you do not set these values, Discoverer uses default Oracle Applications values.
- For more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#).

14.4 How to configure Discoverer for an Oracle Applications only environment

In an Oracle Applications only environment, it is convenient for Discoverer end users to always create private Oracle Applications connections. You therefore remove the **Oracle Applications User** check box from the Create Connection: Connection Details page and set the default connection type to Oracle Applications.

To configure Discoverer in an Oracle Applications-only environment:

First, you remove the **Oracle Applications User** check box from the Create Connection: Connection Details page.

1. Open the ui_config.xml file (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. To remove the Oracle Applications User check box, set the value of the display_login_method_control tag to false.
3. Save the file.

Having removed the **Oracle Applications User** check box from the Create Connection: Connection Details page, you now set the default connection type to Oracle Applications.

4. Open the `pref.txt` file in a text editor (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).

Hint: If you are using Windows, you can open the `pref.txt` file in Notepad from the Windows Start menu by choosing Programs | Oracle9iAS Discoverer Server Setup | Edit Preferences.

5. To set the default connection type to Oracle Applications, set the value of the `DefaultUserTypeIsApps` preference to 1.
6. Save the file and close the text editor.

For the changes you have made to `pref.txt` to take effect, you must apply the preferences.

7. Apply the preference changes you have made, as follows:

- on UNIX, navigate to the directory containing the `applypreferences.sh` file and type the following at the command prompt:

```
> applypreferences.sh
```

For more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#).

- on Windows, from the Windows Start menu choose Programs | Oracle9iAS Discoverer Server Setup | Apply Preferences. Alternatively, enter the following command at the command line:

```
> dis51pr -apply
```

Hint: Check the `error.txt` file in the current directory to verify that the preferences were applied correctly.

8. Stop and restart the Oracle9iASDiscoverer service, as follows:

- for a UNIX platform, see [Section 6.7.1, "How to start and stop the Discoverer Preferences component on UNIX"](#)
- for a Windows platform, see [Section 6.7.2, "How to start and stop the Discoverer Preferences component on Windows"](#)

Discoverer end users can now only create Oracle Applications connections that enable them to connect as Oracle Applications users.

14.5 How to configure Discoverer for a mixed application environment

In a mixed application environment (for more information, see [Section 14.2, "About Discoverer connections and Oracle Applications"](#)), you want Discoverer end users to be able to choose what type of private Discoverer connections they can create. You therefore typically display the **Oracle Applications User** check box from the Create Connection: Connection Details page and set the default connection type to Oracle Applications.

To configure Discoverer in a mixed application environment:

First, you display the **Oracle Applications User** check box on the Create Connection: Connection Details page.

1. Open the `ui_config.xml` file.

For more information about file locations, see [Section A.2, "List of Discoverer file locations"](#).

2. To remove the Oracle Applications User check box, set the state of the `display_login_method_control` variable to true.
3. Save the file.

Having displayed the **Oracle Applications User** check box on the Create Connection: Connection Details page, you can now specify whether or not the **Oracle Applications User** check box is selected by default.

4. Open the `pref.txt` file in a text editor (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).

Hint: If you are using Windows, you can open the `pref.txt` file in Notepad from the Windows Start menu by choosing Programs | Oracle9iAS Discoverer Server Setup | Edit Preferences.

5. Set the value of the `DefaultUserTypeIsApps` preference as follows:
 - if you do not want the Applications User check box to be selected by default, set the `DefaultUserTypeIsApps` variable to 0
 - if you do want the Applications User check box to be selected by default, set the `DefaultUserTypeIsApps` variable to 1
6. Save the file and close the text editor.

For the changes you have made to `pref.txt` to take effect, you must apply the preferences.

7. Apply the preference changes you have made, as follows:

- on UNIX, navigate to the directory containing the `applypreferences.sh` file and type the following at the command prompt:

```
> applypreferences.sh
```

For more information about file locations, see [Section A.2, "List of Discoverer file locations"](#).

- on Windows, from the Windows Start menu choose Programs | Oracle9iAS Discoverer Server Setup | Apply Preferences. Alternatively, enter the following command at the command line:

```
> dis51pr -apply
```

8. Stop and restart the Oracle9iASDiscoverer service, as follows:

- for a UNIX platform, see [Section 6.7.1, "How to start and stop the Discoverer Preferences component on UNIX"](#)
- for a Windows platform, see [Section 6.7.2, "How to start and stop the Discoverer Preferences component on Windows"](#)

Discoverer end users can now choose what type of private Discoverer connections they create. In the example below, an Oracle Applications user is creating a new connection. The Oracle Applications User check box is displayed and is selected by default because:

- `DefaultUserTypeIsApps = 1`
- `display_login_method_control = true`

Figure 14–2 Create Connection: Connection details page with Oracle Applications check box selected by default

Create Connection: Connection Details
Enter a connection name that is easy to remember. Add a description for this connection, followed by the database account details.

Connection Name and Description

Connection Name

Connection Description

Locale

Database Account Details

User Name

Password

Database

Oracle Applications User

Discoverer configuration files

A.1 Discoverer configuration files

This appendix provides reference information about Discoverer configuration files, and contains the following topics:

- [Section A.2, "List of Discoverer file locations"](#)
- [Section A.3, "List of configuration settings in ui_config.xml"](#)
- [Section A.4, "List of configuration settings in configuration.xml"](#)
- [Section A.5, "List of configuration settings in plus_config.xml"](#)

A.2 List of Discoverer file locations

To configure and maintain Oracle9iAS Discoverer, you will use a number of different files that are referred to throughout this guide. The table below shows the locations of these files on both UNIX and Windows platforms.

File name	Description and location
applypreferences.sh	This file is a script file that updates the Discoverer preferences in the cache (UNIX specific). On UNIX: <ORACLE_HOME>/discoverer902/util On Windows: n/a

File name	Description and location
blaf.css	<p>This cascading style sheet file stores browser look-and-feel settings for Discoverer. To see Viewer's current look-and-feel settings, refer to blaf.htm (see blaf.htm entry below).</p> <p>On UNIX: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl</p> <p>On Windows: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl</p>
blaf.htm	<p>This file contains example Viewer look-and-feel settings and enables you to see what customization tags are currently set to. This file displays settings stored in blaf.css (see blaf.css entry above).</p> <p>On UNIX: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl</p> <p>On Windows: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl</p>
configuration.xml	<p>This file stores configuration settings for Discoverer. You can also use the Discoverer Services Configuration page in Oracle Enterprise Manager to configure some of the settings in this file.</p> <p>On UNIX: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/plus_files/xsl</p> <p>On Windows: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/plus_files/xsl</p>
defaults.txt	<p>This file stores factory-supplied default preferences.</p> <p>On UNIX: <ORACLE_HOME>/discoverer902/util</p> <p>On Windows: <ORACLE_HOME>/discoverer902/util</p>
dis51pr	<p>This file runs the command line utility used to manage preferences stored in the .reg_key.dc file.</p> <p>On UNIX: <ORACLE_HOME>/discoverer902/bin</p> <p>On Windows: <ORACLE_HOME>/discoverer902/bin</p>
discwb.sh	<p>This script file sets the PATH and other environment variables needed to run Discoverer utility scripts located in /discoverer902/util/. Because this script is included in most other script files, the commands in this file run automatically. Therefore, you do NOT need to run this script unless you are working independently of the Oracle Discoverer supplied scripts.</p> <p>Type the following at the command prompt:</p> <pre>> ./discwb.sh</pre> <p>Note: You must separate the periods with a space.</p>

File name	Description and location
plus_config.xml	<p>On UNIX: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/WEB-INF/</p> <p>On Windows: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/WEB-INF/</p>
pref.txt	<p>This file stores the Discoverer middle tier preferences, and is used to generate the .reg_key.dc file. On install, this file is populated using settings in the default.txt file.</p> <p>On UNIX: <ORACLE_HOME>/discoverer902/util</p> <p>On Windows: <ORACLE_HOME>/discoverer902/util</p>
registerSession.bat	<p>This file is a script file that registers the Discoverer session component (Windows specific).</p> <p>On UNIX: n/a</p> <p>On Windows: <ORACLE_HOME>\discoverer902\util</p>
registerSession.sh	<p>This file is a script file that registers the Discoverer session component (UNIX specific).</p> <p>On UNIX: <ORACLE_HOME>/discoverer902/util</p> <p>On Windows: n/a</p>
startoad.sh	<p>This file is a script file that starts the Object Activation Daemon.</p> <p>On UNIX: <ORACLE_HOME>/discoverer902/util</p> <p>On Windows: n/a</p>
startall.bat	<p>Start Discoverer, OAD, OSAGENT, and the Discoverer Preference component (Windows specific).</p> <p>On UNIX: n/a</p> <p>On Windows: <ORACLE_HOME>\discoverer902\util</p>
startall.sh	<p>Start Discoverer, OAD, OSAGENT, and the Discoverer Preference component (UNIX specific).</p> <p>On UNIX: <ORACLE_HOME>/discoverer902/util</p> <p>On Windows: n/a</p>
startpreference.sh	<p>This file is a script file that starts (and registers) the Discoverer preferences component (UNIX specific).</p> <p>On UNIX: <ORACLE_HOME>/discoverer902/util</p> <p>On Windows: n/a</p>

File name	Description and location
stopall.bat	Stops Discoverer, OAD, OSAGENT, and the Discoverer Preference component (Windows specific). On UNIX: n/a On Windows: <ORACLE_HOME>\discoverer902\util
stopall.sh	Stops Discoverer, OAD, OSAGENT, and the Discoverer Preference component (UNIX specific). On UNIX: <ORACLE_HOME>/discoverer902/util On Windows: n/a
stoppreference.sh	This file is a script file that stops (and unregisters) the Discoverer preferences component (UNIX specific). On UNIX: <ORACLE_HOME>/discoverer902/util On Windows: n/a
tnsnames.ora	This file contains the names and aliases of all the databases that users can access using Oracle9iAS Discoverer. On UNIX: <ORACLE_HOME>/network/admin On Windows: <ORACLE_HOME>/network/admin
ui_config.xml	This file stores user interface configuration settings for Discoverer. On UNIX: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl On Windows: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl
unRegisterSession.bat	This file is a script file that unregisters the Discoverer session component (Windows specific). On UNIX: n/a On Windows: <ORACLE_HOME>\discoverer902\util
unregistersession.sh	This file is a script file that registers the Discoverer session component (UNIX specific). On UNIX: <ORACLE_HOME>/discoverer902/util On Windows: n/a

Notes:

- On Windows NT, preferences are controlled by the NT service.

- On Unix, preferences are controlled by the startpreference.sh and stoppreference.sh scripts.

A.3 List of configuration settings in ui_config.xml

Note: For more information about customization settings in ui_config.xml, see [Section 10.1, "Customizing Discoverer Viewer"](#).

User Interface Area	Setting	Description
Configuration	base_dir="."	Specifies the location of directories for images and help if different from the default.
Appearance	option id="display_login_method_control" state="false"	Specifies whether to display the "Applications User" check box.
	option id="display_show_xml_link" state="true"	Specifies whether to display the "Show XML" link at the bottom of every page.
	option id="display_language_control" state="true"	Specifies whether to display the Language drop down list on the Connect dialog.
	option id="display_rerun_query_link" state="true"/	Specifies whether to display the Rerun query link on the Worksheet page. Note: If you are using Oracle9iAS Web Cache, set this value to false.
	option id="display_preferences_link" state="true"/	Specifies whether to display the Preferences global icon. Note: If you are using Oracle9iAS Web Cache, set this value to false.
	option id="display_presentation_options_link" state="true"/	Specifies whether to display the Presentation Option link on the Worksheet page. Note: If you are using Oracle9iAS Web Cache, set this value to false.
	option id="use_javascript_enhanced_ui" state="true"	Specifies whether to use the JavaScript enhanced user interface.

User Interface Area	Setting	Description
Behavior	option id="sticky_worksheets" state="true"	Specifies whether worksheet drills and pivot operations are remembered between visits to the same worksheet in a single session.
	option id="debug_mode" state="false"/	When set to true, every HTML page generated by Viewer includes a text box containing XML describing the internal state of the Viewer Servlet. This information is useful when developing custom XSL or debugging.
Presentation_ templates	look name="Corporate Look"	Specifies the name of the presentation template.
	component name="xxx" state="true false"	Specifies whether a particular UI component is displayed or hidden for the current presentation template (refer to the comments in ui_config.xml for more details about component names).
NLS	resource id="xxx" href="yyy" help="zzz"	Specifies the message file yyy and help file zzz to use for a particular language xxx.
	resource id="es" href="resources/es.xml" help="es" images="en"	The images attribute enables you to specify the sub-directory within the images directory to find images specific to this locale.
Help	<page name="add_connection" file="add_conn.htm"/>	Specifies the name of the help page for the Add Connection online page.
	<page name="add_eul" file="sel_eul.htm"/>	Specifies the name of the help page for the Add Connection: EUL page.
	<page name="add_responsibility" file="sel_resp.htm"/>	Specifies the name of the help page for the Add Connection: Responsibility page.
	<page name="connection_list" file="connections.htm"/>	Specifies the name of the help page for the Connections List page.
	<page name="home" file="index.htm"/>	Specifies the name of the help page for the top level help page.
	<page name="launch_plus" file="app_launch.htm"/>	Specifies the name of the help page for the Launch Discoverer Plus page (not used in this release.)

User Interface Area	Setting	Description
	<code><page name="sort_crosstab" file="sort_crosstab.htm"/></code>	Specifies the name of the help page for the Crosstab Sorting page (not used in this release).
	<code><page name="sort_table" file="sort_table.htm"/></code>	Specifies the name of the help page for the Table Sorting page.
	<code><page name="update_eul" file="edit_eul.htm"/></code>	Specifies the name of the help page for the Update Connection: EUL page.
	<code><page name="update_main" file="update_conn.htm"/></code>	Specifies the name of the help page for the Update Connection page.
	<code><page name="update_responsibility" file="edit_resp.htm"/></code>	Specifies the name of the help page for the Update Connection: Responsibility page.
	<code>page name="data" file="worksheet_display.htm"</code>	Specifies the name of the help page for the data page.
	<code>page name="edit_layout" file="edit_layout.htm"</code>	Specifies the name of the help page for the Edit layout page.
	<code>page name="export" file="export.htm"</code>	Specifies the name of the help page for the export page.
	<code>page name="parameters" file="edit_parameters.htm"</code>	Specifies the name of the help page for the parameters page.
	<code>page name="preferences" file="preferences.htm"</code>	Specifies the name of the help page for the preferences page.
	<code>page name="presentation" file="presentation_options.htm"</code>	Specifies the name of the help page for the presentation options page.
	<code>page name="reconnect" file="connect.htm"</code>	Specifies the name of the help page for the reconnect page.
	<code>page name="run_query" file="run_query.htm"</code>	Specifies the name of the help page for the start query page.
	<code>page name="running_query" file="query_progress.htm"</code>	Specifies the name of the help page for the running query page.
	<code>page name="workbooks" file="list_of_workbooks.htm"</code>	Specifies the name of the help page for the workbooks page.
	<code>page name="worksheets" file="list_of_worksheets.htm"</code>	Specifies the name of the help page for the worksheets page.

A.4 List of configuration settings in configuration.xml

Setting	Description
/disco:configuration/@locale	Specifies the default locale. The locale that Discoverer Viewer uses to display its UI is determined by the language setting in the end user's browser. If this setting has not been defined, Viewer will default to the system locale set on the middle tier. If Viewer is unable to determine the system locale, it will default on the locale set here.
/disco:configuration/@rmi	Specifies whether the servlet should listen for RMI requests from the Plus applet. Setting this to false prevents Discoverer Plus from working but frees up a small amount of resources on the middle tier.
/disco:configuration/@webcache	Specifies whether Oracle9iAS Web Cache is being used to cache the pages generated by the Discoverer servlet.
/disco:configuration/portlet/@maximumSessions	
/disco:configuration/portlet/xsl_translator/*	Same as above but for the Discoverer Portlet Provider rather than the Discoverer Servlet.
/disco:configuration/server/@session	Specifies the name of the instance of the Discoverer Server for both Discoverer Plus and Discoverer Viewer.
/disco:configuration/servlet/@charting	Specifies whether to display charts that have been saved with workbooks: <ul style="list-style-type: none"> ▪ set to true to display charts (default) ▪ set to false to prevent the display of charts (improves performance where charts are not required)
/disco:configuration/servlet/@exportRefreshPeriod	Specifies the delay in seconds before a browser is redirected to the original URL. Use this argument to prevent the browser timing out during export operations. Note: This setting only applies when a valid value has also been specified for the fm argument.
/disco:configuration/servlet/@queryRefreshPeriod	Specifies the delay in seconds before a query progress page is displayed (or re-displayed). You might use this argument to avoid writing code to handle query progress pages when using the Discoverer servlet to return data to an application you have written.
/disco:configuration/servlet/@userDefinedConnections	Specifies whether users are allowed to create private Connections. If set to false, users are still able to use public connections (and if they know how to create their own URLs, they will be able to create temporary connections).
/disco:configuration/servlet/xsl_translator/@cache	Specifies whether the servlet caches the xsl or not.
/disco:configuration/servlet/xsl_translator/@path	Specifies the path to the discoverer.xsl file.

Setting	Description
/disco:configuration/servlet/xsl_translator/@processor	Enables you to choose a different XSL Processor.
/disco:configuration/servlet/xsl_translator/stylesheet_pool	Enables you to configure how stylesheets are pooled for maximum performance (for more information, see Section 12.5.4, "How to enhance Discoverer Viewer scalability using XSL stylesheet pooling").
maximumSessions	<p>This setting specifies the maximum number of sessions the Portlet Provider can spawn at any given time.</p> <p>The Discoverer Portlet Provider runs Discoverer Sessions in order to refresh the portlet content in the background. It also uses Discoverer Sessions when a user is publishing or customizing a portlet.</p> <p>If the maximum number of sessions is reached, the Portlet Provider defers the background refresh until the number of sessions is below the maximum. If a user tries to customize or publish a portlet when the maximum number of sessions is reached, they are asked to retry later.</p> <p>The default value for this setting is 20.</p>
query_progress_delay	<p>Specifies the delay in seconds before a query progress page is displayed (or re-displayed). You can use this parameter to improve accessibility if you use a JAWS screen reader (for more information, see "Documentation Accessibility").</p> <p>Note: You can also set this parameter on a per-user basis using the URL parameter <i>qpd</i> (for more information, see Section 8.7, "Discoverer Viewer URL arguments").</p>

A.5 List of configuration settings in plus_config.xml

Setting	Description
transport	<p>Specifies the protocols the Discoverer Plus applet and the Discoverer servlet use to communicate.</p> <p>Hint: You can use Oracle Enterprise Manager to change this setting.</p>
jvm	Specifies the version of the JVM (e.g. JInitiator) to use. You can change the JVM for particular platforms, browsers, and browser versions.

Generating trace information in Discoverer

B.1 Generating trace information in Discoverer

This chapter explains why you might want to generate trace information and how to do it, and contains the following topics:

- [Section B.2, "About trace information"](#)
- [Section B.3, "How to generate trace information"](#)

B.2 About trace information

Occasionally, you might want to look at exactly what operations the Discoverer Server is performing. For example, your Web server might not be responding, or Discoverer SQL queries might not be returning data. In these scenarios, you might generate trace information and save it in a log file so that you can diagnose problems.

B.3 How to generate trace information

To generate trace information into a log file:

1. Open the register session script file in a text editor.

The name of this file depends on the operating system platform on which you are running the Discoverer Server, as follows:

- on UNIX, open the registersession.sh file
- on Windows, open the registersession.bat file

To find out more about the location of these files, see [Section A.2, "List of Discoverer file locations"](#).

2. Add a logdir entry to the file using the following syntax:

```
-logdir <directory> -loglevel <level>
```

where:

- <directory> is a directory in which the log file will be created
- <level> is a number between 1 and 3, indicating the level of detail of information that will be saved in the log file (the higher the number, the more detailed the information that will be saved)

For example, before the change a file might contain the following line:

```
oadutil ... dis51ws.exe -a session -a MySession -a -preference -a  
MyPreference ...
```

After appending the logdir command, this might look like this:

```
oadutil ... dis51ws.exe -a session -a MySession -a -preference -a  
MyPreference -a -logdir -a C:\temp -a -loglevel -a 3 ...
```

Note: If you omit the logdir argument, the log file is created in the current directory.

3. Unregister the session (for more information about unregistering sessions, see [Section 6.6, "How to register and unregister the Discoverer Session component with the OAD"](#)).
4. Re-register the session (for more information about registering sessions, see [Section 6.6, "How to register and unregister the Discoverer Session component with the OAD"](#)).

Notes:

- To stop the generation of trace information:
 1. Remove the logdir and loglevel parameters from the file containing the register session script.
 2. Unregister the session.
 3. Re-register the session.

Frequently asked questions

C.1 Frequently asked questions

This section contains the following frequently asked questions:

- "What environment variables are set?"
- "What should I do if I get a network error?"
- "What do I need to do if I get ORA-12154 TNS: Could not resolve service name?"
- "How can I find out whether the pref.txt file is corrupted?"
- "How to I create public connections?"
- "How do Discoverer end users create private connections?"

What environment variables are set?

During installation, two environment variables are set for the VisiBroker products:

```
VBROKER_JAVAVM = <ORACLE_9i_HOME>\jre11728o\bin\jre
VBROKER_TAG = -D
```

The CLASSPATH variable is not modified.

The PATH variable is updated with:

```
PATH = <iSUITES_HOME>\bin;<ORACLE_9i_HOME>\vbroker\bin;<ORACLE_
9i_HOME>\bin; <iSUITES_
HOME>\Apache\Perl\5.00503\bin\mswin32-x86;%PATH%
```

This minimizes conflict with other products.

What should I do if I get a network error?

If Oracle 9iAS Discoverer receives a network exception during login, check the following:

- Are there any directories or jar files in the CLASSPATH or PATH that might interfere with Oracle 9iAS Discoverer? Oracle 9iAS Discoverer uses VisiBroker CORBA V4.5 and JDK 1.3.
- Make sure the VisiBroker SmartAgent and OAD are up and running and that a new session can be started.
- Make sure the Preferences component is up and running. To confirm that the Preferences component is up and running, use the Windows Task Manager and make sure that Dis51pr.exe is running.

What do I need to do if I get ORA-12154 TNS: Could not resolve service name?

This is an Oracle error that appears when the session cannot connect to the database alias specified in the Connect field. Make sure that:

- the database alias is in the tnsnames.ora file
- the database alias exists in the tnsnames.ora file on every machine that runs sessions

Hint: If you have SQL*Plus (or any other Oracle product) running on that machine, try connecting to the database with that product.

How can I find out whether the pref.txt file is corrupted?

You cannot directly determine from the pref.txt file that it is corrupted. To test if the pref.txt file is corrupted:

1. Save a copy of the pref.txt file (to find out the location of this file, see [Section A.2, "List of Discoverer file locations"](#)).
2. Delete the original pref.txt file.
3. From the Windows Start menu, select Run.
4. In the Run window, type `regedit` and press [Enter].
5. Find the registry key at
HKEY_LOCAL_MACHINE\software\oracle\Oracle9iAS Discoverer
6. Delete that registry key.

7. Take a copy of the defaults.txt file (to find out the location of this file, see [Section A.2, "List of Discoverer file locations"](#)) and change the name of the copied file to pref.txt.
8. Choose Start | Programs | Oracle9iAS Discoverer Server Setup | Apply Preferences.
9. Run a Discoverer session.
If the session runs correctly, the original pref.txt file was probably corrupted.
10. Quit the session.
11. Delete the saved copy of the original pref.txt file because it contains the corrupted elements.
12. Reset the end user preferences by editing the new pref.txt file, for more information, see [Section 7.5, "How to set user preferences for all users"](#).

How to I create public connections?

For more information, see *Oracle9i Discoverer Administrator Administration Guide*.

How do Discoverer end users create private connections?

For more information, see *Oracle9iAS Discoverer Plus User's Guide*.

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