

Oracle®Application Server Discoverer

Configuration Guide

10g (9.0.4)

Part No. B10273-01

August 2003

Oracle Application Server Discoverer Configuration Guide, 10g (9.0.4)

Part No. B10273-01

Copyright © 1999, 2003 Oracle Corporation. All rights reserved.

The Programs (which include both the software and documentation) contain proprietary information of Oracle Corporation; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent and other intellectual and industrial property laws. Reverse engineering, disassembly or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. Oracle Corporation does not warrant that this document is error free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Oracle Corporation.

If the Programs are delivered to the U.S. Government or anyone licensing or using the programs on behalf of the U.S. Government, the following notice is applicable:

Restricted Rights Notice Programs delivered subject to the DOD FAR Supplement are "commercial computer software" and use, duplication, and disclosure of the Programs, including documentation, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement. Otherwise, Programs delivered subject to the Federal Acquisition Regulations are "restricted computer software" and use, duplication, and disclosure of the Programs shall be subject to the restrictions in FAR 52.227-19, Commercial Computer Software - Restricted Rights (June, 1987). Oracle Corporation, 500 Oracle Parkway, Redwood City, CA 94065.

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and Oracle Corporation disclaims liability for any damages caused by such use of the Programs.

Oracle is a registered trademark, and JInitiator, Oracle Discoverer, Oracle Rdb, Oracle Transparent Gateway, Oracle 7, Oracle 8i, Oracle 9i, Oracle9iAS Discoverer, OracleAS Discoverer, Oracle Application Server Discoverer, PL/SQL, SQL*Net and SQL*Plus are trademarks or registered trademarks of Oracle Corporation. Other names may be trademarks of their respective owners.

Perspective® for Java licensed from Three D Graphics, Inc. Copyright © 1997, 2002, Three D Graphics, Inc.

Contents

Send Us Your Comments	ix
Preface	xi
Intended Audience	xi
Conventions.....	xi
Related Documents.....	xii
Prerequisites to run Discoverer Plus and Discoverer Viewer.....	xii
OracleAS Discoverer Navigation and Accessibility	xiii
Documentation Accessibility	xiii
1 Introducing OracleAS Discoverer	
1.1 Introducing OracleAS Discoverer.....	1-1
1.2 What is OracleAS Discoverer?.....	1-1
1.3 What are the new configuration features in OracleAS Discoverer 10g (9.0.4)	1-4
1.4 About OracleAS Discoverer and Oracle Application Server	1-5
1.5 About configuring OracleAS Discoverer	1-5
1.6 How to confirm an OracleAS Discoverer installation.....	1-7
1.7 About connecting to Discoverer.....	1-9
1.8 What is the OracleAS Discoverer architecture?	1-9
1.9 About the Discoverer client tier	1-10
1.10 About the Discoverer Services tier.....	1-12
1.11 About the Discoverer database tier	1-16
1.12 How does OracleAS Discoverer work?.....	1-17

2 Running OracleAS Discoverer

2.1	Running OracleAS Discoverer.....	2-1
2.2	General information about running OracleAS Discoverer.....	2-2
2.3	What are the supported Web browser versions for Discoverer?.....	2-3
2.4	About restricting how users can run Discoverer	2-3
2.5	Which port number is Discoverer installed on?.....	2-4
2.6	What are the memory requirements and privileges required to run Discoverer Plus and Discoverer Viewer?.....	2-5
2.7	About running Discoverer Plus over HTTP for the first time on a client machine	2-5
2.8	About running Discoverer over HTTPS.....	2-7
2.9	How to run Discoverer Plus over HTTP in Microsoft Internet Explorer for the first time on a Windows client machine.....	2-17
2.10	How to run Discoverer Plus over HTTP in Netscape Navigator for the first time on a Windows client machine	2-20
2.11	How to run Discoverer Plus over HTTP in Netscape Navigator for the first time on a UNIX client machine	2-27
2.12	How to run Discoverer Viewer over HTTP	2-33

3 Managing OracleAS Discoverer connections

3.1	Managing OracleAS Discoverer connections.....	3-1
3.2	What is an OracleAS Discoverer connection?	3-1
3.3	What are the different types of Discoverer connections.....	3-3
3.4	About managing Discoverer connections?	3-4
3.5	About the Discoverer connections pages.....	3-5
3.6	About specifying whether Discoverer end users can create their own private connections	3-6
3.7	How to create a public connection.....	3-6
3.8	How to specify whether Discoverer end users can create private connections	3-10

4 Maintaining OracleAS Discoverer

4.1	Maintaining OracleAS Discoverer	4-1
4.2	About Oracle Enterprise Manager Application Server Control	4-2
4.3	About using Application Server Control to manage Discoverer components.....	4-10
4.4	About starting and stopping the Discoverer Service	4-12
4.5	About disabling and enabling Discoverer client tier components.....	4-17

4.6	About starting the Discoverer Service and the Discoverer servlets without using Application Server Control.....	4-22
4.7	How to start and stop the Discoverer servlets.....	4-22
4.8	About configuring options for the Discoverer Service and the Discoverer client tier components.....	4-24
4.9	About monitoring Discoverer metrics.....	4-29
4.10	How to list ports used by OracleAS.....	4-34
4.11	About Discoverer diagnostics and logging.....	4-39
4.12	About running Discoverer Plus with different Java Virtual Machines.....	4-48

5 Installing OracleAS Discoverer in a multiple machine environment

5.1	Installing OracleAS Discoverer in a multiple machine environment.....	5-1
5.2	What is a multiple machine Discoverer environment?	5-1
5.3	About OracleAS installations	5-3
5.4	What are the pre-requisites for using OracleAS Web Cache to provide load balancing for OracleAS Discoverer.....	5-7
5.5	About using OracleAS Web Cache Manager to configure load balancing for OracleAS Discoverer.....	5-7
5.6	How to deploy OracleAS Discoverer with load balancing using OracleAS Web Cache.....	5-8
5.7	About the Discoverer Preferences component in a multiple machine environment	5-20
5.8	About configuring the tnsnames.ora file in a multiple machine environment.....	5-24

6 Using OracleAS Discoverer Viewer with OracleAS Web Cache

6.1	Using OracleAS Discoverer Viewer with OracleAS Web Cache.....	6-1
6.2	About OracleAS Web Cache.....	6-1
6.3	What are the benefits of OracleAS Web Cache?	6-3
6.4	How does OracleAS Web Cache work?.....	6-4
6.5	When to use Discoverer Viewer with OracleAS Web Cache.....	6-5
6.6	How to use Discoverer Viewer with OracleAS Web Cache.....	6-6
6.7	How to turn on OracleAS Web Cache.....	6-7
6.8	How to restart OracleAS Web Cache	6-7
6.9	How to display the Rerun Query link, hide the Preferences link, and hide the Presentation Options link.....	6-9
6.10	How to turn off Discoverer Viewer's 'sticky worksheet' behavior	6-10

6.11	Notes about using Discoverer Viewer with OracleAS Web Cache.....	6-11
------	--	------

7 Customizing OracleAS Discoverer Viewer

7.1	Customizing OracleAS Discoverer Viewer	7-1
7.2	What is Discoverer Viewer customization?	7-2
7.3	Notes on customizing Discoverer in a multiple machine installation.....	7-3
7.4	What tools do you need to customize Discoverer Viewer?.....	7-3
7.5	About the sample browser look and feel file (blaf.htm)	7-3
7.6	About updating the Discoverer Viewer stylesheet file	7-4
7.7	About updating Discoverer Viewer XML files	7-6
7.8	About Discoverer Viewer options.....	7-7
7.9	About presentation options	7-7
7.10	About presentation templates	7-8
7.11	How to change the default Discoverer Viewer look and feel	7-10
7.12	How to change the default Discoverer Viewer logo	7-11
7.13	How to change Discoverer Viewer options.....	7-13
7.14	How to create a presentation template.....	7-15

8 Managing OracleAS Discoverer preferences

8.1	Managing OracleAS Discoverer preferences.....	8-1
8.2	What are Discoverer preferences?.....	8-1
8.3	About Discoverer system preferences.....	8-2
8.4	About Discoverer user preferences.....	8-3
8.5	About migrating Discoverer preferences.....	8-5
8.6	How to set user preferences for all users	8-5
8.7	How to set individual preferences for specific users	8-6
8.8	List of Discoverer user preferences.....	8-8

9 Using OracleAS Discoverer with OracleAS Portal

9.1	Using OracleAS Discoverer with OracleAS Portal	9-1
9.2	What is OracleAS Portal?	9-1
9.3	How to use OracleAS Discoverer with OracleAS Portal	9-4
9.4	How to register Discoverer Portlet Provider with OracleAS Portal	9-4
9.5	How to edit the Discoverer Portlet Provider.....	9-10

9.6	About changing the default performance settings for OracleAS Discoverer	9-12
10	Optimizing OracleAS Discoverer performance and scalability	
10.1	Optimizing OracleAS Discoverer performance and scalability	10-1
10.2	About Discoverer and performance	10-1
10.3	About Discoverer and scalability	10-1
10.4	How to improve Discoverer performance.....	10-2
10.5	How to take advantage of Discoverer's scalable architecture	10-11
11	Starting OracleAS Discoverer using URL parameters	
11.1	Starting OracleAS Discoverer using URL parameters	11-1
11.2	Why use Discoverer with URL parameters.....	11-1
11.3	What is the URL parameter syntax?	11-2
11.4	About specifying workbooks and worksheets using URL parameters.....	11-5
11.5	Examples of using URL parameters	11-10
11.6	Generic Discoverer URL parameters.....	11-13
11.7	Discoverer Plus URL parameters.....	11-17
11.8	Discoverer Viewer URL parameters.....	11-24
12	Maintaining security with OracleAS Discoverer	
12.1	Maintaining security with OracleAS Discoverer	12-1
12.2	About Discoverer and security.....	12-1
12.3	About Discoverer and the database security model	12-4
12.4	About Discoverer and the Discoverer EUL security model.....	12-4
12.5	About Discoverer and the Oracle Applications security model.....	12-5
12.6	About Discoverer and the OracleAS Security model.....	12-6
12.7	Using Discoverer with OracleAS Framework Security	12-7
12.8	Using Discoverer with Oracle Identity Management Infrastructure.....	12-18
12.9	Frequently asked questions about security	12-23
13	OracleAS Discoverer and Oracle Applications	
13.1	OracleAS Discoverer and Oracle Applications	13-1
13.2	About Discoverer connections and Oracle Applications	13-1
13.3	About Discoverer preference settings for Oracle Applications.....	13-3

13.4	How to configure Discoverer for an Oracle Applications only environment	13-3
13.5	How to configure Discoverer for a mixed application environment.....	13-4

A OracleAS Discoverer configuration files

A.1	OracleAS Discoverer configuration files.....	A-1
A.2	List of Discoverer file locations	A-1
A.3	List of configuration settings in ui_config.xml.....	A-7
A.4	List of configuration settings in configuration.xml	A-9
A.5	List of configuration settings in plus_config.xml	A-11
A.6	List of configuration settings in opmn.xml.....	A-12

B Changing Infrastructure Services for Discoverer

B.1	Changing Infrastructure Services for Discoverer	B-1
B.2	About OracleAS Release 9.0.4 installations	B-1
B.3	About changing Infrastructure Services for OracleAS Discoverer	B-2

C OracleAS Discoverer administrative account information

C.1	OracleAS Discoverer administrative account information	C-1
C.2	Database privileges granted by OracleAS Discoverer scripts to the PUBLIC user	C-1
C.3	Database privileges granted by OracleAS Discoverer scripts to the Discoverer manager	C-2

D Upgrading from earlier versions of OracleAS Discoverer

D.1	Upgrading from earlier versions of OracleAS Discoverer	D-1
D.2	Upgrading from Discoverer Version 9.0.2 to Discoverer Version 9.0.4.....	D-1
D.3	Upgrading from Discoverer Release 4.1 to Discoverer Version 9.0.4	D-2

E Frequently asked questions

E.1	Frequently asked questions.....	E-1
-----	---------------------------------	-----

Index

Send Us Your Comments

Oracle Application Server Discoverer Configuration Guide, 10g (9.0.4)

Part No. B10273-01

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.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most?

If you find any errors or have any other suggestions for improvement, please indicate the document title and part number, and the chapter, section, and page number (if available). You can send comments to us in the following ways:

- Electronic mail: discdoc_us@oracle.com
- FAX: 650 506 7421 Attn: OracleAS Discoverer
- Postal service:

Oracle Corporation
OracleAS Discoverer Documentation
500 Oracle Parkway, 2OP9
Redwood Shores, CA 94065
USA

If you would like a reply, please give your name, address, telephone number, and (optionally) electronic mail address.

If you have problems with the software, please contact your local Oracle Support Services.

Preface

Welcome to OracleAS Discoverer!

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

This guide does not explain how to install OracleAS Discoverer. For information about installation, refer to the *Oracle 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 about Oracle9AS Discoverer, please read the OracleAS Discoverer Release Notes in conjunction with this guide.

Intended Audience

This guide is intended for OracleAS administrators (also referred to as Discoverer middle tier 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 OracleAS software, the Oracle HTTP Server, and the OC4J servlet engine software are installed.

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 example.
boldface text	Boldface type in text indicates a field label on a Discoverer graphical user interface or Web page.
<i>italic text</i>	Italic type represents a user-supplied variable.
< >	Angle brackets enclose user-supplied names or values.
[]	Brackets enclose optional clauses from which you can choose one or none.
Menu name Command	Text in this format conveys a sequence of menu choices, e.g. choose the menu, then the command under that menu.
Courier text	Text in this format indicates a command to be typed at a command prompt.

Note that OracleAS Discoverer is supported on Windows 2000, and UNIX. Instructions for the Windows platform in this manual assume you are using Windows 2000 (unless stated otherwise).

Related Documents

For more information, see the following manuals:

- *Oracle Application Server Discoverer Plus User's Guide*
- *Oracle Discoverer Administrator Administration Guide*
- *Oracle Enterprise Manager Administrator's Guide*

Prerequisites to run Discoverer Plus and Discoverer Viewer

Before users can use Discoverer to analyze data, the database **must** contain a Discoverer EUL Version 5.1. The Discoverer manager must have created or updated the End User Layer (EUL) Version 5.1 with Oracle Discoverer Administrator Version 9.0.4 or later (shipped as part of Oracle Developer Suite 10g (9.0.4)).

OracleAS Discoverer Navigation and Accessibility

Keyboard Navigation

OracleAS 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 must 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 11.7, "Discoverer Plus URL parameters"](#)).

To further maximize usability, you might also do the following:

- 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 11.8, "Discoverer Viewer URL parameters"](#)).
 - on a global basis by using Application Server Control to specify a number of seconds delay (for more information see *Application Server Control 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"](#)).

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle Corporation is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information,

visit the Oracle Accessibility Program Web site at
<http://www.oracle.com/accessibility/>.

Accessibility of Code Examples in Documentation JAWS, a Windows screen reader, might not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS might not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation This documentation might contain links to Web sites of other companies or organizations that Oracle Corporation does not own or control. Oracle Corporation neither evaluates nor makes any representations regarding the accessibility of these Web sites.

Introducing OracleAS Discoverer

1.1 Introducing OracleAS Discoverer

This chapter introduces OracleAS Discoverer and contains the following topics:

- [Section 1.2, "What is OracleAS Discoverer?"](#)
- [Section 1.3, "What are the new configuration features in OracleAS Discoverer 10g \(9.0.4\)"](#)
- [Section 1.4, "About OracleAS Discoverer and Oracle Application Server"](#)
- [Section 1.5, "About configuring OracleAS Discoverer"](#)
- [Section 1.6, "How to confirm an OracleAS Discoverer installation"](#)
- [Section 1.7, "About connecting to Discoverer"](#)
- [Section 1.8, "What is the OracleAS Discoverer architecture?"](#)
- [Section 1.9, "About the Discoverer client tier"](#)
- [Section 1.10, "About the Discoverer Services tier"](#)
- [Section 1.11, "About the Discoverer database tier"](#)
- [Section 1.12, "How does OracleAS Discoverer work?"](#)

1.2 What is OracleAS Discoverer?

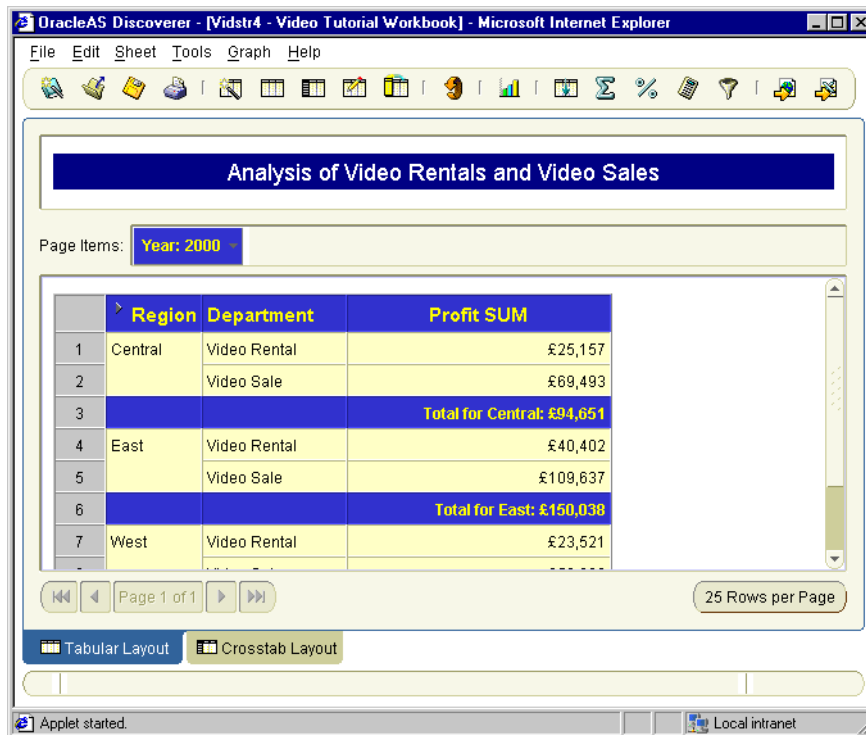
OracleAS Discoverer is a business intelligence tool for analyzing data and is a key component of Oracle Application Server (OracleAS). Discoverer provides an integrated business intelligence solution comprising intuitive ad-hoc query, reporting, analysis, and Web-publishing functionality. These tools enable non-technical users to gain immediate access to information from data marts, data

warehouses, and online transaction processing systems. OracleAS Discoverer integrates seamlessly with OracleAS Portal, enabling rapid deployment of Discoverer workbooks and worksheets to Web portals.

There are two OracleAS 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.

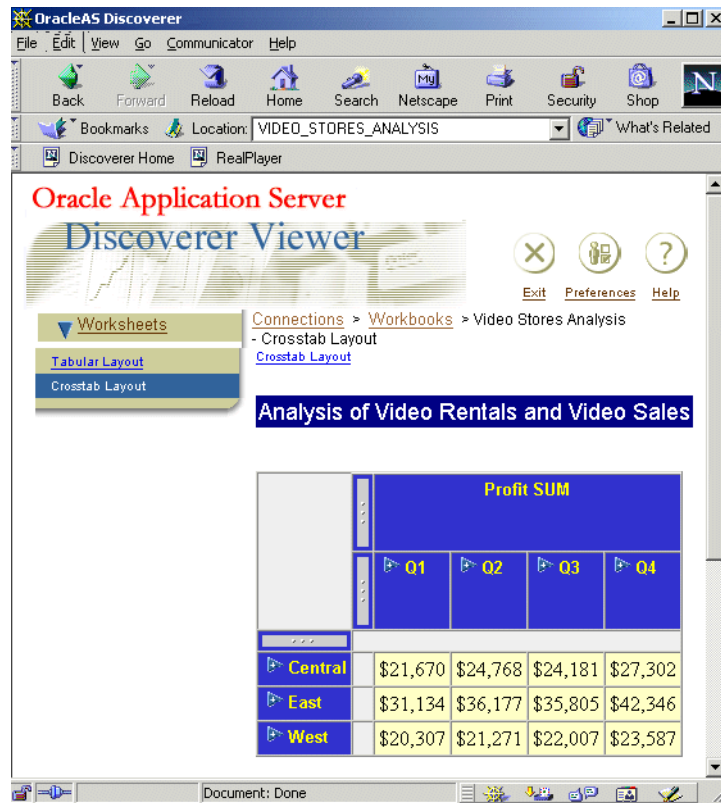
Figure 1–1 OracleAS Discoverer Plus



- Discoverer Viewer is a Web tool for accessing interactive reports and charts created using Discoverer Plus. Because Discoverer Viewer is a thin client HTML tool, users require only a Web 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 OracleAS 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, conditions, totals).
- Discoverer Viewer users access the interactive reports in read-only mode, though they can typically personalize reports in a restricted number of ways (e.g. drilling to the data that they require, applying parameters).

1.3 What are the new configuration features in OracleAS Discoverer 10g (9.0.4)

This section lists configuration changes in OracleAS Discoverer 10g (9.0.4).

1.3.1 User preference changes

This section lists changes to user preferences in OracleAS Discoverer 10g (9.0.4). For a complete list of user preferences, see [Section 8.8, "List of Discoverer user preferences"](#).

1.3.1.1 User preferences removed

The following user preferences have been removed:

- DefaultUserTypeIsApps

1.3.1.2 User preferences added

The following user preferences have been added or are being documented for the first time:

- AllowAggregationOverRepeatedValues
- AxisLabelBehavior
- CellPadding
- DisableAlternateSortOptimization
- DisableFanTrapResolution
- EuroCountries
- ExcelExportWithMacros
- ExportGroupSortedItemsAsBlank
- GraphAxesAutoScaledFromZero
- GraphShowRollupAggregates
- MaxRowsPerFetch
- NonAggregableValue
- NotifyNewRunsOnConnect
- OutOfFetch

- PrintHeadersOnce
- PrintPercentageOfTitle
- SaveLastUsedParamValue
- ShowExpiredRunsOnExit
- SQLFlatten
- SQLItemTrim
- SQLJoinTrim

1.4 About OracleAS Discoverer and Oracle Application Server

OracleAS Discoverer is installed as part of Oracle Application Server when you do an installation of type OracleAS Business Intelligence and Forms. The default installation is to install the Discoverer middle tier on a single machine. However, you can install the Discoverer middle tier on multiple machines to improve performance and reliability (for more information, refer to [Chapter 5.1, "Installing OracleAS Discoverer in a multiple machine environment"](#)).

OracleAS Discoverer is fully integrated with other OracleAS components, such as:

- OracleAS Portal
- OracleAS Single Sign-On
- OracleAS Reports Services

1.5 About configuring OracleAS Discoverer

After an OracleAS BI and Forms installation, OracleAS Discoverer works without further configuration. Depending on your requirements, you might want to perform one or more of the Discoverer middle tier configuration tasks in the table below.

Note: For more information about Discoverer architecture, see [Section 1.8, "What is the OracleAS Discoverer architecture?"](#)).

What do you want to do?	Look in this section:
Confirm a Discoverer installation.	Section 1.6, "How to confirm an OracleAS Discoverer installation"

What do you want to do?	Look in this section:
Run Discoverer Plus or Discoverer Viewer.	Section 2.1, "Running OracleAS Discoverer"
Create public connections (i.e. database logins).	Section 3.1, "Managing OracleAS Discoverer connections"
Configure the Discoverer middle tier using Application Server Control (e.g. starting and stopping the Discoverer Service).	Section 4.1, "Maintaining OracleAS Discoverer"
Provide load balancing for Discoverer, or specify a central Discoverer Preference Server.	Section 5.1, "Installing OracleAS Discoverer in a multiple machine environment"
Deploy Discoverer with OracleAS Web Cache to improve performance	Section 6.1, "Using OracleAS Discoverer Viewer with OracleAS Web Cache"
Customize the appearance of OracleAS Discoverer Viewer.	Section 7.1, "Customizing OracleAS Discoverer Viewer"
Specify Discoverer end user preferences.	Section 8.1, "Managing OracleAS Discoverer preferences"
Register the Discoverer Portal Provider for use with OracleAS Portal.	Section 9.1, "Using OracleAS Discoverer with OracleAS Portal"
Fine tune Discoverer for optimal performance and scalability.	Section 10.1, "Optimizing OracleAS Discoverer performance and scalability"
Deploy specify Discoverer workbooks and worksheets using URL details.	Section 11.1, "Starting OracleAS Discoverer using URL parameters"
Configure Discoverer to work with firewalls and demilitarized zones	Section 12.1, "Maintaining security with OracleAS Discoverer"
Configure Discoverer for use with Oracle applications.	Section 13.1, "OracleAS Discoverer and Oracle Applications"
Find out about Discoverer configuration files	Section A.1, "OracleAS Discoverer configuration files"
Deploy OracleAS Discoverer with a different Infrastructure Services.	Section B.1, "Changing Infrastructure Services for Discoverer"

What do you want to do?	Look in this section:
Find out about administrative accounts used by OracleAS Discoverer.	Section C.1, "OracleAS Discoverer administrative account information"
Upgrade Discoverer to a newer version.	Section D.1, "Upgrading from earlier versions of OracleAS Discoverer"
Find out about frequently asked questions.	Section E.1, "Frequently asked questions"

1.6 How to confirm an OracleAS Discoverer installation

If you have installed OracleAS, you might want confirm that the OracleAS Discoverer installation is correct by running Discoverer Viewer.

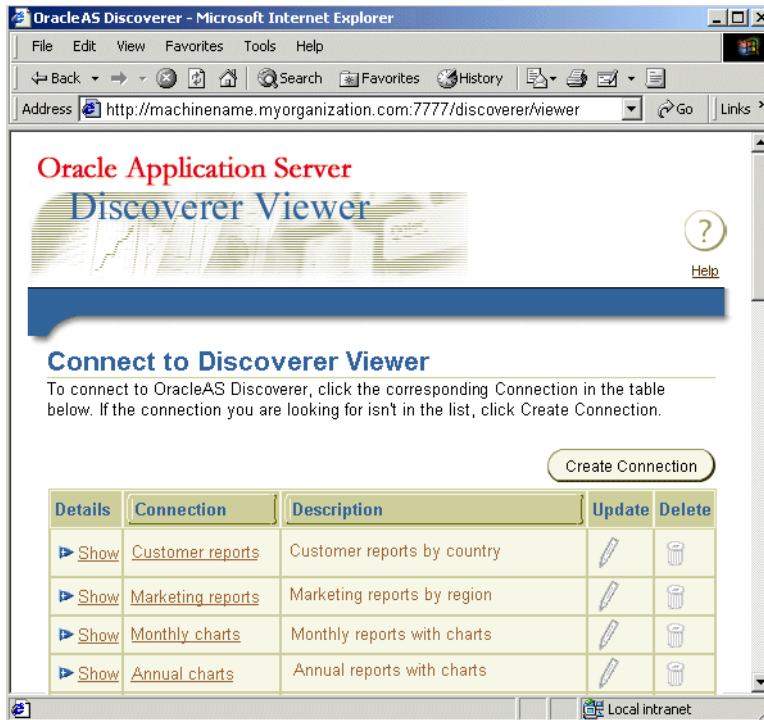
To confirm an OracleAS Discoverer installation:

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 OracleAS installation.

For example:

`http://<host.domain>:<port>/discoverer/viewer`

The Connect to Discoverer Viewer page is displayed.



Note: If Single Sign-On is enabled, you will first be asked to authenticate as a single sign-on user.

2. Create a private connection to store database login details (click Create Connection to add a private connection).
3. In the Connect to Discoverer Viewer page, click the new connection name in the **Connection** column to start Discoverer Viewer.

Open a Discoverer workbook. You can now begin to analyze data using Discoverer's powerful business intelligence analysis tools.

Notes

- For more information about how to create a private connection, see *Oracle Application Server Discoverer Plus User's Guide*.
- For more information about starting Discoverer Viewer, see [Section 2.12, "How to run Discoverer Viewer over HTTP"](#).

- For more information about starting Discoverer Plus, see [Section 2.7, "About running Discoverer Plus over HTTP for the first time on a client machine"](#).
- You can use the `checkdiscoverer` utility to verify a Discoverer configuration and report on failures or anomalies (for more information about the `checkdiscoverer` utility, see [Section 4.11.2, "What is the `checkdiscoverer` utility?"](#)).

1.7 About connecting to Discoverer

Discoverer end users connect to Discoverer in the following ways:

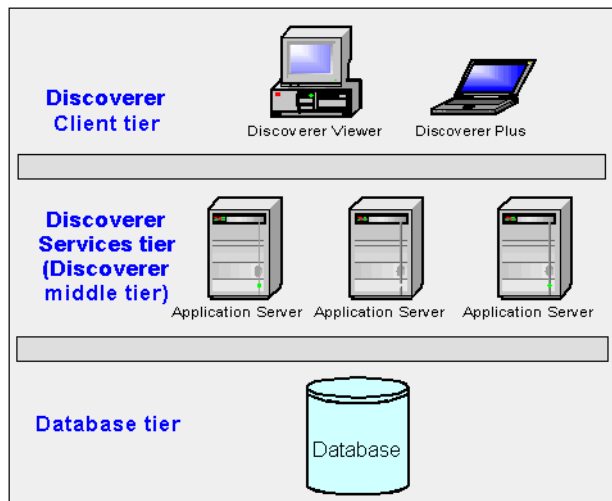
- using Oracle Discoverer Desktop, end users log in using their database user name and password (for more information, see *Discoverer Desktop User's Guide*)
- using OracleAS Discoverer Plus or OracleAS Discoverer Viewer, end users store login information in private connections, then select a connection (for more information, see *Discoverer Plus User's Guide* or *Discoverer Viewer Online Help*)

Discoverer middle tier managers can also provide public connections that enable Discoverer Plus and Discoverer Viewer end users to start Discoverer automatically without having to enter login details. For more information, see [Section 3.7, "How to create a public connection"](#).

1.8 What is the OracleAS Discoverer architecture?

OracleAS 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 OracleAS 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 1.9, "About the Discoverer client tier"](#)).
- The Discoverer Services tier (also referred to as the Discoverer middle tier) including one or more OracleAS Discoverer installs and one OracleAS infrastructure install. For more information, see [Section 1.10, "About the Discoverer Services tier"](#).
- The Discoverer database tier, containing data and metadata (for more information, see [Section 1.11, "About the Discoverer database tier"](#)).

Notes

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

1.9 About the Discoverer client tier

The Discoverer client tier is the Web browser accessing Discoverer Plus or Discoverer Viewer (see figure below). The Discoverer client tier also includes

Discoverer Portlet Provider, which is used to publish Discoverer workbooks using OracleAS Portal. To deploy Discoverer Plus and Discoverer Viewer to end users, you must provide them with an appropriate URL (for more information, see [Section 2.1, "Running OracleAS Discoverer"](#)).

Figure 1–4 *The Discoverer client tier*



You can enable and disable Discoverer client tier components using Application Server Control (for more information, see [Section 4.5, "About disabling and enabling Discoverer client tier components"](#)).

1.9.1 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 5.5 or later), or Netscape Navigator (version 4.7 or later), both with a Java Virtual Machine (JVM) such as 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 creating workbooks and analyzing 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 2.1, "Running OracleAS Discoverer"](#)).

1.9.2 About the Discoverer client tier and Discoverer Viewer

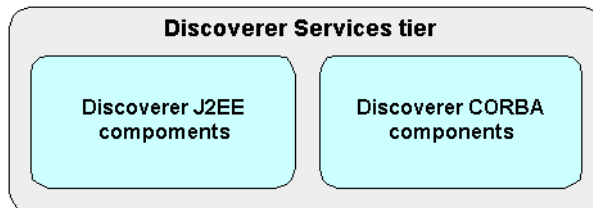
For Discoverer Viewer, the minimum requirement for the client machine is that it can run HTML through a Web browser (e.g. Microsoft Internet Explorer (version 5.5

or later), or Netscape Navigator (version 4.7 or later). In addition, JavaScript must be enabled in the browser.

1.10 About the Discoverer Services tier

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

Figure 1–5 Discoverer Services tier



The Discoverer Services tier consists of:

- the Discoverer J2EE components (for more information, see [Section 1.10.1, "About the Discoverer J2EE components"](#))
- the Discoverer CORBA components (for more information, see [Section 1.10.2, "About the Discoverer CORBA components \(Discoverer Service\)"](#))

Notes

- The Discoverer Services tier also stores the Discoverer Plus applet, which is downloaded to client machines when Discoverer end users run Discoverer Plus for the first time (for more information, see [Section 2.1, "Running OracleAS Discoverer"](#)).
- All machines running the Discoverer middle tier components must be on the same subnet.

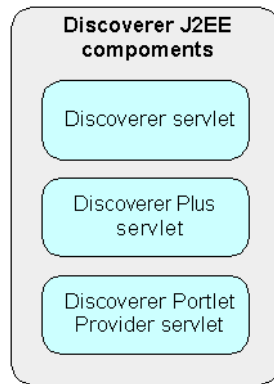
1.10.1 About the Discoverer J2EE components

The Discoverer J2EE components comprise the following:

- the Discoverer servlet (for more information, see [Section 1.10.1.1, "What is the Discoverer servlet?"](#))

- the Discoverer Plus servlet (for more information, see [Section 1.10.1.2, "What is the Discoverer Plus servlet?"](#))
- the Discoverer Portlet Provider servlet (for more information, see [Section 1.10.1.3, "What is the Discoverer Portlet Provider servlet?"](#))

Figure 1–6 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.

For more information about starting and stopping Discoverer servlets, see [Section 4.7, "How to start and stop the Discoverer servlets"](#).

1.10.1.1 What is the Discoverer servlet?

The Discoverer servlet manages connections and login for Discoverer Plus and Discoverer Viewer, and generates Discoverer Viewer HTML pages from HTTP requests using an XML/XSL processor.

1.10.1.2 What is the Discoverer Plus servlet?

The Discoverer Plus servlet forwards requests from the Discoverer servlet to the Discoverer Plus applet.

1.10.1.3 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 OracleAS Portal page. For more information about Discoverer Portlet Provider, see [Section 9.1, "Using OracleAS Discoverer with OracleAS Portal"](#).

1.10.2 About the Discoverer CORBA components (Discoverer Service)

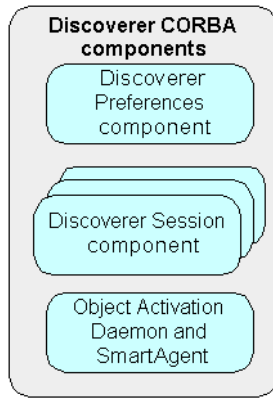
The Discoverer CORBA (Common Object Request Broker Architecture) components are responsible for activating Discoverer when an end user starts a Discoverer session (i.e. when a user connects to Discoverer Plus or Discoverer Viewer).

Note: Collectively, the Discoverer CORBA components are referred to as the Discoverer Service (for more information, see [Section 4.4, "About starting and stopping the Discoverer Service"](#)).

The Discoverer CORBA components are used by all of the Discoverer client tier components (i.e. Discoverer Plus, Discoverer Viewer and Discoverer Portlet Provider).

The Discoverer CORBA components comprise the following:

- the Discoverer Session component (for more information, see [Section 1.10.2.1, "What is the Discoverer Session component?"](#))
- the Discoverer Preferences component (for more information, see [Section 1.10.2.2, "What is the Discoverer Preferences component?"](#))
- the Object Activation Daemon (OAD) and SmartAgent - these are third party Visibroker CORBA components (supplied by Inprise Corporation) that are installed with Discoverer (for more information, see [Section 1.10.2.3, "What is the Object Activation Daemon?"](#))

Figure 1–7 Discoverer CORBA components

1.10.2.1 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.

1.10.2.2 What is the Discoverer Preferences component?

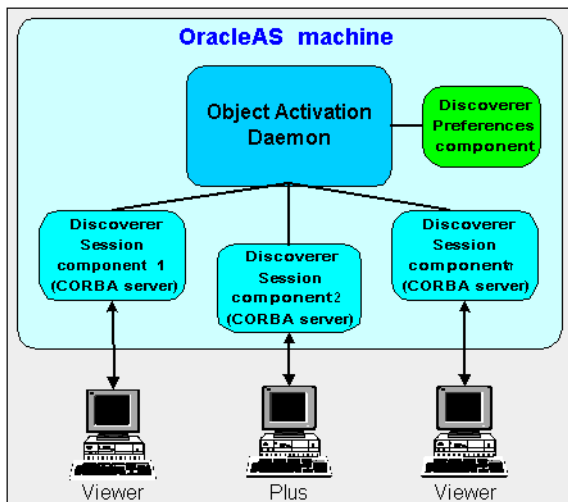
The Discoverer Preferences component provides a single location for preference settings for all OracleAS Discoverer users (i.e. users of both Discoverer Plus and Discoverer Viewer). The Discoverer Services tier relies on stored preference settings to specify the default Discoverer behavior.

Note: In a multiple machine environment with different Discoverer Session components running on different machines, Discoverer uses a single Preferences component on one machine. For more information about designating a single Preferences component, see [Section 5.7, "About the Discoverer Preferences component in a multiple machine environment"](#).

1.10.2.3 What is the Object Activation Daemon?

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

Figure 1–8 OAD, Preferences component, and Session components in a single machine OracleAS install



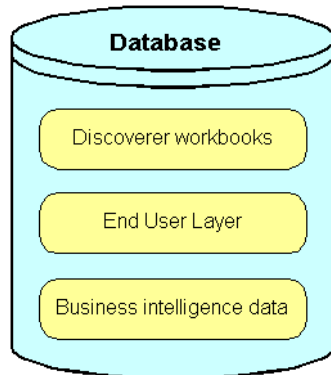
The OAD is installed on each OracleAS machine. A machine on which the OAD component has been installed can run multiple concurrent Discoverer Session components, each supporting a single user login session.

In a multiple machine environment (i.e. where you install OracleAS 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.

1.11 About the Discoverer database tier

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

Figure 1–9 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 data that users want to analyze

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

Notes

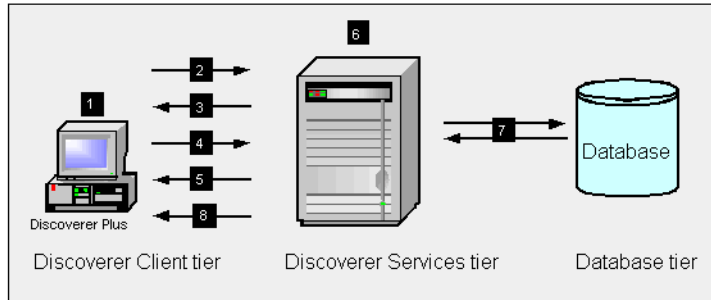
- Before users can use Discoverer to analyze data, the database **must** contain a Discoverer EUL Version 5.1. The Discoverer manager must have created or updated the End User Layer (EUL) Version 5.1 with Oracle Discoverer Administrator Version 9.0.4 or later (shipped as part of Oracle Developer Suite 10g (9.0.4)).

1.12 How does OracleAS Discoverer work?

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

1.12.1 How does Discoverer Plus work?

Figure 1–10 The Discoverer Plus process



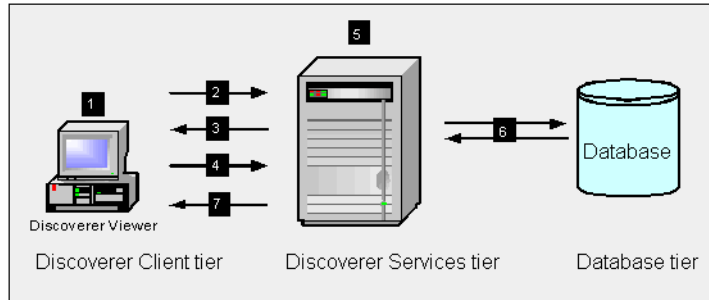
1. The user launches a Web browser on a client computer and types the URL of the Discoverer Plus servlet.
2. The Web browser accesses the Discoverer Plus servlet on the Discoverer Services tier, which forwards the request to the Discoverer servlet.
3. The Discoverer servlet retrieves the Discoverer Connections 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 Discoverer Services tier 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 send a request to the OAD on the Discoverer Services tier machine and a Discoverer session starts.

At this point, the connection is direct from the Discoverer applet to the Discoverer session.

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.

1.12.2 How does Discoverer Viewer work?

Figure 1–11 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 Discoverer Services tier.
3. The Discoverer servlet retrieves the Discoverer Connections page and returns this to the client.
4. The user selects a connection, which is returned to the Discoverer servlet on the Discoverer Services tier.
5. Meanwhile, the Discoverer servlet send a request to the OAD on the Discoverer Services tier 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.

How does OracleAS Discoverer work?

Running OracleAS Discoverer

2.1 Running OracleAS Discoverer

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

- Section 2.2, "General information about running OracleAS Discoverer"
- Section 2.3, "What are the supported Web browser versions for Discoverer?"
- Section 2.4, "About restricting how users can run Discoverer"
- Section 2.5, "Which port number is Discoverer installed on?"
- Section 2.6, "What are the memory requirements and privileges required to run Discoverer Plus and Discoverer Viewer?"
- Section 2.7, "About running Discoverer Plus over HTTP for the first time on a client machine"
- Section 2.8, "About running Discoverer over HTTPS"
- Section 2.9, "How to run Discoverer Plus over HTTP in Microsoft Internet Explorer for the first time on a Windows client machine"
- Section 2.10, "How to run Discoverer Plus over HTTP in Netscape Navigator for the first time on a Windows client machine"
- Section 2.11, "How to run Discoverer Plus over HTTP in Netscape Navigator for the first time on a UNIX client machine"
- Section 2.12, "How to run Discoverer Viewer over HTTP"

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

Notes

- Before users can use Discoverer to analyze data, the database **must** contain a Discoverer EUL Version 5.0.2 or higher. The Discoverer manager must have created or updated the End User Layer (EUL) Version 5.0.2 with Oracle Discoverer Administrator Version 9.0.4 or later (shipped as part of Oracle Developer Suite).
- You can use the checkdiscoverer utility to verify a Discoverer configuration and report on failures or anomalies (for more information about the checkdiscoverer utility, see [Section 4.11.2, "What is the checkdiscoverer utility?"](#)).
- In some circumstances you might want to remove the Discoverer Plus applet from a client machine. For example, to provide a clean environment in which to run Discoverer Plus by removing older versions of Discoverer Plus. The location of the Discoverer Plus applet depends on the version of Windows running on that machine. For example, on Windows 2000, the Discoverer Plus applet is typically located in:

Windows 2000 - C:\Documents and Settings\\Oracle Jar Cache

You might also need to clear the browser's temporary files (e.g. in Internet Explorer, choose Tools | Internet Options and click Delete Files).

2.2 General information about running OracleAS Discoverer

To run Discoverer Viewer, you just need an Internet browser, as follows:

- To run Discoverer Viewer over HTTP, start an Internet browser and enter the Discoverer Viewer HTTP URL (e.g. `http://<host.domain>:<HTTP port>/discoverer/viewer`).

For more information, see [Section 2.12, "How to run Discoverer Viewer over HTTP"](#).

- To run Discoverer Viewer over HTTPS, start an Internet browser and enter the Discoverer Viewer HTTPS URL (e.g. `https://<host.domain>:<HTTPS port>/discoverer/viewer`).

For more information, see [Section 2.8, "About running Discoverer over HTTPS"](#).

To run Discoverer Plus, you need an Internet browser, and possibly the following additional software, as follows:

- If the client browser machine does not have a JVM installed (e.g. Oracle JInitiator), you need to install a JVM and initialize the Discoverer Plus applet for

that machine. For more information, see [Section 2.7, "About running Discoverer Plus over HTTP for the first time on a client machine"](#).

- To run Discoverer Plus over HTTPS, you must have installed a security certificate from a Certificate Authority. For more information, see [Section 2.8, "About running Discoverer over HTTPS"](#).

2.3 What are the supported Web browser versions for Discoverer?

The preferred browsers for Discoverer are:

- Windows - Microsoft Internet Explorer versions 5.5 and 6.0 (version 6.0 is the preferred version)
- Windows - Netscape Navigator 4.79 and 6.0
- UNIX - Netscape Navigator 4.7 and 6.0

Discoverer Viewer will also run with Internet Explorer 5.0. However, note the following:

- There are known bugs in Internet Explorer 5.0 which can cause intermittent problems when posting information from Viewer form pages such as the parameter screen.
- Internet Explorer versions prior to 5.5 have a variety of compatibility issues with certain versions of Microsoft Excel. For this reason, customers who use Internet Explorer and the "Export to Excel" feature in Discoverer Plus and Viewer are strongly recommended to use Internet Explorer 5.5 or higher.

Note: These problems are generic to Internet Explorer and Microsoft Excel and are not specific to their use with Oracle products.

- Performance of the HTML interface for Discoverer Viewer is substantially better with Microsoft Internet Explorer 5.5 and 6.0.

2.4 About restricting how users can run Discoverer

In a secure Discoverer environment you want to enable only authorized end users to access Discoverer. For example, you might want to limit users to read-only access to Discoverer workbooks using Discoverer Viewer.

Depending on your security requirements, you might do any of the following to provide a secure Discoverer environment:

- You might prevent Discoverer users creating their own connections. If you disable private connections, Discoverer end users can only start Discoverer using public connections (i.e. login information) that you specify.
For more information, see [Section 3.6, "About specifying whether Discoverer end users can create their own private connections"](#).
- You might prevent users using Discoverer Plus to modify workbooks. If you disable Discoverer Plus, users only have read-only access to workbooks using Discoverer Viewer.
You disable Discoverer Plus using Application Server Control (for more information, see [Section 4.5, "About disabling and enabling Discoverer client tier components"](#)).
- you might run Discoverer Plus in read-only mode for specified Discoverer end users by removing the Create/Edit Query privilege in Oracle Discoverer Administrator (for more information, see *Oracle Discoverer Administrator Administration Guide*)
- You might enable Oracle Advanced Security (formerly Advanced Security Option) encryption between the middle tier and the database.

For more information about other Discoverer security features, see [Section 12.1, "Maintaining security with OracleAS Discoverer"](#).

2.5 Which port number is Discoverer installed on?

When you perform an OracleAS installation of type Business Intelligence and Forms (i.e. a Discoverer installation) Discoverer is installed on port 7777 or the next available port.

For example, an OracleAS infrastructure installation uses port 7777. Therefore, if you have an OracleAS installation of type Business Intelligence and Forms on the same machine as the infrastructure install, Discoverer will typically use a port in the range 7778 - 7877.

Hint: If you are not sure which default ports Discoverer is using, display the OracleAS ports list page (for more information, see [Section 4.10, "How to list ports used by OracleAS"](#)).

For information about changing default OracleAS ports for Discoverer, see [Section 4.10.1, "How to change the port on which Discoverer is deployed"](#).

2.6 What are the memory requirements and privileges required to run Discoverer Plus and Discoverer Viewer?

To run OracleAS Discoverer Plus, you require the following on the Discoverer Plus client machine (i.e. the browser machine):

- administrative privileges on the client machine, because you need to be able to install a Java Virtual Machine (e.g. Oracle JInitiator)
- at least 15KB of Users Personal Profile Space for the Oracle Jar Cache
- a minimum of between 25 - 50 MB of available disk space to install a JVM

To run OracleAS Discoverer Viewer, you need only to be able to run a standard Web browser (e.g. Microsoft Internet Explorer) that has JavaScript and cookies enabled.

2.7 About running Discoverer Plus over HTTP 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 a Java Virtual Machine (e.g. Oracle JInitiator) and initialize the Discoverer Plus software. This process is typically performed when:

- you have installed OracleAS 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

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.

The Discoverer Plus initialization procedure is different for Microsoft Internet Explorer and Netscape Navigator. Refer to the appropriate task below:

- for Microsoft Internet Explorer on a Windows client, see [Section 2.9, "How to run Discoverer Plus over HTTP in Microsoft Internet Explorer for the first time on a Windows client machine"](#)
- for Netscape Navigator on a Windows client, see [Section 2.10, "How to run Discoverer Plus over HTTP in Netscape Navigator for the first time on a Windows client machine"](#)
- for Netscape Navigator on a UNIX client, see [Section 2.11, "How to run Discoverer Plus over HTTP in Netscape Navigator for the first time on a UNIX client machine"](#)

Notes

- If Single Sign-On is enabled, you will first be asked to authenticate as a single sign-on user before a Discoverer connections page is displayed.
 - If Single Sign-On is not enabled, Discoverer end users are asked to enter a database password when they select a private connection.
- Note:** A Discoverer connection stores login information.
- 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 the JVM (e.g. Oracle JInitiator). If you have previously configured the machine to always trust content from Oracle Corporation, this dialog is not displayed.

Figure 2–1 Security Warning dialog



Note: 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), increase the Timeout value in the pref.txt file on the middle tier and apply the preferences. For more information, see [Section 8.8, "List of Discoverer user preferences"](#).
- The steps in [Section 2.9, "How to run Discoverer Plus over HTTP in Microsoft Internet Explorer for the first time on a Windows client machine"](#) and

Section 2.10, "How to run Discoverer Plus over HTTP in Netscape Navigator for the first time on a Windows client machine" assume that you are using the Initiator Java Virtual Machine (JVM). If you are using a different JVM, the installation steps might differ slightly.

2.8 About running Discoverer over HTTPS

Before you can run Discoverer over HTTPS (i.e. in Secure Sockets Layer (SSL) mode), you must have installed a security certificate from a Certificate Authority (e.g. Verisign) on the Oracle HTTP server on the OracleAS instance. For more information about installing security certificates, see *Oracle Application Server Administrator's Guide* and *Oracle Application Server Security Guide*.

An OracleAS installation includes a dummy certificate on the OracleAS instance that you can use to confirm that HTTPS is deployed. You must install a valid security certificate to make sure that communication with the OracleAS instance is secure.

A security certificate confirms to the Discoverer client machine that the holder of the security certificate is who they say they are.

How to run Discoverer over HTTPS is different for Discoverer Viewer and Discoverer Plus, as follows:

- To run Discoverer Viewer over HTTPS, simply specify HTTPS on the Discoverer Viewer URL.

For example:

```
https://<host.domain>:443/discoverer/viewer
```

When the Security Alert dialog is displayed, click Yes to accept the security certificate issued by the certificate authority you are using. Discoverer Viewer then starts in HTTPS mode. For more information about starting Discoverer Viewer, see [Section 2.12, "How to run Discoverer Viewer over HTTP"](#).

- To run Discoverer Plus over HTTPS, you install the Web server's security certificate into the Java Virtual Machine (JVM) certificate store in all client machines that will run Discoverer Plus. For more information, see [Section 2.8.1, "How to install a security certificate on a Discoverer Plus client machine"](#).

Notes

- When you install OracleAS, SSL is installed automatically, but it is not enabled by default. To deploy Discoverer using SSL, make sure that SSL is enabled (i.e.

make sure that the start-mode parameter in opmn.xml is set to 'ssl-enabled'). For more information, see *Oracle HTTP Server Administrator's Guide*.

2.8.1 How to install a security certificate on a Discoverer Plus client machine

You install a security certificate on a Discoverer client machine when you run Discoverer Plus for the first time over HTTPS (i.e. in Secure Sockets Layer (SSL) mode).

Hint: If you do not have a JVM installed on the client machine, before you try to run Discoverer for the first time in Secure Sockets Layer (SSL) mode, do one of the following:

- run Discoverer Plus in HTTP mode, which installs a JVM (e.g. Oracle JInitiator) on the client machine for you (for more information, see [Section 2.7, "About running Discoverer Plus over HTTP for the first time on a client machine"](#))
- install a JVM on the client machine manually

To install a Discoverer Plus security certificate:

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

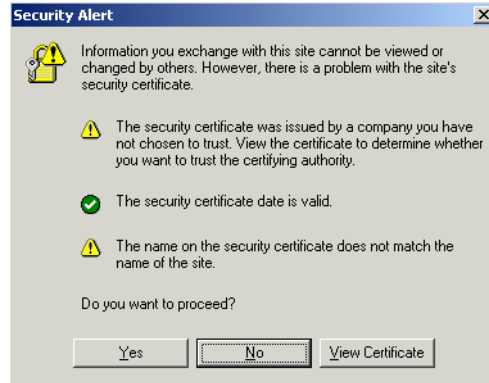
For example:

`https://<host.domain>:<port>/discoverer/plus`

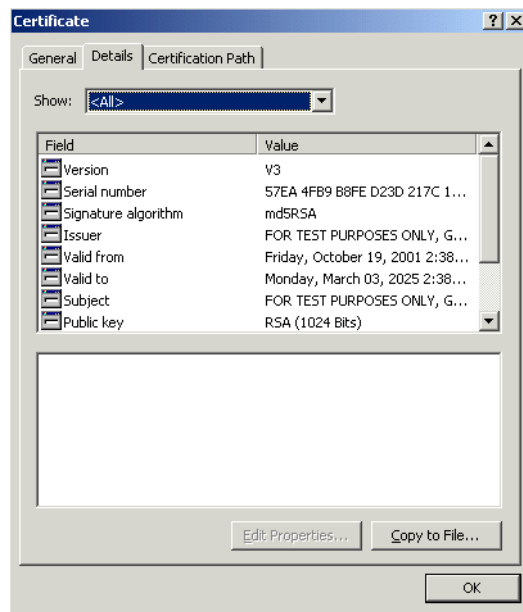
where:

- `<host.domain>` is the server name and domain on which the Oracle HTTP Server is installed
- `<port>` is the HTTPS port number (default 4443) on which Discoverer is installed
- `/discoverer/plus` is the URL command that starts Discoverer Plus

The Security Alert dialog is displayed.



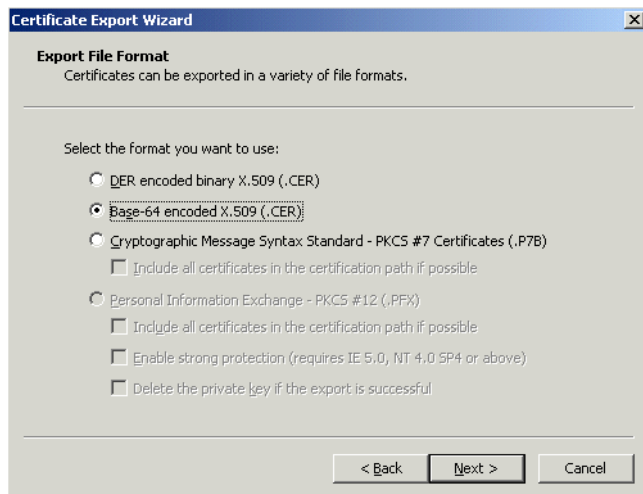
2. Click View Certificate to display the Certificate dialog.
3. Display the Details tab.



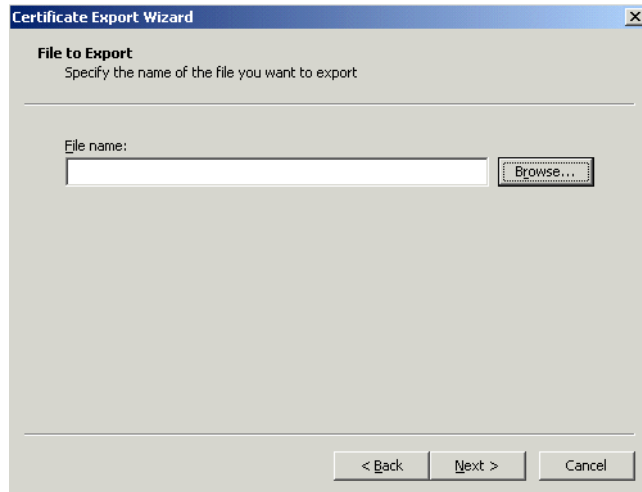
4. Click Copy to File to start the Certificate Export Wizard.



5. Click Next to display the Export File Format page in the Certificate Export Wizard.



6. Select the **Base-64 encoded X.509 (.CER)** radio button.
7. Click Next to display the File to Export page in the Certificate Export Wizard.



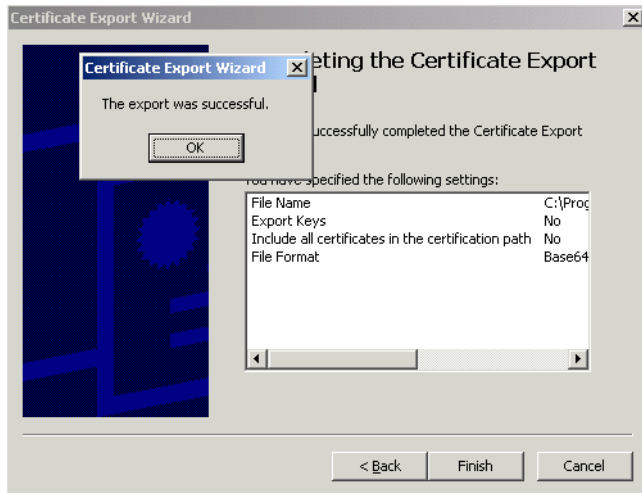
You now choose a temporary name and location for the exported certificate file.

8. Enter a file location and file name (with a '.cer' extension) for the exported certificate file in the **File name** field (e.g. c:\tmp\mycertificate.cer).
9. Click Next to display the final page of the Certificate Export Wizard dialog.



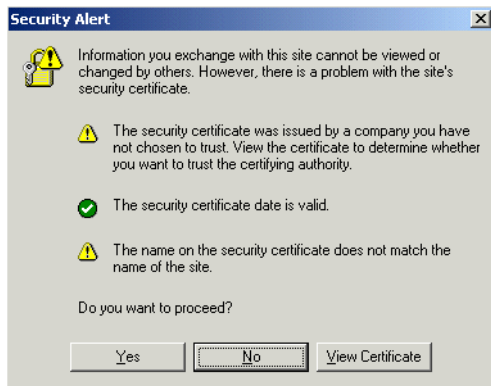
10. Click Finish to complete the certificate installation.

A confirmation dialog is displayed.



11. Click OK to close the confirmation dialog and the Certificate Export Wizard and return to the Details tab of the Certificate dialog.

12. Click OK in the Details tab of the Certificate dialog to return to the Security Alert dialog.



13. Leave the Security Alert dialog displayed.
14. Import the security certificate file that you saved earlier into the certificate store of the JVM you are using, as follows:
 - if you are using JInitiator, see [Section 2.8.2, "How to import certificate details into the JInitiator certificate store"](#)
 - if you are using Java Plug-in 1.4, see [Section 2.8.3, "How to import certificate details into the Java Plug-in 1.4 certificate store"](#)
15. (optional) Delete the certificate file that you saved earlier (e.g. c:\tmp\mycertificate.cer).
16. At the Security Alert dialog, click Yes to accept the security certificate and start Discoverer Plus.

Discoverer Plus starts in HTTPS mode and displays the Connect to Discoverer Plus page.

Oracle Application Server
Discoverer Plus

Help

Connect to Discoverer Plus

To connect to OracleAS Discoverer, click the corresponding Connection in the table below. If the connection you are looking for isn't in the list, click Create Connection.

Create Connection

Details	Connection	Description	Update	Delete
▶ Show	Customer reports	Customer reports by country		
▶ Show	Marketing reports	Marketing reports by region		
▶ Show	Monthly charts	Monthly reports with charts		
▶ Show	Annual charts	Annual reports with charts		

Done Local intranet

Note: Notice the padlock symbol displayed on the status bar of the browser, which indicates that the Web session is secure.

Notes

- For information about installing security certificates with a JVM other than Oracle JInitiator and Java Plug-in 1.4, consult the JVM's proprietary documentation.
- If you install a new JVM when you start Discoverer Plus, you must reinstall the Web server's security certificate into the JVM certificate store on all client machines that run Discoverer Plus.

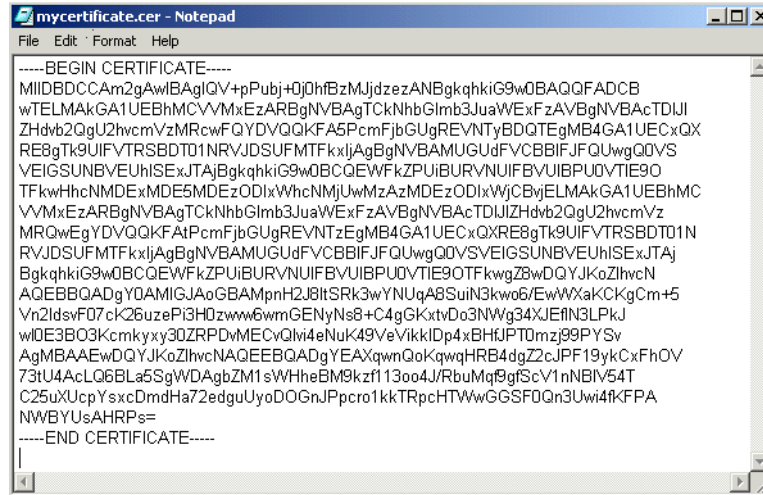
2.8.2 How to import certificate details into the JInitiator certificate store

When configuring Discoverer Plus to run over HTTPS using JInitiator, you import the certificate details into the JInitiator certificate store after you have used the Certificate Export Wizard to export a certificate file (for more information, see [Section 2.8.1, "How to install a security certificate on a Discoverer Plus client machine"](#)).

To import certificate details into the JInitiator certificate store:

1. Open the certificate file that you saved in [Section 2.8.1, "How to install a security certificate on a Discoverer Plus client machine"](#) in a text editor (e.g. `c:\tmp\mycertificate.cer`).

The screenshot below shows a certificate file called `mycertificate.cer` opened in a text editor.



```

-----BEGIN CERTIFICATE-----
MIDBDCCAm2gAwlBAglQV+pPubj+OjDhBzMJjdzdezANBqkqkhiG9w0BAQQFADCB
wTELMaKGA1UEBhMCVVMxEzARBgNVBAgTCKNhbGlmb3JuaWEzAVBgNVBAcTDUI
ZHdb2QgU2hvcnVzMRcwFQYDVOQKFA5PcmFjbGUgREVNTyBDQTEgMB4GA1UECzQX
RE8gTk9UaWVTRSBBDT01NRVJDSUFMTFkxIjAgBgNVBAMUGUdFVCBBIJFQJQWwgQ0VS
VEIGSUNBVEUuHSEsJTajBqkqkhiG9w0BCQEWFkZPUIBURVNUIFBUIBPU0VTIE9O
TFkWHhcNMDEzMDExODIxWhcNMjUwMzAzMDEzODIxWjCBYjELMAkGA1UEBhMC
VVMxEzARBgNVBAgTCKNhbGlmb3JuaWEzAVBgNVBAcTDUIZHdb2QgU2hvcnVz
MRQWegYDVOQKFA5PcmFjbGUgREVNTzEgMB4GA1UECzQXRE8gTk9UaWVTRSBBDT01N
RVJDSUFMTFkxIjAgBgNVBAMUGUdFVCBBIJFQJQWwgQ0VSVEIGSUNBVEUuHSEsJTaj
BqkqkhiG9w0BCQEWFkZPUIBURVNUIFBUIBPU0VTIE9OTFkwgZ3wDQyJKoZlhcN
AQEBBQADgY0AMIGJAoGBAMpnH2J8ItSRk3wYNUqABSuiN3kwo6/EwWXakCKgCm+5
Vn2ldsvF07ck26uzePi3H0zwww6wmGENyNs8+C4gGKxtvDo3NWg34XEIIN3LPKJ
wIDE3B03Kcmkyxy30ZRPDvMECvQlvi4eNuk49VeVikkIDp4xBHJPT0mzj99PYsV
AgMBAAEwDQYJKoZIhvcNAQEEBQADgYEAxqwnQoKqwgHRB4dgZ2cJPF19ykCxFOV
73tU4AcLQ6BLa5SgWDAgBZM1sWHheBM9kzf113oo4J/RbuMqf9gScV1nNBIV54T
C25uXUcpYsxcDmdHa72edguUyoDOGnJpccr1kkTRpcHTWwGGSFOQn3Uwi4fkFPA
NWBYSuAHRP=
-----END CERTIFICATE-----

```

Initiator's certificate store is contained in a file called certdb.txt

2. Open the certdb.txt file in a separate text editor (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
3. Copy the entire contents (including the '-----BEGIN CERTIFICATE-----' and '-----END CERTIFICATE-----' text) of the certificate file (e.g. c:\tmp\mycertificate.cer) to the end of the certdb.txt file.
4. Save the certdb.txt file.

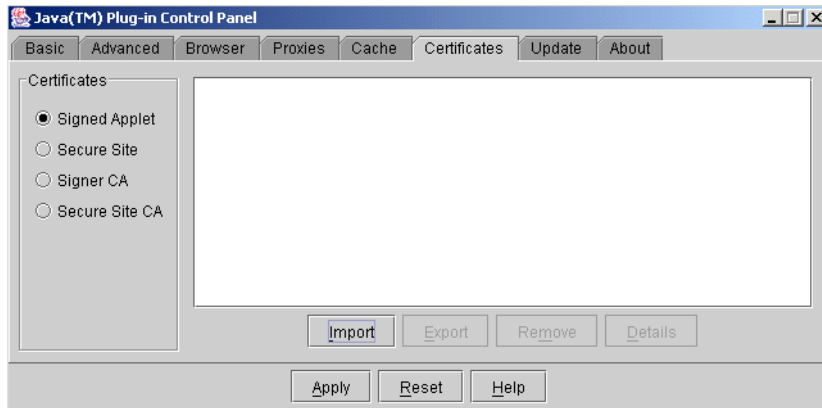
2.8.3 How to import certificate details into the Java Plug-in 1.4 certificate store

When configuring Discoverer Plus to run over HTTPS using Java Plug-in 1.4, you import the certificate details into the Java Plug-in 1.4 certificate store after you have used the Certificate Export Wizard to export a certificate file.

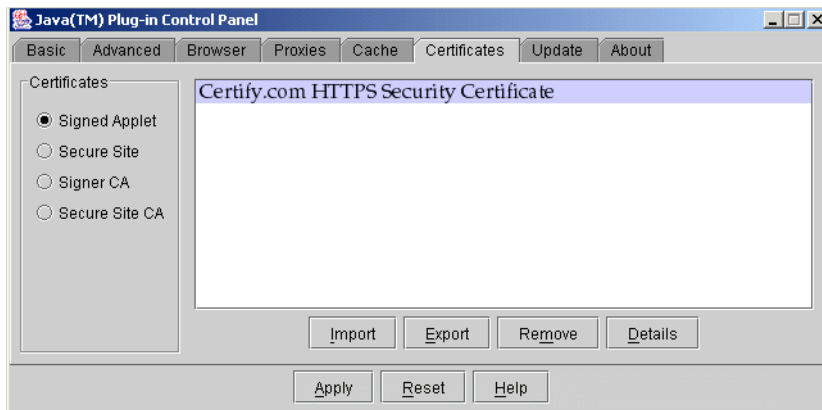
1. Display the Java Plug-In Control Panel.

For example, on Windows choose Start | Settings | Control Panel to display the Windows Control Panel, then select the Java Plug-in icon.

2. Display the Certificates tab.



3. Select the **Signed Applet** radio button in the Certificates panel (if it is not selected already).
4. Click Import and import the certificate file that you saved in [Section 2.8.1, "How to install a security certificate on a Discoverer Plus client machine"](#) (e.g. c:\tmp\mycertificate.cer).



The security certificate is displayed in the list of certificates in the Java Plug-in 1.4 certificate store.

5. Click Apply.

2.9 How to run Discoverer Plus over HTTP in Microsoft Internet Explorer for the first time on a Windows client machine

You might run Discoverer Plus for the first time on a client machine if you:

- have installed OracleAS and want to test that Discoverer is working
- want to set up a client machine to use Discoverer Plus

To run Discoverer Plus in Microsoft Internet Explorer for the first time on a Windows 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 OracleAS installation.

For example:

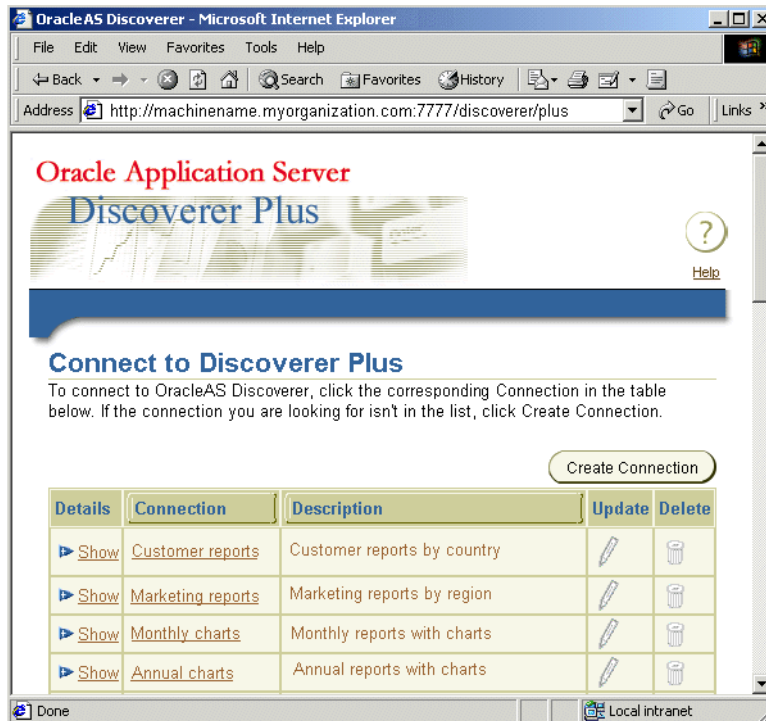
`http://<host.domain>:<port>/discoverer/plus`

where:

- `<host.domain>` is the server name and domain on which the Oracle HTTP Server is installed
- `<port>` is the port number (typically 7777 or 7778) on which Discoverer is installed (for more information, see [Section 2.5, "Which port number is Discoverer installed on?"](#))
- `/discoverer/plus` is the URL command that starts Discoverer Plus

The Connect to Discoverer Plus page is displayed.

Figure 2–2 Connect to Discoverer Plus page



Note: If Single Sign-On is enabled, you will first be asked to authenticate as a single sign-on user.

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

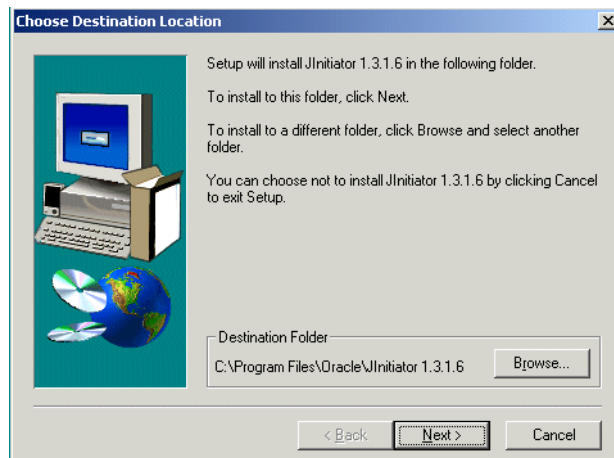
Hint: If no connections are displayed in the **Connection** column, you will have to create a new connection before continuing. For more information about creating private connections, see *Oracle Application Server Discoverer Plus User's Guide*. You can also use public connections that have been created by the Discoverer manager (for more information, see [Section 3.7, "How to create a public connection"](#)).

Depending on the software already installed on the client machine, you might have to download and install a Java Virtual Machine (JVM) (e.g. Oracle JInitiator). If you are not prompted to download and install a JVM, go straight to step 5.

Hint: If the JVM installation process fails, close down extraneous processes on the client machine, then re-try.

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

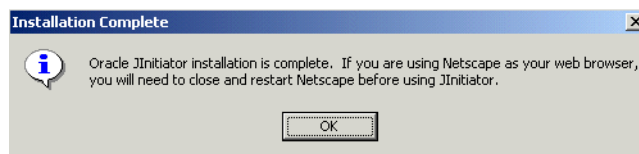
Figure 2–3 Choose Destination Location dialog



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

Oracle JInitiator is installed in the location you specified. When the Oracle JInitiator installation is complete, the Installation Complete dialog is displayed.

Figure 2–4 Installation Complete dialog



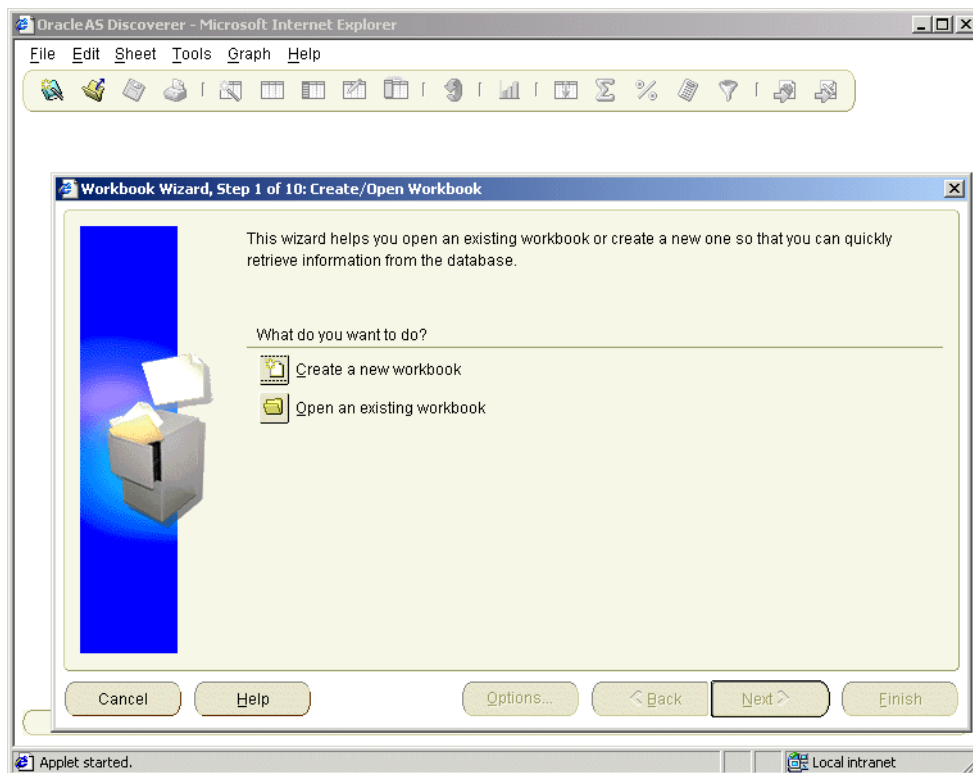
4. Click OK to close the Installation Complete dialog.

Oracle JInitiator is now installed on the client machine.

5. Wait for the Discoverer Plus applet to initialize.

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

Figure 2–5 Discoverer Plus Workbook Wizard: Create/Open Workbook dialog



You are now running Discoverer Plus.

2.10 How to run Discoverer Plus over HTTP in Netscape Navigator for the first time on a Windows client machine

You might run Discoverer Plus for the first time on a client machine if you:

- have installed OracleAS and want to test that Discoverer is working
- want to set up a client machine to use Discoverer Plus

To run Discoverer Plus in Netscape Navigator for the first time on a Windows 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 OracleAS installation.

For example:

`http://<host.domain>:<port>/discoverer/plus`

where:

- `<host.domain>` is the server name and domain on which the Oracle HTTP Server is installed
- `<port>` is the port number (typically 7777 or 7778) on which Discoverer is installed (for more information, see [Section 2.5, "Which port number is Discoverer installed on?"](#))
- `/discoverer/plus` is the URL command that starts Discoverer Plus

The Connect to Discoverer Plus page is displayed.

Figure 2–6 Connect to Discoverer Plus page



Note: If Single Sign-On is enabled, you will first be asked to authenticate as a single sign-on user.

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

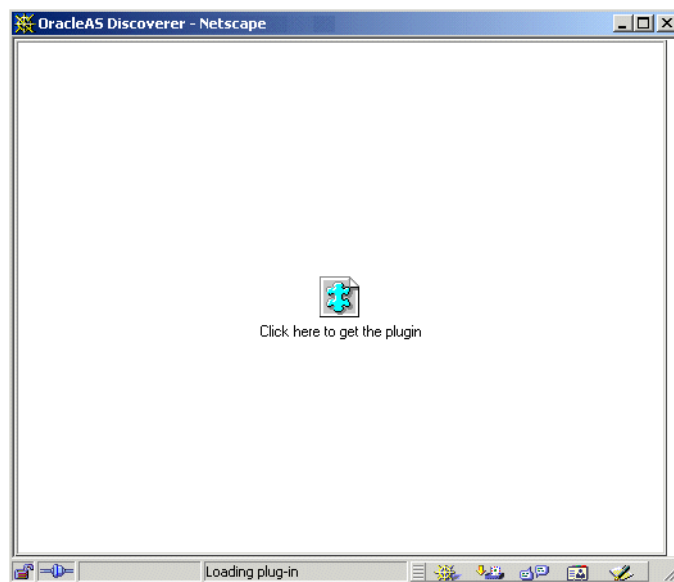
Hint: If no connections are displayed in the **Connection** column, you will have to create a new connection before continuing. For more information about creating private connections, see *Oracle Application Server Discoverer Plus User's Guide*. You can also use public connections that have been created by the Discoverer manager (for more information, see [Section 3.7, "How to create a public connection"](#)).

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, go straight to step 10.

Hint: If the JVM installation process fails, close down extraneous processes on the client machine, then re-try.

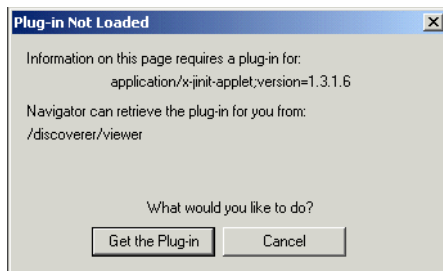
When you are using Netscape Navigator, if you have to download and install Oracle JInitiator, the OracleAS Discoverer - Netscape page is displayed.

Figure 2-7 OracleAS Discoverer - Netscape page



Then the Plug-in not Loaded page is displayed.

Figure 2–8 Plug-In Not Loaded dialog



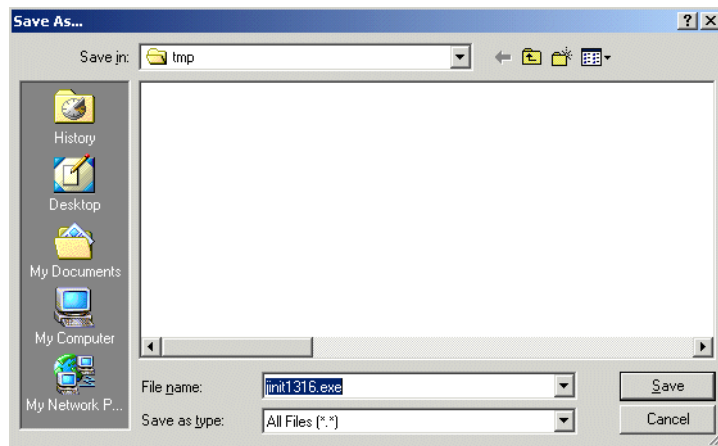
3. Click Get the Plug-in to display the Setting Up OracleAS Discoverer Plus page.

Figure 2–9 Setting Up OracleAS Discoverer Plus page



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

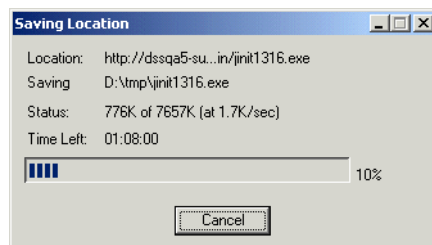
Figure 2–10 Save As... dialog for Oracle JInitiator



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

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

Figure 2–11 Saving Location dialog



6. When the Oracle JInitiator installation file has been saved, open the file, as follows:
 - a. Open a file browser and navigate to where the Oracle JInitiator installation file was saved in the previous step.

- b. Double-click the Oracle JInitiator installation 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).

Oracle JInitiator is installed in location you specified. When the Oracle JInitiator installation is complete, the Installation Complete dialog is displayed.

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

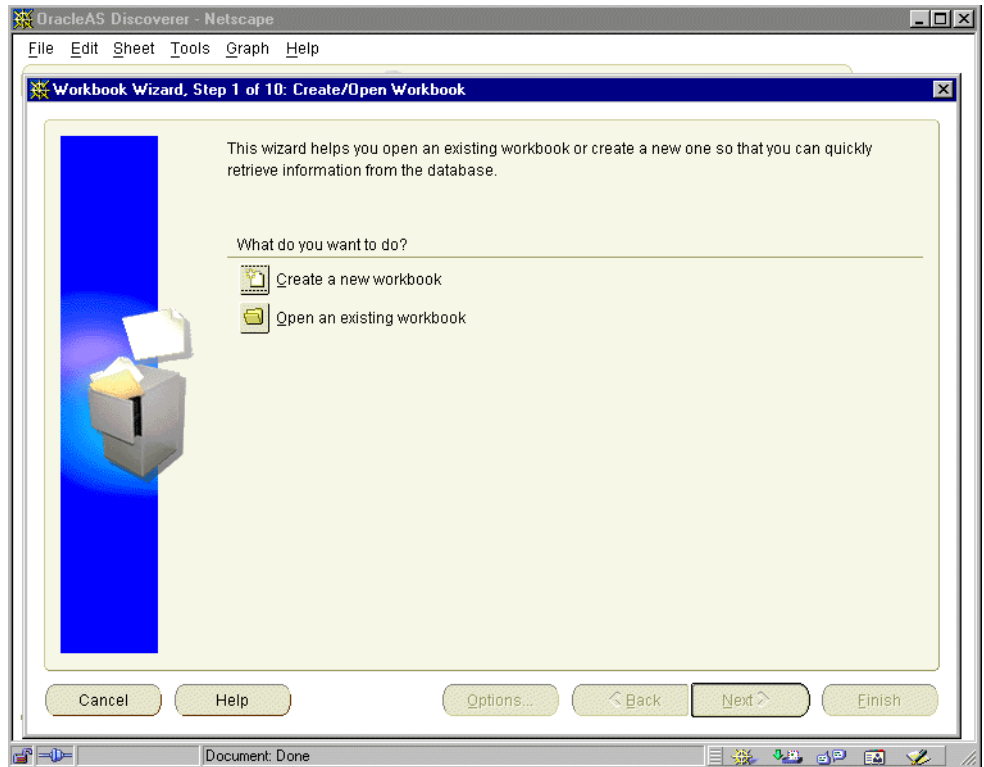
Oracle JInitiator is now installed on the client machine.

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

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

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

Figure 2–12 Discoverer Plus Workbook Wizard: Create/Open Workbook dialog



You are now running Discoverer Plus.

2.11 How to run Discoverer Plus over HTTP in Netscape Navigator for the first time on a UNIX client machine

You might run Discoverer Plus for the first time on a client machine if you:

- have installed OracleAS and want to test that Discoverer is working
- want to set up a client machine to use Discoverer Plus

To run Discoverer Plus in Netscape Navigator for the first time on a UNIX 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 OracleAS installation.

For example:

`http://<host.domain>:<port>/discoverer/plus`

where:

- `<host.domain>` is the server name and domain on which the Oracle HTTP Server is installed
- `<port>` is the port number (typically 7777 or 7778) on which Discoverer is installed (for more information, see [Section 2.5, "Which port number is Discoverer installed on?"](#))
- `/discoverer/plus` is the URL command that starts Discoverer Plus

The Connect to Discoverer Plus page is displayed.

Figure 2–13 Connect to Discoverer Plus page



Note: If Single Sign-On is enabled, you will first be asked to authenticate as a single sign-on user.

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

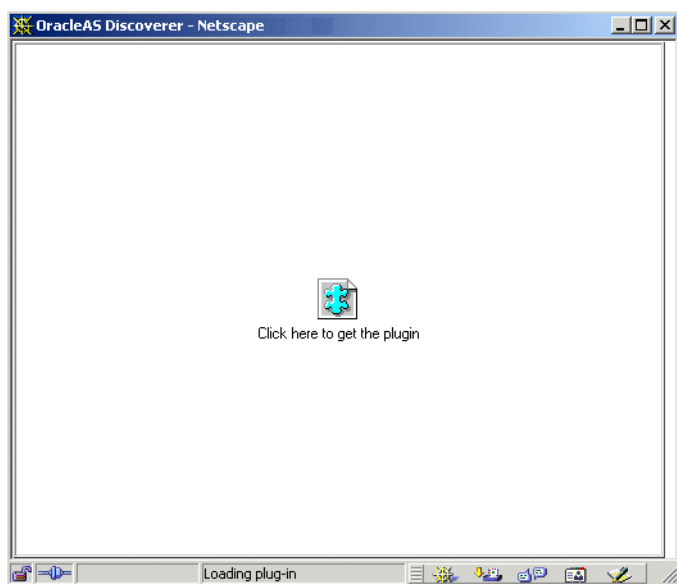
Hint: If no connections are displayed in the **Connection** column, you will have to create a new connection before continuing. For more information about creating private connections, see *Oracle Application Server Discoverer Plus User's Guide*. You can also use public connections that have been created by the Discoverer manager (for more information, see [Section 3.7, "How to create a public connection"](#)).

Depending on the software already installed on the client machine, you might have to download and install Sun Java Plug-In. If you are not prompted to download and install Sun Java Plug-In, go straight to step 7.

Hint: If the JVM installation process fails, close down extraneous processes on the client machine, then re-try.

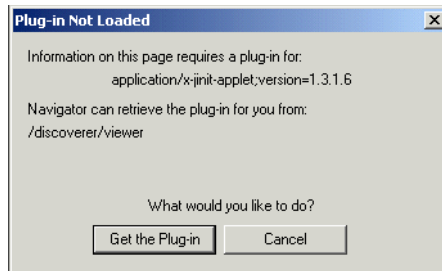
When you are using Netscape Navigator, if you have to download and install Sun Java Plug-In, the OracleAS Discoverer - Netscape page is displayed.

Figure 2–14 OracleAS Discoverer - Netscape page



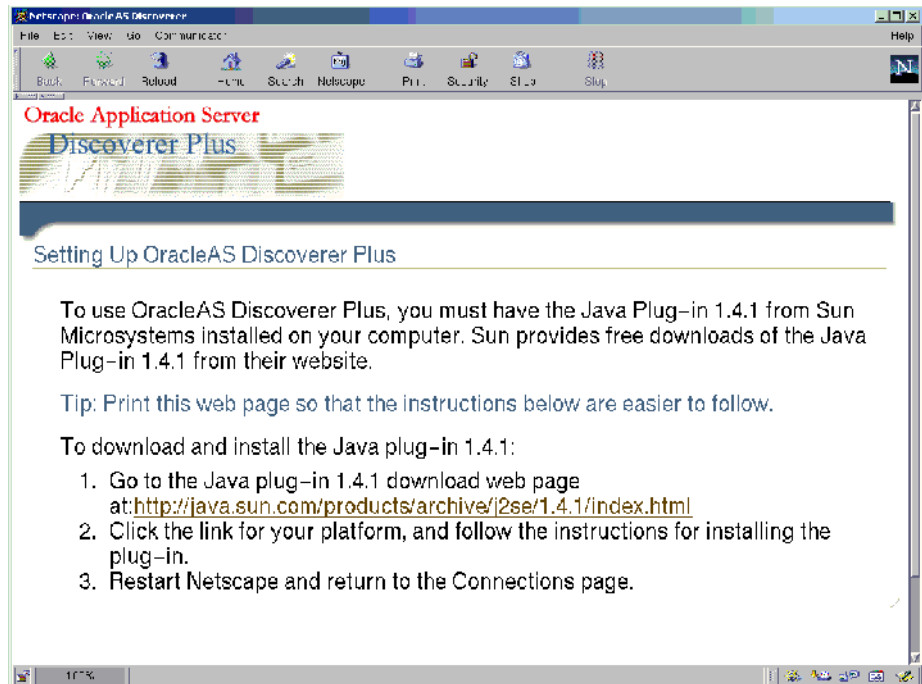
Then the Plug-in not Loaded page is displayed.

Figure 2–15 Plug-In Not Loaded dialog



3. Click Get the Plug-in to display the Setting Up OracleAS Discoverer Plus page.

Note: If you are using a Netscape Navigator on a UNIX client machine, you must have the Java Plug-in 1.4.1 installed on your machine. The Connect to Discoverer Plus page that is displayed when you start Discoverer contains instructions on how to install the necessary files (see screenshot below).

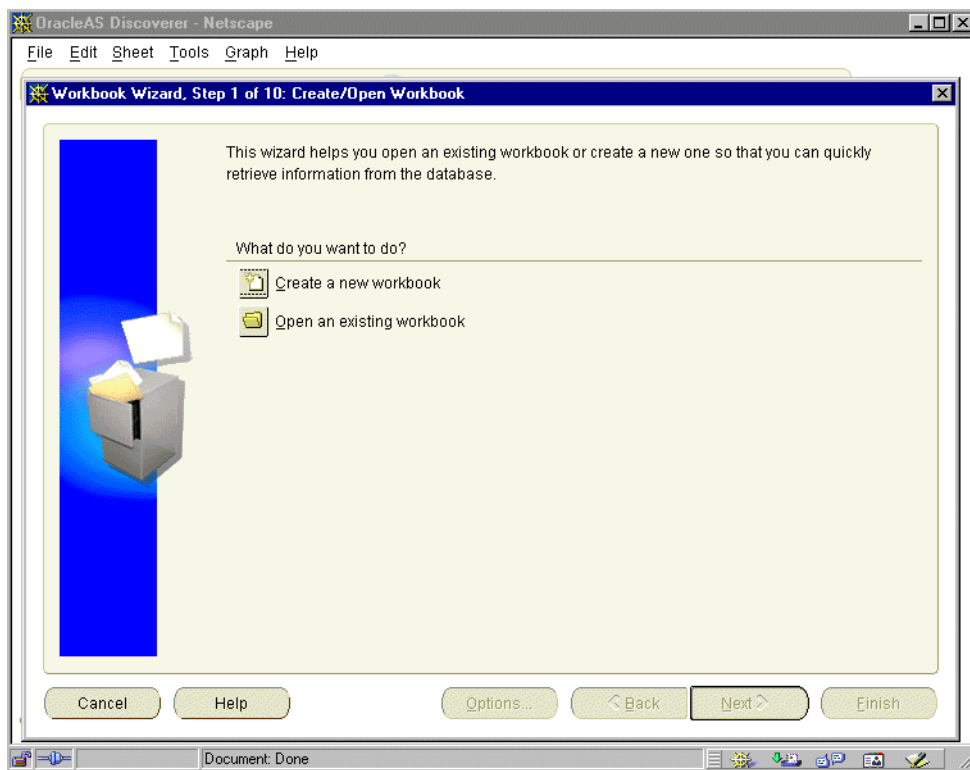


4. Follow the instructions on the Setting Up OracleAS Discoverer Plus page.
5. Start Netscape and enter the Discoverer Plus URL containing the fully qualified host name.
6. Select a connection in the **Connection** column.
7. Wait for the Discoverer Plus applet to initialize.

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

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

Figure 2–16 Discoverer Plus Workbook Wizard: Create/Open Workbook dialog



You are now running Discoverer Plus.

2.12 How to run Discoverer Viewer over HTTP

You might run Discoverer Viewer if you have installed OracleAS and want to test that Discoverer is working.

To run Discoverer Viewer:

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

For example:

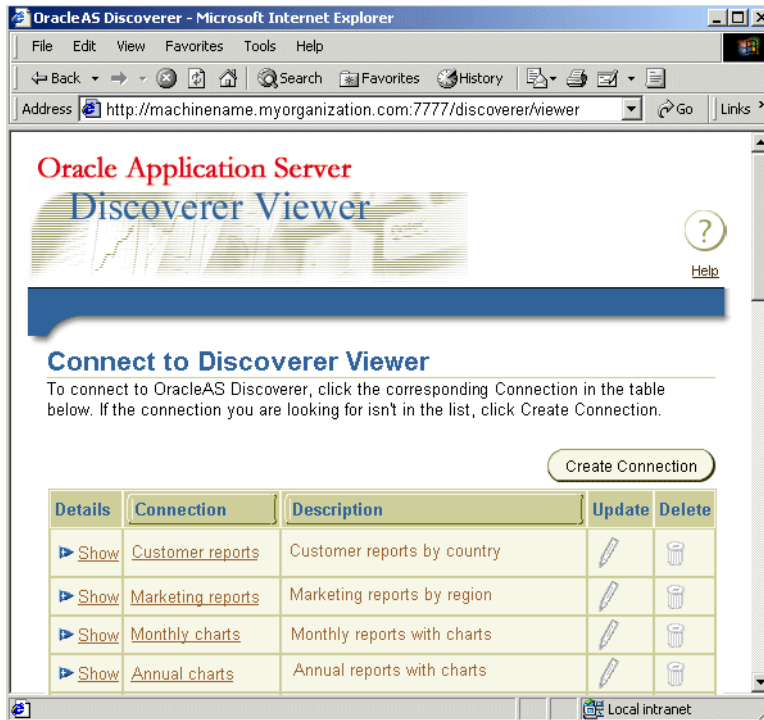
`http://<host.domain>:<port>/discoverer/viewer`

where:

- `<host.domain>` is the server name and domain on which the Oracle HTTP Server is installed
- `<port>` is the port number (typically 7777 or 7778) on which Discoverer is installed (for more information, see [Section 2.5, "Which port number is Discoverer installed on?"](#))
- `/discoverer/viewer` is the URL command that starts Discoverer Viewer

The Connect to Discoverer Viewer page is displayed.

Figure 2–17 Connect to Discoverer Viewer page

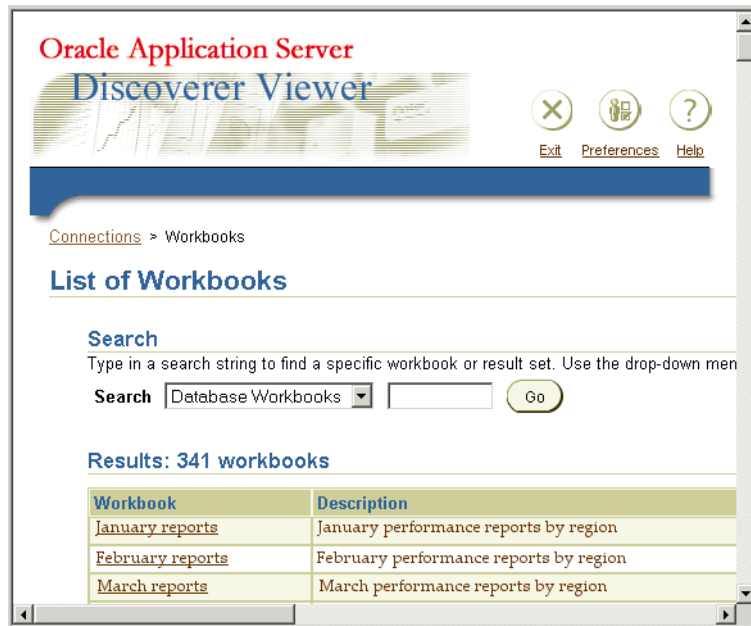


Note: If Single Sign-On is enabled, you will first be asked to authenticate as a single sign-on user.

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 *Oracle Application Server Discoverer Plus User's Guide*. You can also use public connections that have been created by the Discoverer manager (for more information, see [Section 3.7, "How to create a public connection"](#)).

The List of Workbooks page is displayed.

Figure 2–18 *List of Workbooks page*

You are now running Discoverer Viewer.

3. Select a workbook from the Workbook list to display the workbook in Discoverer Viewer.



Notes

- To run Discoverer Viewer over HTTPS, enter the Discoverer Viewer HTTPS URL (e.g. `https://<host.domain>:<HTTPS port>/discoverer/viewer`). For more information about running Discoverer Viewer over HTTPS, see [Section 2.8, "About running Discoverer over HTTPS"](#).
- If you install OracleAS in a UNIX environment, an XWindow display must be available to the Discoverer 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 *Oracle Application Server Installation Guide*.

Managing OracleAS Discoverer connections

3.1 Managing OracleAS Discoverer connections

This chapter explains how to create and manage OracleAS Discoverer connections, and includes the following topics:

- [Section 3.2, "What is an OracleAS Discoverer connection?"](#)
- [Section 3.3, "What are the different types of Discoverer connections"](#)
- [Section 3.4, "About managing Discoverer connections?"](#)
- [Section 3.5, "About the Discoverer connections pages"](#)
- [Section 3.6, "About specifying whether Discoverer end users can create their own private connections"](#)
- [Section 3.7, "How to create a public connection"](#)
- [Section 3.8, "How to specify whether Discoverer end users can create private connections"](#)

3.2 What is an OracleAS Discoverer connection?

An OracleAS Discoverer connection is a stored set of database login details, comprising:

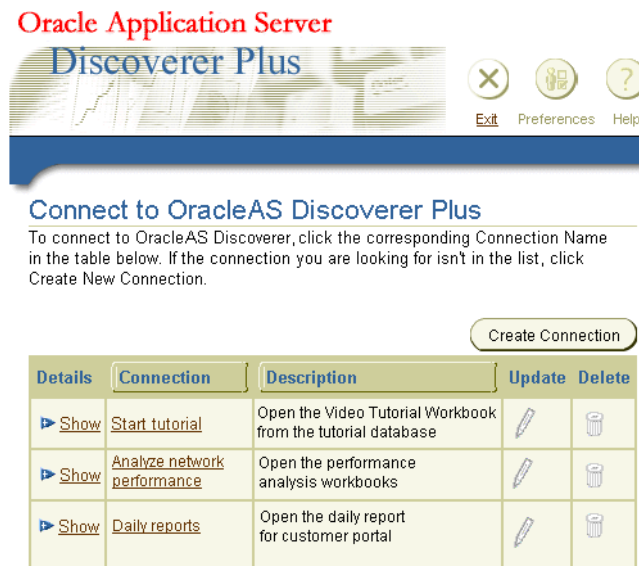
- a database user name - to identify the Discoverer end user
- a database password - to authenticate the Discoverer end user
- a database name - to specify the database containing the information that the Discoverer end user wants to analyze

- (optional) an Oracle Applications Responsibility - to specify a Discoverer end user's responsibility when using Discoverer with Oracle Applications
- an EUL - to specify the End User Layer to be used
- a language - to specify the language that should be used in Discoverer

Discoverer connections enable Discoverer end users to start Discoverer without having to re-enter database login details each time they connect to Discoverer.

In the example below, a connection called Start Tutorial has been created that contains login information to connect to the Discoverer tutorial database. This enables a Discoverer Plus user to select the **Start Tutorial** link in the **Name** column to start Discoverer Plus and access the Discoverer tutorial database without having to enter login details.

Figure 3–1 Connections page in OracleAS Discoverer Plus



Notes

- A connection is visible to both Discoverer Plus and Discoverer Viewer end users.
- If Single Sign-On is enabled, you will first be asked to authenticate as a single sign-on user before a Discoverer connections page is displayed.

3.2.1 About Discoverer connections and OracleAS Single Sign-On

If OracleAS Single Sign-On is enabled, Discoverer connections work as follows:

- the first time that a Discoverer connection is selected, the Discoverer end user is prompted to enter their OracleAS Single Sign-On details (if they have not already been authenticated)
- when an OracleAS Single Sign-On user is authenticated, a Discoverer connection can be selected without confirming the Discoverer password

Note: For more information about OracleAS Single Sign-On, see [Section 12.8.1, "Using Discoverer with OracleAS Single Sign-On"](#).

3.3 What are the different types of Discoverer connections

There are two types of Discoverer connections:

- private connections - see ["About private connections"](#)
- public connections - see ["About public connections"](#)

3.3.1 About private connections

Private connections are created and maintained by Discoverer end users.

Private connections have the following characteristics:

- A private connection is private to the Discoverer end user that created it.
- Discoverer end users create and maintain their own private connections.
For more information about controlling what types of connection Discoverer end users can use, see ["About specifying whether Discoverer end users can create their own private connections"](#).
- If single sign-on is enabled, Discoverer end users can use their private connections from any client machine. If single sign-on is not enabled, private connections are stored as cookies, and are accessible only on the machine and browser on which they were created. For more information about single sign-on, see [Section 3.2.1, "About Discoverer connections and OracleAS Single Sign-On"](#).
- For more information about how to create private connections, see *Oracle Application Server Discoverer Plus User's Guide*.

3.3.2 About public connections

Public connections are created and maintained by Discoverer middle tier managers. Public connections enable you to provide pre-defined login details to Discoverer end users.

For example, if you want to provide the Discoverer Plus tutorial to Discoverer end users, you might create a public connection called 'Start tutorial', which connects to the tutorial database as a tutorial user.

Public connections have the following characteristics:

- A public connection is available to all Discoverer end users.
- Public connections enable Discoverer end users to access data to which the PUBLIC role has access.
- Discoverer Plus and Viewer users cannot add, edit, or delete public connections.

For more information about how to create public connections, see ["How to create a public connection"](#).

3.4 About managing Discoverer connections?

As a middle tier manager, you use Application Server Control to manage Discoverer connections, as follows:

- to provide public connections to enable Discoverer Plus and Discoverer Viewer users to start Discoverer (for more information, see [Section 3.7, "How to create a public connection"](#))
- to enable Discoverer Plus and Discoverer Viewer users to create their own (i.e. private) connections to start Discoverer (for more information, see [Section 3.6, "About specifying whether Discoverer end users can create their own private connections"](#))

You might also want to migrate Discoverer connections from one OracleAS instance to another (for more information, see [Section D.2.1, "About migrating Discoverer connections"](#)).

Notes

- If you want end users to be able to create public connections based on an Oracle Applications user, make sure that the **Oracle Applications User** check box is displayed on the Create Public Connection page (for more information, see [Section 13.1, "OracleAS Discoverer and Oracle Applications"](#)).

3.5 About the Discoverer connections pages

There are two Discoverer connections pages:

- Connect to Discoverer Viewer, which is used to start Discoverer Viewer using a set of stored login details
- Connect to Discoverer Plus, which is used to start Discoverer Plus using a set of stored login details

The figure below shows the Connect to Discoverer Plus page. In this example, there are three connections available in the **Connection** column (called Start tutorial, Analyze network performance, and Daily reports). To start Discoverer Plus using database login details stored in the 'Daily reports' connection, the Discoverer end-user selects the **Daily reports** link in the **Connection** column.

Figure 3–2 Discoverer Connections page

Oracle Application Server
Discoverer Plus

Exit Preferences Help

Connect to OracleAS Discoverer Plus

To connect to OracleAS Discoverer, click the corresponding Connection Name in the table below. If the connection you are looking for isn't in the list, click Create New Connection.

Create Connection

Details	Connection	Description	Update	Delete
▶ Show	Start tutorial	Open the Video Tutorial Workbook from the tutorial database		
▶ Show	Analyze network performance	Open the performance analysis workbooks		
▶ Show	Daily reports	Open the daily report for customer portal		

Notes

- You can change the default Discoverer logo that is displayed on the Connect to Discoverer Viewer page and the Connect to Discoverer Plus page (for more information, see [Section 7.12, "How to change the default Discoverer Viewer logo"](#)).

3.6 About specifying whether Discoverer end users can create their own private connections

You can specify whether Discoverer end users can create their own private connections (for more information, see [Section 3.8, "How to specify whether Discoverer end users can create private connections"](#)).

If you enable Discoverer end users to create their own private connections:

- end users will be able to specify any login details (e.g. user name, password, database, EUL) for the new connections that they create
- end users will be able to open any workbooks in any EULs that they successfully connect to (providing that they have sufficient database privileges)

If you prevent Discoverer end users from creating their own private connections, they will only have access to the workbooks that are accessible to the public connections that you create.

Notes

- When end users create private connections, note the following:
 - if they specify a database using an alias, they can connect to databases that have an entry in the tnsnames.ora file
 - if they specify a database using the full tnsnames entry for the database (e.g. SID, address, port), they can connect databases that do not have an entry in the tnsnames.ora file

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

3.7 How to create a public connection

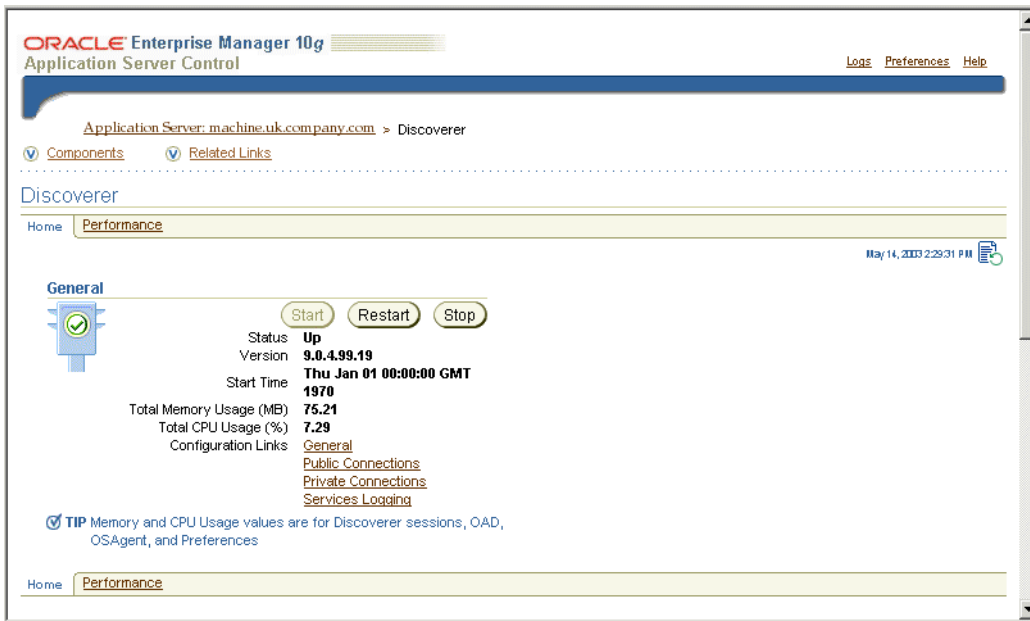
You create a public connection when you want to provide pre-defined login details to Discoverer Plus and Discoverer Viewer users. For example, you might create a public connection called 'Start tutorial', which connects to the tutorial database as a tutorial user.

Hint: In a secure Discoverer environment you might want to use only public connections, so that you can restrict database access to login details that you specify. In other words, you might also disallow Discoverer end users from creating private

connections (for more information, see [Section 3.6, "About specifying whether Discoverer end users can create their own private connections"](#)).

To create a public connection:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).



3. Select the **Public Connections** link to display the Discoverer Public Connections area.

Discoverer.Home > Configuration

[Discoverer Public Connections](#) [Discoverer Private Connections](#) [Discoverer Services Logging](#)

Discoverer Configuration

[Cancel](#) [Apply](#)

General

Default Locale: This locale is used when:
1. There is no locale explicitly specified on the URL
2. There is no locale set in the user's browser

Graphs: Enable in Discoverer Viewer and Discoverer Portlets
Graphs are always enabled in Discoverer Plus.

Discoverer Public Connections

[Return to Top](#)

Use a public connection to allow users to see data without logging into Discoverer. Use a database account that has appropriate (restricted) database privileges.

[Create Connection](#)

Connection	Description	Update	Delete
No Public Connections exist			

4. Click Create Connection to display the Create Public Connection page.

Create Public Connection

[Cancel](#) [OK](#)

Connection Name and Description

Enter a name or alias that is easy to remember and a description for this connection followed by the database user name

* Connection Name:

Description:

Locale: This locale is used when there is no locale explicitly specified on the URL (e.g.).

Show Connection Details

Database Account Details

Enter the connection information

* EUL: The End User Layer name is case sensitive.

Login Method:

* User Name:

* Password:

* Database:

5. Enter the connection details, then click OK to save the details.

The new connection that you created is displayed in the Discoverer Public Connections list.

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

In the example below, the three connections (Start tutorial, Analyze network performance, and Daily reports) are public connections that are available to all Discoverer end users. Notice that the Update and Delete icons are grayed out, indicating that Discoverer end users cannot change or delete them.

Oracle Application Server
Discoverer Plus



The screenshot shows the Oracle Application Server Discoverer Plus interface. At the top, there is a header with the Oracle Application Server logo and the text "Discoverer Plus". Below the header, there are three icons: a red 'X' for "Exit", a person icon for "Preferences", and a question mark for "Help". Below the icons, there is a section titled "Connect to OracleAS Discoverer Plus" with a sub-header "Connect to OracleAS Discoverer Plus". Underneath, there is a paragraph of text: "To connect to OracleAS Discoverer, click the corresponding Connection Name in the table below. If the connection you are looking for isn't in the list, click Create New Connection." Below the text, there is a table with a "Create Connection" button above it. The table has four columns: "Details", "Connection", "Description", and "Update Delete". The table contains three rows of connections: "Start tutorial", "Analyze network performance", and "Daily reports". Each row has a "Show" link in the "Details" column, the connection name in the "Connection" column, a description in the "Description" column, and "Update" and "Delete" icons in the "Update Delete" column. The "Update" and "Delete" icons are grayed out.

Connect to OracleAS Discoverer Plus

To connect to OracleAS Discoverer, click the corresponding Connection Name in the table below. If the connection you are looking for isn't in the list, click Create New Connection.

Create Connection

Details	Connection	Description	Update	Delete
▶ Show	Start tutorial	Open the Video Tutorial Workbook from the tutorial database		
▶ Show	Analyze network performance	Open the performance analysis workbooks		
▶ Show	Daily reports	Open the daily report for customer portal		

Notes

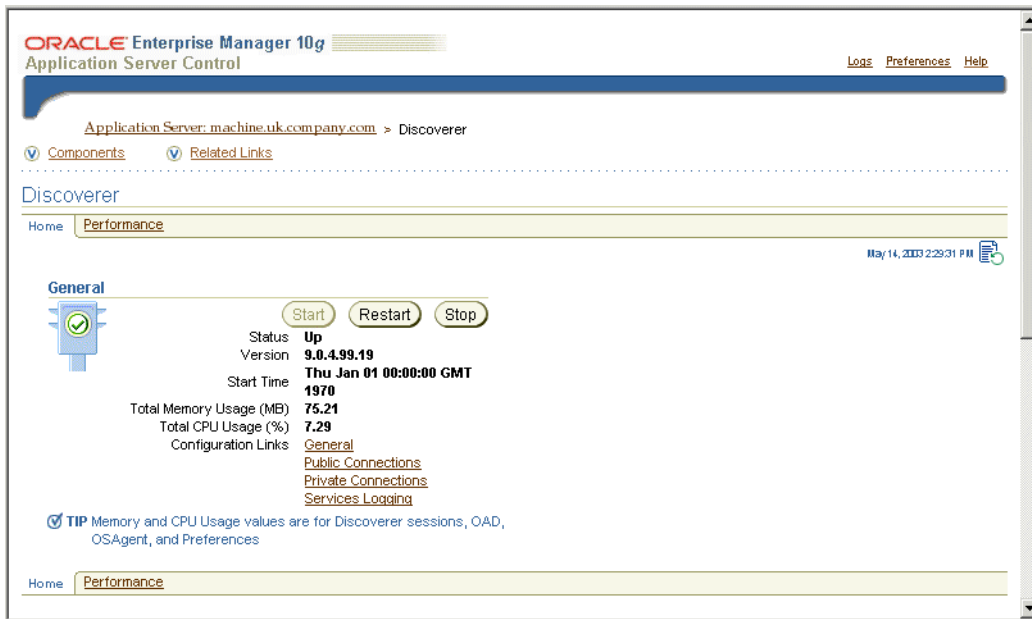
- If you specify a database using the full tnsnames entry for the database (e.g. SID, address, port), you can connect databases that do not have an entry in the tnsnames.ora file. For example, you might enter the following string in the Database field:

```
(DESCRIPTION =(ADDRESS_LIST =(ADDRESS = (PROTOCOL =
TCP)(HOST = machine_a.company.com)(PORT = 1521)))(CONNECT_
DATA =(SERVICE_NAME = database1)))
```

3.8 How to specify whether Discoverer end users can create private connections

To specify whether Discoverer Plus and Discoverer Viewer users can create private connections:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).



3. Select the **Private Connections** link to display the Discoverer Private Connections area.
4. Specify whether users can create private connections, as follows:
 - Select the **Allow users to define their own connections in Discoverer Plus and Discoverer Viewer** check box if you want Discoverer end users to be able to create their own private connections.

- Clear the **Allow users to define their own connections in Discoverer Plus and Discoverer Viewer** check box if you want to restrict Discoverer end users to using public connections that you specify.
5. Click OK to save the details.

If you enable Discoverer end users to create private connections, they will see a Create Connection button on the Discoverer Connections page. For example, in the figure below the Create Connection button is available.

Figure 3–3 Connections page in OracleAS Discoverer Plus



Notes

- If you clear the **Allow users to create their own connections in Discoverer Plus and Discoverer Viewer** check box:
 - Discoverer end users cannot start Discoverer using URL parameters, unless they specify the connection ID for a public connection using the `cn=` URL parameter (for more information, see [Section 11.6, "Generic Discoverer URL parameters"](#)).
- The Details column on the Discoverer connections page is only visible in Internet Explorer.

Maintaining OracleAS Discoverer

4.1 Maintaining OracleAS Discoverer

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

- [Section 4.2, "About Oracle Enterprise Manager Application Server Control"](#)
- [Section 4.3, "About using Application Server Control to manage Discoverer components"](#)
- [Section 4.4, "About starting and stopping the Discoverer Service"](#)
- [Section 4.5, "About disabling and enabling Discoverer client tier components"](#)
- [Section 4.6, "About starting the Discoverer Service and the Discoverer servlets without using Application Server Control"](#)
- [Section 4.7, "How to start and stop the Discoverer servlets"](#)
- [Section 4.8, "About configuring options for the Discoverer Service and the Discoverer client tier components"](#)
- [Section 4.9, "About monitoring Discoverer metrics"](#)
- [Section 4.10, "How to list ports used by OracleAS"](#)
- [Section 4.11, "About Discoverer diagnostics and logging"](#)
- [Section 4.12, "About running Discoverer Plus with different Java Virtual Machines"](#)

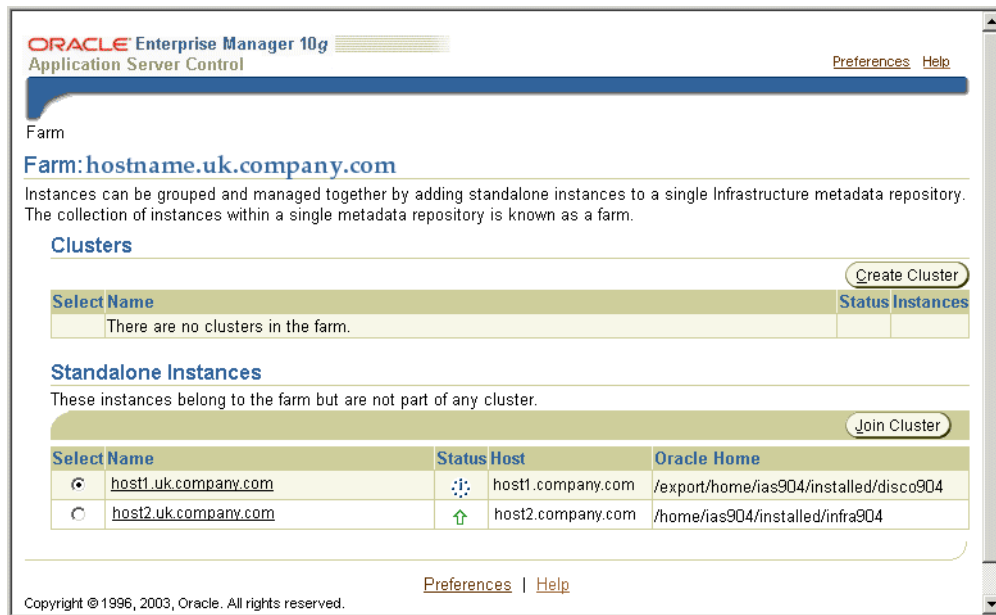
4.2 About Oracle Enterprise Manager Application Server Control

Oracle Enterprise Manager Application Server Control is part of Oracle Enterprise Manager, which provides a comprehensive systems management platform for managing Oracle products.

Application Server Control provides Web-based management tools that enable you to monitor and configure the components (e.g. OracleAS Discoverer, OracleAS Portal, OracleAS HTTP Server) of your Oracle Application Server installations. You can deploy applications, manage security, and create Oracle Application Server clusters.

The figure below shows the Application Server Control main page.

Figure 4–1 Application Server Control main page



Notes

- For more information about using managing OracleAS components using Application Server Control, see *Application Server Control Help* and *Oracle Enterprise Manager Administrator's Guide*.

- For more information about how to display Application Server Control, see [Section 4.2.2, "How to display Application Server Control"](#).
- For more information about OracleAS installations, see [Section 5.3, "About OracleAS installations"](#).

4.2.1 Why use Application Server Control with Discoverer?

You use Application Server Control with Discoverer to:

- manage availability
- set configuration options
- monitor performance
- diagnose problems

The following table lists some of the Discoverer configuration tasks that you might perform using Application Server Control:

Discoverer configuration task	Where can I find out more information about this task?
Change database passwords	<i>Application Server Control Help</i>
Enable and disable Discoverer client tier components	Section 4.5, "About disabling and enabling Discoverer client tier components"
Enable or disable graphs in Discoverer Viewer and Discoverer Portlet Provider	<i>Application Server Control Help</i>
Manage connections for Discoverer Plus and Discoverer Viewer	Section 4.9, "About monitoring Discoverer metrics"
Monitor Discoverer metrics	Section 4.9, "About monitoring Discoverer metrics"
Search for and analyze Discoverer log files	Section 4.11, "About Discoverer diagnostics and logging"
Select the locale for public connections	<i>Application Server Control Help</i>
Specify a delay value for the Query Progress page in Discoverer Viewer	<i>Application Server Control Help</i>
Specify communication protocols for the Discoverer Plus middle tier	Section 12.7.3.3, "How to display the OracleAS Discoverer Plus Communications Protocols page in Application Server Control"

Discoverer configuration task	Where can I find out more information about this task?
Specify the maximum number of Discoverer Portlet Provider sessions to pool	<i>Application Server Control Help</i>
Specify the maximum number of stylesheets to pool (in the cache) for Discoverer Viewer and Discoverer Portlet Provider	Section 10.5.2, "How to enhance Discoverer Viewer scalability using XSL stylesheet pooling"
Start and stop the Discoverer Service (for more information)	Section 4.4, "About starting and stopping the Discoverer Service"
Start and stop the Discoverer servlets	Section 4.7, "How to start and stop the Discoverer servlets"

4.2.2 How to display Application Server Control

You use Application Server Control to configure OracleAS components (e.g. OracleAS Discoverer, OracleAS Portal). For example, if you want to start or stop the Discoverer Service, view current session details, or configure default user preferences for all users.

To display Application Server Control:

1. Start a Web browser and enter the Application Server Control URL containing the fully qualified host name and domain used by your own OracleAS installation.

For example:

`http://<host.domain>:1810`

2. When prompted, enter an Application Server Control user name and password.
3. Click OK to display the Application Server Control Home page, where you monitor OracleAS and manage the instances (i.e. OracleAS installations) on your network.

ORACLE Enterprise Manager 10g
Application Server Control Preferences Help

Farm
Farm: hostname.uk.company.com

Instances can be grouped and managed together by adding standalone instances to a single Infrastructure metadata repository. The collection of instances within a single metadata repository is known as a farm.

Clusters Create Cluster

Select	Name	Status	Instances
There are no clusters in the farm.			

Standalone Instances Join Cluster

These instances belong to the farm but are not part of any cluster.

Select	Name	Status	Host	Oracle Home
<input checked="" type="radio"/>	host1.uk.company.com		host1.company.com	/export/home/ias904/installed/disco904
<input type="radio"/>	host2.uk.company.com		host2.company.com	/home/ias904/installed/infra904

Preferences | Help

Copyright © 1996, 2003, Oracle. All rights reserved.

The Standalone Instances table lists OracleAS instances available. For example, in the screenshot above, the Standalone Instances table contains the following two instances:

- 'host1.uk.oracle.com' is the OracleAS Business Intelligence and Forms installation, containing OracleAS Discoverer (specified in the **Oracle Home** column as being located in the /disco904 directory).
- 'host2.uk.oracle.com' is the OracleAS infrastructure installation (specified in the **Oracle Home** column as being located in the /infra904 directory).

Notes

- For a brief overview of OracleAS installations, see [Section 5.3, "About OracleAS installations"](#).
- Experienced administrators can modify the default port, but in most cases the port specified for Application Server Control is 1810.
- For more information about using Application Server Control, see *Application Server Control Help*, and *Oracle Enterprise Manager Administrator's Guide*.

4.2.3 How to display the Application Server Control Discoverer Home page

You display the Application Server Control Discoverer Home page to configure and manage Discoverer.

To display the Application Server Control Discoverer home page:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).

Application Server Control displays a list of OracleAS instances available.

2. In the **Name** column, select the OracleAS instance containing the OracleAS Business Intelligence and Forms installation where OracleAS Discoverer is installed.
3. If prompted, enter an Application Server Control user name and password.

Application Server Control displays a list of OracleAS System Components available for the OracleAS Business Intelligence and Forms installation (e.g. Discoverer, Forms, HTTP Server).

ORACLE Enterprise Manager 10g
Application Server Control

Logs Preferences Help

Farm > Application Server: host1.company.com

Application Server: Discoverer.machine.uk.company.com

Home J2EE Applications Ports Infrastructure

Page Refreshed Jul 7, 2003 10:43:47 AM

General

Stop All Restart All Start All

Status **Partially Up**
Host [machine.uk.company.com](#)
Installation Type **Business Intelligence and Forms**
Oracle Home [/export/home/ias904/installed/disco](#)
Farm [machine.uk.company.com](#)

CPU Usage

Application Server (4%)
Idle (62%)
Other (34%)

Memory Usage

Application Server (37% 1,524MB)
Free (52% 2,126MB)
Other (11% 446MB)

System Components

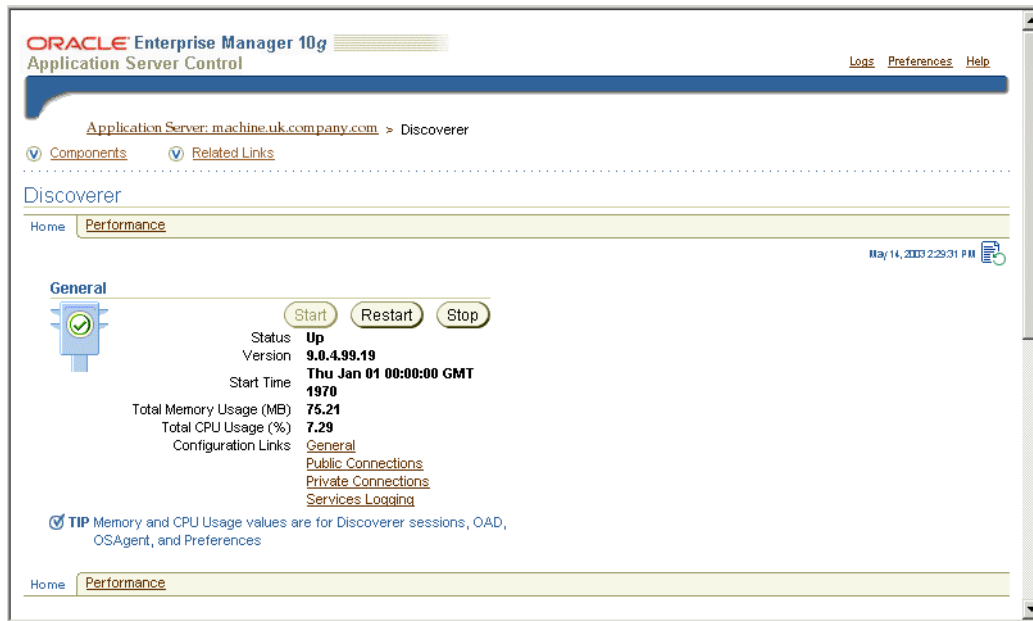
Enable/Disable Components Configure Component Create OC4J Instance

Start Stop Restart Delete OC4J Instance

Select All | Select None

Select	Name	Status	Start Time	CPU Usage (%)	Memory Usage (MB)
<input type="checkbox"/>	Discoverer	↑	Jul 4, 2003 11:43:42 AM	0.00	42.68
<input type="checkbox"/>	home	↑	Jul 4, 2003 11:43:13 AM	0.17	137.73
<input type="checkbox"/>	HTTP_Server	↑	Jul 4, 2003 11:43:14 AM	2,067.94	127.77
<input type="checkbox"/>	OC4J_BI_Forms	↑	Jul 4, 2003 11:43:14 AM	3.22	240.27

- In the **Name** column, select the Discoverer link to display the Application Server Control Discoverer Home page.

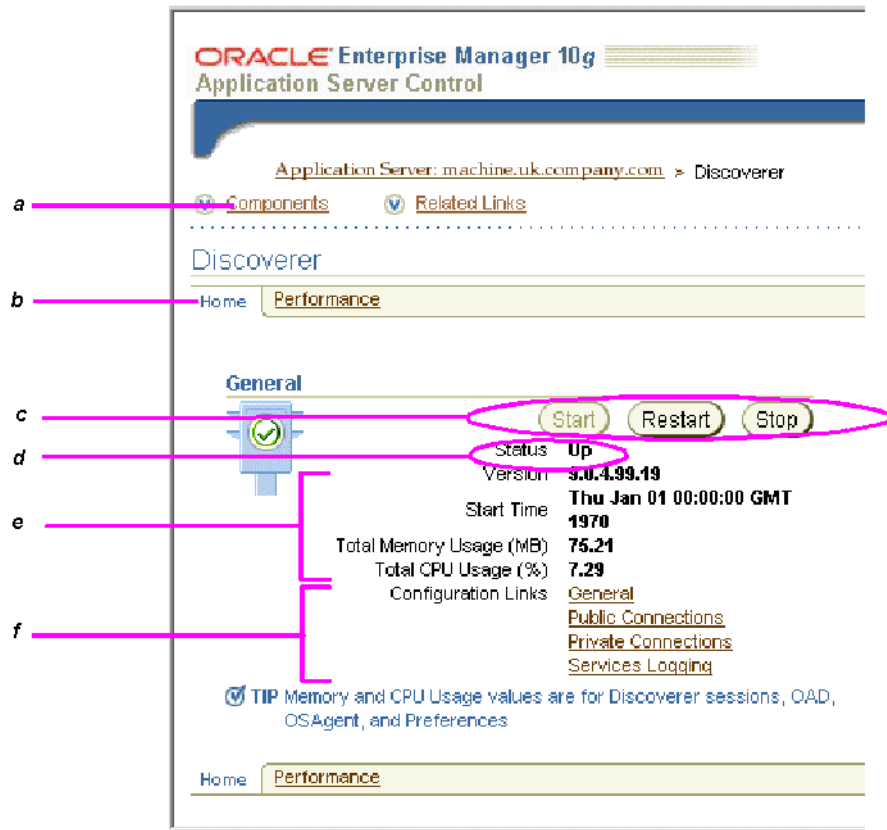


You can now start and stop Discoverer client tier components, and manage all aspects of Discoverer (see figure below).

Notes:

- The figure below describes the Application Server Control Discoverer Home page.

Figure 4–2 Application Server Control Discoverer Home page



Key to figure:

- a. Link to the Discoverer Components area (for more information, see [Section 4.3, "About using Application Server Control to manage Discoverer components"](#))
- b. The Home tab of the Application Server Control Discoverer page.
- c. Buttons to start and stop the Discoverer Service.
- d. Current Status indicator, which shows whether the Discoverer Service is running (i.e. Up) or not running (i.e. Down).
- e. General information about the Discoverer component (e.g. memory and CPU usage).

- f. Links to Discoverer configuration pages.

4.3 About using Application Server Control to manage Discoverer components

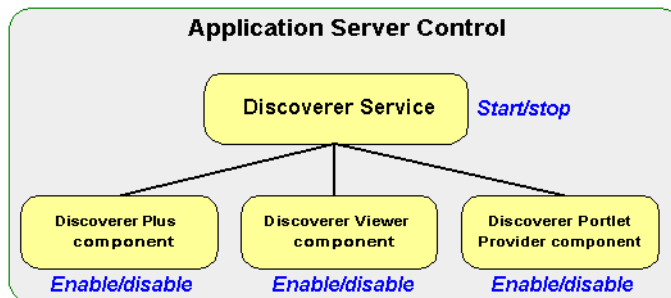
As a middle tier manager, you use Application Server Control to manage the following Discoverer components:

- the Discoverer Service
- the Discoverer Plus component
- the Discoverer Viewer component
- the Discoverer Portlet Provider component
- the Discoverer servlets (for more information, see [Section 4.7, "How to start and stop the Discoverer servlets"](#))

The main tasks that you perform using Application Server Control are (see figure below):

- stopping and starting the Discoverer Service
- enabling and disabling the Discoverer Plus component, Discoverer Viewer component, and Discoverer Portlet Provider component

Figure 4–3 Using Application Server Control to manage Discoverer components



The figure below shows the Discoverer Plus component, Discoverer Viewer component, and Discoverer Portlet Provider component displayed in the Application Server Control Discoverer Home page.

Figure 4–4 Discoverer components displayed in the Application Server Control Discoverer Home page

The screenshot displays the 'Components' section of the Application Server Control interface. It includes a summary of session memory usage, a table of component status, and related links.

Components [Return to Top](#)

The CPU and Memory Usage values are only for Discoverer sessions and do not include values for servlets used by the components. Visit the OC4J page from the Related Links section to see the CPU and Memory Usage values for the servlets. Disabling a component allows currently active users to continue working, but prevents any new users from using that component. Stop the Discoverer service from the General section to terminate all active sessions.

Total Session Memory Usage (MB) **67.17**
 Shared Session Memory Usage (MB) **41.75**

[Enable](#) [Disable](#)

[Select All](#) | [Select None](#)

Select	Name	Status	Session CPU Usage (%)	Session Memory Usage (MB)	Sessions
<input type="checkbox"/>	Discoverer Plus	Enabled	0	12.72	4
<input type="checkbox"/>	Discoverer Viewer	Enabled	0	12.7	2
<input type="checkbox"/>	Discoverer Portlet Provider	Enabled	0	12.72	4

Related Links [Return to Top](#)

[Oracle HTTP Server](#)
[OC4J](#)

[Logs](#) | [Preferences](#) | [Help](#)

Notes

- For more information about the Discoverer Service, see [Section 1.10.2, "About the Discoverer CORBA components \(Discoverer Service\)"](#).
- For more information about the Discoverer client tier components, see [Section 1.9, "About the Discoverer client tier"](#).

4.3.1 What happens when you enable or disable Discoverer client tier components?

What happens when you enable or disable Discoverer client tier components depends on whether the Discoverer Service is running, as show below:

Is the Discoverer Service running?	What happens when you enable Discoverer client tier components?	What happens when you disable Discoverer client tier components?
Yes	Discoverer client tier components resume normal operation	Existing Discoverer sessions continue as normal, but no new Discoverer sessions are allowed. A message is displayed that informs the Discoverer end user that the component is disabled (for more information, see Section 4.5, "About disabling and enabling Discoverer client tier components")
No	Nothing happens immediately When you start the Discoverer Service, the Discoverer client tier components resume normal operation	Nothing happens immediately (for more information, see Section 4.5, "About disabling and enabling Discoverer client tier components")

4.4 About starting and stopping the Discoverer Service

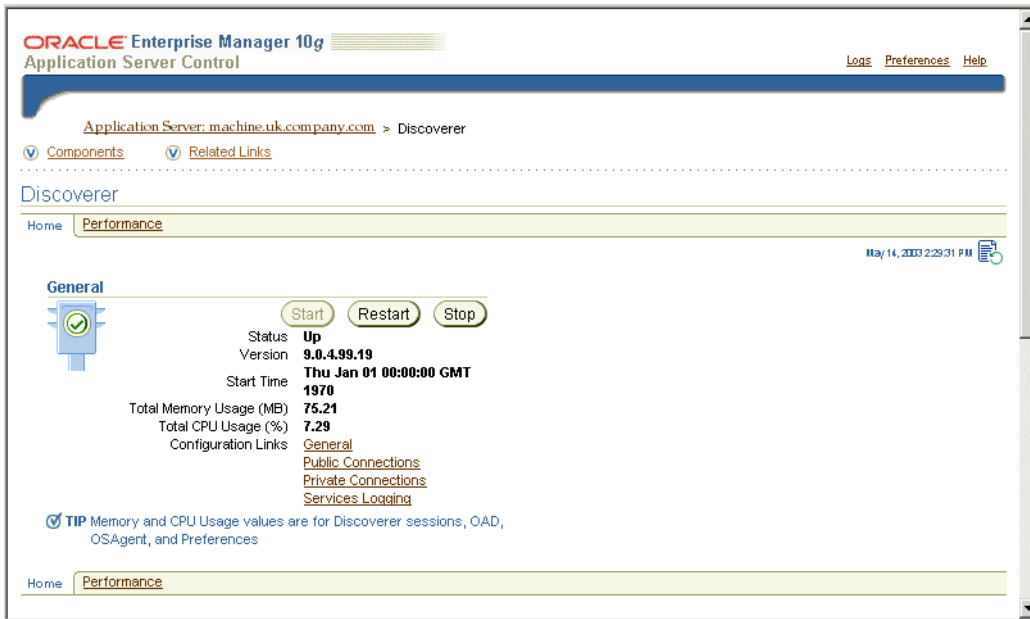
The Discoverer Service comprises the following:

- Discoverer Session
- Discoverer Preference
- Object Activation Daemon (OAD) and SmartAgent

For more information about the Discoverer Service, see [Section 1.10.2, "About the Discoverer CORBA components \(Discoverer Service\)"](#).

You use Application Server Control to start, stop and monitor the Discoverer Service running on a machine. For example, you might need to start and stop the Discoverer Service for maintenance (e.g. when you apply a Discoverer patch).

Figure 4–5 The Application Server Control Discoverer Home page displaying the Discoverer Service options



This section describes how to start and stop the Discoverer Service, and contains the following topics:

- [Section 4.4.1, "How to start the Discoverer Service on a machine"](#)
- [Section 4.4.2, "How to stop the Discoverer Service on a machine"](#)

Notes

- You can also start, stop and restart the Discoverer Service in the Application Server Control Application Server page (i.e. before you display the Application Server Control Discoverer Home page).
- If you want to stop and start the Discoverer Service in one operation, you can also use the Restart button.
- When you start the Discoverer Service, note the following:
 - If all Discoverer servlets are running and are not disabled, Discoverer Viewer, Discoverer Plus, and Discoverer Portlet Provider can connect to Discoverer sessions and begin to serve requests (e.g. users can open

workbooks using Discoverer Viewer, build worksheets using Discoverer Plus, and create portlets using Discoverer Portlet Provider).

- the Current Status indicator shows that the Discoverer Service is running (i.e. set to 'Up')
- If the Discoverer Service is already running, no action is performed.
- If the Discoverer Service fails to start:
 - the Current Status indicator shows that the Discoverer Service is not running (i.e. set to 'Down')
 - Application Server Control displays an error message indicating why the Discoverer Service failed to start
- When you stop the Discoverer Service, note the following:
 - Discoverer Plus users cannot access the Discoverer Plus URL and an information message is displayed informing users that the Discoverer Service is down (i.e. a No Response from Application Web Server).
 - Discoverer Viewer users cannot access the Discoverer servlet URL and an error message is displayed that the Discoverer Service is down (i.e. No Response from Application Web).
 - Discoverer Portlet Provider users cannot publish new portlets, edit defaults, customize or refresh portlets, and an information message is displayed informing users that the Discoverer Service is down (i.e. a No Response from Application Web Server).
 - Discoverer servlets release system resources that they are using
 - Discoverer displays existing portlets in Portal pages using cached data.
 - All Discoverer sessions are terminated.
 - The following processes are terminated (if running):
 - Discoverer Session
 - Discoverer Preference
 - Object Activation Daemon (OAD)
 - OSAgent
 - Discoverer Plus, Discoverer Viewer, and Discoverer Portlet Provider cannot connect to Discoverer sessions or serve requests (e.g. users cannot open

workbooks using Discoverer Viewer, build worksheets using Discoverer Plus, or create portlets using Discoverer Portlet Provider).

- the Current Status indicator shows that the Discoverer Service is not running (i.e. set to 'Down')
- If the Discoverer Service fails to stop:
 - and all components are still running, the Status indicator indicates that the Discoverer Service is up
 - and not all components are running, the Status indicator indicates that the Discoverer Service is in an unknown state
 - Discoverer displays an error message that indicates why the Discoverer Service failed to stop

4.4.1 How to start the Discoverer Service on a machine

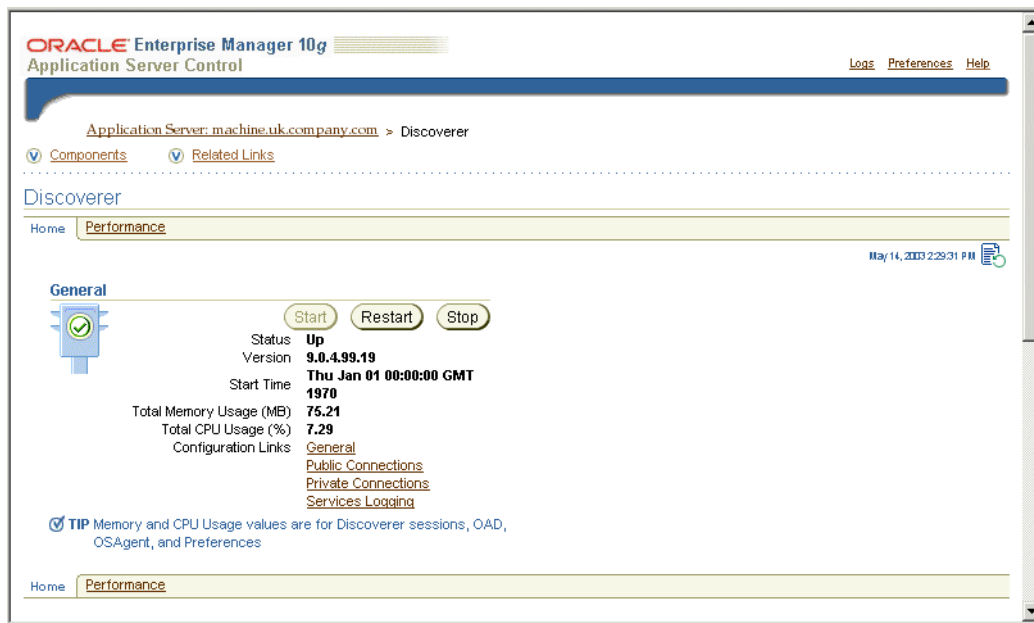
You might want to start the Discoverer Service after maintenance. For example, after the Discoverer Service has been stopped to apply a Discoverer patch.

Hint: If the Discoverer Service is already running, you might want to restart the Discoverer Service by clicking Restart.

Note: The Discoverer Service is started automatically as part of the BI_Forms instance.

To start the Discoverer Service:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page for the machine that you want to configure (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).



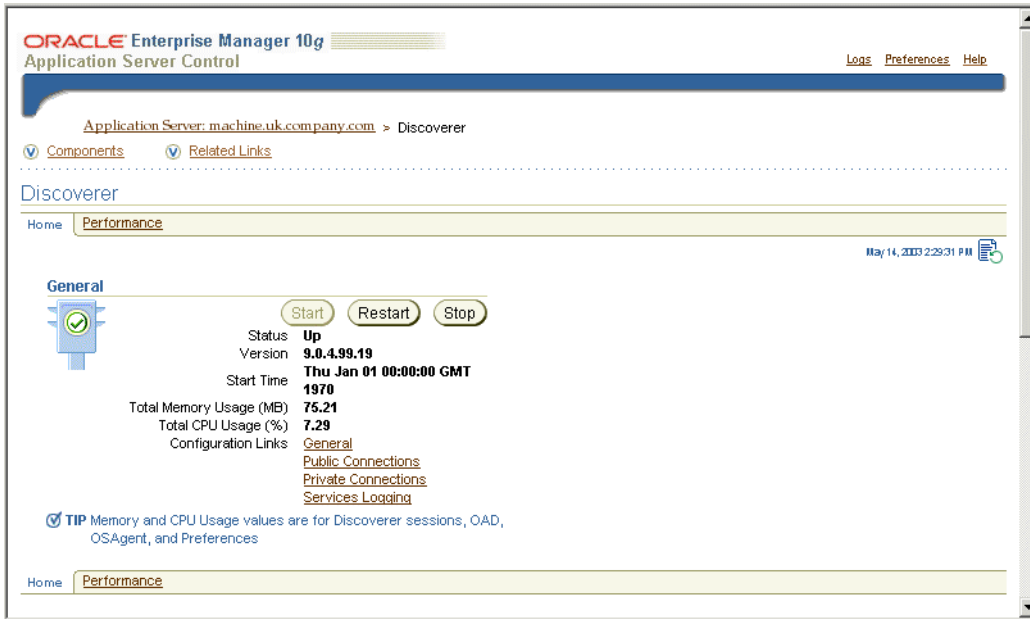
3. Click Start to start the Discoverer Service.
4. Click Yes at the confirmation page.

4.4.2 How to stop the Discoverer Service on a machine

You might want to stop Discoverer Service to perform maintenance. For example, to apply a Discoverer patch.

To stop the Discoverer Service:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page for the machine that you want to configure (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).



3. Click Stop.

Application Server Control displays a warning message.

4. Click Yes to begin the process that stops the Discoverer Service.

Hint: To stop and start the Discoverer Service, click Restart instead of clicking Stop then Start.

4.5 About disabling and enabling Discoverer client tier components

Sometimes you will want to disable and enable end user access to Discoverer client tier components (i.e. Discoverer Plus, Discoverer Viewer, and Discoverer Portlet Provider).

For example, you might want to:

- prevent new users from connecting to Discoverer

However, existing users can still complete their work. When all users have disconnected, you can stop the Discoverer Service.

- restrict access to Discoverer components

You might disable Discoverer Plus, Discoverer Viewer, or Discoverer Portlet Provider to prevent users from connecting, due to security restrictions or other policies.

The Discoverer client tier components behave differently when you disable them, as follows:

- You cannot start or stop the Discoverer Service for a single Discoverer component because all the components share a single Discoverer Service (for more information about the Discoverer Service, see "[About the Discoverer CORBA components \(Discoverer Service\)](#)").
- When you disable the Discoverer Plus and Discoverer Viewer components, Discoverer behaves as follows:
 - All existing Discoverer Plus or Discoverer Viewer sessions will continue to run until users end their sessions.
 - Requests for new user sessions are not accepted. Users whose sessions time out due to inactivity cannot continue to use Discoverer Plus or Discoverer Viewer.

Note: A user time out is determined differently between Discoverer Plus and Discoverer Viewer as follows:

- Discoverer Plus uses the server process to determine user time outs
- Discoverer Viewer uses the servlet to determine user time outs
- When a user attempts to access a Discoverer Plus or Discoverer Viewer URL, Discoverer displays an error message explaining that the service is unavailable.
- When you disable the Discoverer Portlet Provider component, Discoverer behaves as follows:
 - New Discoverer portlets cannot be added to Portal pages.
 - A user cannot use the Edit Defaults option or the Customize option for existing portlets.
 - If a user is already editing defaults or customizing a portlet when the component is disabled, they can finish the task.
 - Scheduled refreshes that are running can complete. However, scheduled refreshes that have not yet run, will not run until you enable the Portlet Provider component.

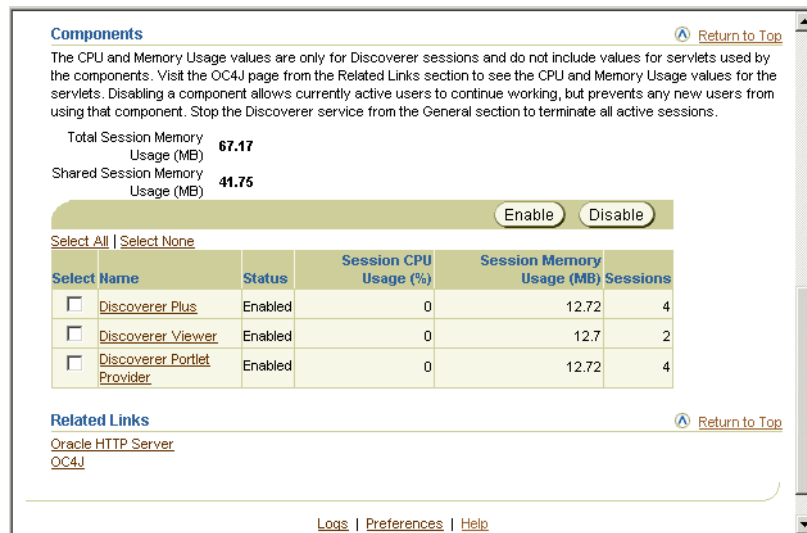
- If a user attempts to add a new portlet, edit defaults, or customize an existing portlet, Discoverer displays a message explaining that the service is not available.

4.5.1 How to disable Discoverer client tier components

You might need to disable one or more Discoverer client tier components to perform maintenance. For example, to apply a Discoverer patch, or to restrict user access to a Discoverer component.

To disable Discoverer client tier components:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).
3. Select the **Components** link to display the Components area.



Components [Return to Top](#)

The CPU and Memory Usage values are only for Discoverer sessions and do not include values for servlets used by the components. Visit the OC4J page from the Related Links section to see the CPU and Memory Usage values for the servlets. Disabling a component allows currently active users to continue working, but prevents any new users from using that component. Stop the Discoverer service from the General section to terminate all active sessions.

Total Session Memory Usage (MB) **67.17**
 Shared Session Memory Usage (MB) **41.75**

[Enable](#) [Disable](#)

Select All | Select None

Select	Name	Status	Session CPU Usage (%)	Session Memory Usage (MB)	Sessions
<input type="checkbox"/>	Discoverer Plus	Enabled	0	12.72	4
<input type="checkbox"/>	Discoverer Viewer	Enabled	0	12.7	2
<input type="checkbox"/>	Discoverer Portlet Provider	Enabled	0	12.72	4

Related Links [Return to Top](#)

[Oracle HTTP Server](#)
[OC4J](#)

[Logs](#) | [Preferences](#) | [Help](#)

4. In the Components area, select the check box in the **Select** column for the Discoverer component(s) that you want to disable.

For example, to disable Discoverer Plus, select the **Discoverer Plus** check box.

Note: Alternatively, click a link in the **Name** column to display the Home page for the component you selected and click Disable or Enable.

5. Complete the following steps to disable the Discoverer component:

a. Click Disable.

Application Server Control displays a warning message.

b. Click Yes to begin the process that disables the Discoverer component.

Application Server Control displays a Processing message.

The **Status** column displays 'Disabled' for the Discoverer component(s) that you selected.

4.5.2 How to enable Discoverer client tier components

You might need to enable one or more Discoverer client tier components after performing maintenance. For example, after you have applied a Discoverer patch, or to enable user access to a Discoverer component.

Note: The Discoverer client tier components are started automatically as part of the BI_Forms instance.

To enable Discoverer client tier components:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).
3. Select the **Components** link to display the Components area.

Components [Return to Top](#)

The CPU and Memory Usage values are only for Discoverer sessions and do not include values for servlets used by the components. Visit the OC4J page from the Related Links section to see the CPU and Memory Usage values for the servlets. Disabling a component allows currently active users to continue working, but prevents any new users from using that component. Stop the Discoverer service from the General section to terminate all active sessions.

Total Session Memory Usage (MB) **67.17**
 Shared Session Memory Usage (MB) **41.75**

[Enable](#) [Disable](#)

[Select All](#) | [Select None](#)

Select	Name	Status	Session CPU Usage (%)	Session Memory Usage (MB)	Sessions
<input type="checkbox"/>	Discoverer Plus	Enabled	0	12.72	4
<input type="checkbox"/>	Discoverer Viewer	Enabled	0	12.7	2
<input type="checkbox"/>	Discoverer Portlet Provider	Enabled	0	12.72	4

Related Links [Return to Top](#)

[Oracle HTTP Server](#)
[OC4J](#)

[Logs](#) | [Preferences](#) | [Help](#)

4. In the Components area, select a check box in the **Select** column for the Discoverer component(s) that you want to disable or enable.

For example, to enable Discoverer Plus, select the **Discoverer Plus** check box.

Note: Alternatively, click a link in the **Name** column to display the Home page for the component you selected and click Disable or Enable.

5. Complete the following steps to enable the Discoverer component:
 - a. Click Enable.

Application Server Control displays a warning message.

- b. Click Yes to begin the process that enables the Discoverer component.

Application Server Control displays a warning message.

The **Status** column displays 'Enabled' for the Discoverer component(s) that you selected.

4.6 About starting the Discoverer Service and the Discoverer servlets without using Application Server Control

This section explains why you might want to manage Discoverer without using Application Server Control, and how you stop and start the Discoverer Service without using Application Server Control.

4.6.1 Managing Discoverer in a high availability environment

A high availability environment is an environment in which middle tier processes must have as little downtime as possible. If any middle tier processes fail or become unresponsive, those processes must be restarted as quickly as possible.

OPMN (Oracle Process Monitoring and Notification) is an OracleAS component for managing OracleAS middle tier processes (including Discoverer) in a high availability environment.

OPMN periodically checks the processes it manages, and automatically restarts any processes that have failed or become unresponsive.

You specify how OPMN manages Discoverer processes by changing the settings in the `opmn.xml` configuration file. For more information about the options that are available in the `opmn.xml` file, see [Section A.6, "List of configuration settings in `opmn.xml`"](#).

4.7 How to start and stop the Discoverer servlets

You can start and stop the Discoverer servlets (i.e. the Discoverer J2EE components) running on a standalone machine in an OracleAS component farm from any machine in the farm. For example, you might want to perform maintenance tasks on a machine and need to stop the Discoverer servlets.

Note: This task also stops the OracleAS Reports component and the OracleAS Forms component.

For more information about the Discoverer servlets, see [Section 1.10.1, "About the Discoverer J2EE components"](#).

To start and stop the Discoverer servlets:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).

Application Server Control displays a list of OracleAS instances available.

- In the **Name** column, select the OracleAS instance that you want to configure.

Application Server Control displays a list of OracleAS System Components available (e.g. Discoverer, Forms, HTTP Server).

The screenshot shows the Oracle Enterprise Manager 10g Application Server Control interface. The page title is "Application Server: Discoverer.machine.uk.company.com". The status is "Partially Up". The installation type is "Business Intelligence and Forms". The Oracle Home is "/export/home/ias904/installed/disco". The Farm is "machine.uk.company.com".

There are two pie charts showing resource usage:

- CPU Usage:** Application Server (4%), Idle (62%), Other (34%).
- Memory Usage:** Application Server (37% 1,524MB), Free (52% 2,126MB), Other (11% 446MB).

The **System Components** table is as follows:

Select Name	Status	Start Time	CPU Usage (%)	Memory Usage (MB)
<input type="checkbox"/> Discoverer	↑	Jul 4, 2003 11:43:42 AM	0.00	42.68
<input type="checkbox"/> home	↑	Jul 4, 2003 11:43:13 AM	0.17	137.73
<input type="checkbox"/> HTTP_Server	↑	Jul 4, 2003 11:43:14 AM	2,067.94	127.77
<input type="checkbox"/> OC4J_BI_Forms	↑	Jul 4, 2003 11:43:14 AM	3.22	240.27

- In the **Name** column, select the OC4J_BI_Forms link to display the OC4J_BI_Forms page.

- Do one of the following:

- Click Start to start the OC4J_BI_Forms component, which starts the Discoverer servlets (i.e. Discoverer Plus, Discoverer Viewer, Discoverer Portlet Provider)

Note: If the OC4J_BI_Forms component is already started, click Restart to start the Discoverer servlets.

- Click Stop to stop the OC4J_BI_Forms component, which stops the Discoverer servlets (i.e. Discoverer Plus, Discoverer Viewer, Discoverer Portlet Provider).

Notes

- If you want to stop and start the servlets in one operation, you can also use the Restart button.

4.8 About configuring options for the Discoverer Service and the Discoverer client tier components

You use Application Server Control to configure options for the Discoverer Service and the Discoverer client tier component as follows:

- using the Discoverer Service options, you can:
 - set the default locale (e.g. language setting) for Discoverer connections
 - enable graph support for Discoverer Viewer and Discoverer Portlet Provider
 - manage public connections (i.e. create, edit, and delete connections)
 - enable users to create their own private connections
 - set Discoverer session logging
- using the Discoverer client tier component options, you can:
 - specify the communication protocol and servlet logging settings for Discoverer Plus
 - specify caching, servlet logging, stylesheet pool, and delay time settings for Discoverer Viewer
 - specify session, servlet logging, and stylesheet pool settings for Discoverer Portlet Provider

For more information about how to configure Discoverer and Discoverer component options, see:

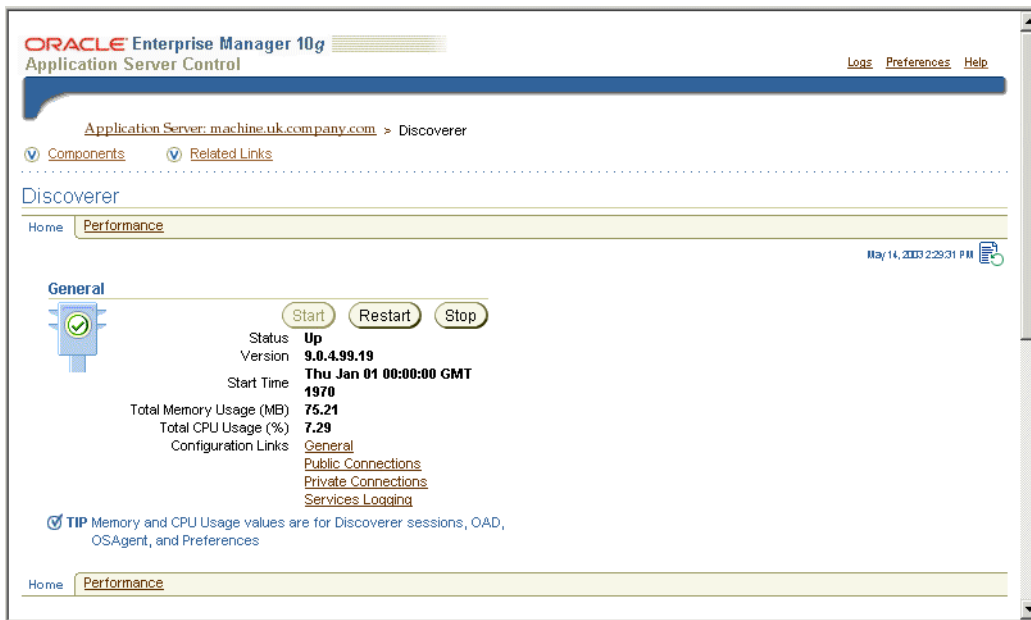
- [Section 4.8.1, "How to change configuration options for all Discoverer client tier components"](#)
- [Section 4.8.2, "How to change configuration options for individual Discoverer client tier components"](#)

4.8.1 How to change configuration options for all Discoverer client tier components

You might want to change configuration settings that apply to all Discoverer client tier components. For example, to set the default locale or to edit public connections.

To change configuration options for all Discoverer client tier components:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).



3. In the General area, next to **Configuration**, click one of the links to display the appropriate Discoverer Configuration page, as follows:
 - Click General to display the General area.
Use this page to select a locale, enable or disable graphs for Discoverer Viewer and Discoverer Portlets.
 - Click Public Connections to display the Public Connections area.

Use this page to create and update public connection details

- Click Private Connections to display the Private Connections area.

Use this page to enable private connections for Discoverer Plus and Discoverer Viewer.

- Click Services Logging to display the Services Logging area.

Use this page to maintain Discoverer Services logging options

Note: For more information about each option, see *Application Server Control Help*.

4. Modify the configuration options as required.
5. Click OK to save the changes you have made.

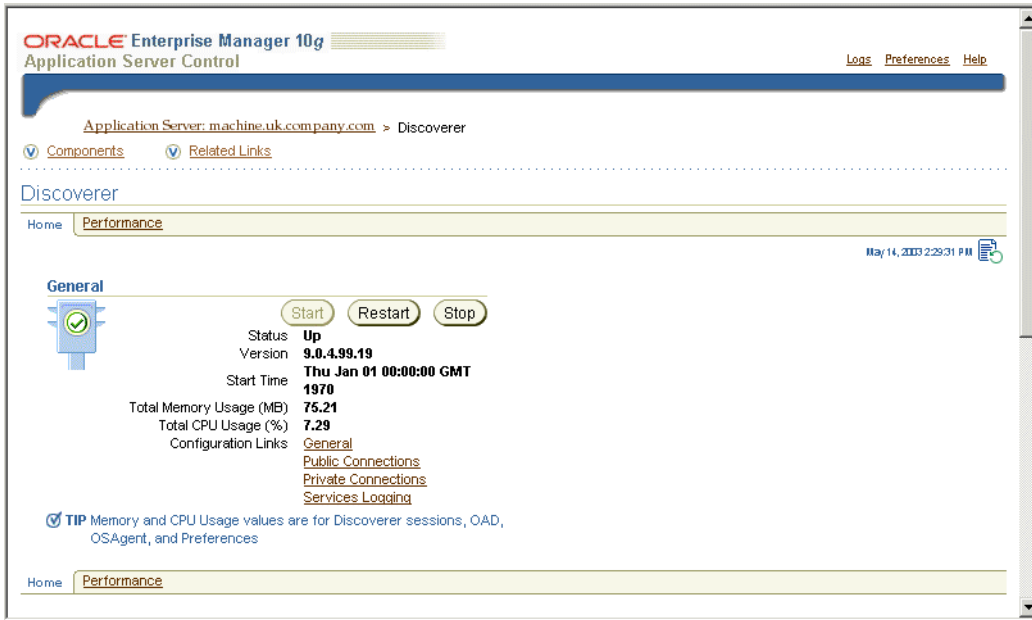
Note: Configuration changes take effect when Discoverer users next log in to Discoverer. You do not have to restart the Discoverer Service or the Discoverer servlets.

4.8.2 How to change configuration options for individual Discoverer client tier components

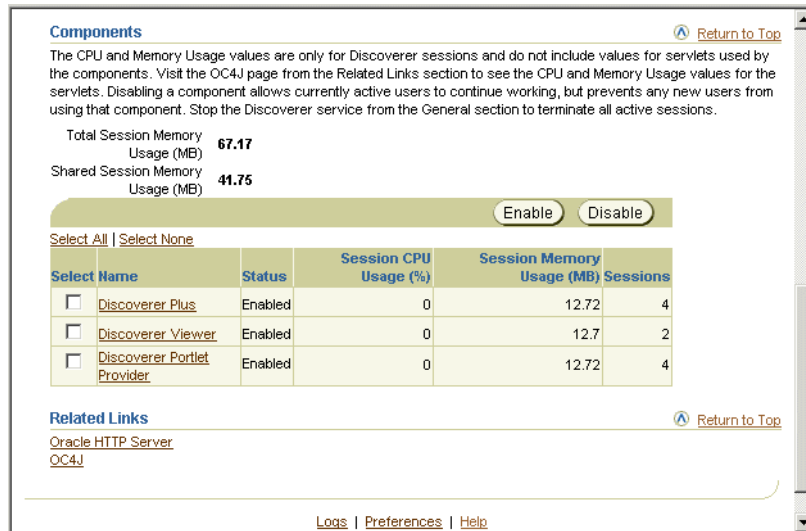
You might want to change configuration settings that apply to individual Discoverer client tier components (i.e. Discoverer Plus, Discoverer Viewer, or Discoverer Portlet Provider). For example, to select the communication protocol for Discoverer Plus.

To change configuration options for individual Discoverer client tier components:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).



3. Select the **Components** link to display the Components area.



4. In the Components area, in the **Name** column, select the Discoverer link for the component that you want to configure.

For example, select the Discoverer Plus link to display the Home page for Discoverer Plus.

5. In the General area, next to **Configuration Links**, select a link to display the Configuration options for the component you selected, as follows:

- Discoverer Plus options:

- Communication Protocols enables you to specify either the JRMP, HTTP, or HTTPS protocol (for more information, see [Section 12.7.3.2, "About specifying a Discoverer Plus communication protocol"](#)).
- Logging enables you to maintain Discoverer Plus logging options

- Discoverer Viewer options

- Caching enables you enable and disable OracleAS Web Cache
- Logging enables you to maintain Viewer logging options
- Stylesheet Pool enables you to specify the number of stylesheets to store in memory to maximize Discoverer performance (for more information, see [Section 10.5.2, "How to enhance Discoverer Viewer scalability using XSL stylesheet pooling"](#))
- Delay Times enables you to specify how long to wait before Discoverer Viewer displays a query progress page, or the frequency for checking for export completion

- Discoverer Portlet Provider options:

- Sessions enables you to specify the number of sessions to cache for Discoverer portlets to maximize Discoverer performance
- Logging enables you to maintain Discoverer Portlet Provider logging options
- Stylesheet Pool enables you to specify the number of stylesheets to store in memory to maximize Discoverer Portlet Provider performance

Note: For more information about each option, see *Application Server Control Help*.

6. Modify the configuration options as required.

For more information about each option, see *Application Server Control Help*.

7. Click OK to save the changes you have made.

Note: Configuration changes take effect when Discoverer users next log in to Discoverer. You do not have to restart the Discoverer Service or the Discoverer servlets.

4.9 About monitoring Discoverer metrics

As the Discoverer middle tier administrator, you will typically want to analyze system performance by monitoring a number of statistics or metrics. This enables you to easily compare the total resources used by Discoverer with other installed applications and services.

You can use Application Server Control to monitor the following Discoverer metrics:

- current status
- uptime
- CPU usage
- session information

You can view the Discoverer metrics in two different ways:

- you can view summary metrics for all Discoverer client tier components
- you can view individual metrics for particular client tier components

For more information about how to monitor Discoverer metrics, see:

- [Section 4.9.1, "How to monitor summary metrics for all Discoverer client tier components"](#)
- [Section 4.9.2, "How to monitor metrics for a single Discoverer client tier component"](#)

Notes

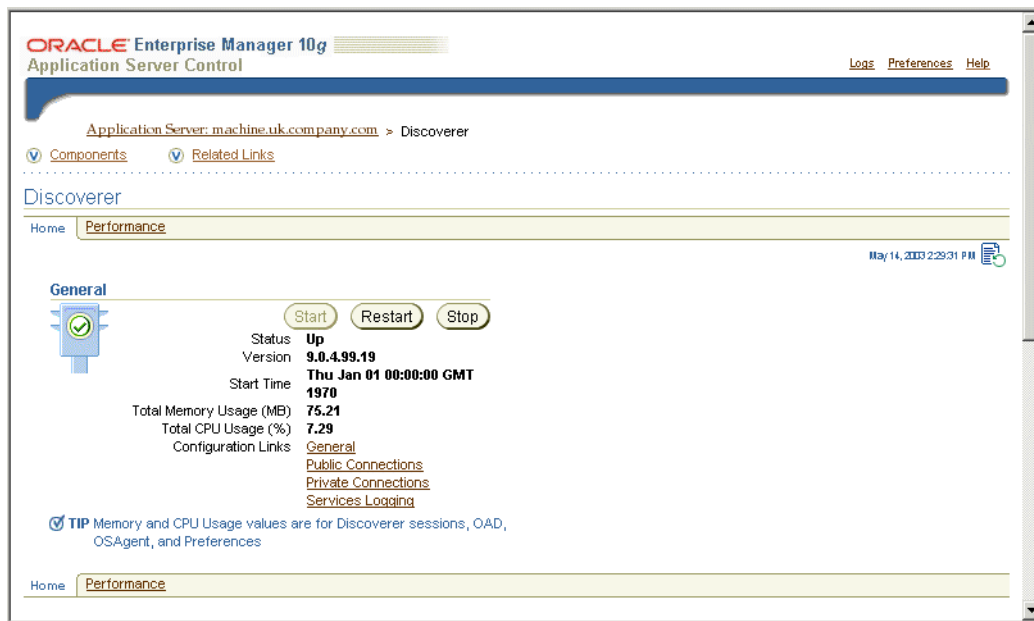
- Metrics are a snapshot taken at the time displayed on the Application Server Control page and do not update automatically. To get up-to-date metrics, click Refresh.

4.9.1 How to monitor summary metrics for all Discoverer client tier components

You might want to monitor metrics for all Discoverer client tier components. For example, to view the total amount of memory or CPU that the Discoverer system is using.

To monitor metrics for all Discoverer client tier components:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).




The Application Server Control Discoverer Home page displays general information and summary metrics.

Note the following:

- The CPU and memory consumption of the Discoverer servlets are not included in this figure (i.e. the Discoverer Viewer, Plus and Portlet Provider servlets).
 - If the **Current Status** indicator is Down, Application Server Control does not display figures for the **Uptime**, **CPU Usage** and **Memory Usage**.
3. (optional) Display the Performance tab to show session details for all Discoverer client tier components.

Discoverer








[Home](#) [Performance](#)

Page Retrieved June 21, 2002, EST 2:44pm 

Discoverer Sessions

Number of Sessions [39](#)

Display Top CPU Usage All Sessions

Session ID	OS Process ID	Component	CPU Usage (%)	Memory Usage (MB)	DBUser@DB - EUL	SSO user	View Log
OW6734X	4629	Viewer	6	444.26	admin@dsspm - VIDE031	tshah	
PW7863X	6246	Portlet Provider	7	130.97	admin@dssdev - VIDE031	chbarron	
PS7814W	7416	Viewer	15	256.45	chbarron@dsspm - VIDE031	cdarlach	
TC8762P	1462	Plus	6	444.26	video@video31 - VIDE031	cleung	
BI7893P	7958	Portlet Provider	7	130.97	smead@dsspm - VIDE031	smead	
YT6895W	6498	Viewer	15	256.45	admin@dss -	dsmith	
IF9485W	4628	Viewer	6	444.26	admin@video - VIDE031	jashley	

The Performance page displays:

- the total number of sessions
- a list of the top N sessions ordered by either CPU usage or memory usage

For more information about the Discoverer session details displayed on this page, see *Application Server Control Help*.

4. (optional) Click the file icon in the **View Log** column on the Performance page to display the View Logs page.

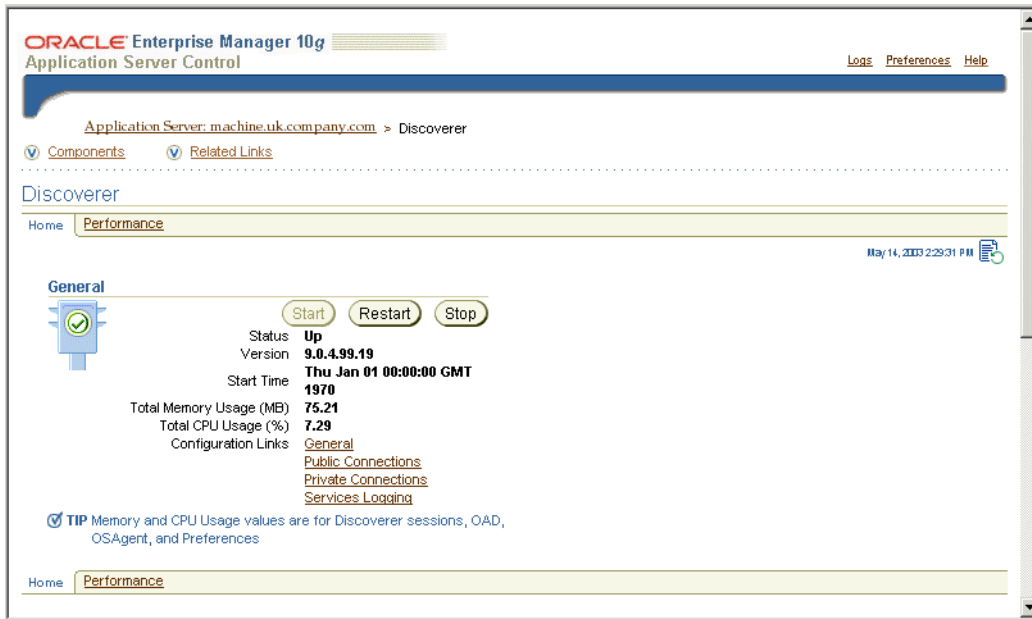
The View Logs page displays all the log information for the selected Discoverer session.

4.9.2 How to monitor metrics for a single Discoverer client tier component

You might want to monitor metrics for a single Discoverer component (i.e. Discoverer Plus, Discoverer Viewer or Discoverer Portlet Provider). For example, For example, you mind want to find out exactly how many sessions are currently used by Discoverer Plus users compared to Discoverer Viewer users.

To monitor metrics for a single Discoverer client tier component:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).



3. Select the **Components** link to display the Components area.

Components [Return to Top](#)

The CPU and Memory Usage values are only for Discoverer sessions and do not include values for servlets used by the components. Visit the OC4J page from the Related Links section to see the CPU and Memory Usage values for the servlets. Disabling a component allows currently active users to continue working, but prevents any new users from using that component. Stop the Discoverer service from the General section to terminate all active sessions.

Total Session Memory Usage (MB) **67.17**
 Shared Session Memory Usage (MB) **41.75**

[Enable](#) [Disable](#)

[Select All](#) | [Select None](#)

Select	Name	Status	Session CPU Usage (%)	Session Memory Usage (MB)	Sessions
<input type="checkbox"/>	Discoverer Plus	Enabled	0	12.72	4
<input type="checkbox"/>	Discoverer Viewer	Enabled	0	12.7	2
<input type="checkbox"/>	Discoverer Portlet Provider	Enabled	0	12.72	4

Related Links [Return to Top](#)

[Oracle HTTP Server](#)
[OC4J](#)

[Logs](#) | [Preferences](#) | [Help](#)

- In the **Name** column of the Components area, select the Discoverer link for the component that you want to monitor.

For example, select the Discoverer Plus link to display the Home page for Discoverer Plus.

Application Server Control displays the Home page for the Discoverer component that you selected.

Each Discoverer component home page displays general information and summary metrics. The Discoverer component home page is similar to the metrics on the Application Server Control Discoverer Home page, except that the metrics are specific to the displayed Discoverer component.

- (optional) Display the Performance tab to show session details for the selected Discoverer component.

The Performance page displays:

- the total number of sessions for this Discoverer component
- a list of the top N sessions for this Discoverer component, ordered by either CPU usage or memory usage

For more information about the Discoverer session details displayed on this page, see *Application Server Control Help*.

6. (optional) Click the file icon in the **View Log** column on the Performance page to display the View Logs page.

The View Logs page displays log information for the selected Discoverer session.

Notes

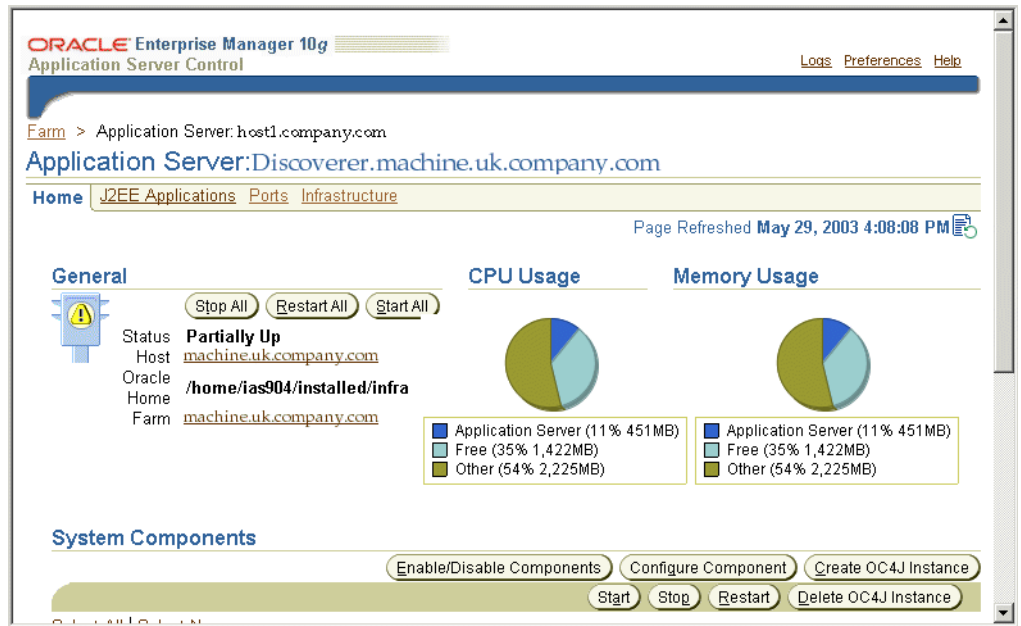
- The CPU and memory consumption of the Discoverer servlets (i.e. the Discoverer Viewer, Plus and Portlet Provider servlets) are not included in this figure.
- If the **Current Status** indicator is Down, Application Server Control does not display figures for the **Uptime**, **CPU Usage** and **Memory Usage**.

4.10 How to list ports used by OracleAS

Discoverer uses the same port(s) as the Oracle HTTP Server.

To see a list of ports used by OracleAS:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. In the **Name** column, select the OracleAS instance containing the OracleAS infrastructure installation where OracleAS Discoverer is installed.



3. Display the Ports tab.

The screenshot shows the Oracle Enterprise Manager 10g Application Server Control interface. The page title is "Application Server: Discoverer.machine.uk.company.com". The navigation menu includes "Home", "J2EE Applications", "Ports", and "Infrastructure". The "Ports" tab is selected. The page content includes a table with the following data:

Component	Type	Port In Use	Suggested Port Range	Configure
OPMN	ONS Remote	6201	6200-6299	
OPMN	ONS Local	6101	6100-6199	
OPMN	ONS Request	6004	6003-6099	
Oracle HTTP Server	The SSL listen port	4444	4443-4543	
Oracle HTTP Server	The nonSSL listen port	7778	7777-7877	
OC4J_SECURITY	Web site port	3301	3301-3400	
OC4J_SECURITY	RMI server port	3101	3101-3200	
OC4J_SECURITY	JMS server port	3201	3201-3300	

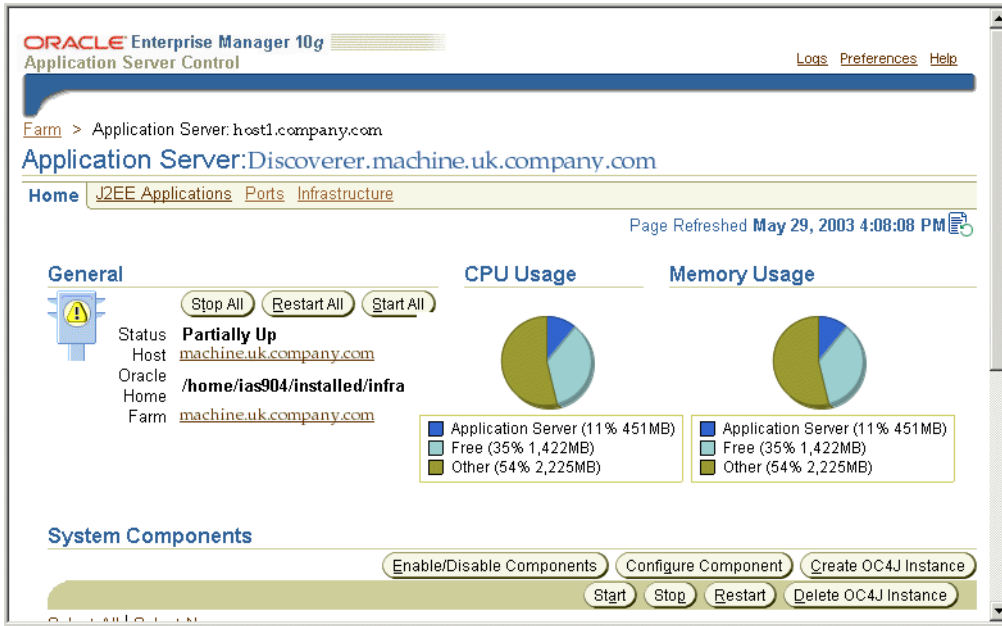
For information about changing the default OracleAS ports for OracleAS components, see [Section 4.10.1, "How to change the port on which Discoverer is deployed"](#).

Note: For more information about which port Discoverer is installed on by default, see [Section 2.5, "Which port number is Discoverer installed on?"](#).

4.10.1 How to change the port on which Discoverer is deployed






To change the port on which Discoverer is deployed:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. In the **Name** column, select the OracleAS instance containing the OracleAS infrastructure installation where OracleAS Discoverer is installed.



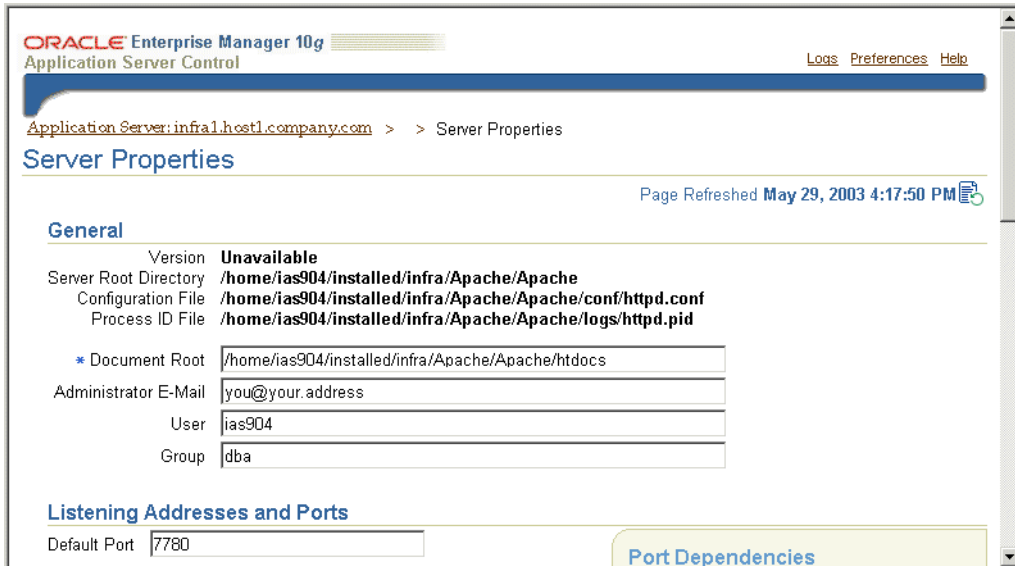
3. Display the Ports tab.

The screenshot shows the Oracle Enterprise Manager 10g Application Server Control interface. The page title is "Application Server: Discoverer.machine.uk.company.com". The breadcrumb trail is "Farm > Application Server: host1.company.com". The page is refreshed on May 29, 2003, at 3:59:56 PM BST. A note states: "The Port In Use column is empty if the port is not defined or if the component is not running. The Configure column contains an icon if you can configure the port using Enterprise Manager. Otherwise, see help topic: [About Oracle9iAS Port Dependencies](#)".

Component	Type	Port In Use	Suggested Port Range	Configure
OPMN	ONS Remote	6201	6200-6299	
OPMN	ONS Local	6101	6100-6199	
OPMN	ONS Request	6004	6003-6099	
Oracle HTTP Server	The SSL listen port	4444	4443-4543	
Oracle HTTP Server	The nonSSL listen port	7778	7777-7877	
OC4J_SECURITY	Web site port	3301	3301-3400	
OC4J_SECURITY	RMI server port	3101	3101-3200	
OC4J_SECURITY	JMS server port	3201	3201-3300	

4. In the rows containing the Oracle HTTP Server component, select the edit icon in the **Configure** column to display the Server Properties page for that component.

For example, to change the Discoverer HTTP port, select the edit icon in the **Configure** column where the **Type** column displays 'The nonSSL listen port'. To change the Discoverer HTTPS port, select the edit icon in the **Configure** column where the **Type** column displays 'The SSL listen port'.



5. Scroll down to the Listening Addresses and Ports area and change the port number in the **Default Port** field.
6. Click OK.
7. When you are prompted to restart the Oracle HTTP Server, click Yes.

For more information about the Server Properties page in Application Server Control, see *Application Server Control Help*.

Hint: If you change a Discoverer port number, make sure that any other OracleAS components that use that Discoverer port number are synchronized.

4.11 About Discoverer diagnostics and logging

This explains describes the server diagnostic and logging facilities that are available in Discoverer, and contains the following topics:

- [Section 4.11.1, "What Discoverer diagnostics and logging facilities are available"](#)
- [Section 4.11.3, "About using the OracleAS View Logs facility"](#)
- [Section 4.11.4, "How to use OracleAS View Logs to view Discoverer log files"](#)

- [Section 4.11.5, "How to enable the Discoverer Services log file"](#)
- [Section 4.11.6, "How to enable the Discoverer Servlet log files"](#)
- [Section 4.11.7, "How to view the Discoverer Services log file"](#)
- [Section 4.11.8, "How to view Discoverer Servlet log files"](#)
- [Section 4.11.9, "How to copy Discoverer log files"](#)

4.11.1 What Discoverer diagnostics and logging facilities are available

You use Discoverer's diagnostics facilities to trace and diagnose problems with Discoverer. For example, if Discoverer's performance is slow, you might want to check that Discoverer's middle tier components are correctly configured.

The following Discoverer diagnostic facilities are available:

- Log files:
 - Discoverer Services log files (for more information, see [Section 4.11.7, "How to view the Discoverer Services log file"](#))
 - Discoverer Plus log files (for more information, see [Section 4.11.8, "How to view Discoverer Servlet log files"](#))
 - Discoverer Viewer log files (for more information, see [Section 4.11.8, "How to view Discoverer Servlet log files"](#))
 - Discoverer Portlet Provider log files (for more information, see [Section 4.11.8, "How to view Discoverer Servlet log files"](#))
- CollectLogs script - you can use the *collectlogs* utility to collect all Discoverer logs into a single location (for more information about using the collectlogs script, see [Section 4.11.9, "How to copy Discoverer log files"](#)).
- CheckDiscoverer utility - you can use the checkdiscoverer utility to verify a Discoverer configuration and report on failures or anomalies (for more information about the checkdiscoverer utility, see [Section 4.11.2, "What is the checkdiscoverer utility?"](#)).
- Log Files - select the **Logs** link on the Application Server Control page and display the Log Files tab to search for and display log files (for more information, see [Section 4.11.4, "How to use OracleAS View Logs to view Discoverer log files"](#)). You can also display the Search Log Repository tab to search the Log Repository.

Notes

- When diagnosing Discoverer session information, you often need to know the session ID of the Discoverer Plus session that you want to monitor. A session ID uniquely identifies a session, which starts when an end user logs in to Discoverer and finishes when an end users logs out of Discoverer. You can then use this session ID to locate the corresponding server log.

If single sign-on is deployed, you can use the single sign-on username to monitor Discoverer sessions.

To find out the session ID of a Discoverer Plus user's session, access the JInitiator console of the Discoverer Plus user and note the Session ID: <number> value.

4.11.2 What is the checkdiscoverer utility?

The checkdiscoverer utility is a script that checks the configuration of the Discoverer middle tier and middle tier components, and reports any failures or anomalies.

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

4.11.3 About using the OracleAS View Logs facility

The OracleAS View Logs facility enables you to query and view log files from OracleAS applications. For example, you might want to produce a list of all Discoverer sessions running on a particular Discoverer middle tier machine.

Note: The OracleAS View Log facility is an alternative to using the **Services Logging** link on the Application Server Control Discoverer Home page, or the **View Log** link on the Performance page for each Discoverer servlet.

4.11.4 How to use OracleAS View Logs to view Discoverer log files

You use the OracleAS View Logs facility when you want to search for particular Discoverer logs. For example, you might want to look at session log files for a particular Discoverer component.

To use OracleAS View Logs to view Discoverer log files:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).

2. In the **Name** column, select the OracleAS instance containing the OracleAS Business Intelligence and Forms installation where OracleAS Discoverer is installed.
3. If prompted, enter an Application Server Control user name and password. Application Server Control displays a list of OracleAS System Components available for the OracleAS Business Intelligence and Forms installation (e.g. Discoverer, Forms, HTTP Server).
4. Select the **Logs** link in the Application Server Control header to display the View Logs page.
5. Add Discoverer to the Selected Components list.
6. Click Search to display all Discoverer Services log files for that machine.

View Logs

Referenced at Monday, March 17, 2003 6:56:03 AM PST

Log Files [Search Log Repository](#)

The Log Files tab lists the log files for this application server. View a log file by clicking on the Log File name in the search results table.

Simple Search Advanced Search

Available Components

- BC4J
- Enterprise Manager
- Log Loader
- OC4J home
- OC4J_BI_Forms
- OC4J_Demos
- OC4J_Portal
- OC4J_Wireless
- OPMN
- Wireless

>

Move

>>

Move All

<

Remove

<<

Remove All

Selected Components

- Discoverer

Results: 22 Log Entries Retrieved

Component Type	Component Name	Log Type	Log File	Modified	Size (bytes)
Discoverer	Discoverer Server Process log	Process	log2003031410464117186.xml	March 14, 2003 11:07:57 AM PST	1019557
Discoverer	Discoverer Server Process log	Process	log2003031410493219263.xml	March 14, 2003 11:11:08 AM PST	1907526
Discoverer	Discoverer Server	Process	log2003031410585326088.xml	March 14, 2003	174912

7. Select a link in the Log File column to display that log in detail.

Hint: For find more specific logging information, click Advanced Search to search by log file attributes, or display the Search Log Repository tab to search all logs.

4.11.5 How to enable the Discoverer Services log file

You enable the Discoverer Services log file when you want to monitor Discoverer session processes.

To enable the Discoverer Services log file:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).
3. Select the **Services Logging** link to display the Discoverer Services Logging area.

Discoverer Services Logging [Return to Top](#)

These logging options only apply to Discoverer Session processes on the Discoverer Services tier. For a more complete view of Discoverer Plus, Viewer or Portlet Provider activity, logging should also be enabled for the respective Discoverer component. These options are accessible from the component home pages.

Logging Level:

- None
- Error
- Warning
- Notification**
- Trace

listed in increasing amount of information logged.

[Logs](#) | [Preferences](#) | [Help](#)

4. Enable the Discoverer Services log file as follows:
5. Select a logging level from the **Logging Level** drop down list.

You can now monitor the Discoverer Services log file (for more information, see [Section 4.11.7, "How to view the Discoverer Services log file"](#)).

6. Click OK.

Notes

- To enable OAD logging, do the following:
 - a. Open the opmn.xml file (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).

Replace the value of the OAD_VERBOSE_LOGGING variable with the logging level to use.

For example:

```
<variable id="OAD_VERBOSE_LOGGING" value="-verbose">
```

- b. Save the opmn.xml file.

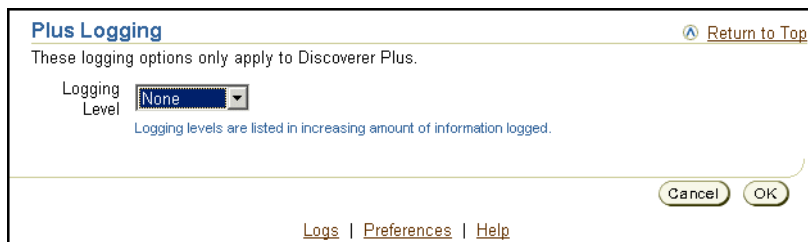
4.11.6 How to enable the Discoverer Servlet log files

You enable the Discoverer Servlet log files when you want to monitor Discoverer servlet activity.

To enable the Discoverer Servlet log files:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).
3. Select the **Components** link to display the Components area.
4. Display the home page for the Discoverer servlet for which you want to enable log files, select one of the following links in the **Name** column:
 - for the Discoverer Plus servlet log file, select the **Discoverer Plus** link
 - for the Discoverer Viewer servlet log file, select the **Discoverer Viewer** link
 - for the Discoverer Portlet Provider servlet log file, select the **Discoverer Portlet Provider** link
5. Select the **Logging** link to display the Logging area.
6. Select a logging level from the **Logging Level** drop down list.

For example, the figure below shows a logging level being selected for Discoverer Plus.



7. Click OK.

You can now monitor the Discoverer servlet log file that you enabled (for more information, see [Section 4.11.8, "How to view Discoverer Servlet log files"](#)).

4.11.7 How to view the Discoverer Services log file

You view the Discoverer Services log file when you want to monitor Discoverer.

Note: The Discoverer Services log file must first be enabled (for more information, see [Section 4.11.5, "How to enable the Discoverer Services log file"](#)).

Hint: You can also use the OracleAS View Log facility to search for and view Discoverer log files (for more information, see [Section 4.11.4, "How to use OracleAS View Logs to view Discoverer log files"](#)).

To view the Discoverer Services log file:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).
3. Display the Performance tab.

Discoverer

Home Performance

Page Retrieved June 21, 2002, EST 2:44pm

Discoverer Sessions

Number of Sessions [39](#)

Display Top Bottom 10 CPU Usage All Sessions All Sessions

Session ID	OS Process ID	Component	CPU Usage (%)	Memory Usage (MB)	DBUser@DB - EUL	SSO user	View Log
OW6734X	4629	Viewer	6	444.26	admin@dsspm - BUG	tshah	
PW7863X	6246	Portlet Provider	7	130.97	admin@dssdev - BUG	chbarron	
PS7814W	7416	Viewer	15	256.45	chbarron@dsspm - CHBARRON	cdarlach	
TC8762P	1462	Plus	6	444.26	video@video31 - VIDEO31	cleung	
BI7893P	7958	Portlet Provider	7	130.97	smead@dsspm - BUG	smead	
YT6895W	6498	Viewer	15	256.45	admin@dss - TEST	dsmith	
IF9485W	4628	Viewer	6	444.26	admin@video -	jashley	

4. Click a file icon in the **View Log** column on the Performance page to display the View Logs page.

4.11.8 How to view Discoverer Servlet log files

You view the Discoverer Servlet log files when you want to monitor Discoverer servlets.

Note: The Discoverer Servlet logs must first be enabled (for more information, see [Section 4.11.6, "How to enable the Discoverer Servlet log files"](#)).

Hint: You can also use the OracleAS View Log facility to search for and view Discoverer log files (for more information, see [Section 4.11.4, "How to use OracleAS View Logs to view Discoverer log files"](#)).

To view the Discoverer Servlet log files:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).

3. Display the Performance tab for the Discoverer servlet that you want to monitor, as follows.
 - to monitor Discoverer Plus - select the **Discoverer Plus** link, display the Performance tab, then click the View Log icon for the session that you want to monitor.
 - to monitor Discoverer Viewer - select the **Discoverer Viewer** link, display the Performance tab, then click the View Log icon for the session that you want to monitor.
 - to monitor Discoverer Portlet Provider - select the **Discoverer Portlet Provider** link, display the Performance tab, then click the View Log icon for the session that you want to monitor.

4.11.9 How to copy Discoverer log files

You might want to copy all Discoverer logs into a single location. For example, to provide a snap-shot of a Discoverer middle tier machine, or to provide an archive of Discoverer log files.

You use the collectlogs utility to copy Discoverer logs into a single location.

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

To copy Discoverer log files to a single location:

1. On the Discoverer middle tier machine, navigate to the `/discoverer/util/` directory and type the following at a command prompt:

```
collectlogs <logs target location>
```

where *<logs target location>* is either a TAR filename (UNIX) or a folder name (Windows).

The Discoverer log files are copied to the specified location.

Notes

- The collectlogs script collects the following information:
 - Middle tier Discoverer logs
 - application.log
 - .reg_key.dc

- env
- Discoverer server files (i.e. all files in <ORACLE_HOME>/discoverer/bin and <ORACLE_HOME>/discoverer/lib)
- UNIX specific system parameters (e.g. /etc.hosts, ifconfig output, showrev -p output, uname -a output, ulimit -a output)

4.12 About running Discoverer Plus with different Java Virtual Machines

OracleAS supports the following default Java Virtual Machines (JVMs):

- Oracle JInitiator 1.3 for Windows (i.e. Internet Explorer or Netscape Navigator)
- Sun Java Plug-in 1.4.1 for other browsers on other platforms (e.g. Netscape Navigator for UNIX)

You might want to use a different JVM in the following circumstances:

- if you want to use a newer version of the JVM to improve performance
- if a different JVM is already installed and you want to use that JVM
- if you want to deploy Discoverer Plus on a non-Windows browser that requires a different JVM (e.g. for which JInitiator is not available)
- if you want to standardize on using the Sun Java Plug-in 1.4.1 across both Windows and non-Windows clients

The `plus_config.xml` Discoverer configuration file that is installed with OracleAS contains details of the recommended JVMs that are compatible with Discoverer (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)). The list of JVMs in `plus_config.xml` is pre-populated with JVM details for JInitiator 1.3 and Sun Java Plug-in 1.4.1.

In the figure below, the `plus_config.xml` file contains two JVM tags (highlighted):

- `<jvm name = "windows" ...>` - JVM tag for the JInitiator 1.3 JVM
- `<jvm name = "non-windows" ...>` - JVM tag for the Sun Java Plug-in 1.4.1 JVM

Figure 4–6 *plus_config.xml* showing the JVM parameters (highlighted)

```

plus_config.xml - Notepad
File Edit Format Help
<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XML Spy v4.2 U (http://www.xmlspy.com) by Mohan Sarangan (Oracle) -->
<!-- Copyright (c) 2001 Oracle Corporation. All rights reserved.-->
<disco:applet xmlns:disco="http://www.oracle.com/discoverer/configuration" xmlns:xsi="http://ww
  <!-- Discoverer plus applet configuration. Since no transport is specified, the transpor
  <!-- Discoverer plus applet configuration. The applet will always communicate using t
  <!--
    <transport name="http"/>
    <transport name="https"/>
    <transport name="codebase"/>
  -->
  <transport name="jrmf"/>
  <transport name="codebase"/>
  <jvm name="windows" classid="clsid:CAFECAFE-0013-0001-0008-ABCDEFABCD
  <jvm name="non-windows" classid="clsid:CAFEEFAC-0014-0001-0001-ABCDEF
  <jvm name="native"/>
  <nls id="ar" locale="ar" resjar="resources/arabic_res.jar" helpdir="ar"/>
  <nls id="ar-dz" locale="ar_dz" resjar="resources/arabic_res.jar" helpdir="ar"/>
  <nls id="ar-bh" locale="ar_bh" resjar="resources/arabic_res.jar" helpdir="ar"/>
  <nls id="ar-eg" locale="ar_eg" resjar="resources/arabic_res.jar" helpdir="ar"/>
  <nls id="ar-iq" locale="ar_iq" resjar="resources/arabic_res.jar" helpdir="ar"/>
  <nls id="ar-jo" locale="ar_jo" resjar="resources/arabic_res.jar" helpdir="ar"/>
  <nls id="ar-kw" locale="ar_kw" resjar="resources/arabic_res.jar" helpdir="ar"/>

```

Notes

- Do not specify JDK 1.4.1 as the JVM on machines running Windows NT version 4. For more information, see the *Oracle Application Server Discoverer Release Notes*.
- The values "windows" and "non-windows" are the default JVMs that must be included in the *plus_config.xml* file.

4.12.1 How to change the JVMs specified in the *plus_config.xml* file

You change the JVMs specified in the *plus_config.xml* file when you want to use a different JVM from the default JVMs installed with Discoverer.

Hint: Make a backup copy of the *plus_config.xml* file before making amendments.

To change the JVMs specified in the *plus_config.xml* file:

1. Open the *plus_config.xml* file in a text editor (for more information about the location of the *plus_config.xml* file, see [Section A.2, "List of Discoverer file locations"](#)).

2. Change the details of the default JVMs (i.e. "windows" and "non-windows") as required.

4.12.2 How to specify a Java Virtual Machine

If you want to specify a JVM globally for Discoverer Plus sessions, you must modify JVM entries for 'windows' or 'non-windows'. For example, you might want Windows clients to use the Sun Java Plug-in 1.4.1 instead of the default JInitator 1.3 JVM.

To specify a Java Virtual Machine:

1. Open the plus_config.xml file in a text editor or XML editor (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. Remove (or comment out) the existing JVM tag for the JVM that you want to stop using.

For example, if you want to stop using the JInitator 1.3 JVM for Windows clients, remove (or comment out) the following 'oracle' JVM tag:

```
<jvm name="windows"
classid="clsid:CAFECAFE-0013-0001-0008-ABCDEFABCDEF" plugin_
setup="plus_files/plugin/jinit1318.exe" version="1.3.1.9" versionie="1,3,1,9"
type="application/x-jinit-applet" plugin_page="" archive="disco5i.jar"/>
```

3. Cut and paste the JVM tag for the JVM that you want to use into the plus_config.xml file.

For example, if you want to start using the Sun Java Plug-in 1.4.1 JVM for Windows clients, cut and paste the following 'non-windows' JVM tag:

```
<jvm name="non-windows"
classid="clsid:CAFEEFAC-0014-0001-0002-ABCDEFFEDCBA" plugin_
setup="/plus_files/plugin/j2re-1_4_1_02-windows-i586-i.exe"
version="1.4.1" versionie="1,4,1,2" type="application/x-java-applet"
plugin_page>
="http://java.sun.com/products/archive/j2se/1.4.1/index.html"
archive="disco5i.jar"/>
```

Note: The JVM tag that you paste must be one continuous line with no carriage returns or breaks.

4. In the new JVM tag that created in the previous step, change the jvm name= value to the value of the JVM that you want to use.

For example, if you want to start using the Sun Java Plug-in 1.4.1 JVM for Windows clients, change the value 'non-windows' to the value 'windows'.

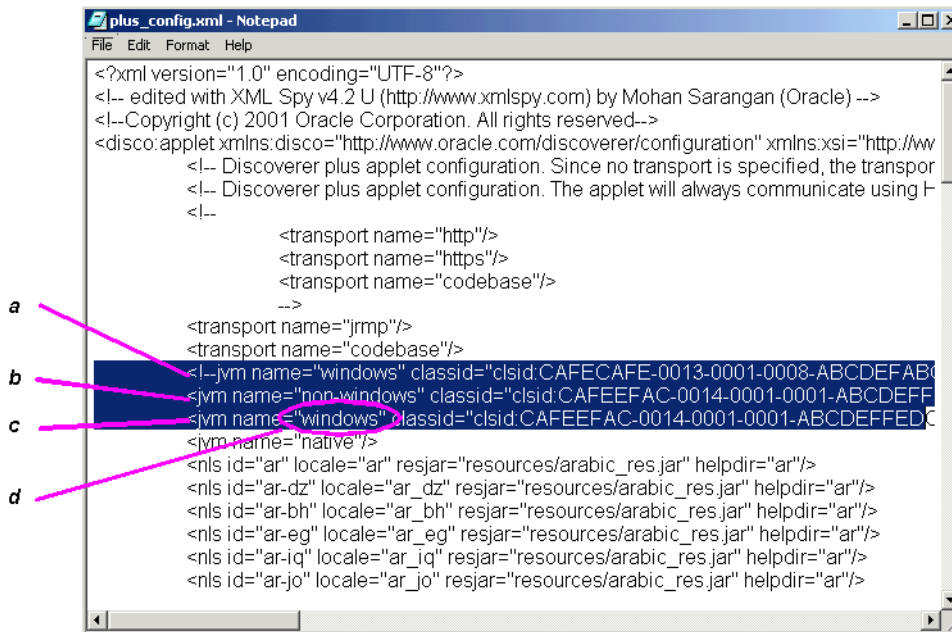
5. Save the plug_config.xml file.

The specified JVM will now be used for Discoverer Plus sessions for the specified browser platforms.

Example

The figure below shows an example of a plus_config.xml file after changes are made to specify the Sun Java Plug-in 1.4.1 JVM for Windows clients.

Figure 4-7 Specifying a JVM for all sessions



Key to figure above:

- Original Windows JVM tag commented out.
- Original non-Windows JVM tag.
- Copy of the non-Windows JVM tag with "non-windows" changed to "windows".

- d. The JVM name value that is changed from "non-windows" to "windows".

Installing OracleAS Discoverer in a multiple machine environment

5.1 Installing OracleAS Discoverer in a multiple machine environment

This chapter explains how to configure OracleAS Discoverer in a multiple machine environment, and contains the following topics:

- [Section 5.2, "What is a multiple machine Discoverer environment?"](#)
- [Section 5.3, "About OracleAS installations"](#)
- [Section 5.4, "What are the pre-requisites for using OracleAS Web Cache to provide load balancing for OracleAS Discoverer"](#)
- [Section 5.5, "About using OracleAS Web Cache Manager to configure load balancing for OracleAS Discoverer"](#)
- [Section 5.6, "How to deploy OracleAS Discoverer with load balancing using OracleAS Web Cache"](#)
- [Section 5.7, "About the Discoverer Preferences component in a multiple machine environment"](#)
- [Section 5.8, "About configuring the tnsnames.ora file in a multiple machine environment"](#)

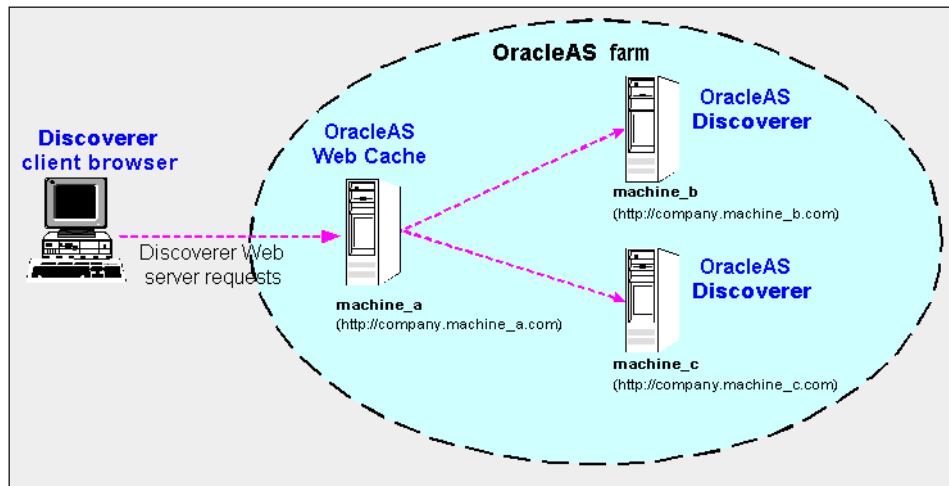
5.2 What is a multiple machine Discoverer environment?

A multiple machine Discoverer environment is a Discoverer deployment that contains two or more machines running OracleAS Discoverer.

A typical multiple machine Discoverer environment uses a standard commercial hardware router to distribute Discoverer Web traffic to other Discoverer machines. This is commonly known as load balancing.

However, you can also provide load balancing using OracleAS Web Cache as a proxy server to distribute Discoverer Web traffic to other Discoverer machines.

Load balancing improves OracleAS Discoverer's performance, scalability, and availability.



In the diagram above, OracleAS Web Cache on machine_a (URL http://company.machine_a.com) distributes Discoverer Web traffic to machine_b (http://company.machine_b.com) and machine_c (http://company.machine_b.com). In other words, you can have a single Discoverer URL for multiple Discoverer machines.

For more information about using OracleAS Web Cache to load balance, see [Section 5.6.2, "How to configure OracleAS Web Cache for load balancing"](#).

Notes

- There are two other types of multiple machine environment:
 - load balanced with high availability - this configuration provides load balancing with additional support for failure detection and failover of OracleAS Web Cache servers. For more information about implementing high availability, see *Oracle Application Server Web Cache Administration and Deployment Guide*.

- non-load balanced - this configuration is essentially a number of unconnected OracleAS Discoverer machines that operate independently. In other words, you have a different Discoverer URL for each machine. For example, you might deploy Discoverer Plus on one machine and Discoverer Viewer on another machine.
- When you deploy OracleAS Discoverer across multiple machines with load balancing, you also provide load balancing for other OracleAS components on those machines. For example, you can also deploy OracleAS Portal with load balancing.
- To provide a consistent Discoverer interface to end users, when you deploy OracleAS Discoverer across multiple machines with load balancing, make sure that each machine has the same configuration settings (e.g user interface customizations, timeouts).

5.3 About OracleAS installations

Before you can deploy OracleAS Discoverer on multiple machines, you need a basic understanding of OracleAS Discoverer installations (if you are already familiar with OracleAS installations, skip to [Section 5.4, "What are the pre-requisites for using OracleAS Web Cache to provide load balancing for OracleAS Discoverer"](#)).

A typical OracleAS Discoverer installation comprises the following:

- one OracleAS infrastructure installation, containing the underlying database, directory server, and management servers necessary for OracleAS middle tier components
Note: There is one OracleAS infrastructure installation per OracleAS farm.
- one or more OracleAS Business Intelligence and Forms type installations, one per machine
- (optional) one OracleAS J2EE and Web Cache type installation on one machine, to enable OracleAS Web Cache to act as a proxy machine (i.e. if you are not using a standard commercial hardware router or load balancer)

An OracleAS instance is a single OracleAS installation in one Oracle home. For example, an OracleAS Business Intelligence and Forms type installation.

You can have more than one instance on one machine. For example, you might have one OracleAS infrastructure installation and one OracleAS Business Intelligence and Forms type installation on the same machine, but in different Oracle homes. For

more information, see [Section 5.3.1, "About installing Discoverer on a single machine"](#).

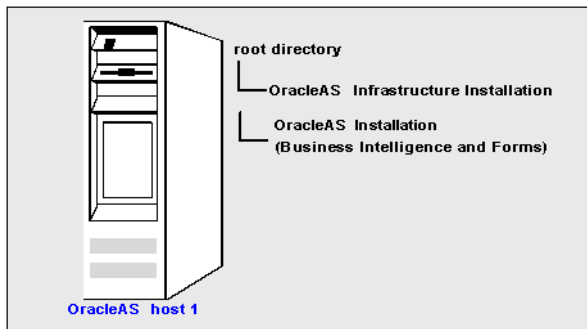
Notes

- 'Business Intelligence and Forms' and 'J2EE and Web Cache' are types of OracleAS installation. For more information, see *Oracle Application Server Installation Guide*.
- A machine can only have one OracleAS infrastructure installation.
- A machine can have multiple Business Intelligence and Forms installations.

5.3.1 About installing Discoverer on a single machine

When Discoverer is deployed on a single machine, the OracleAS infrastructure installation and the OracleAS Business Intelligence and Forms type installation are located on the same machine but in separate Oracle homes (see diagram below).

Figure 5–1 *Installing OracleAS Discoverer on a single machine*



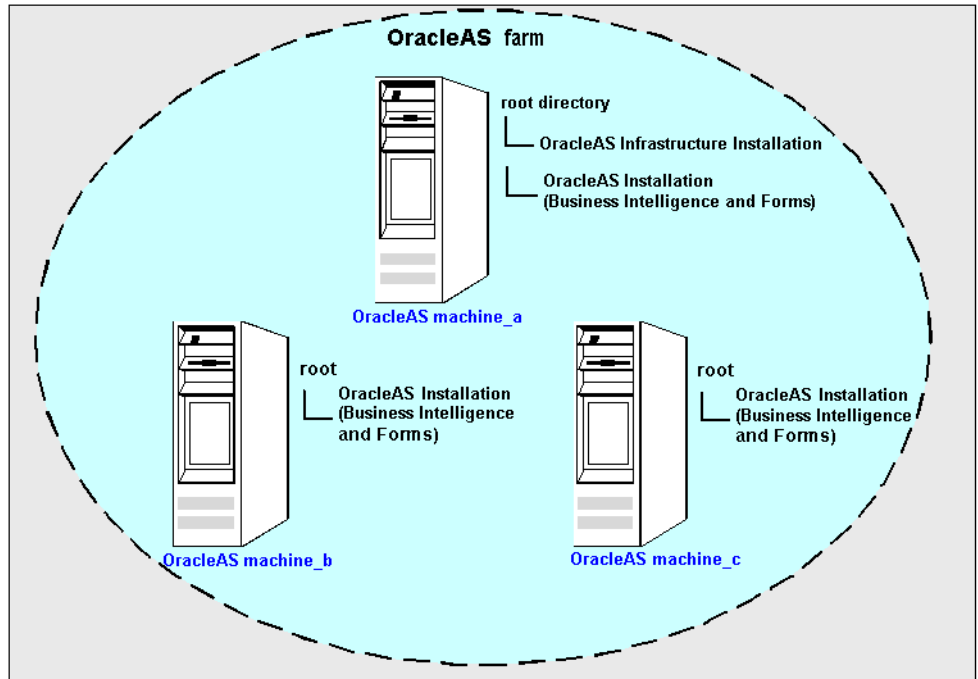
5.3.2 About installing Discoverer on multiple machines

When Discoverer is deployed on multiple machines, the OracleAS infrastructure installation and an OracleAS Business Intelligence and Forms type installation are typically installed on one machine, and one or more OracleAS Business Intelligence and Forms type installations are installed on other machines. These standalone OracleAS components are typically linked together in an OracleAS farm.

Note: An OracleAS farm is a collection of OracleAS instances that share the same OracleAS infrastructure instance.

In the diagram below, OracleAS machine_a contains the OracleAS infrastructure installation and an OracleAS Business Intelligence and Forms type installation. OracleAS machine_b and OracleAS machine_c contain OracleAS Business Intelligence and Forms type installations. The three machines are linked together in an OracleAS farm.

Figure 5–2 *Installing OracleAS Discoverer on multiple machines*



You might use OracleAS Web Cache as a proxy server to distribute Discoverer Web server requests to other Discoverer machines in an OracleAS farm. For more information about using OracleAS Web Cache to load balance, see [Section 5.6.2, "How to configure OracleAS Web Cache for load balancing"](#).

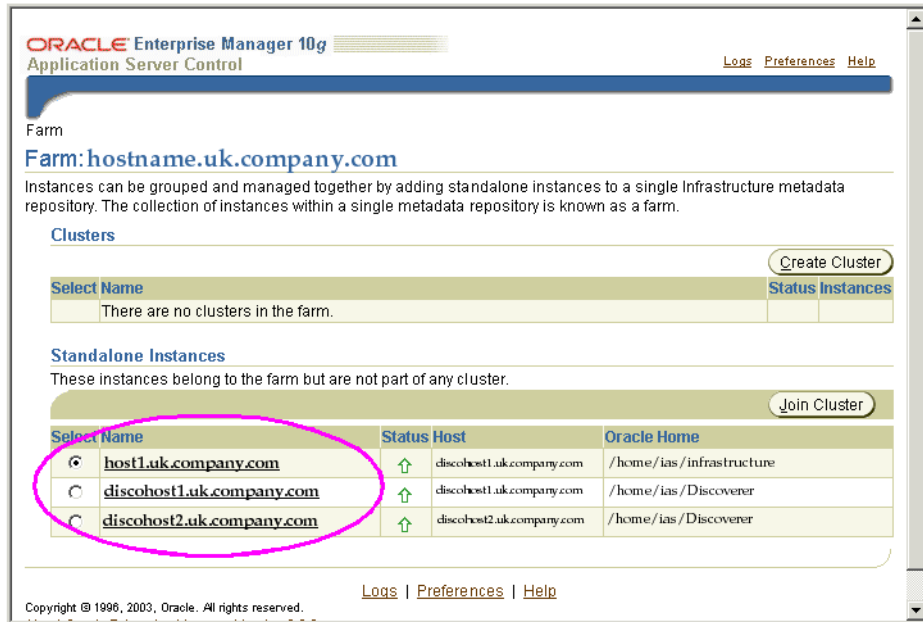
5.3.3 About using Application Server Control to manage multiple machines

When you choose the OracleAS installation type during installation and select the Business Intelligence and Forms option, OracleAS Discoverer is installed on that machine. You can subsequently install a Business Intelligence and Forms instance on other machines and link instances together in an OracleAS farm.

For example, you might have installed the following:

- one OracleAS infrastructure installation on host 1 (e.g. in /home/ias/infrastructure)
- one OracleAS Business Intelligence and Forms type installation on host 1 (e.g. in /home/ias/Discoverer)
- one OracleAS Business Intelligence and Forms type installation on host 2 (e.g. in /home/ias/Discoverer)

You use Application Server Control to manage OracleAS farms. The screen below shows how the above scenario is represented in Application Server Control. Each machine is represented as a row in the Standalone Instances table.



Notes

- For more information about using Application Server Control to manage OracleAS farms, refer to the Application Server Control *Help*.
- When OracleAS Discoverer is installed on multiple machines, the Discoverer Preferences component is installed on each machine, but only one Preferences component is used (for more information, see [Section 1.10.2.2, "What is the](#)

[Discoverer Preferences component?](#) and [Section 5.7, "About the Discoverer Preferences component in a multiple machine environment"](#))

5.4 What are the pre-requisites for using OracleAS Web Cache to provide load balancing for OracleAS Discoverer

Before you can configure OracleAS Discoverer for load balancing using OracleAS Web Cache, you must have the following installed:

- an OracleAS infrastructure instance
- two or more OracleAS Business Intelligence and Forms type instances on different machines (note that OracleAS Web Cache is also installed as part of an OracleAS Business Intelligence and Forms type installation)
- (optional) one OracleAS J2EE and Web Cache type instance on one machine

Notes

- You can either install OracleAS Web Cache as part of an OracleAS Business Intelligence and Forms type installation or as part of an OracleAS J2EE and Web Cache type installation. Choose an installation type as follows:
 - use the Business Intelligence and Forms type installation if you want to run OracleAS Discoverer and OracleAS Web Cache on the same machine
 - use the J2EE and Web Cache type installation if you only want to run OracleAS Web Cache on that machine
- It is recommended that you put the OracleAS Discoverer instances (i.e. that you are using to provide load balancing) in the same OracleAS farm.
- If OracleAS Web Cache is installed on a separate instance, it does not have to be part of the same farm as the OracleAS Discoverer instances.

5.5 About using OracleAS Web Cache Manager to configure load balancing for OracleAS Discoverer

You can use OracleAS Web Cache Manager to configure load balancing for OracleAS Discoverer across multiple machines. For example, you might have the following:

- three machines in an OracleAS farm - machine_a, machine_b, and machine_c
- OracleAS Web Cache is running on machine_a

- OracleAS Discoverer running on machine_b and machine_c

Note: OracleAS Web Cache might also be running on machine_b and machine_c but is not used to load balance the machines.

Configuring OracleAS Web Cache for load balancing involves the following tasks:

- choose which machine you want to specify as the proxy machine and start OracleAS Web Cache Manager on that machine
- define the OracleAS Discoverer machines that you want to use to provide load balancing (using the Origin Servers page in OracleAS Web Cache Manager),
- define the load balancing relationship between OracleAS Web Cache and the OracleAS Discoverer instances (using the OracleAS Web Cache Site to Server Mapping page in OracleAS Web Cache Manager)
- enable the Default Session Binding option (using the Session Binding page in OracleAS Web Cache Manager)
- restart OracleAS Web Cache (using the Cache Operations page in OracleAS Web Cache Manager)

For more information about using OracleAS Web Cache Manager to provide load balancing with OracleAS Discoverer, see [Section 5.6.2, "How to configure OracleAS Web Cache for load balancing"](#).

5.6 How to deploy OracleAS Discoverer with load balancing using OracleAS Web Cache

You deploy OracleAS Discoverer with load balancing to increase the number of supported Discoverer end users and improve Discoverer performance.

To deploy OracleAS Discoverer with load balancing using OracleAS, do the following:

1. On each machine that you want to use to load balance Discoverer, make sure that OracleAS Web Cache is turned on (i.e. the 'webcache' attribute of the Discoverer configuration element in configuration.xml is set to 'true'). For more information, see [Section 6.7, "How to turn on OracleAS Web Cache"](#).

Note: Turned on does not necessarily mean that OracleAS Web Cache is running (i.e. OracleAS Web Cache is set to UP in Application Server Control). When you do an OracleAS install, OracleAS Web Cache is turned off by default (i.e. the 'webcache' attribute of the Discoverer configuration element in configuration.xml is set to 'false').

2. If you have not already created an OracleAS farm, use Application Server Control to create a new farm (for more information, see *Oracle Enterprise Manager Help*).
3. Use Application Server Control to add OracleAS Discoverer instances to a farm (for more information, see *Application Server Control Help*).
Hint: Make sure that you can run Discoverer directly from a machine before trying to load balance to that machine. For example, if you want to load balance OracleAS Discoverer installed on machine_b, start a Web browser and enter the Discoverer URL for that machine (e.g. `http://machine_b:7779/discoverer/viewer`) to make sure that Discoverer works correctly.
4. Start OracleAS Web Cache Manager on the machine that you want to specify as the proxy machine (for more information, see [Section 5.6.1, "How to start OracleAS Web Cache Manager"](#)).
5. Configure OracleAS Web Cache Manager to act as a proxy machine to direct Discoverer Web server requests to other Discoverer machines (for more information, see [Section 5.6.2, "How to configure OracleAS Web Cache for load balancing"](#)).
6. Confirm that Discoverer Web traffic is being routed correctly (for more information, see [Section 5.6.3, "How to verify that OracleAS Web Cache is configured correctly for load balancing"](#)).
7. (optional) You might want to deploy a single centralized Discoverer Preferences component (for more information, see [Section 5.7, "About the Discoverer Preferences component in a multiple machine environment"](#)).
8. (optional) You might need to make sure that the `tnsnames.ora` file on each machine contains the same database names and aliases information (for more information, see [Section 5.8, "About configuring the tnsnames.ora file in a multiple machine environment"](#)).

5.6.1 How to start OracleAS Web Cache Manager

You start OracleAS Web Cache Manager on a machine when you want to configure and monitor OracleAS Web Cache on that machine. For example, you might want to configure a machine as a proxy machine to route OracleAS Discoverer Web traffic to multiple machines.

To start OracleAS Web Cache Manager:

1. Start a Web browser.

2. Enter the OracleAS Web Cache Manager URL for the machine on which you are running OracleAS Web Cache using the fully qualified host name and domain used by your installation.

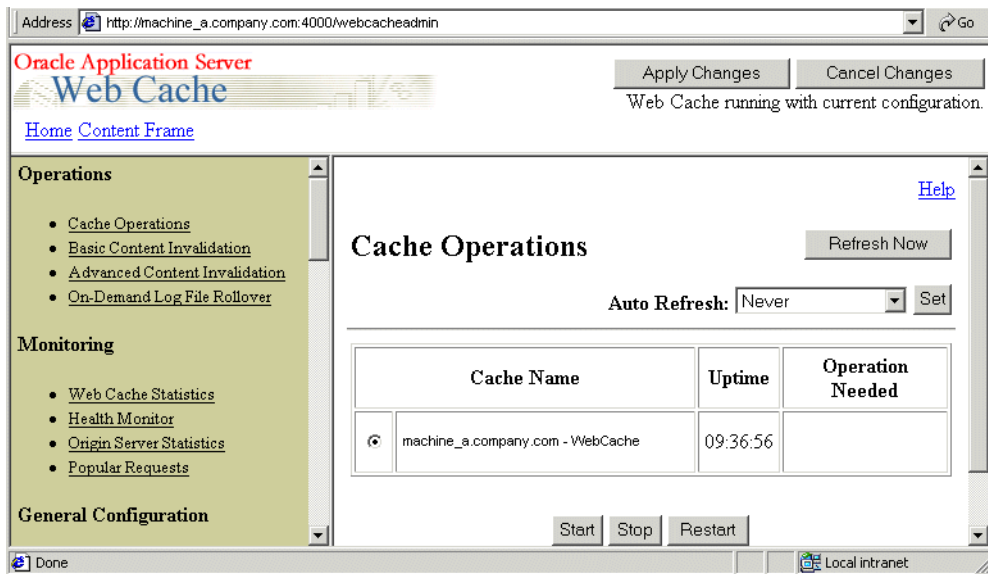
For example:

`http://<host.domain>:4000/Webcacheadmin`

Note: The default port number for OracleAS Web Cache is 4000. You can obtain the port number from the OracleAS Ports page (for more information, see [Section 4.10, "How to list ports used by OracleAS"](#)).

The Enter Network Password page is displayed.

3. Enter an OracleAS Web Cache Manager user name (i.e. 'administrator' or a user name with administrator privileges) and network password to display the OracleAS Web Cache - Cache Operations page.



You can now configure OracleAS Web Cache for load balancing (for more information, see [Section 5.6.2, "How to configure OracleAS Web Cache for load balancing"](#)).

5.6.2 How to configure OracleAS Web Cache for load balancing

You can use OracleAS Web Cache Manager to configure load balancing for Web applications such as OracleAS Discoverer. OracleAS Web Cache Manager has pages for each aspect of OracleAS Web Cache that you can configure.

For example, the Origin Servers page in the Origin Servers, Sites, and Load Balancing area enables you to specify which machines you want to use to provide load balancing for a Web application.

Note: Before you start, make sure you have the necessary OracleAS components installed (for more information, see [Section 5.4, "What are the pre-requisites for using OracleAS Web Cache to provide load balancing for OracleAS Discoverer"](#)).

To configure OracleAS Web Cache for load balancing:

1. Start OracleAS Web Cache Manager (for more information, see [Section 5.6.1, "How to start OracleAS Web Cache Manager"](#)).
2. Select the **Origin Servers** link in the Origin Servers, Sites, and Load Balancing area of the Navigator Pane to display the Origin Servers page.

The screenshot shows the Oracle Application Server Web Cache Manager interface. The title bar reads "Oracle Application Server Web Cache". In the top right corner, there are buttons for "Apply Changes" and "Cancel Changes", and a status message: "Web Cache running with current configuration." Below the title bar, there is a "Home Content Frame" link. The main interface is divided into a left-hand "Ports" sidebar and a main "Origin Servers" content area.

The "Ports" sidebar contains the following links:

- Listening Ports
- Operations Ports

The "Origin Servers, Sites, and Load Balancing" section in the sidebar contains the following links:

- Origin Servers
- Site Definitions
- Site to Server Mapping
- Apology Pages
- Session Binding
- Origin Server Wallet

The "Rules for Caching, Personalization, and Compression" section in the sidebar contains the following links:

- Caching, Personalization, and Compression Rules
- Expiration Policy Definitions
- Session Definitions
- Cookie Definitions

The main "Origin Servers" content area has the following text:

Use this page to configure application Web server or proxy server settings. These settings are required for load balancing, failover, and site-to-server mappings ([Site-to-Server Mappings](#) page).

Component Dependencies: Modifying an origin server port number on this page also requires changing the port number in the origin server's configuration.

The "Application Web Servers" section contains a table with the following data:

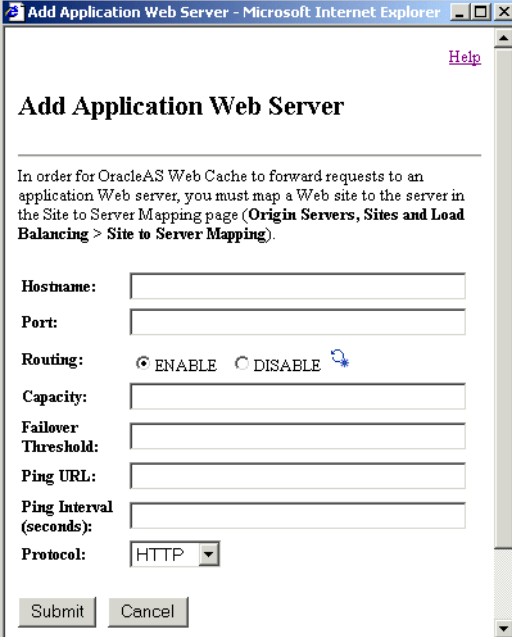
Select	Host	Port	Routing	Capacity	Failover Threshold	Ping URL	Ping Interval (seconds)	Protocol
<input type="radio"/>	machine_b.company.com	7778	ENABLED	50	5 /		10	HTTP
<input type="radio"/>	machine_c.company.com	7778	ENABLED	50	5 /		10	HTTP

Below the table, there are three buttons: "Edit Selected...", "Delete Selected...", and "Add..."

Note: You select the Origin Servers link in OracleAS Web Cache Manager, not Application Server Control.

You use the Origin Servers page to specify and manage the OracleAS machines that you want to use to provide load balancing. For example, if you want to use OracleAS Discoverer installed on machine_b and machine_c, you need to add entries for machine_b and machine_c to the Application Web Servers table.

3. For each OracleAS Discoverer machine on which you want to load balance, do the following:
 - a. Click Add... beneath the Application Web Servers table to display the Add Application Web Server page.



The screenshot shows a web browser window titled "Add Application Web Server - Microsoft Internet Explorer". The page content includes a "Help" link, a title "Add Application Web Server", and an introductory paragraph: "In order for OracleAS Web Cache to forward requests to an application Web server, you must map a Web site to the server in the Site to Server Mapping page (Origin Servers, Sites and Load Balancing > Site to Server Mapping)." Below this are several form fields: "Hostname:" (text input), "Port:" (text input), "Routing:" (radio buttons for "ENABLE" and "DISABLE", with "ENABLE" selected), "Capacity:" (text input), "Failover Threshold:" (text input), "Ping URL:" (text input), "Ping Interval (seconds):" (text input), and "Protocol:" (dropdown menu showing "HTTP"). At the bottom are "Submit" and "Cancel" buttons.

- b. Enter the fully qualified hostname of the machine (e.g. machine_b.company.com) in the **Hostname** field.
- c. Enter the OracleAS Web Cache HTTP Listen port number of the machine into the **Port** field, as follows:

- for HTTP communication, use the HTTP port on which Discoverer is deployed (typically the HTTP Listen (non-SSL) port number)
- for HTTPS communication, use the HTTPS port on which Discoverer is deployed (typically the HTTPS Listen (non-SSL) port number)

Note: You can obtain these port numbers from the OracleAS Ports page (for more information, see [Section 4.10, "How to list ports used by OracleAS"](#)).

Hint: Display the portlist page for the Discoverer BI and Forms installation, not the OracleAS infrastructure installation.

- d. Type 50 into the **Capacity** field (recommended setting).

Note: For more information about specifying the capacity, see *Oracle Application Server Web Cache Administration and Deployment Guide*.

- e. Type 5 into the **Threshold** field (recommended setting).
- f. Type / in the **Ping URL** field (recommended setting).
- g. Type 10 in the **Ping Interval** field (recommended setting).

Note: You might want to fine tune OracleAS Web Cache later if necessary. For more information about the Create Application Web Server page, see *OracleAS Web Cache Help*. For more information about specifying Origin Servers, see *Oracle Application Server Web Cache Administration and Deployment Guide*.

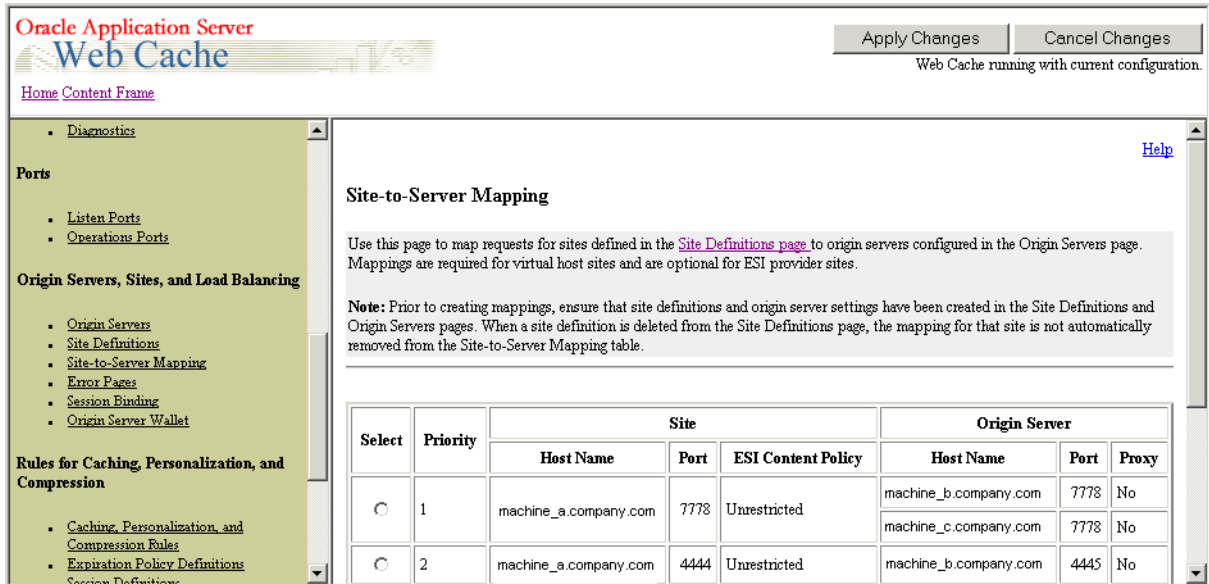
- h. Select the communication protocol used by the machine from the **Protocol** drop down list.

Note: If you are using the OracleAS Web Cache HTTP Listen (non-SSL) port, select HTTP. If you are using the OracleAS Web Cache HTTPS Listen (SSL) port, select HTTPS.

- i. Click Submit to save the details and display the Origin Servers page.

Having defined the OracleAS machines that you want to load balance, you now define the load balancing relationship between OracleAS Web Cache and the OracleAS machines. For example, you might want to specify that machine_a directs Discoverer Web server requests to machine_b and machine_c.

4. Select the **Site to Server Mapping** link in the Origin Servers, Sites, and Load Balancing area of the Navigator Pane to display the Site to Server Mapping page.



The Site to Server Mapping page has an entry for the machine on which you are running OracleAS Web Cache. For example, if you are running OracleAS Web Cache on machine_a, you will see a row for machine_a with default settings.

Hint: The **Port Number** field under the **Enter Site Name** area should contain the OracleAS Web Cache listening port number that is displayed on the Listening Ports page in the Ports area.

The next step is to specify which OracleAS Discoverer machines you want to load balance.

- In the **Select** column, select the radio button next to the OracleAS Web Cache machine.
- Click **Edit Selected...** to display the Edit/Add Site to Server Mapping page.

[Help](#)

Edit/Add Site to Server Mapping

Edit Site Name
Select one of the following options to edit a Site Name

Enter Site Name

Host Name: (Example: www.company.com; *company.com; *)
(hostname.domain)

Port Number: (Examples: 80 for HTTP; 443 for HTTPS; * for all ports)

Select from Site Definitions

Host Name : Port Number :

Select either application Web servers or proxy servers to which this Site is mapped

Select Application Web Servers

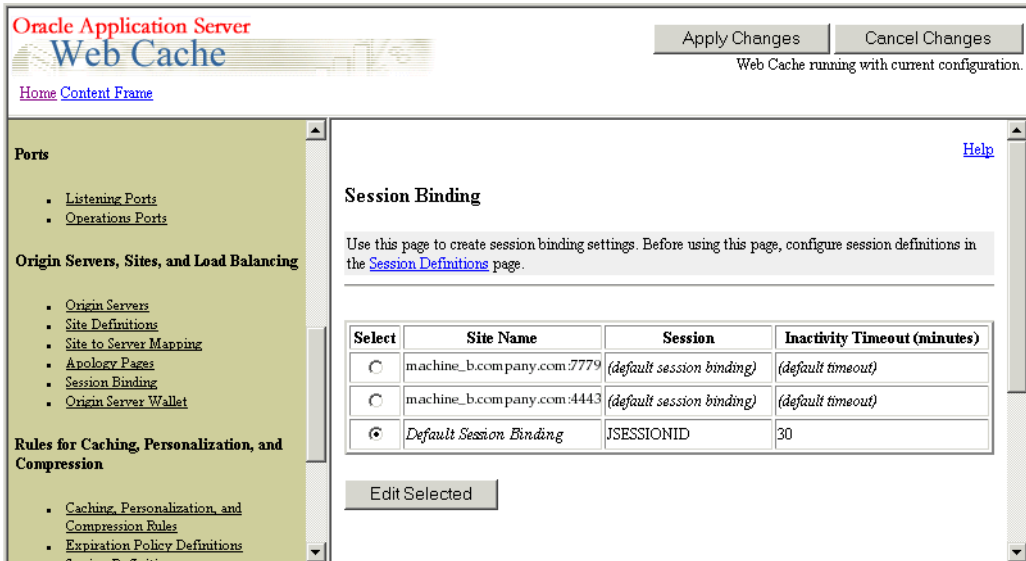
<input checked="" type="checkbox"/>	machine_b.company.com:7778	HTTP
<input type="checkbox"/>	machine_b.company.com:4444	HTTPS
<input checked="" type="checkbox"/>	machine_c.company.com:7778	HTTP

7. In the **Select Application Web Servers** area, select the check box next to each OracleAS Discoverer machine on which you want to provide load balancing.

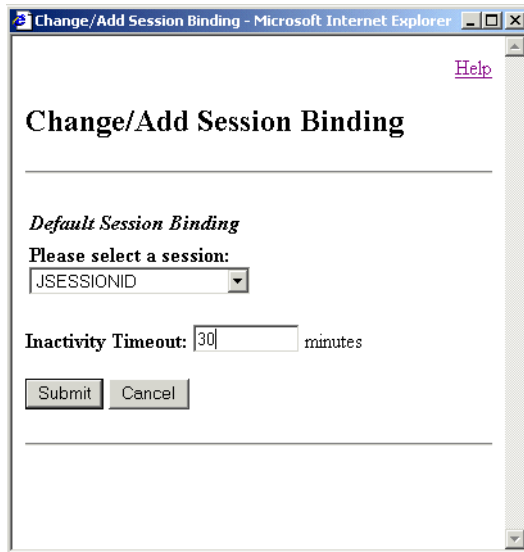
You should see the machines that you defined in the Application Web Servers table on the Origin Servers page.

For example, if you have installed OracleAS Discoverer on machine_b and machine_c, select the check boxes next to machine_b and machine_c.
8. Click Submit to save the details and display the Site to Server Mapping page.

The next step is to specify the session binding value, which specifies how a user session is bound to a particular application Web server.
9. Select the **Session Binding** link in the Origin Servers, Sites, and Load Balancing area of the Navigator Pane to display the Session Binding page.
10. In the **Select** column, select the radio button next to the row that contains the **Default Session Binding** option in the **Site Name** column.



11. Click Edit Selected to display the Change/Add Session Binding page.



12. Select JSESSIONID from the **Default Session Binding** drop down list.

13. Type 30 in the **Inactivity Timeout** field (recommended setting).

14. Click Submit to save the details and display the OracleAS Web Cache page.

The next step is to apply the changes you have made and restart OracleAS Web Cache.

15. Click Apply Changes at the top of the OracleAS Web Cache page to display the Cache Operations page.

16. Click Restart.

When OracleAS Web Cache has restarted, the Success page is displayed.

You can now verify that browser sessions connecting to the OracleAS Web Cache machine are routed to one of the OracleAS Discoverer machines specified for load balance. For more information, see [Section 5.6.3, "How to verify that OracleAS Web Cache is configured correctly for load balancing"](#).

Hint: If the changes that you apply are not accepted, you might find that the capacity that you have defined on one or more of the load balancing machines is too high. For example, when you click Restart you might get an error message similar to the following:

```
opmnctl: stopping opmn managed processes... opmnctl: starting opmn
managed processes... Request failure: 0 of 1 processes started.
```

To change the capacity value of load balanced machines:

- a. Display the Origin Servers page.
- b. In the **Select** column, select the radio button next to the machine(s) on which you want to load balance.
- c. Click Edit Selected to display the Edit Application Web Server page.
- d. Change the value in the **Capacity** field to a smaller value.
- e. Click Submit.
- f. Click Apply Changes.
- g. Click Restart.

Notes

- For more information about using OracleAS Web Cache Manager, see *Oracle Application Server Web Cache Administration and Deployment Guide*.

5.6.3 How to verify that OracleAS Web Cache is configured correctly for load balancing

You can verify that OracleAS Web Cache is configured correctly for load balancing by confirming that OracleAS Discoverer Web traffic is being routed to the correct machines.

For example, you might want to confirm that Discoverer browser sessions connecting to:

`http://machine_a.company.com:7777/discoverer/viewer`

are routed to:

`http://machine_b.company.com:7778/discoverer/viewer`

Or

`http://machine_c.company.com:7778/discoverer/viewer`

To verify that OracleAS Web Cache is configured correctly for load balancing:

1. Start OracleAS Web Cache Manager (for more information, see [Section 5.6.1, "How to start OracleAS Web Cache Manager"](#)).
2. Select the **Origin Server Statistics** link in the Monitoring area of the Navigator Pane to display the Origin Server Statistics page.

Oracle Application Server
Web Cache

Home Content Frame

Apply Changes Cancel Changes

Administration

- Operations
- Monitoring
 - Web Cache Statistics
 - Health Monitor
 - Origin Server Statistics
 - Cache Contents
- Content Invalidation
- Cluster Configuration

Cache-Specific Configuration

- Process Identity
- Operations Ports
- Listening Ports
- Resource Limits
- Network Timeouts
- Event Log
- Access Log
- Origin Server Wallet

Origin Server Statistics

For Cache: machine_a.company.com-WebCache Auto Refresh: Never

Refresh Now

Origin Server		Up/Down Time		Completed Requests			
<i>hostname</i>	<i>proxy server</i>	<i>up/down</i>	<i>since</i>	<i>number/sec</i>	<i>max/sec</i>	<i>avg/sec</i>	<i>total</i>
machine_b.company.com:7778	NO	UP	Tue Sep 10 13:31:48 2002	0	0	0	0
machine_c.company.com:7778	NO	UP	Tue Sep 10 13:31:48	0	0	0	0

3. Verify the status of the OracleAS Discoverer machines to which you are distributing Discoverer Web traffic by confirming that:

- the Origin Server Statistics table contains a row for each OracleAS Discoverer machine

For example, if you have Discoverer sessions running on machine_a and machine_b, the Origin Server Statistics will contain a row for machine_a and a row for machine_b.

- the application server port number is correct in the **hostname** column
- the **up/down** setting in the **Up/Down Time** column setting is UP
- the **Active Sessions** values should correctly reflect the number of OracleAS Discoverer sessions that are running on each machine

For example, if you have ten Discoverer sessions running on machine_a and machine_b, the **Active Sessions-now** column might contain the value 6 for machine_a and the value 4 for machine_b (i.e. ten sessions in total).

- the **Active Sessions** values should indicate an even distribution of server requests between the OracleAS Discoverer machines (i.e. according to how you have configured each machine in the Origin Servers page)

For example, if you have 100 Discoverer sessions running on machine_a and machine_b, the **Active Sessions-now** column might should reflect a similar number of sessions for each machine.

Notes

- For more information about using the Origin Server Statistics page, see OracleAS Web Cache *Manager help*.
- You can also select the **Health Monitor** link in the Monitoring area of the Navigator Pane to see a summary of server requests served by the OracleAS Discoverer machines. If OracleAS Web Cache is configured correctly for load balancing, there will be an even distribution of server requests across the OracleAS Discoverer machines.

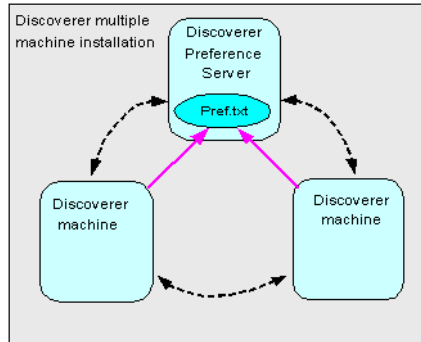
5.7 About the Discoverer Preferences component in a multiple machine environment

Each Discoverer instance includes a Discoverer Preference component. The Discoverer Preference component stores preference settings (e.g. worksheet axis style, default EUL, auto-query enable) for OracleAS Discoverer users accessing that Discoverer instance (for more information, see [Section 1.10.2.2, "What is the Discoverer Preferences component?"](#)).

In a multiple machine environment, you might want to store all Discoverer end user preferences in a single location. In other words, you want to each Discoverer instance to use the same Discoverer Preference component. To store all Discoverer end user preferences in a single location, you specify a centralized Discoverer Preferences component (for more information, see [Section 5.7.1, "How to specify a centralized Discoverer Preferences component"](#)).

5.7.1 How to specify a centralized Discoverer Preferences component

If you want to store all Discoverer end user preferences in a single location, you configure each Discoverer instance 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.



To specify a centralized Discoverer Preferences component, you:

- choose which machine you want to use as the Discoverer Preference Server machine, then find out the instance name of that machine (for more information, see [Section 5.7.2, "How to find out the instance name of the Discoverer Preference Server machine"](#))
- modify the register session scripts of other machines in the multiple machine environment to use the instance name of the Discoverer Preference Server machine (for more information, see [Section 5.7.3, "How to modify the register session scripts of other machines in the multiple machine environment to use the Discoverer Preference Server machine"](#))
- disable the preferences component on all machines except the Discoverer Preference Server machine (for more information, see [Section 5.7.4, "How to disable the preferences component on a machine"](#))
- make sure that the OSAgent port is the same on all machines - to obtain the OSAgent port of a machine, look at the OSAGENT_PORT value in the opmn.xml file (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).

Notes

- If you do not configure a central Discoverer Preferences Server machine, each machine might have different preferences settings. Discoverer end users connecting to different machine might experience different Discoverer behavior according to what preference settings are specified.

5.7.2 How to find out the instance name of the Discoverer Preference Server machine

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

1. On the machine that you want to designate as the Discoverer Preference Server machine, find out the instance name, as follows:
 - on UNIX, open the `discwb.sh` file and find out the value of the `INSTANCE_NAME=` command (e.g. `INSTANCE_NAME=machine_a.us.company.com`)
 - on Windows, open a command prompt and type `set COMPUTERNAME` to display the instance name

2. Make a note of the value of the instance name.

You use the instance name value in register session scripts of other machines in the multiple machine environment.

3. Close the register session file.

You now need to modify the register session scripts of other machines in the multiple machine environment to use the instance name of the Discoverer Preference Server machine (for more information, see [Section 5.7.3, "How to modify the register session scripts of other machines in the multiple machine environment to use the Discoverer Preference Server machine"](#)).

5.7.3 How to modify the register session scripts of other machines in the multiple machine environment to use the Discoverer Preference Server machine

Having identified the instance name of the machine that is going to run the Preferences component (i.e. the Discoverer Preference Server machine), you must now make sure that other machines use the Preferences component on the Discoverer Preference Server machine.

To modify the register session scripts of other machines in the multiple machine environment to use the Discoverer Preference Server machine, on every other machine in the installation do the following:

1. Stop the Discoverer service component (for more information, see [Section 4.4.2, "How to stop the Discoverer Service on a machine"](#)).
2. 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"](#).

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

```
... -a -preference -a ${INSTANCE_NAME}OracleDiscovererPreferences9
```

4. Replace \${INSTANCE_NAME} with the instance name of the Discoverer Preference Server machine that you noted in [Section 5.7.2, "How to find out the instance name of the Discoverer Preference Server machine"](#).

For example, if the Discoverer Preference Server machine with the instance name machine_a.us.company.com, you would change the register session script to:

```
... -a -preference -a machine_a.us.company.comOracleDiscovererPreferences9
```

5. Save the register session file.
6. Stop the Discoverer Service on that machine (for more information, see [Section 4.4.2, "How to stop the Discoverer Service on a machine"](#)).
7. Start the Discoverer Service on that machine (for more information, see [Section 4.4.1, "How to start the Discoverer Service on a machine"](#)).

You now need to disable the preferences component on all machines except the Discoverer Preference Server machine (for more information, see [Section 5.7.4, "How to disable the preferences component on a machine"](#)).

5.7.4 How to disable the preferences component on a machine

When you configure Discoverer to use a single Preference Server machine in a multiple machine environment, you must disable the preferences component on all Discoverer machines except the Preferences Server machine.

To disable the preferences component on all machines except the Preference Server machine:

1. On each machine except the Preference Server machine, open the opmn.xml file in a text editor (or XML editor).

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

2. Locate the Disco_PreferenceServer entry.

3. Change the Disco_PreferenceServer entry from enabled to disabled.

For example, you might change:

```
<ias-component id="Disco_PreferenceServer" status="enabled">
```

to:

```
<ias-component id="Disco_PreferenceServer" status="disabled">
```

4. Save the opmn.xml file.
5. Stop the Discoverer Service on that machine (for more information, see [Section 4.4.2, "How to stop the Discoverer Service on a machine"](#)).
6. Start the Discoverer Service on that machine (for more information, see [Section 4.4.1, "How to start the Discoverer Service on a machine"](#)).

To verify that Discoverer is using a single set of preferences, run Discoverer directly from a machine and check that preferences applied are those on the Discoverer Preference Server machine. For example, if the Discoverer Preference Server machine is machine_a, run Discoverer Viewer directly from machine_b and machine_c (e.g. on the URL http://machine_b.us.company.com:7779 or http://machine_b.us.company.com:7779) and verify that Discoverer applies preferences on machine_a.

5.8 About configuring the tnsnames.ora file in a multiple machine environment

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

Each machine in a multiple machine Discoverer installation must have the same tnsnames.ora file or must point to a centralized tnsnames.ora file (to find out the location of this file, see [Section A.2, "List of Discoverer file locations"](#)).

To must make sure that the tnsnames.ora files on the different machines are the same, do one of the following:

- copy the tnsnames.ora file from an one Discoverer Web Server machine to the same location on all of the other Discoverer Web Server machines, replacing the existing file
- edit the tnsnames.ora file on each Discoverer machine so that they all contain 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"](#).

Using OracleAS Discoverer Viewer with OracleAS Web Cache

6.1 Using OracleAS Discoverer Viewer with OracleAS Web Cache

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

- [Section 6.2, "About OracleAS Web Cache"](#)
- [Section 6.3, "What are the benefits of OracleAS Web Cache?"](#)
- [Section 6.4, "How does OracleAS Web Cache work?"](#)
- [Section 6.5, "When to use Discoverer Viewer with OracleAS Web Cache"](#)
- [Section 6.6, "How to use Discoverer Viewer with OracleAS Web Cache"](#)
- [Section 6.7, "How to turn on OracleAS Web Cache"](#)
- [Section 6.8, "How to restart OracleAS Web Cache"](#)
- [Section 6.9, "How to display the Rerun Query link, hide the Preferences link, and hide the Presentation Options link"](#)
- [Section 6.10, "How to turn off Discoverer Viewer's 'sticky worksheet' behavior"](#)
- [Section 6.11, "Notes about using Discoverer Viewer with OracleAS Web Cache"](#)

6.2 About OracleAS Web Cache

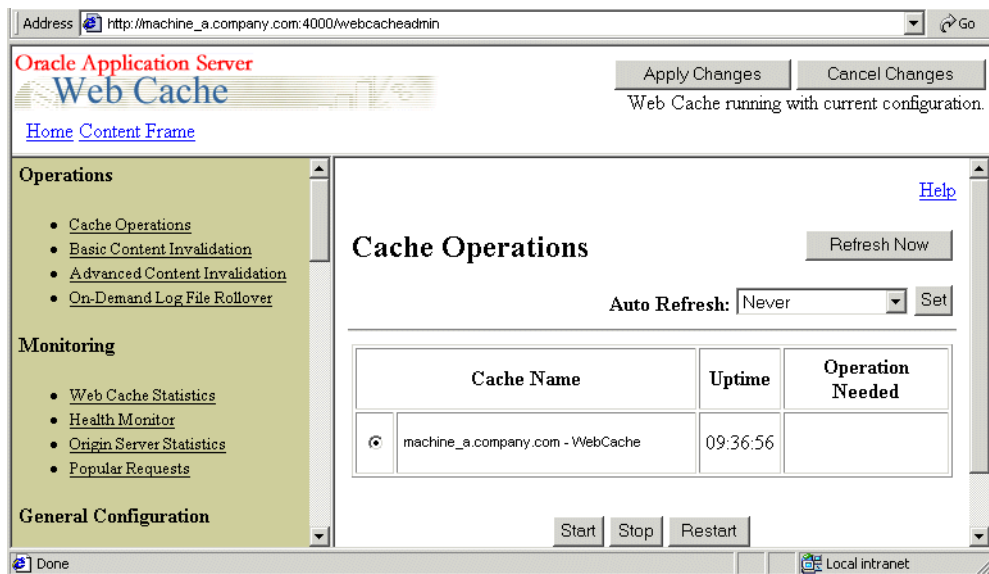
OracleAS Web Cache is a content-aware server accelerator, or reverse proxy server, that improves the performance, scalability, and availability of Web sites that run on OracleAS and Oracle9i. By storing frequently accessed pages in memory, OracleAS

Web Cache eliminates the need to repeatedly process requests for those pages on middle tier servers and databases.

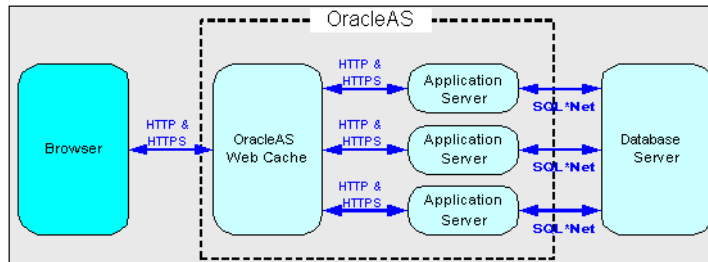
You can also use OracleAS Web Cache to load balance OracleAS machines in a multiple machine installation (for more information, see [Section 5.1, "Installing OracleAS Discoverer in a multiple machine environment"](#)).

You manage OracleAS Web Cache using the OracleAS Web Cache Administration page.

Figure 6–1 OracleAS Web Cache Administration page



OracleAS 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 OracleAS Web Cache. OracleAS Web Cache, in turn, acts as a virtual server to the application Web servers. If the requested content has changed, OracleAS Web Cache retrieves the new content from the application Web servers.

Figure 6–2 OracleAS Web Cache overview

For more information about OracleAS Web Cache, see *Oracle Application Server Web Cache Administration and Deployment Guide*.

Notes

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

6.3 What are the benefits of OracleAS Web Cache?

Using OracleAS Web Cache:

- improves performance

Running on inexpensive hardware, OracleAS Web Cache can increase the throughput of a Web site by several orders of magnitude. In addition, OracleAS 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, OracleAS Web Cache can sustain thousands of concurrent browser connections. The result is that visitors to a site see fewer application Web server errors, even during periods of peak load.

- offers high availability

OracleAS Web Cache supports content-aware load balancing and fail-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, OracleAS 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 OracleAS 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.

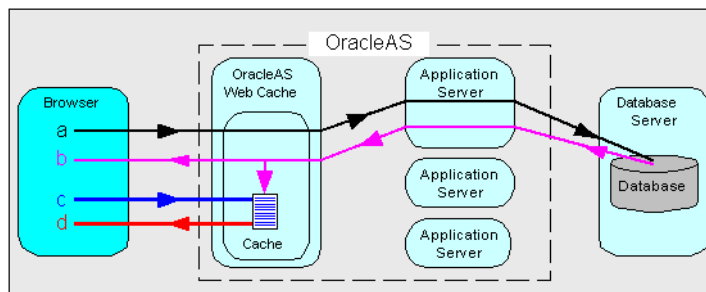
For more information about the benefits of using OracleAS Web Cache, see *Oracle Application Server Web Cache Administration and Deployment Guide*.

6.4 How does OracleAS Web Cache work?

OracleAS 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 *Oracle Application Server 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 6-3 The URL and document request process



Key to figure:

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

6.5 When to use Discoverer Viewer with OracleAS Web Cache

With Oracle Application Server 10g (9.0.4), using Discoverer Viewer with OracleAS Web Cache to improve Web site performance, scalability, and availability will be most appropriate in the following cases:

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

OracleAS 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). OracleAS 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 OracleAS Web Cache in a restricted environment, note that a malicious user might be able to access pages that have been cached for another user (for more information about OracleAS Discoverer security in general, see [Section 12.1, "Maintaining security with OracleAS Discoverer"](#)).

In Oracle Application Server 10g (9.0.4), using Discoverer Viewer and OracleAS 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 turning off of sticky worksheet functionality (for more information about sticky worksheet functionality, see [Section 6.10, "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

6.6 How to use Discoverer Viewer with OracleAS Web Cache

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

- you must turn on OracleAS Web Cache for Discoverer Viewer, by setting the 'webcache' attribute of the Discoverer configuration element to 'true' in the configuration.xml file (for more information, see [Section 6.7, "How to turn on OracleAS Web Cache"](#)).
- 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 6.9, "How to display the Rerun Query link, hide the Preferences link, and hide the Presentation Options link"](#)).

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

- turn off Discoverer Viewer's 'sticky worksheet' behavior (for more information, see [Section 6.10, "How to turn off Discoverer Viewer's 'sticky worksheet' behavior"](#)).

Note: If you have a multiple machine Discoverer environment, you need to make the changes specified above on each Discoverer machine.

Having specified that you want to use Discoverer Viewer with OracleAS Web Cache, you might want to remove files from the cache because workbook data has changed (for more information, see [Section 6.11.1, "How to remove Discoverer Viewer documents from the cache"](#))

Notes

- OracleAS Web Cache is automatically pre-configured on installation with an cacheability rule for Discoverer Viewer (for more information, see [Section 6.11.3, "About the OracleAS Web Cache cacheability rule that is pre-configured for Discoverer Viewer"](#)).

6.7 How to turn on OracleAS Web Cache

Although OracleAS Web Cache is installed with OracleAS, it is turned off by default. To make use of OracleAS Web Cache, you must turn it on. For example, you might want to cache Discoverer Viewer pages, or use a Discoverer machine to provide load balancing.

To turn on OracleAS Web Cache for Discoverer Viewer:

1. Open the configuration.xml file in text editor or XML 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.
4. Restart OracleAS Web Cache in Application Server Control (for more information, see [Section 6.8, "How to restart OracleAS Web Cache"](#)).

OracleAS Web Cache is now turned on for Discoverer Viewer and OracleAS Discoverer Viewer performance will improve.

6.8 How to restart OracleAS Web Cache

You restart OracleAS Web Cache to re-initialize the component. For example, you might want to restart OracleAS Web Cache after making changes to the configuration.xml file.

To restart OracleAS Web Cache:

1. Display Application Server Control (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).

Application Server Control displays a list of OracleAS instances available.

2. In the **Name** column, select the OracleAS instance containing the OracleAS Business Intelligence and Forms installation where OracleAS Discoverer is installed.

3. When prompted, enter an Application Server Control user name and password.

Application Server Control displays a list of OracleAS System Components available for the OracleAS Business Intelligence and Forms installation (e.g. Discoverer, Forms, Web Cache).

System Components

Enable/Disable Components Configure Component Create OC4J Instance

Select All | Select None Start Stop Restart Delete OC4J Instance

Select	Name	Status	Start Time	CPU Usage (%)	Memory Usage (MB)
<input type="checkbox"/>	Discoverer	↑	Jul 2, 2003 10:57:35 AM	0.00	70.63
<input type="checkbox"/>	home	↑	Jul 2, 2003 10:57:16 AM	0.09	112.65
<input type="checkbox"/>	HTTP_Server	↑	Jul 2, 2003 10:57:16 AM	1,271.13	142.45
<input type="checkbox"/>	OC4J_BI_Forms	↑	Jul 2, 2003 10:57:16 AM	4.88	241.43
<input type="checkbox"/>	OC4J_Demos	↑	Jul 2, 2003 10:57:16 AM	0.00	99.46
<input type="checkbox"/>	OC4J_Portal	↑	Jul 2, 2003 10:57:16 AM	0.75	256.91
<input type="checkbox"/>	OC4J_Wireless	↑	Jul 2, 2003 10:57:16 AM	0.13	250.09
<input type="checkbox"/>	Portal:portal	↑			
<input checked="" type="checkbox"/>	Web Cache	↑	Jul 3, 2003 12:00:33 PM	0.31	50.66
<input type="checkbox"/>	Wireless	↑	Jul 2, 2003 10:57:35 AM	0.22	118.89
<input type="checkbox"/>	Management	↑	Jul 3, 2003 10:33:58 AM	5.40	428.10

Start Stop Restart Delete OC4J Instance

4. In the **Select** column, select the check box next to the Web Cache link.

5. Click Restart.

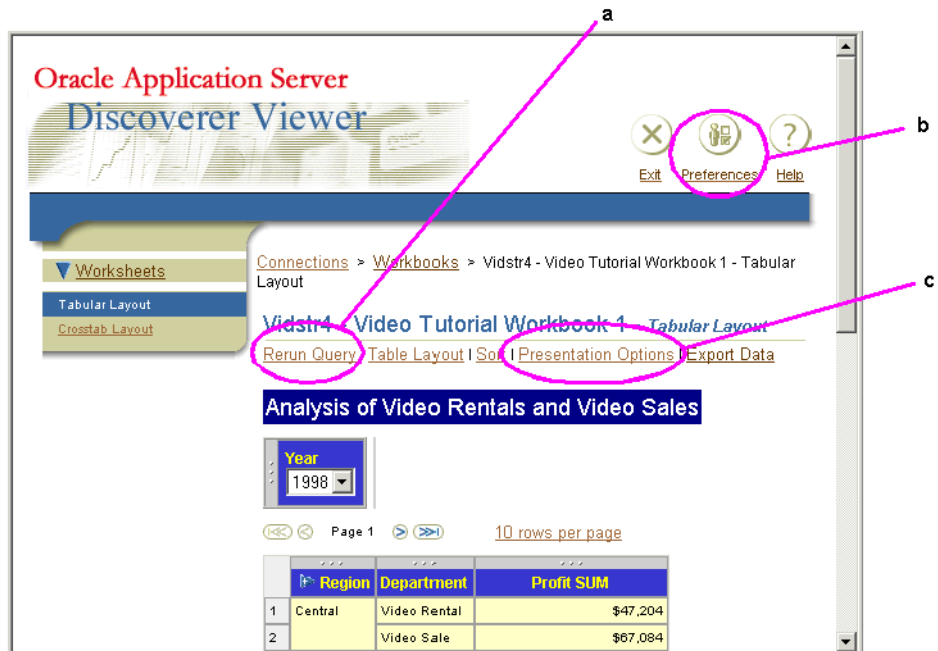
Application Server Control displays a notification message when OracleAS Web Cache is has restarted.

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

When you use Discoverer Viewer with OracleAS 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 6–4 Discoverer Viewer showing Rerun Query link, Preferences link, and Presentation Options link



Key to figure:

- a. Rerun Query link
- b. Preferences link
- c. Presentation Options link

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 OracleAS 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 or XML 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 the `ui_config` file.

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

6.10 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 OracleAS 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 the `ui_config.xml` file.

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

6.11 Notes about using Discoverer Viewer with OracleAS Web Cache

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

6.11.1 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 OracleAS Web Cache Manager and login.
If you are not sure of the user name and password to use, contact the OracleAS system administrator.
2. Select the Advanced Content Invalidation link to display the Advanced Content Invalidation page.

3. In the Advanced Invalidation section:

- a. Type `/discoverer/` in the **URL Path Prefix** field.
- b. Enter an appropriate regular expression in the **URL Expression** field and select the adjacent **regular expression** radio button.

The regular expression that you enter depends on the Discoverer Viewer document(s) 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 document(s) from the cache.

Notes

- For a full list of regular OracleAS Web Cache expressions, see *Oracle Application Server Web Cache Administration and Deployment Guide*.

6.11.2 About preventing unauthorized access to cached pages

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

6.11.3 About the OracleAS Web Cache cacheability rule that is pre-configured for Discoverer Viewer

OracleAS Discoverer Viewer is pre-configured with a cacheability rule to cache pages served by the Discoverer servlet, except the following types of page:

- error pages
- scheduled workbook pages
- progress pages
- list of connections pages

A cacheability rule comprises a regular expression. OracleAS Web Cache evaluates each expression to a string, and tests whether a particular URL contains that string. If the URL does contain the string, OracleAS 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, the page is not cached.

Notes

- Cacheability rules are configured automatically when you install OracleAS. Do not change the Web Cache configuration unless explicitly advised to do so by Oracle Corporation.

6.11.3.1 Cacheability rule to cache all pages served by the Discoverer Servlet

This cacheability rule caches all Discoverer Viewer pages.

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

Rule Details	Value
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 Discoverer servlet

* For more information about this option, see [Section 6.11.2, "About preventing unauthorized access to cached pages"](#).

Customizing OracleAS Discoverer Viewer

7.1 Customizing OracleAS Discoverer Viewer

This chapter explains how you can provide a customized Discoverer Viewer look and feel to end users. For example, you might want to replace Discoverer Viewer's Oracle logo with a different organization logo, or change the user interface background color.

Note: Discoverer Viewer 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 7.2, "What is Discoverer Viewer customization?"](#)
- [Section 7.3, "Notes on customizing Discoverer in a multiple machine installation"](#)
- [Section 7.4, "What tools do you need to customize Discoverer Viewer?"](#)
- [Section 7.5, "About the sample browser look and feel file \(blaf.htm\)"](#)
- [Section 7.6, "About updating the Discoverer Viewer stylesheet file"](#)
- [Section 7.7, "About updating Discoverer Viewer XML files"](#)
- [Section 7.8, "About Discoverer Viewer options"](#)
- [Section 7.9, "About presentation options"](#)
- [Section 7.10, "About presentation templates"](#)
- [Section 7.11, "How to change the default Discoverer Viewer look and feel"](#)
- [Section 7.12, "How to change the default Discoverer Viewer logo"](#)

- [Section 7.13, "How to change Discoverer Viewer options"](#)
- [Section 7.14, "How to create a presentation template"](#)

7.2 What is Discoverer Viewer customization?

You can customize Discoverer Viewer in the following ways:

- change Discoverer's font styles to match your organization's Internet look and feel (for more information, see [Section 7.11, "How to change the default Discoverer Viewer look and feel"](#))
- change Discoverer's default logo to a logo (i.e. graphic file) of your choice (for more information, see [Section 7.12, "How to change the default Discoverer Viewer logo"](#))
- specify Discoverer Viewer options (for more information, see [Section 7.13, "How to change Discoverer Viewer options"](#))
- provide presentation templates that specify which user interface components (e.g. header and footers, drill icons, row numbers) are displayed in Discoverer Viewer (for more information, see [Section 7.9, "About presentation options"](#) and [Section 7.14, "How to create a presentation template"](#))

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 when you upgrade Discoverer.
- 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 World Wide Web Consortium (W3C) Web site at <http://www.w3.org/>.

7.3 Notes on customizing Discoverer in a multiple machine installation

If you have deployed Discoverer in a multiple machine installation, note the following:

- If you want to deploy the same customized Discoverer Viewer user interface across all machines, you must repeat the customization changes on each Discoverer machine.

7.4 What tools do you need to customize Discoverer Viewer?

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

- a simple text editor
- a dedicated XML editor

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

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

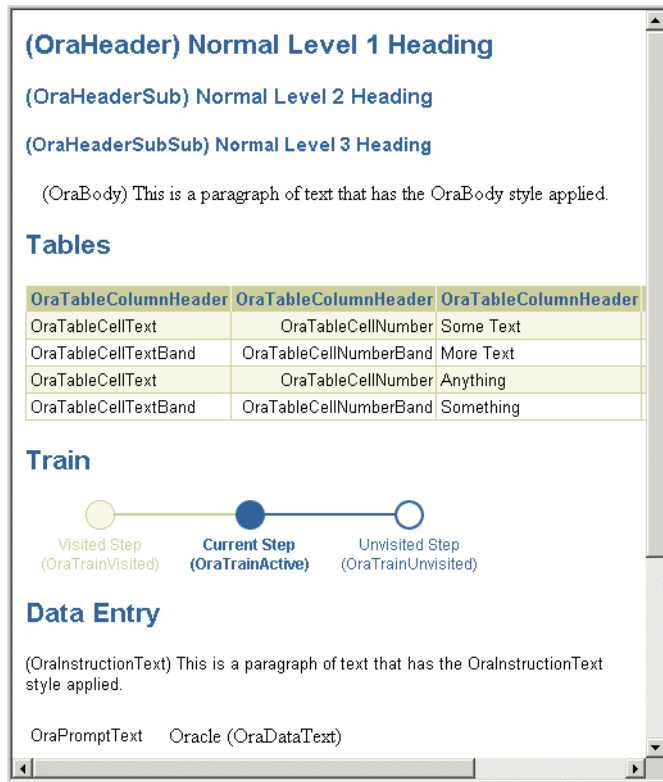
To help you customize Discoverer Viewer's look and feel, Discoverer is installed with a sample browser look and feel file (blaf.htm). For more information about the location of blaf.htm, see [Section A.2, "List of Discoverer file locations"](#).

The blaf.htm file displays the current look and feel settings for each display tag defined in the Discoverer Viewer cascading stylesheet (blaf.css). For more information about updating the blaf.css file, see [Section 7.6, "About updating the Discoverer Viewer stylesheet file"](#).

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 7–1 Discoverer Viewer sample HTML file (blaf.htm)



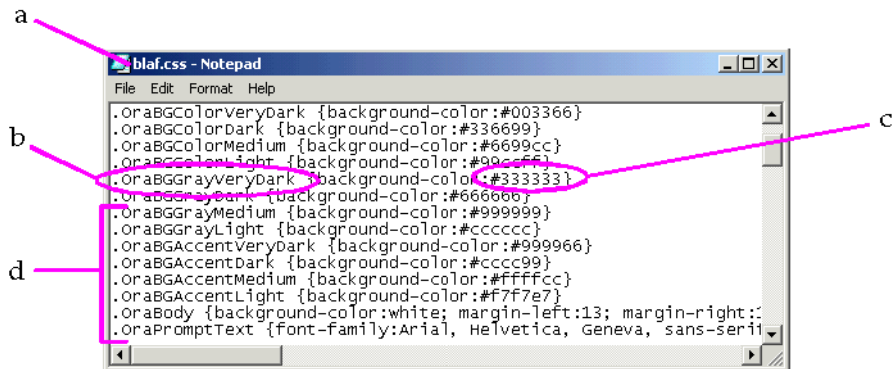
Notes

- Some of the styles in blaf.css affect the Discoverer Connections page that is also used by Discoverer Plus. For example, if you set the background-color:grey attribute for the OraTableCellText style, the fill color for table cells on the Connections page will be grey.

7.6 About updating the Discoverer Viewer stylesheet file

Discoverer Viewer uses a stylesheet file called blaf.css to format the Discoverer Viewer user interface. Blaf.css 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 7–2 An example of a `blaf.css` file displayed in a simple text editor



Key to figure:

- a. A `blaf.css` file opened in a text editor.
- b. A tag (`OraBGGreyVeryDark`) for one of the Discoverer Viewer background colors.
- c. The value of the tag (`#333333`), which is the RGB code for the color.
- d. Tags for other Discoverer Viewer styles.

To customize Discoverer Viewer, you change the value of the tags. For more information, see [Section 7.11, "How to change the default Discoverer Viewer look and feel"](#).

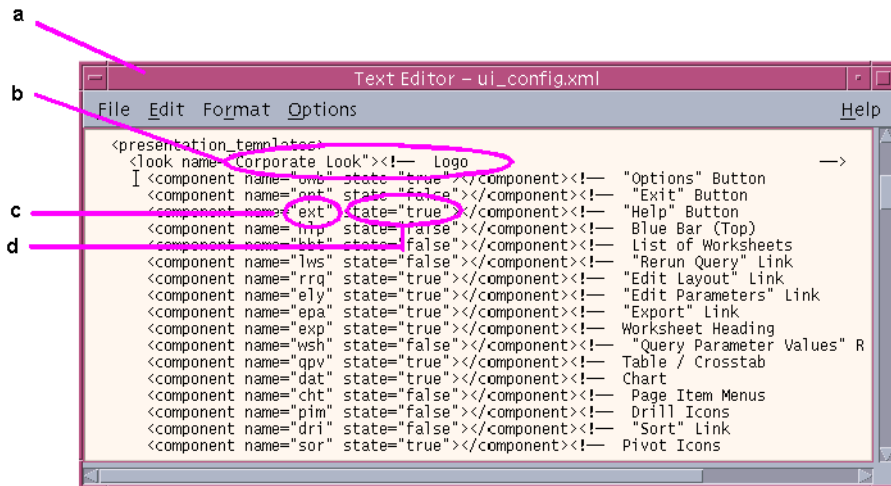
Notes

- 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 [Section 7.5, "About the sample browser look and feel file \(blaf.htm\)"](#).

7.7 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 configure (for more information, see "[About presentation options](#)"). The figure below shows an example of a `ui_config.xml` file.

Figure 7-3 An example of a `ui_config.xml` file displayed in a simple text editor



Key to figure:

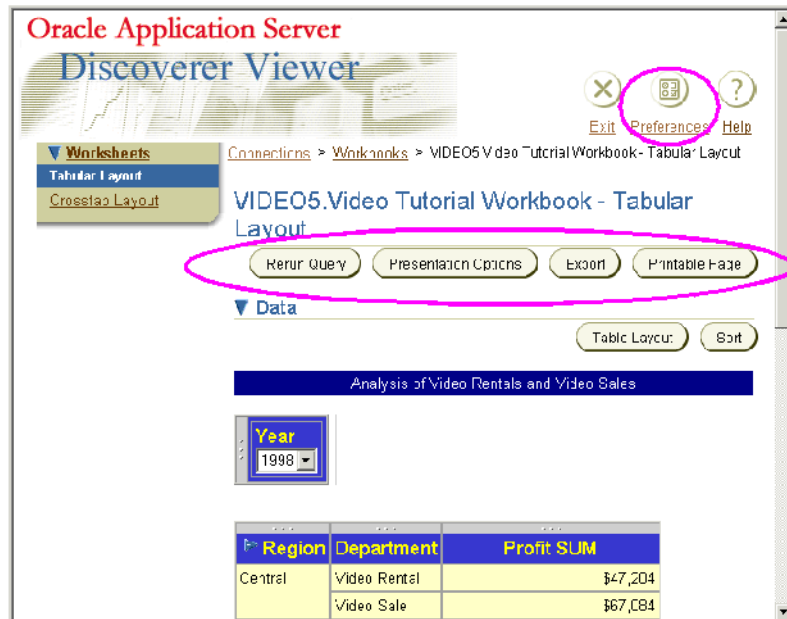
- a. A `ui_config.xml` file opened in an XML editor.
- b. A presentation template called Corporate Look (shipped with Discoverer).
- c. A tag called 'ext', which determines whether the Discoverer Viewer exit button is displayed.
- d. The value of the 'ext' tag (true), which means that the Discoverer Viewer exit button is displayed.

To update a tag, replace the 'state=' value with a new value. For example, to hide a user interface component, change its tag value from '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 `-->`.

7.8 About Discoverer Viewer options

Discoverer Viewer options are buttons on the Discoverer Viewer user interface that provide functionality to Discoverer Viewer users. For example, Presentation Options, Export. The screenshot below shows which Discoverer Viewer options you can display or remove when you customize Discoverer Viewer (i.e. Preferences, Rerun Query, Presentation Options, Export, and Printable Page).

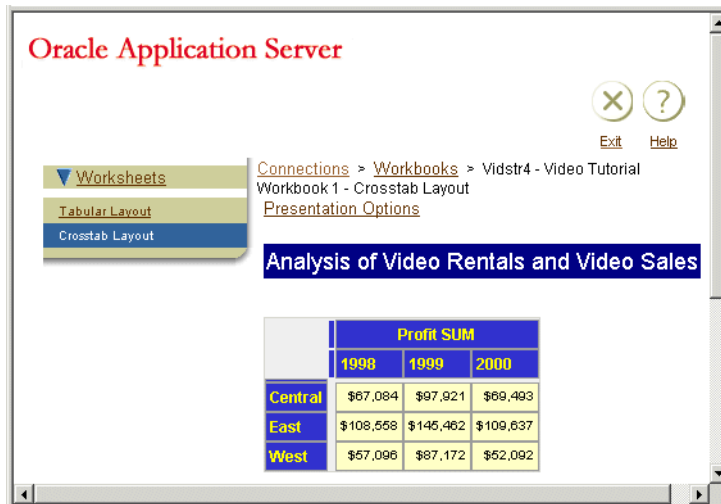


For more information about customizing Discoverer Viewer by displaying or removing options, see [Section 7.13, "How to change Discoverer Viewer options"](#).

7.9 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 users.

Figure 7–4 Discoverer Viewer customization using presentation options



In the figure above, Discoverer Viewer has been customized on a per-session basis by removing the Discoverer logo, page footer, and export option.

You can store presentation options in presentation templates and make them available to Discoverer end users (for more information, see [Section 7.10, "About presentation templates"](#)).

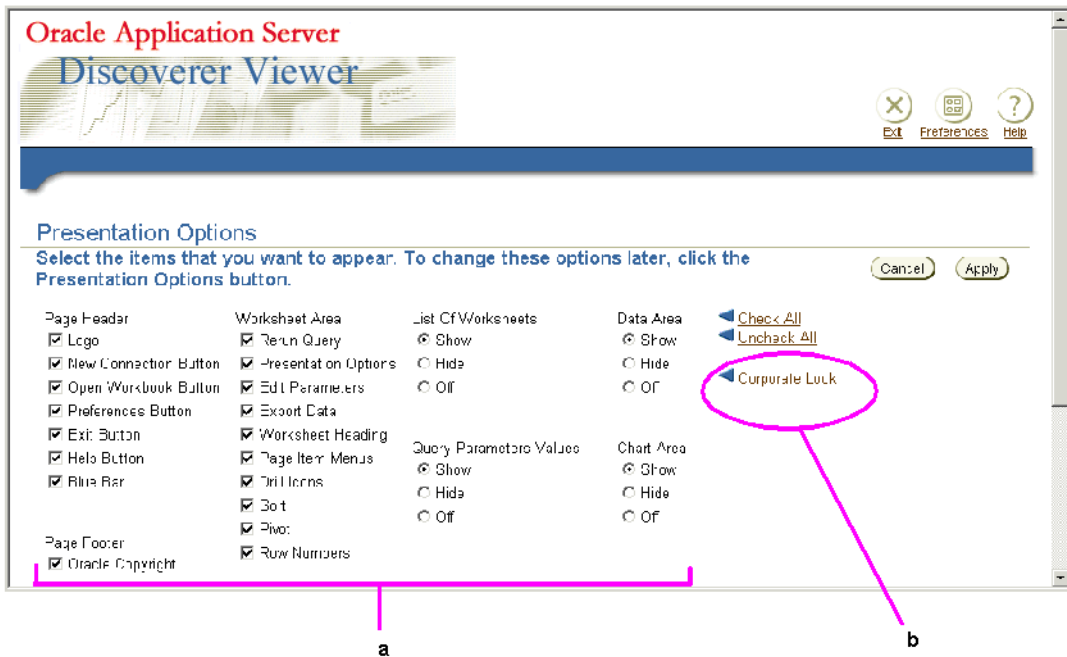
Note: You can also remove Discoverer UI components by editing the `ui_config.xml` file (for more information, see [Section 7.13, "How to change Discoverer Viewer options"](#)).

7.10 About presentation templates

Presentation templates are sets of pre-defined presentation options that enable Discoverer Viewer users to customize the Discoverer Viewer user interface with a single click.

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

Figure 7-5 Discoverer Viewer Presentation Options page



Key to figure:

- a. Presentation options, which determine the Discoverer Viewer components that are displayed. For example, the List Of Worksheets is turned on, and the Page Header Logo is turned on.
- b. A Presentation template called Corporate Look, which applies pre-defined presentation options. To apply the Corporate Look presentation template to Discoverer Viewer, the user selects the **Corporate Look** link. The presentation options are then updated with the values stored in the `ui_config.xml` file.

Notes

- For information about how to create presentation templates, see [Section 7.14, "How to create a presentation template"](#).
- You can remove Discoverer UI components globally by editing the `ui_config.xml` file (for more information, see [Section 7.13, "How to change Discoverer Viewer options"](#)).

7.11 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. Open the Discoverer blaf.css file in a text editor or XML editor (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}`

3. Save the blaf.css file.

Hint: Display 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

- You do not customize the actual worksheet text styles and cell colors of Discoverer Viewer using the blaf.css stylesheet. You define worksheet text styles and cell colors in Discoverer Plus.

If you want consistent worksheet text styles and cell colors (i.e. all worksheets have the same cell color and text color), make sure that Discoverer Plus users format worksheet cells in the same way. For more information, see *Oracle Application Server Discoverer Plus User's Guide*.

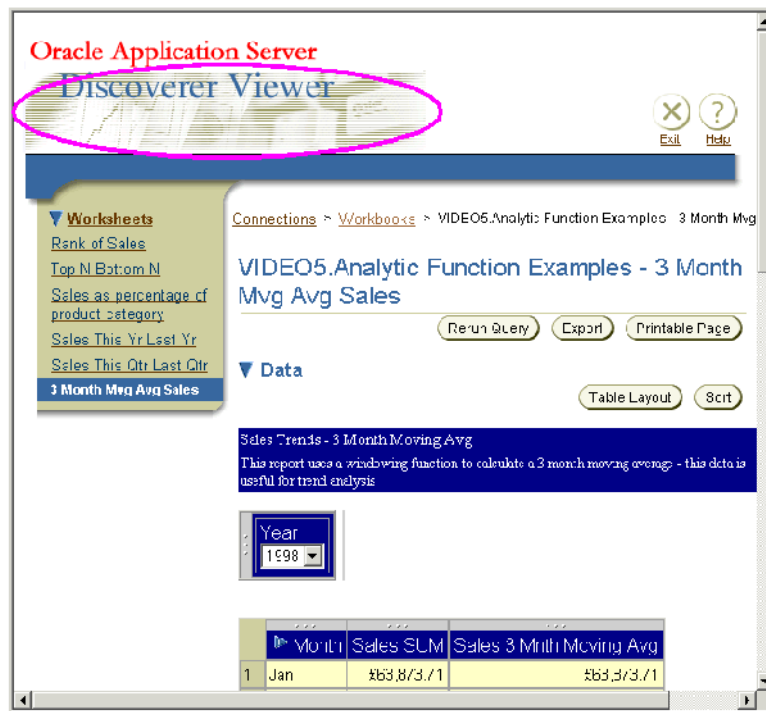
- In Japanese installations, blaf.css is called blafjp.css.
- To display or remove Discoverer Viewer buttons (e.g. Presentation Options or Preferences), see [Section 7.13, "How to change Discoverer Viewer options"](#)

7.12 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 replace the default Discoverer Viewer logo with an organization logo.

Note: If you change the Discoverer Viewer logo, the new logo is also displayed on the Connect to Discoverer Viewer page and the Connect to Discoverer Plus page (for more information, see [Section 3.5, "About the Discoverer connections pages"](#)).

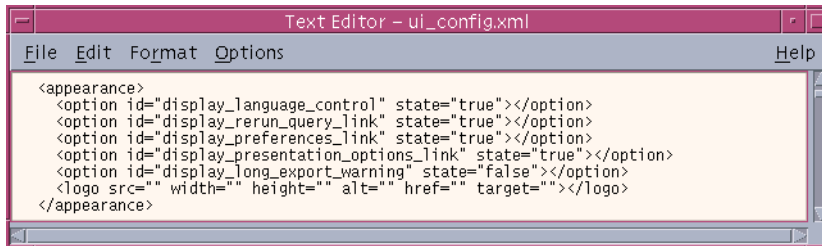
The screenshot below shows the default Discoverer logo (highlighted) that you can change.



To change the default Discoverer Viewer logo:

1. Open the `ui_config.xml` file in a text editor or XML editor (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.

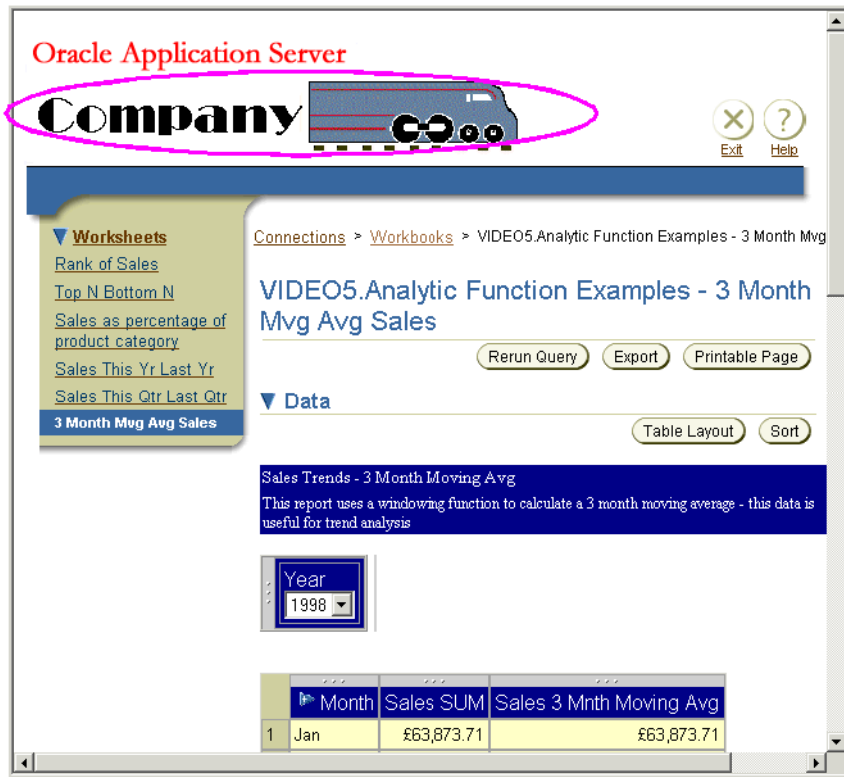


3. Insert the URL of the graphic you want to use as a logo into the **src** attribute value field. For example, to replace the default Oracle logo with a logo stored in `<ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl/my_logo.gif`, the URL of the logo file can be either 'common/xsl/my_logo.gif' (i.e. using a relative path), or 'http://www.server.com:7779/discoverer/common/xsl/my_logo.gif' (i.e. an absolute path).
4. Update the other tag attributes as required.
5. Save the ui_config.xml file.
6. 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 that you specified will appear in Discoverer Viewer.

The screenshot below shows an example of a Discoverer Viewer page where the default Discoverer logo has been replaced with an organization logo (highlighted).



Notes

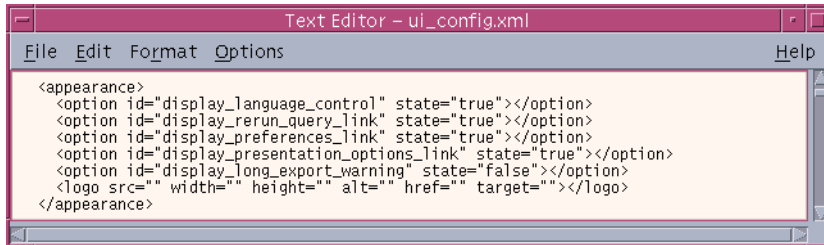
- If you change the default Discoverer Viewer logo, you also change the logo that is displayed on the Discoverer connections page for Discoverer Plus.

7.13 How to change Discoverer Viewer options

You change Discoverer Viewer options when you want to deploy Discoverer Viewer with specific default options enforced for all end users. For example, if you do not want Discoverer Viewer users to set Presentation Options or Preferences, you remove the Presentation Options link and the Preferences link. For more information about Discoverer Viewer options, see [Section 7.8, "About Discoverer Viewer options"](#).

To change Discoverer Viewer Presentation Options:

1. Open the `ui_config.xml` file in a text editor or XML editor (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.



3. Update the `configuration\appearance` tag attributes as required by setting Discoverer Viewer options to either 'true' or 'false'.

For example:

- to display the Rerun Query link, change the value of the `display_rerun_query_link` attribute to 'true'
- to hide the Preferences link, change the value of the `display_preferences_link` attribute to 'false'
- to hide the Presentation Options link, change the value of the `display_presentation_options_link` attribute to 'false'

Hint: Set the Presentation Options option itself to 'false' to prevent Discoverer Viewer users overriding which options are displayed, and enforces a consistent look and feel for all Discoverer end users.

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

Notes

- If you are using OracleAS Web Cache to cache Discoverer Viewer pages, there are some Discoverer Viewer options that you must not display (for more information, see [Section 6.6, "How to use Discoverer Viewer with OracleAS Web Cache"](#)).

- If you have an existing Discoverer Viewer session running, refresh the browser to update Discoverer Viewer with changes that you have made.
- Discoverer Viewer users can also remove Discoverer UI components on a per-session basis using presentation options (for more information, see [Section 7.9, "About presentation options"](#)).

7.14 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 [Section 7.9, "About presentation options"](#) and [Section 7.10, "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, and edit the copy to suit your needs.

To create a presentation template:

1. Open the `ui_config.xml` file in a text editor or XML editor (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.
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 Rerun Query link, change the value of the `display_rerun_query_link` attribute 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.

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

Discoverer Viewer is updated with the presentation options that you have selected. Existing Discoverer browser sessions need to be refreshed to see the new presentation template(s) that you created.

Notes

- Discoverer Viewer 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.
 - c. Select the name of the presentation template to use.

For example, to apply a presentation option called Corporate Look, select the **Corporate Look** link.

- d. Click **Apply** to display the Discoverer Viewer worksheet with the presentation template applied.

Managing OracleAS Discoverer preferences

8.1 Managing OracleAS Discoverer preferences

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

- [Section 8.2, "What are Discoverer preferences?"](#)
- [Section 8.3, "About Discoverer system preferences"](#)
- [Section 8.4, "About Discoverer user preferences"](#)
- [Section 8.5, "About migrating Discoverer preferences"](#)
- [Section 8.6, "How to set user preferences for all users"](#)
- [Section 8.7, "How to set individual preferences for specific users"](#)
- [Section 8.8, "List of Discoverer user preferences"](#)

8.2 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 8.3, "About Discoverer system preferences"](#))
- Discoverer user preferences (for more information, see [Section 8.4, "About Discoverer user preferences"](#))

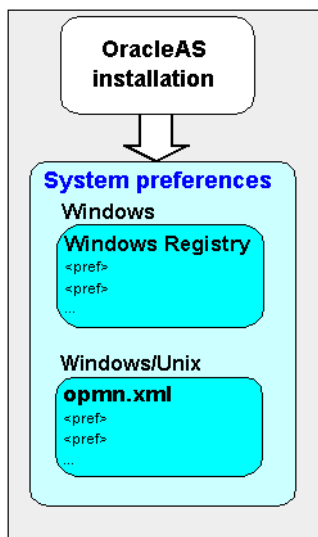
8.3 About Discoverer system preferences

Discoverer system preferences are created and set during installation. Typically you will never have to modify the Discoverer system preferences. System preferences are stored as follows:

- On UNIX systems, the Discoverer system preferences are stored in the opmn.xml file.
- On Windows systems, the Discoverer system preferences are stored in the Windows Registry and the opmn.xml file.

The script file discwb.sh is used to set the Discoverer environment. For more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#).

Figure 8–1 Discoverer System preferences

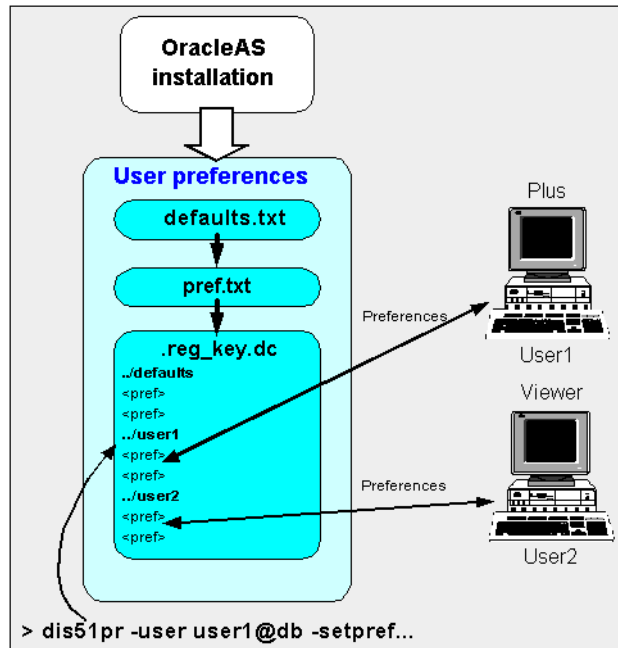


For more information about Discoverer system preferences, see [Section A.1, "OracleAS Discoverer configuration files"](#).

8.4 About Discoverer user preferences

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

Figure 8–2 Discoverer user preferences



When a new user starts an OracleAS 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 middle tier.

Note: Updates made when Discoverer end users change their preferences are lost if preferences are re-applied (using the applypreferences script).

- When an individual user changes a preference, the setting of that preference for that user is saved in the reg_key.dc file (to find out the location of this file, see [Section A.2, "List of Discoverer file locations"](#)).

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 might be stored in reg_key.dc for that user (:

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

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 8.6, "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 user's preferences using the Discoverer preferences command line utility (to find out the location of this utility, see [Section A.2, "List of Discoverer file locations"](#)). Changes that you make are stored in the reg_key.dc file (for more information, see [Section 8.7, "How to set individual preferences for specific users"](#)).

Notes

- Never edit the reg_key.dc directly. You must only change values in reg_key.dc using the Discoverer preferences command line utility dis51pr or dis51pre (to find out the location of this file, see [Section A.2, "List of Discoverer file locations"](#)).
- If you delete the reg_key.dc file, you lose preferences set by Discoverer end users or preferences set using the Discoverer preferences command line utility. Default preferences stored in pref.txt are applied.

- 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.
- Maximum values for preferences are documented in the pref.txt file.
- 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 '.'). Type the command `ls -al` to list hidden files.
- If you want to deploy Discoverer on multiple machines, you might want to use a centralized set of Discoverer preferences. You do this by specifying one Discoverer Preference Server machine and turn off the Discoverer Preferences component on the other machines. For more information, see [Section 5.7, "About the Discoverer Preferences component in a multiple machine environment"](#).

8.5 About migrating Discoverer preferences

You migrate OracleAS Discoverer preferences when you want to upgrade to a new version of Discoverer. For example, you might want to upgrade from OracleAS Discoverer Version 9.0.2 to OracleAS Discoverer Version 9.0.4.

How you migrate Discoverer preferences depends on which version of Discoverer you are using, as follows:

- if you are upgrading from OracleAS Discoverer Version 9.0.2 to OracleAS Discoverer Version 9.0.4, use the OracleAS Upgrade Assistant (for more information about using the OracleAS Upgrade Assistant, see [Section D.2, "Upgrading from Discoverer Version 9.0.2 to Discoverer Version 9.0.4"](#))
- if you are upgrading from OracleAS Discoverer Release 4.1 to Discoverer Version 9.0.4, you need to migrate Discoverer Preferences manually (for more information, see [Section D.3.1, "Upgrading preferences"](#))

8.6 How to set user preferences for all users

You set user preferences for all users when you want to globally configure Discoverer. To set user preferences for all users you edit the pref.txt file on the Discoverer Preference server (for more information about the Discoverer Preference

server, [Section 5.7, "About the Discoverer Preferences component in a multiple machine environment"](#)).

To set user preferences for all users:

1. On the host machine, 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 | Oracle Application Server | Discoverer | Edit Preferences.

2. Edit the items in the `pref.txt` file as required.
3. Save the `pref.txt` file.
4. Run the `applypreferences` script to apply the preference changes you have made (for more information about the `applypreferences` script, see [Section A.2, "List of Discoverer file locations"](#)).

Hint: Check for error messages in the `error.txt` file in the current directory to verify that the preferences were applied correctly (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).

5. Stop and restart the OracleAS Discoverer service (for more information, see [Section 4.4, "About starting and stopping the Discoverer Service"](#)).

Note: You must run the `applypreferences` script from the host machine.

8.7 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 Discoverer preferences command line utility `dis51pr` or `dis51pre` (to find out the location of this file, see [Section A.2, "List of Discoverer file locations"](#)).
2. Type a Discoverer preferences command line utility command at a command prompt, using the following syntax:

```
dis51pr | dis51pre -user <user> -setpref <"preference category">  
<"preference name"> <"preference value">
```

where:

- `dis51pr` | `dis51pre` means type either `dis51pr` on a UNIX machine or `dis51pre` on a Windows machine

- `<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 (e.g. `jchan@salesdb`)
- `<"preference category">` is the category of the preference you want to change (e.g. "Database")
- `<"preference name">` is the name of the preference you want to change (e.g. "DefaultEUL")
- `<"preference value">` is the value you want the preference to have

Hint: Before running the Discoverer preferences command line script, set the Discoverer environment by running the `discwb` script (to find out the location of this file, see [Section A.2, "List of Discoverer file locations"](#)).

Examples:

- if you want to set the default EUL to Sales for the user `jchan`, type the following at a command prompt (on UNIX):

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

- if you want to set the maximum amount of heap memory allowed for the data cache to 512000 for a user `jchan`, type the following at a command prompt (on UNIX):

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

Notes

- To display online help for the Discoverer preferences command line utility, type the name of the script followed by `-help` (e.g. `dis51pr -help`).
- Preference names and values are case-sensitive.
- When specifying a string preference value, prefix the string with `\"` and end the string with `\"`. For example, if the preference value is `Sales`, type `\"Sales\"`.
- For a list of Discoverer preferences that you can set using the Discoverer preferences command line utility, see [Section 8.8, "List of Discoverer user preferences"](#).

8.8 List of Discoverer user preferences

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

Note: Maximum values for preferences are documented in the pref.txt file.

User preference name	Category	Description	Default value	Valid values
AllowAggregationOverRepeatedValues	Application	Specifies whether to aggregate repeated values. If set to 0, Discoverer displays the non-aggregable label (e.g. N/A).	0	0 = do not aggregate repeat values 1 = aggregate repeat values
AppsFNDNAM	Database	Specifies the schema in which Oracle Applications data is stored.	APPS	Valid Apps foundation name
AppsGWYUID	Database	Specifies the public user name and password for the AOL security DLL.	APPLSYSPUB/ PUB	Valid Apps user name and password
AvoidServerWildcardBug	Database	Specifies which database Discoverer is running against.	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
AxisLabelBehavior	Application	Specifies whether Discoverer exports axis labels as part of a worksheet.	'	1 = export axis labels 2 = do not export axis labels 3 = use the same export format as Discoverer Desktop
Axis Style	Crosstab	Specifies the crosstab axis position.	2	1 = inline 2 = outline

User preference name	Category	Description	Default value	Valid values
BusinessAreaFastFetchLevel	Database	Specifies the amount of pre-caching that occurs for components and items whenever a Business Area is fetched.	1	1
CacheFlushPercentage	Application	Specifies the percentage of cache flushed if the cache is full.	25	User specified
CellPadding	Application	Specifies the amount of space (in pixels) that appears around each cell value in the table or crosstab when displayed or printed. For example, 0 = no pixels, 1 = one pixel, 2 = two pixels. Note: Set this value to 0 to reduce the size of printed reports by removing extra spaces. Hint: For more information about reducing the size of a printed report, see the PrintHeadersOnce preference.	1	User specified Hint: To avoid worksheet layout problems, do not specify a value greater than 5.
Cell XGridline	Crosstab/ Table	Specifies whether to show horizontal and vertical gridlines. Note: To hide both horizontal and vertical gridlines, both Cell XGridline and Cell YGridline must be set to 0. If either XGridline or YGridline is set to 1, both horizontal and vertical gridlines are displayed.	0	0 = no 1 = yes
Cell YGridline	Crosstab/ Table	Specifies whether to show horizontal and vertical gridlines. Note: To hide both horizontal and vertical gridlines, both Cell XGridline and Cell YGridline must be set to 0. If either XGridline or YGridline is set to 1, both horizontal and vertical gridlines are displayed.	0	0 = no 1 = yes

User preference name	Category	Description	Default value	Valid values
Data Format	Application	Specifies whether to apply HTML formatting to worksheet data cells.	<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	Specifies the EUL to which you want all users to connect. Each user can override this default from the Discoverer Plus Options dialog.	Any EUL you have created.	Any valid EUL
DefaultUserTypeIs Apps	Application	Specifies whether the default Discoverer login type is Oracle Applications (i.e. the "Applications User" check box on the Create Connection page is selected by default). If set to 1, the "Applications User" check box is selected by default.	1	0 = Apps check box is cleared by default 1 = Apps check box is selected by default
DisableAlternateSortOptimization	Database	Specifies whether Discoverer writes optimized Alternate Sort queries. Hint: Set to 1 only if you use external registered summaries.	0	0 = Do not write optimized Alternate Sort queries 1 = Do write optimized Alternate Sort queries

User preference name	Category	Description	Default value	Valid values
DisableAutoOuterJoinsOnFilters	Database	Specifies the behavior of Discoverer when running queries involving an outer join with a condition (or conditions) applied. The effect of this setting is fully explained in the <i>Oracle Discoverer Administrator Administration Guide</i> .	0	0 = Do not disable outer joins on filters 1 = Disable outer joins on filters
DisableAutoQuery	Database	Specifies whether to automatically run queries and display worksheet data when a worksheet is opened.	0	0 = Run queries 1 = Do not run queries
DisableFanTrapDetection	Database	Specifies whether to disable fan trap detection in user queries.	0	0 = Enable fan trap detection 1 = Disable fan trap detection
DisableFanTrapResolution	Database	Specifies whether to resolve fan traps. For a detailed description of fan trap resolution in Discoverer, see <i>Discoverer Administrator Administration Guide</i> .	0	0 = turn on fan trap resolution 1 = turn off fan trap resolution - you get a pure cartesian product
DisableMultiJoinDetection	Database	Specifies whether to use multiple join path detection when creating worksheets in Discoverer Plus. When this setting is equal to 1, Discoverer Plus selects all join options when creating a worksheet. When this setting is equal to 0 and multiple joins exist, Discoverer Plus displays the Join Folders dialog where you choose the join(s) to use for the worksheet. Note: It is recommended that Discoverer Plus users select all available joins for Discoverer to display accurate results data.	0	0 = Do not disable multiple join detection 1 = Disable multiple join detection

User preference name	Category	Description	Default value	Valid values
EnhancedAggregationStrategy	Database	Specifies whether to use Enhanced Data Aggregation and if it is, what SQL generation strategy to use. For more information about setting this value, see Section 8.8.1, "About the EnhancedAggregationStrategy user preference setting" .	1	0 = Off 1 = Strict Grouping Sets 2 = Optimized 3 = Cube 4 = Auto Determine
EuroCountries	Application	Specifies a comma-separated list of Java locales (e.g. en_IE) for countries whose currency is the Euro.	A list of countries using the Euro (e.g. de,de_AT,de_DE,de_LL...)	Comma-separated list of Java locales (e.g. en_IE) for countries whose currency is the Euro.
ExcelExportWithMacros	Application	Specifies whether macros are exported with the exported Excel file. Note: Macros must be enabled for pivot tables to work.	1	0=Export without macros 1=Export with macros
ExcelVersion	Application	Specifies the version of Excel to export to. Different versions of Excel impose different limits on the number of rows per sheet: <ul style="list-style-type: none"> ■ the Excel97 limit is 65536 rows per sheet ■ the Excel2000 limit is 65536 rows per sheet If the limit is exceeded, Discoverer places additional rows on additional Excel sheets.	Excel95	Excel97 Excel2000

User preference name	Category	Description	Default value	Valid values
ExportGroupSorte dItemsAsBlank	Application	Specifies whether repeated values on the left side of a Discoverer crosstab worksheet are displayed, or replaced as NULL. For example, if you display Month in the left axis, you might want to repeat the month for each row so that when you export the worksheet to CSV format you export all required data.	1	0 = display repeated values 1 = display repeated values as NULL
GraphAxesAutoSc aledFromZero	Application	Specifies whether default minimum value for the Graph axis scale is 0 or not. If set to 1, the minimum value of scale is set to 0, otherwise Discoverer chooses the minimum scale value automatically.	1	0 = do not scale to 0 1 = scale to 0
GraphShowRollup Aggregates	Application	Specifies whether to plot 'rolled up' aggregates in graphs. For example, for an outline crosstab worksheet, you might want the graph to plot drilled down values but not the rolled up aggregate values. In other words, if you drill down into sales figures for 2003 to display monthly values, you might want the graph to have the monthly values (e.g. January, February) but not the aggregate value for 2003.	1	0 = no 1 = yes

User preference name	Category	Description	Default value	Valid values
Heading Format	Application	Specifies which HTML formatting to apply to heading cells in worksheets.	<pre><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></pre>	User specified
ItemClassDelay	Database	Specifies a timeout value in seconds for fetching a list of values.	15	User specified
MaterializedViewRedirectionBehavior	Database	Specifies whether to use materialized view redirection.	0	0=always when available 1=always when summary data not stale 2=never
MaxRowsPerFetch	Database	<p>Specifies the number of database rows retrieved in each fetch from the database, as follows:</p> <p>If the MaxRowsPerFetch value is greater than the RowsPerFetch value, use the RowsPerFetch value.</p> <p>If the MaxRowsPerFetch value is less than or equal to the RowsPerFetch value, use the MaxRowsPerFetch value.</p> <p>If the RowsPerFetch value is not set, use the MaxRowsPerFetch value.</p> <p>See also RowsPerFetch.</p>	250	User specified Minimum=1 Maximum=1000

User preference name	Category	Description	Default value	Valid values
MaxVirtualDiskMem	Application	Specifies the maximum amount of disk memory allowed for the data cache.	102400000	User specified
MaxVirtualHeapMem	Application	Specifies maximum amount of heap memory allowed for the data cache.	5120000	User specified
NonAggregableValue	Application	Specifies the default value that is displayed for non-aggregable cells in worksheet. A cell is classified as non-aggregable if the aggregation function being applied does not make sense for the values being aggregated.	"N/A"	User specified
NotifyNewRunsOnConnect	Application	Specifies whether to notify an end user on login if new scheduled results are available.	0	0 = Do not notify when new scheduled workbook results are available 1 = Notify when new scheduled workbook results are available
NullValue	Application	Specifies how null values are displayed in worksheets, for example, 'NULL', 'N/A', '0'.	NULL	User specified
ObjectsAlwaysAccessible	Database	Specifies whether to verify that Business Area objects and items exist in the database.	1	0=verify 1=do not verify and assume that the objects and items exist

User preference name	Category	Description	Default value	Valid values
OutOfFetch	Session Manager	Specifies the delay in seconds between successive database fetches. Set this value if you are getting the following error while running a query: ORA-1002 Fetch out of sequence. If set to bigger value will increase the time taken to run the report. So use only if you get the error mentioned above	0	0 - No delay 1 - 1 second delay 2 - 2 second delay
PredictionThresholdSeconds	Database	Specifies a time threshold for warning Discoverer end users that the predicted query time will exceed this number of seconds.	60	User specified
PredictionThresholdSeconds Enabled	Database	Specifies whether to use the Query prediction threshold.	1	0 = disabled 1 = enabled
PrintHeadersOnce	Application	Specifies whether column headers are printed for each page, or only for the first page. Note: Set this value to 1 to reduce the number of pages that Discoverer Plus generates (e.g. in a crosstab worksheet where headers are repeated often). Hint: For more information about reducing the size of a printed report, see the CellPadding preference.	0	0 = Print column headers for each page 1 = Print column headers once

User preference name	Category	Description	Default value	Valid values
PrintPercentageOf Title	Application	<p>Specifies the percentage of a worksheet title to print if the worksheet title is too long to print on a single page.</p> <p>For example, if set to 60, Discoverer truncates a long title to take up 60% of the page.</p> <p>If set to 0, no title is printed. If set to a value that is outside the range, Discoverer defaults to the nearest minimum or maximum value. For example, if set to 80, Discoverer defaults to the maximum value (i.e. 60).</p>	60	<p>User specified</p> <p>Minimum value is 0.</p> <p>Maximum value is 60.</p>
QPPAvgCostTime Algorithm	Database	<p>Specifies how to calculate the query prediction time based on query statistics.</p>	2	<p>1 = use five statistics above and below the computed estimate irrespective of cost</p> <p>2 = use the nearest ten statistics based on the cost</p>

User preference name	Category	Description	Default value	Valid values
QPPCBOEnforced	Database	Specifies whether to enforce cost based optimizer for query prediction SQL.	2	0 = Cost based optimizer not enforced for query prediction SQL 1 = Cost based optimizer enforced for query prediction SQL 2 = Cost based optimizer for query prediction SQL only enforced for databases older than version 8.1.7
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

User preference name	Category	Description	Default value	Valid values
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
QPPObtainCostMethod	Database	Controls how the cost of a query is obtained.	1	0 = uses explain plan to obtain the cost 1 = uses dynamic views to obtain the cost
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	Controls the amount of pre-caching that occurs during SQL generation.	1	0 = no fast fetch 1 = fast fetch (slowest) 2 - fast fetch (medium) 3 - fast fetch (fast) 4 - fast fetch (super fast)
QueryTimeLimit	Database	Limit on query time in seconds.	1800	User specified Minimum=1 Maximum=N/A
QueryTimeLimitEnabled	Database	Query time limit disabled (0) or enabled (1).	1	0 = disabled 1 = enabled

User preference name	Category	Description	Default value	Valid values
RdbFastSQLOff	Database	Controls whether fast sql option is turned off for an RDB oracle database (applicable only for an Admin session).	0	0 = off 1 = on
Row Headings	Table	Display row numbers on table worksheets.	0	0 = no 1 = yes
RowFetchLimit	Database	The maximum number of rows fetched.	10000	User specified Minimum=1 Maximum=N/A
RowFetchLimitEnabled	Database	RowFetchLimit parameter is disabled (0) or enabled (1).	1	0 = disabled 1 = enabled
RowsPerFetch	Database	The number of rows to fetch from the database at once. If the RowsPerFetch value is less than or equal to the MaxRowsPerFetch value, use the RowsPerFetch value. If the RowsPerFetch value is greater than the MaxRowsPerFetch value, use the MaxRowsPerFetch value. If the RowsPerFetch value is not set, use the MaxRowsPerFetch value.	250	User specified Minimum=1 Maximum=1000 0
RowsPerHTML	Session Manager	Number of data rows to display on one HTML page. For example, if you have 10 rows of data, they are displayed over two pages in Discoverer Viewer.	25	User specified

User preference name	Category	Description	Default value	Valid values
SaveLastUsedParameterValue	Application	When a workbook is saved, this preference specifies whether to save the most recently used parameter values, or to revert to the default parameter values when the workbook is next opened.	0	0 = Do not save the most recently used parameter values; use the default parameter value when the workbook is next opened. 1 = Save the most recently used parameter value and apply this value when the workbook is next opened.
ShowDialogBitmaps	Application	End users see the bitmap graphics on Discoverer Plus dialogs.	1	0 = off 1 = on
ShowExpiredRunsOnExit	Application	Specifies whether to notify an end user on exit about expired and deleted scheduled results.	0	0 = Do not notify about expired and deleted scheduled workbook results 1 = Notify about expired and deleted scheduled workbook results
ShowUserTypeChoice	Application	Specifies whether to display the "Applications User" check box on the Create Connection page. If set to 1, Discoverer users can specify the type of login to use by selecting this check box.	1	0 = false 1 = true

User preference name	Category	Description	Default value	Valid values
SQLTrace	Database	Specifies whether Discoverer copies SQL statements to a trace file for analysis. For more information, see the <i>Oracle Discoverer Administrator Administration Guide</i> .	0	0 = false 1 = true
SQLFlatten	Database	Specifies whether Discoverer attempts to flatten the SQL, minimizing the use of inline views in the query SQL. For more information, see the <i>Oracle Discoverer Administrator Administration Guide</i> .	1	0 = false 1 = true
SQLItemTrim	Database	Specifies whether Discoverer attempts to trim the SQL for irrelevant or unused items. For more information, see the <i>Oracle Discoverer Administrator Administration Guide</i> .	1	0 = false 1 = true
SQLJoinTrim	Database	Specifies whether Discoverer attempts to remove the unused joins from the SQL. For more information, see the <i>Oracle Discoverer Administrator Administration Guide</i> .	1	0 = false 1 = true
SummaryObjectsUseCachedAccessibility	Database	Specifies 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.	60	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

User preference name	Category	Description	Default value	Valid values
Timeout	Session Manager	Amount of time (in seconds) after which Discoverer Plus disconnects an idle session. Minimum time is 180 seconds (for more information, see Section 8.8.2, "About setting the timeout value for Discoverer"). To set the timeout for Discoverer Viewer, you set the session-timeout value in the web.xml file (for more information, see Section 8.8.3, "How to set the timeout value for Discoverer Viewer").	1800	User specified
Title	Crosstab	Displays worksheet titles.	1	0 = no 1 = yes
Title	Table	Displays worksheet titles.	1	0 = no 1 = yes
Totals Format	Application	Applies HTML formatting to cells that contain totals in worksheets.	<code><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></code>	User specified
UseOptimizerHints	Database	Specifies whether to add optimized hints to SQL.	0	0 = off 1 = on

8.8.1 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 control the SQL that is generated for the query, and specify whether there should be an exact match between client request and the aggregation levels retrieved from the database, or whether more aggregation levels are retrieved from the database than are requested by the client.

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.
1	Strict Grouping Sets The generated SQL contains GROUPING SET requests that exactly match the GROUPING SET requests made by Discoverer. The requests that Discoverer makes are determined by how the end user created the worksheet. For example, the generated GROUP BY clause might be similar to the following: GROUP BY GROUPING SETS((Department, Region, Year),(Department),()) Note: This value (the default) might be used if you want to maximize performance.
2	Optimized 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 Discoverer. This typically enables the end user to add totals or pivot without needing to re-query the database. For example, the generated GROUP BY clause might be similar to the following: GROUP BY GROUPING SETS(ROLLUP(Department, Region, Year), ROLLUP(Region, Year)) Note: This value might be used if worksheet users do a lot of drilling or pivoting when using worksheets.

Value	Description
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 might 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>

8.8.2 About setting the timeout value for Discoverer

You specify a Discoverer timeout if you want Discoverer sessions to shut down automatically after a time specified period if no user interaction has occurred during that time. Before Discoverer shuts down, a warning message is displayed. For example, if a Discoverer session is not used for ten minutes, the Discoverer session will shut down. The Discoverer end user will have to reconnect to use Discoverer again.

Discoverer timeout values are specified as follows:

- In Discoverer Plus, the Timeout value in the pref.txt file specifies the timeout value (for more information, see the Timeout preference in [Section 8.8, "List of Discoverer user preferences"](#)).
- In Discoverer Viewer, the session-timeout value in the web.xml files specifies the timeout value (for more information, see [Section 8.8.3, "How to set the timeout value for Discoverer Viewer"](#)).

8.8.3 How to set the timeout value for Discoverer Viewer

To set the timeout value for Discoverer Viewer:

1. Open the web.xml file in a text editor or XML editor (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. Look for a session-timeout tag, e.g.

```
<session-timeout>10</session-timeout>
```

3. Update the session-timeout value as required (in minutes).

For example, to set the timeout to twenty minutes, change the session-timeout value to 20.

4. (optional) If the web.xml file does not contain a session-config tag add the following text to the end of the file, immediately before the closing </web-app> tag:

```
<session-config>
    <session-timeout>10</session-timeout>
</session-config>
```

Note: Change the value '10' (i.e. ten minutes) as required.

5. Save the web.xml file.
6. Using Application Server Control, restart the Business Intelligence and Forms component (for more information about restarting instances, see [Section 4.7, "How to start and stop the Discoverer servlets"](#)).

When users next start Discoverer Viewer, Discoverer will impose the timeout value specified.

Using OracleAS Discoverer with OracleAS Portal

9.1 Using OracleAS Discoverer with OracleAS Portal

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

- [Section 9.2, "What is OracleAS Portal?"](#)
- [Section 9.3, "How to use OracleAS Discoverer with OracleAS Portal"](#)
- [Section 9.4, "How to register Discoverer Portlet Provider with OracleAS Portal"](#)
- [Section 9.5, "How to edit the Discoverer Portlet Provider"](#)
- [Section 9.6, "About changing the default performance settings for OracleAS Discoverer"](#)

9.2 What is OracleAS Portal?

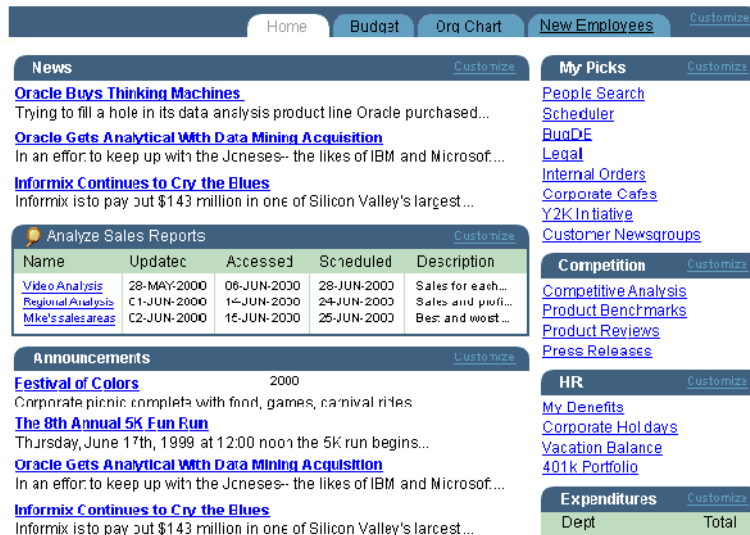
OracleAS Portal is a component of OracleAS that enables non-technical business users to create portals. Portals are Internet or intranet sites that provide a personalized, single point of interaction with a company's suite of applications. Portals also enable you to provide a consistent look and feel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

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

- a Worksheet portlet, which displays a Discoverer worksheet
- a List of Workbooks portlet, which displays a list of Discoverer workbooks

The figure below shows a portal page containing a Discoverer List of Workbooks portlet called Analyze Sales Reports. Analyze Sales Reports contains links to Discoverer workbooks that enable portal users to start Discoverer Viewer and quickly access Discoverer reports.

Figure 9–1 An OracleAS Portal containing a List of Workbooks portlet



You can also use Discoverer portlets in dashboard applications to display worksheets and graphs (see figure below).

Figure 9–2 A dashboard application featuring Discoverer graphs, worksheets, a list of workbooks, and links to other information sources

The screenshot displays the OracleAS Portal interface within a Microsoft Internet Explorer browser window. The page title is "Integrated BI powered by Discoverer". The main content area is divided into several sections:

- Margin Analysis:** A table showing profit and sales data for the "Laser Disc Rent" department across years 1998, 1999, and 2000, categorized by region (Central, East, West).
- Sales Workbooks:** A table listing various workbooks such as "Margin Analysis", "Regional Sales by Year", and "Quarterly Profit by Region (graph)".
- Quarterly Profit by Region - Sales Analysis:** A 3D bar chart titled "Quarterly Profits by Region" showing profit values for Central, East, and West regions across quarters Q1, Q2, and Q3.
- Search:** A search box with a dropdown menu set to "All Content Areas" and a "Go" button.
- Regional Sales:** A table showing sales data for the "Video Sale" department for years 1998 and 1999, categorized by region.
- Margin Analysis - Profits by:** A table showing profit by unit for the "Beverage" department for years 1998 and 1999, categorized by region.

Notes

- For more information about OracleAS Portal, see *Oracle Application Server Portal Configuration Guide*.
- For more information about how OracleAS Discoverer works with OracleAS Portal and OracleAS Single Sign-On, see [Section 12.8.2.3, "An example showing how Discoverer works with OracleAS Portal and Single Sign-on"](#).
- To use Discoverer with OracleAS Portal, make sure that the `OssolPCheck` parameter value in the `mod_osso.conf` file is set to `FALSE`.

9.3 How to use OracleAS Discoverer with OracleAS Portal

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

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

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

- register Discoverer Portlet Provider with OracleAS Portal (for more information, see [Section 9.4, "How to register Discoverer Portlet Provider with OracleAS Portal"](#))

Note: This task must be done once after an OracleAS Business Intelligence and Forms type installation.

- (optional) change the default cache settings for Discoverer Portlet Provider if required (for more information, see [Section 9.6, "About changing the default performance settings for OracleAS Discoverer"](#))
- use OracleAS Portal to add Discoverer portlets to portal pages, which is typically done by Discoverer Plus or Discoverer Viewer users

For more information about how to add Discoverer portlets to portal pages, see *Oracle Application Server Discoverer Plus User's Guide*.

Notes

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

9.4 How to register Discoverer Portlet Provider with OracleAS Portal

You register Discoverer Portlet Provider to enable OracleAS Portal end users to add Discoverer business intelligence portlets to their portal pages.

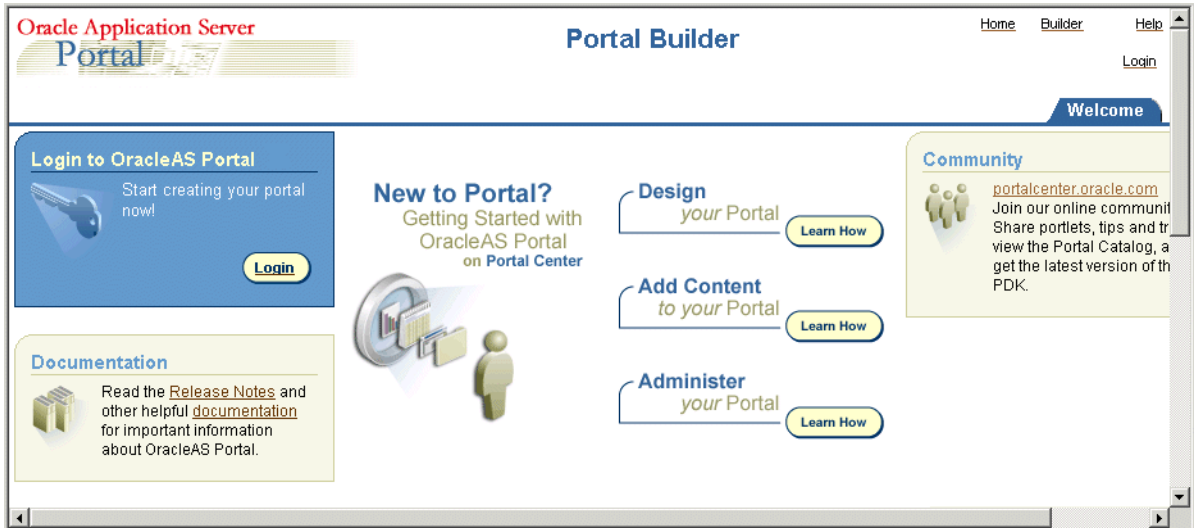
To register Discoverer Portlet Provider with OracleAS Portal:

1. Start a Web browser and enter the URL for OracleAS Portal.

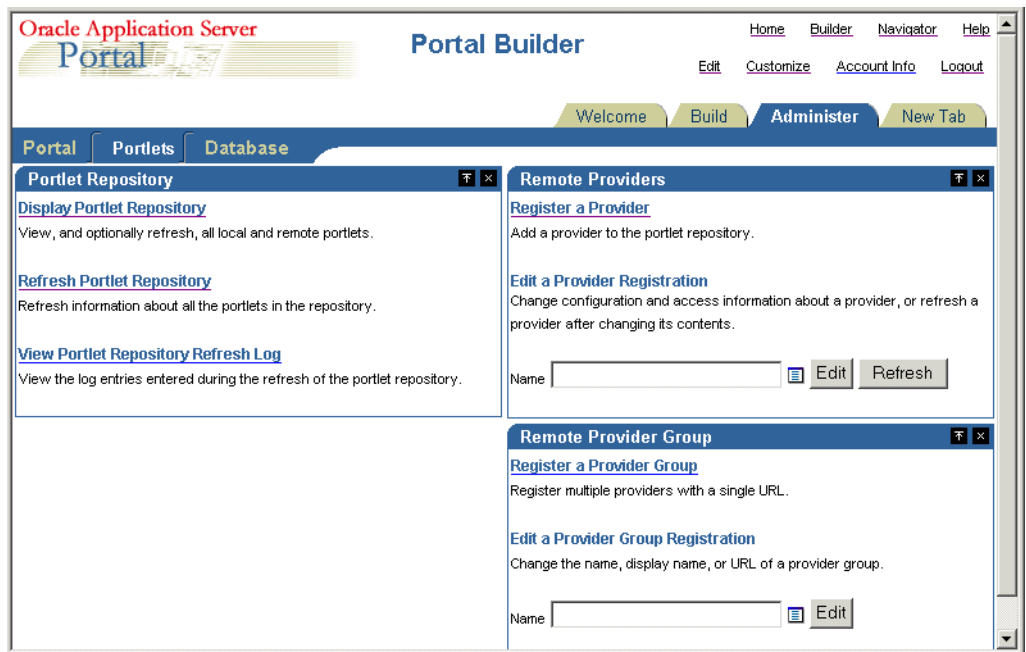
For example:

`http://<host.domain>:7778/pls/portal`

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



2. Select the **Login** link and connect as a portal administrator.
3. Display the Administer tab.
4. Display the Portlets sub-tab.



5. Select the **Register a Provider** link to display the Provider Information page.

The screenshot shows a web browser window displaying the 'Add Provider' wizard. The wizard has a blue header bar with the text 'Add Provider' and a question mark icon. Below the header, there are 'Next >' and 'Cancel' buttons. The main content area is titled 'Step 1 of 3' and 'Provider Information'. It includes a descriptive paragraph: '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.' Below this are five input fields: 'Name' (Discoverer01), 'Display Name' (Business Intelligence), 'Timeout' (100 seconds), 'Timeout Message' (Sorry, timing out), and 'Implementation Style' (Web). The 'Next >' button is highlighted in blue. The browser's status bar at the bottom shows 'Done' and 'Internet'.

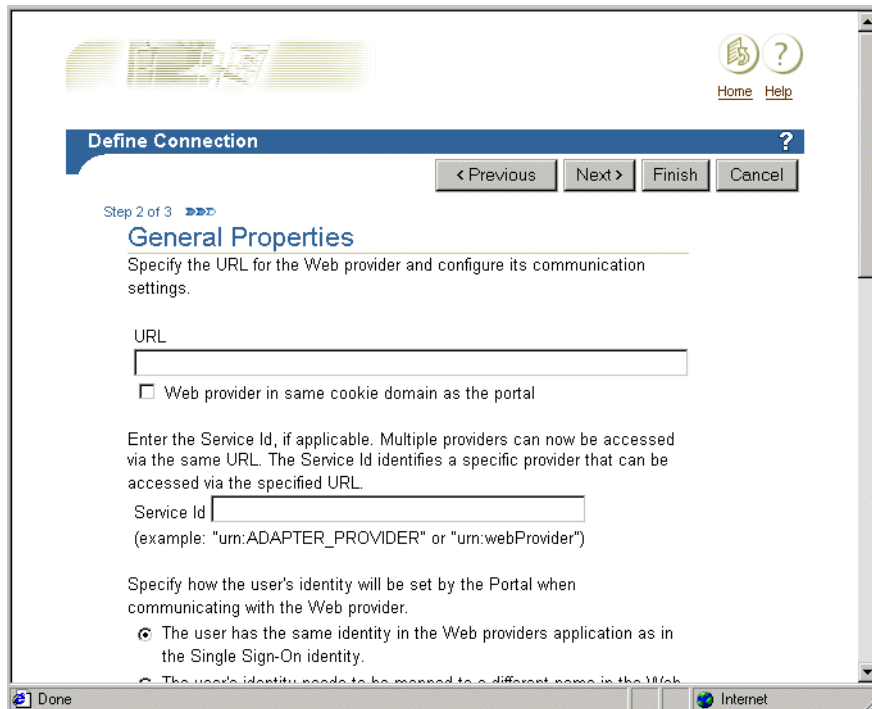
6. Enter the Discoverer Portlet Provider details.

You can enter any name and display name for 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.

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

8. Click Next to display the General Properties page.



9. 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://<host.domain>:<port>/discoverer/portletprovider` (e.g.
`http://myserver:7778/discoverer/portletprovider`)

- b. Clear the **Web Provider in same cookie domain as the portal** check box.**
- c. Select the **The user has the same identity in the Web providers application as in the Single Sign-On identity** radio button.**

Note: Do not change the default value of other fields.

10. Click Next to display the Control Access page.



11. (optional) Change the default access control settings if necessary.
12. Click Finish.

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

Hint: To test that the Discoverer Portlet Provider is running:

- a. Start a Web browser.
- b. Enter the URL that you entered into the URL field in step 8 (e.g. `http://<host.domain>:<port>/discoverer/portletprovider`).

You should see the message 'Congratulations! You have successfully reached your Provider's Test Page.'

Notes

- If Discoverer end users need to publish workbooks and worksheets using a public connection, create a public connection that they can use using Enterprise Manager (for more information about creating public connections, see [Section 3.7, "How to create a public connection"](#)).
- If the Discoverer Portlet Provider is not visible in the Portlet repository, refresh the Portlet repository, as follows
 - a. Click the Home icon to display the OracleAS Portal main page.
 - a. Select the **Builder** link to display the Portal Design-Time pages.
 - b. Display the Administer tab.
 - c. Display the Portlets sub-tab.
 - d. Select the **Refresh Portlet Repository** link in the Portlet Repository area.
 - e. Apply changes.

You might also turn the Portal cache setting off, as follows:

- a. Click the Home icon to display the OracleAS Portal main page.
- a. Select the **Builder** link to display the Portal Design-Time pages.
- b. Display the Administer tab.
- c. Display the Portal sub-tab.
- d. Select the **Global Settings** link in the Services area.
- e. Display the Cache tab to display the Web Cache Settings page.
- f. Clear the **Enable Web Cache for Caching Portal Content** check box.
- g. Apply changes.

9.5 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:

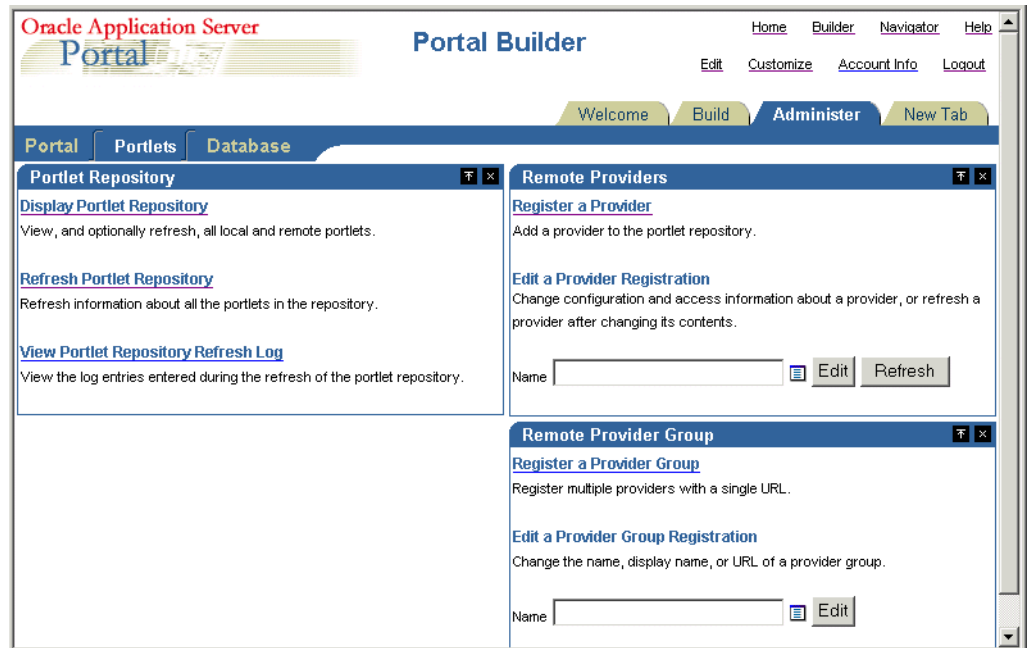
1. Start a Web browser and enter the URL for the OracleAS Portal main page main page.

For example:

`http://<host.domain>:<port>/pls/portal`

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

2. Display the Administer tab.
3. Display the Portlets sub-tab.



4. In the **Remote Providers** area, enter the name of the Discoverer Portlet Provider (i.e. its display name) in the **Name** field, and click Edit to display the Provider Information page.

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

- 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 9.4, "How to register Discoverer Portlet Provider with OracleAS Portal"](#)).

- c. Click Edit to display the Edit Portlet Provider page.
5. 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)
 6. Click OK to save the changes you have made.

The Discoverer Portlet Provider is updated according to changes you have made.

9.6 About changing the default performance settings for OracleAS Discoverer

You might change the default performance settings for OracleAS Discoverer to improve Discoverer performance.

When you use OracleAS Discoverer with OracleAS 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 10.5.2, "How to enhance Discoverer Viewer scalability using XSL stylesheet pooling"](#))

Optimizing OracleAS Discoverer performance and scalability

10.1 Optimizing OracleAS Discoverer performance and scalability

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

- [Section 10.2, "About Discoverer and performance"](#)
- [Section 10.3, "About Discoverer and scalability"](#)
- [Section 10.4, "How to improve Discoverer performance"](#)
- [Section 10.5, "How to take advantage of Discoverer's scalable architecture"](#)

10.2 About Discoverer and performance

The performance of a Discoverer system refers to the time Discoverer takes to complete a specific task. Performance time might be the time taken to:

- return the results of a query (i.e. display a worksheet)
- perform a pivot or drill
- add a new user to the system

10.3 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.

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 [Section 5.1, "Installing OracleAS Discoverer in a multiple machine environment"](#).

The main factors that determine Discoverer's scalability are:

- 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)
- the number of Discoverer middle tier machines

10.4 How to improve Discoverer performance

Discoverer 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 and materialized views
- indexes
- database parameter settings
- network bandwidth

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 10.4.1, "How to improve Discoverer performance by using worksheets and page items appropriately"](#)
- [Section 10.4.2, "How to improve Discoverer performance by reducing the time taken to display business areas and folders"](#)
- [Section 10.4.3, "How to improve Discoverer performance by using summary folders"](#)
- [Section 10.4.4, "How to improve query performance by optimizing the SQL that Discoverer generates"](#)
- [Section 10.4.5, "How to improve Discoverer performance by providing a 'Select all parameter values' option that does not use a DECODE statement"](#)

- Section 10.4.6, "How to improve Discoverer performance by using Discoverer Administrator hints"
- Section 10.4.7, "How to improve Discoverer performance by setting the Case Storage item property appropriately"
- Section 10.4.8, "How to improve Discoverer performance by increasing the size of the array used to fetch rows from the database"
- Section 10.4.9, "How to improve Discoverer performance by basing lists of values on tables containing distinct values"
- Section 10.4.10, "How to improve Discoverer performance by changing cache settings for your system"
- Section 10.4.11, "How to improve Discoverer performance by scheduling worksheets to run overnight"
- Section 10.4.12, "How to improve Discoverer Viewer performance by using OracleAS"

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

The time that Discoverer takes to query and display data depends on the worksheet layout (i.e. table or crosstab) and whether the worksheet layout uses page items.

For example:

- When populating a tabular worksheet that does not contain page items, Discoverer uses incremental fetch (e.g. retrieves rows 100 at a time) and therefore does not need to load the entire results set, which might be much larger.

Data for tabular layouts that do not contain page items is displayed faster because Discoverer does not index cached items as it would if the page items were displayed.
- 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 Discoverer spends additional time creating an index by page item on the cached results set.

To enhance performance, encourage Discoverer Plus users to follow these guidelines when designing Discoverer workbooks:

- use tabular reports rather than cross-tabular reports
- minimize the number of page items in reports
- avoid wide cross tabular report
- avoid creating reports that return tens of thousands of rows
- provide parameters to reduce the amount of data produced
- minimize the number of worksheets in workbooks
- remove extraneous worksheets from workbooks (especially if end users frequently use Discoverer's export option)

Note: When end users export data in Discoverer Plus or Discoverer Viewer, they can export either the current worksheet or all the worksheets. In other words, they cannot selectively choose the worksheets to be exported. Remove extraneous worksheets so that extra data is not included when end users export all worksheets.

The following worksheet setups all increase the overhead in index creation and therefore affect Discoverer performance:

- wide crosstabs
- page axis items
- page axis items with a large number of values

10.4.2 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 in the Discoverer Plus Item Navigator (for more information, see *Oracle Application Server Discoverer Plus User's Guide*). 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 the user cannot create workbooks that they cannot run, the security check can increase the time taken to display the list, because the check is done for all business areas and folders.

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

```
ObjectsAlwaysAccessible = 1
```

Note: After editing the `pref.txt` file, you must run the `applypreferences` script to apply the preference changes you have made, then stop and restart the OracleAS Discoverer service (for more information, see [Section 4.4, "About starting and stopping the Discoverer Service"](#)).

If the value of `ObjectAlwaysAccessible` is not 0, Discoverer does not perform the security check at the time that the query is built and assumes that the tables are accessible.

Note: Database security is always respected. The security check made when the query runs, instead of when the query is built.

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 ensures database security when the query runs and no rows are returned.

10.4.3 How to improve Discoverer performance by using summary folders

When used correctly, Discoverer summary folders significantly improve query response times. For example, 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 *Oracle Discoverer Administrator Administration Guide*.

10.4.4 How to improve query performance by optimizing the SQL that Discoverer generates

To improve query performance Discoverer optimizes the SQL that it generates, in the following three areas:

- item trimming

Discoverer removes references to irrelevant or unused columns and expressions in the query SQL, improving performance. Item trimming is controlled by the user preference `SQLItemTrim`.

- join trimming

Discoverer detects and eliminates joins (where possible) from queries without affecting the result set, which improves query performance. Join trimming is controlled by the user preference `SQLJoinTrim`.

- flattening

Discoverer minimizes the use of inline views in the query SQL, which makes it easier for the database to efficiently parse the SQL and select an optimal execution path. Flattening is controlled by the user preference `SQLFlatten`.

For more information about:

- the user preferences `SQLItemTrim`, `SQLJoinTrim`, `SQLFlatten`, see [Section 8.8, "List of Discoverer user preferences"](#).
- the join properties to choose to improve performance, see the *Oracle Discoverer Administrator Administration Guide*.

10.4.5 How to improve Discoverer performance by providing 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 for a database index to be used (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 as a parameter value, you might:

1. Create a custom folder to list all regions 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 Discoverer end 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 *Oracle Discoverer Administrator Administration Guide*. For more information about how to create a parameter, see *Oracle Application Server Discoverer Plus User's Guide*.

10.4.6 How to improve Discoverer performance by using Discoverer Administrator hints

To improve Discoverer performance, you can add hints to SQL statements (e.g. using a custom folder) in Discoverer Administrator to force the database optimizer to use a specific path. For more information, see *Oracle Discoverer Administrator Administration Guide*.

10.4.7 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.

10.4.8 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 = <array size>
```

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

Note: 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

Notes

- 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.
- After editing the pref.txt file, you must run the applypreferences script to apply the preference changes you have made, then stop and restart the OracleAS Discoverer service (for more information, see [Section 4.4, "About starting and stopping the Discoverer Service"](#)).

10.4.9 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 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 *Oracle Discoverer Administrator Administration Guide*.

10.4.10 How to improve Discoverer performance by changing cache settings for your system

Data retrieved from the database is stored in a middle tier Discoverer cache for each user session. 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 (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)):

Setting name	Default value	Description
CacheFlushPercentage	25	Percentage of cache flushed, if cache is full.
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 Discoverer preferences command line utility `dis51pr` or `dis51pre` (for more information, see [Section 8.7, "How to set individual preferences for specific users"](#)).

Notes

- **Note:** After editing the `pref.txt` file, you must run the `applypreferences` script to apply the preference changes you have made, then stop and restart the OracleAS Discoverer service (for more information, see [Section 4.4, "About starting and stopping the Discoverer Service"](#)).

- 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 OracleAS applications.

10.4.11 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, which avoids overburdening the server during peak times. For more information about scheduling workbooks, see the *Oracle Application Server Discoverer Plus User's Guide*.

10.4.12 How to improve Discoverer Viewer performance by using OracleAS

If your workbooks remain relatively stable, Web Cache can greatly improve Discoverer Viewer performance. For more information about OracleAS Web Cache, see [Section 6.1, "Using OracleAS Discoverer Viewer with OracleAS Web Cache"](#).

10.5 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 OracleAS (for more information, see [Section 10.5.1, "How to take advantage of Discoverer's scalable architecture using the scalability features of OracleAS"](#))
- making use of Discoverer Viewer scalability features (for more information, see [Section 10.5.2, "How to enhance Discoverer Viewer scalability using XSL stylesheet pooling"](#))

10.5.1 How to take advantage of Discoverer's scalable architecture using the scalability features of OracleAS

The scalable architecture of OracleAS enables you to install the Discoverer Services tier on multiple machines (for more information about installing OracleAS Discoverer on multiple machines, see [Chapter 5.1, "Installing OracleAS Discoverer in a multiple machine environment"](#)).

You can balance the load between the different machines using:

- OracleAS Web Cache
- standard commercial HTTP/IP Router load balancers

10.5.1.1 How to enhance Discoverer scalability by specifying OC4J memory usage parameters

For more information, see Chapter 6 "Optimizing J2EE Applications in OC4J" in the *Oracle Application Server Performance Guide*.

10.5.1.2 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 *Oracle Application Server Performance Guide*.

10.5.2 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 can be both CPU and memory intensive.

Note: XSL stylesheet pooling is also used by Discoverer Portlet Provider. For more information about Discoverer Portlet Provider, see [Section 9.1, "Using OracleAS Discoverer with OracleAS 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 can 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.

Stylesheet pooling settings are held in the configuration.xml file and are shown in the table below (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)):

Setting	Use this setting to:	Default	Allowed	Recommended
cache	specify that you want to use stylesheet pooling	true	true or false	true

Setting	Use this setting to:	Default	Allowed	Recommended
log	<p>specify that stylesheet pooling statistics are written to the servlet log file.</p> <p>Note: This can significantly degrade performance. Do not set this option to true unless performing scalability and performance diagnostics in a non-production environment</p>	false	true or false	false
maximum	<p>specify the maximum number of XSL stylesheets to hold in memory at any given time</p> <p>Note: Oracle recommends that the maximum value equals the number of CPUs on the machine.</p>	1	zero or positive integer up to 32768	1 per CPU
minimum	specify the minimum number of XSL stylesheets to hold in memory at any given time	1	zero or positive integer up to 32768	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>	-1
retirementAge	specify how many times a stylesheet is used before it is discarded. Use this value to control Discoverer's memory usage. Suggested values are between 50 and 100.	0	<p>zero or positive integer up to 32768</p> <p>Note: 0 = do not retire.</p>	0

Setting	Use this setting to:	Default	Allowed	Recommended
tolerance	specify how much to optimize the pool for concurrent processing of user requests for HTML pages: <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	floating point number between 0.0 and 1	1

The text below shows an extract from a configuration.xml file showing XSL example XSL 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" retirementAge="50" />
</xsl_translator>
    
```

10.5.2.1 About the stylesheet pooling statistics in the servlet log file

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
activate object	a stylesheet has been activated (taken out of the pool to be used)
create object	a stylesheet has just been created
optimize pool	the optimizer has detected an opportunity to add or remove stylesheets

Event	Description
passivate object	a stylesheet has been passivated (put back in the pool ready for use)
remove object	a stylesheet has been removed
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)

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)
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)
hits	the number of pool hits (i.e. the number of times a stylesheet was activated with a passive object)
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)
misses	the number of times no passive object was available, the stylesheet had to be created, or had to wait for passivation
optimal objects	the optimal number of stylesheets to pool (maintained at the number of sessions + 1)
passive objects	the number of stylesheets ready for use
peak objects	the highest number of objects created in the lifetime of the pool (i.e. since the servlet started)
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)
total objects	the number of all created stylesheets (i.e. the total number of active and passive objects)

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
```

Starting OracleAS Discoverer using URL parameters

11.1 Starting OracleAS Discoverer using URL parameters

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

- [Section 11.2, "Why use Discoverer with URL parameters"](#)
- [Section 11.3, "What is the URL parameter syntax?"](#)
- [Section 11.4, "About specifying workbooks and worksheets using URL parameters"](#)
- [Section 11.5, "Examples of using URL parameters"](#)
- [Section 11.6, "Generic Discoverer URL parameters"](#)
- [Section 11.7, "Discoverer Plus URL parameters"](#)
- [Section 11.8, "Discoverer Viewer URL parameters"](#)

11.2 Why use Discoverer with URL parameters

Discoverer end users usually start OracleAS Discoverer by manually choosing a Discoverer connection, opening a workbook, and optionally specifying workbook parameter values. To speed up this process, you can create a URL to start OracleAS Discoverer with specific settings (e.g. login details, which workbook and worksheet to open). 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 Discoverer end users time by enabling them to quickly log in access Discoverer worksheets. For examples of Discoverer URL parameters, see [Section 11.5, "Examples of using URL parameters"](#).

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 within an existing Web site so that end users can start Discoverer by selecting a single hot link

11.3 What is the URL parameter syntax?

URL parameters must conform to the following syntax:

```
http://<host.domain>:<port>/<Discoverer application name>?  
arg1=value1...&argN=valueN
```

where:

- *host.domain* is the server name and domain on which the Oracle HTTP Server is installed
- *port* is the port number on which the Oracle HTTP Server is installed
- *Discoverer 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 parameter 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 parameters is not important.

- If the following mandatory parameters are not specified on the URL, end users are prompted for them:
 - user name
 - password
 - Responsibility (for an Oracle Applications login)
 - Security Group (for an Oracle Applications login)
- 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. _ ! ~ () * ')

Discoverer uses a proprietary encoding mechanism that is similar to HTTP URL encoding, except that Discoverer uses a tilde character (~) instead of a percent character (%). 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 Web 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 on which the Oracle HTTP Server is based has a limit of 8192 characters.

11.3.1 About URL parameters and format masks

When specifying format masks for dates and numbers, note the following:

- Discoverer uses the format mask specified when the workbook was created in Discoverer Desktop or Discoverer Plus.

- If numeric and date items in a worksheet have 'default' as the format mask value, Discoverer uses the default format mask in the specified browser environment, unless optional URL parameters are specified.
- If optional URL parameters for the format masks are not provided, Discoverer will use the format mask specified when the EUL was created (e.g using Discoverer Administrator).
- When specifying format masks for dates and numbers as parameter values, note the following:
 - Discoverer uses the format mask specified in the optional URL parameters for date and numeric items.

Note: The optional URL parameters for format masks are NLS_DATE_FORMAT and NLS_NUMBER_FORMAT.
 - Discoverer uses the default format mask for the specified browser language setting, unless optional URL parameters are specified.

11.3.2 About using URL parameters with private connections

When you specify connection information in URL parameters, note the following restrictions:

- If Discoverer end users are not allowed to create private connections in Discoverer Plus or Discoverer Viewer, you can only use URL parameters containing public connection information. In other words, you must include the connection ID in a URL parameter string for a public connection because end users can only start Discoverer using public connections.
- If a Discoverer URL parameter string does not work, it might be because you are trying to use a private connection when private connections are not allowed. In other words, the **Allow users to create their own connections in Discoverer Plus and Discoverer Viewer** check box is cleared in the General Discoverer Configuration page in Application Server Control.

Discoverer end users should navigate to the required Discoverer worksheet and store the URL as a bookmark in their browser.

For more information about the **Allow users to create their own connections in Discoverer Plus and Discoverer Viewer** check box in Application Server Control, see [Section 3.6, "About specifying whether Discoverer end users can create their own private connections"](#). For more information about connection IDs, see the `cn=` URL parameter in [Section 11.6, "Generic Discoverer URL parameters"](#).

11.4 About specifying workbooks and worksheets using URL parameters

When using URL parameters to specify workbooks and worksheets, you can use either unique IDs (recommended), or the workbook name or worksheet name.

Hint: To avoid encoding problems and problems caused by long workbook or worksheet names, Oracle recommends that you use unique IDs to specify workbooks and worksheets (for more information, see [Section 11.4.1, "How to find out the unique workbook ID of a workbook"](#) and [Section 11.4.2, "How to find out the unique worksheet ID of a worksheet"](#)).

The following table shows which URL parameters are used to specify Discoverer workbooks and worksheets.

Specifying a workbook using a URL parameter	Specifying a worksheet using a URL parameter
In Discoverer Plus, use <code>opendbid <workbook ID></code> (or use <code>opendb <workbook name></code> for backwards compatibility)	In Discoverer Plus, use <code>sheetid <worksheet ID></code> (or use <code>sheet <worksheet name></code> for backwards compatibility)
In Discoverer Viewer, use <code>wbk <workbook ID></code> (or use <code>wb <workbook name></code> for backwards compatibility)	In Discoverer Viewer, use <code>wsk <worksheet ID></code> (or use <code>ws <worksheet name></code> for backwards compatibility)

Notes

- To use the `opendbid` and `wbk` URL parameters, you need to know the unique ID of the workbook you want to specify (for more information, see [Section 11.4.1, "How to find out the unique workbook ID of a workbook"](#)).
- To use the `sheetid` and `wsk` URL parameters, you need to know the unique ID of the worksheet you want to specify (for more information, see [Section 11.4.2, "How to find out the unique worksheet ID of a worksheet"](#)).

11.4.1 How to find out the unique workbook ID of a workbook

You find out the unique workbook ID of a workbook so that you can specify a workbook on a Discoverer URL using its unique workbook ID.

Note: You identify a workbook using its workbook ID in preference to using its workbook name to avoid encoding problems and problems caused by large

workbook names (for more information, see [Section 11.4, "About specifying workbooks and worksheets using URL parameters"](#)).

You can find out the unique ID of a workbook in either Discoverer Viewer or Discoverer Plus.

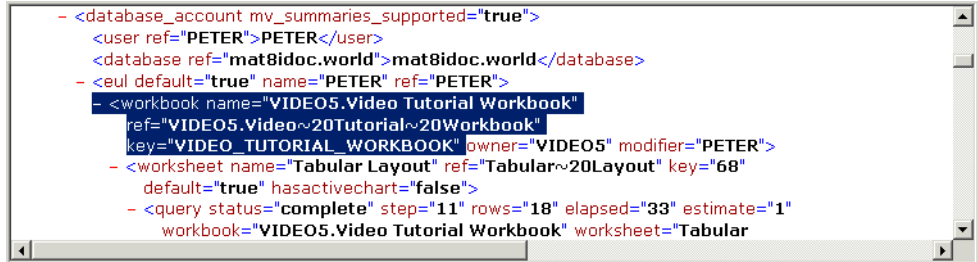
To find out the unique ID of a workbook in Discoverer Viewer:

1. Start a Web browser.
2. Run Discoverer Viewer and select a connection to display the List of Workbooks page.
3. Add `&fm=xml` to the end of the Discoverer Viewer URL to display the underlying XML code of the workbook.

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

4. To find out the unique ID of a workbook, look at the value of the key attribute within the `<workbook name>` element.

In the example below, the key value for the workbook called VIDEO5.Video Tutorial Workbook is 'VIDEO_TUTORIAL_WORKBOOK'.



```
- <database_account mv_summaries_supported="true">
  <user ref="PETER">PETER</user>
  <database ref="mat8idoc.world">mat8idoc.world</database>
- <eul default="true" name="PETER" ref="PETER">
  - <workbook name="VIDEO5.Video Tutorial Workbook"
    ref="VIDEO5.Video~20Tutorial~20Workbook"
    key="VIDEO_TUTORIAL_WORKBOOK" owner="VIDEO5" modifier="PETER">
    - <worksheet name="Tabular Layout" ref="Tabular~20Layout" key="68"
      default="true" hasactivechart="false">
    - <query status="complete" step="11" rows="18" elapsed="33" estimate="1"
      workbook="VIDEO5.Video Tutorial Workbook" worksheet="Tabular
```

Note: Alternatively, if you display a workbook in Discoverer Viewer then look at the underlying XML by appending `&fm=xml` to the URL, you can get the workbook ID from the `wbk=` value.

To find out the unique ID of a workbook in Discoverer Plus:

1. Start a Web browser.
2. Run Discoverer Plus and open the workbook.
3. Choose File | Manage Workbooks | Properties to display the Workbook Properties dialog.

4. To find out the unique ID of a workbook, look at the value in the **Identifier** field.

Notes

- You can use a workbook ID value to specify a workbook as follows:
 - in a Discoverer Plus URL using `opendbid <workbook ID>`
 - in a Discoverer Viewer URL using `wbk <workbook ID>`

For examples, see [Section 11.5, "Examples of using URL parameters"](#).

11.4.2 How to find out the unique worksheet ID of a worksheet

You find out the unique worksheet ID of a worksheet so that you can specify a worksheet on a Discoverer URL using its unique worksheet ID.

Note: You identify a worksheet using its worksheet ID in preference to using its worksheet name to avoid encoding problems and problems caused by large worksheet names (for more information, see [Section 11.4, "About specifying workbooks and worksheets using URL parameters"](#)).

To find out the unique ID of a worksheet in Discoverer Viewer:

1. Start a Web browser.
2. Run Discoverer Viewer, select a connection and open the workbook.
3. Display the worksheet that you want to specify using a URL parameter.
4. Add `&fm=xml` to the end of the Discoverer Viewer URL to display the underlying XML code of the worksheet.
5. To find out the unique ID of the worksheet, look at the value of the key attribute within the `<worksheet name>` element.

In the example below, the key value for the worksheet called Sheet 2 is '140'.

```
eu default="true" name="PETER" ref="PETER">
<workbook name="Repeated values" ref="Repeated~20values"
  key="REPEATED_VALUES" modifier="PETER">
  <worksheet name="Sheet 1" ref="Sheet~201" key="1" hasactivechart="false" />
  - <worksheet name="Sheet 2" ref="Sheet~202" key="140" hasactivechart="false">
    - <query status="complete" step="11" rows="6" elapsed="4" estimate="2"
      workbook="Repeated values" worksheet="Sheet 2"
      version="1057740907218" mode="inline">
      - <axes>
        - <axis position="x">
          - <item name="Calendar Year" hidden_item="false"
            key="Calendar~20Date.Calendar~20Year">
```

Note: Alternatively, if you display a worksheet in Discoverer Viewer then look at the underlying XML by appending &fm=xml to the URL, you can get the worksheet ID from the wsk= value.

Notes

- You can use a worksheet ID value to specify a worksheet as follows:
 - in a Discoverer Plus URL using sheetid *<worksheet ID>*
 - in a Discoverer Viewer URL using wsk *<worksheet ID>*
- For examples, see [Section 11.5, "Examples of using URL parameters"](#).

11.4.3 How to find out the connection ID of a connection

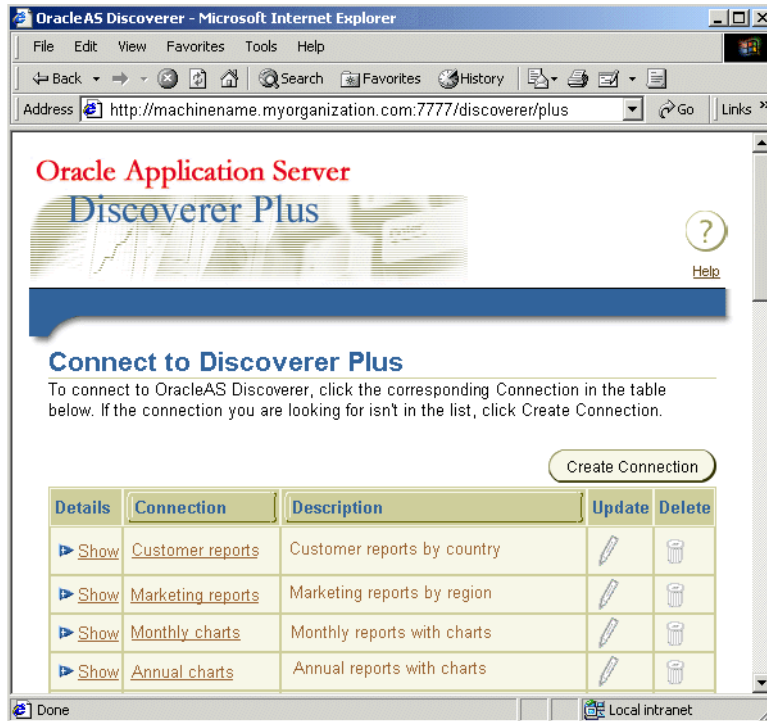
You find out the connection ID (sometimes referred to as a connection key) of a connection so that you can specify a connection using the key URL parameter. For example, you might want to start Discoverer without exposing a password in the Discoverer URL (for more information, see [Section 11.5.4, "Example 4: Starting Discoverer without exposing a password in the URL"](#)).

You can find out the connection ID of a connection in either Discoverer Viewer or Discoverer Plus.

To find out the connection ID of a connection:

1. Start a Web browser.
2. Start Discoverer to display the connections containing the connection that you want to use, as follows:
 - if you use Discoverer Viewer, display the Connect to Discoverer Viewer page
 - if you use Discoverer Plus, display the Connect to Discoverer Plus page

The example below shows the Connect to Discoverer Plus page.



3. Add `?fm=xml` to the end of the Discoverer URL to display the underlying XML code.

For example, if the URL is:

```
http://<host.domain>:<port>/discoverer/plus
```

you should change the URL to:

```
http://<host.domain>:<port>/discoverer/plus?fm=xml
```

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

4. To find out the connection of a connection, look at the value of the key attribute within the `<connection name>` element.

In the example below, the key value for connection fred is 'cf_a156'.

```
(United States)</default_locale>
</connection>
- <connection name="fred" type="public" key="cf_a156" eul="VIDEO4" ref="fred">
- <confirmation>
  <parameter name="us">~27VIDEO4~27</parameter>
  <parameter name="db">dssqa92</parameter>
  <parameter name="lm">discoverer</parameter>
  <parameter name="eul">VIDEO4</parameter>
</confirmation>
- <database_account>
  <user ref="VIDEO4">VIDEO4</user>
  <database ref="dssqa92">dssqa92</database>
</database_account>
<default_locale language="en" country="US">English (United States)English
(United States)</default_locale>
</connection>
```

Notes

- You can use a connection ID value to specify a connection as follows:
 - in a Discoverer Plus or Discoverer Viewer URL using `cn=<connection ID>`
For an example, see [Section 11.5.4, "Example 4: Starting Discoverer without exposing a password in the URL"](#).

11.5 Examples of using URL parameters

This section contains the following examples of using URL parameters with Discoverer:

- [Section 11.5.1, "Example 1: Starting Discoverer Viewer using URL parameters"](#)
- [Section 11.5.2, "Example 2: Starting Discoverer Viewer using URL parameters"](#)
- [Section 11.5.3, "Example 3: Starting Discoverer Plus using URL parameters"](#)
- [Section 11.5.4, "Example 4: Starting Discoverer without exposing a password in the URL"](#)

11.5.1 Example 1: Starting 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://<host.domain>:<port>/discoverer/viewer?us=jchan&pw=3829382&db=sales&wbk=MONTHLY_ANALYSIS&wsk=179
```


Notes

- `http://<host.domain>:<port>/discoverer/viewer?` is the Discoverer Viewer URL.
- `us=<value>` specifies a database username.
- `pw=<value>` specifies a database password.
- `db=<value>` specifies a database name.
- `wbk=<value>` specifies the workbook ID of a Discoverer workbook.
- `wsk=<value>` specifies the worksheet ID of a Discoverer worksheet.
- In this example, MONTHLY_ANALYSIS is the workbook ID of the Monthly Analysis workbook, and 179 is the worksheet ID of the January Analysis worksheet. For more information about finding out workbook IDs and worksheet IDs, see [Section 11.4.1, "How to find out the unique workbook ID of a workbook"](#) and [Section 11.4.2, "How to find out the unique worksheet ID of a worksheet"](#).

11.5.2 Example 2: Starting Discoverer Viewer using URL parameters

To start Discoverer Viewer, connect automatically as jchan to the Sales EUL, open a worksheet called January Analysis in a workbook called Monthly Analysis, and enter the worksheet parameter value East, you might use the following URL:

```
http://<host.domain>:<port>/discoverer/viewer?us=jchan&pw=3829382&db=sales&wbk=MONTHLY_ANALYSIS&wsk=179&qp_regionparam=East
```

Notes

- `http://<host.domain>:<port>/discoverer/viewer?` is the Discoverer Viewer URL.
- `us=<value>` specifies a database username.
- `pw=<value>` specifies a database password.
- `db=<value>` specifies a database name.
- `wbk=<value>` specifies workbook ID of a Discoverer workbook.
- `wsk=<value>` specifies the worksheet ID of a Discoverer worksheet.
- `qp_regionparam=<value>` specifies a parameter value.
- In this example, MONTHLY_ANALYSIS is the workbook ID of the Monthly Analysis workbook, and 179 is the worksheet ID of the January Analysis

worksheet. For more information about finding out workbook IDs and worksheet IDs, see [Section 11.4.1, "How to find out the unique workbook ID of a workbook"](#) and [Section 11.4.2, "How to find out the unique worksheet ID of a worksheet"](#).

11.5.3 Example 3: Starting Discoverer Plus using URL parameters

To start Discoverer Plus, connect automatically as jchan to the Sales EUL, open a worksheet called January Analysis in a workbook called Monthly Analysis, you might use the following URL:

```
http://<host.domain>:<port>/discoverer/viewer?us=jchan&pw=3829382&database=sales&opendbid=MONTHLY_ANALYSIS&sheetid=179
```

Notes

- `http://<host.domain>:<port>/discoverer/plus?` is the Discoverer Viewer URL.
- `us=<value>` specifies a database username.
- `pw=<value>` specifies a database password.
- `database=<value>` specifies a database name.
- `opendbid=<value>` specifies workbook ID of a Discoverer workbook.
- `sheetid=<value>` specifies the worksheet ID of a Discoverer worksheet.
- In this example, MONTHLY_ANALYSIS is the workbook ID of the Monthly Analysis workbook, and 179 is the worksheet ID of the January Analysis worksheet. For more information about finding out workbook IDs and worksheet IDs, see [Section 11.4.1, "How to find out the unique workbook ID of a workbook"](#) and [Section 11.4.2, "How to find out the unique worksheet ID of a worksheet"](#).

11.5.4 Example 4: Starting Discoverer without exposing a password in the URL

To start Discoverer Viewer using a connection called Sales Data that has the connection ID cf_a156, you might use the following URL:

```
http://<host.domain>:<port>/discoverer/viewer?cn=cf_a156
```

Notes

- `http://<host.domain>:<port>/discoverer/plus?` is the Discoverer Viewer URL.
- `cn=<value>` specifies the connection ID of a Discoverer connection.

- For more information about finding out connection IDs, see [Section 11.4.3, "How to find out the connection ID of a connection"](#).
- You create public connections using Oracle Enterprise Manager (for more information, see [Section 3.7, "How to create a public connection"](#)).
- If private connections are not allowed, you can only use the connection ID of a public connection (for more information, see [Section 3.6, "About specifying whether Discoverer end users can create their own private connections"](#).)

11.6 Generic Discoverer URL parameters

This table defines generic Discoverer URL parameters that you can use with both Discoverer Plus and Discoverer Viewer.

Parameter and Values	Description	Example
<code>cn=<connection ID></code>	Specifies the connection containing the login details with which to start Discoverer (for more information about how to find out the connection ID of a connection, see Section 11.4.3, "How to find out the connection ID of a connection"). For an example, see Section 11.5.4, "Example 4: Starting Discoverer without exposing a password in the URL" . See also Notes below.	<code>cn=cf_m2</code>
<code>con_db=<database></code>	Specifies the database to which the connection that is being added or updated should connect.	<code>con_db=Sales</code>
<code>con_desc=<connection description></code>	Specifies a description for the connection that is being added or updated. Can be blank.	<code>con_desc=Weekly+performance+reports+by+region</code>
<code>con_eul=<eul></code>	Specifies the EUL that the connection that is being added or updated should open when connected to the database.	<code>con_eul=VIDEO</code>
<code>con_key=<connection ID></code>	Specifies the connection to update (for more information about how to find out the connection ID of a connection, see Section 11.4.3, "How to find out the connection ID of a connection").	<code>con_key=cf_m2</code>

Parameter and Values	Description	Example
con_lm=<discoverer or applications>	<p>Specifies the login method, as follows:</p> <ul style="list-style-type: none"> ▪ use 'applications' to connect as an Oracle Applications user. ▪ use 'discoverer' to connect as a non-Oracle Applications user. <p>Note: If this parameter is not present, the default login method specified in the ui_config.xml configuration file is used.</p>	con_lm=discoverer
con_name=<connection_name>	Specifies the name for the connection that is being added or updated. Can be blank.	con_name=Weekly+Report
con_nsl=<locale>	Specifies the default browser language setting that should be associated with the connection that is being added or updated.	con_nsl=es_ES (i.e. language is Spanish, country is Spain).
con_pw=<password>	Specifies the database password the connection that is being added or updated should use when connecting to the database.	con_pw=382939382
con_rs=<responsibility>	Specifies the Oracle Applications Responsibility that the connection that is being added or updated should open when connected to the database (only valid with Oracle Applications logins).	con_rs=Power+User
con_sg=<security_group>	Specifies the Applications Security Group that the connection that is being added or updated should open when connected to the database. (Only valid with Applications logins).	con_sg=Marketing
con_us=<user name>	Specifies the database user name that the connection that is being added or updated should use when connecting to the database.	con_us=jchan

Parameter and Values	Description	Example
condel=<connection ID>	Deletes the connection specified by <connection ID> (for more information about how to find out the connection ID of a connection, see Section 11.4.3, "How to find out the connection ID of a connection").	condel=cf_m2
eul=<eul name>	Specifies the name of the EUL to which to connect. You only need to specify this parameter if you want to override the default EUL. Note: EUL names are case-sensitive.	eul=myEUL
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. Use the con_key URL parameter to specify the database account for which you want to change the password.	newpw1=3837282
newpw2=<new password>	Confirms the new password specified by newpw1. This password must match that given with newpw1 before the change password operation will be attempted.	newpw2=25363523
pw=<password>	Specifies the password for the user name connecting to the database.	pw=tiger
sg=<securitygroup>	Specifies the Oracle Applications Security Group you want to connect with. Note: If you do not specify a user name, password, responsibility, or security group, the Discoverer end user is prompted to enter the missing login information.	sg=securityGroup

Parameter and Values	Description	Example
us=< <i>connect string</i> >	<p>Specifies the user name and database plus further optional login information. The connect string uses the following syntax:</p> <pre><user name>[:<responsibility>[:<securityGroup>]][/<password>]@<database></pre> <p>Note: If you do not specify a user name, password, responsibility, or security group, the Discoverer end user is prompted to enter the missing login information.</p>	us=scott/tiger@disco
us=< <i>database user name</i> >	<p>Specifies a database user name with which to connect to Discoverer.</p> <p>Hint: You can also use the us parameter to specify a database, user name, and password as a single parameter.</p> <p>Note: If you do not specify a user name, the Discoverer end user is prompted a user name.</p>	us=video5

Notes

- When using the cn URL parameter, note the following:
 - If Discoverer end users are not allowed to create private connections, the specified connection must be a public connection. For more information, see [Section 3.6, "About specifying whether Discoverer end users can create their own private connections"](#).
 - If the specified connection is private and single sign-on is not enabled, the Discoverer end user will be prompted to verify the password. In this scenario, you can also specify a password using the pw URL parameter. For example:

http://machine:port/discoverer/plus&cn=12345&pw=password.

11.7 Discoverer Plus URL parameters

This table describes Discoverer Plus-specific URL parameters that can be used in addition to the generic URL parameters in [Section 11.6, "Generic Discoverer URL parameters"](#).

Hint: Do not use Discoverer Plus URL parameters on the same URL as Discoverer Viewer URL parameters.

Parameter and Values	Description	Example
brandimage=<logo file name>	<p>Specifies that you display an organizational logo in the top right hand corner of the Discoverer Plus screen.</p> <p>For example, to display a logo stored in:</p> <pre><ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl/my_logo.gif</pre> <p>you can reference this file in two ways:</p> <ul style="list-style-type: none"> ▪ using a relative path, (e.g. common/xsl/my_logo.gif) ▪ using an absolute path (e.g. (http://www.server.com:7777/discoverer/common/xsl/my_logo.gif) 	brandimage=common/xsl/my_logo.gif
connect=[APPS_SECURE] <hostname_instancename>	<p>Specifies whether Oracle Applications end users connect in secure mode. hostname_instancename refers to the database host name and the instance of the Applications server.</p>	connect=[APPS_SECURE]genledger_payables
connect=<connection string>	<p>Specifies login details to use to connect to Discoverer.</p> <p>Note: If you do not specify a user name, password, responsibility, or security group, the Discoverer end user is prompted to enter the missing login information.</p>	connect=username/password@mydb

Parameter and Values	Description	Example
database=<database name or alias>	<p>Specifies which database to connect to when Discoverer starts.</p> <p>Hint: You can also use the connect URL parameter to specify a database, user name, and password as a single parameter.</p>	database=mydb
framedisplaystyle=<separate or embedded>	<p>Specifies how to launch the Discoverer main window.</p> <ul style="list-style-type: none"> ▪ use 'separate' to launch Discoverer's main 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. ▪ use 'embedded' to launch Discoverer's main window within the current browser window. <p>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.</p> <p>Note: This parameter must be used in conjunction with valid connection information. If the connection information is invalid, the end user is directed to the Connections page, and the framedisplaystyle parameter does not take effect.</p> <p>See also Notes below.</p>	framedisplaystyle=separate
locale=<language[_country][_variant]>	<p>Specifies the language (and optionally the country and variant) used by Discoverer. This parameter overrides the browser language setting on the end user's client machine.</p> <p>Hint: Use ISO codes to specify language, country, and variant.</p>	<p>locale=es_ES (i.e. language is Spanish, country is Spain)</p>

Parameter and Values	Description	Example
lookandfeelname=<system or oracle or browser>	Specifies a browser look and feel. For example, a user might want to run Discoverer Plus using the Windows look and feel.	lookandfeelname=system
nls_number_format=<number format>	Specifies a number format for numeric worksheet items, using a SQL number format mask (e.g. 999999990).	nls_number_format=999999990
nlsdateformat=<date format>	Specifies a date format for a specific region. Use a SQL date format mask (e.g. DD-Mon-YY).	nlsdateformat=DD-Mon-YY
nlsdatelanguage=<date language>	Specifies the language for day and month names displayed in Discoverer.	nlsdatelanguage=Spanish
nlslang=<language>	Specifies the language, territory, and character displayed in Discoverer. Use Oracle naming conventions to specify language, territory, and character set.	nlslang=Spanish
nlsnumeric_characters=<separator characters>	Specifies decimal character and group separator for numbers.	nlsnumeric_characters=.,
nlsort=<sort type>	Specifies a character sort sequence. For more information about the nlsort command, see <i>Oracle9i Globalization Support Guide</i> .	nlsort=XSpanish

Parameter and Values	Description	Example
opendb=<workbook name>	<p>Specifies the name of a workbook to open (assumes that it is stored in the database instead of scheduled). If you use the opendb parameter more than once in the URL, Discoverer uses the last one.</p> <p>Hint: This URL parameter is included for backward compatibility. Oracle recommends that you use opendbid to specify workbooks.</p> <p>Note: 'opendb=Video+Sales+Workbook' is the equivalent of 'workbookname=Video+Sales+Workbook&workbooksourcesource=Database'.</p> <p>See also workbookname and workbooksourcesource.</p>	opendb=Video+Sales+Workbook
opendbid=<unique ID>	<p>Specifies 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 Section 11.4.1, "How to find out the unique workbook ID of a workbook".</p> <p>For examples, see Section 11.5, "Examples of using URL parameters".</p>	opendbid=JanuarySales
param_<parameter_name>=<parameter_value>	<p>Specifies values for workbook parameters.</p> <p>Note: If the workbook does not contain a parameter of that name, Discoverer ignores the parameter.</p>	param_regionparam=East

Parameter and Values	Description	Example
password=<string>	<p>Specifies a database password to authenticate the user name used to connect to Discoverer.</p> <p>Hint: You can also use the connect parameter to specify a database, user name, and password as a single parameter.</p> <p>Note: If you do not specify a user name, password, responsibility, or security group, the Discoverer end user is prompted to enter the missing login information.</p>	password=37282732
responsibility=<responsibility name>	<p>Specifies the Oracle Applications responsibility for Oracle Applications end users.</p> <p>Note: If you do not specify a user name, password, responsibility, or security group, the Discoverer end user is prompted to enter the missing login information.</p>	<p>responsibility=Manager</p> <p>(i.e. Discoverer bypasses the Responsibility dialog and assigns the end user an Oracle Applications responsibility of Manager)</p>
sheet=<worksheetname>	<p>Specifies the name of the worksheet to open by default.</p> <p>Note: If you use the sheet parameter more than once in the URL, Discoverer opens the last one.</p> <p>Hint: This URL parameter is included for backward compatibility. Oracle recommends that you use sheetid to specify worksheets.</p>	sheet=Sales+Detail+Sheet
sheetid=<unique ID>	<p>Specifies the unique identifier of the worksheet that you want to open.</p> <p>For more information about how to find the unique ID of a worksheet, see Section 11.4.2, "How to find out the unique worksheet ID of a worksheet".</p> <p>Note: You must also specify a workbook using openbid.</p> <p>For examples, see Section 11.5, "Examples of using URL parameters".</p>	sheetid=7

Parameter and Values	Description	Example
username=< <i>database user name</i> >	<p>Specifies a database user name with which to connect to Discoverer.</p> <p>Hint: You can also use the connect parameter to specify a database, user name, and password as a single parameter.</p> <p>Note: If you do not specify a user name, password, responsibility, or security group, the Discoverer end user is prompted to enter the missing login information.</p>	username=video_user
windowheight=< <i>pixel width</i> >	Specifies the height in pixels of the Discoverer application frame. If you do not use this parameter, Discoverer uses a default value.	windowheight=600
windowwidth=< <i>pixel width</i> >	Specifies the width in pixels of the Discoverer application frame. If you do not use this parameter, Discoverer uses a default value.	windowwidth=800
workbookname=< <i>workbook name</i> >	<p>Specifies the name of the Discoverer workbook you want users to display by default.</p> <p>Hint: Use this URL parameter in conjunction with workbooksource. E.g. 'workbookname=Video+Sales+Workbook&workbooksource=Database' is the equivalent of 'opendb=Video+Sales+Workbook'.</p> <p>Hint: This URL parameter is included for backward compatibility. Oracle recommends that you use opendbid to specify workbooks.</p>	workbookname=Video+Sales+Workbook

Parameter and Values	Description	Example
workbooksource=<Database or Scheduled>	<p>Specifies the location of the workbook to open:</p> <ul style="list-style-type: none"> ■ Database specifies that the workbook is saved in the database. ■ Scheduled specifies that the workbook is a scheduled workbook that is updated periodically. <p>Hint: Use this URL parameter in conjunction with workbookname.</p>	workbooksource=Database
_plus_popup=<true or false>	<p>Specifies whether to launch Discoverer Plus in a new browser window or in the Discoverer Connections page, as follows:</p> <ul style="list-style-type: none"> ■ true (default) launches Discoverer Plus in a new browser window. ■ false launches Discoverer Plus in a the current browser window. <p>This URL parameter can be used in conjunction with framedisplaystyle. See also Notes below.</p>	_plus_popup=true

Notes

- When using _pop_up in conjunction with framedisplaystyle=, the possible combinations are:
 - _plus_popup=true and framedisplaystyle=embedded launches Discoverer Plus in a new pop-up browser window that contains the Plus applet embedded in it.
 - _plus_popup=true and framedisplaystyle=separate opens a new pop-up browser window and launches Discoverer Plus in a new applet window.
This combination launches three windows: the original browser window (i.e. Discoverer connections page), the new browser window containing the Discoverer image, and the JFrame window containing the Discoverer Plus applet.
 - _plus_popup=false and framedisplaystyle=embedded launches Discoverer Plus in the current browser window

- `_plus_popup=false` and `framedisplaystyle=separate` launches Plus in a JFrame window. The current browser window contains the Discoverer image.

11.8 Discoverer Viewer URL parameters

This table describes Discoverer Viewer-specific URL parameters that can be used in addition to the generic URL parameters in [Section 11.6, "Generic Discoverer URL parameters"](#).

Hint: Do not use Discoverer Viewer URL parameters on the same URL as Discoverer Plus URL parameters.

Parameter and Values	Description	Example
<code>anlsdf=<date format></code>	Specifies the date format for the session for Oracle Applications end users (synonym of <code>nls_date_format</code>).	<code>anlsdf='MM/DD/YY'</code>
<code>anlsdl=<date language></code>	Specifies the language to use for the spelling of day and month names and date abbreviations (AM, PM, AD, BC) for Oracle Applications end users (synonym of <code>nls_date_language</code>).	<code>anlsdl=fr</code>
<code>anlsl=<language></code>	Specifies the session language for Oracle Applications end users (synonym of <code>nls_lang</code>).	<code>anlsl=en-gb</code>
<code>anlsnc=<separator characters></code>	Specifies the default characters to use as the group separator and decimal for Oracle Applications end users (synonym of <code>nls_numeric_characters</code>). You must specify the decimal separator first, followed by the group separator.	<code>anlsnc=',.'</code>
<code>anlss=<sortname or binary></code>	Specifies the session collating sequence for ORDER BY queries and string comparisons for Oracle Applications end users (synonym of <code>nls_sort</code>). Values are: the name of an alphabetical sort sequence binary to specify a binary sort	<code>anlss=binary</code>

Parameter and Values	Description	Example
aow=<true or false>	Specifies whether to open the default worksheet when opening a workbook. Note: You can also use the ws and wsk parameters to specify which worksheet to open.	aow=true
arq=<true or false>	Specifies whether to automatically run a worksheet's query when a worksheet is opened (the value can be true or false).	arq=true
cp_height=<number_of_pixels>	Specifies height of charts (in pixels).	cp_height=200
cp_show_legend=<true or false>	Specifies whether a chart title is displayed.	cp_show_legend=true
cp_width=<number_of_pixels>	Specifies width of charts (in pixels).	cp_width=300
cs=[APPS_SECURE]<hostname_instancename>	Specifies whether to connect in secure mode. hostname_instancename refers to the Applications DBC file that contains Applications connection information.	cs=[APPS_SECURE]genledger_payables
db=<databasename>	Specifies which database to which to connect when Discoverer starts.	db=video

Parameter and Values	Description	Example
fm=<exportformat>	<p>Specifies one of the following export formats:</p> <p><i>Data export formats:</i></p> <ul style="list-style-type: none"> csv (Comma Separated Values) dcs (Express) dif (Data Interchange Format) htm (HTML) prn (Formatted Text) slk (Symbolic Link) sql (Structured Query Language) txt (Text) wks (Lotus 1-2-3) xls (Microsoft Excel) xlsp (Microsoft Excel PivotTable report) xml (Extensible Markup Language) <p><i>Graph export formats:</i></p> <ul style="list-style-type: none"> gif (Graphical Interchange Format) jpg (Joint Photographic Experts Group) png (Portable Network Graphics) <p>Note: When you use fm= to specify an export format, you must also specify a page number using pg=.</p> <p>Note: The xlsp format (Microsoft Excel PivotTable report) is used for static sheet with pivot table.</p>	fm=xls

Parameter and Values	Description	Example
lm=<applications or discoverer>	<p>Specifies the login method, as follows:</p> <ul style="list-style-type: none"> ▪ applications connects as an Oracle Applications user. ▪ discoverer connects as a Discoverer user. <p>Note: If this parameter is not present, the default login method specified in the ui_config.xml configuration file is used.</p>	lm=applications
nls_lang=<language>	Specifies the session language.	nls_lang=en-gb
nls_date_format=<date format>	Specifies the default date format for the session.	nls_date_format='MM/DD/YY'
nls_numeric_characters=<separator characters>	<p>Specifies the default characters to use as the group separator and decimal.</p> <p>You must specify the decimal separator first, followed by the group separator.</p>	nls_numeric_characters=',.'
nls_date_language=<date language>	Specifies the language to use for the spelling of day and month names, and date abbreviations (AM, PM, AD, BC).	nls_date_language=fr
nls_sort=<sort name or binary>	<p>Specifies the session collating sequence for ORDER BY queries and string comparisons, as follows:</p> <ul style="list-style-type: none"> ▪ use <sort name> to specify an alphabetical sort sequence ▪ use 'binary' to specify a binary sort 	nls_sort=binary
nlsl=<language>	Specifies the language code for the language you want (using ISO language codes).	nlsl=en-gb
pg=<page_number>	<p>Specifies a page in the specified worksheet.</p> <p>Note: You must specify a page number using pg when you use fm to specify an export format.</p>	pg=4

Parameter and Values	Description	Example
pi_ <pageitemname>=<pageitemvalue>	Specifies the name of a page item and the value to select.	pi_Region=West
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>	<p>Specifies the delay in seconds before a query progress page is displayed (or re-displayed). You might use this parameter to avoid writing code to handle query progress pages when using the Discoverer servlet to return data to an application you have written.</p> <p>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").</p> <p>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").</p>	qpd=60
rd=<number_of_seconds>	<p>Specifies the delay in seconds before a browser is redirected to the original URL. Use this parameter to prevent the browser timing out during export operations.</p> <p>Note: This parameter only applies when a valid value has also been specified for the fm parameter.</p>	rd=90
rs=<responsibility>	<p>Specifies the Oracle Applications Responsibility you want to connect with.</p> <p>Note: If you do not specify a user name, password, responsibility, or security group, the Discoverer end user is prompted to enter the missing login information.</p>	rs=Manager

Parameter and Values	Description	Example
tsc_d!<index>=<direction>	Specifies the sort direction for the item identified by <index>. When specifying the <direction> value: <ul style="list-style-type: none"> ■ use 'lh' for low to high ■ use 'hl' high to low 	tsc_d!region=lh
tsc_g!<index>=<normal or group>	Specifies whether the sort applied to the item identified by <index> is a group sort or a normal sort. Note: For more information about group sort, see <i>Oracle Application Server Discoverer Plus User's Guide</i> .	tsc_g!region=normal
tsc_h!<index>=<true or false>	Specifies whether the item identified by <index> visible on the worksheet.	tsc_h!region=true
tsc_i!<index>=<item_key>	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.	tsc_i!region=0
tss_s!<index>=<direction>,<type>,<hidden>,<item_key>	Specifies a sort on an item using a single URL parameter combining any of the tsc_d!, tsc_g!, tsc_h!, or tsc_i! parameters.	tss_s!region=lh,normal,true,0
wb=<workbookname>	Specifies the name of the Discoverer workbook you want users to open by default. Hint: This URL parameter is included for backward compatibility. Oracle recommends that you use wbk to specify workbooks. Note: Use + to indicate spaces in workbook names.	wb=My+Workbook
wbd=<workbookdate>	Specifies that date on which the scheduled workbook you want to open was run.	wbd=31-OCT-00

Parameter and Values	Description	Example
wbk=< <i>unique ID</i> >	<p>Specifies the unique identifier of the workbook to open.</p> <p>For more information about how to find the unique ID of a workbook, see Section 11.4.1, "How to find out the unique workbook ID of a workbook".</p> <p>Note: If you specify a scheduled workbook, you must use the wbr URL parameter to specify a unique run identifier for that workbook.</p> <p>For examples, see Section 11.5, "Examples of using URL parameters".</p>	wbk=JanuarySales
wbr=< <i>unique ID</i> >	<p>Specifies the unique run identifier of a scheduled workbook specified by the wbk URL parameter.</p> <p>For more information about how to find the unique ID of a workbook, see Section 11.4.1, "How to find out the unique workbook ID of a workbook".</p>	wbr=SWB001
wbt=< <i>workbooktime</i> >	<p>Specifies the time on which the scheduled workbook you want to open was run.</p> <p>If you specified the Scheduled Workbook's ID using the wb parameter, you don't need to use this parameter</p>	wbt=4%3a00+PM (i.e. 4:00 PM)
ws=< <i>worksheetname</i> >	<p>Specifies the worksheet to open.</p> <p>Hint: This URL parameter is included for backward compatibility. Oracle recommends that you use wsk to specify worksheets.</p>	ws=My+Worksheet

Parameter and Values	Description	Example
wsk=< <i>unique ID</i> >	<p>Specifies the unique identifier of the worksheet to open.</p> <p>For more information about how to find the unique ID of a worksheet, see Section 11.4.2, "How to find out the unique worksheet ID of a worksheet".</p> <p>Note: You must also specify a workbook using wbk.</p> <p>For examples, see Section 11.5, "Examples of using URL parameters".</p>	wsk=7

Maintaining security with OracleAS Discoverer

12.1 Maintaining security with OracleAS Discoverer

This chapter describes the different security mechanisms that Discoverer uses to protect sensitive resources, and contains the following topics:

- [Section 12.2, "About Discoverer and security"](#)
- [Section 12.3, "About Discoverer and the database security model"](#)
- [Section 12.4, "About Discoverer and the Discoverer EUL security model"](#)
- [Section 12.5, "About Discoverer and the Oracle Applications security model"](#)
- [Section 12.6, "About Discoverer and the OracleAS Security model"](#)
- [Section 12.7, "Using Discoverer with OracleAS Framework Security"](#)
- [Section 12.8, "Using Discoverer with Oracle Identity Management Infrastructure"](#)
- [Section 12.9, "Frequently asked questions about security"](#)

12.2 About Discoverer and security

Discoverer uses (and must therefore protect) different sensitive resources, including:

- data (e.g. users must only see information they are allowed to see)
- metadata (e.g. users must not be able to edit workbooks to which they do not have access)
- Discoverer connections (e.g. database login details must not be transmitted or persisted without being securely encrypted)

- system resources (e.g. CPU, memory)
- network resources (or more precisely, the protection of data as it is transmitted across a network)

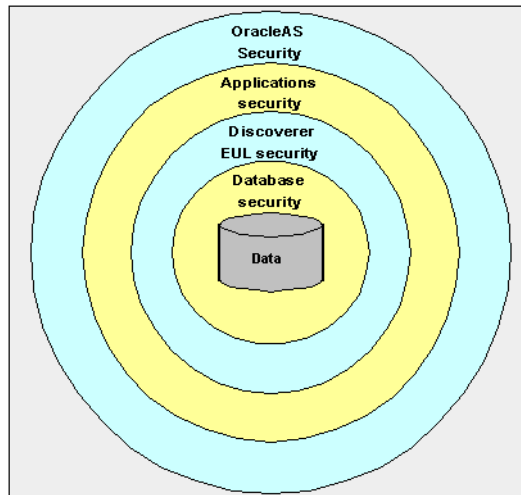
The table below shows the sensitive resources used and protected by the different Discoverer components:

Sensitive resources	Used and protected by Discoverer Plus	Used and protected by Discoverer Viewer	Used and protected by Discoverer Portlet Provider	Used and protected by Discoverer Administrator	Used and protected by Discoverer pages in Application Server Control
data	Yes	Yes	Yes	Yes	No
metadata	Yes	Yes	Yes	Yes	Yes
Discoverer connections	Yes	Yes	Yes	No	Yes
system resources	Yes	Yes	Yes	Yes	Yes
network resources	Yes	Yes	Yes	Yes	Yes

Discoverer uses a number of security mechanisms to prevent unauthorized access to the above resources. These security mechanisms are provided by the following security models:

- the database security model
- the Discoverer EUL security model
- the Oracle Applications security model
- the OracleAS Security model

The diagram below shows the multiple security mechanisms employed by Discoverer, all of which ultimately protect data and system resources from unauthorized access:



The security mechanisms that Discoverer employs will depend on the category of Discoverer user (as defined by the Discoverer product they are using), as follows:

- Discoverer Plus, Discoverer Viewer, and Discoverer Portlet Provider users (i.e. Discoverer end users)
- Oracle Discoverer Administrator users (i.e. Discoverer managers)
- users administering Discoverer using Application Server Control (i.e. Discoverer middle tier administrators)

The table below shows which security models are used by which Discoverer components:

Security Model	Used by Discoverer Plus	Used by Discoverer Viewer	Used by Discoverer Portlet Provider	Used by Discoverer Administrator	Used by Discoverer pages in Application Server Control
Database	Yes	Yes	Yes	Yes	Yes
Discoverer EUL	Yes	Yes	Yes	Yes	No
Applications	Yes	Yes	Yes	Yes	Yes
OracleAS	Yes	Yes	Yes	No	Yes

12.3 About Discoverer and the database security model

At the most basic level, data in the database is protected from unauthorized access by the database's own security model. In the case of an Oracle database, this security model comprises:

- database users and roles
- database privileges

The database privileges granted directly to database users (or granted indirectly via database roles) determine the data that users can access. Typically, you will set up database security using a database administration tool or SQL*Plus.

Discoverer uses the database's own security model to make sure that users never see information to which they do not have database access.

For more information about the database security model and how Discoverer uses it, see *Oracle Discoverer Administrator Administration Guide*.

12.4 About Discoverer and the Discoverer EUL security model

Discoverer managers use Discoverer Administrator to grant Discoverer access permissions and task privileges directly to database users (or indirectly via database roles), as follows:

- to control who can see and use which business areas, Discoverer managers grant Discoverer access permissions
- to control the tasks each user is allowed to perform, Discoverer managers grant Discoverer task privileges

Regardless of the access permissions and task privileges granted in Discoverer Administrator, a Discoverer end user only sees folders if that user has been granted the following database privileges (either directly or through a database role):

- SELECT privilege on all the underlying tables used in the folder
- EXECUTE privilege on any PL/SQL functions used in the folder

Even if they share workbooks with each other, Discoverer users will never see information to which they do not have database access.

Discoverer Administrator also enables Discoverer managers to protect system resources by:

- setting scheduled workbook limits to control the system resources available to end users

- preventing end user queries from running for longer than a specified maximum duration
- preventing end user queries from returning more than a specified number of rows

Discoverer managers can extend Discoverer functionality by registering their own PL/SQL functions. However, they can only register PL/SQL functions to which they have been granted the EXECUTE database privilege.

For more information about the Discoverer EUL security model, see *Oracle Discoverer Administrator Administration Guide*.

Notes

- You can also enforce read-only access to Discoverer workbooks in any of the following ways:
 - you can disable Discoverer Plus by preventing access to the Discoverer Plus URL (for more information, see [Section 2.4, "About restricting how users can run Discoverer"](#))

If you disable Discoverer Plus, Discoverer end users will only have read-only access to workbooks using Discoverer Viewer.
 - you can run Discoverer Plus in read-only mode for specified Discoverer end users by removing the Create/Edit Query privilege in Oracle Discoverer Administrator (for more information, see *Oracle Discoverer Administrator Administration Guide*)
- Some of the EUL maintenance scripts supplied with Discoverer grant database privileges to the Discoverer manager and the PUBLIC user (for more information, see [Appendix C.1, "OracleAS Discoverer administrative account information"](#)).

12.5 About Discoverer and the Oracle Applications security model

A common use of Discoverer is to provide ad-hoc query access to Oracle Applications databases. To provide such access, Discoverer managers can use Discoverer Administrator to create Applications mode EULs.

An Oracle Applications mode EUL is a Discoverer End User Layer based on an Oracle Applications schema (containing the Oracle Applications FND (Foundation) tables and views).

Oracle Applications EULs make use of the following Oracle Applications security model features:

- Oracle Applications users and responsibilities

Oracle Applications EULs employ Oracle Applications user names and responsibilities whereas standard EULs use database users and roles. Discoverer managers running Discoverer Administrator in Oracle Applications mode grant access permissions or task privileges to Oracle Applications responsibilities instead of roles.

- Oracle Applications row level security

Many Oracle Applications tables and views are user-sensitive, and will return different results depending on which user/responsibility is used to access these tables/views. Discoverer correctly runs queries that respect these user-sensitive tables and views.

- Oracle Applications multiple organizations

Oracle Applications multiple organizations support enables Discoverer to work with data from more than one organization. Discoverer end users can query and analyze data from the set of organizations to which they have been granted access. The folders in the EUL must be based on Oracle Business Views (available in Oracle Applications 11*i*).

For more information about the Oracle Applications security model and how Discoverer uses it, see *Oracle Discoverer Administrator Administration Guide*.

12.6 About Discoverer and the OracleAS Security model

OracleAS Security is an integrated management and security framework that provides:

- central management for OracleAS and the Oracle environment to reduce total cost of ownership
- out-of-box monitoring, alerting, and diagnostics to eliminate unexpected downtime and performance problems
- end-to-end performance monitoring of Web applications, and root cause analysis to resolve performance bottlenecks
- a complete and integrated identity management infrastructure for user management, provisioning, single sign-on and Public Key infrastructure

- advanced security and identity management features to ensure end-to-end security of deployed Web applications

The OracleAS Security model comprises:

- OracleAS Framework Security
- Oracle Identity Management infrastructure
- Oracle Advanced Security

To make sure that Discoverer fully leverages the OracleAS Security model:

- use the HTTPS services provided by OracleAS Framework Security (for more information, see [Section 12.7, "Using Discoverer with OracleAS Framework Security"](#))
- use the single sign-on services provided by Oracle Identity Management infrastructure (for more information, see [Section 12.8, "Using Discoverer with Oracle Identity Management Infrastructure"](#))

In addition, the OracleAS Security model underpins the Discoverer connection mechanism (for more information, see [Section 12.6.1, "About Discoverer public connections and the OracleAS Security model"](#)).

For more information about OracleAS Security, see:

- *Oracle Application Server Security Guide*
- *Oracle Identity Management Concepts and Deployment Planning Guide*

12.6.1 About Discoverer public connections and the OracleAS Security model

Discoverer managers can give users access to information by using OracleAS Oracle Enterprise Manager to create public connections. Each connection specifies an EUL containing one or more business areas.

Discoverer managers can control users' access to information by restricting users to using public connections or by giving users permission to create their own private connections.

For more information about connections, see [Section 3.1, "Managing OracleAS Discoverer connections"](#).

12.7 Using Discoverer with OracleAS Framework Security

OracleAS Framework Security provides a number of services, including:

- HTTPS/SSL support (using Oracle HTTP Server)
- user authentication and authorization (using Java Authentication and Authorization Service (JAAS), also known as JAZN)
- encryption (using Java Cryptography Extension (JCE))

You can specify that Discoverer uses the HTTPS/SSL support offered by the Oracle HTTP Server as one of the communication protocols to communicate between the Discoverer server and the Discoverer client tier components. For more information, see:

- [Section 12.7.1, "About specifying Discoverer communication protocols"](#)
- [Section 12.7.2, "About Discoverer Viewer security and communication protocols"](#)
- [Section 12.7.3, "About Discoverer Plus security and communication protocols"](#)

For more information about OracleAS Framework Security, see *Oracle Application Server Security Guide*.

Notes

- When you install OracleAS, SSL is installed automatically, but it is not enabled by default. To deploy Discoverer using SSL, make sure that SSL is enabled (i.e. make sure that the start-mode parameter in opmn.xml is set to 'ssl-enabled'). For more information, see *Oracle HTTP Server Administrator's Guide*.

12.7.1 About specifying Discoverer communication protocols

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)

Note that you must use HTTPS if you want to make sure that sensitive information (e.g. passwords, data) is securely transmitted across a network.

Discoverer Viewer and Discoverer Plus require different security configurations:

- for more information about configuring security for Discoverer Viewer, see [Section 12.7.2, "About Discoverer Viewer security and communication protocols"](#)
- for more information about configuring security for Discoverer Plus, see [Section 12.7.3, "About Discoverer Plus security and communication protocols"](#)

Notes

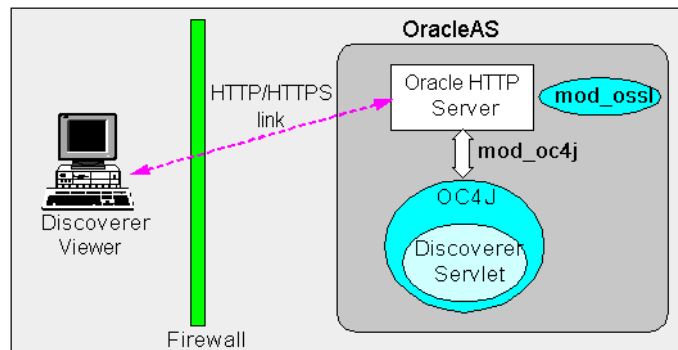
- If you are deploying OracleAS Discoverer with OracleAS Web Cache, there are security implications for some restricted user environments.

For more information, see:

- [Section 6.5, "When to use Discoverer Viewer with OracleAS Web Cache"](#)
- *Oracle Application Server Security Guide*
- If you have deployed Discoverer in a multiple machine installation, note that you might want to specify different communication protocols on different Discoverer machines. For example, you might use:
 - the JRMP protocol on one machine for Plus users working inside a firewall
 - the HTTPS protocol on two other machines for Viewer users accessing reports across the Web

12.7.2 About Discoverer Viewer security and communication protocols

Discoverer Viewer uses standard HTTP or HTTPS protocols to connect Discoverer Viewer clients to the Discoverer servlet.



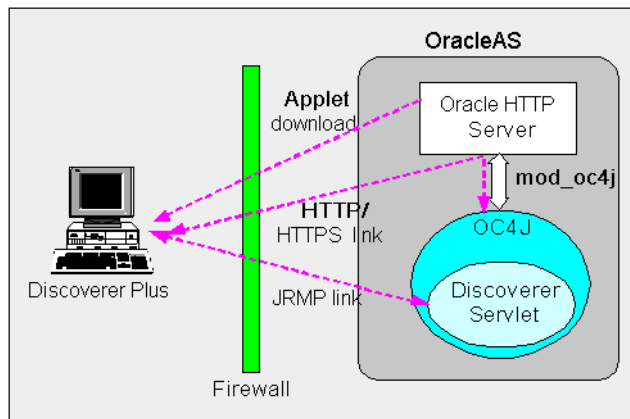
Note: Discoverer Viewer client machines require only a standard Web browser to run Discoverer Viewer.

In a default OracleAS installation, Discoverer Viewer is configured as follows:

- 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, open the firewall for the Oracle HTTP Server port used by OracleAS (e.g. 7778).
- In a HTTPS environment, you need to configure the `mod_ossll` file on the OracleAS machine (for more information, see *Oracle Application Server HTTP Administrator's Guide*). If you are using a firewall, open the firewall for the Oracle HTTP Server SSL port used by OracleAS (e.g. 4443). In a HTTPS environment, Discoverer Viewer uses SSL security certificates on the client machine's browser. If you are using a non-standard or private SSL signing authority, you need to install the root certificates in the browser. For more information about deploying Discoverer Viewer over HTTPS, see [Section 2.8, "About running Discoverer over HTTPS"](#).

12.7.3 About Discoverer Plus security and communication protocols

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 and installed on the Discoverer 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 a default OracleAS installation, 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.

Make sure that the default Discoverer Plus communication protocol (i.e. Default) is selected (for more information, [Section 12.7.3.4, "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, open the firewall for the Oracle HTTP Server port used by OracleAS (e.g. 7778).

Although a HTTP connection will work with the Discoverer Plus communication protocol option set to Default, you can improve performance by specifying the Tunneling option on the Discoverer Plus communication protocol page (for more information, [Section 12.7.3.5, "How to set up Discoverer Plus to use the Tunneling communication protocol"](#)).

- In a HTTPS environment, Discoverer Plus uses security certificates on the client machine's browser. When you run Discoverer Plus for the first time over HTTPS (i.e. in Secure Sockets Layer (SSL) mode), you need to install your Web server's security certificate into the Java Virtual Machine (JVM) certificate store in all client machines that need to run Discoverer Plus.

For more information about deploying Discoverer Plus over HTTPS, see [Section 2.8, "About running Discoverer over HTTPS"](#).

If you are using a non-standard SSL signing authority, you might need to configure the certdb.txt file on client machines (for more information, see [Section 12.7.3.1, "About configuring Discoverer Plus for a non-standard SSL signing authority"](#)). If you are using a firewall, open the firewall for the Oracle HTTP Server SSL port used by OracleAS (e.g. port 4443).

Although a HTTPS connection will work with Discoverer Plus communication protocol option set to Default, you can improve performance by specifying the

Tunneling option or Secure Tunneling option on the Discoverer Plus communication protocol page (for more information, [Section 12.7.3.2, "About specifying a Discoverer Plus communication protocol"](#)).

Notes

- 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 12.7.3.2, "About specifying a Discoverer Plus communication protocol"](#)).

12.7.3.1 About configuring Discoverer Plus for a non-standard SSL signing authority

If you are deploying Discoverer Plus using a non-standard or private SSL signing authority, you need to make sure that the root certificate information is in the certdb.txt file on each client machine (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)). Certificate information is required in the certdb.txt file because Discoverer Plus ignores the browser's signing authority and uses Oracle Jinitiator's SSL technology.

12.7.3.2 About specifying a Discoverer Plus communication protocol

Using Application Server Control, you can specify which communication protocol the Discoverer Plus applet (i.e. the Discoverer client) and the Discoverer servlet (i.e. on the Discoverer middle tier) 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.

The advantage of using the Default communication protocol is that Discoverer Plus works regardless of whether the client browser 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 option, see [Section 12.7.3.4, "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.

This advantage of using the Tunneling communication protocol is that it is quicker than the Default option, because a JRMP is not attempted first before failing and trying again using HTTP.

For more information about specifying this option, see [Section 12.7.3.5, "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.

This advantage of using the Secure Tunneling communication protocol is that it is quicker than the Default option, because a JRMP is not attempted first before failing and trying again using HTTPS.

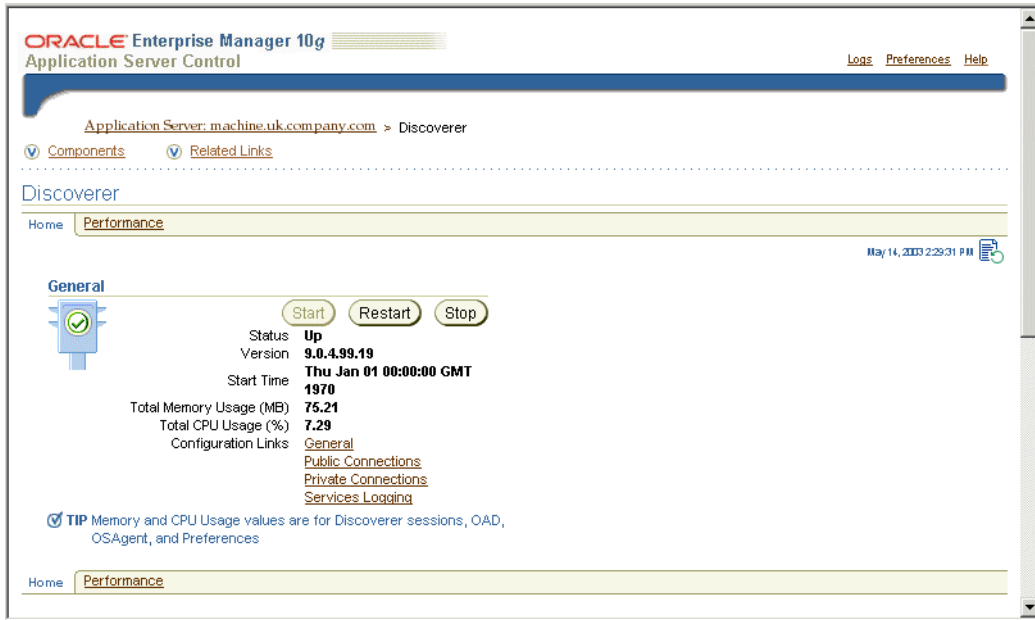
For more information about specifying this option, see [Section 12.7.3.6, "How to set up Discoverer Plus to use the Secure Tunneling communication protocol"](#).

12.7.3.3 How to display the OracleAS Discoverer Plus Communications Protocols page in Application Server Control

You use the Discoverer Plus Communication Protocols page in Application Server Control 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 OracleAS Discoverer Plus Configuration page in Application Server Control:

1. Display Application Server Control on the Discoverer instance that you want to configure (for more information, see [Section 4.2.2, "How to display Application Server Control"](#)).
2. Display the Application Server Control Discoverer Home page (for more information, see [Section 4.2.3, "How to display the Application Server Control Discoverer Home page"](#)).



3. Select the **Discoverer Plus** link to display the Application Server Control Discoverer Plus Home page.

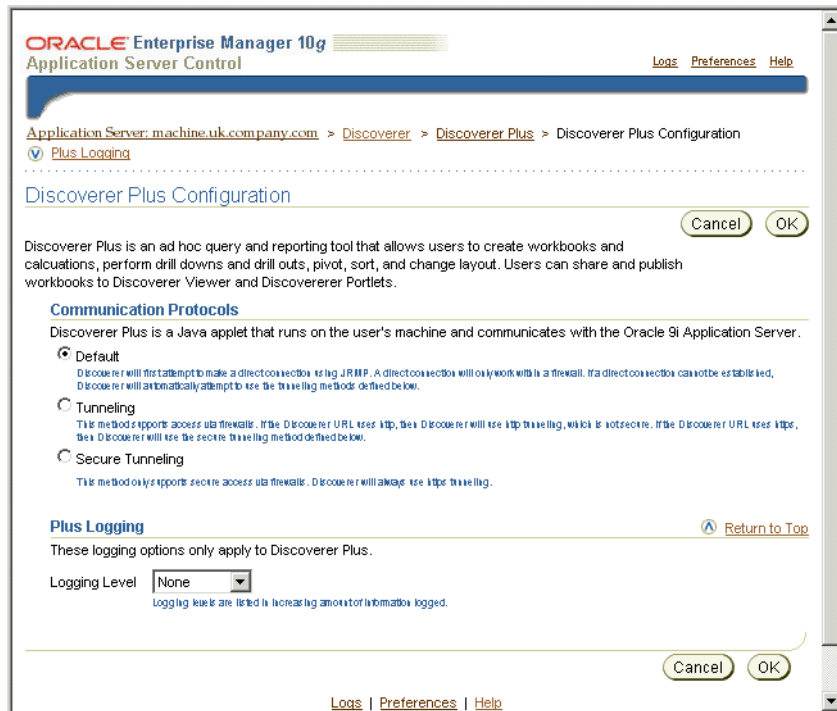
Hint: To display the Discoverer Plus link, either scroll down the page to the Components area, or select the **Components** link.

The screenshot shows the Oracle Enterprise Manager 10g Application Server Control interface. The page title is "ORACLE Enterprise Manager 10g Application Server Control". The breadcrumb navigation is "Application Server: machine.uk.company.com > Discoverer > Discoverer Plus". The page is titled "Discoverer Plus" and has a "Performance" tab selected. The "General" section shows the following status:

Discoverer Plus Status	Enabled
Discoverer Status	Up
Version	9.0.4.99.19
Session Memory Usage (MB)	0
Session CPU Usage (%)	0
Configuration Links	Communication Protocols Logging

At the bottom of the page, there is a "Related Links" section with links for "Oracle HTTP Server" and "OC4J". The footer contains the copyright information: "Copyright © 1996, 2003, Oracle. All rights reserved. About Oracle Enterprise Manager 10g Application Server Control".

4. Select the **Communication Protocols** link to display the Communication Protocols page.



12.7.3.4 How to set up Discoverer Plus to use the Default communication protocol

To set up Discoverer Plus to use the Default communication protocol:

1. Display Application Server Control and navigate to the OracleAS Discoverer Plus Communication Protocols page (for more information, see [Section 12.7.3.3, "How to display the OracleAS Discoverer Plus Communications Protocols page in Application Server Control"](#)).
2. Select the **Default** radio button from the **Communication Protocols** options.
3. Click OK to save the details.
4. Give Discoverer Plus users the URL of the Discoverer servlet:

For example, `http://<host.domain>:7779/discoverer/plus`

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 [Section 12.7.3.2, "About specifying a Discoverer Plus communication protocol"](#).

12.7.3.5 How to set up Discoverer Plus to use the Tunneling communication protocol

To set up Discoverer Plus to use the Tunneling communication protocol:

1. Display Application Server Control and navigate to the OracleAS Discoverer Plus Communication Protocols page (for more information, see [Section 12.7.3.3, "How to display the OracleAS Discoverer Plus Communications Protocols page in Application Server Control"](#)).
2. Choose the **Tunneling** radio button from the **Communication Protocols** options.
3. Click OK to save the details.
4. (optional) If you are using a firewall, open the appropriate port in the firewall to accept HTTP or HTTPS traffic as appropriate.
5. Give Discoverer Plus users the URL of the Discoverer servlet:

For example, `http://<host.domain>:7779/discoverer/plus`

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.

12.7.3.6 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. Display Application Server Control and navigate to the OracleAS Discoverer Plus Communication Protocols page (for more information, see [Section 12.7.3.3, "How to display the OracleAS Discoverer Plus Communications Protocols page in Application Server Control"](#)).
2. Choose the **Secure Tunneling** radio button from the **Communication Protocols** options.
3. Click OK to save the details.

4. (optional) If you are using a firewall, open the appropriate port in the firewall to accept HTTP or HTTPS traffic as appropriate.

5. Give Discoverer Plus users the URL of the Discoverer servlet:

For example, `https://<host.domain>:4443/discoverer/plus`

The Discoverer Plus applet will use the HTTPS protocol to communicate with the Discoverer servlet.

When a Discoverer end user starts Discoverer Plus for the first time on a client machine, they are prompted to confirm that they want to accept a default security certificate. Before selecting the Yes option on the Security Alert dialog, the Discoverer end user must install a Discoverer Plus security certificate on the client machine (for more information, see [Section 12.7.1, "About specifying Discoverer communication protocols"](#)).

12.8 Using Discoverer with Oracle Identity Management Infrastructure

Oracle Identity Management Infrastructure provides a number of services, including:

- OracleAS Single Sign-On
- OracleAS Certificate Authority
- Oracle Internet Directory (OID)
- Oracle Delegated Administration Services
- Oracle Directory Integration and Provisioning
- LDAP Developer Kit

You can specify that Discoverer uses OracleAS Single Sign-On to enable users to access Discoverer using the same user name and password as other Web applications. For more information, see:

- [Section 12.8.1, "Using Discoverer with OracleAS Single Sign-On"](#)
- [Section 12.8.2, "What is OracleAS Single Sign-On?"](#)

For more information about Oracle Identity Management Infrastructure, see *Oracle Identity Management Concepts and Deployment Planning Guide*.

12.8.1 Using Discoverer with OracleAS Single Sign-On

This section describes OracleAS Single Sign-On and how to use it with Discoverer Discoverer.

12.8.2 What is OracleAS Single Sign-On?

OracleAS Single Sign-On is a component of Oracle Application Server that enables users to log in to all the features of the OracleAS product set (as well as to other Web applications) using a single user name and password that is entered once.

Note: OracleAS Single Sign-On is implemented using Oracle Single Sign-On Server.

12.8.2.1 About Single Sign-On and Discoverer

When you install OracleAS, the OracleAS Single Sign-On service is installed automatically, but it is not enabled by default. For information about how to enable OracleAS Single Sign-On, see [Section 12.8.2.2, "How to enable Single Sign-On for Discoverer"](#)).

Discoverer connections work in both Single Sign-On and non-Single Sign-On environments. In an OracleAS Single Sign-On environment, if a Discoverer end user starts Discoverer without having been authenticated by OracleAS Single Sign-On, the user is challenged for Single Sign-On details (user name and password). Having provided Single Sign-On details, the user can display the Discoverer connections page and start Discoverer without having to enter a user name or password again.

Note: For more information about how OracleAS Discoverer works with OracleAS Portal and Single Sign-On, see [Section 12.8.2.3, "An example showing how Discoverer works with OracleAS Portal and Single Sign-on"](#).

12.8.2.2 How to enable Single Sign-On for Discoverer

You enable Single Sign-On on the OracleAS Discoverer instance.

To enable Single Sign-On, do the following:

1. Open the `mod_osso.conf` file in a text editor (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).
2. Add the following text to the end of the file:

```
<Location /discoverer/plus*>  
    require valid-user  
    AuthType Basic
```

```
</Location>
<Location /discoverer/viewer>
  require valid-user
  AuthType Basic
</Location>
```

3. Save the `mod_osso.conf` file.
4. Type the following at a command prompt:

```
opmnctl stopall
opmnctl startall
```

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

Notes

- Do **not** enable SSO for `/discoverer/portlet` provider. Discoverer relies on OracleAS Portal to protect the `/discoverer/portlet` provider URL. In other words, do not specify the Location value as `/discoverer`, as follows:

```
<Location /discoverer>
require valid-user
AuthType Basic
</Location>
```

- Make sure that the `OssolPCheck` parameter value in the `mod_osso.conf` file is set to `off`.

12.8.2.3 An example showing how Discoverer works with OracleAS Portal and Single Sign-on

When you publish Discoverer content in a portlet on an OracleAS Portal page, you give portal users access to the Discoverer workbooks and worksheets. 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 9.1, "Using OracleAS Discoverer with OracleAS Portal"](#).

To illustrate how OracleAS Discoverer works with OracleAS Portal, consider the following example:

Imagine that there are two single sign-on users:

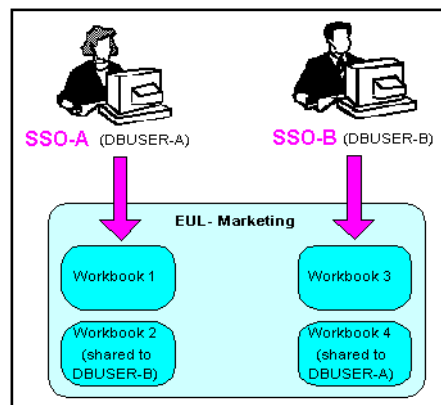
- User SSO-A has a private connection Conn-A pointing to DBUSER-A@discodb, EUL-Marketing.
- User SSO-B has a private connection Conn-B pointing to DBUSER-B@discodb, EUL-Marketing.

User SSO-A using connection Conn-A creates two workbooks Workbook 1 and Workbook 2 in the Marketing EUL. User SSO-A uses Discoverer Plus to share Workbook 2 with DBUSER-B.

User SSO-B using connection Conn-B creates two workbooks Workbook 3 and Workbook 4 in the Marketing EUL. User SSO-B uses Discoverer Plus to share Workbook 4 with DBUSER-A.

This situation is shown in the figure below:

Figure 12–1 Single sign-on users creating workbooks



Now imagine that user SSO-A creates a List Of Workbooks portlet using Conn-A, and chooses the 'Use user's database connection' option in the **Logged In users** section (i.e. in the Select Database Connections page in the Discoverer Portlet Provider).

When user SSO-A accesses the List Of Workbooks portlet, the following workbooks are available:

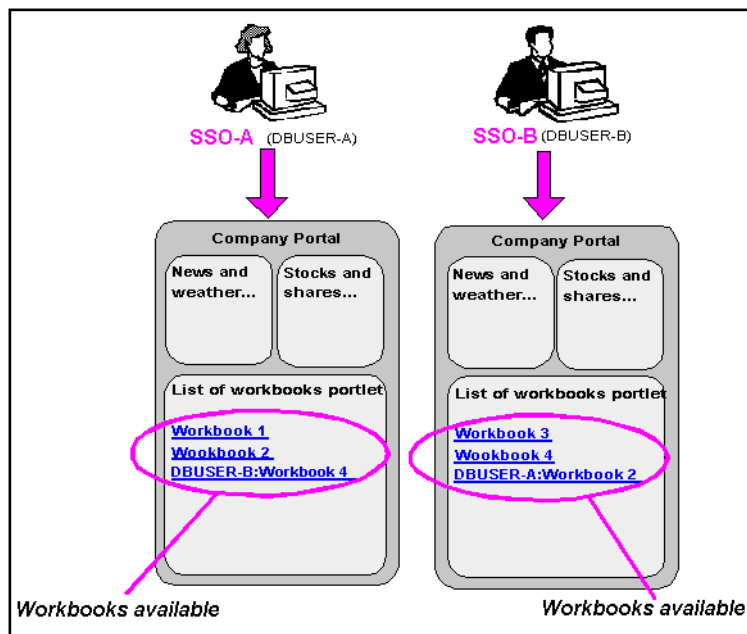
- Workbook 1
- Workbook 2
- DBUSER-B.Workbook 4

When user SSO-B accesses the same List Of Workbooks portlet, the following workbooks are available:

- Workbook 3
- Workbook 4
- DBUSER-A.Workbook 2

This situation is shown in the figure below:

Figure 12–2 Single sign-on users accessing Discoverer portlets



12.8.3 Using Discoverer without Single Sign-on

If you are not deploying Discoverer with Single Sign-On, end users must confirm the database password each time a private connection is used. In other words, 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 the Web browser and then starts the Web browser again (i.e. creates a new browser session), they are prompted to confirm their database

password. End users do not have to confirm passwords for public connections (for more information, see [Section 3.3.2, "About public connections"](#)).

Notes

- To store private Discoverer connections in non-SSO environments, cookies must be enabled in the Web browser.
- In non-SSO environments, a Discoverer end user can only access private connections created using the current machine and current Web browser. If an end user wants to use a different machine or different Web browser, they must re-create the private connections on the different machine or Web browser.

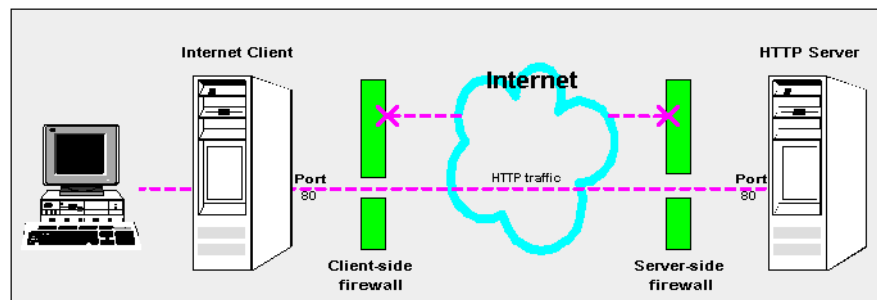
12.9 Frequently asked questions about security

12.9.1 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 12–3 A typical Internet connection with a Client-side and Server-side firewall



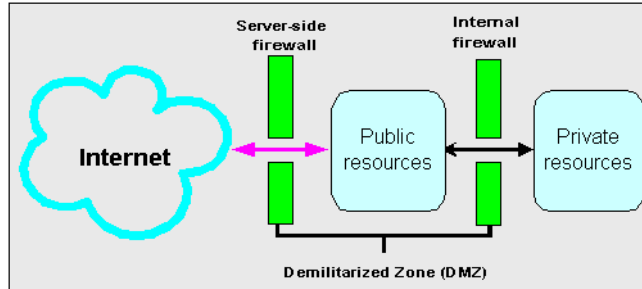
Typically, an organization using a Web Server machine that communicates across the Internet has a firewall between its Oracle HTTP Server machine and the Internet. This is known as a Server-side firewall. Other organizations (or remote parts of the same organization) connecting to this Web Server machine 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.

12.9.2 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 12–4 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 if this happens should minimize damage to the internal network and any sensitive data residing on the network. 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 middle tier and the database behind the internal firewall. Note that this configuration is not supported.

12.9.3 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

12.9.4 How do I configure Discoverer to work in an intranet

You configure Discoverer to work in an intranet as follows:

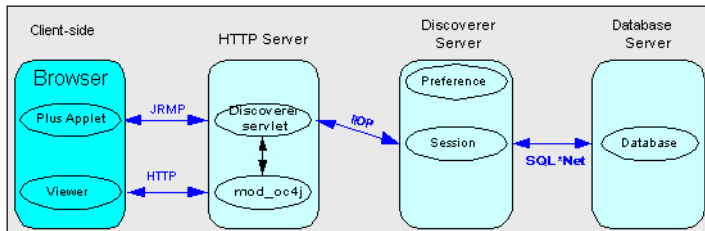
- Discoverer Viewer

Deploying Discoverer Viewer in an intranet (i.e. inside a firewall) requires no additional configuration after an OracleAS 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 OracleAS installation. Discoverer Plus uses a direct connection using JRMP.

Figure 12–5 A typical network configuration for Discoverer in an intranet



12.9.5 How do I configure Discoverer to work through a firewall?

You configure Discoverer to work through firewalls with HTTP or HTTPS, as follows:

- Discoverer Viewer

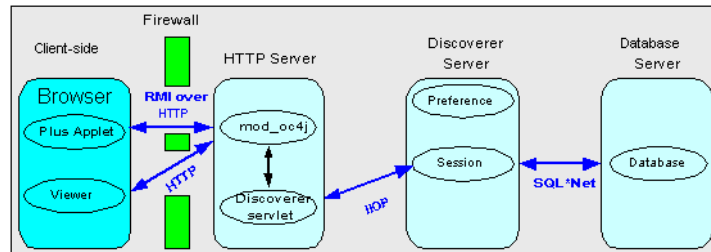
Discoverer Viewer requires no additional configuration as long as the firewall allows HTTP traffic to pass through.

- Discoverer Plus

Discoverer Plus requires no additional configuration as long as the firewall allows HTTP or HTTPS traffic to pass through.

To improve performance, you might want to change the Discoverer Plus communication protocol to one of the following:

- for HTTP, set the communication protocol to Tunneling to prevent the Discoverer client from first trying to connect using JRMP, then by HTTP (for more information, see [Section 12.7.3.5, "How to set up Discoverer Plus to use the Tunneling communication protocol"](#)).
- for HTTPS, set the 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 12.7.3.6, "How to set up Discoverer Plus to use the Secure Tunneling communication protocol"](#)).

Figure 12–6 A typical firewall configuration for Discoverer using HTTP

12.9.6 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 12.9.5, "How do I configure Discoverer to work through a firewall?"](#)).

12.9.7 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 *Oracle Application Server HTTP Administrator's Guide*) and deploy Discoverer Viewer on a HTTPS URL.
- Discoverer Plus

Configure mod_ossl to use HTTPS (for more information, see *Oracle Application Server HTTP Administrator's Guide*) and deploy Discoverer Plus on a HTTPS URL. You must change the Discoverer Plus communication protocol to Secure Tunneling (for more information, see [Section 12.7.3.6, "How to set up Discoverer Plus to use the Secure Tunneling communication protocol"](#)).

12.9.8 How do I configure Discoverer to use encryption through firewalls?

You configure Discoverer to use encryption through firewalls as follows:

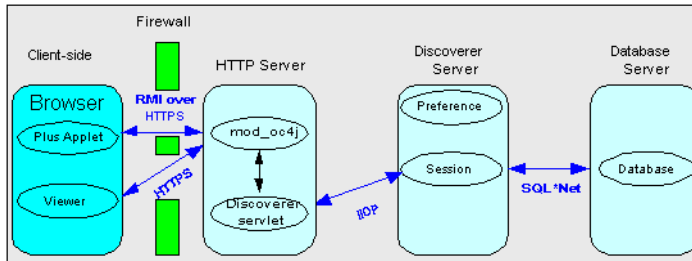
- Discoverer Viewer

Configure Discoverer Viewer to work through a firewall (for more information, see [Section 12.9.5, "How do I configure Discoverer to work through a firewall?"](#)). Then, make sure that the firewall(s) allow HTTPS traffic to pass through.

- Discoverer Plus

Configure Discoverer Plus to work through a firewall (for more information, see [Section 12.9.5, "How do I configure Discoverer to work through a firewall?"](#)). Then, make sure that the firewall(s) allow HTTPS traffic to pass through.

Figure 12–7 A typical firewall configuration for Discoverer using HTTPS



12.9.9 How can I verify that Discoverer is encrypting communications?

In Discoverer Viewer, make sure that client browsers display a closed padlock or other equivalent symbol (browser dependent) in the Discoverer Viewer browser's status bar.

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.

12.9.10 Can I configure Discoverer for both intranet users and users accessing Discoverer through a firewall?

Yes, you can configure Discoverer for both intranet users and Internet users. For example, if you use the Default Discoverer Plus communication protocol:

- sessions connecting from inside the firewall use a direct JRMP connection because JRMP is a direct connection that only works inside a firewall
- sessions connecting from outside the firewall automatically use a HTTP or HTTPS connection (depending on the URL)

12.9.11 Can I use Discoverer with a NAT device?

Yes, you can deploy Discoverer using any standard Network Address Translation (NAT) device.

OracleAS Discoverer and Oracle Applications

13.1 OracleAS Discoverer and Oracle Applications

This chapter explains how OracleAS Discoverer provides capabilities for integrating with Oracle Applications, and contains the following topics:

- [Section 13.2, "About Discoverer connections and Oracle Applications"](#)
- [Section 13.3, "About Discoverer preference settings for Oracle Applications"](#)
- [Section 13.4, "How to configure Discoverer for an Oracle Applications only environment"](#)
- [Section 13.5, "How to configure Discoverer for a mixed application environment"](#)

13.2 About Discoverer connections and Oracle Applications

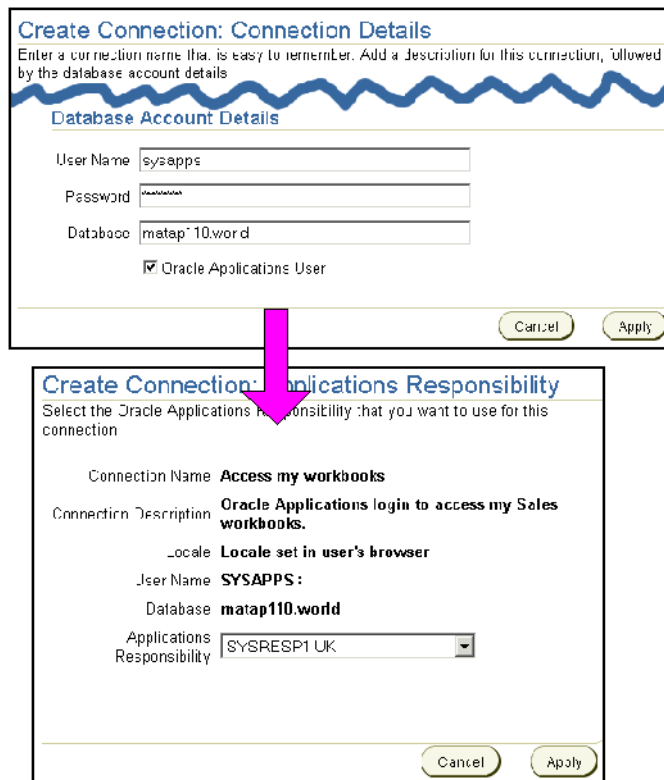
As a Discoverer middle tier manager, when you want Oracle Applications end users to use Discoverer Viewer and Discoverer Plus, you can deploy Discoverer in two ways:

- If you are using Discoverer in an Oracle Applications only environment, you can set the default connection (i.e. login) type to Oracle Applications (for more information, see [Section 13.4, "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 13.5, "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 create Oracle Applications connections. When the Oracle Applications check box is selected, the Create Connection: Applications Responsibility page is displayed, which enables the user to specify an Applications Responsibility.

Figure 13–1 Create Connection: Connection details page with Oracle Applications check box



When Discoverer is not deployed in a mixed application environment (e.g. in Oracle Applications only environments) you typically remove the **Oracle Applications User** check box from the Create Connection: Connection Details page (for more

information, see [Section 13.4, "How to configure Discoverer for an Oracle Applications only environment"](#)).

Notes

- You can also create public Oracle Applications connections using Application Server Control. For more information, refer to [Section 3.7, "How to create a public connection"](#) or *Oracle Application Server Enterprise Manager Help*.
- A default Oracle Applications Gateway User ID (GWYUID), password, and Foundation Name (FNDNAM) is specified in the pref.txt configuration file (for more information, see [Section 13.3, "About Discoverer preference settings for Oracle Applications"](#)).

13.3 About Discoverer preference 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:

- the AppsGWYUID preference specifies a Gateway User ID and Password (the default value is 'APPLSYSPUB/PUB')
- the AppsFNDNAM preference specifies a Foundation Name (the default value is 'APPS')

AppsGWYUID and AppsFNDNAM are the specified in the pref.txt configuration file (for more information, see [Section A.2, "List of Discoverer file locations"](#)).

Note: After editing the pref.txt file, you must run the applypreferences script to apply the preference changes you have made, then stop and restart the OracleAS Discoverer service (for more information, see [Section 4.4, "About starting and stopping the Discoverer Service"](#)).

13.4 How to configure Discoverer for an Oracle Applications only environment

In an Oracle Applications only environment, Discoverer end users will only want to 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:

1. 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"](#)).
2. Set the value of the ShowUserTypeChoice preference to 0 to remove the Oracle Applications User check box.
3. Set the value of the DefaultUserTypeIsApps preference to 1 to set the default connection type to Oracle Applications.
4. Save the pref.txt file.
5. Run the applypreferences script to apply the preference changes you have made (for more information about the applypreferences script, see [Section A.2, "List of Discoverer file locations"](#)).

Hint: Check the error.txt file in the current directory to verify that the preferences were applied correctly.

6. Stop and restart the OracleAS Discoverer Service (for more information, see [Section 4.4, "About starting and stopping the Discoverer Service"](#)).

Discoverer end users can now only create Oracle Applications connections (i.e. connections that enable them to connect as Oracle Applications users).

Notes

- If the pref.txt file does not contain a ShowUserTypeChoice preference or a DefaultUserTypeIsApps preference, add these preferences with the values specified above to the [Application] section of the pref.txt file.

13.5 How to configure Discoverer for a mixed application environment

In a mixed application environment (for more information about mixed application environments, see [Section 13.2, "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 in the Create Connection: Connection Details page and set the default connection type to Oracle Applications.

To configure Discoverer in a mixed application environment:

1. 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"](#)).
2. Set the value of the ShowUserTypeChoice preference to 1 to display the Oracle Applications User check box.

3. 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` preference to 0
 - if you do want the Applications User check box to be selected by default, set the `DefaultUserTypeIsApps` preference to 1
4. Save the `pref.txt` file.
5. Run the `applypreferences` script to apply the preference changes you have made (for more information about the `applypreferences` script, see [Section A.2, "List of Discoverer file locations"](#)).

Hint: Check for error messages in the `error.txt` file in the current directory to verify that the preferences were applied correctly (for more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#)).

6. Stop and restart the OracleAS Discoverer service (for more information, see [Section 4.4, "About starting and stopping the Discoverer Service"](#)).

Discoverer end users can now choose what type of private Discoverer connections they create.

Notes

- If the `pref.txt` file does not contain a `ShowUserTypeChoice` preference or a `DefaultUserTypeIsApps` preference, add these preferences with the values specified above to the `[Application]` section of the `pref.txt` file.

Example

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 preferences are specified as follows:

- `ShowUserTypeChoice = 1`
- `DefaultUserTypeIsApps = 1`

Figure 13–2 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

OracleAS Discoverer configuration files

A.1 OracleAS 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"](#)
- [Section A.6, "List of configuration settings in opmn.xml"](#)

A.2 List of Discoverer file locations

This section lists the files that are used to configure and maintain OracleAS Discoverer. Many of the settings in the configuration files are configured using Application Server Control. Where possible, use Application Server Control to configure Discoverer. If you update settings in the configuration files manually, you must only do so in accordance with the instructions in this guide.

The table below shows the locations of these files on both UNIX and Windows platforms.

File name	Description and location
applypreferences.bat	<p>This file updates the Discoverer Preferences component (Windows specific).</p> <p>On UNIX: n/a</p> <p>On Windows: <ORACLE_HOME>\discoverer\util</p> <p>Hint: Information about processing errors are stored in error.txt (for more information, see File name entry for error.txt).</p>
applypreferences.sh	<p>This file updates the Discoverer Preferences component (UNIX specific).</p> <p>On UNIX: <ORACLE_HOME>/discoverer/util</p> <p>On Windows: n/a</p> <p>Hint: Information about processing errors are stored in error.txt (for more information, see File name entry for error.txt).</p>
blaf.css	<p>This cascading style sheet file stores browser look and feel settings for Discoverer. To see Discoverer 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 Discoverer 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>
certdb.txt	<p>This file contains the security certificate store for Oracle JInitiator, and is stored on each client machine that is running Discoverer Plus.</p> <p>On UNIX: <JINITIATOR HOME>/lib/security/</p> <p>On Windows: <JINITIATOR HOME>\lib\security\</p> <p>where <JINITIATOR HOME> is the location on the client machine in which JInitiator is installed (e.g. c:\program files\oracle\JInitiator 1.3.1.9\)</p> <p>For more information about installing a security certificate in the JInitiator certificate store, see Section 2.8.1, "How to install a security certificate on a Discoverer Plus client machine".</p> <p>For more information about certdb.txt, see Section 12.7.3.1, "About configuring Discoverer Plus for a non-standard SSL signing authority".</p>

File name	Description and location
checkdiscoverer.bat	<p>This file starts a utility that checks the configuration of the Discoverer middle tier, checks the status of the middle tier components, and reports any failures or anomalies.</p> <p>On UNIX: n/a</p> <p>On Windows: <ORACLE_HOME>\discoverer\util</p> <p>Note: You can also find documentation on using the checkdiscoverer utility in the \util directory.</p>
checkdiscoverer.sh	<p>This file starts a utility that checks the configuration of the Discoverer middle tier, checks the status of the middle tier components, and reports any failures or anomalies.</p> <p>On UNIX: <ORACLE_HOME>/discoverer/util</p> <p>On Windows: n/a</p> <p>Note: You can also find documentation on using the checkdiscoverer utility in the /util directory.</p>
collectlogs.bat	<p>This script file collects all Discoverer logs into a folder.</p> <p>On UNIX: n/a</p> <p>On Windows: <ORACLE_HOME>\discoverer\util</p> <p>Note: For more information about using the collectlogs script, see Section 4.11.9, "How to copy Discoverer log files".</p>
collectlogs.sh	<p>This script file copies all Discoverer logs into a TAR file.</p> <p>On UNIX: <ORACLE_HOME>/discoverer/util</p> <p>On Windows: n/a</p> <p>Note: For more information about using the collectlogs script, see Section 4.11.9, "How to copy Discoverer log files".</p>
configuration.xml	<p>This file stores configuration settings for Discoverer.</p> <p>Note: Use the Discoverer Services Configuration page in Application Server Control to configure some of the settings in this file (for more information, see Section A.4, "List of configuration settings in configuration.xml").</p> <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> <p>For more information about improving Discoverer performance by adjusting XSL stylesheet pooling settings, see Section 10.5.2, "How to enhance Discoverer Viewer scalability using XSL stylesheet pooling".</p>

File name	Description and location
defaults.txt	<p>This file stores factory-supplied default Discoverer preferences. If pref.txt becomes corrupted, you can use defaults.txt to restore default preference settings.</p> <p>On UNIX: <ORACLE_HOME>/discoverer/util</p> <p>On Windows: <ORACLE_HOME>\discoverer\util</p>
dis51pr.sh/exe	<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>/bin</p> <p>On Windows: <ORACLE_HOME>\bin</p>
discoverer.xsl	<p>This file is the main Discoverer XSL file, which is used to import the other XSL files used by Discoverer.</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>
discwb.sh	<p>This script file sets the PATH and other environment variables needed to run Discoverer utility scripts located in /discoverer/util/. You do not need to run this script unless you are working independently of the Oracle Discoverer supplied scripts. This script is included in most other Discoverer script files. Therefore, the commands in this file run automatically.</p> <p>On UNIX: <ORACLE_HOME>/discoverer/</p> <p>On Windows: N/A</p>
error.txt	<p>This file contains information about processing errors collected when you update the Discoverer Preferences component using the applypreferences script.</p> <p>On UNIX: <ORACLE_HOME>/discoverer/util</p> <p>On Windows: <ORACLE_HOME>\discoverer\util</p>
graphproperties.xss	<p>This style sheet file stores font-family, font-size, and font anti-aliasing properties for graphs in Discoverer Viewer. Properties are locale specific.</p> <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>

File name	Description and location
migrateprefs.bat	<p>This script file is used to migrate Discoverer preferences from Discoverer 9.0.2 to Discoverer 9.0.4.</p> <p>Note: For information on migrating Discoverer preferences from Discoverer 1.0.2 to Discoverer 9.0.4, see the OracleAS Discoverer section in the <i>Oracle Application Server Migration Guide</i>.</p> <p>On UNIX: N/A</p> <p>On Windows: <ORACLE_HOME>\discoverer\util</p>
migrateprefs.sh	<p>This script file is used to migrate Discoverer preferences from Discoverer 9.0.2 to Discoverer 9.0.4.</p> <p>Note: For information on migrating Discoverer preferences from Discoverer 1.0.2 to Discoverer 9.0.4, see the OracleAS Discoverer section in the <i>Oracle Application Server Migration Guide</i>.</p> <p>On UNIX: <ORACLE_HOME>/discoverer/util</p> <p>On Windows: N/A</p>
mod_osso.conf	<p>This file stores configuration settings for OracleAS Single Sign-On (for example, settings to turn OracleAS Single Sign-On on and off).</p> <p>On UNIX: <ORACLE_HOME>/apache/apache/conf</p> <p>On Windows: <ORACLE_HOME>\apache\apache\conf</p> <p>For more information about enabling Single Sign-On, see Section 12.8.2.2, "How to enable Single Sign-On for Discoverer".</p>
opmn.xml	<p>This file stores the OPMN configuration settings for Discoverer. For example, to enable preferences and specify the PING interval for OSAgent and the OAD.</p> <p>Note: Use Application Server Control to the settings in this file.</p> <p>On UNIX: <ORACLE_HOME>/opmn/conf</p> <p>On Windows: <ORACLE_HOME>\opmn\conf</p> <p>For more information, see Section A.6, "List of configuration settings in opmn.xml".</p>
opmnctl.sh/bat	<p>This script file is used to manage OPMN processes.</p> <p>On UNIX: <ORACLE_HOME>/opmn/bin</p> <p>On Windows: <ORACLE_HOME>\opmn\bin</p> <p>Hint: Type opmnctl help to display online help for this script.</p>

File name	Description and location
plus_config.xml	<p>This file stores configuration settings for Discoverer. For example, transport protocols and Jinitiator versions used by Discoverer (for more information, see Section A.5, "List of configuration settings in plus_config.xml").</p> <p>Note: Use Application Server Control to the settings in this file</p> <p>On UNIX: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/plus_files/xsl/ On Windows: <ORACLE_HOME>\j2ee\OC4J_BI_Forms\applications\discoverer\web\plus_files\xsl\</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 defaults.txt file. If pref.txt becomes corrupted, copy preferences in defaults.txt to pref.txt to restore default preference settings.</p> <p>On UNIX: <ORACLE_HOME>/discoverer/util On Windows: <ORACLE_HOME>\discoverer\util</p> <p>Note: After editing the pref.txt file, you must run the applypreferences script to apply the preference changes you have made, then stop and restart the Discoverer Service (for more information, see Section 4.4, "About starting and stopping the Discoverer Service").</p>
reg_key.dc	<p>This file stores individual preferences for each user as a unique combination of database and userid. These values override global default values specified in pref.txt.</p> <p>On UNIX: <ORACLE_HOME>/discoverer/ On Windows: <ORACLE_HOME>\discoverer\</p> <p>Note: On UNIX implementations, the reg_key.dc is a hidden UNIX file (i.e. the filename is prefixed with a '.'). Make sure that your file manager program or command console can list hidden files (e.g. use the console command 'ls -al' to list hidden files).</p>
registerSession.bat	<p>This file registers the Discoverer session component (Windows specific).</p> <p>On UNIX: n/a On Windows: <ORACLE_HOME>\discoverer\util</p>
registerSession.sh	<p>This file registers the Discoverer session component (UNIX specific).</p> <p>On UNIX: <ORACLE_HOME>/discoverer/util On Windows: n/a</p>

File name	Description and location
tnsnames.ora	This file contains the names and aliases of all the databases that users can access using OracleAS 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 (for more information, see Section A.3, "List of configuration settings in ui_config.xml"). 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
web.xml	This file contains deployment information about the Discoverer servlets. On UNIX: <ORACLE_HOME>/j2ee/OC4J_BI_Forms/applications/discoverer/web/WEB-INF/ On Windows: <ORACLE_HOME>\j2ee\OC4J_BI_Forms\applications\discoverer\web\WEB-INF\

A.3 List of configuration settings in ui_config.xml

This file stores user interface configuration settings for Discoverer. The table below shows the setting in ui_config.xml.

Note: For more information about changing settings in ui_config.xml, see [Section 7.1, "Customizing OracleAS 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_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.

User Interface Area	Setting	Description
	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 OracleAS 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 OracleAS Web Cache, set this value to false.
	option id="display_presentation_options_link" state="true"	Specifies whether to display the Presentation Options link on the worksheet page. Note: If you are using OracleAS Web Cache, set this value to false.
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. Note: If you are using OracleAS Web Cache to cache Discoverer pages, set this value to false.
	option id="include_expiration_tags" state="false"	Specifies whether to force Discoverer Viewer pages to be cached in the Web browser. When set to false, Discoverer will retrieve a page from the Web browser cache, if a page is cached When set to true, Discoverer will retrieve a page by re-sending the request to the Discoverer servlet (META tags are included in results pages instructing the browser to treat them as expired). This is not recommended unless the data fluctuates regularly.

User Interface Area	Setting	Description
	<code>option id="debug_mode" state="false"/</code>	Specifies whether every HTML page generated by Viewer includes a text box containing XML describing the internal state of the Discoverer servlet (i.e. when set to true). This information is useful when developing custom XSL or debugging. A debug text box is also displayed for Discoverer Plus.
Presentation_ templates	<code>look name="Corporate Look"</code>	Specifies the name of the presentation template.
	<code>component name="xxx" state="true false"</code>	Specifies whether a particular UI component is displayed or hidden for the current presentation template (refer to the comments in <code>ui_config.xml</code> for more details about component names).
NLS	<code>resource id="xxx" href="yyy" help="zzz" images="aaa"</code>	Specifies the message file <code>yyy</code> and help file <code>zzz</code> to use for a particular language <code>xxx</code> . The <code>images</code> value specifies the sub-directory within the <code>images</code> directory containing images specific to this locale.
Help	There is a help page setting for each Discoverer page, and an appropriate help page name. For example, the help page for the Create Connection: Connection Details is defined as follows: <code>page name="add_connection" file="add_conn.htm"</code>	Specifies the name of the help page for the Add Connection online page.

A.4 List of configuration settings in configuration.xml

This file stores configuration settings for Discoverer. The table below shows the setting 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, Discoverer Viewer will default to the system locale set on the middle tier. If Discoverer Viewer is unable to determine the system locale, it will default to the locale set here.
/disco:configuration/@rmi	Specifies whether the Discoverer servlet listens for RMI requests from the Discoverer Plus applet. If you want to disable Discoverer Plus, set this value to false. Disabling Discoverer Plus frees up a small amount of CPU resource on the middle tier. You can use Application Server Control to disable Discoverer client tier components (for more information, see Section 4.5, "About disabling and enabling Discoverer client tier components").
/disco:configuration/@webcache	Specifies whether OracleAS Web Cache is being used to cache the pages generated by the Discoverer servlet. If you want to use a Discoverer machine as a load balancing machine, the webcache attribute must be set to 'true' (for more information, see Section 5.6, "How to deploy OracleAS Discoverer with load balancing using OracleAS Web Cache").
/disco:configuration/portlet/@maximumSessions	Specifies the maximum number of Discoverer sessions for portlets allowed.
/disco:configuration/portlet/xsl_translator/*	Specifies the maximum number of portlet settings allowed for the Discoverer Portlet Provider.
/disco:configuration/server/@session	Specifies the name of the instance of the Discoverer Service 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 URL argument.
/disco:configuration/servlet/@queryRefreshPeriod	Specifies the delay in seconds before a query progress page is displayed (or re-displayed).
/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).

Setting	Description
/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.xml file.
/disco:configuration/servlet/xsl_translator/@processor	Specifies the XSL Processor to use.
/disco:configuration/servlet/xsl_translator/stylesheet_pool	Specifies how stylesheets are pooled for maximum performance (for more information, see Section 10.5.2, "How to enhance Discoverer Viewer scalability using XSL stylesheet pooling").
maximumSessions	<p>This setting specifies the maximum number of sessions Discoverer 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, Discoverer 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 setting to improve accessibility if you use a JAWS screen reader (for more information, see "Documentation Accessibility").</p> <p>Note: You can also set this setting on a per-user basis using the URL parameter <i>qpd</i> (for more information, see Section 11.8, "Discoverer Viewer URL parameters").</p>

A.5 List of configuration settings in plus_config.xml

This file stores configuration settings for Discoverer Plus. The table below shows the setting 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 Application Server Control to change this setting.</p>

Setting	Description
jvm	Specifies the version of the JVM (e.g. JInitiator) to use. You can change the JVM for particular platforms, browsers, and browser versions (for more information, see Section 4.12, "About running Discoverer Plus with different Java Virtual Machines").

A.6 List of configuration settings in opmn.xml

This file stores OPMN settings for Discoverer. The table below shows the setting in opmn.xml that you might change if you need to modify the default Discoverer configuration:

Setting	Description
<process-type id="OSAgent"	Specifies the interval in which OPMN will ping the OSAgent. The default value for this setting is: <ping interval="300"/> (i.e. 300 seconds, or 5 minutes).
process-type id="OAD"	Specifies the interval which OPMN will ping the OAD. The default value for this setting is: <ping interval="0"/> (i.e. ping turned off).
process-type id="PreferenceServer"	Specifies whether the preferences will be started by OPMN. This setting is useful in clustered environments where only one preference should be running. The default value for this setting is: <process-type id="PreferenceServer" enabled="true">.
data id="bounce-process"	Specifies whether the OAD will be restarted periodically. For example, you can tell OPMN to restart the OAD at specified intervals. This setting does not affect the ability of OPMN to automatically restart the process if it halts or becomes unresponsive at any time. This setting enables you to specify whether or not the OAD can be restarted periodically. The default value for this setting is: <data id="bounce-process" value="false"/>. Note: Use the OAD Bounce Time setting to specify the interval for the periodic restart.

Setting	Description
data id="bounce-time"	<p>Specifies the time (i.e. between 0:00hrs and 24:00hrs) that the OAD will be periodically restarted. This setting only applies if the OAD Bounce Process setting is set to true.</p> <p>The default value for this setting is: <code><data id="bounce-time" value="01:00"/></code> (i.e. 01:00 hrs, or at 1:00am every day).</p>
<variable id="OAD_VERBOSE_LOGGING"	<p>Specifies that OAD uses verbose logging when the value is set to:</p> <p><code><variable id="OAD_VERBOSE_LOGGING"="-verbose"</code>.</p> <p>The default value for this setting is: <code><variable id="OAD_VERBOSE_LOGGING" value=""></code> (i.e. an empty string).</p> <p>For more information, see Section 4.11.5, "How to enable the Discoverer Services log file".</p>

The following table shows OPMN system preference settings that we recommend you do not amend:

Setting	Description
OSAGENT_PORT	<p>Specifies the Osagent domain for the instance.</p> <p>The installation value for this setting ranges between 16001-16004.</p> <p>Note: It is recommended that you do not change this setting.</p>
INSTANCE_NAME	<p>Specifies the host name of the machine.</p> <p>The installation value for this setting is the host name of the machine.</p> <p>Note: It is recommended that you do not change this setting.</p>
DISCO_PREFERENCE	<p>Specifies the preference instance name for the iAS instance.</p> <p>The installation value depends on the host name of the machine.</p> <p>Note: It is recommended that you do not change this setting.</p>
ORACLE_HOME	<p>Specifies the Oracle Home.</p> <p>Note: It is recommended that you do not change this setting.</p>
VBROKER_HOME	<p>Specifies the Visibroker home directory.</p> <p>The installation value for this setting is <code><ORACLE_HOME>/vbroker4</code>.</p> <p>Note: It is recommended that you do not change this setting.</p>

Setting	Description
VBROKER_ADM	Specifies the Visibroker admin home directory. The installation value for this setting is <ORACLE_HOME>/vbroker4/adm. Note: It is recommended that you do not change this setting.
DISCO_JRE	Specifies the location of the Java Runtime Engine. The installation value for this setting is <ORACLE_HOME>/jdk/jre. Note: It is recommended that you do not change this setting.

Changing Infrastructure Services for Discoverer

B.1 Changing Infrastructure Services for Discoverer

This section explains how to specify a different Infrastructure Services for Discoverer, and contains the following topics:

- [Section B.2, "About OracleAS Release 9.0.4 installations"](#)
- [Section B.3, "About changing Infrastructure Services for OracleAS Discoverer"](#)

B.2 About OracleAS Release 9.0.4 installations

An installation of Oracle Application Server 10g (9.0.4) consists of two tiers:

- The OracleAS infrastructure tier, which provides OracleAS infrastructure security services (SSO/OID) and OracleAS infrastructure meta-data in the OracleAS infrastructure database. There is a single installation of the OracleAS infrastructure tier in an OracleAS instance.
- The OracleAS middle tier, which includes applications such as OracleAS Discoverer and OracleAS Portal. There can be multiple instances of middle tiers, each using a single OracleAS infrastructure tier. For example, you might deploy Discoverer on three servers, which are all using the same OracleAS infrastructure machine.

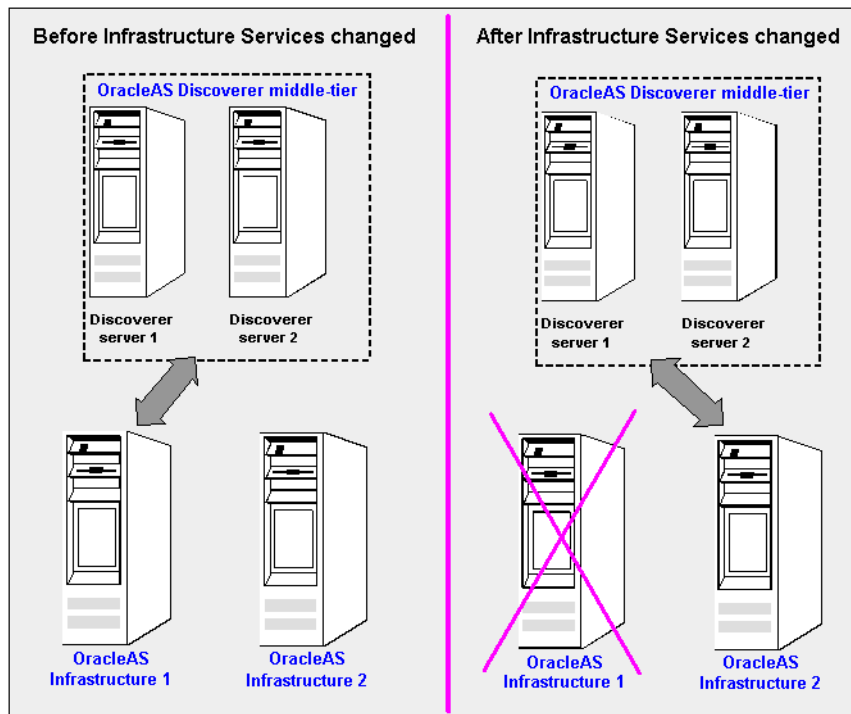
B.3 About changing Infrastructure Services for OracleAS Discoverer

You change Infrastructure Services for OracleAS Discoverer when you want Discoverer to use a different OracleAS infrastructure machine without having to re-install the Discoverer middle tier(s).

For example, you might deploy a test Discoverer system using one infrastructure server. Having tested the system, you might want to deploy it as a production system using a different infrastructure server.

In the figure below, the OracleAS Discoverer middle tier was originally installed with OracleAS infrastructure 1. After changing Infrastructure Services, the OracleAS Discoverer middle tier uses OracleAS infrastructure 2.

Figure B-1 Changing Infrastructure Services for OracleAS



When you change Infrastructure Services, you move the entire OracleAS metadata repository from one machine to another. The OracleAS metadata repository contains the following Discoverer-related schemas:

- the DISCOVERER5 schema, which stores the meta-data and cache for the Discoverer Portlet Provider
- the ORASSO_DS schema, which stores connection information for SSO, non-SSO, and public connections

For instructions on how to move the OracleAS metadata repository, see *Oracle Application Server Administrator's Guide*.

OracleAS Discoverer administrative account information

C.1 OracleAS Discoverer administrative account information

This section lists Discoverer administrative account information, and contains the following topics:

- [Section C.2, "Database privileges granted by OracleAS Discoverer scripts to the PUBLIC user"](#)
- [Section C.3, "Database privileges granted by OracleAS Discoverer scripts to the Discoverer manager"](#)

C.2 Database privileges granted by OracleAS Discoverer scripts to the PUBLIC user

The table below shows the database privileges granted by Oracle Discoverer scripts to the PUBLIC user.

Script name(s)	Script description	Privileges granted
batchusr.sql	Sets up the scheduling schema (granted with INVOKER rights)	EXECUTE on EUL5_BATCH_REPOSITORY
demoddl.sql	Sets up the Video Stores Tutorial data	SELECT on all tables in VIDEO5 schema
eulsuqpp.sql	Run QPP statistics on secure views	SELECT on v_\$\$session, v_\$\$sesstat, v_\$\$parameter, v_\$\$sql, v_\$\$open_cursor

Script name(s)	Script description	Privileges granted
eulgfn.sql, lineage.sql, eul5.sql	Sets up PL/SQL packages	EXECUTE on EUL5_GET_COMPLEX_FOLDER EXECUTE on EUL5_GET_SIMPLE_FOLDER EXECUTE on EUL5_GET_OBJECT EXECUTE on EUL5_GET_ITEM EXECUTE on EUL5_GET_HIERORD EXECUTE on EUL5_GET_HIERLVL EXECUTE on EUL5_GET_ADATE EXECUTE on EUL5_GET_ANALYZED EXECUTE on EUL5_GET_OBJECT_NAME EXECUTE on EUL5_GET_ITEM_NAME EXECUTE on EUL5_GET_APPS_USERRESP EXECUTE on EUL5_GET_ISITAPPS_EUL EXECUTE on EUL5_GET_LINURL

C.3 Database privileges granted by OracleAS Discoverer scripts to the Discoverer manager

The table below shows the database privileges granted by Oracle Discoverer scripts to the Discoverer manager.

Package name(s)	Package description	Privileges granted
EUL5_DROP_BATCH_TABLE	Grant execute to Discoverer managers. Batch repository package for dropping tables as part of batch user management. (granted with GRANT rights)	With GRANT rights.

Upgrading from earlier versions of OracleAS Discoverer

D.1 Upgrading from earlier versions of OracleAS Discoverer

This section describes how to upgrade from earlier versions of OracleAS Discoverer, and contains the following topics:

- [Section D.2, "Upgrading from Discoverer Version 9.0.2 to Discoverer Version 9.0.4"](#)
- [Section D.3, "Upgrading from Discoverer Release 4.1 to Discoverer Version 9.0.4"](#)

D.2 Upgrading from Discoverer Version 9.0.2 to Discoverer Version 9.0.4

If you upgrade from Oracle9iAS Release 2 (9.0.2) to Oracle Application Server 10g (9.0.4), the OracleAS Upgrade Assistant will automatically perform most of the tasks required to upgrade OracleAS Discoverer. However, you still have to manually incorporate the following:

- any customizations made in Version 9.0.2 XSL files into the equivalent Version 9.0.4 XSL files
- public connections and private connections (for more information, see [Section D.2.1, "About migrating Discoverer connections"](#))

For more information about upgrading from Oracle9iAS Discoverer Version 9.0.2 to Version 9.0.4, see *Oracle Application Server Upgrading to 10g (9.0.4)*.

Depending on the version of Oracle9iAS Discoverer Version 9.0.2 that you are upgrading from, you might need to upgrade the End User Layer (EUL) before you

can use OracleAS Discoverer Version 9.0.4 (if you have been using Version 9.0.2.53 or later, no EUL upgrade is required). To upgrade the EUL, you use Oracle Discoverer Administrator Version 9.0.4 (which is shipped with Oracle Developer Suite Release 10g (9.0.4)). For more information about upgrading the EUL, see the *Oracle Discoverer Administrator Administration Guide* in the Oracle Developer Suite Documentation Library.

D.2.1 About migrating Discoverer connections

You can migrate the following Discoverer connections:

- public connections
- private connections stored using the single sign-on name

Note: If single sign-on is not implemented, private connections are stored as cookies on the Discoverer client machines, and therefore cannot be migrated programmatically.

To copy Discoverer public connections and Discoverer private connections from one OracleAS Discoverer instance to another, you migrate the ORASSO_DS schema (for more information, see *Oracle Application Server Administration Guide*).

For more information about infrastructure re-association and the ORASSO_DS schema, see [Section B.3, "About changing Infrastructure Services for OracleAS Discoverer"](#).

D.3 Upgrading from Discoverer Release 4.1 to Discoverer Version 9.0.4

If you upgrade from Oracle9iAS Release 1 (1.0.2.2) to Oracle Application Server 10g (9.0.4), you must perform the following tasks to upgrade OracleAS Discoverer from Release 4.1 to Version 9.0.4:

- [Section D.3.1, "Upgrading preferences"](#)
- [Section D.3.2, "Upgrading the EUL"](#)
- [Section D.3.3, "Updating URL references"](#)
- [Section D.3.4, "Configuring session timeout"](#)
- [Section D.3.5, "Upgrading Discoverer Viewer customizations"](#)

Notes:

- Before you begin the upgrade process, we recommend that you confirm that the Oracle Application Server 10g (9.0.4) Discoverer installation was successful (for

more information, see [Section 1.6, "How to confirm an OracleAS Discoverer installation"](#)).

- The instructions in this section assume the following:
 - Oracle9iAS Release 1 (1.0.2.2) is installed into <ORACLE_HOME_1>
 - Oracle Application Server 10g (9.0.4) is installed into <ORACLE_HOME_2>

D.3.1 Upgrading preferences

This section explains how to upgrade Discoverer preferences.

Hint: If Discoverer scripts do not execute on UNIX, run the script file `discwb.sh` to set the Discoverer environment. For more information about the location of configuration files, see [Section A.2, "List of Discoverer file locations"](#).

D.3.1.1 How to upgrade default user preferences

The `pref.txt` file specifies the default user preferences. To upgrade default user preferences, follow the steps below:

1. Compare the Release 4.1 `pref.txt` file with Version 9.0.4 `pref.txt` file, as follows:
 - on UNIX, compare <ORACLE_HOME_1>/discwb4/util/pref.txt with <ORACLE_HOME_2>/discoverer/util/pref.txt
 - on Windows, compare <ORACLE_HOME_1>\discwb4\util\pref.txt with <ORACLE_HOME_2>\discoverer\util\pref.txt
2. If changes have been made to the `pref.txt` file in the <ORACLE_HOME_1> directory, edit the `pref.txt` file in the <ORACLE_HOME_2> directory and make the same changes.
3. Apply the default preferences (for more information, see [Section 8.6, "How to set user preferences for all users"](#)).

D.3.1.2 How to upgrade user level preferences from Discoverer Release 4.1 to Discoverer Version 9.0.4 on UNIX

If you are upgrading from one Oracle Home to another on the same computer running UNIX, follow the instructions below to upgrade user level preferences from Discoverer Release 4.1 to Discoverer Version 9.0.4:

1. Copy the `.reg_key.dc` file (from the location specified by the `DC_REG` environment variable) to the location specified for the `.reg_key.dc` file in [Section A.2, "List of Discoverer file locations"](#).

Hint: To find out the location of the `.reg_key.dc` file in Discoverer Release 4.1, look in the `discwb.sh` file in `ORACLE_HOME/<installation>/discwb4`.

2. Type the following at a command prompt (on UNIX):

```
> <ORACLE_HOME_2>/discoverer/bin/dis51pr -migrate
```

If you are upgrading from one computer to another computer running UNIX, follow the instructions below to upgrade user level preferences from Discoverer Release 4.1 to Discoverer Version 9.0.4:

1. Copy the `.reg_key.dc` file (from the location specified by the `DC_REG` environment variable) on the machine where Discoverer Release 4.1 is installed to the location specified by the `DC9_REG` environment variable on the machine where Discoverer Version 9.0.4 is installed.
2. On the machine where Discoverer Version 9.0.4 is installed, type the following at a command prompt (on UNIX):

```
> <ORACLE_HOME_2>/discoverer/bin/dis51pr -migrate
```

D.3.1.3 How to upgrade user level preferences from Discoverer Release 4.1 to Discoverer Version 9.0.4 on Windows

If you are upgrading from one Oracle Home to another on the same computer running Windows, follow the instructions below to upgrade user level preferences from Discoverer Release 4.1 to Discoverer Version 9.0.4:

1. Type the following at a command prompt:

```
> <ORACLE_HOME_2>\discoverer\util\migrateprefs.bat
```

This command copies user level preferences from the Windows registry to a file called `reg_key.dc`.

If you are upgrading from one computer to another computer running Windows, follow the instructions below to upgrade user level preferences from Discoverer Release 4.1 to Discoverer Version 9.0.4:

1. On the machine where Discoverer Release 4.1 is installed:
 - a. From the Windows Start menu, select Run.
 - b. In the Run window, type `regedit` and press [Enter].
 - c. In the Registry Editor, open the `HKEY_LOCAL_MACHINE\Software\Oracle\WebDisco4` registry key.

- d. Choose Registry | Export Registry File to export the registry key to a file.
 - e. Specify a name for the registry export file (e.g. disco41prefs.reg).
2. Copy the registry export file from the machine where Discoverer Release 4.1 is installed to the machine where Discoverer Version 9.0.4 is installed.
3. On the machine where Discoverer Version 9.0.4 is installed:
 - a. From the Windows Start menu, select Run.
 - b. In the Run window, type `regedit` and press [Enter].
 - c. In the Registry Editor, choose Registry | Import Registry File.
 - d. Specify the name of the registry export file to import (e.g. disco41prefs.reg).
4. Upgrade the preferences by typing the following at a command prompt:

```
> <ORACLE_HOME_2>\discoverer\util\migrateprefs.bat
```

D.3.2 Upgrading the EUL

The version of Discoverer that ships with Oracle Application Server 10g (9.0.4) requires an EUL created or upgraded by Discoverer Administrator Version 9.0.4 (which is shipped with Oracle Developer Suite 10g (9.0.4)). If you have an existing Discoverer Release 4.1 EUL, you must upgrade the EUL from Release 4.1 to Version 5.1 using Discoverer Administrator Version 9.0.4.

For more information about upgrading the EUL, see the *Oracle Discoverer Administrator Administration Guide* in the Oracle Developer Suite Documentation Library.

D.3.3 Updating URL references

All Discoverer Viewer and Discoverer Plus URL references have changed between Discoverer Release 4.1 and Discoverer Version 9.0.4. These changes include (but are not limited to) links within the Web site and client bookmarks. You must manually replace all occurrences of old URLs with the new URLs, using the table below as a guide:

Release 4.1 URL	Version 9.0.4 URL	Example
<p>http://hostname/Discwb4/html/english/ms_ie/start_ie.htm</p> <p>or</p> <p>http://hostname/Discwb4/html/english/netscape/start_nn.htm</p>	<p>http://hostname/discoverer/plus</p>	<p>Change</p> <p>http://host:port/Discwb4/english/...</p> <p>to</p> <p>http://host:port/discoverer/plus/...</p>
<p>http://hostname/Discoverer4i/Viewer</p>	<p>http://hostname/discoverer/viewer</p>	<p>Change</p> <p>http://host:port/Discoverer4i/Viewer/...</p> <p>to</p> <p>http://host:port/discoverer/viewer/...</p>

D.3.4 Configuring session timeout

The session timeout parameter controls the HTTP session timeout (i.e. the number of minutes the Discoverer servlet waits for a browser to make another HTTP or HTTPS request before terminating the user's HTTP session).

In Discoverer Release 4.1, the session timeout parameter is in the disco4iviewer.properties file in the following directory:

- on UNIX, the disco4iviewer.properties file is in the <ORACLE_HOME_1>/Apache/JServ/servlets directory
- on Windows, the disco4iviewer.properties file is in the <ORACLE_HOME_1>\Apache\JServ\servlets directory

In Discoverer Version 9.0.4, the session timeout parameter is in the web.xml file in the following directory:

- on UNIX, the web.xml file is in the <ORACLE_HOME_2>/j2ee/OC4J_BI_Forms/applications/discoverer/web/WEB-INF directory
- on Windows, the web.xml file is in the <ORACLE_HOME_2>\j2ee\OC4J_BI_Forms\applications\discoverer\web\WEB-INF directory

If you want to set the session timeout parameter, you must add it to the web.xml file immediately following the line that reads </servlet> and before the bottom of the <web-app> section of the file, as shown below:

```
<web-app>
  <servlet>
    ...
  </servlet>
  <session-config>
```

```

        <session-timeout>15</session-timeout>
    </session-config>
</web-app>

```

D.3.5 Upgrading Discoverer Viewer customizations

A number of files control the appearance and behavior of OracleAS Discoverer Viewer. Those files might have been modified to customize Discoverer Viewer to meet certain customer-specific requirements. Installing Oracle Application Server 10g (9.0.4) installs new files with different names. More specifically:

- disco4iv.xml is renamed configuration.xml and viewer_config.xml is renamed ui_config.xml
- the content of various XSL files is moved into new XSL files

If you have modified the original configuration files and XSL files, then you must edit the new Version 9.0.4 files and reapply the changes from the Release 4.1 files.

Note: Do not simply replace the new files with the Release 4.1 files (i.e. do not simply rename the new files). Follow the steps in this section to upgrade only the customizations, not all of the differences, from the original Release 4.1 files to the new files.

1. For each original Release 4.1 file in `ORACLE_HOME_1\Apache\Apache\htdocs\disco4iv\html`, perform the following tasks:
 - a. Use the table below to identify the Version 9.0.4 file that contains the equivalent information:

Release 4.1 File	Version 9.0.4 File
disco4iv.xml	on UNIX, <code><ORACLE_HOME_2>/j2ee/OC4J_BI_Forms/applications/discoverer/web/WEB-INF/configuration.xml</code> on Windows, <code><ORACLE_HOME_2>\j2ee\OC4J_BI_Forms\applications\discoverer\web\WEB-INF\configuration.xml</code>
viewer_config.xml	on UNIX, <code><ORACLE_HOME_2>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl/ui/ui_config.xml</code> on Windows, <code><ORACLE_HOME_2>\j2ee\OC4J_BI_Forms\applications\discoverer\web\common\xsl\ui_config.xml</code>

Release 4.1 File	Version 9.0.4 File
errors.xml functions.xml gui_components.xml page_layouts.xml render_table.xml scripts.xml style.xml	various new XSL files in the following directories: <ul style="list-style-type: none"> ■ on UNIX, in the <ORACLE_HOME_2>/j2ee/OC4J_BI_Forms/applications/discoverer/web/common/xsl directory and the <ORACLE_HOME_2>/j2ee/OC4J_BI_Forms/applications/discoverer/web/viewer_files/xsl directory ■ on Windows, in the <ORACLE_HOME_2>\j2ee\OC4J_BI_Forms\applications\discoverer\web\common\xsl directory and the <ORACLE_HOME_2>\j2ee\OC4J_BI_Forms\applications\discoverer\web\viewer_files\xsl directory

- b. Compare the original Release 4.1 file with the equivalent Version 9.0.4 file in the ORACLE_HOME_2\J2EE\OC4J_BI_Forms\applications\discoverer\web\ subdirectories.
- c. Edit the equivalent Version 9.0.4 file to incorporate any customizations found in the original Release 4.1 file.

Note: If you modify the configuration.xml file, consider using Application Server Control to make the changes. Application Server Control provides a user interface for editing settings in the configuration.xml file and includes useful information about each setting.

Frequently asked questions

E.1 Frequently asked questions

This section contains the following frequently asked questions:

- ["What are the OracleAS Discoverer settings configured on installation?"](#)
- ["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?"](#)

Note: For FAQs about Discoverer security, see [Section 12.9, "Frequently asked questions about security"](#).

What are the OracleAS Discoverer settings configured on installation?

For more information about Discoverer system preferences, see [Section A.6, "List of configuration settings in opmn.xml"](#).

What should I do if I get a network error?

If OracleAS 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 OracleAS Discoverer? OracleAS 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 the Discoverer preferences command line utility `dis51pr` or `dis51pre` is running.

Hint: You can use the `checkdiscoverer` utility to verify a Discoverer configuration and report on failures or anomalies (for more information about the `checkdiscoverer` utility, see [Section 4.11.2, "What is the checkdiscoverer utility?"](#)).

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.

Notes

- If you specify a database using the full `tnsnames` entry for the database (e.g. SID, address, port), you can connect databases that do not have an entry in the `tnsnames.ora` file. For example, you might enter the following string in the Database field:

```
(DESCRIPTION =(ADDRESS_LIST =(ADDRESS = (PROTOCOL =  
TCP)(HOST = machine_a.company.com)(PORT = 1521)))(CONNECT_  
DATA =(SERVICE_NAME = database1)))
```

- For more information about the location of the `tnsnames.ora` file, see [Section A.2, "List of Discoverer file locations"](#).

Index

A

- accessibility
 - about, 1-xiii
 - framedisplaystyle preference configuration, 11-18
 - JAWS, 11-18, A-11
 - query delay for JAWS, A-11
- Application Server Control, 4-2
 - how to display the Discoverer home page, 4-4
 - how to start, 4-4
 - using to manage Discoverer components, 4-4
 - why use with Discoverer, 4-3
- Applications user
 - check box, 8-10, 8-21
 - connection, 8-10, 8-21
- applypreferences.bat, A-2
- applypreferences.sh, A-2
- architecture
 - of Discoverer, 1-9

B

- BLAF
 - blaf.css, 7-3, A-2
 - blaf.htm, 7-3, A-2
 - sample look and feel settings, 7-3
- blaf.css, A-2
- blaf.htm, A-2
- browser
 - requirements, 2-3
 - supported by Discoverer, 2-3

C

- CellPadding preference, 8-9
- certdb.txt, A-2
- changing Infrastructure Services, B-1
- character limits
 - browser limits, 11-3
- checkdiscoverer utility, 4-40, 4-41, A-3
- collectlogs.bat, 4-40, 4-47, A-3
- collectlogs.sh, 4-40, 4-47, A-3
- column spacing in reports, 8-9
- communication protocols, 4-3
 - about HTTP, 12-10, 12-12
 - about HTTPS, 12-12, 12-25
 - about JRMP, 12-10, 12-12
- components
 - OAD, 1-14
- configuration files
 - applypreferences.bat, A-2
 - applypreferences.sh, A-2
 - blaf.css, A-2
 - blaf.htm, A-2
 - certdb.txt, A-2
 - checkdiscoverer.bat, A-3
 - checkdiscoverer.sh, A-3
 - collectlogs.bat, A-3
 - collectlogs.sh, A-3
 - configuration.xml, A-3, A-9
 - defaults.txt, A-4
 - dis51pr, A-4
 - discoverer.xsl, A-4
 - discwb.sh, A-4
 - error.txt, A-4
 - graphproperties.xss, A-4

- migrateprefs.bat, A-5
- migrateprefs.sh, A-5
- mod_osso.conf, A-5
- opmnctl, A-5
- opmn.xml, A-5, A-12
- plus_config.xml, A-6, A-11
- pref.txt, A-6
- reg_key.dc, A-6
- registerSession.bat, A-6
- registerSession.sh, A-6
- tnsnames.ora, A-7
- ui_config.xml, A-7
- web.xml, A-7
- configuration.xml, A-3, A-9
- connections, 2-18
 - about, 3-1, 3-4
 - about private connections, 3-3
 - about public connections, 3-4
 - connections page, 3-5
 - creating a public connection, 3-6
 - enabling private, 3-10
 - how to find out a connection ID, 11-8
 - managing with Oracle Enterprise Manager, 3-4
 - migrating, 3-4, D-2
 - private, 2-18
 - public, 4-3
 - types, 3-3
- connections ID
 - how to find out, 11-8
- CORBA components
 - Preferences, 1-14, 1-15
 - Session, 1-14
 - SmartAgent, 1-14
- Create Connections page
 - Oracle Applications User check box, 13-3, 13-4
- currency
 - Euro countries, 8-12
- customization
 - Discoverer Viewer options, 7-7
- customizing Discoverer Viewer
 - about, 7-2
 - changing the logo, 7-11
 - creating a presentation template, 7-15
 - CSS files, 7-4
 - look and feel, 7-10

- overview, 7-1
- presentation options, 7-7
- presentation templates, 7-8
- what tools you need, 7-3
- XML files, 7-6

D

- dashboard application, 9-2
- database security
 - about, 12-4
- defaults.txt, A-4
- demilitarized zones (DMZs)
 - about, 12-24
- diagnosing problems, 4-41
 - checkdiscoverer utility, 4-41
- dis51pr, A-4
- Discoverer
 - about, 1-1
 - and Oracle Application Server, 1-5
 - and Oracle Applications, 13-1
 - and OracleAS Portal, 9-1
 - architecture, 1-9
 - CORBA components, 1-14
 - installing on multiple machines, 5-1
 - J2EE components, 1-12
 - over SSL/HTTPS, 2-8, 12-8
 - Plus servlet, 1-13
 - Portlet Provider servlet, 1-14
 - process, 1-17
 - running, 2-1
 - security, 2-3, 3-11
 - servlet, 1-13
 - starting, 2-1
 - URL parameters, 11-1
 - Viewer, 1-1
- Discoverer connections
 - about, 3-1
 - and Oracle Applications, 13-1
- Discoverer Java applet, 1-11
- Discoverer logins
 - managing with Oracle Enterprise Manager, 3-4
- Discoverer Plus, 2-5
 - about, 1-1
 - accessing over dial-up, 2-6

- applet, 2-2
- client machine requirements, 1-11
- operating system rights, 2-5
- process, 1-18
- running, 2-5
- running on Internet Explorer, 2-17
- running on MS Internet Explorer, 2-5
- running on Netscape, 2-5
- running on Netscape Navigator, 2-20
- security settings, 2-5
- session timeout, 2-6
- upgrading the applet, 1-11
- URL arguments, 11-17
- Discoverer Portlet Provider
 - about, 9-1
 - security example, 12-20
- Discoverer preferences
 - migrating, 8-5
- Discoverer Preferences component
 - specifying the machine that is going to run it, 5-20
- Discoverer security
 - communication protocols, 12-12
 - configuring with HTTPS, 12-17
 - connections, 12-7
 - database, 12-4
 - default, 12-12
 - Discoverer Services Configuration page, 12-13
 - JRMP,HTTP,HTTPS, 12-7
 - non-Single Sign-On, 12-22
 - OracleAS Portal, 12-20
 - overview, 12-1
 - secure tunneling, 12-12
 - tunneling, 12-12
- Discoverer Services components
 - about, 1-12
 - Preferences component, 1-15
 - Session component, 1-15
- Discoverer Services Configuration page
 - starting OEM, 12-13
- Discoverer Viewer
 - about, 1-1
 - client machine requirements, 1-11
 - configuration files, A-7
 - customizing, 7-1

- JavaScript, 1-11
- process, 1-19
- running, 2-33
- security, 12-9
 - using the browser cache, A-8
- Discoverer Viewer options, 7-7
- DISCOVERER5 schema migration, B-1
- discoverer.xml, A-4
- discwb.sh, A-4
- DISPLAY variable
 - configuring for X Server, 2-36
- distributed installation, 5-1
- DMZs, 12-24

E

- encryption
 - how to configure Discoverer to use encryption in an intranet, 12-27
 - how to configure Discoverer to use encryption through firewalls, 12-27
 - how to verify that Discoverer is encrypting communications, 12-28
- Enterprise Manager
 - changing database passwords, 4-3
 - creating public connections, 4-3
 - enabling graphs in Viewer/Portal, 4-3
 - Oracle Enterprise Manager, 4-3
 - query progress delay, 4-3
 - setting locale, 4-3
 - stylesheet pooling, 4-3
 - using, 4-3
- error message - Could not resolve service name?, E-2
- error message ORA-1002 Fetch out of sequence, 8-16
- error message ORA-12154, E-2
- Euro currency, 8-12
- EuroCountries preference, 8-12
- Excel export formats, 11-26
- exporting data
 - displaying repeating values, 8-13
 - export formats, 11-26
 - NULL values, 8-13

F

firewalls

- about, 12-23
- how to configure Discoverer for both intranet users and users accessing Discoverer through a firewall, 12-28
- how to configure Discoverer to use encryption through firewalls, 12-27
- how to configure Discoverer to work through a firewall, 12-26, 12-27
- policies, 12-24

fonts

- in Viewer graphs, A-4

framedisplaystyle preference and JAWS, 11-18

- frequently asked questions about security, 12-23

G

graph

- properties in Viewer, A-4
- styles, A-4

graph properties

- how to change in Viewer, A-4

graphing

- configuring X Server, 2-36
- graphs don't display on UNIX, 2-36

graphproperties.xss, A-4

H

HTTP, 12-7

- about, 12-10, 12-12

HTTPS, 12-7

- about, 12-12, 12-25
- enabling, 2-8, 12-8
- running Discoverer, 2-7

I

include_expiration_tags, A-8

Infrastructure Services

- changing, B-1
- which files to move, B-1

installing Discoverer

- on multiple machines, 5-1

Internet Explorer

- running Discoverer, 2-17

intranet

- configure Discoverer for both intranet users and users accessing Discoverer through a firewall, 12-28
- how to configure Discoverer to work in an intranet, 12-25

J

J2EE components

- about, 1-12

Jar Cache

- clearing, 2-2

Java applet, 2-2

Java Plug-in 1.3, 2-31

Java Virtual Machine, 4-48

- overriding, 4-48

Javascript

- Discoverer Viewer requirements, 1-11

JAWS

- framedisplaystyle preference, 11-18
- maximising for, 11-18, A-11
- using, A-11

JInitiator

- requirements, 2-5, 2-8
- version 1.3, 4-48

JRMP, 12-7

- about, 12-10, 12-12

L

load balancing, 5-1

- how to turn on OracleAS Web Cache, 6-7, A-10

log files, 4-40, 4-47

- collecting, 4-40, 4-47
- enabling Discoverer Service logs, 4-43
- enabling Discoverer Servlet logs, 4-44
- server diagnostics available, 4-40
- using OracleAS View Logs, 4-41
- viewing Discoverer Services logs, 4-45
- viewing Discoverer Servlet logs, 4-46

login information
migrating, D-2

M

memory requirements of Discoverer, 2-5
Microsoft Excel
 export formats, 11-26
migrateprefs.bat, A-5
migrateprefs.sh, A-5
minimum security settings, 2-5
mixed application environments, 13-4
mod_osso.conf, 9-3, 12-19, A-5
 OssoIPCheck, 9-3
multiple machine installation
 about configuring Discoverer, 5-7

N

NAT (Network Address Translation), deploy
 Discoverer using a standard NAT, 12-28
Netscape Navigator, 2-5
 running Discoverer, 2-20
Netscape Navigator for UNIX, 2-31
NULL values in exported data, 8-13

O

OAD, 1-14
 about, 1-15
OPMN
 list of configuration settings in opmn.xml, A-12
 opmnctl script, A-5
opmn.xml, A-5, A-12
optimizing Discoverer performance and
 scalability, 10-1
ORA-1002 Fetch out of sequence error
 message, 8-16
ORA-12154 error message, E-2
Oracle Application Server
 and OracleAS Discoverer, 1-5
Oracle Applications, 13-1
 and OracleAS Discoverer, 13-1
 AppsFNDNAM, 13-3
 AppsGWYUID, 13-3

 configuration settings, 13-3
 using Discoverer with, 13-1
Oracle Applications user
 displaying login check box, 13-1
Oracle Applications User check box, 13-3, 13-4
Oracle Applications-only environments, 13-3
Oracle Enterprise Manager
 enabling private connections, 3-10
Oracle Enterprise Manager Application Server
 Control
 about, 4-2
Oracle Jar Cache, 2-5
 clearing, 2-2
OracleAS Discoverer
 about Discoverer Plus, 1-1
 about Discoverer Viewer, 1-1
 about Portlet Provider, 9-1
OracleAS Framework Security
 and Discoverer, 12-7
OracleAS Portal, 9-1
 about, 9-1
 security example, 12-20
 stylesheet pooling, 10-12
OracleAS Web Cache
 about, 6-1
 benefits, 6-3
 how does it work?, 6-4
 how to display the Rerun Query link, hide the
 Preferences link and hide the presentation
 options link, 6-9
 how to turn off Viewer's 'sticky worksheet'
 behavior, 6-9, 6-10
 using, 6-1
 using Viewer with, 6-5, 6-6, 6-11
ORASSO_DS schema migration, B-1
OssoIPCheck, 9-3

P

password
 hiding passwords in URL, 11-12
performance
 about Discoverer and performance, 10-1
 how to improve Discoverer's performance, 10-2
 by basing lists of values on tables containing

- distinct values, 10-9
- by changing cache settings, 10-10
- by increasing the size of the array used to fetch rows from the database, 10-8
- by reducing the time taken to display business areas and folders, 10-4
- by scheduling worksheets to run overnight, 10-11
- by setting the Case Storage item property appropriately, 10-7
- by using 'select all parameter values' not using DECODE function, 10-6
- by using Discoverer Administrator hints, 10-7
- by using OracleAS Web Cache, 10-11
- by using summary folders, 10-5
- optimizing, 10-1
- reducing the size of reports, 8-9, 8-16
- plus_config.xml, A-6, A-11
 - and JVMs, 4-48
- portals, 9-1
 - OracleAS Portal, 9-1
- ports
 - Discoverer port, 2-4
- preferences
 - about Discoverer preferences?, 8-1
 - about Discoverer system preferences, 8-2
 - about Discoverer user preferences, 8-3
 - editing, 8-1
 - how to set for specific users, 8-6
 - how to set user preferences for all users, 8-5
 - list of Discoverer user preferences, 8-8
 - migrating, 8-5
 - upgrading Discoverer, 8-5
- Preferences component
 - in Discoverer Services tier, 1-15
- pref.txt, A-6
- prerequisites
 - for running Plus and Viewer, 1-xii
- Presentation Options
 - about, 7-7
 - presentation templates, 7-7
- presentation templates, 7-7
 - how to create, 7-15
- PrintHeadersOnce preference, 8-16

- printing
 - reducing the size of reports, 8-9, 8-16
- printing large worksheet titles, 8-17
- private connections
 - about, 3-3
 - not allowed, 11-4, 11-13
 - URL parameters for, 11-4, 11-13
- privileges
 - granted to PUBLIC, C-1
 - granted to the Discoverer manager, C-2
 - required for Discoverer, 2-5
- public connections
 - about, 3-4
 - not allowed, 11-4, 11-13
 - URL parameters for, 11-4, 11-13

R

- reg_key.dc, A-6
- .reg_key.dc file, 8-4
- registerSession.bat, A-6
- registerSession.sh, A-6
- removing Discoverer Plus applet, 2-2
- reports
 - reducing the size of reports, 8-9, 8-16
- running Discoverer Plus in IE, 2-17
- running Discoverer Plus in Netscape, 2-20
- running Discoverer Viewer, 2-33

S

- scalable architecture of Discoverer
 - how to take advantage of, 10-11
 - specifying OC4J memory usage parameters, 10-12
 - specifying the number of OC4J processes, 10-12
 - using the scalability features of OracleAS, 10-11
 - using XSL stylesheet pooling, 10-12
- Secure Sockets Layer (SSL), 2-7
- security
 - about Discoverer security, 12-1
 - database level, 12-4
 - disabling Discoverer Plus, 2-3, 3-11

- disabling private connections, 2-3, 3-11
- Discoverer Plus, 12-10
- Discoverer Viewer, 12-9
- encryption, 12-27
- installing certificates, 2-7
- network level, 12-7
- non-standard signing authority, 12-12
- private connections not allowed, 11-4, 11-13
- protocols, 12-10, 12-12
- running Discoverer, 2-3, 3-11
- security settings for Discoverer Plus, 2-5
- Session component of Discoverer Services, 1-15
- session ID
 - in logs, 4-41
- session pooling, 4-3
- session timeout in Discoverer Plus, 8-25
- session timeout in Discoverer Viewer, 8-25
- session-timeout value, 8-25
- signing authority, 12-12
- Single Sign-On
 - about, 12-19
 - and Discoverer, 12-19
 - enabling, 12-19
 - mod_osso.conf, 12-19
 - OracleAS Portal example, 12-20
- SmartAgent, 1-14
- SSL
 - enabling, 2-8, 12-8
- starting Discoverer, 2-1
- starting Discoverer automatically using URL parameters, 11-1

T

- tiered architecture of Discoverer
 - Client tier (Plus and Viewer), 1-10
 - Database tier (Plus and Viewer), 1-16
 - Discoverer Services tier (Plus and Viewer), 1-12
- Timeout
 - about setting in Discoverer Viewer, 8-25
 - in Discoverer Plus, 8-25
 - in Discoverer Viewer, 8-25
 - preferences, 8-25
 - session timeout, 2-6, 8-23
 - setting timeout values, 8-25

- titles
 - printing large worksheet titles, 8-17
- tnsnames.ora, A-7
 - about, 5-24
 - editing, 5-24, A-7

U

- ui_config.xml, A-7
 - include_expiration_tags, A-8
- UNIX client browser, 2-31
- UNIX Netscape Navigator, 2-31
- upgrading
 - Discoverer preferences, 8-5
- URL
 - hiding passwords, 11-12
 - URL character limits, 11-3
 - URL parameters, 11-1
 - about, 11-1
 - specifying workbooks and worksheets, 11-5
 - syntax, 11-2
- URLs and Discoverer, 11-1
 - examples of using URL parameters, 11-10
 - generic Discoverer URL arguments, 11-13
 - URL arguments for Discoverer Plus, 11-17
 - URL arguments for Discoverer Viewer, 11-24
 - what is the URL parameter syntax for
 - Discoverer, 11-2
 - why use URL parameters?, 11-1
- Users Personal Profile Space, 2-5

V

- Visibroker CORBA components, 1-14

W

- Web browser cache
 - overriding, A-8
- Web Cache
 - how Web Cache works, 6-4
 - what are the benefits of?, 6-3
- web.xml, 8-25, A-7
- workbook ID
 - how to find out, 11-5

worksheet ID
 how to find out, 11-7
worksheet layout
 padding cells, 8-9
 printing large title, 8-17

X

X Server
 configuring on UNIX, 2-36
 displaying graphs and charts, 2-36
XSL stylesheet pooling, 10-12