

HP Data Protector Reporter

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Quick Start Guide

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Acknowledgements

This product includes software developed by the Apache Software Foundation (<http://www.apache.org/>).

This product includes software developed by the JDOM Project (<http://www.jdom.org/>).

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About This Guide

This guide is intended to help first-time users who purchased HP Data Protector Reporter to install and configure the product quickly. If you are migrating HP Data Protector Reporter, refer to the *HP Storage Essentials Installation Guide*.

Obtaining HP Data Protector Reporter

You can download HP Data Protector Reporter for a 60-day trial from <http://www.hp.com/go/storageessentials>. Click **TRIALS AND DEMOS > HP STORAGE ESSENTIALS FOR DATA PROTECTOR REPORTER SOFTWARE FOR 60 DAYS**. Then, follow the prompts. If you do not have a Passport Account, follow the prompts to create one.

Chapter 1

Installing HP Data Protector Reporter on Microsoft Windows

Caution: HP Storage Essentials is designed for operation in a secure corporate intranet. All other configurations are not recommended or supported.

The chapter contains the following topics:

- "Pre-installation Checklist" below
- "Installing the Product" on page 22
- "Removing the Product" on page 28

For information on how to install the product on Linux, see "Installing HP Data Protector Reporter on Linux" on page 33.

Pre-installation Checklist

The following basic requirements must be met before beginning an installation or migration:

- "Installation and Migration Requirements" below
- "Verify Networking" on page 21
- "Install a Supported Browser" on page 21

Installation and Migration Requirements

Verify that your environment meets or exceeds the requirements listed in the following table.

Note: You cannot proceed with your installation or migration until you meet these requirements.

Requirement	Must Meet or Exceed
NTFS File System	Installations: The NTFS file system is required to install the product. Migrations (Contact Your Account Representative Before Migrating): If Oracle is installed on a volume using the FAT32 file system, you must convert the volume to NTFS before you can migrate. Contact customer support for information about converting the volume to NTFS.

Requirement	Must Meet or Exceed
Screen Resolution	Screen resolutions less than 800 pixels by 600 pixels will cause the installation or migration to fail. The Install/Migrate wizard can run on a screen resolution of 800 x 600 pixels, or higher, and can be resized.
Windows Account	The account used to log on must be in the Administrators group.
Operating System	Refer to the support matrix.
Microsoft Internet Explorer and Firefox	Refer to the Browser tab in the support matrix.
TCP/IP	TCP/IP must be enabled.
Minimum Disk Space for the Install/Migrate Wizard	When the Install/Migrate wizard is running, it creates a temporary directory named <system-drive:>InstallSRMTemp that contains the files required by the Install/Migrate wizard. This directory must have at least 2 GB of free space.
Minimum Recommended Disk Space for the Product	<ul style="list-style-type: none"> • Single Server = HP Storage Essentials, SRM Report Optimizer, and Report Database installed on the same 64-bit server. <ul style="list-style-type: none"> ▪ With ARCHIVING and RMAN backup off: recommended disk space 300 GB. ▪ With ARCHIVING and RMAN backup on: recommended disk space 450 GB. • Dual Server = HP Storage Essentials on one Windows server and SRM Report Optimizer\Report Database installed on a separate Windows server. <ul style="list-style-type: none"> ▪ With ARCHIVING and RMAN backup off: recommended disk space: 200 GB. ▪ With ARCHIVING and RMAN backup on: recommended disk space: 350 GB.
Virtual Machines	Installations on virtual machines are supported. Refer to the "Mgr Platform" tab in the support matrix.
Required RAM	Refer to the support matrix.
Required Ports	<p>The management server requires certain ports be available. For more information about the ports used, see "Ports Used by the Product" on page 33.</p> <p>If you see a warning in the Ports Availability requirement, check to make sure that the ports listed are not currently in use and make any changes that are necessary. The installation will continue even if a required port is not available.</p>

Requirement	Must Meet or Exceed
Firewalls	If the management server is behind a firewall, make sure that the ports required by HP Data Protector Reporter are added to the firewall "exceptions" list. This is required for Data Protector Reporter to communicate with the managed elements and enables a client web browser to access HP Storage Essentials from outside the firewall.
DNS Resolution	<p>The Install/Migrate wizard verifies the IPv4 address and DNS name of the server using nslookup. If nslookup is not successful, the installation will not continue.</p> <p>DNS Resolution failure prevents the product from running successfully. If the DNS Resolution requirement fails, see "Troubleshooting Installation and Migration" on page 117.</p>
%perl5lib% Environment Variable	The %perl5lib% environment variable cannot be set to any value. For more information, see "Troubleshooting Installation and Migration" on page 117 .
Data Execution Prevention (DEP)	Data Execution Prevention (DEP) must be set for "Essential Windows Programs and Services Only." For information on modifying the DEP setting, see the documentation for your Windows operating system.
<p>The paths specified in the Options tab for the following components share these requirements:</p> <ul style="list-style-type: none"> • HP Storage Essentials • Oracle Database • CIM extensions • Reporter Database • Report Optimizer 	<p>The Options tab has the following requirements for entering paths:</p> <ul style="list-style-type: none"> • Only the following characters are supported: A-z, 0-9, underscores, periods, and backslashes. • Paths cannot contain spaces. • The drive letter must be a fixed drive.

Ports Used by the Product

HP Storage Essentials and Report Optimizer use a number of ports that cannot be used by another program.

Ports Used by the HP Storage Essentials

Port	Description	Protocol	In/Out
22	Used by SSH to deploy host agents (optional – only need if using the CIME Management tool)	SSH	I/O ¹
80	Port used for discovery and the HTTP web server. <ul style="list-style-type: none"> • NetApp • Web Browser Interface • HP Accelerator Pack for Operations Orchestration 	HTTP	I/O ¹
161	<ul style="list-style-type: none"> • SNMP Agent • Cisco SNMP <p>This port is not required and is optional for SNMP trapping. HP Storage Essentials uses SNMP version 2. Device alerts can also be delivered to HP Storage Essentials via API or SMI-S for certain devices.</p>	SNMP	I/O ¹
162	<p>An external port that is used for the SNMP trap listener. SNMP can be disabled, but no traps will be received.</p> <ul style="list-style-type: none"> • Cisco SNMP <p>This port is not required, but it is optional for SNMP trapping. HP Storage Essentials uses SNMP version 2. Device alerts can also be delivered to HP Storage Essentials via API or SMI-S for certain devices.</p>	SNMP	I/O ¹
389 (TCP/UDP)	<p>LDAP directory service</p> <p>This port is required to communicate with the Microsoft Exchange server. The port is used by Active Directory and Active Directory Domain Services.</p>	LDAP	O ²

Port	Description	Protocol	In/Out
443	An external port used for Secure Socket Layer (SSL) with the web interface. Port 80 can be used instead, but there will be no SSL. <ul style="list-style-type: none"> Celerra HP Storage Essentials OM SPI NetApp VMWare VC/ESX Web Browser interface 	HTTPS	I ³
636 TCP	This port is required to communicate with the Microsoft Exchange server. The port is used by Active Directory and Active Directory Domain Services.	LDAP/SSL	O ²
1099	<ul style="list-style-type: none"> HP Storage Essentials Connector for HP BSA Server Automation RMI Registry XP Arrays via Built-in XP Provider 	TCP	I ³
1443	Microsoft SQL Server Database (optional – only used if MSSQL Database Viewer is used)		O ²
1521	<ul style="list-style-type: none"> Oracle Transparent Name Substrate (TNS) Listener Port (Used for reporter access to HP Storage Essentials, as well as optional Oracle Database Viewer discovery) HP uCMDB DDM Probe 	TCP	>I ³
1972	Intersystems Caché Database	JDBC	O ²
2001	Device discovery port for the following devices: <ul style="list-style-type: none"> XP's via CV-AE HDS via HDvM 	HiCommand API (HTTP/HTTPS)	O ²
2443	Device discovery port for the following devices: <ul style="list-style-type: none"> XP's via CV-AE HDS via HDvM VMWare VC/ESX 	HiCommand API (HTTP/HTTPS)	>O ²
2463	Device discovery port for the following devices: <ul style="list-style-type: none"> SUN through the Engenio/LSI provider Engenio/LSI based arrays 	TCP	O ²

Port	Description	Protocol	In/Out
2707	Device discovery port for the EMC storage systems discovered through Solutions Enabler/SYMAPI	SYMAPI	O ²
3268 TCP	This port is required to communicate with the Microsoft Exchange server. The port is used by Active Directory and Active Directory Domain Services. The Active Directory global catalog listens on this port.	LDAP	O ²
3269 TCP	This port is required to communicate with the Microsoft Exchange server. The port is used by Active Directory and Active Directory Domain Services. The communications to the Active Directory global catalog on this port are encrypted.	LDAP/SSL	O ²
4444	JBoss RMI/JRMP Invoker HP Storage Essentials Connector for HP BSA Server Automation	TCP	I ³
4445	JBoss Pooled Invoker	TCP	>L ⁴
4673	<ul style="list-style-type: none"> • CIM Extension/Product Health Agent (Tuneable) • IBM VIO 	TCP	O ²
5432	PostgreSQL Server Database	JDBC	O ²
5555	Data Protector Agentless	TCP	O ²
5962	Discovery Group 12 CIMOM RMI	TCP	>L ⁴
5964	Discovery Group 11 CIMOM RMI	TCP	L ⁴
5966	Discovery Group 10 CIMOM RMI	TCP	L ⁴
5968	Discovery Group 9 CIMOM RMI	TCP	L ⁴
5970	Discovery Group 8 CIMOM RMI	TCP	>L ⁴
5972	Discovery Group 7 CIMOM RMI	TCP	L ⁴
5974	Discovery Group 6 CIMOM RMI	TCP	L ⁴
5976	Discovery Group 5 CIMOM RMI	TCP	L ⁴
5978	Discovery Group 4 CIMOM RMI	TCP	>L ⁴
5980	Discovery Group 3 CIMOM RMI	TCP	L ⁴

Port	Description	Protocol	In/Out
5982	Discovery Group 2 CIMOM RMI	TCP	L ⁴
5984	Discovery Group 1 CIMOM RMI	TCP	L ⁴
5986	Default Discovery Group CIMOM RMI	TCP	>L ⁴
5988/ 5989	<ul style="list-style-type: none"> • 3PAR SMI-S • Brocade SMI-A • Cisco SMI-S • Compellent SMI-S • EVAs via CV-EVA SMI-S • ESL/EML via CV-TL SMI-S v1.7/1.8/2.0 • ESL/EML via CV-TL SMI-S v2.2/2.3 • HP VLS 9000 (port 5988 only) • HSG-80 via EML SMI-S • IBM XIV • McDATA SMI-S • MSA 2300 G2 via MSA SMI-S Proxy Provider • MSA P2000 G3 (port 5989 only) • IBM CIM Agent • QLogic SMI-S • SMI-S and SMI-S secure • WBEM/WMI Mapper 	TCP/SMI-S	O ²
6389	Device discovery port for CLARiiON storage systems discovered through the NaviSphere CLI	Navisphere CLI	O ²
8009	JBoss Embedded Tomcat Service	TCP	L ⁴
8083	JBoss Web Service		L ⁴
8093	JBoss UIL Server IL Service HP Storage Essentials Connector for HP BSA Server Automation	TCP	I ³
8443	BSAE Data Miner	TCP	O ²
8873	BSAE Data Miner	TCP	O ²

Port	Description	Protocol	In/Out
9088	IBM Informix Dynamic Server Database	JDBC	O ²
12443	HP X9000. If the default port does not work, specify the port that is used, such as port 443.	HTTPS	O ²
16022	Lefthand Network	SSH	O ²
49152	WBEM	TCP SMI-S	O ²
49153	WBEM Secure Port	TCP SMI-S	>O ²
50000	IBM DB2 Database	JDBC	O ²
55988	WBEM	TCP SMI-S	O ²
55989	WBEM Secure Port	TCP SMI-S	O ²
60000	WBEM	TCP SMI-S	>O ²
60001	WBEM Secure Port	TCP SMI-S	O ²
Legend			
1	I/O = The port number must be opened on both HP Storage Essentials server and target device.		
2	O = The port number must be opened on the target device.		
3	I = The port number must be opened on the Source Server; for example, the HP Storage Essentials management server, the Report Optimizer server, or the SMI Agent (to receive information from a switch).		
4	L = A loopback port that must be available to the source server but not exposed outside.		

Ports Used by Report Optimizer

Port	Description
2638	SQL Anywhere for the Report Optimizer database uses this port.
6400, 6410, 6420, and 80	SI Agent uses these ports.
8080, 8005, 8443	Tomcat uses these ports.

Turn Off Internet Information Services (IIS) and Third-Party Web Servers

To turn off Internet Information Services (IIS) and third-party Web servers, verify that Internet Information Services (IIS) is either not installed or the service is set to manual and stopped.

Disable User Access Control on Windows

Do one of the following:

- Windows 2008 SP1 and SP2. Disable user access control (UAC).
- Windows 2008 R2. Set UAC to the lowest level available.

For more information on how to change your settings for UAC, see the Microsoft Windows documentation for your operating system.

Verify Networking

The management server must have static or dynamic host name resolution.

To verify that the server's name can be resolved through DNS on a Windows server 2008:

1. Right-click **My Computer** in the Start menu.
2. Select **Properties**. The Full computer name appears on the System page under Computer name, domain, and workgroup settings. The server must be in the domain in which it is going to be used.
3. From a command prompt, type `nslookup <FQDN>`. FQDN (fully qualified domain name) is the fully qualified computer name obtained in the previous step.
4. In the command prompt, type `nslookup <IP address>`. IP address is the IP address of the server.
Both results from `nslookup` should have the same fully qualified computer name and IP address.
5. In the command prompt, type `nslookup <Short name of computer>`. Results should resolve to the computer's fully qualified computer name and IP address.

The management server uses `nslookup` to resolve the names and IP addresses of managed systems. If the DNS suffix `com` is listed in the TCP/IP properties as one to append, problems such as inaccurate system status and incorrect IP addresses for systems HP Storage Essentials manages might occur. To correct this, remove `com` from the TCP/IP DNS suffix list:

1. Open **Control Panel > Network and Internet > Network and Sharing Center > Manage Network Connections**.
2. Right-click **Local Area Connection** and select **Internet Protocol > Properties > Advanced > DNS** tab.
3. If `com` is in the **Append these suffixes (in order)** box, remove it.

Caution: If you plan to browse to HP Storage Essentials from a server in a different domain, verify that the DNS suffix of the management server is added to the suffix list of the web client.

Install a Supported Browser

Install a supported browser on any machine from which you intend to view HP Storage Essentials pages. See the support matrix for your edition for a list of supported browsers.

Installing the Product

Caution: Do not manually install the Oracle database using the Oracle DVD set. The HP Storage Essentials Install/Migrate wizard prompts you for the Oracle installation files when the Oracle installation components are required.

This section contains the following information:

- "Windows Installation Checklist" below
- "Step 1 – Read the Release Notes and the Support Matrix" on the next page
- "Step 2 – Log On to the Windows Server" on the next page
- "Step 3 – Open Several Ports (Windows 2008 R2 Only)" on the next page
- "Step 4 – Start the HP Storage Essentials for Windows Installation Wizard" on page 24
- "Step 5 – Obtain a License Key" on page 27
- "Step 6 – Check for the Latest Service Pack" on page 28

Windows Installation Checklist

Print the following table and use it to track your progress. Each time you complete a step, check off the step in the "Did You Complete This Step?" column.

Windows Installation Checklist

Step	Need More information?	Did You Complete This Step?
Read the Support Matrix and Release Notes.	"Step 1 – Read the Release Notes and the Support Matrix" on the next page	
Logon to the Windows Server.	"Step 2 – Log On to the Windows Server" on the next page	
Open Several Ports (Windows 2008 R2 Only)	"Step 3 – Open Several Ports (Windows 2008 R2 Only)" on the next page	
Start the HP Storage Essentials for Windows Installation Wizard.	"Step 4 – Start the HP Storage Essentials for Windows Installation Wizard" on page 24	
Obtain a License Key.	"Step 5 – Obtain a License Key" on page 27	
Check for the Latest Service Pack.	"Step 6 – Check for the Latest Service Pack" on page 28	

Step 1 – Read the Release Notes and the Support Matrix

The *Release Notes* discuss late-breaking issues not covered in the *Installation Guide*. Read the support matrix to make sure the server on which you plan to install the management server meets or exceeds the requirements. Management server requirements are listed on the Manager Platform (Mgr Platform) tab of the support matrix. The *Release Notes* and support matrix can be found in any of the top-level directories of the *HP_SE_9.6.0* DVD.

If you run the installer on an unsupported operating system, the following error message is displayed:

```
This system type is not supported, please check the support matrix for supported type.
```

Step 2 – Log On to the Windows Server

Create a new account or log on to an existing account on the Windows system on which you are installing HP Storage Essentials. The new account or the existing account you use must be a member of the Administrators group. Before installing, you must disable UAC as described in ["Disable User Access Control on Windows"](#) on page 21.

Step 3 – Open Several Ports (Windows 2008 R2 Only)

If you plan to install HP Data Protector Reporter on Windows 2008 R2, you must open several ports before you begin the installation.

For example, to open ports 6400 and 8080, complete the following steps:

1. Open Windows Firewall with Advanced Security by selecting **Start > Administrative Tools > Windows Firewall Advanced Security**.
2. Create a new Inbound Rule, as follows:
 - a. Click **Inbound Rules**.
 - b. Select **New Rule** from the right-click menu.
3. Select the **Port** option and click **Next**.
4. Select the **TCP** option.
5. Enter `6400, 8080` for specific local ports. Make sure there is a space between the comma and 8080.
6. Click **Next**.
7. Select the **Allow the connection** option and then click **Next**.
8. In the When does this rule apply? window, select the **Domain**, **Private**, and **Public** options.
9. Click **Next**.
10. Type a name for the rule; for example, `Reporter ports`.

11. Click **Finish**.
12. Refer to the next section for information about the installation. During the installation you are shown Windows Security Alerts. Keep the defaults in the Windows Security Alerts and always click **Allow Access**.

Step 4 – Start the HP Storage Essentials for Windows Installation Wizard

Keep in mind the following:

- Before you start the installation wizard, make sure all applications are closed. If the wizard detects locked files, the installation stops and a link to a log file is provided. This log file contains the details on the files that are locked. You must unlock these files by closing the corresponding application, and resume the installation process. If the log file contains a locked message for the `explorer.exe` process, you must reboot the server and restart the installation process.
- For a management server configured on dual-stack IPv6 network, make sure that the IPv4 and IPv6 address is mapped to the same host name or canonical name in the server hosts file. If the IPv4 and IPv6 addresses are mapped to a different host name or canonical name, a connection cannot be established between HP Data Protector Reporter and Report Optimizer. For example, if the management server is configured on a dual-stack IPv6 network, the server hosts file must contain the following entries:

```
192.168.0.0 node1.foo.com node1
fc00:0db8::ff00:ac10:be01 node1.foo.com node1
```

To install the product:

1. Verify the following:
 - The designated HP Storage Essentials server meets or exceeds the requirements listed in the "[Pre-installation Checklist](#)" on page 13 and in the support matrix.
 - The file system format on the HP Storage Essentials server is NTFS. The HP Storage Essentials installation wizard will display an error message if the file system is not NTFS.

The directory in which you install the management server must have write access for the local Administrators group. Installing the management server in a directory created by another program — for example, the Proliant Support Pack — is not recommended.

2. Log on as a user that is a member of the Administrators group.

3. Do one of the following:

The installation bits must be local. You must either insert the DVD locally or copy the bits to the server where you are planning to install the product.

- **DVD**. Insert the *HP_SE_9.6.0* DVD in the designated HP Storage Essentials server.

Or

- **Copied locally**. Copy the bits of the *HP_SE_9.6.0* DVD to the server where you are planning to install the product. Make sure that the directory path where you copy the installation media does not contain spaces or special character. The installation fails with the message "The system cannot find the path specified" if space or special

characters are used.

If you copy the Oracle DVD, copy it to a top-level directory where the directory path is not more than 20 characters long.

When you copy the bits from a DVD to the server, preserve directory names and structures. The directory structure you copied must match the folder structure exactly.

4. In the root directory of the installation media, double-click **setup.exe** in the `ManagerCDWindows` directory on the DVD. The HP Storage Essentials for Windows installer starts, and the Welcome page is displayed. Make sure that you have downloaded the latest Service Packs and read the product documentation before starting the installation process.
5. Click **Next**. The System Scan page appears. The installation wizard scans the computer to ensure that the server is ready for installation. If the wizard detects that one or more prerequisites are not met, the scan process is halted. The Scan Report dialog box appears that provides details on the action that you must complete before proceeding with the installation. After you take the required action, click **Re-Scan** to restart the scan process. The scan process is successful when the progress bar shows 100%.
6. Click **Next** to continue with the installation.
7. On the Select Product page, select HP Data Protector Reporter option.




Refer to the online help in the wizard for more information about each product.
8. Click **Next**. On the Installation Options page, provide the location where the product must be installed. The default installation location is `C:\HP`. You can accept the default location, or click **Browse** to select a different location. You can also select the default location by clicking the **Restore Default Folder** button.
9. The Options page displays the components that will be installed. The options are selected by default because you previously selected the HP Data Protector Reporter option. Reporter and the management server are automatically installed on the same server as part of the configuration for HP Data Protector Reporter:
 - **Management Server**: If you selected HP Data Protector Reporter, this option is selected by default.
 - **Reporter**: If you selected HP Data Protector Reporter, this option is selected by default. You can optionally specify the installation media path for Reporter in the **Media Path (Optional)** field. The installer automatically looks in the location specified and you will not need to swap out the DVD for Reporter. You can also provide the drive location if the installation files were copied locally.
10. Under Oracle section, provide the installation location for the Oracle database. The default installation location is `C:\oracle`. You can accept the default location, or click **Browse** to select a different location. You can also select the default location by clicking the **Restore Default Folder** button.
11. *(Optional)*: You can optionally specify the installation media path for Oracle in the **Media Path (Optional)** field. The installer automatically looks in the location specified and you will not need to swap out the DVD for Oracle. You can also provide the path if the files were copied locally.
12. Click **Next**. On the Password page, type the password in the **Password** field. This password is used for the Data Protector Reporter Admin, Data Protector Reporter database user (`appiq_`

system), Report Optimizer Administrator, and Report Database user (appiq_system). Re-enter the password in the Confirm Password field. Although the installer allows you to save the password multiple times, note that HP Data Protector Reporter will remember the last saved password only. Click **Next**. Note that the installer remembers the password even if you navigate using the Back button.

Note: The password policy enforces a few restrictions that do not allow you to enter some characters using the Install/Migrate wizard. An administrator can however change the password after the installation is complete. See the following sections for more details on how to change the passwords:

- To change Data Protector Reporter Admin and Data Protector Reporter database user password using the Database Admin utility, see the sections *Changing System Account Passwords* and *Changing the Admin Password for the Management Server* in the chapter *Database Maintenance and Management* of the *HP Data Protector Reporter User Guide*.
- To change Report Optimizer Administrator password, see ["Changing the Passwords for Report Optimizer Accounts" on page 59](#)
- To change the Report Database user password, see the section *Changing the DB_SYSTEM_USER Password* in the *HP Data Protector Reporter Report Database Guide*.

13. Review the list of requirements on the Verify System Requirements page to know if the server meets the requirements. The following table summarizes what each icon on the Verify page depicts:

Icon	Meaning
	The server meets installation requirements.
	Setting barely meets installation requirements. The installation will proceed but there might be some issues. It is highly recommended you change the setting.
	Setting does not meet the installation requirements. Even though the installation will still proceed, the product might not work as expected after the installation. Resolve the issue before proceeding with the installation.

14. Click **Next**. The Pre-Installation Summary page displays the components to be installed and an estimate of the time in `hours:minutes:seconds` it will take to complete installing each component.
15. Click **Install** to start the installation. The Progress page provides a status of the installation for each component. You are asked to provide the Oracle installation media location, if you did not provide that in the Options page. If during installation, an error is observed, the installation stops and the Resume button is enabled. You are also provided with a link to the error log file. This error log file provides you the details of the error that occurred during the installation. You must fix the error and then click **Resume** button to continue the installation.

Note: If you are shown a command line window for the Oracle Universal Installer, do not close this window.

16. After the installation is complete, the progress bar on the Progress page shows 100%. Click **Next** to finish the installation process.
17. On the Installation Complete page, copy the Unique Client ID number, and select one of the following options. The Unique Client ID number is required to obtain the license.
 - **Start HP Data Protector Reporter When "Finish" is Clicked.** This option starts the AppStorManager service after you click Finish. You can then access the management server. Note that the AppStorManager service might take a few minutes to start.
 - **Start HP Data Protector Reporter later.** This option requires you to start the AppStorManager service at a later time, either manually or by rebooting the server. Users will not be able to access the management server unless the AppStorManager service is running.
18. For details about accessing the HP Storage Essentials installation log files, see ["Log Files from the Installation and Migration on Windows" on page 118](#).

Step 5 – Obtain a License Key

See your product invoice for important information about licensing. If you are required to import a license, copy your Unique Client ID (UID) number and follow the instructions in your product invoice documentation to obtain and apply your license key. A valid license key is required to use the management server and to collect data from a managed element.

Verify that the following are enabled on your web browser:

- Cookies
- JavaScript
- Java

Additionally, make sure that the AppStorManager service is running. This service must be running for the product to work.

To obtain your HP Storage Essentials license, you must have the UID. This ID is displayed in the Installation Complete page of the HP Data Protector Reporter Install/Migrate Wizard. If you did not copy the Unique Client ID during installation, you can obtain the Unique Client ID after you log on for the first time to HP Storage Essentials.

To obtain the UID from the management server, complete the following steps:

1. Log on to the management server.
 - a. Open a web browser and enter the URL of the server running the management server; for example, <http://www.myserver.com>.
 - b. Type `admin` for the user name and the password that you provided in the Password page of the Install/Migrate wizard, during the product installation.
2. Select **Security > Licenses** in the management server.
3. At the top of the page, select the unique client ID and press **CTRL + C** to copy it.

Follow these steps to obtain and import your HP Storage Essentials license:

1. Go to <http://h30580.www3.hp.com/poeticWeb/portalintegration/hppWelcome.htm> and select the **Generate New Licenses** option. Follow the steps for obtaining your license key. You will need to provide your UID and HP Order ID (found on the entitlement certificate).
2. After you obtain your license, log on to the management server.
 - a. Open a web browser and enter the URL of the server running the management server; for example, <http://www.myserver.com>.
 - b. Type `admin` for the user name and the password that you provided in the Password page of the Install/Migrate wizard, during the product installation.
3. Import the license key:
 - a. Click the **Security** menu.
 - b. Click **Licenses** from the menu.
 - c. Click the **Import License File** button.
 - d. Click the **Browse** button. The file system of the computer used to access the management server is shown.
 - e. Select the license file.
 - f. Click **OK**.

Step 6 – Check for the Latest Service Pack

A service pack might have been created since this release. Obtain the latest service pack from the following location:

<http://h20230.www2.hp.com/selfsolve/patches>

Removing the Product

HP Storage Essentials provides scripts to remove the management server, Reporter and the Oracle database. Run these scripts if you want to remove the management server and Reporter (Report Optimizer and the Report Database). If the management server and Reporter are on separate servers, run the scripts on each server.

Use the uninstall scripts instead of Add/Remove programs. If you try Add/Remove programs, the following message appears, and you are prompted to use the uninstall scripts:

```
HP Storage Essentials must be uninstalled using uninstall scripts in  
the ManagerCDWindows\install\support folder of Product ISO CD
```

The uninstall scripts stops all Java processes. Other applications on the server running `java.exe` are stopped during the uninstall of HP Storage Essentials. After reboot, all processes continue as normal.

To uninstall the product from Windows:

1. Insert the *HP_SE_9.6.0* DVD to the server that has the management server installed. Open a command prompt window and navigate to the following directory:
`ManagerCDWindows\install\support`

2. Type the following command at the command prompt:

```
removeAll.cmd
```

The `removeAll.cmd` script removes the following components from the server:

- The management server
- The database instance for the management server
- The Report Database
- Report Optimizer
- The database instance for Reporter
- The CIM extension installation files

Note: During the uninstall process, you might observe that the uninstall does not proceed further and stops at the following message:

```
cmd.exe /c "msiexec /x {5418F914-1D31-4849-822C-314AC28B06BF}
/qn /l*vC:\srmInstallLogs\BOEXIR31uninstall.log
REBOOT=ReallySuppress
```

If this message appears for the time duration ranging from a couple of minutes to a couple of hours, you must restart your computer and then run the `removeAll.cmd` again.

3. Type the following command to remove the Oracle software:

```
RemoveOracle.cmd
```

4. Reboot the Server. This step is required to finish the cleanup of the files.

Log Files from the Installation and Migration on Windows

The Install/Migrate wizard generates log files in the `C:\srmInstallLogs` directory. Log files provided at the top level of the `C:\srmInstallLogs` directory are for the current session of the Install/Migrate wizard or for the last session the Install/Migrate wizard was run. Files from a previous session are stored in a subdirectory with a date and time stamp.

Log files are generated by the Install/Migrate wizard. Some log files also provide an `<logfilename>_output.log` file. The `<logfilename>_output.log` file displays information about any errors, and is generated by the component itself instead of the Install/Migrate wizard.

The log files are zipped into a file in the root of the system drive. The zip file can be sent to support to help diagnose installation and migration issues, for example: `C:\srmLog02-01-2011-16_21_49.zip`.

The following log files can be found in `C:\srmInstallLogs`:

- **Srm_InstallBaseSoftware_Output.log** provides logging information about the installation of the base version of HP Storage Essentials.

- **Srm_DatabaseInstance_Output.log** provides information about any errors that occurred during the creation of the database instance for HP Storage Essentials.
- **Srm_CopyCimExtensions_Output.log** provides logging information about the copying of the CIM extensions. This log file is only provided if you select the option to copy the CIM extensions to the management server during the installation or migration.
- **Srm_ImportDatabase_Output.log** provides logging information about the database import process when you run the Install/Migrate wizard to migrate to the latest HP Data Protector Reporter environment. This log file is provided only if you are migrating HP Data Protector Reporter.
- **Srm_ExportDatabase_Output.log** provides logging information about the database export process when you run the Install/Migrate wizard to back up the database. The database backup is required when you are migrating HP Data Protector Reporter. This log file is provided only if you are migrating HP Data Protector Reporter.
- **Srm_RestoreConfiguration_Output.log** provides logging information about the restore process when you are migrating HP Data Protector Reporter.
- **backUpConfiguration.log** provides the logging information about the back up process that occurs when you are migrating HP Storage Essentials.
- **Ro_InstallBaseSoftware_Output.log** provides logging information about the installation of the base version of Report Optimizer.
- **Ro_InstallROSsoftware_Output.log** provides logging information about the installation and migration of Report Optimizer.
- **Ro_UpgradeTomcat_Output.log** provides logging information about the Tomcat upgrade process during the installation and migration of the Report Optimizer.
- **Ro_ImportBiarFile_Output.log** provides logging information about the import of the BIAR file during the installation and migration of the Report Optimizer.
- **Ro_ImportPreviousBiarFile_Output.log** provides logging information about the import of the BIAR file when you run the Install/Migrate wizard to migrate to the new version of the Report Optimizer.
- **Ro_ExportBiarFile_Output.log** provides logging information about the export of the BIAR file when you run the Install/Migrate wizard to export the Report Optimizer configuration.
- **Rd_InstallBaseSoftware_Output.log** provides logging information about the installation of the base version of the Report Database.
- **Rd_InstallDatabase_Output.log** provides logging information about the creation of the database instance for the Report Database.
- **Rd_Resetpassword_Output.log** provides logging information about the password reset operation for Report Database user. This log file is available only if you have installed Report Optimizer.
- **Oracle_InstallBaseSoftware.log** provides logging information about the installation of the base version of the Oracle database.
- **Oracle_InterimPatches.log** provides logging information about the installation of the patches for the Oracle database.

- **Wizard.log** is the master log file of the Install/Migrate wizard session. It provides information for troubleshooting installation of the management server and related components.
- **WizardSetup.log** is the log file of the installation wizard entry point. It provides information for troubleshooting installation wizard startup issues. The log file without a date and time is the current log file. This file provides information of the last task that was done in the installation wizard.
- **Srmwiz.ini** provides information about the settings for the Install/Migrate wizard, such as the installation directory for HP Storage Essentials.

About This Guide

This guide is intended to help first-time users who purchased HP Data Protector Reporter to install and configure the product quickly. If you are migrating HP Data Protector Reporter, refer to the *HP Storage Essentials Installation Guide*.

Chapter 2

Installing HP Data Protector Reporter on Linux

Note: HP Storage Essentials is designed for operation in a secure corporate intranet. All other configurations are not recommended or supported.

If you are installing the management server on Windows, see ["Installing HP Data Protector Reporter on Microsoft Windows"](#) on page 13.

This section includes the following installation topics and steps:

- ["Pre-installation Checklist"](#) below
- ["Linux Installation Checklist"](#) on page 44
- ["Step 1 – Read the Release Notes and the Support Matrix"](#) on page 45
- ["Step 2 – Install the Management Server"](#) on page 45
- ["Step 3 – Verify that Processes Can Start"](#) on page 52
- ["Step 4 – Obtain a License Key"](#) on page 52
- ["Step 5 – Verify Your Connection to the Management Server"](#) on page 53
- ["Step 6 – Check for the Latest Service Pack"](#) on page 55
- ["Step 7 – Install the Java Plug-in on a Linux Client"](#) on page 55
- ["Log Files from the Installation on Linux"](#) on page 120
- ["Removing HP Data Protector Reporter"](#) on page 57

Pre-installation Checklist

Security-Enhanced Linux (SELinux) must be disabled on the server where HP Storage Essentials is to be installed. SELinux must be kept disabled forever, that is, before and after the installation.

Refer to the support matrix for your edition for memory requirements. The installation will stop if the server does not meet the memory requirements.

Ports Used by the Product

HP Storage Essentials and Report Optimizer use a number of ports that cannot be used by another program.

Ports Used by the HP Storage Essentials

Port	Description	Protocol	In/Out
22	Used by SSH to deploy host agents (optional – only need if using the CIME Management tool)	SSH	I/O ¹
80	Port used for discovery and the HTTP web server. <ul style="list-style-type: none"> • NetApp • Web Browser Interface • HP Accelerator Pack for Operations Orchestration 	HTTP	I/O ¹
161	<ul style="list-style-type: none"> • SNMP Agent • Cisco SNMP <p>This port is not required and is optional for SNMP trapping. HP Storage Essentials uses SNMP version 2. Device alerts can also be delivered to HP Storage Essentials via API or SMI-S for certain devices.</p>	SNMP	I/O ¹
162	<p>An external port that is used for the SNMP trap listener. SNMP can be disabled, but no traps will be received.</p> <ul style="list-style-type: none"> • Cisco SNMP <p>This port is not required, but it is optional for SNMP trapping. HP Storage Essentials uses SNMP version 2. Device alerts can also be delivered to HP Storage Essentials via API or SMI-S for certain devices.</p>	SNMP	I/O ¹
389 (TCP/UDP)	<p>LDAP directory service</p> <p>This port is required to communicate with the Microsoft Exchange server. The port is used by Active Directory and Active Directory Domain Services.</p>	LDAP	O ²

Port	Description	Protocol	In/Out
443	An external port used for Secure Socket Layer (SSL) with the web interface. Port 80 can be used instead, but there will be no SSL. <ul style="list-style-type: none"> Celerra HP Storage Essentials OM SPI NetApp VMWare VC/ESX Web Browser interface 	HTTPS	I ³
636 TCP	This port is required to communicate with the Microsoft Exchange server. The port is used by Active Directory and Active Directory Domain Services.	LDAP/SSL	O ²
1099	<ul style="list-style-type: none"> HP Storage Essentials Connector for HP BSA Server Automation RMI Registry XP Arrays via Built-in XP Provider 	TCP	I ³
1443	Microsoft SQL Server Database (optional – only used if MSSQL Database Viewer is used)		O ²
1521	<ul style="list-style-type: none"> Oracle Transparent Name Substrate (TNS) Listener Port (Used for reporter access to HP Storage Essentials, as well as optional Oracle Database Viewer discovery) HP uCMDB DDM Probe 	TCP	>I ³
1972	Intersystems Caché Database	JDBC	O ²
2001	Device discovery port for the following devices: <ul style="list-style-type: none"> XP's via CV-AE HDS via HDvM 	HiCommand API (HTTP/HTTPS)	O ²
2443	Device discovery port for the following devices: <ul style="list-style-type: none"> XP's via CV-AE HDS via HDvM VMWare VC/ESX 	HiCommand API (HTTP/HTTPS)	>O ²
2463	Device discovery port for the following devices: <ul style="list-style-type: none"> SUN through the Engenio/LSI provider Engenio/LSI based arrays 	TCP	O ²

Port	Description	Protocol	In/Out
2707	Device discovery port for the EMC storage systems discovered through Solutions Enabler/SYMAPI	SYMAPI	O ²
3268 TCP	This port is required to communicate with the Microsoft Exchange server. The port is used by Active Directory and Active Directory Domain Services. The Active Directory global catalog listens on this port.	LDAP	O ²
3269 TCP	This port is required to communicate with the Microsoft Exchange server. The port is used by Active Directory and Active Directory Domain Services. The communications to the Active Directory global catalog on this port are encrypted.	LDAP/SSL	O ²
4444	JBoss RMI/JRMP Invoker HP Storage Essentials Connector for HP BSA Server Automation	TCP	I ³
4445	JBoss Pooled Invoker	TCP	>L ⁴
4673	<ul style="list-style-type: none"> • CIM Extension/Product Health Agent (Tuneable) • IBM VIO 	TCP	O ²
5432	PostgreSQL Server Database	JDBC	O ²
5555	Data Protector Agentless	TCP	O ²
5962	Discovery Group 12 CIMOM RMI	TCP	>L ⁴
5964	Discovery Group 11 CIMOM RMI	TCP	L ⁴
5966	Discovery Group 10 CIMOM RMI	TCP	L ⁴
5968	Discovery Group 9 CIMOM RMI	TCP	L ⁴
5970	Discovery Group 8 CIMOM RMI	TCP	>L ⁴
5972	Discovery Group 7 CIMOM RMI	TCP	L ⁴
5974	Discovery Group 6 CIMOM RMI	TCP	L ⁴
5976	Discovery Group 5 CIMOM RMI	TCP	L ⁴
5978	Discovery Group 4 CIMOM RMI	TCP	>L ⁴
5980	Discovery Group 3 CIMOM RMI	TCP	L ⁴

Port	Description	Protocol	In/Out
5982	Discovery Group 2 CIMOM RMI	TCP	L ⁴
5984	Discovery Group 1 CIMOM RMI	TCP	L ⁴
5986	Default Discovery Group CIMOM RMI	TCP	>L ⁴
5988/ 5989	<ul style="list-style-type: none"> • 3PAR SMI-S • Brocade SMI-A • Cisco SMI-S • Compellent SMI-S • EVAs via CV-EVA SMI-S • ESL/EML via CV-TL SMI-S v1.7/1.8/2.0 • ESL/EML via CV-TL SMI-S v2.2/2.3 • HP VLS 9000 (port 5988 only) • HSG-80 via EML SMI-S • IBM XIV • McDATA SMI-S • MSA 2300 G2 via MSA SMI-S Proxy Provider • MSA P2000 G3 (port 5989 only) • IBM CIM Agent • QLogic SMI-S • SMI-S and SMI-S secure • WBEM/WMI Mapper 	TCP/SMI-S	O ²
6389	Device discovery port for CLARiiON storage systems discovered through the NaviSphere CLI	Navisphere CLI	O ²
8009	JBoss Embedded Tomcat Service	TCP	L ⁴
8083	JBoss Web Service		L ⁴
8093	JBoss UIL Server IL Service HP Storage Essentials Connector for HP BSA Server Automation	TCP	I ³
8443	BSAE Data Miner	TCP	O ²
8873	BSAE Data Miner	TCP	O ²

Port	Description	Protocol	In/Out
9088	IBM Informix Dynamic Server Database	JDBC	O ²
12443	HP X9000. If the default port does not work, specify the port that is used, such as port 443.	HTTPS	O ²
16022	Lefthand Network	SSH	O ²
49152	WBEM	TCP SMI-S	O ²
49153	WBEM Secure Port	TCP SMI-S	>O ²
50000	IBM DB2 Database	JDBC	O ²
55988	WBEM	TCP SMI-S	O ²
55989	WBEM Secure Port	TCP SMI-S	O ²
60000	WBEM	TCP SMI-S	>O ²
60001	WBEM Secure Port	TCP SMI-S	O ²
Legend			
1	I/O = The port number must be opened on both HP Storage Essentials server and target device.		
2	O = The port number must be opened on the target device.		
3	I = The port number must be opened on the Source Server; for example, the HP Storage Essentials management server, the Report Optimizer server, or the SMI Agent (to receive information from a switch).		
4	L = A loopback port that must be available to the source server but not exposed outside.		

Ports Used by Report Optimizer

Port	Description
2638	SQL Anywhere for the Report Optimizer database uses this port.
6400, 6410, 6420, and 80	SI Agent uses these ports.
8080, 8005, 8443	Tomcat uses these ports.

Prerequisite RPMs

Verify that your system includes the required packages by using the following command:

```
rpm -q <package-name>
```

Example

```
rpm -q binutils
```

The above command checks for the availability of `binutils` package in your system and if available, lists the version of the package.

Ensure that the installed version of the package is equal to or later than the listed versions of the package mentioned below.

If the package is not installed, install the required packages from the DVD for your operating system. If the version of the installed package is an older version, contact your system administrator and upgrade it.

Note: The following sections provide the list of required RPMs. Based on the mode selected during the installation of the operating system, you might be required to install the dependent RPMs also.

For reference, see the Appendix ["Required and Dependent RPMs list for Default Operating System Installation" on page 1](#) to view the complete list of required and dependent RPMs for default operating system installation.

Install the following RPMs on your system:

- ["Prerequisite RPMs for Database Admin Utility" below](#)
- ["Prerequisite RPMs for Oracle" below](#)
- ["Prerequisite RPMs for Report Optimizer" on page 42](#)

Some of these packages might be selectively installed depending on the mode selected during an installation of the operating system.

Prerequisite RPMs for Database Admin Utility

The following list includes the packages needed for the Database Admin Utility installation on RHEL 6.3:

- `libXrender-0.9.5 (32-bit)`
- `libXext-1.1-3 (32-bit)`
- `libXtst-1.0.99.2-3 (32-bit)`

Prerequisite RPMs for Oracle

The following list includes the packages needed for the Oracle installation.

RHEL 5.9 (64-bit)

Install the following packages or later versions for RHEL 5.9 systems (64-bit):
All packages listed are 64-bit unless otherwise stated.

- `binutils-2.17.50.0.6`
- `compat-libstdc++-33-3.2.3`
- `compat-libstdc++-33-3.2.3(32-bit)`
- `elfutils-libelf-0.125`

- elfutils-libelf-devel-0.125
- gcc-4.1.2
- gcc-c++-4.1.2
- glibc-2.5-24
- glibc-2.5-24(32-bit)
- glibc-common-2.5
- glibc-devel-2.5
- glibc-devel-2.5(32-bit)
- glibc-headers-2.5
- ksh-20060214
- libaio-0.3.106
- libaio-0.3.106(32-bit)
- libaio-devel-0.3.106
- libaio-devel-0.3.106(32-bit)
- libgcc-4.1.2
- libgcc-4.1.2(32-bit)
- libstdc++-4.1.2
- libstdc++-4.1.2(32-bit)
- libstdc++-devel-4.1.2
- redhat-lsb-3.1
- make-3.81
- numactl-devel-0.9.8
- sysstat-7.0.2
- unixODBC-2.2.11
- unixODBC-2.2.11(32-bit)
- unixODBC-devel-2.2.11
- unixODBC-devel-2.2.11(32-bit)

RHEL 6.3 (64-bit)

Install the following packages or later versions for RHEL 6.3 systems (64-bit):
All packages listed are 64-bit unless otherwise stated.

- binutils -2.20.51.0.2
- compat-libcap1- 1.10
- compat-libstdc++-33-3.2.3
- compat-libstdc++-33-3.2.3(32-bit)

- gcc-4.4.6
- gcc-c++-4.4.6
- glibc-2.12-1
- glibc-2.12-1(32-bit)
- glibc-common-2.12
- glibc-devel-2.12
- glibc-devel-2.12(32-bit)
- ksh-20100621
- libaio-0.3.107
- libaio-0.3.107(32-bit)
- libaio-devel-0.3.107
- libaio-devel-0.3.107(32-bit)
- libgcc-4.4.6
- libgcc-4.4.6(32-bit)
- libstdc++-4.4.6
- libstdc++-4.4.6(32-bit)
- libstdc++-devel-4.4.6
- make-3.81
- sysstat-9.0.4
- unixODBC-2.2.14
- unixODBC-2.2.14(32-bit)
- unixODBC-devel-2.2.14
- unixODBC-devel-2.2.14(32-bit)

SUSE 11 (64-bit)

Install the following packages or later versions for SUSE 11 (64-bit):

All packages listed are 64-bit unless otherwise stated.

- binutils-2.19
- gcc-4.3
- gcc-32bit-4.3
- gcc-c++-4.3
- glibc-2.9
- glibc-32bit-2.9
- glibc-devel-2.9
- glibc-devel-32bit-2.9

- ksh-93t-9.4
- libaio-0.3.104
- libaio-32bit-0.3.104
- libaio-devel-0.3.104
- libaio-devel-32bit-0.3.104
- libgcc43-4.3.3*
- libstdc++33-3.3.3
- libstdc++33-32bit-3.3.3
- libstdc++43-4.3.3*
- libstdc++43-32bit-4.3.3*
- libstdc++43-devel-4.3.3*
- libstdc++43-devel-32bit-4.3.3*
- libstdc++-devel-4.3
- make-3.81
- orarun-1.9-172
- sysstat-8.1.5
- unixODBC-2.2.12
- unixODBC-devel-2.2.12
- unixODBC-32bit-2.2.12

Prerequisite RPMs for Report Optimizer

The following list includes the packages needed for the Report Optimizer installation on RHEL 6.3:

All packages listed are 64-bit unless otherwise stated.

- libXext-1.1-3 (32-bit)
- libXext-devel-1.1-3
- libXext-devel-1.1-3 (32-bit)
- compat-libstdc++-33-3.2.3 (32-bit)
- glibc-2.12-1
- ncurses-libs-5.7-3 (32-bit)

Software Dependencies

Verify that the following required software is available on your system, and install any that are missing:

- Perl 5.8.3 or above. By default, the operating system installs Perl as follows:
 - RedHat Linux (RHEL) 5.9 installs Perl 5.8.8
 - RedHat Linux (RHEL) 6.3 installs Perl 5.10.1
 - SUSE Linux Enterprise 11 installs Perl 5.10.0

Application Viewer requires Xvfb.

- For RHEL 5.9, the package name is **xorg-x11-server-Xvfb-1.10.6-1.el6.x86_64.rpm**.

Note: The Xvfb RPM is not required on RHEL 6.3.

- For SUSE Linux Enterprise 11, the package name is **xorg-x11-server-extra**.

The respective Xvfb package is available on the installation media of your operating system.

Verify Network Settings

Verify the network configuration for the management server:

1. Verify that the appropriate DNS server entries are present in `/etc/resolv.conf`. Verify that the correct DNS suffixes are mentioned in the order of preference in which they need to be appended to hostnames; for example:

```
nameserver 172.168.10.1
nameserver 172.168.10.2
search "yourenvironment".com
```

Note: If DNS is not configured in your environment, ignore this step.

2. From a console window on the management server, enter the following command:

```
# ping <hostname>
```

In this instance, `<hostname>` is the hostname (without domain name) of the Linux CMS.

The ping command must ping the IP address of the management server. It must not ping the loopback address (127.0.0.1). If it pings the loopback address, edit the `/etc/hosts` file to make appropriate corrections.

The `/etc/hosts` file should have entries similar to:

```
127.0.0.1 localhost.localdomain localhost
192.168.0.100 myservername.mydomain.com myservername
```

Note: If DNS is not configured in your environment, the `/etc/hosts` file should have entries similar to:

```
127.0.0.1 localhost.localdomain localhost
192.168.0.100 myservername
```

If the ping command fails to ping the IP address and instead pings the loopback address, the oracle listener process will fail to start and, therefore, the CIMOM process will also fail.

SUSE Linux Enterprise 11 might have an entry for 127.0.0.2 in `/etc/hosts` against the host name for that system. Comment out or remove the line that maps the IP address 127.0.0.2 to the system's fully qualified hostname. Retain only that line that contains the actual IP address mapped to the fully qualified host name; for example:

```
# cat /etc/hosts

127.0.0.1 localhost

#127.0.0.2 demo.novell.com demo

192.168.1.5 demo.novell.com demo
```

In the example, remove or comment the line in bold as shown in the middle line.

3. Enter the following command:

```
# nslookup <hostname>
```

In this instance, `<hostname>` is the hostname (without domain name) of the management server.

4. Enter the following command:

```
# nslookup <IP address>
```

In this instance, `<IP address>` is the IP address of the server.

5. Verify that both results from nslookup have the same fully qualified computer name and IP address.

Linux Installation Checklist

Print the following table and use it to track your progress. Check off each step as you complete it.

Step	Need More information?	Did You Complete This Step?
Read the Release Notes and the Support Matrix	"Step 1 – Read the Release Notes and the Support Matrix" on the next page	
Install the Management Server	"Step 2 – Install the Management Server" on the next page	
Verify that Processes Can Start	"Step 3 – Verify that Processes Can Start" on page 52	
Obtain a License Key	"Step 4 – Obtain a License Key" on page 52	
Verify Your Connection to the Management Server	"Step 5 – Verify Your Connection to the Management Server" on page 53	
Check for the Latest Service Pack	"Step 6 – Check for the Latest Service Pack" on page 55	

Step 1 – Read the Release Notes and the Support Matrix

Read the Release Notes for late-breaking information not covered in the *Installation Guide*.

Read the support matrix to make sure the server on which you plan to install the management server meet or exceed the requirements. Management server requirements are listed on the Manager Platform (Mgr Platform) tab of the support matrix.

The Release Notes and support matrix can be found in any of the top-level directories of the *HP_SE_9.6.0* DVD.

Step 2 – Install the Management Server

Keep in mind the following:

- Refer to the release notes for late breaking information.
- Your screen resolution should be at least 1024 pixels by 768 pixels; otherwise, you might run into issues with viewing the user interface for the software.
- If you receive a message saying there is not enough room in the temp directory to perform the installation, increase the amount of free space in the /tmp directory. For information on how to increase the amount of free space, see the documentation for your operating system.
- Verify that the required software is available on your system as described in "[Software Dependencies](#)" on page 42.
- The installation of the Oracle database on Linux does not work when the dba group exists in an external database, such as LDAP. Disable LDAP authentication on the system when installing HP Storage Essentials. Also ensure that the Linux group lookup is performed with files before LDAP. For more information, see "[Unable to Install the Oracle Database on Linux](#)" on page 137.
- When you launch the Install/Migrate wizard using `setup.bin`, the following error message is displayed:

```
strings: '/lib/libc.so.6': No such file
```

You can safely ignore this message and continue with the installation.

- In this release, no RPM entry is created for management server on Linux.
- When you install the management server on computer, you must install the software using a POSIX (Portable Operating System Interface) shell, such as sh. C Shell is not supported.
- You must install the management server on a Linux server with a non-loopback static IP address.
- Do not mount the DVD to any system-level directory, such as /home, /tmp, /root, or /var. If you mount the DVD to any of the system-level directories, the installation will not run. You can, however, create a directory below /home, such as /home/Oracle_bits and mount /home/Oracle_bits as a valid mount point. You must be careful about the permission inherited from the parent directory. Some permissions might be restricted, such as executable permission in setting up in a user profile. Make sure the directory you are mounting the DVD has

executable permissions. Verify that the disk device where DVD is mounted has executable permissions.

- To verify the operating system where you are installing HP Data Protector Reporter is supported, the installer uses the following files:

- SUSE 11: /etc/SuSE-release
- RHEL 5.9 and 6.3: /etc/redhat-release

Make sure that you do not modify these files. If these files are modified, the installer stops at the operating system check in the Scan page of the Install/Migrate wizard.

- When you launch the Install/Migrate wizard, the following error message appears:

```
tar: jre/man/ja: time stamp 2012-03-01 22:45:08 is 1406639.690552586
s in the future
tar: jre/bin/ControlPanel: time stamp 2012-03-01 22:45:07 is
1406638.688267673 s in the future
tar: jre/lib/amd64/server/libjsig.so: time stamp 2012-03-01 22:45:08
is 1406639.469038533 s in the future
```

This message appears if the date and time on the computer where you are installing HP Data Protector Reporter is not correct. You can safely ignore this message and continue with the installation process.

- You must launch the wizard with a root user or a sudo user. You cannot launch the wizard using a non-root user.
- To install HP Data Protector Reporter by remotely logging on to a computer, you must set the DISPLAY variable. If the DISPLAY variable is not set and you run the setup.bin file to launch the Install/Migrate wizard, the installer exits without any error message.
- For a management server configured on dual-stack IPv6 network, make sure that the IPv4 and IPv6 address is mapped to the same host name or canonical name in the server hosts file. If the IPv4 and IPv6 addresses are mapped to a different host name or canonical name, a connection cannot be established between HP Data Protector Reporter and Report Optimizer. For example, if the management server is configured on a dual-stack IPv6 network, the server hosts file must contain the following entries:

```
192.168.0.0 node1.foo.com node1
fc00:0db8::ff00:ac10:be01 node1.foo.com node1
```

1. Access the Linux host as described in ["Accessing the Linux Host" on page 50](#). Your installation options are the following:

- **Install from the DVD:**

- i. Log on to the server as a user with root privileges.
- ii. Insert the *HP_SE_9.6.0* DVD and mount it with the following commands:

```
# mkdir -p /mnt/installer
# mount /dev/DVD /mnt/installer
```

In this instance, /dev/DVD is the DVD device.

- iii. Verify the mount point and disk device by entering the following command at the command prompt:

```
# df -k
```

The following is an example of what is displayed:

Filesystem	1K-blocks	Used	Available	Use%	
Mounted on					
/dev/cciss/c0d0p1	52924244	33893460	16880004	67%	/
udev	12344632	132	12344500	1%	/dev
/dev/scd1	85616	85616	0	100%	
/media/ManagementServerDVD					

In this instance, /dev/scd1 is the name of the disk device.

- iv. Verify that the disk device where the DVD is mounted has executable permissions by entering the following command at the command prompt:

```
#mount | grep /dev/scd1
```

In this instance, /dev/scd1 is the name of the disk device and /media/ManagementServerDVD is a mount point.

The word "noexec" is displayed if the directory you are mounting does not have executable permissions, as shown in the following example:

```
/dev/scd1 on /media/ManagementServerDVD type iso9660 (ro,
noexec,nosuid,nodev,uid=0)
```

- v. If the directory does not have executable permissions, remount the directory by entering the following command:

```
# mount -o remount,exec /dev/scd1/
```

In this instance, /dev/scd1 is the mount point.

■ Install from ISO Copied to Local Server:

- i. Create a directory on which the drive will be mounted:

```
# mkdir /InstallProduct
```

- ii. Loop mount the HP_StorageEssentials_9.6.0.iso to the /mnt/installer directory.

```
# mount -o loop,ro /InstallProduct/HP_StorageEssentials_
9.6.0.iso /mnt/installer
```

2. Set the display for X Windows by entering the following at the command prompt.

Note: You must run the setup.bin script, which uses X Windows.

```
# /usr/X11R6/bin/xhost +
```

3. Set the display to your client. Refer to the documentation for your shell for more information.
4. Access the Linux host from a remote Windows client.

Before running X Windows from a client system, make sure that X server is running on the server that you plan to install the software.

Note: ReflectionX Manager from Attachmate corporation is the tested XServer to install the product. You cannot install the product using Xming as the XServer.

Start up a local X server, and connect through xterm to the remote system. The xterm session automatically sets the DISPLAY variable to "localhost:displaynumber:screennumber". Change the display variable to point to the IP address of the client from which installer is launched with the correct display number and screen number by entering the following command:

```
# DISPLAY=<ip-address>:displaynumber.screennumber
```

In this instance, <ip-address> is the address of the client from which the Installer script is launched.

If you do not modify the value of the DISPLAY variable, the installer will launch with the default display setting, and the Oracle installation will stop prematurely with a timeout error.

The following is an example of the display command:

```
# DISPLAY=172.168.10.15:0.0
```

5. Export the display by entering the following command:

```
# export DISPLAY
```

6. Enter the following at the command prompt.

```
# /mnt/installer/ManagerCDLinux/setup.bin
```

In this instance, you mounted the DVD to the /mnt/installer location.

7. When you see the introduction screen, read through the information. You should already have read the release notes and verified that you meet the requirements stated in the support matrix. Click **Next**.
8. The installation scans the system to ensure that it meets the requirements. When the scan is complete, click **Next** to proceed with the installation.
9. Select HP Data Protector Reporter option.
 - HP Data Protector Reporter
 - HP Storage Essentials

Refer to the online help in the wizard for more information about each product.

10. Click **Next**.
11. In the Install Option window, provide the Installation Location for the product. The default installation location is the following: /opt/HP.

You can browse to a location by clicking the **Browse** button or you can provide the default location by clicking the **Restore Default Folder** button. The installation directory must not contain spaces or special characters, such as the dollar sign (\$).
12. The Options page displays the options that will be installed. The options are selected by default because you previously selected the HP Data Protector Reporter option. Reporter and the management server are automatically installed on the same server as part of the configuration for HP Data Protector Reporter:

- **Management Server**




- **Reporter**

- Under the Oracle section, provide the location where you want to install Oracle. The default location is `/opt/oracle`.
- (Optional) Provide the path to the Oracle installation media in the **Media Path** box. You will be asked for it during the installation.
- Click **Next**. On the Password page, type the password in the **Password** field. This password is used for the Data Protector Reporter Admin, Data Protector Reporter database user (`appiq_system`), Report Optimizer Administrator, and Report Database user (`appiq_system`). Re-enter the password in the Confirm Password field. Although the installer allows you to save the password multiple times, note that HP Data Protector Reporter will remember the last saved password only. Click **Next**. Note that the installer remembers the password even if you navigate using the Back button.

Note: The password policy enforces a few restrictions that do not allow you to enter some character sets using the Install/Migrate wizard. An administrator can however change the password after the installation is complete. See the following sections for more details on how to change the passwords:

- To change Data Protector Reporter Admin and Data Protector Reporter database user password using the Database Admin utility, see the sections *Changing System Account Passwords* and *Changing the Admin Password for the Management Server* in the chapter *Database Maintenance and Management* of the *HP Data Protector Reporter User Guide*.
- To change Report Optimizer Administrator password, see ["Changing the Passwords for Report Optimizer Accounts" on page 59](#)
- To change the Report Database user password, see the section *Changing the DB_SYSTEM_USER Password* in the *HP Data Protector Reporter Report Database Guide*.

- Review the list of requirements on the Verify page to know if the server meets the requirements. The following table summarizes what each icon on the Verify page depicts:

Icon	Meaning
	The server meets installation requirements.
	Setting barely meets installation requirements. The installation will proceed but there might be some issues. It is highly recommended you change the setting.
	Setting does not meet the installation requirements. Even though the installation will still proceed, the product might not work as expected after the installation. Resolve the issue before proceeding with the installation.

- Click **Next**. The Summary page displays the components to be installed and an estimate of the time in `hours:minutes:seconds` it will take to complete installing each component.

18. Click **Install** to start the installation. The Progress page provides a status of the installation for each component. You are asked to provide the Oracle installation media location, if you did not provide that in the Options page. If during installation, an error is observed, the installation stops and the Resume button is enabled. You are also provided with a link to the error log file. This error log file provides you the details of the error that occurred during the installation. You must fix the error and then click **Resume** button to continue the installation.

Note: If you are shown a command line window for the Oracle Universal Installer, do not close this window.

19. After the installation is complete, the progress bar on the Progress page shows 100%. Click **Next**.
20. On the Finish page, copy the Unique Client ID number, and select one of the following options:
 - **Start HP Data Protector Reporter When "Finish" is Clicked.** Start the product immediately after clicking the finish page. This option starts the AppStorManager service after you click the Finish button so you can access the management server. It might take a few minutes for AppStorManager to finish starting.
 - **Start HP Data Protector Reporter later.** This option requires you to start the AppStorManager service at a later time, either manually or by rebooting the server. Users will not be able to access the management server unless the AppStorManager service is running.
21. Click **Finish** to complete the installation process. A message box appears that provides you the path to log on to the HP Data Protector Reporter management server.
22. Set the new Oracle database to ARCHIVE MODE to enable automatic RMAN backups. See the User Guide in the Documentation Center (**Help > Documentation Center**) for steps.

Accessing the Linux Host

Access the Linux host by doing one of the following:

- **Use the graphics console on the localhost**

Run the following command at the command prompt:

```
# /usr/X11R6/bin/xhost +
```

Or

- **Access from a remote Linux client**

Make sure that the X server on the remote client can accept TCP connections:

- a. Open `/etc/X11/xdm/Xservers`.
- b. Verify that the line for the screen number 0 (the line containing `:0 local`) does not contain the `-nolisten tcp` option. Remove the `-nolisten tcp` option if present. The line should look like the following:

```
:0 local /usr/X11R6/bin/X
```
- c. Enable TCP connections on the X server of the remote client:

- **SUSE** – Edit `/etc/sysconfig/displaymanager` and set the following options to yes:

```
DISPLAYMANAGER_REMOTE_ACCESS
```

```
DISPLAYMANAGER_XSERVER_TCP_PORT_6000_OPEN
```

Here is an example:

```
DISPLAYMANAGER_REMOTE_ACCESS="yes"DISPLAYMANAGER_XSERVER_TCP_PORT_6000_OPEN="yes"
```

- **RHEL (for gnome)** – Edit `/etc/X11/gdm/gdm.conf` and set the `DisallowTCP` option to false (uncomment if commented); for example:

```
DisallowTCP=false
```

- d. If you made any changes in the configuration files during the previous steps, reboot the system for the changes to take effect.
- e. Run the following command at the command prompt:

```
# /usr/X11R6/bin/xhost +
```
- f. Set the display to your client. Refer to the documentation for your shell for more information.

Accessing the Linux Host from a Remote Client Using RealVNC

HP Storage Essentials supports the use of RealVNC Viewer Free Edition version 4.1 or later to access the Linux host from a remote client. Refer to the RealVNC documentation for information on how to configure the RealVNC server and how to use it to access the Linux host. Once you have configured the RealVNC server, follow the instructions in the section, "[Use the graphics console on the localhost](#)" on the previous page.

Accessing the Linux Host from a Remote Windows Client

Before running X Windows from a client system, make sure that X server is running on the HP Storage Essentials management server.

Note: ReflectionX Manager from Attachmate corporation is the tested XServer to install the product. You cannot install the product using Xming as the XServer.

Start up a local X server, connect through xterm to the remote system and set your DISPLAY environment variable appropriately by using the following commands:

```
# DISPLAY=<ip-address>:displaynumber.screennumber
```

In this instance, `<ip-address>` is the address of the client from which the Installer script is launched.

```
# export DISPLAY
```

Here is an example:

```
# DISPLAY=172.168.10.15:0.0
```

```
# export DISPLAY
```

Step 3 – Verify that Processes Can Start

After you install the management server, verify the process for the management server has started. It might take some time for the process to start depending on the server's hardware. The process must be running to monitor and manage your elements. Refer to the appropriate section for your operating system.

Verify that the process for the management server started. Enter the following at the command prompt:

```
# /etc/init.d/appstormanager status
```

The following is displayed if the process started:

```
Checking for Cimom Service...
```

```
Cimom Service - RUNNING.
```

```
Checking for appstormanager service...
```

```
appstormanager service - RUNNING.
```

If the process did not start, enter the following at the command prompt:

```
# /etc/init.d/appstormanager start
```

To stop the process, enter the following at the command prompt:

```
# /etc/init.d/appstormanager stop
```

The appstormanager service is available with the following options:

```
# /etc/init.d/appstormanager
```

```
Usage: /etc/init.d/appstormanager { start | stop | restart | status |  
force-reload }
```

If the status indicates that the CIMOM service is not running, wait a few minutes. It usually takes some time for the CIMOM process to start.

Step 4 – Obtain a License Key

See your product invoice for important information about licensing. If you are required to import a license, copy your Unique Client ID (UID) number and follow the instructions in your product invoice documentation to obtain and apply your license key. A valid license key is required to use the management server and to collect data from a managed element.

Verify that the following are enabled on your web browser:

- Cookies
- JavaScript
- Java

Additionally, make sure that the AppStorManager service is running. This service must be running for the product to work.

To obtain your HP Storage Essentials license, you must have the UID. This ID is displayed in the Installation Complete page of the HP Data Protector Reporter Install/Migrate Wizard. If you did not copy the Unique Client ID during installation, you can obtain the Unique Client ID after you log on for the first time to HP Storage Essentials.

To obtain the UID from the management server, complete the following steps:

1. Log on to the management server.
 - a. Open a web browser and enter the URL of the server running the management server; for example, <http://www.myserver.com>.
 - b. Type `admin` for the user name and the password that you provided in the Password page of the Install/Migrate wizard, during the product installation.
2. Select **Security > Licenses** in the management server.
3. At the top of the page, select the unique client ID and press **CTRL + C** to copy it.

Follow these steps to obtain and import your HP Storage Essentials license:

1. Go to <http://h30580.www3.hp.com/poeticWeb/portalintegration/hppWelcome.htm> and select the **Generate New Licenses** option. Follow the steps for obtaining your license key. You will need to provide your UID and HP Order ID (found on the entitlement certificate).
2. After you obtain your license, log on to the management server.
 - a. Open a web browser and enter the URL of the server running the management server; for example, <http://www.myserver.com>.
 - b. Type `admin` for the user name and the password that you provided in the Password page of the Install/Migrate wizard, during the product installation.
3. Import the license key:
 - a. Click the **Security** menu.
 - b. Click **Licenses** from the menu.
 - c. Click the **Import License File** button.
 - d. Click the **Browse** button. The file system of the computer used to access the management server is shown.
 - e. Select the license file.
 - f. Click **OK**.

Step 5 – Verify Your Connection to the Management Server

The `appstormanager` process must be running for you to connect to the management server.

Keep in mind the following:

- The license agreement, which is in PDF format, is displayed the first time you access HP Storage Essentials. Install the latest version of a PDF reader, such as Adobe Acrobat Reader, on the client you plan to use to access HP Storage Essentials for the first time. You can access the latest version of Adobe Acrobat Reader at the following URL: <http://www.adobe.com>

- If you do not have a license installed, you are asked to install the license. If you do not have a valid license, contact customer support, as mentioned in the Documentation Center (**Help > Documentation Center**). To install the license, select the **Import License File** button on the Licenses tab (**Security > Licenses**).
- Make sure you do not have pop-up blocking software enabled. If your Web browser has an option for blocking pop-ups, disable it. The management server uses pop-ups for dialog boxes.
- Make sure JavaScript is enabled.

To access the management server:

1. Type one of the following in a Web browser:

- For secure connections:

`https://machinename`

In this instance, machinename is the name of the management server.

- For nonsecure connections:

`http://machinename`

In this instance, machinename is the name of the management server.

2. If you receive an error message when you attempt to connect to the management server, the appstoremanager process might be still starting. Wait for it to complete its start script.

You might see a message like the following:

```
Receiving HTTP ERROR: 503 javax.ejb.EJBException: null;  
CausedByException is: Unexpected Error; nested exception is:  
java.lang.NoClassDefFoundError
```

For more information, see ["Receiving HTTP ERROR: 503 When Accessing the Management Server" on page 138](#).

3. In the management server login page, type `admin` in the **Name** box and the password that you provided in the Password page of the Install/Migrate wizard in the **Password** box, and then click **Login**.
4. If you are shown the software license agreement and you agree with its terms, click the **Accept** button.

To prevent the license agreement from being displayed each time you log on to the management server, select **Do not show me this again**.

5. When you first log on to the management server, you are asked to provide a license.
 - a. To obtain a license, you must provide the unique client ID from the management server. To access the unique client ID, select **Security > Licenses** in the management server.
 - b. At the top of the page, select the unique client ID and press **CTRL+C** to copy it.
 - c. Paste the unique client ID into a text file.
 - d. Access the Web site specified on the Activation Card for the product.
 - e. Follow the instructions provided at the Web site.
 - f. Once you obtain your license, return to the license page (**Security > Licenses**).

- g. Click the **Import License File** button.
 - h. Select the license file you obtained from the Web site and click **OK**.
6. If the management server does not detect a license, you are asked to import the license. Click the **Import License File** button to install the license.

The license file can be obtained from customer support.

Step 6 – Check for the Latest Service Pack

A service pack could have been created since this release. Obtain the latest service pack at the following location:

<http://h20230.www2.hp.com/selfsolve/patches>

Step 7 – Install the Java Plug-in on a Linux Client

Several of the features in HP Storage Essentials require the Java plug-in. Install the Java plug-in on the clients that will be accessing HP Storage Essentials through a web browser.

For Windows clients, install the Java plug-in by following the prompts in the user interface.

For Linux clients, follow the steps described in this section.

For Linux 32-bit clients, see the following section.

For Linux 64-bit clients, see "Linux 64-bit Clients" on the next page.

Linux 32-bit Clients

To install the Java plug-in on a 32-bit Linux client running Firefox:

1. Navigate to the following directory:

```
<install_directory>/JBossandJetty/server/appiq/webapp/appiq
```

In this instance, *<install_directory>* is the installation directory for HP Storage Essentials.

2. Copy the file `jre-6u38-linux-i586.bin` and paste this file to the `/usr/local` directory.
3. Open command prompt and enter the following command to navigate to the `/usr/local` directory:
`cd /usr/local`

4. Enter the following command to install the Java plug-in:

```
sudo sh jre-6u38-linux-i586.bin
```

5. After the installation is complete, you must link the plug-in with the browser:
 - a. Enter the following command to navigate to the Firefox applications directory:
`cd /usr/lib/mozilla`

- b. Enter the following command to create the `plugins` subdirectory in the Firefox applications directory. Follow this step only if `plugins` directory does not already exist:
`mkdir plugins`
- c. Enter the following command to navigate to the `plugins` directory:
`cd plugins`
- d. Enter the following command to link the plug-in:
`ln -s /usr/java/jre1.6.0_38/lib/i386/libnpjp2.so`

In this instance `/usr/local/jre1.6.0_38/lib/i386` is the path to the `libnpjp2.so` file.

6. Restart Firefox browser.

Linux 64-bit Clients

These steps are only for 64-bit Red Hat Linux.

To install the Java plug-in on a 64-bit Red Hat Linux client running Firefox:

1. Navigate to the following directory:
`<install_directory>/JBossandJetty/server/appiq/webapp/appiq`

In this instance, `<install_directory>` is the installation directory for HP Storage Essentials.
2. Copy the file `jre-6u38-linux-x64.bin` and paste this file to the `/usr/local` directory.
3. Open command prompt and enter the following command to navigate to the `/usr/local` directory:
`cd /usr/local`
4. Enter the following command to install the Java plug-in:
`sudo sh jre-6u38-linux-x64.bin`
5. After the installation is complete, you must link the plug-in with the browser:
 - a. Enter the following command to navigate to the Firefox applications directory:
`cd /usr/lib64/mozilla`
 - b. Enter the following command to create the `plugins` subdirectory in the Firefox applications directory. Follow this step only if `plugins` directory does not already exist:
`mkdir plugins`
 - c. Enter the following command to navigate to the `plugins` directory:
`cd plugins`
 - d. Enter the following command to link the plug-in:
`ln -s /usr/local/jre1.6.0_38/lib/amd64/libnpjp2.so`

In this instance `/usr/local/jre1.6.0_38/lib/amd64` is the path to the `libnpjp2.so` file.
6. Restart Firefox browser.

Log Files from the Installation on Linux

When an installation is successful, the Install/Migrate wizard zips up the log files and places them in the `Installation_Directory/logs` directory. In this instance, `Installation_Directory` is the directory where the product was installed.

The name of the zip file has a date stamp `InstallWizard_MM_DD_YYYY_HH_MM_SS.zip`; for example, `InstallWizard_12_12_2012-01_21_30.zip`.

The zip file includes two internal log files created by the installation. These files contain debug information for internal use only.

- `/tmp/InstallSRMTemp/WizardSetup.log`
- `/tmp/InstallSRMTemp/Wizard.log`

The log files are available at the following location:

`<Installation_Directory>/logs`

Removing HP Data Protector Reporter

You must have root privileges to run the uninstall scripts.

To uninstall the management server, enter the following at the command prompt:

```
/<InstallDir>/StorageEssentials/Uninstall_HP_Storage_
Essentials/Uninstall_HP_Storage_Essentials
```

To uninstall the Report Database, enter the following at the command prompt:

```
/<InstallDIR>/ReportDatabase/Uninstall_Storage/ Report/
Database/Uninstall/ Storage/ Report/ Database
```

To uninstall Report Optimizer, enter the following at the command prompt:

```
/<Report Optimizer install directory>/Uninstall_
HPSRMReportOptimizer/Uninstall_HPSRMReportOptimizer
```

To uninstall the Oracle database, insert the Oracle DVD and enter the following command:

```
./<Mount_Point>/UninstallDatabase
```

In this instance, `<Mount_Point>` is the mount point for the DVD drive containing the Oracle DVD.

Chapter 3

Required Configuration Steps after Installing Reporter

You must configure Reporter. If you observe any issues while generating reports, see the section *Troubleshooting Reporter* in the HP Storage Essentials Installation Guide.

Changing the Passwords for Report Optimizer Accounts

The Reporter installation provides the default passwords for the SQL Anywhere user account. The default password is `Password123`.

Changing the Password for the Administrator Account

If you have since changed the password and you do not remember the old password, you can reset it, as described in the *Resetting the Administrator Password* section in the *HP Data Protector Reporter Installation Guide*.

To change the password for the Administrator account:

1. Log on to Central Management Console as described in "[Accessing the Central Management Console for Report Optimizer](#)" on page 62.
2. In the Organize section, click **Users and Groups**.
3. Double-click **Administrators**.
4. Right-click **Administrator** and then select **Account Manager**.
5. Enter the new password in the Enterprise Password Settings section.
6. Click **Save and Close** for the new password to take effect.

Changing the Password for SQL Anywhere User

To change the password for SQL Anywhere user:

Windows:

1. Stop the Report Optimizer service `BOE120SQLAW`.
2. Open command prompt and navigate to the install location of the SQL Anywhere bin folder. By default, the path is: `<RO_Install_Dir>\SQLAnywhere12\bin`.
In this instance, `<RO_Install_Dir>` is the Report Optimizer installation directory.

3. Enter the following command:

```
dbisqlc -q -c "uid=<host_name>;pwd=<old_password>;dbf=<host_name>.db" " alter user <host_name>identified by <new_password> ";
```

In this instance,
<host_name> is the host name of the computer where Report Optimizer is installed. Make sure that you provide the host name without the hyphen character.
<old_password> is the old password. By default, this password is Password123.
<new_password> is the new password for the user.
4. Configure the password for data source using the following steps:
 - a. Click **Start>Business Objects XI 3.1>Business Objects Enterprise>32-bit Data Source (ODBC)**.
 - b. Click the **System DSN** tab.
 - c. Select the data source with name as <host_name_without_hyphen>.
 - d. Click **Configure** and then click Login tab.
 - e. Update the password in the Password field for the user with the name as <host_name_without_hyphen>.
 - f. Repeat steps 4a through 4d for BOE120_AUDIT.
5. Right-click the **BOE120Tomcat** services in the Services Administration tool and select **Restart** to restart Tomcat.
6. Start the Report Optimizer service, BOE120SQLAW, from Services, which is available from the Windows Control Panel. See your Windows operating system documentation for more information on start a service on Windows.

Linux:

1. Open command prompt and navigate to the install location of the SQL Anywhere bin folder. By default, the path is the following:

```
<RO_Install_Dir>/bobje/SQLAW/Bin
```

In this instance, <RO_Install_Dir> is the Report Optimizer installation directory.
2. Enter the following command to set the SQL Anywhere Library path:

```
export LD_LIBRARY_PATH=<RO_Install_Dir>/bobje/SQLAW/Lib
```

In this instance, <RO_Install_Dir> is the Report Optimizer installation directory.
3. Enter the following command at the command prompt:

```
./dbisqlc -q -c "UID=<host_name>;pwd=<old_password>;dbn=boe120" "alter user <host_name> identified by <new_password> ";
```

In this instance,
<host_name> is the host name of the computer where Report Optimizer is installed. Make sure that you provide the host name without the hyphen character.
<old_password> is the old password. By default, this password is Password123.
<new_password> is the new password for the user.
4. Restart Tomcat:
 - a. Navigate to the following directory:

```
<RO_Install_Dir>/bobje
```

In this instance, <RO_Install_Dir> is the Report Optimizer installation directory.

- b. Enter the following command to stop Tomcat:
`./tomcatshutdown.sh`
 - c. Enter the following command to start Tomcat:
`./tomcatstartup.sh`
 5. Restart Report Optimizer:
 - a. Enter the following command to stop Report Optimizer:
`/'etc/init.d/BojEnterprise120 stop`
 - b. Enter the following command to start Report Optimizer:
`/'etc/init.d/BojEnterprise120 start`

Configuring the Report Database to Point to the Management Server

If you are installing Reporter on the same server as the HP Storage Essentials management server, you do not need to configure the Report Database to point to the management server.

To configure the Report Database to point to the management server:

1. To access the Report Database Admin Utility:
 - **Windows**

Go to %REPORT_DATABASE_HOME% and double-click **ReportAdmin.bat**.
 - **Linux**
 - i. Set the display if you are accessing the Report Database Admin Utility remotely.
 - ii. Go to the \$REPORT_DATABASE_HOME directory by entering the following at the command prompt:

```
# cd $REPORT_DATABASE_HOME
```
 - iii. Run the Report Admin Utility by entering the following at the command prompt:

```
# sh ./ReportAdmin.sh
```
2. Click **Add**.
3. Enter a site name in the Site Name box. The site name is used to differentiate the server from other servers.
4. Enter the IP address of the management server. The Report Database uses this IP address to contact the management server for report data.
5. Click **OK**. The management server is set as the local management server.

Configuring a Global Report Database

Configuring a global report database enables you to use the Global Reports in Report Optimizer.

To configure a global report database:

1. Add additional management servers on the “Set up report sources” screen.
2. By default, the first management server you enter is configured as the local management server. Data from the local management server is used for the Standard Reports in Report Optimizer. To make one of the other management servers the local server, click **Configure Report Database** in the left pane.
3. Select another management server from the Standard Reports Use drop-down menu, and click **Submit**.
4. Click **Set up report sources** in the left pane. The selected management server becomes the local management server.
5. To view updated reports immediately, click **Refresh Data Now**. Otherwise, updated reports are available after the next report cache refresh is processed.

For additional details about configuring the Report Database, see the Report Database online help.

Accessing the Central Management Console for Report Optimizer

Before you access the central management console for Report Optimizer, verify the following:

- JavaScript is enabled.
- Pop-ups are disabled.

If you are running Windows Server 2008 with Internet Explorer Enhanced Security Configuration” (IEESC) enabled, the server running Report Optimizer was added as a trusted site. See ["Adding the Report Optimizer Server as a Trusted Site"](#) below.

1. Use a web browser to go to:
`http://<fqdn_or_ip_address_of_Report_Server>:8080/CmcApp/logon.faces`
2. Log on to the Central Management Console with the following credentials:
 - Username: Administrator
 - Password: The password that you provided during the installation in the Install/Migrate wizard.

Adding the Report Optimizer Server as a Trusted Site

If you are running Windows Server 2008 with the Internet Explorer Enhanced Security Configuration (IEESC) enabled, you must add the server running Report Optimizer as a trusted site.

When you access Report Optimizer directly, you are prompted to add the site as a trusted site.

When you access Report Optimizer from within HP Storage Essentials, you are not prompted to add the server as a trusted site and thus, you might run into difficulty with accessing Report Optimizer from within HP Storage Essentials.

To manually add Report Optimizer server as a trusted site:

1. In Internet Explorer, click **Tools** > **Internet Options** > **Security**.
2. Click **Trusted Sites** and then click **Sites**.
3. Add several variations of the server name. For example, if the server running Report Optimizer is named reportserver.usa.mycompany.com with IP address 192.168.1.1, you can enter the following variations of the site name:
 - The IP address of the server; in this example, http://192.168.1.1
 - The full name of the computer; in this example, http://reportserver.usa.mycompany.com
 - The computer name; in this example, http://reportserver

Installing a Named User Permanent License Key

Adding a named user permanent license key enables you to log on as Administrator without consuming a concurrent license.

To install a named user permanent license key:

1. Launch the Central Management Console as described in "[Accessing the Central Management Console for Report Optimizer](#)" on the previous page.
2. In the Manage section, click **License Keys**.
3. In the Add Key box, enter the named user license key. Click **Add**.
4. Return to the Central Management Console home page. In the Organize section, click **Users and Groups**.
5. Select **User List** and then double-click **Administrator**.
6. In the Connection Type section, select the **Named User** radio button.
7. Click **Save and Close**.

Setting the Report Parameters in HP Storage Essentials

To set the report parameters in HP Storage Essentials:

1. In HP Storage Essentials, select **Configuration** > **Reports**, and click the **Reporter Configuration** tab.
2. In the Host Name or IP box, enter the host name or IP address of the server running Report Optimizer.
3. In the Port Number box, enter the port number for accessing Report Optimizer. The default is 8080.
4. *(Optional)* Change the password for the ReportUser user account. You must have already changed the password on the Report Optimizer server.

- a. Click **Change Password**.
- b. Enter the old password (Welcome), enter a new password, and confirm the new password.
- c. Click **Submit**.

Modifying the Server Session Timeout Value

You must change the server session timeout value to 120 minutes, as follows:

1. Launch the Central Management Console as described in "[Accessing the Central Management Console for Report Optimizer](#)" on page 62.
2. In the Organize section, click **Servers**.
3. Expand the Server Categories node, and click **Web Intelligence**.
4. Double-click the WebIntelligenceProcessingServer. The Properties window opens.
5. In the Web Intelligence Processing Service section, enter 120 in the Idle Connection Timeout box.
6. Click **Save and Close**.

Configuring Drill-Down Options

The drill-down options must be properly configured to synchronize graphs with drill-down reports.

To configure the drill-down options:

1. Log on to InfoView, as follows:
 - a. Go to `http://<fqdn_or_ip_address_of_Report_Server>:8080/InfoViewApp/logon.jsp`
 - b. Log on with a valid username and password.
2. In the upper-right corner of your browser, click the **Preferences** button.
3. Click **Web Intelligence** to expand that section.
4. In the Drill Options section, click the "Synchronize drill on report blocks" check box.
5. Click **OK**.

Disabling Browser Access to Desktop Intelligence

Desktop Intelligence is not installed with Report Optimizer, so references to that feature should be removed from the user interface.

To remove these references by disabling browser access to Desktop Intelligence:

1. Launch the Central Management Console as described in "[Accessing the Central Management Console for Report Optimizer](#)" on page 62.
2. In the Manage section on the home page, click **Applications**.

3. Right-click **Desktop Intelligence**, and select **User Security**.
4. Click **User Security**, select **Administrators**, and click **Assign Security**.
5. Click the **Advanced** tab.
6. Click **Add/Remove Rights**.
7. Click **General** under the General node.
8. Click the **Denied** radio button for every option:
 - Edit this object.
 - Log on to Desktop Intelligence and view this object in the CMC.
 - Modify the rights users have to this object.
 - Securely modify rights users have to objects.
9. Click **OK**.
10. Click **Desktop Intelligence** under the Application node.
11. Click the **Denied** radio button for the following options:
 - Create Desktop Intelligence Documents
 - Create Templates
 - Save Desktop Intelligence Documents
 - Save Documents for all users
 - Use Templates
12. Click **OK**.
13. Click **OK** to apply the chosen settings.
14. Repeat these steps for the Everyone group.

Adding the Report Designers Group

Report Optimizer does not support Report Optimizer role-based security. The reports visible to a user are determined by the access and security levels set in Report Optimizer.

Add the Report Designers group to allow easy addition and modification of rights for users who will have report creation, modification, and deletion rights.

To add the Report Designers group:

1. Launch the Central Management Console as described in "[Accessing the Central Management Console for Report Optimizer](#)" on page 62.
2. Click **Users and Groups** in the Organize section.
3. Right-click **Group List**, and select **New Group**.
4. Enter `Report Designers` in the Group Name box.
5. Add the following text to the description:

Report Designers group. Users added to this group will have the rights and privileges to create, modify, and delete new and existing reports.

6. Click **OK**.

Assigning Report Designing Privileges to Report Designers

The Report Designers group must be assigned the appropriate application rights.

To assign the appropriate rights:

1. Launch the Central Management Console as described in "[Accessing the Central Management Console for Report Optimizer](#)" on page 62.
2. In the Manage section, click **Applications**.
3. Right-click **Web Intelligence**, and select **Properties**.
4. Click **User Security** in the left panel, and click **Add Principals**.
5. Select **Report Designers** and click > to add it to the Selected users/groups list.
6. Click **Add and Assign Security**. The Assign Security window opens.
7. Select **Full Control** and click > to add it to the Assigned Access Levels pane.
8. Click **OK**.
9. Return to the Central Management Console Home page.
10. In the Organize section, click **Folders**.
11. Right-click **All Folders**, and select **Properties**.
12. Click **User Security**, and then click **Add Principals**.
13. Select **Report Designers** and click > to add it to the Selected users/groups list.
14. Click **Add and Assign Security**. The Assign Security window opens.
15. Select **Full Control** and click > to add it to the Assigned Access Levels pane.
16. Click **OK**.
17. Return to the Central Management Console Home page.
18. In the Organize section, click **Folders**.
19. Expand the All Folders node, right-click **Report Pack**, and select **User Security**.
20. Click **Add Principals**, select **Report Designers**, and click > to add it to the Selected users/groups list.
21. Click **Add and Assign Security**. The Assign Security window opens.
22. Select **Full Control** and click > to add it to the Assigned Access Levels pane.
23. Click **OK**.

24. Return to the Central Management Console Home page.
25. In the Organize section, click **Universes**.
26. In the right-hand pane, right-click **Report Connector**, and select **User Security**.
27. Click **Add Principals**, select **Report Designers**, and click > to add it to the Selected users/groups list.
28. Click **Add and Assign Security**. The Assign Security window opens.
29. Select **Full Control** and click > to add it to the Assigned Access Levels pane.
30. Click **OK**.
31. Return to the Central Management Console Home page.
32. In the Organize section, click **Connections**.
33. Right-click **DB Connection**, and select **User Security**.
34. Click **Add Principals**, select **Report Designers**, and click > to add it to the Selected users/groups list.
35. Click **Add and Assign Security**. The Assign Security window opens.
36. Select **Full Control** and click > to add it to the Assigned Access Levels pane.
37. Click **OK**.

Best Practices

Always use the Report Designers group to add new users who can add, modify, and delete reports and perform report related management operations. This simplifies maintenance when privileges and rights are modified for all users who have report modification and maintenance-related tasks.

Adding New Users to Report Optimizer

To add new users:

1. Launch the Central Management Console as described in "[Accessing the Central Management Console for Report Optimizer](#)" on page 62.
2. Click **Users and Groups** in the Organize section, and click User List in the left-hand pane. All of the valid users are listed in the right-hand pane.
3. Click **Manage**, and select **New > New User**.
4. Choose the Authentication type and enter user details. If you select LDAP/Windows or AD/Windows NT, enter the username qualified with the appropriate domain; for example, americas\username.
5. Select **Concurrent User or Named User** for the Connection type at the bottom of the page.
6. Click **Create** or **Create and Close**.
7. Right-click the new user, and select **Member of**.
8. Click **Join Group**.

9. Select the **Report Designers** group and click > to add it to the Destination Group(s) list. Remove the Everyone group from the Destination Group(s) list if it is included there.
10. Click **OK**.

The new user can now log on to the web interface at `http://<fqdn_or_ip_address_of_Report_Server>:8080/InfoViewApp/logon.jsp`

If you changed the port number during installation, enter the selected port number instead of 8080.

For more information, see the “Managing Enterprise and general accounts” section of the “Managing Users and Groups” chapter of the *Administrator's Guide*.

Best Practices

Assign rights to groups instead of individual users.

All users who need rights for the creation, modification, or deletion of reports should be added to the Report Designers group.

All users who need view-only rights should be added to the Everyone group. The Everyone group has view-only rights by default.

Changing the Server Intelligence Agent's User Account (for Monitoring Remotely Located Files)

To change the Server Intelligence Agent's user account:

1. Use the Central Configuration Manager to stop the Server Intelligence Agent.
2. Right-click the Server Intelligence Agent, and select **Properties**.
3. Uncheck the System Account check box.
4. Enter the Windows user name and password:

Report Optimizer and the management server are installed on different machines. Both machines must be in the same domain.

- Click the button to the right of the User field. The Browse User window opens.
 - Click the **Change** button, and select the domain name.
 - Click **OK** to return to the Browse User window.
 - Select the appropriate user, and click **OK** to return to the Server Intelligence Agent window.
5. Click **Apply**, and then click **OK**.
 6. Start the Server Intelligence Agent. The server process logs on to the local machine with the specified user account. All reports processed by this server are formatted using the printer settings associated with the user account you entered.

Configuring Active Directory (AD) Authentication

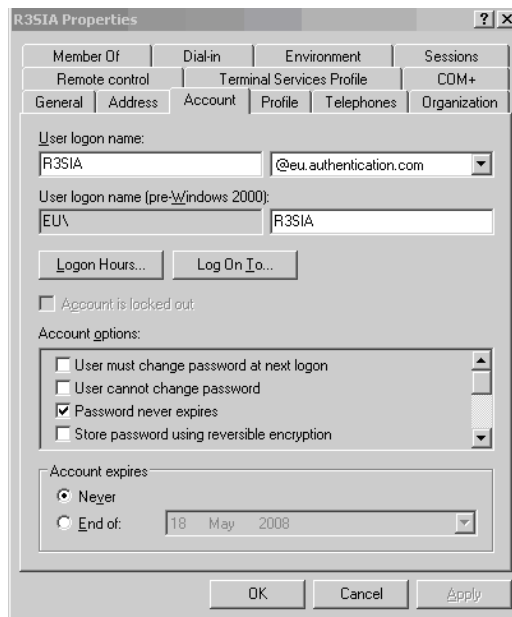
Active Directory is only supported on Windows for Report Optimizer.

You must configure Active Directory (AD) Authentication.

Create a Service Account

Create a domain account that can be used as a service account, and add this account to the local Administrators group on the RO server.

1. Open the Account tab for the user you created and make sure the "Password never expires" checkbox is selected.



2. Add the Service Account user to the local Administrators group.

Register an SPN Account

To add an SPN for the service account of the Central Management Server (CMS):

1. Open a command window.
2. Type the following command as a Domain Admin user:

```
SETSPN.exe -A<service_class>/<domain_name> <service_account>
```

In this instance:

- <service_class> means any desired name; for example, ROCentralIMS)
- <domain_name> means the domain and server name of the service account; for example,

DFDEV.COMPANY.COM)

- <service_account> means the domain user account you configured; for example, sa ser01

Input example:

```
Setspn.exe -A ROCentralMS/DFDEV.COMPANY.COM sa ser01
```

Output example:

```
Registering ServicePrincipalNames for CN=sa ser01,OU=Service Accounts,  
OU=NCSUS,D
```

```
C=dfdev,DC=company,DC=com
```

```
ROCentralMS/dfdev.company.com
```

```
Updated object
```

Grant Rights to Service Account

Grant the service account the rights to act as part of the operating system on each RO server:

1. On the RO server go to **Start > Control Panel > Administrative Tools > Local Security Policy**.
2. Expand **Local Policies**, and then click **User Rights Assignment**.
3. Double-click **Act as part of the operating system** and select **Add**.
4. Enter the name of service account you created and click **OK**.
5. Make sure the Local Policy Setting box is selected and click **OK**.

(Optional) Set Delegation Option

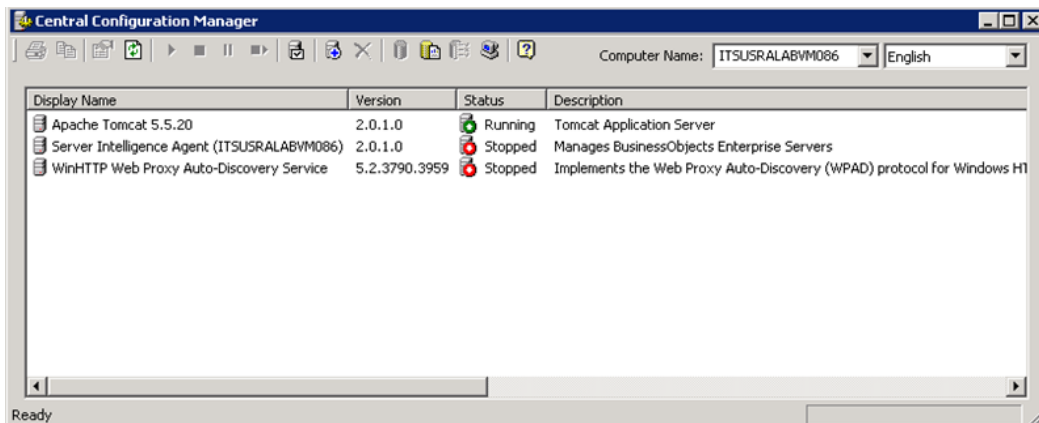
To set the Delegation option for the user:

1. Open the AD Service Account User within the AD Users and Computers tool.
2. Select the Delegation tab for the User.
3. Select **Trust this user for delegation to specified services only** and **Use Kerberos Only**.
On Windows 2008, a delegation tab appears after an SPN is assigned. Select **Trust this user for delegation (Kerberos only)**.
4. Select **Add > Users and Computers** and enter the Service Account user.
5. Select the <service_class> name you specified in step 2.
6. Click **OK**.

Assign Account to Server Intelligence Agent

To set the AD service account to run the Server Intelligence Agent service:

1. Go to **Start Menu > Business Objects XI 3.1 > Business Objects Enterprise > Central Configuration Manager** and stop the Server Intelligence Agent.



2. Right-click the Server Intelligent Agent and select **Properties**.
3. In the Log On As section, deselect the System Account and use the new AD account created in step 1. The format should be `selab\ro_svc`.
4. Restart the Server Intelligence Agent.

If the service does not start properly, you have an account issue (such as password or rights)

Create WINNT Directory

Create the `C:\WINNT` directory and then create the `krb5.ini` and `bscLogin.conf` files in the WINNT directory as follows:

1. Create the `bscLogin.conf` file, and copy and paste the following information into the file:

```
com.businessobjects.security.jgss.initiate {
com.sun.security.auth.module.Krb5LoginModule required;
};
```

2. Create the `krb5.ini` file, and copy and paste the following information into the file:

```
[libdefaults]
default_realm = <DOMAIN.COM>
dns_lookup_kdc = true
dns_lookup_realm = true
[realms]
<DOMAIN.COM> = {
kdc = <ADSERVER>.<DOMAIN.COM>
default_domain = <DOMAIN.COM>
}
```

In this instance, <DOMAIN.COM> means the Windows Fully Qualified Domain Name (FQDN) and <ADSERVER> means the Active Directory Domain Controller name. All names must include only capital letters.

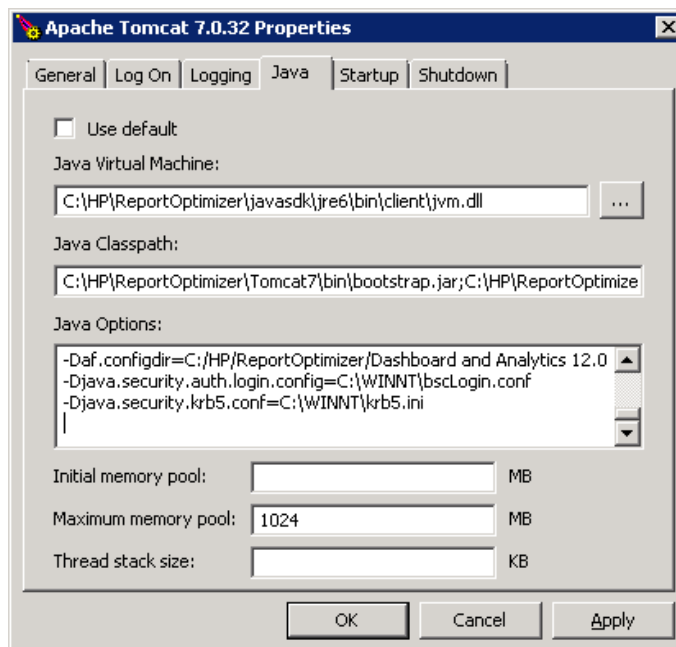
Set File Locations in Tomcat

To set the locations for the files in the Tomcat configuration:

1. Select **Start > Programs > Tomcat > Tomcat configuration** and click the **Java** tab.
2. Copy and paste the following lines into the Java Options section:

```
-Djava.security.auth.login.config=C:\WINNT\bscLogin.conf
```

```
-Djava.security.krb5.conf=C:\WINNT\krb5.ini
```



3. Open Central Configuration Manager (**Start > All Programs > BusinessObjects XI 3.1 > BusinessObjects Enterprise > Central Configuration Manager**).
4. Select the Apache Tomcat service and restart it.

Configure Active Directory Plug-In in RO

To configure the AD plug-in within the Configuration Management Console of RO:

1. Log on as Administrator to the Configuration Management Console.
2. On the Central Management Console home page, select **Authentication** from the drop-down menu, and double-click **Windows AD**.
3. Make sure the Enable Windows Active Directory (AD) check box is selected.
4. Set settings in the AD Configuration Summary section:

- a. Click "" beside the AD Administration Name, and enter an AD account that can read the AD. This is used to bind to the domain and search for users trying to authenticate.
 - b. In the Default AD Domain box, enter the Fully Qualified Domain Name (using capital letters).
5. Add any AD Groups in the Mapped AD Member groups section.
6. In the Authentication Options section, select the Use Kerberos authentication radio button and enter <service_account>@<DOMAIN.COM> (see step 2) as the Service principal name of the service account. The domain name must be in capital letters.
7. Make sure the following options are selected in the AD Alias Options section:
 - "Assign each new AD alias to an existing User Account with the same name."
 - "Create new aliases when the Alias Update occurs."
 - "New users are created as concurrent users."
8. Click **Update**.
9. Make sure that AD Users or Groups is a member of the SE Report or Report Designer groups within the Configuration Management Console of RO.

Restart Tomcat

Stop and restart the Tomcat service using the Central Configuration Manager.

Scheduling Reports Based on File Based Events

If you scheduled reports based on file based events, you must reschedule those reports after migrating. See the "Using file-based events with scheduled reports" section of the HP Storage Essentials Report Optimizer *Quick Start Guide*.

Setting Up an Email Server

To set up an email server:

1. Launch the Central Management Console as described in ["Accessing the Central Management Console for Report Optimizer" on page 62](#).
2. Click **Servers**. A list of all of the server processes running on your Report Optimizer server is displayed.
3. Click **Servers**.
4. Double-click <your_servername>.destinationjobserver.
5. Click **Destination**.
6. Select **Email** from the Destination drop-down menu, click **Add**, and populate your SMTP server details.
7. Click **Save** or **Save and Close**.

8. Double-click **<your_servername>.AdaptiveJobServer**.
9. Click **Destination**.
10. Select **Email** from the Destination drop-down menu, click **Add**, and populate your SMTP server details.
11. Click **Save** or **Save and Close**.

For more information, see the “Configuring the destination properties for job servers” section of the “Managing and Configuring Servers” chapter of the *BusinessObjects Enterprise Administrator’s Guide*.

Best Practices

Set up an email account like StorageReporter@mycompany.com and use this account for SMTP mailings.

Tuning the Report Optimizer Server

The following are optional steps for further configuring your server.

This section contains the following topics:

- ["Configuring a Set of User Groups as Read-Only Users" below](#)
- ["Disabling Servers that are Not Required " on page 77](#)
- ["Increasing the Memory Heap Size Value" on page 77](#)
- ["Adding a Folder for User-Created Custom Reports" on page 79](#)
- ["Deleting Duplicate Folders" on page 79](#)

Configuring a Set of User Groups as Read-Only Users

To configure a set of user groups as read-only users:

1. Log on to the Central Management Console as an administrative user.
2. In the Organize section, click **Users and Groups**.
3. Click the **Manage** drop-down menu, and select **New > New Group**.
4. Enter a group name, such as Report Viewers, in the Group Name box. Enter a description in the Description box, and then click **OK**.
5. Click the **Manage** drop-down menu and select **New > New User**.
6. Enter an account name in the Account Name box, enter other details as appropriate, and then click **Create**. Repeat this step to create additional users.
7. After entering the last user, click **Create and Close**.

To integrate Active Directory users, see "[Configuring Active Directory \(AD\) Authentication](#)" on [page 69](#).

8. Select all the users you just created, right-click, and select **Join Group**.
9. From the Available Groups section, select the Report Viewers group, click > to move it to the Destination Group(s) section, and then click **OK**.
10. Return to the Central Management Console Home page.
11. In the Define section, click **Access Levels**.
12. Click the **Manage** drop-down menu and select **New > Create Access Level**.
13. Enter a title in the Title box and click **OK**.
14. Double-click the access level you just created, and then click **Included Rights**.
15. In the right pane, click **Add/Remove Rights**.
16. In the left pane, select **General > General**, and then select the Granted radio button for the following rights:
 - Reschedule instances
 - Reschedule instances that the user owns
 - Schedule document that the user owns to run
 - Schedule document to run
 - Schedule objects that the user owns to destinations
 - Schedule on behalf of other users
 - Schedule on behalf of other users that the user owns
 - Schedule to destinations
 - View objects
 - View objects that the user owns
17. In the left pane, select **Content > Web Intelligence Report**, and then select the Granted radio button for the following rights:
 - Download files associated with the object
 - Export the report's data
 - Refresh List of Values
 - Refresh the report's data
 - Save as CSV
 - Save as excel
 - Save as PDF
 - Use Lists of Values
18. In the left pane, select **Application > InfoView**, and then select the Granted radio button for

the following rights:

- View the favorites folder
 - View the Inbox
19. In the left pane, select **Application > Web Intelligence**, and then select the **Granted** radio button for the following rights:
 - Enable drill mode
 - Enable Java Report Panel
 20. In the left pane, select **System > Connection**, and then select the **Granted** radio button for the following rights:
 - Data Access
 - Use connection for Stored Procedures
 21. In the left pane, select **System > Universe**, and then select the **Granted** radio button for the following right:
 - Data Access
 22. Click **OK** and **Close**.
 23. Return to the Central Management Console Home page.
 24. In the Organize section, click **Folders**.
 25. Click **All Folders**.
 26. Click the **Manage** drop-down menu and select **Top Level Security > All Folders**.
 27. Select **Everyone**, and click **Assign Security**.
 28. Select **View** from the Available Access Levels section, and click **>** to move to the Assigned Access Levels section.
 29. Click **Apply**, **OK**, and **Close**.
 30. Expand the All Folder node and select **Report Pack**. Right-click and select **User Security**.
 31. Click **Add Principals**.
 32. In the Available users/groups section, select **Report Viewers** and click **>** to move it to the Selected users/groups section.
 33. Click **Add and Assign Security**.
 34. Uncheck the **Inherit From Parent Folder** and **Inherit From Parent Group** check boxes.
 35. In the Available Access Levels section, select **Report Viewers Access Level** and click **>** to move it to the Assigned Access Levels section.
 36. Click **Apply**, **OK**, and **Close**.
 37. Return to the Central Management Console Home page.
 38. In the Manage section, select **Web Intelligence**, right-click, and select **User Security**.
 39. Repeat [step 31](#) through [step 37](#).

40. In the Organize section, click **Connections**.
41. Click the **Manage** drop-down menu, and select **Top-Level Security > All Connections**.
42. Repeat [step 31](#) through [step 37](#).
43. In the Organize section, click **Universes**.
44. Click the **Manage** drop-down menu, and select **Top-Level Security > All Universes**.
45. Repeat [step 31](#) through [step 37](#).

Disabling Servers that are Not Required

The following servers are not required by Report Optimizer and should be stopped and set to the Disabled state:

- Crystal Reports Cache Server
- Crystal Reports Job Server
- Crystal Reports Processing Server
- Desktop Intelligence Cache Server
- Desktop Intelligence Job Server
- Desktop Intelligence Processing Server
- Report Application Server

To disable these servers:

1. Launch the Central Management Console as described in "[Accessing the Central Management Console for Report Optimizer](#)" on page 62.
2. In the Organize section, click **Servers**.
3. Select the servers, right-click, and select **Disable Server**.

Increasing the Memory Heap Size Value

Increasing the memory heap size value will prevent potential error messages.

To increase the memory heap size value:

1. Click **Start > Run**. The Run dialog box appears.
2. Enter `regedit` in the Open text field.
3. Click **OK**. The Registry Editor appears.
4. Navigate to `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet/Control/Session Manager/Subsystems`.
5. Right-click the Windows key and select **Modify**.

6. Edit the SharedSection value from 1024, 3072, 512 to 1024, 3072, 1024. Note that the default value varies depending on the Windows version on which you have installed the Report Optimizer server.
7. Navigate to either of the following:
 - Windows 32-bit servers:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects\Suite  
12.0\default\WebIntelligence\Server\Admin\SwapTimeOut
```
 - Windows 2008 64-bit servers:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Business Objects\Suite  
12.0\default\WebIntelligence\Server\Admin\SwapTimeOut
```
8. Edit this value to 1500 seconds. Alternatively, set this to a value higher than the Web Intelligence Processing Server connection time out value found in the Central Management Console. This value is written in minutes. The default value is 20.
9. Close the Registry Editor.
10. Restart the Server Intelligence Agent service for the changes to take effect.

Creating a Server Group

Creating a server group that contains all of the Report Optimizer servers enables you to modify the status of the servers from the Central Management Console.

To create a server group:

1. Launch the Central Management Console as described in ["Accessing the Central Management Console for Report Optimizer" on page 62](#).
2. In the Organize section, click **Servers**.
3. Right-click **Server Groups**, and select **New > Create Server Group**.
4. In the Name box, enter Report Connector Services.
5. Click **OK**.
6. Click **Servers List**.
7. Select the following servers:
 - AdaptiveJobServer
 - AdaptiveProcessingServer
 - CentralManagementServer
 - ConnectionServer
 - DestinationJobServer
 - EventServer
 - InputFileRepository
 - ListOfValuesJobServer

- MultiDimensionalAnalysisServicesServer
 - OutputFileRepository
 - ProgramJobServer
 - PublicationJobServer
 - ReportApplicationServer
 - WebIntelligenceProcessingServer
8. Right-click the selected servers, and select **Add to Server Group**.
 9. Select the **Report Connector Services** group, and click the > button.
 10. Click **OK**.

Adding a Folder for User-Created Custom Reports

To add a folder for user-created custom reports:

1. Log on to InfoView.
 - Go to `http://<fqdn_or_ip_address_of_Report_Server>:8080/InfoViewApp/logon.jsp`
If you changed the port number during installation, enter the selected port number instead of 8080.
 - Log on with a valid username and password.
2. Right-click **Public Folders**, and select **New > Folder**.
3. Enter the following name for the folder:
`<Customer Name> <Management Server Name> reports`

Best Practices

Follow the naming convention described in "[Adding a Folder for User-Created Custom Reports](#)" above. If multiple installations are being configured at the same time, specify the management server name to uniquely identify each installation.

When exporting and importing end-user created reports for backup or support purposes, a unique top-level folder name for the reports ensures that the reports are not overwritten. Unique folder names for end-user reports also ensure that Report Pack updates do not overwrite user-created custom reports.

Deleting Duplicate Folders

To delete duplicate folders:

1. Right-click the folder you want to remove.
2. Select **Organize > Delete**.
3. Click **OK**.

Chapter 4

Required Configuration Steps for HP Data Protector Reporter

First, follow the steps on the Getting Started page.

To access the Getting Started page:

1. Open a web browser and enter the following URL:

`http://<name_of_the_management_server>`

In this instance, <name_of_the_management_server> is the name of the server on which you installed the management server. You can also provide an IP address.

2. In the Name text box, enter the following:

`admin`

3. In the Password text box, enter the following:

`password`

4. If the Getting Started page does not automatically appear, click **Startup** in the upper-right corner.

Follow the steps on the Getting Started page. Make sure you import the license as directed. Also, run the Configuration Wizard from the Getting Started page. For more information about the Configuration Wizard, see "[Launching the Backup Host Configuration and Discovery Wizard](#)" on page 88.

Prerequisites for Agentless Discovery of Data Protector

If you have a CIM extension installed, the product will automatically use the CIM extension to discover Data Protector.

Before you discover a Data Protector server that does not have a CIM extension installed, you must do the following:

1. Install the Data Protector Client on the management server. See "[Step 1 – Install the Data Protector Client](#)" on the next page.
2. Create the DPREPORTER user group for HP Data Protector Reporter. See "[Step 2 – Create a User Group for HP Data Protector Reporter](#)" on page 84
3. (Windows Only) Start the AppStorManager service with the context of the local administrator. "[Step 3 – Start the AppStorManager Service with the Context of Local Administrator](#)" on page 85

4. Create a user in the DPREPORTER user group. See ["Step 4 – Create a User within the DPREPORTER User Group" on page 86](#)
5. Install the Data Protector 6.1 patches on top of the Data Protector 6.1 client or upgrade to the Data Protector 6.11 client. See ["Step 5 – Install the Data Protector Patch" on page 87](#)

Step 1 – Install the Data Protector Client

Install the Data Protector Client on the HP Storage Essentials management server as described in the following steps.

- ["Linux Installation Steps" below](#)
- ["Windows Installation Steps" below](#)

Linux Installation Steps

To install the Data Protector Client:

1. Open the `/etc/services` file in a text editor, such as `vi`.
2. Search for 5555 in the text editor.
3. Comment the following two lines in the text editor as follows:

```
#personal-agent 5555/tcp # Personal Agent  
#personal-agent 5555/udp # Personal Agent
```
4. Save the services file, and exit the text editor.
5. Copy the Data Protector tar file and extract the tar file.
6. Go to the `LOCAL_INSTALL` directory.
7. Run the Data Protector installation by entering the following command at the command prompt:

```
./omnisetup.sh
```

8. When asked which components to install, select only the following:
 - User Interface
 - Java GUI Interface

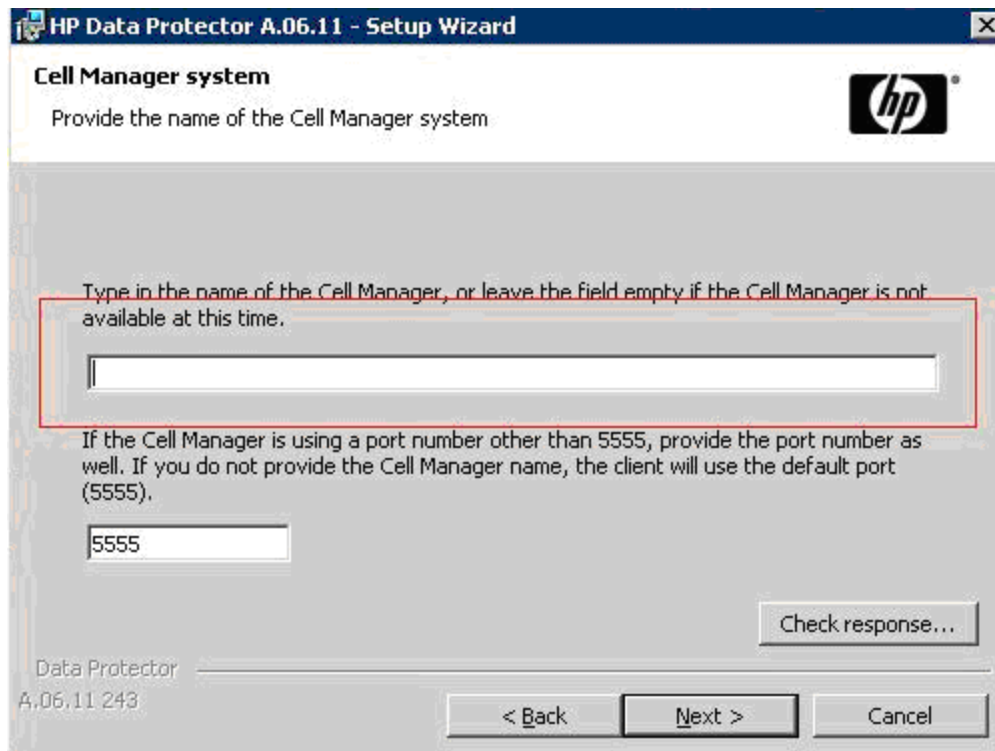
Windows Installation Steps

To install the Data Protector Client:

1. Select the **Client** option in the Setup Wizard and click **Next**.

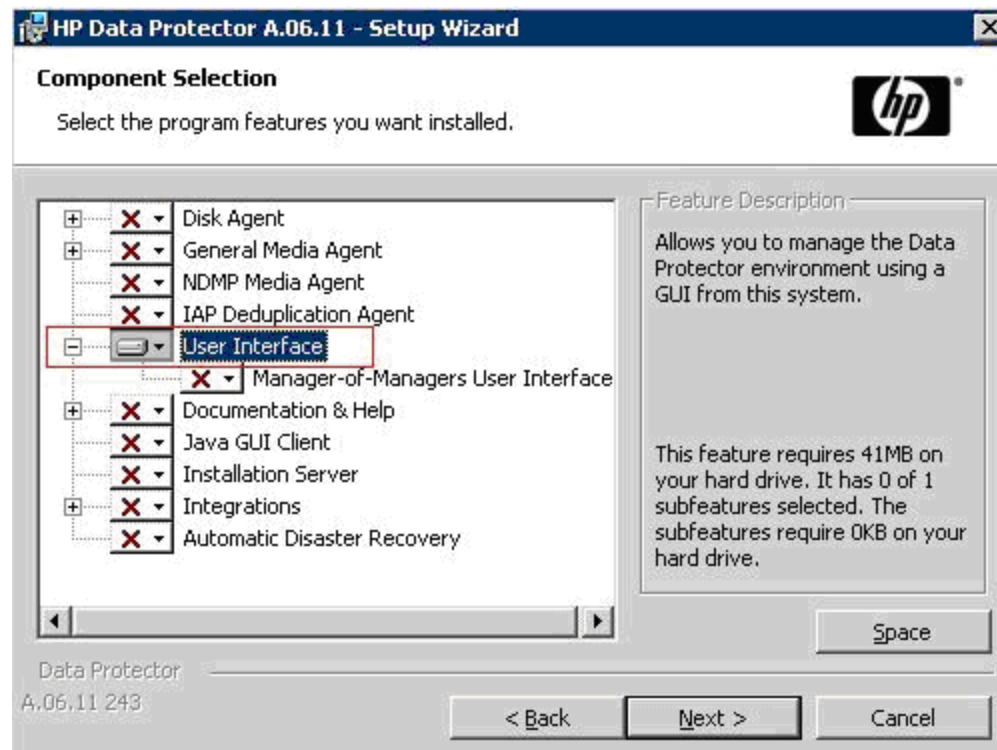


2. Leave the Cell Manager name field blank and click **Next**.



3. Deselect all options, except for the User Interface option, which is selected in the following

figure. Click **Next** when done.



4. Complete the installation by following the steps in the Wizard.

Step 2 – Create a User Group for HP Data Protector Reporter

Ask your Data Protector Administrator to create a user group for HP Data Protector Reporter in the Data Protector Cell Manager Console Client as follows:

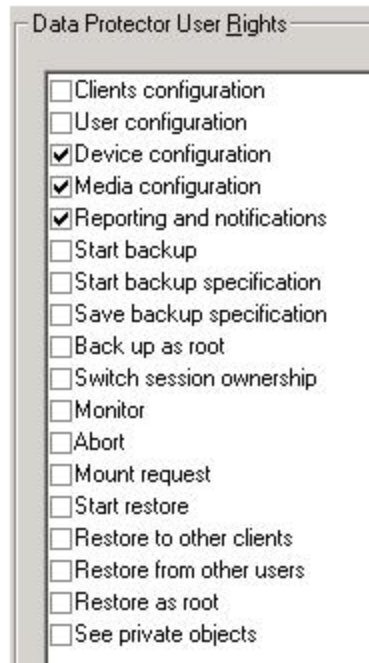
1. Open the Data Protector Cell Manager Console Client.
2. Go to **Users**. Right-click **Users**, and then click **Add User Group**.



3. Provide the user group name `DPREPORTER`.
4. Deselect the **Start restore** option in the Data Protector User Rights pane. This option is selected by default.
5. Select the following user rights in the Data Protector User Rights pane:
 - Device Configuration
 - Media Configuration

- Reporting notifications

The selections should resemble the following:

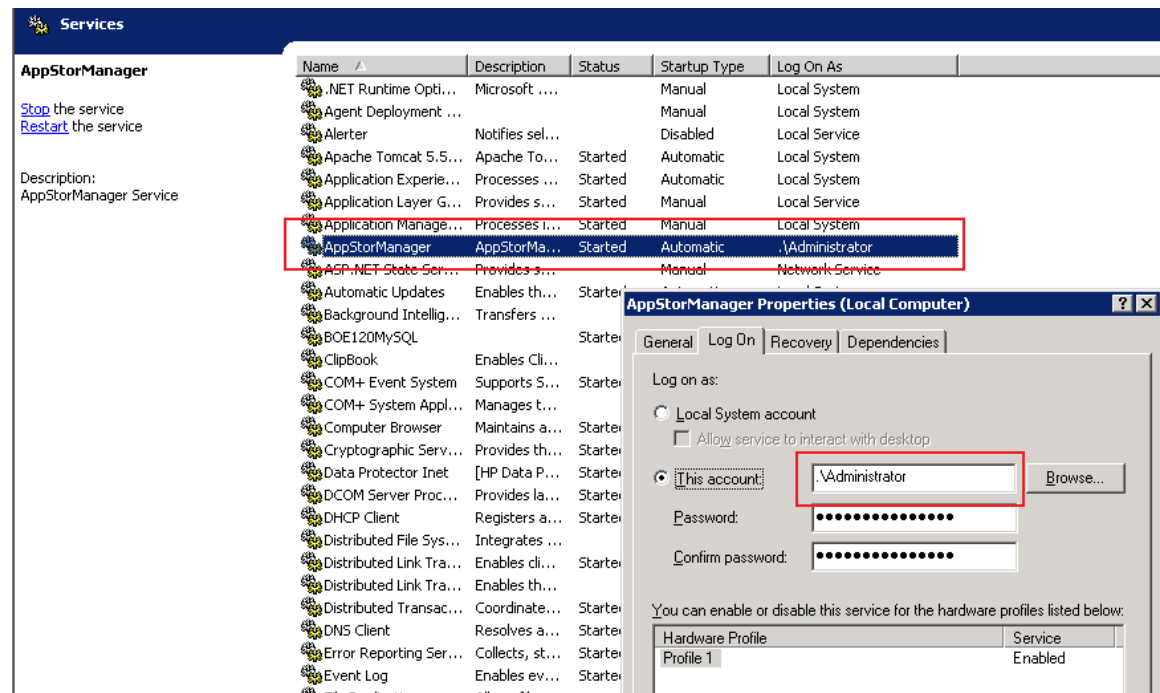


6. Click **Finish** to create the new user group.

Step 3 – Start the AppStorManager Service with the Context of Local Administrator

1. (*Windows only*) Before creating the user, make sure that the AppStorManager service, which is the service for HP Storage Essentials, is started on the HP Storage Essentials management server with the context of a Local Administrator user as the Log On User. You can check in the

properties of the Service as follows:



Step 4 – Create a User within the DPREPORTER User Group

1. Ask your Data Protector Administrator to create a user within the DPREPORTER User Group as follows:
2. Right-click the DPREPORTER group and select **Add/Delete Users**.
3. In the Name field, provide one of the following:
 - **Linux:** The name of the user under which the HP Storage Essentials server process is running. By default, this name is the 'root' user.
 - **Windows:** The name of the user with which the HP Storage Essentials AppStorManager service is running. You can determine the user by looking for the account specified in the **This Account** field on the Log On tab. In this case, the user is Administrator.
4. In the Group/Domain field, provide one of the following:
 - **Linux:** The group information of the user under which the process is running. This can be verified by running the command 'id root' on the HP Storage Essentials management server.
 - **Windows:** The host name of the HP Storage Essentials management server, since the AppStorManager service is started as the Local Administrator User.
5. In the Client field, select the DNS name or IP address of the HP Storage Essentials management server.
6. Click >> to apply your new user.
7. Click **Finish** to add your new user to the user group.

Step 5 – Install the Data Protector Patch

You need to install the following patch, depending the operating system of the HP Storage Essentials management server, on top of the Data Protector 6.1 client or upgrade to the Data Protector 6.11 client:

- **Linux:** DPLNX_00077
- **Windows:** DPWIN_00417

If you own a valid support contract, you can download patches from <http://support.openview.hp.com/selfsolve/patches>. You need an HP Passport Account for login. When you access the Patches Search page, select **All Products SPIs** and enter the name of patch, such as DPWIN_00417, in the Optional: Enter keyword(s) or phrases field. Click **Search**. The link to the patch appears under the Search button.

http://support.openview.hp.com/selfsolve/patches

HP Software Patches Search

Patches search

Select your search criteria [Help](#)

Filter Products

Product » [Cannot find a product?](#)

All Products/SPIs
Advanced Security
Application Performance Management (BAC)
Application Recovery Manager
Application Storage Automation

Product version Operating system Sub-product

All Versions All Operating Systems All Sub Products

Optional: Enter keyword(s) or phrases
DPWIN_00417

Search tip: Using punctuation marks in your search string or selecting Exact match can significantly reduce the number of results

☒ Natural language ☐ All words ☐ Any words
☐ Exact match/Error Message

Sort by: ☐ Relevance ☒ Date (Modified Date) ☐ Title

[Reset »](#) [Search »](#)

Patch information

- » Software patches
- » Patch types
- » Obtaining a patch
- » File names & formats
- » Disk space requirements
- » Installation notes
- » Patch warnings
- » Patch text files
- » Patch e-mail notification
- » Patch feedback

» Patches on ITRC

If you do not install the patch or do not upgrade to Data Protector 6.11, the following occurs in Backup Manager:

- Media and media pools details do not appear for discovered backup hosts.
- Policy Details for any session are not displayed in the Policy Detail tab.
- Schedule Details for any session are not displayed in the Schedule Detail tab.

Launching the Backup Host Configuration and Discovery Wizard

If you installed HP Data Protector Reporter, the Backup Host Configuration and Discovery Wizard is available to you. The Backup Host Configuration and Discovery Wizard assists you perform the initial discovery and configuration tasks using a single user interface. You can invoke the **Backup Host Configuration and Discovery Wizard** from the **Getting Started** page.

Caution: Before you can discover Data Protector, you must complete the requirements provided in ["Prerequisites for Agentless Discovery of Data Protector"](#) on page 81.

The Backup Host Configuration and Discovery Wizard page displays the following tabs:

- **Discovery** – Helps you discover the hosts running the Data Protector server. It also provides options to configure the discovery details and backup server schedule. See ["Step 1 – Discover Backup Host Address"](#) below.
- **Backup** – Enables you to set values to retain the backup sessions in the database. See ["Step 2 – Set Retention Value for Backup Session Data"](#) on page 90.
- **System** – Helps you configure email notifications on reports and policies. You can assign an SMTP server from which the management server can send email notifications. ["Step 2 – Set Retention Value for Backup Session Data"](#) on page 90.
- **Reports** – Provides options to schedule the Report Cache Refresh and configure the Reporter Login. It also provides options to configure the Report Optimizer email and FTP server. See ["Step 4 – Configure Report Optimizer Settings"](#) on page 91.

Step 1 – Discover Backup Host Address

The **Discovery** tab of the configuration wizard helps you configure and discover single or multiple backup servers. Before you discover the backup hosts, you must add and configure the backup hosts.

HP Data Protector Reporter, by default, does not come with MAPs. Therefore, you cannot discover devices that have MAPs, such as switches, arrays and CIM extension, even though this functionality is displayed in the product and mentioned in the documentation. If you are running HP Data Protector Reporter without MAPs, you can only discover the backup servers without a CIM extension installed, as described in ["Prerequisites for Agentless Discovery of Data Protector"](#) on page 81.

To configure a backup host:

1. Provide the backup host's IP address, user name, and password as follows:
 - **Single server:**

In the IP Address/ DNS Name box, type the IP address of the device and provide the host's user credentials.
 - **Multiple servers:**
 - In the **From IP address** box, type the lowest IP address in the range of elements you want to discover.
 - In the **To IP address** box, type the highest IP address of the range of elements you want to discover.
 - Provide the host's user credentials (optional); otherwise, the default credentials will be used.
 - Select **Import** to import the IP addresses for discovery, and do one of the following:
 - Click **Browse** to find an XML file containing the list of IP addresses to be discovered.

Or

 - In the **Filename** box, provide a complete path to the file.
 - In the **Password** box, type the password for the discovery list. If the discovery list does not have a password assigned to it, leave this field blank.
2. Configure the Discovery Details Schedule as follows:
 - Select **Add the Address to this schedule** option.
 - Select a name from the **Schedule Name** list, or select **New Schedule** to create your own schedule name. Provide a name for the schedule.
 - Type a description for the schedule.
 - Set **Next Schedule Run** date and time. Click the calendar icon to select a date and time.
 - Set **Repeat Interval** period. Type a value for interval and select an unit of time from the list.

However, you can choose to skip the above step.
3. Configure the Backup server schedule. You can enable the schedules for the following:
 - Image collection
 - Sessions collection
 - Media collection
 - Session monitoring
 - Drive monitoring
4. Click **Add**. This validates the backup configuration details and saves it to the database. The validated IP addresses of the Data Protector backup servers are listed in the **Addresses to Discover** table.

After you configure the backup hosts, you must discover them. You can also edit or delete the backup hosts.

To discover the IP addresses from the **Address to Discover** table:

1. Select the IP addresses you want to discover.
2. Click **Discover**. The following message appears: "Are you sure you want to discover the selected IP addresses?"
3. Click **OK** to start the discovery process. This initiates Discovery Step 1 and Backup Data Collection. The discovery status is displayed as "Discovery is in progress.." You can click on the link to view the discovery logs.

To edit IP addresses from the Address to Discover table:

1. Select the IP addresses you want to edit.
2. Click **Edit**. The Edit window opens.
3. Edit the settings, and then click **Save**. The changes will apply to all the selected backup servers.

You can also reset your changes by clicking the **Reset** button.

To delete the IP addresses from the Address to Discover table:

1. Select the IP addresses you want to delete.
2. Click **Delete**. The following message appears: "Are you sure you want to delete the addresses?"
3. Click **OK** to delete the selected discovery addresses from the table.

After the configuration and discovery of backup hosts are complete, click **Next** to go to the **Backup** tab.

Step 2 – Set Retention Value for Backup Session Data

The **Backup** tab of the configuration wizard provides options to set the retention value for the Sessions to be stored in the database.

To set the retention value:

1. Type the number of days (a value between 30 and 1098) in the box.
2. Click **Submit**.
3. Click **Next** to go to the **System** tab.

Step 3 – Set Up Email Notifications

The **System** tab of the configuration wizard helps you set notifications from the management server on reports and policies.

To configure email notification:

1. Select **Enable**.
2. In the **Server Name or IP Address** box, type the DNS name or IP address of the Simple Mail Transfer Protocol (SMTP) server, you want to use to send the email notification.
3. In the **Port** box, type the Port number.

4. In the User Name box, type the user name for the SMTP server.
5. In the Password box, type the password of the above user.
6. In the Verify Password box, re-type the password.
7. In the Sender box, type the email address of the sender. This address is displayed in the From box in the email.
8. If you want the replies to go to an email address other than the one specified In the Sender box, type an email address you want to receive the replies to in the Reply box.
9. Click **Save**.

Click **Next** to go to the **Reports** tab.

Step 4 – Configure Report Optimizer Settings

The Reports tab enables you to schedule a reports cache refresh and configure the reporter login. You can also specify the email server to be used for sending the reports and the FTP server to post the reports.

To schedule a reports cache refresh:

1. Select **Enable**.
2. Click the calendar icon to set the date and time for a scheduled task.
3. In the **Time** box, type the time in 24-hour format with the hour and minutes separate by a colon. For example, 22:15. Click the date on which you want the task to run.
4. Click **Set**.
5. In the **Repeat Interval** box, type an interval. Select a unit of time from the list.
6. Click **Save**.

To configure the reporter login settings:

1. In the **Host Name or IP** box, type the IP of the Reporter Optimizer system.
2. In the **Port Number** box, type the port number.
3. Click **Save**.

You can also reset or change the password. When you click **Reset the password**, the password is set to default.

To configure the Report Optimizer E-mail server:

1. Select a Job Server from the list.
2. In the Domain Name box, type the domain name.
3. In the Host box, type the IP address of the host.
4. In the Port box, type the port number.
5. In the User name box, type the user name.
6. Click **Save**.

To specify the Report Optimizer FTP server:

1. In the Host box, type the IP address of the host.
2. In the Port box, type the port number.
3. In the Account box, type the user name.
4. In the User name box, re-type the user name as above.
5. Type password for the user.
6. Click **Save**.

Click **Close** to complete the discovery and configuration tasks and exit the wizard.

- Select **Do not automatically display this page again** option if you do not want to invoke the Backup Host and Configuration wizard each time you log on to the management server.
- Click **Close** to exit the wizard without completing your configuration tasks. You can, at a later stage, access the wizard by using the **Discovery** menu (**Discovery > Wizard**) or **Configuration** menu (**Configuration > Wizard**).

Chapter 5

Backup Manager

The Backup Manager monitors the backup applications running on hosts managed by HP Storage Essentials. It monitors the progress of backup processes and provides status on the physical infrastructure that supports those processes. It also helps you visualize your backup configuration and recovery setup.

The following topics in this section describe how to use the Backup Manager and how to view information about backup applications running in your storage environment.

- ["About Backup Manager" below](#)
- ["Viewing Running Sessions" on page 96](#)
- ["Determining Last Successful Backup" on page 97](#)
- ["Viewing Running Sessions" on page 96](#)
- ["About the Summary Backup Charts " on page 107](#)
- ["About the Tabs in the Topology Lower Pane " on page 109](#)
- ["Modifying Summary Backup Charts " on page 112](#)
- ["Viewing Charts for a Backup Manager Host " on page 113](#)
- ["Printing Summary Charts " on page 113](#)
- ["Changing Collection Times for Media and Session Collectors" on page 113](#)

About Backup Manager

The Backup Manager enables you to:

- Monitor the overall status of the backup process.
- Visualize the backup configuration and recoverability of a file, directory, volume, or server.
- View the status of the physical infrastructure supporting the backup process, backup application, backup server, network, tape library, and media.
- Obtain information on reasons for backup failures and advisory information for configuring new back-up schedules.

Backup Manager monitors the backup applications running on discovered hosts. To determine which backup applications are supported, see the support matrix, which is accessible from the Documentation Center.

The management server is able to detect the presence of the following after you obtain backup details:

- **Backup Application** – A backup application (such as NetBackup, HP Data Protector, EMC NetWorker, or IBM Tivoli Storage Manager) serving as the master in a backup hierarchy. A backup application is responsible for managing other media managers.
- **Backup Manager Host** – A managed host that is running the backup application. The IP address of the Backup Manager host must be specified in Step 1 of discovery before the backup application can be discovered.
- **Media Manager Application** – A backup application functioning as a server to control the media in a backup hierarchy. A media manager application can be responsible for managing different types of hardware, such as tapes and drives.
- **Media Manager Host** – A host that has the backup application running as the media manager application. A media manager application and its host can be discovered through the Backup Manager host (similar to the way that hosts are detected through a switch). If a media manager host is discovered through a backup manager host, the media manager host is considered to be “unmanaged,” meaning that the management server has discovered it, but cannot obtain additional information about the element. If the IP address of the media manager host is specified in Step 1 of discovery, the media manager host will be considered “managed.”
- **Media** – Any device that is used to store backup data, such as tape
- **Media Pool** – A logical grouping of the backup media
- **Sessions** – Scheduled and executed backup sessions
- **Tape Library** – A device hosting a collection of tapes
- **Robot** – An automated device inside the tape library; responsible for manipulating the tapes
- **Backup Client** – A host that is being backed up by a backup application. A backup client can be managed as a non-generic element if its IP address appears in the discovery list. Otherwise, backup clients that are identified through the backup application are considered generic elements.

Only a single click on an element in the topology is required to obtain more information about the element.

Master servers without the tape library connectivity are not shown in the drive monitoring page.

When the tape library name provided by Data Protector and the name provided by the SMI-S agent of the tape library do not match, a tape library is displayed as two different tape libraries, once as a generic tape library and again as a discovered tape library.

Requirements for Backup Manager

The CIM extension supports only one backup solution on a host. For this reason, Backup Manager does not support both EMC NetWorker or NetBackup Master Server, HP Data Protector Cell Manager, and IBM Tivoli Storage Manager on the same host. If EMC NetWorker or NetBackup Master Server, Data Protector Cell Manager, and IBM Tivoli Storage Manager are installed on the same host, by default only Data Protector Cell Manager is discovered. EMC NetWorker or NetBackup Master Server and IBM Tivoli Storage Manager are ignored by the CIM extension.

Before you can use the Backup Manager feature, you must follow these steps:

1. Install a CIM extension on the host running the backup application. For information about installing CIM extensions, see the *Installation Guide*.
2. Discover the host running the backup application, selecting the **Include backup details** option (refer to the *HP Storage Essentials Installation Guide*). HP recommends that you also select the **Include infrastructure detail** option, so you can also monitor and manage the host itself.

Make sure you have at least 500 MB available if you are using the host as a Backup Manager host in a large environment; for example, 300 clients, 25,000 sessions, and 500,000 images.

3. Schedule backup collection for your Backup Manager hosts as described in the *HP Storage Essentials User Guide*.

Determining if You Have Enough Media to Run a Backup

If you are performing many, or large, backups, you should make sure you have enough media available for the backup. Backup Manager provides several methods for determining this:

- **Media tab** – Provides information about the discovered media, including its usage count.
- **Media Pool tab** – Provides information about media in the pools, such as whether it is Available, Allocated, Frozen, or Suspended.
- **Media Summary reports** – Provides information about all discovered media over a defined time period.

To use these methods:

1. Click **Backup Manager** ().
2. Click the **Topology** tab on the right side of the window.
3. Expand the Backup Applications node in the left pane, and then select a Backup Manager host.
4. If necessary, expand the lower pane so you can view the Media and Media Pool tabs.
5. Click the **Media** tab in the lower pane. The following information is displayed:

- **Media ID** – The identification number of the media
- **Media Pool** – The name of the media pool
- **Usage Count** – How often the media has been used
- **Barcode** – The barcode associated with the media
- **Retention** – How long the media is retained
- **State** – Whether the media is Full, Available, or Active

To learn more about a specific medium, select its row. Additional information is displayed in the lower-right pane.

6. To learn more about the media pool that contains the media, click the **Media Pool** tab. The following information is displayed:
 - **Media Pool** – The name of the media pool
 - **Backup Manager** – The name of the Backup Manager host to which the media pool belongs

- **Media Manager** – The name of the media manager to which the media pool belongs
- **Library** – The name of the library to which the media pool belongs
- **Available** – The media is available for backup.
- **Allocated** – The media is currently either actively being used or has a valid backup on it.
- **Frozen** – The media will never become available for backup again, but it is still available for restores.
- **Suspended** – The media will not be used again until all backups written to it expire. It is still available for installations however.

You can also set up a policy that will notify you when the number of available media for a storage pool is running low. For example, you could create a policy that sends you an e-mail when the number of available media for a storage pool is less than two. Refer to the *HP Storage Essentials User Guide*.

Viewing Running Sessions

For information about configuring session monitoring refer to the *HP Storage Essentials User Guide*.

To view sessions that are running:

1. Click **Backup Manager** ().
2. Click the **Topology** tab on the right side of the window.
3. Right-click a Backup Manager application, and then select **Show Running Sessions**. The Running Sessions page is displayed.
4. If desired, select filter criteria, and then click **Apply Filter**. The table is updated to display only the sessions that meet the filter criteria you entered. The following information about each session is displayed:
 - **Job ID** – The identifier assigned to the session
 - **Backup Manager** – The name of the backup manager
 - **Media Manager** – The name of the media manager
 - **Clients** – The names of the clients
 - **Backup Policies** – The names of the backup policies
 - **Schedules** – The names of the schedules
 - **Session Status** – The session status: Success or Failure
 - **Session State** – The session state: Done, Queued, or Active
 - **Media Used** – The type of media used for the backup
Media Used information is not available for IBM Tivoli Storage Manager.
 - **Start Time** – The starting time and date of the session
 - **End Time** – The end time and date of the session

- **Size** – The size of the session in kilobytes (KB)
- **Files** – The number of files

After Caché is removed and the CIM extensions are installed, the first session monitoring collection collects all of the sessions for the past week. One hour after a fresh installation of Caché, these sessions are removed from the Running Sessions page.

The Running Sessions page is automatically refreshed every two minutes. To manually refresh the page, click **Getting Latest Sessions**.

For IBM Tivoli Storage Manager, the sessions information is collected using the activity log.

Retrieving Restore Sessions from Data Protector Cell Manager

By default, HP Data Protector Reporter does not retrieve the Restore Sessions from Data Protector Cell Manager. To collect the restore sessions, complete the following steps on the host where the Data Protector Cell Manager is installed:

1. Open the Global options file in a text editor. By default, this file is available at the location:
 - Windows: C:\Program Files\OmniBack\Config\Server\Options
 - Linux: /etc/opt/omni/server/options
2. Add the property `EnableRestoreReportStats=1` and save this file.

Note: Restore Sessions are collected only after you enable the `EnableRestoreReportStats` property. Previous Restore Sessions will not be retrieved.

Determining Last Successful Backup

Backup Manager provides several tools to help you determine if the last scheduled backup was successful. The quickest way to do this is from the Summary tab in Backup Manager. The following topics provide more information:

- "Viewing the Summary Backup Charts " below
- "Viewing Backup Results for a Backup Manager Host" on the next page
- "Viewing Backup Results for a Client" on the next page
- "Viewing Backup Information for a Client" on page 99

Viewing the Summary Backup Charts

To access summary information about last night's backup from the backup charts:

1. Click **Backup Manager** ().
2. Click the **Summary** tab on the right side of the window.

By default, the Backup SLA Performance chart is displayed in the upper-left pane on the Summary page. This chart includes the overall results of the backups made in the past 14 days. It tells you if the overall backup was successful, partially successful, or failed.

For more information, see ["About the Summary Backup Charts "](#) on page 107 and ["Modifying Summary Backup Charts "](#) on page 112.

Viewing Backup Results for a Backup Manager Host

To quickly view the results of the backup sessions performed by a backup application:

1. Click **Backup Manager()**.
2. Click the tab on the right side of the window.
3. In the left pane, expand the Backup Applications node, and then select the Backup Manager host.
4. If necessary, expand the lower pane so you can see the tabs.
5. Click the Sessions tab. Backup Manager displays the following information for each session the backup application performed:
 - **Session ID** – The identifier assigned to the session
 - **Client** – The name of the client
 - **Backup Policy** – The name of the backup policy
 - **Schedule** – The name of the schedule
 - **Status** – The status of the backup: Success, Partial, or Failure
 - **Start Time** – The starting time and date of the backup
 - **Duration** – The amount of time in seconds it took for the backup to be displayed
 - **Size** – The size of the backup in gigabytes (GB)
 - **Files** – The number of files backed up
6. To learn more about a session, select the session's row in the table and see the Session Detail, Policy Detail, and Schedule Detail tabs in the lower-right pane.

Viewing Backup Results for a Client

To view the results of the last backup for a client:

1. Click **Backup Manager ()**.
2. Click the **Topology** tab on the right side of the window.
3. In the left pane, expand the Clients node, and then select the client.
4. In the topology pane, check the color of the check mark above the icon for the client. The icon colors have the following meaning:

- **Green** – The last backup on the client was successful.
- **Yellow** – The backup on the client was partially successful.
- **Red** – The backup on the client failed.

To view detailed backup information for a client, see ["Viewing Backup Information for a Client" below](#).

Viewing Backup Information for a Client

Backup Manager tracks backup information for a client for the past 30 days. The Backup tab gives an at-a-glance view of the backup coverage for a selected element. For example, you can select the period for the coverage and review the policy, schedule, and results for the backups executed for that period.

To obtain detailed information about the backup sessions for a client:

1. Click **Backup Manager** ().
2. Click the **Topology** tab on the right side of the window.
3. Select the client from the topology pane or from the tree in the left pane.
4. If necessary, expand the lower pane so you can view the Properties and Backup tabs.
5. Click the **Backup** tab to view the following information for each backup policy:
 - **Backup Policy** – The name of the backup policy
 - **Schedule** – The name of the schedule
 - **Date** – The date, end time, and status
6. To learn more about a policy or schedule, select a cell in the table. Additional information is provided on the Policy Detail and Schedule Detail tabs in the lower-right pane.

About the User Interface for Backup Manager

Backup Manager has an easy-to-use interface that provides the following options:

- **Toolbar** – Provides buttons and menus to help you modify the topology and charts in Backup Manager (see ["About the Toolbars in Backup Manager" on the next page](#))
- **Summary and Topology tabs:**
 - **Summary** tab – Displays summary charts for backup elements (see ["About the Summary Backup Charts " on page 107](#) and ["Modifying Summary Backup Charts " on page 112](#)).
 - **Topology** tab – Displays the topology of the backup elements

The lower pane on the Topology tab becomes visible when you select a discovered element. The tabs are determined by the backup element selected (see ["About the Tabs in the Topology Lower Pane " on page 109](#)).

Access to Navigation, Events, Collectors, Policies, and Chargeback – When you click an element on the Topology tab, the following links in the lower-right corner are enabled if that feature is supported for the selected element:









- **Navigation** – Displays the navigation information for an element, such as which storage systems are connected to the element. Refer to the *HP Storage Essentials User Guide*.
- **Events** – Displays the events for the element. Refer to the *HP Storage Essentials User Guide*.
- **Collectors** – Provides links to data collectors and reports about the element. Refer to the *HP Storage Essentials User Guide*.
- **Policies** – Enables you to set up policies for the element. Refer to the *HP Storage Essentials User Guide*.
- **Chargeback** – Enables you to provide chargeback information about the element. Refer to the *HP Storage Essentials User Guide*.

You can also select an element and use the right-click menu options to obtain additional information (see "[Right-Click Menu Options on the Topology Tab](#)" on page 104).

About the Topology Icons in Backup Manager

The following table describes the icons that appear in the topology in Backup Manager.

Topology Icons in Backup Manager

Icon	Description
	When a client computers is shown with a green check mark, the backup on the computer was successful.
	When a client computers is shown with a yellow question mark, the backup on the computer was partial.
	When a client computers is shown with a red X, the backup on the computer failed.
	Host
	Master backup server (media). This image is an example of a master backup server for NetBackup.
	Backup server (media), such as NetBackup
	Tape Library
	Tape Drive

About the Toolbars in Backup Manager







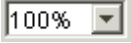





Backup Manager has two toolbars:

- The main toolbar that appears at the top of its screen. See "[Main Toolbar for Backup Manager](#)" on the next page.
- The toolbar for charts that appears in the middle of its screen. See "[Toolbar for Charts](#)" on page 102.






Main Toolbar for Backup Manager

The following table provides a brief description of the buttons and menus on the main toolbar in Backup Manager. This toolbar is available at the top of the Backup Manager screen.

Toolbar in Backup Manager

Button	Description
	<p>Saves the current topology or summary page, so that when you return to Backup Manager, the saved layout or summary is restored.</p> <p>This option can be especially useful if you want to keep the new location of elements you have moved.</p> <p>When you click the button, you are asked if you want the layout to apply to all users.</p> <ul style="list-style-type: none">• Yes – All users who log into the management server can view the topology or summary you created. Only users with system configuration capability can save their layout for all other users• No – No other users can view the topology or summary you saved.
	Prints the topology or the summary.
	Enables you to view information from past backups. For example, if you want to view a backup from last March, just click the Calendar icon, then select the date.
	Enables you to modify the summary charts. Enabled when the Summary tab is active.
	Magnifies the view. Enabled when the Topology tab is active.
	Decreases the magnification. Enabled when the Topology tab is active.
	Enables you to set the magnification to a percentage of the default magnification. Enabled when the Topology tab is active.
	Opens a smaller pane, which provides a global view of the topology. This enables you to position the main view to a certain section of the topology (see Using the Global View). Enabled when the Topology tab is active.
	Fits the topology to the window, so you can view the entire topology. Enabled when the Topology tab is active.
	Enables you to move an element in the topology (see Arranging Elements in the Topology). Enabled when the Topology tab is active.
	Enables you to move the entire topology at once. Click the Pan () button, click any place in the topology, and then drag the mouse to a new location. Enabled when the Topology tab is active.


Toolbar in Backup Manager, continued

Button	Description
	Opens a new window, containing the topology, which enables you to view different domains of the topology at one time (see About the New Window Option). Enabled when the Topology tab is active.
	Enables you to change the topology layout. Enabled when the Topology tab is active.
	Restores the topology layout to the last saved version. Enabled when the Topology tab is active.
	<p>Enables you to find an element by name or by Worldwide Name (WWN) in the topology. Enabled when the Topology tab is active.</p> <p>To find an element, enter the name or part of the name in the Find box, and then click the Find Next () button. The management server highlights the elements that match in the topology and in the tree.</p> <p>If the management server has found multiple elements matching your search criteria, click the Find Next () button to find the next element that matches your search criteria.</p> <p>To view the previous element that matches the search criteria, click the Find Previous () button. The Find Previous () button is disabled when only one element meets your search criteria.</p>
	Displays links between shared libraries. Additional connections between media servers and tape libraries, and media servers and disk drives are displayed. If the additional links between shared libraries are currently displayed, clicking the Show MultiPath button a second time will hide the links.
	Change Observer button – Monitors changes in the database status on the server. When changes are detected, the button turns amber. Click on the amber button and a pop-up window displays the elements that have changed on the server. When no changes are detected, the button is grayed out.
	Reloads the Change Observer button to display the latest changes to elements on the server.

Toolbar for Charts

To view a chart on the Topology tab, click an element in the topology. The following toolbar options are available.


Toolbar for Charts

Option	Description
	Converts the data in the chart to a list in a separate browser.
	Click to print a chart. See " Printing Summary Charts " on page 113 for more information.

Toolbar for Charts, continued

Option	Description
	Click to switch the X and Y axes in a chart.
	To change the chart displayed, select another chart from the Title menu (see "About the Summary Backup Charts " on page 107).
	To change the period displayed in the chart, select a period from the Period menu.
	In Service Level Agreement charts, Backup Manager provides a green line that serves as a baseline. Use the Average Service Level menu to change the location of this baseline. The default baseline value is 95% of usage.

Changing the Topology Settings

The **Display Layout Settings Dialog** () button enables you to modify the following properties of the topology in Backup Manager:

- **Direction** – Horizontal or Vertical. The direction of the topology is Horizontal by default, with multiple elements of the same type displayed in a row. If you select Vertical, multiple elements of the same type are displayed in a column.
- **Alignment** – Left, Right, or Center. The default alignment of the topology is Center. You can change the alignment of the topology to be left- or right-justified. For example, if you select the Left, the backup clients are aligned along the left side of the topology window.
- **Horizontal Spacing** – The number of spaces in pixels between elements in a row
- **Vertical Spacing** – The number of spaces in pixels between elements in a column

To restore the layout to the default settings, click **Defaults**.

To change the layout settings:

1. Click **Backup Manager** ().
2. Click the **Display Layout Settings Dialog** button.
3. Select one of the following directions:
 - Horizontal
 - Vertical
4. Select one of the following alignments:
 - Left
 - Right
 - Center
5. To change the horizontal spacing, enter a new number in the Horizontal Spacing box.
6. To change the vertical spacing, enter a new number in the Vertical Spacing box.
7. Click **OK**.

You might need to use the scroll buttons to see the rearranged topology.

Right-Click Menu Options on the Topology Tab

When you right-click an element on the Topology tab or in the Backup Applications tree, a list of options is displayed. The options displayed in the menu depend on the type of element you selected.

The following table describes the menu options displayed when an element is right-clicked on the Topology tab or in the Backup Applications tree.

Right-Click Menu Options on the Topology Tab

Right-Click Menu Option	Description
Go To Navigation Details	Directs you to the Navigation page. If the element is labeled Discovered, you are shown the Properties page. An element is labeled unmanaged when the management server has become aware of it, but cannot obtain additional information about it (see About the Navigation Tab).
Show Events	Displays events for the selected element (see About the Events Tab).
Show Policies	Displays the backup policies for the selected element (see About the Policies Tab).
Show Collectors	Displays the report collectors for the selected element (see About the Collectors Tab).
Show Chargeback	Displays the chargebacks for the selected element (see About the Monitoring Tab).
Update Element Data	<p>The management server gathers new and changed details from the element and then redraws the topology with the updated information.</p> <p>Important:</p> <p>The Update Element Data functionality does not detect element components that have been removed, such as ports and LUNs. For example, assume you removed several LUNs from an array. If you right-click the storage system, and then select Update Element Data, the deleted LUNs still appear in the user interface. You must perform Get Details for the deleted LUNs to be removed from the user interface.</p> <p>For more information, see "Right-Click Menu Options on the Topology Tab" above.</p>

Right-Click Menu Options on the Topology Tab, continued

Right-Click Menu Option	Description
External Tools	<p>Provides several ways to access an element:</p> <ul style="list-style-type: none">• Telnet – Enables you to access a host or a switch through the telnet utility. The Telnet feature is only accessible to Web browsers on Microsoft Windows operating systems.• Browse – Enables you to access the main Web page for a host or a switch.• Set Up External Tools – Enables you to add URLs for accessing the management tools for the storage system. In some instances, the management tool for the storage system is directly accessible from this menu (for example, HiCommand for HDS storage systems and Command View for HP XP storage systems). <p>See Using External Tools</p>
Add Virtual Application	<p>Enables you to add an unsupported application so you can monitor it. For example, you might want to add a virtual application so you can monitor software that was created uniquely for your company.</p> <p>See Creating a Virtual Application.</p>
Custom Commands	<p>Enables you to run a custom command on an element; for example to start an executable or a script. See Setting Up Custom Commands.</p>
Go to System Manager	<p>Provides a topology that enables you to view how the devices in your network are connected. See About .</p>
Show MultiPath/Remove MultiPath	<p>Displays links between shared libraries. Additional links between media servers and tape libraries, and media servers and disk drives are displayed. If the additional links between shared libraries are currently displayed, the menu option becomes Remove MultiPath. Selecting Remove MultiPath hides the links between shared libraries.</p>
Delete Element	<p>This option enables you to delete a backup element in the topology.</p>

The charts in Backup Manager provide a wealth of information about your backups. You can obtain detailed information about a data point displayed in a chart by right-clicking the data point. For example, assume you are looking at a Service Level Agreement (SLA) chart on the Summary tab and you want to obtain more information about a backup performed yesterday. You could right-click the bar **yesterday's date**, and then select **Show Details** to display the Sessions tab showing the additional details of that data point, such as the backup status of each client, in addition to the start and end time of the backup on that client.

Right-Click Menu Options on the Summary Tab

Right-Click Menu Option	Description
Summary Page Settings	The settings for the charts provided on the Summary tab are displayed. See "About the Summary Backup Charts " on the next page and "Modifying Summary Backup Charts " on page 112.
Go To Topology	A graphical representation of the path of an element is displayed. This also includes multipathing. See Viewing Element Topology.
Show Details	The additional information about the data point you right-clicked is displayed. See the following table.

The following table explains what is displayed when you click **Show Details** on the Summary tab's right-click menu option.

When additional information is not available for a data point, Show Details is disabled.

Additional Information from Charts on the Summary Tab

When you right-click a bar and select Show Details in the following chart...	The Sessions tab displays the following information:
Service Level Agreement	Clients that were backed up, whether successfully or not. The failures are displayed first. To obtain details about a session, select the session in the Session tab and then expand the View the Details pane on the far right. The status you right-clicked is highlighted in the Sessions tab.
Backup Volume	Clients in the backup, sorted by size.
Windows Utilization Chart	The time span represented by the bar you clicked is highlighted in the Sessions tab. For example, assume a bar in the Windows utilization tab shows a duration of seven hours. To determine which sessions were running during that time, right-click the bar, and then select Show Details .
Largest Sessions	Clients in the backup, sorted by the size of the session.
Longest Sessions	Clients in the backup, sorted by duration of the session.

You can also obtain additional information from some of the charts that are displayed on the bottom pane of the Topology tab.

Show Details for Tabs on the Lower Pane of the Topology Tab

Right-click...	Select Show Details to view...
Any data point on the Charts tab	The Sessions tab for the data point you right-clicked.

Show Details for Tabs on the Lower Pane of the Topology Tab, continued

Right-click...	Select Show Details to view...
Any element on the Servers tab	The Sessions tab showing the sessions for the element you right-clicked.
Any element on the Resources tab	The Media tab for the element you right-clicked.
Any element on the Media Pools tab	The Media tab for the elements contained in the media pool you right-clicked.

About the Summary Backup Charts

Backup Manager displays six summary backup charts on the Summary tab by default and offers many other charts as well. To learn how to display the various charts and/or modify which charts display by default, see ["Modifying Summary Backup Charts "](#) on page 112.

Backup Manager Summary Charts

View	Description
Servers	<p>Displays the servers Backup Manager monitors with the following information for each server:</p> <ul style="list-style-type: none"> • Volume • Sessions • Failed • Partial • Successful
Resources	<p>Displays the resources Backup Manager monitors, showing the following information for each server:</p> <ul style="list-style-type: none"> • Media Pools • Available media • Allocated • Frozen • Suspended <p>In the Available Media, Allocated, Frozen, and Suspended columns, the first number shows the number of available online media, and the second number shows the number of available offline media. This information is available only to the backup manager host.</p>

Backup Manager Summary Charts, continued

View	Description
Service Level Agreements (SLAs)	<p>Displays the performance of backup SLAs, showing the percentage of the following types of sessions for each SLA:</p> <ul style="list-style-type: none"> • Successful sessions • Partial sessions • Failed sessions
Backup Volume	Displays the backup volume of all backup applications in gigabytes (GB). This chart can also display the backup volume of a backup manager host.
Window Utilization	<p>Displays the number of hours it takes for all backup sessions on a server to run. Keep in mind this time might seem extended if you have overlapping sessions.</p> <p>For example, bsession1 starts at 11 p.m. on Monday. While it is running, bsession2 starts. At 2 a.m. on Tuesday, bsession1 stops, but bsession2 continues to run until 9 a.m. on Tuesday. The Windows Utilization report shows the backup sessions running for 10 hours – from the beginning of the bsession1 to the end of bsession2.</p>
Backup Manager Hosts with Most Executed Sessions	Displays the five backup manager hosts with the most executed sessions. Only successful sessions are counted.
Most Unsuccessful Backup Manager Hosts	Displays the five backup manager hosts with the most unsuccessful sessions. Unsuccessful sessions include failed and partially completed sessions.
Servers with Most Available Media	Displays the five backup manager hosts with the largest number of media in the Available state and for each of the displayed hosts, the chart shows media that is Allocated, Frozen, or Suspended.
Servers with Fewest Available Media	<p>Displays the five Backup Manager hosts with the lowest number of media in the Available state. The chart displays the following states:</p> <ul style="list-style-type: none"> • Allocated • Frozen • Suspended • Available
Five Largest Sessions	Displays the five largest sessions in gigabytes (GB).

Backup Manager Summary Charts, continued

View	Description
Five Longest Sessions	Displays the five longest sessions in seconds.

About the Tabs in the Topology Lower Pane

The lower pane on the Topology tab is displayed when you select a discovered backup element. The following tabs are displayed according to the element type you selected.

Tabs in the Lower Pane of Backup Manager Topology

Tab	Element Type	Description
Properties	All elements	Provides property information for an element, including information about whether the element supports backup.
Backup	Clients	Provides information about the last time the client was backed up. See " Viewing Charts for a Backup Manager Host " on page 113 for more information.
Charts	<ul style="list-style-type: none">Backup Manager HostsMedia ManagersTape Libraries	Shows a chart for the selected element.
Servers	<ul style="list-style-type: none">Backup Manager HostsMedia Managers	Displays the servers Backup Manager monitors with the following information for each server: <ul style="list-style-type: none">Volume – The size of the volume backed up, in kilobytesSessions – The number of backup sessions that have run in the specified timeFailed – The number of failed sessions during the specified timePartial – The number of partial sessions during the specified timeSuccessful – The number of successful sessions within the specified time

Tabs in the Lower Pane of Backup Manager Topology, continued

Tab	Element Type	Description
Resources	<ul style="list-style-type: none"> Backup Manager Hosts Media Managers Tape Libraries 	<p>Displays the resources Backup Manager monitors with the following for each server:</p> <ul style="list-style-type: none"> Media Pools – The number of media pools that the backup manager host can access Available Media Allocated Frozen Suspended <p>In the Available Media, Allocated, Frozen, and Suspended columns, the first number shows the number of available online media; the second number shows the number of available offline media. Note that this information is available only to the backup manager host.</p>
Sessions	<ul style="list-style-type: none"> Backup Manager Hosts Media Managers 	<p>Displays the following information for the sessions assigned to a backup server:</p> <ul style="list-style-type: none"> Session ID – The identifier for the session Client – The DNS name of the computer on which the session is taking place Backup Policy – The name of the backup policy Schedule – The name of the schedule for the session Status – The status of the session Start Time – The time the session started End Time – The time when the session ended Duration – The amount of time in seconds the session ran Size – The size of the session Files – The number of files that were backed up
Media	<ul style="list-style-type: none"> Backup Manager Hosts Media Managers Tape Libraries 	<p>Displays the following information for the media attached to a backup server or tape library:</p> <ul style="list-style-type: none"> Media ID – The identifier for the media Media Pool – The media pool to which the media belongs Usage Count – How often the media is used Retention – How long the media is retained State – Whether the media is Full, Available, or Active

Tabs in the Lower Pane of Backup Manager Topology, continued

Tab	Element Type	Description
Media Pool	<ul style="list-style-type: none">• Backup Manager Hosts• Media Managers• Tape Libraries	<p>Displays the following information for the media pools containing the selected element:</p> <ul style="list-style-type: none">• Media Pool – The media pool to which the media belongs• Backup Manager – The name of the backup manager host in the media pool• Library – The name of the library in the media pool• Available Media – The number of available media• Allocated – The number of allocated media• Frozen – The number of frozen media.• Suspended – The number of suspended media
Drive Utilization	<ul style="list-style-type: none">• Tape Libraries• Drives	<p>Displays the following information for the drives in a tape library:</p> <ul style="list-style-type: none">• Library – The name of the tape library that contains the drive• Drive – The name of the drive• Media ID – The media identifier• Status – The running status of the drive <p>For information about configuring drive monitoring, the section <i>Configuring the Management Server</i> in the <i>HP Storage Essentials User Guide</i>.</p>

Sorting Information in the Lower Pane

You can sort the information displayed on the tabs in the lower pane by clicking the heading of a column. You can also sort more than one column at a time. The sorting feature for multiple columns can be extremely useful. For example, if you have several clients with failed backups, you would take the following steps to sort the table to show the clients according to their status:

1. Click the **Status** heading in the session column to sort the sessions according to status.
2. Press the **CTRL** key, and then click the **Client** heading.

The clients are sorted first according to their status and second according to their client name. You can now easily view all clients with failed sessions in alphabetical order.

You can sort as many columns as you want on a tab. The arrow indicates ascending or descending sort order. The arrow decreases in size for each additional column that is sorted. The largest arrow corresponds to the column that is sorted first, the second largest arrow corresponds to the second sort, and so on.

Modifying Summary Backup Charts

You can modify Backup Manager to display charts other than the default. To learn more about the data and options available in the Summary Backup charts, see ["About the Summary Backup Charts " on page 107](#).

The Summary Settings page shown below displays a grid that lists the charts available on the Summary tab in Backup Manager. To change a chart, select a grid on the this page and change the settings as described in the steps in this section.

The top four grids on the Summary Settings page correspond to the top four charts on the Summary tab, and the lower four grids on the Summary Settings page correspond to the lower Summary tab. There are only two tables on the bottom half of the Summary tab because each of the tables spans two grids.

Summary Settings Page for Backup Manager Charts

You can also modify the Summary tab instantly by clicking one of the buttons displayed in the Summary Settings page. The following table describes these buttons.

Buttons on the Summary Settings Page

Button	Description
Clear All	Clears the settings for all the charts.
Clear	Clears the settings for the selected chart.
Revert	Returns the Summary Settings page to the previous setting.
Defaults	Returns the Summary Settings page to the default setting.

To modify a chart displayed on the Summary tab in Backup Manager:

1. Click **Backup Manager** ().
2. Click the icon.
3. To change the title for the summary page, enter a new title in the Title box.
4. Select the grid in which you want the chart to appear on the screen.
5. Select one of the following options from the Backup Element menu:
 - **Backup Applications** – The chart includes the results from all backup applications.

Or

 - **A specific backup element** – The chart includes the results from only the backup application you selected.
6. Select the type of chart you want from the View menu. To learn more about the available charts, see ["About the Summary Backup Charts " on page 107](#).
7. Select a period for coverage from the Period menu.
8. Click **OK**.

The Summary page is updated with your changes and the chart accessed from the selected grid will reflect your changes.

Viewing Charts for a Backup Manager Host

To quickly view charts for a backup manager host:


1. Click **Backup Manager()**.
2. Select the backup manager host on the Topology tab.
3. Click the **Charts** tab in the lower pane.
4. Select a chart from the Title menu.
5. Select a period of coverage for the chart.

To learn more about the charts in Backup Manager, see ["About the Summary Backup Charts "](#) on [page 107](#).

See ["Toolbar for Charts"](#) on [page 102](#) for information about the toolbar for charts.

Printing Summary Charts

To print a summary chart:

1. Access a backup summary chart by clicking an element on the Topology tab.
2. Scroll to the bottom of the screen.
3. Click the **Print** () button.
4. Click **Landscape** at the top of the new window if you want the picture to be printed in landscape format. To revert to portrait format, click **Portrait**.
5. To change the magnification of the image on the printed page, select the desired percentage.
6. Click **Print** when you are ready to print the chart.

Changing Collection Times for Media and Session Collectors

For CIM extension hosts with Data Protector installed, the CIM extension queries the data from DataProtector for session and media details and puts the data into the cache database as soon as the CIM extension is started.

The background collection occurs every 15 minutes for sessions and every 24 hours for media.

Changing the Frequency of Collection Times

To change the collection time for the session and media collectors:

1. Check if the `dp-connector.properties` file exists in the following directory on the host with the CIM extension:
 - **Windows hosts:** `C:\Program Files\APPQcime\CimExtensions\tools`
 - **Linux, Solaris, and HPUX hosts:** `/opt/APPQcime/tools`
2. If the `dp-connector.properties` file does not exist, create it in the directory specified in the previous step.
3. Add the following properties to the `dp-connector.properties` file if they do not exist in the file:

```
cachedb.sessions.waitBgCollection=300000
cachedb.media.waitBgCollection=3600000
```

The time shown in the example is in milliseconds.
4. Set the values.
 - `cachedb.sessions.waitBgCollection` Corresponds to the amount of time before the next collection for a session.
 - `cachedb.media.waitBgCollection` Corresponds to the amount of time before the next collection for a media.
5. Save the file.

Stopping Background Collections when a CIM Extension Starts

You can stop the background collection whenever a CIM Extension starts. In this case, the session and media collection will be started only for each get details that includes backup details.

To stop background collections when a CIM extension starts:

1. Check if the `dp-connector.properties` file exists in the following directory on the host with the CIM extension:
 - **Windows hosts:** `C:\Program Files\APPQcime\CimExtensions\tools`
 - **Linux, Solaris, and HPUX hosts:** `/opt/APPQcime/tools`
2. If the `dp-connector.properties` file does not exist, create it in the directory specified in the previous step.
3. Add the following properties to the `dp-connector.properties` file if they do not exist in the file:

```
BUMODEL.startScheduler=no
BUMODEL.forceStart=yes
```
4. Save the file.

Changing the Number of Days Session is Stored in the Cache Database

Seven days of session data is stored in the cached database by default.

To change the number of days session data is stored in the cached database:

1. Check if the `dp-connector.properties` file exists in the following directory on the host with the CIM extension:

- **Windows hosts:** `C:\Program Files\APPQcime\CimExtensions\tools`

- **Linux, Solaris, and HP-UX hosts:** `/opt/APPQcime/tools`

2. If the `dp-connector.properties` file does not exist, create it in the directory specified in the previous step.
3. Add the following property to the `dp-connector.properties` file if it did not previously exist in the file:

```
sessions.timeframe=2592000000
```

The time in the example is in milliseconds. The value assigned to the `sessions.timeframe` property is in milliseconds (30 days).

4. Save the file.

Known Issues

- Display Limitation with a large number of Backup Sessions/Savesets. The management server user interface is limited by the number of savesets and/or sessions it may display. In testing when there is in excess of 100,000 items, the user interface will not display the information.
- Restore Sessions not Reported for EMC Networker. Backup Manager does not currently support the display of restore sessions for EMC Networker.
- Backup Details are not Gathered from Multi-homed Hosts if CIM Extension IP is Restricted. The CIM extensions have the capability of being restricted to listening on and using a particular IP address on multi-homed systems (hosts with multiple IP addresses). Although the host information will be returned, backup information will not be sent back to the management server while the CIM extension is in this type of configuration.
- Status not Displayed in Topology for Backup Master Server. The Session Status is not displayed in the Backup Manager Topology for the Backup Master Server Hosts.
- NetBackup Does Not Report Media Information for Disk-based Backups. NetBackup does not report media information for disk-based backups. Consequently, the Media Used field is blank in Backup Manager.
- Disk-based Backup Devices are Shown as Physical Tape Libraries in HP Data Protector. Disk-based backup devices are shown as physical tape libraries in HP Data Protector. In Veritas NetBackup, only robotic tape library devices are shown; other backup devices (simple tape drives or disks) are not shown.

Chapter 6

Troubleshooting Installation and Migration

The following topics provide information on troubleshooting installations and upgrades.

- "Troubleshooting a Failed Installation or Migration" below
- "Importing One or More Reports" on page 122
- ""The environment variable 'perl5lib' is set." Message" on page 135
- "Perl not Installed on the Linux Computer" on page 1
- "Additional Entries Appear in the Discovery Pages" on page 136
- "Troubleshooting the Oracle Database" on page 136
- "Receiving HTTP ERROR: 503 When Accessing the Management Server" on page 138
- "Web Intelligence Processing Server Does Not Start " on page 139

Troubleshooting a Failed Installation or Migration

(Windows management servers only) You can quickly gather system information and log files for troubleshooting by running the srmCapture.cmd program in <installation directory>/tools. The program provides a date and time-stamped zip file with this information.

The srmCapture.cmd program requires that zip.exe be in the same folder as srmCapture.cmd. If you are missing zip.exe, you can find it in the tools directory in both the ManagerCDLinux and ManagerCDWindows directories on the StorageEssentials DVD.

To run the srmCapture.cmd program:

1. Open a command prompt window on the Windows management server, and go to the <installation directory>/tools directory.
2. Type the srmCapture command. The command has several parameters:

```
srmCapture [/nowait] [/listmodules] [/?] [/help] [/usage]
```

- /nowait

Non-interactive mode. The srmCapture command runs without prompting you with the message "press any key to continue."

- /listmodules

Shows the dll files in use by each process (written to srmListProcesses.txt). If you use the /listmodules parameter, you must also include the /nowait parameter.

- `/?`, `/help` or `/usage`

Provides information on how to use `srmCapture`.

The following are examples of `srmCapture` commands:

- `srmCapture`
- `srmCapture /?`
- `srmCapture /nowait`
- `srmCapture /nowait /listmodules`

The following information is gathered by `srmCapture.cmd`:

- List of environment variables, look for the `srmListEnvVar.txt` file.
- Results from running `ipconfig /all`, look for the `srmListIpconfigAll.txt` file.
- Results from running `netstat -noab`, look for the `srmListNetstatNoab.txt` file.
- Results from running `netstat -rte`, look for the `srmListNetstatRte.txt` file.
- Results from running `netsh diag show test`, look for the `srmListNetshDiagShowTest.txt` file.
- Install wizard log files (all files are located in `%systemdrive%\srmInstallLogs`).
- `srmwiz.ini`
- Oracle export log file
- File SRM log files
- File SRM configuration files
- Oracle log files
- Zero G registry content

If a message similar to `Current location, d:\Tools, is not writable` appears, the current working subdirectory is not writable. The `srmCapture.cmd` program goes through the following directories, in order, until it finds one that is writeable:

1. `%temp%`
2. `%tmp%`
3. `%systemdrive%`

Log Files from the Installation and Migration on Windows

The Install/Migrate wizard generates log files in the `C:\srmInstallLogs` directory. Log files provided at the top level of the `C:\srmInstallLogs` directory are for the current session of the Install/Migrate wizard or for the last session the Install/Migrate wizard was run. Files from a previous session are stored in a subdirectory with a date and time stamp.

Log files are generated by the Install/Migrate wizard. Some log files also provide an <logfilename>_output.log file. The <logfilename>_output.log file displays information about any errors, and is generated by the component itself instead of the Install/Migrate wizard.

The log files are zipped into a file in the root of the system drive. The zip file can be sent to support to help diagnose installation and migration issues, for example: C:\srmLog02-01-2011-16_21_49.zip.

The following log files can be found in C:\srmInstallLogs:

- **Srm_InstallBaseSoftware_Output.log** provides logging information about the installation of the base version of HP Storage Essentials.
- **Srm_DatabaseInstance_Output.log** provides information about any errors that occurred during the creation of the database instance for HP Storage Essentials.
- **Srm_CopyCimExtensions_Output.log** provides logging information about the copying of the CIM extensions. This log file is only provided if you select the option to copy the CIM extensions to the management server during the installation or migration.
- **Srm_ImportDatabase_Output.log** provides logging information about the database import process when you run the Install/Migrate wizard to migrate to the latest HP Data Protector Reporter environment. This log file is provided only if you are migrating HP Data Protector Reporter.
- **Srm_ExportDatabase_Output.log** provides logging information about the database export process when you run the Install/Migrate wizard to back up the database. The database backup is required when you are migrating HP Data Protector Reporter. This log file is provided only if you are migrating HP Data Protector Reporter.
- **Srm_RestoreConfiguration_Output.log** provides logging information about the restore process when you are migrating HP Data Protector Reporter.
- **backUpConfiguration.log** provides the logging information about the back up process that occurs when you are migrating HP Storage Essentials.
- **Ro_InstallBaseSoftware_Output.log** provides logging information about the installation of the base version of Report Optimizer.
- **Ro_InstallROSsoftware_Output.log** provides logging information about the installation and migration of Report Optimizer.
- **Ro_UpgradeTomcat_Output.log** provides logging information about the Tomcat upgrade process during the installation and migration of the Report Optimizer.
- **Ro_ImportBiarFile_Output.log** provides logging information about the import of the BIAR file during the installation and migration of the Report Optimizer.
- **Ro_ImportPreviousBiarFile_Output.log** provides logging information about the import of the BIAR file when you run the Install/Migrate wizard to migrate to the new version of the Report Optimizer.
- **Ro_ExportBiarFile_Output.log** provides logging information about the export of the BIAR file when you run the Install/Migrate wizard to export the Report Optimizer configuration.
- **Rd_InstallBaseSoftware_Output.log** provides logging information about the installation of the base version of the Report Database.

- **Rd_InstallDatabase_Output.log** provides logging information about the creation of the database instance for the Report Database.
- **Rd_Resetpassword_Output.log** provides logging information about the password reset operation for Report Database user. This log file is available only if you have installed Report Optimizer.
- **Oracle_InstallBaseSoftware.log** provides logging information about the installation of the base version of the Oracle database.
- **Oracle_InterimPatches.log** provides logging information about the installation of the patches for the Oracle database.
- **Wizard.log** is the master log file of the Install/Migrate wizard session. It provides information for troubleshooting installation of the management server and related components.
- **WizardSetup.log** is the log file of the installation wizard entry point. It provides information for troubleshooting installation wizard startup issues. The log file without a date and time is the current log file. This file provides information of the last task that was done in the installation wizard.
- **Srmwiz.ini** provides information about the settings for the Install/Migrate wizard, such as the installation directory for HP Storage Essentials.

Log Files from the Installation on Linux

When an installation is successful, the Install/Migrate wizard zips up the log files and places them in the `Installation_Directory/logs` directory. In this instance, `Installation_Directory` is the directory where the product was installed.

The name of the zip file has a date stamp `InstallWizard_MM_DD_YYYY_HH_MM_SS.zip`; for example, `InstallWizard_12_12_2012-01_21_30.zip`.

The zip file includes two internal log files created by the installation. These files contain debug information for internal use only.

- `/tmp/InstallSRMTemp/WizardSetup.log`
- `/tmp/InstallSRMTemp/Wizard.log`

The log files are available at the following location:

`<Installation_Directory>/logs`

Installation Does Not Import the BIAR File

If the Install/Migrate wizard is unable to import the BIAR file, you must manually import this file. See the information for your operating system:

"Linux" below

"Windows" on the next page

Linux

To import the BIAR file:

1. Make sure that the Report Optimizer services, for example SQL Anywhere, Tomcat, and Bobj120Enterprise are running.

The following is an example of how you would start a service, such as Bobj120Enterprise:

```
/etc/init.d/BojEnterprise120 stop  
/etc/init.d/BojEnterprise120 start
```

2. Open the `ImportBiarFileLinux.properties` file in a text editor. The file is located in the following directory: `/opt/HP/ReportOptimizer/`
3. Modify the `ImportBiarFileLinux.properties` file with the password and BIAR file name, as shown in the example below:

- `action=importXML`
- `importBiarLocation=/opt/SE_Backup/sereporter.biar`
- `userName=Administrator`
- `password=Changeme123`
- `authentication=secEnterprise`
- `CMS=<Computername>:6400`
- `includeSecurity=true`
- `stacktrace=true`

Modify the following values as necessary:

- `importBiarLocation`. Modify the value of this property with the name and location of the BIAR file. If you are importing BIAR file for Report Optimizer version 9.6.0, specify the path as `/opt/HP/Report Optimizer`. If you are importing BIAR file for Report Optimizer version earlier to 9.6.0, specify the path of the file that you copied in ["Step 4a – Copy Back up Files" \(on page 1\)](#).
 - `password`. Modify the value of the password.
4. Open command prompt and enter the following command to import the BIAR file:

```
<RO_install_dir>/ImportBiarFile.sh ImportBiarFileLinux.properties  
>> <Report Optimizer install dir>/logs/ImportBiarFile.log
```

In this instance, `<RO_install_dir>` is the Report Optimizer installation directory.

Windows

To import your BIAR file:

1. Restart the BOE120SQLAnywhere service.
2. Open the `ImportBiarFileWindows.properties` file in a text editor. The file is located in the following directory: `C:\HP\ReportOptimizer`
3. Modify the `ImportBiarFileWindows.properties` file with the password and BIAR file name, as shown in the example below:
 - `action=importXML`
 - `importBiarLocation=C:\HP\ReportOptimizer\ReportPackage_9_5_0.biar`

- `userName=Administrator`
- `password=Changeme123`
- `authentication=secEnterprise`
- `CMS=<Computername>:6400`
- `includeSecurity=true`
- `stacktrace=true`

Modify the following values as necessary:

- `importBiarLocation`. Modify the value of this property with the name and location of the BIAR file.
 - `password`. Modify the value of the password.
4. Make sure the services are running for Report Optimizer. for example SQL Anywhere, Tomcat, and Bobj120Enterprise.
 5. To import the BIAR file, enter the following `importbiarfile.sh` script on one line at the command prompt:

```
<Report Optimizer install dir>\ImportBiarFile.bat >> <Report  
Optimizer install dir>\logs\ImportBiarFile.log
```

In this instance, `<Report Optimizer>` is the installation directory for Report Optimizer.

Importing One or More Reports

You can import one or more customized reports from one server running Report Optimizer to another without having to import the entire report set.

"Linux" below

"Windows" on page 127

Linux

With Linux you must specify which items, such as reports, you want exported out of the BIAR file.

1. Copy the following text and save it to a file named `exportBiarFile.properties` in the installation directory, `/opt/HP/ReportOptimizer`, for example:

```
# properties file for BO XI R3 Biar Engine # properties used to  
export ReportPackage_9_5_0.biar  
  
action=exportXML  
  
exportBiarLocation=/opt/HP/ReportOptimizer/ReportPackage_9_4_0_  
HF.biar  
  
userName=Administrator  
  
password=  
  
authentication=secEnterprise  
  
exportDependencies=true
```

```
CMS=<Name of the server running Report Optimizer:6400

includeSecurity=true

stacktrace=true

exportQueriesTotal=8

exportQuery1=select * from CI_INFOOBJECTS WHERE SI_KIND='Folder'
and (SI_NAME='Root Folder' or SI_NAME='Report Pack')

exportQuery4=select * from CI_APOBJECTS where SI_
KIND='WebIntelligence'

exportQuery5=select * from CI_SYSTEMOBJECTS WHERE SI_
KIND='UserGroup' and SI_NAME='SE Reports'

exportQuery6=select * from CI_SYSTEMOBJECTS WHERE SI_KIND='User'
and SI_NAME='ReportUser'

exportQuery7=select * from CI_SYSTEMOBJECTS WHERE SI_KIND='Folder'
and SI_NAME='Servers'

exportQuery8=select * from CI_SYSTEMOBJECTS WHERE SI_KIND='Folder'
and SI_NAME='Users'
```

Properties have to be modified based on your requirements so that you can export them to a BIAR file. If you do not want to export users/user groups and access rights, you can remove queries from 5 to 8 and the properties file will resemble the following example:

```
# properties file for BO XI R3 Biar Engine # properties used to
export ReportPackage_9_5_0.biar

action=exportXML

exportBiarLocation=/opt/HP/ReportOptimizer/ReportPackage_9_4_0_
HF.biar

userName=Administrator

password=

authentication=secEnterprise

exportDependencies=true

CMS=<Name of the server running Report Optimizer:6400

includeSecurity=true

stacktrace=true

exportQueriesTotal=4

exportQuery1=select * from CI_INFOOBJECTS WHERE SI_KIND='Folder'
and (SI_NAME='Root Folder' or SI_NAME='Report Pack')

exportQuery2=select * from CI_INFOOBJECTS WHERE SI_KIND='Webi' and
SI_ANCESTOR=9864
```

```
exportQuery3=select * from CI_APOBJECTS WHERE SI_KIND='Universe'  
and SI_NAME='Report Connector'
```

```
exportQuery4=select * from CI_APOBJECTS where SI_  
KIND='WebIntelligence'
```

If you want to export only a report, the file would be modified as follows:

```
# properties file for BO XI R3 Biar Engine # properties used to  
export ReportPackage_9_5_0.biar  
  
action=exportXML  
  
exportBiarLocation=/opt/HP/ReportOptimizer/ReportPackage_9_4_0_  
HF.biar  
  
userName=Administrator  
  
password=  
  
authentication=secEnterprise  
  
exportDependencies=true  
  
CMS=<Name of the server running Report Optimizer:6400  
  
includeSecurity=true  
  
stacktrace=true  
  
exportQueriesTotal=1  
  
exportQuery1=select * from CI_INFOOBJECTS WHERE SI_KIND='Webi' and  
SI_NAME='Host Summary'
```

In this example, the file that will be exported is the Host Summary report, as referenced in the SI_Name value.

If you want to take backup of a report and universe

```
# properties file for BO XI R3 Biar Engine # properties used to  
export ReportPackage_9_5_0.biar  
  
action=exportXML  
  
exportBiarLocation=/opt/HP/ReportOptimizer/ReportPackage_9_4_0_  
HF.biar  
  
userName=Administrator  
  
password=  
  
authentication=secEnterprise  
  
exportDependencies=true  
  
CMS=<Name of the server running Report Optimizer:6400  
  
includeSecurity=true  
  
stacktrace=true  
  
exportQueriesTotal=2
```

```
exportQuery1=select * from CI_INFOOBJECTS WHERE SI_KIND='Webi' and
SI_NAME='Host Summary'
```

```
exportQuery3=select * from CI_APPOBJECTS WHERE SI_KIND='Universe'
and SI_NAME='Report Connector'
```

2. Change the following properties in the `exportBiarFile.properties` file created in the previous step:

- `exportBiarLocation` - Make sure the property points to the path for the BIAR file you want to export, for example `/opt/HP/ReportOptimizer/ReportPackage_9_4_0_HF.biar`.
- `username` - Do not change the value of the `userName` property.
- `password` - The password for accessing Report Optimizer.
- `CMS` - Provide the IP address or DNS name of the server running Report Optimizer
- `SI_ANCESTOR` - Change the default value of 9864 to the ID used by your instance of Report Optimizer. You can obtain your ID from the Report Pack folder properties page.

To access the properties page:

- a. Click Document list in Report Optimizer (Infoview).
- b. Expand Public Folders.
- c. Select the Report Pack folder.
- d. Right-click **Properties**. The ID for your instance of Report Optimizer is circled in the following screen. You can copy and paste this ID as the `SI_ANCESTER` value to the `exportBiarFile.properties` file

SAP BUSINESSOBJECTS INFOVIEW

Home | Document List | Open ▾ | Send To ▾ |

Properties - Report Pack

▼ **General Properties**

Folder Name:

ID, CUID: 1919, AWqLA.W8SaFht_mYMwCIdQ

Description:

Keywords:

Created: Jul 6, 2010 11:08 AM

Last Modified: Sep 15, 2011 11:05 AM

3. Open a command line window and go to the installation directory of Report Optimizer, `/opt/HP/ReportOptimizer`, for example.
4. Run `biarengine.jar` by entering the following command at the command prompt:

```
<Install dir>/jre/bin/java -jar  
<installdir>/bobje/java/lib/biarengine.jar  
<installdir>/exportBiarFile.properties
```

This command should be entered on one line.

In this instance replace `<Install dir>` with the name of the installation directory. The default directory is the following: `/opt/HP/ReportOptimizer`. The command prompt is not listed in the previous command.

5. To import the BIAR file:
 - a. Make sure that the Report Optimizer services, for example SQL Anywhere, Tomcat, and Bobj120Enterprise are running.

The following is an example of how you would start a service, such as Bobj120Enterprise:

```
/etc/init.d/BobjEnterprise120 stop  
/etc/init.d/BobjEnterprise120 start
```

- b. Open the `ImportBiarFileLinux.properties` file in a text editor. The file is located in the following directory: `/opt/HP/ReportOptimizer/`
 - c. Modify the `ImportBiarFileLinux.properties` file with the password and BIAR file name, as shown in the example below:
 - `action=importXML`
 - `importBiarLocation=/opt/SE_Backup/sereporter.biar`
 - `userName=Administrator`
 - `password=Changeme123`
 - `authentication=secEnterprise`
 - `CMS=<Computername>:6400`
 - `includeSecurity=true`
 - `stacktrace=true`

Modify the following values as necessary:

- `importBiarLocation`. Modify the value of this property with the name and location of the BIAR file. If you are importing BIAR file for Report Optimizer version 9.6.0, specify the path as `/opt/HP/Report Optimizer`. If you are importing BIAR file for Report Optimizer version earlier to 9.6.0, specify the path of the file that you copied in ["Step 4a – Copy Back up Files" \(on page 1\)](#).
 - `password`. Modify the value of the password.
- d. Open command prompt and enter the following command to import the BIAR file:

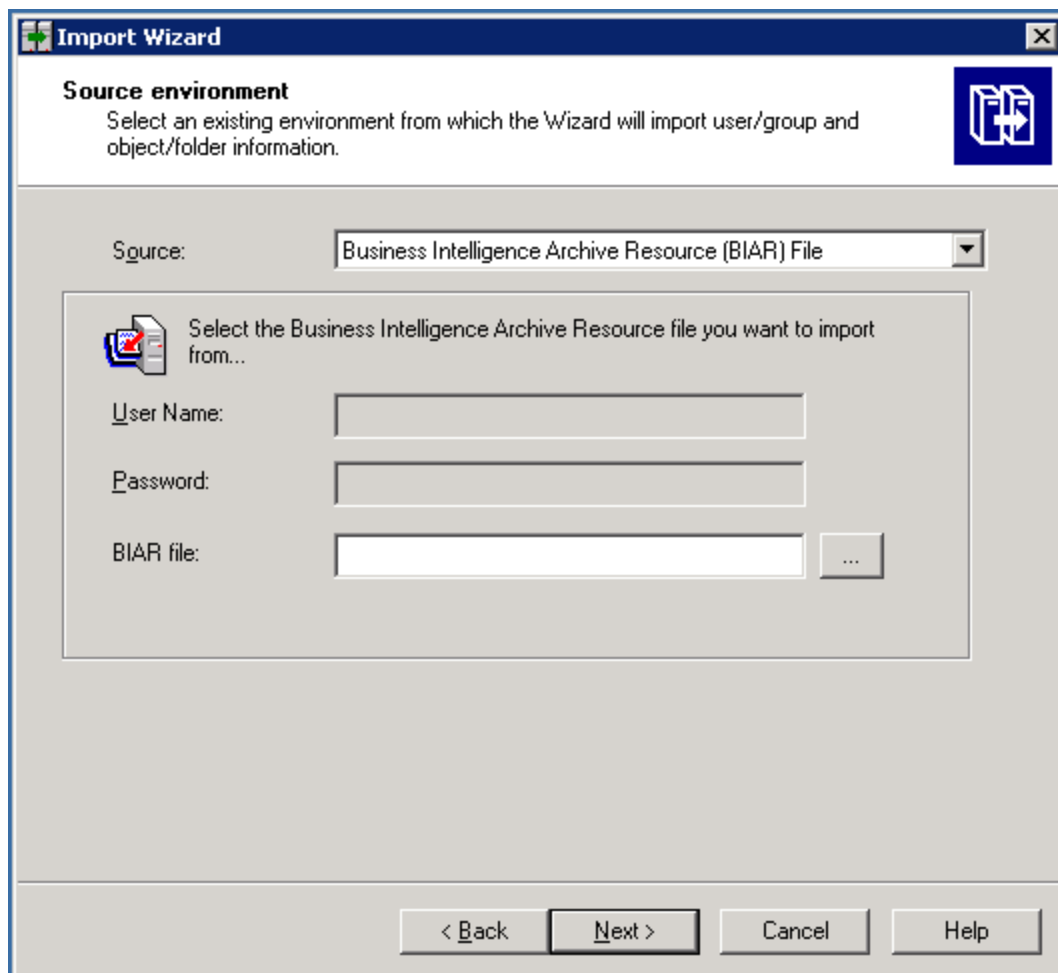
```
<RO_install_dir>/ImportBiarFile.sh  
ImportBiarFileLinux.properties >> <Report Optimizer install  
dir>/logs/ImportBiarFile.log
```

In this instance, `<RO_install_dir>` is the Report Optimizer installation directory.

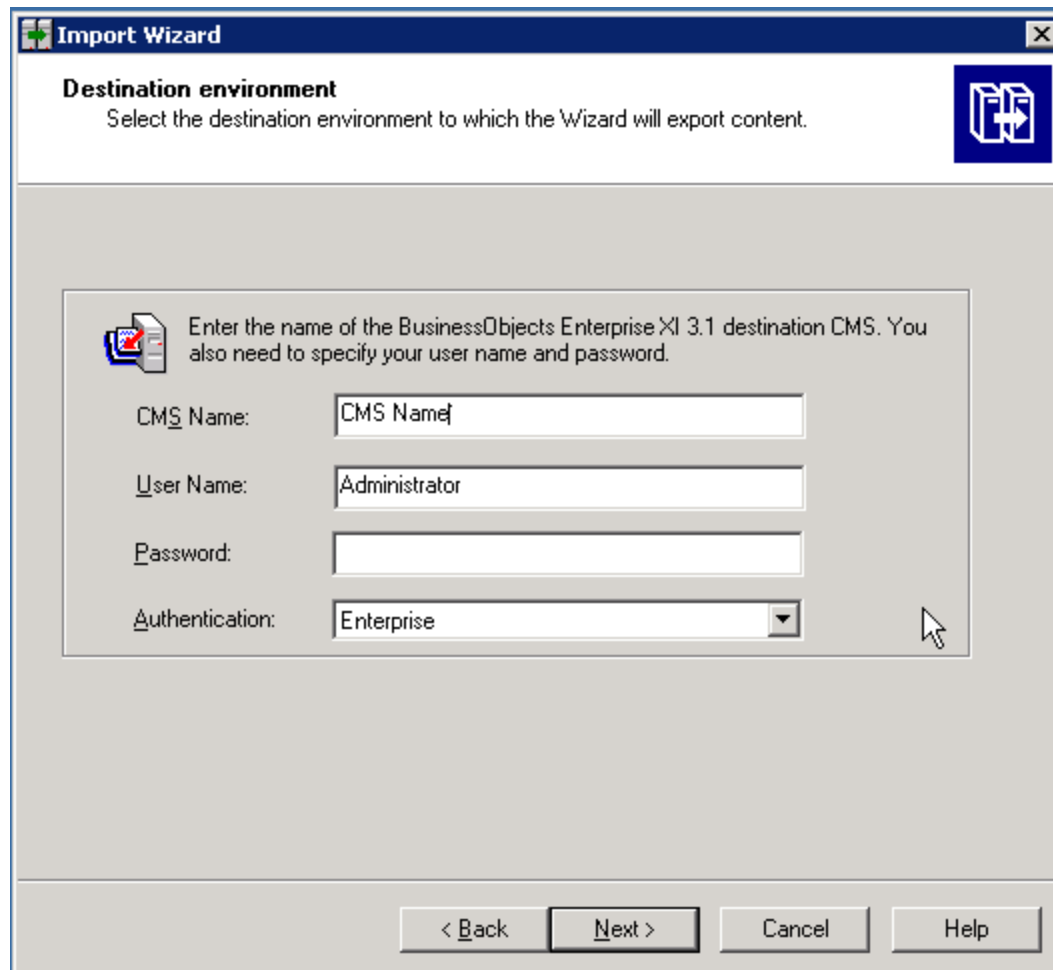
Windows

To import one or more reports:

1. Restart the BOE120SQLAnywhere service.
2. On the Report Optimizer server, select **Start Menu > Programs > BusinessObjects XI Release 3.1 > BusinessObjects Enterprise > Import Wizard**. The Welcome to the Import Wizard window opens.
3. Click **Next**. The Source Environment window opens.

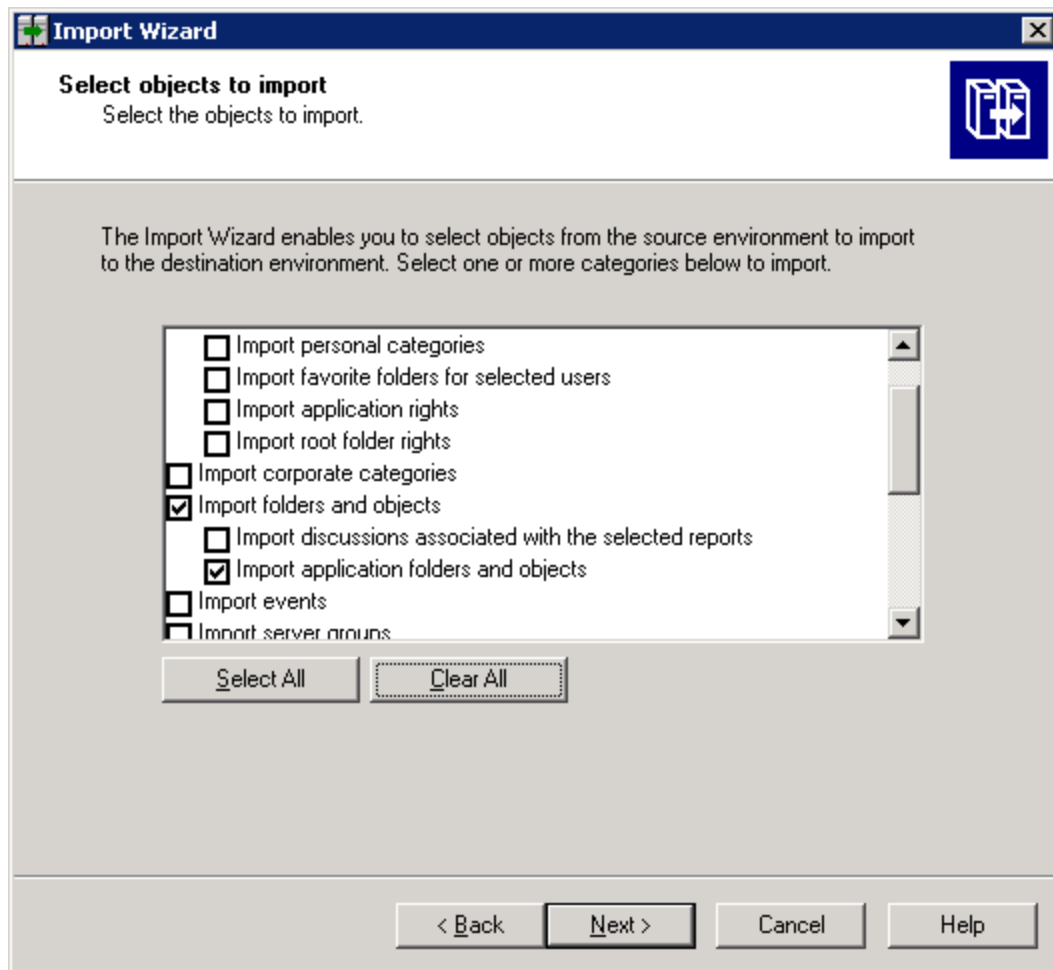


4. Select **Business Intelligence Archive Resource (BIAR) File** from the Source drop-down menu. Click the ... button, browse to the directory where the BIAR file is located, `/HP/ReportOptimizer/ReportPackage_9_5_0.biar`.
5. Click **Open**
6. Click **Next**. The Destination Environment window opens.



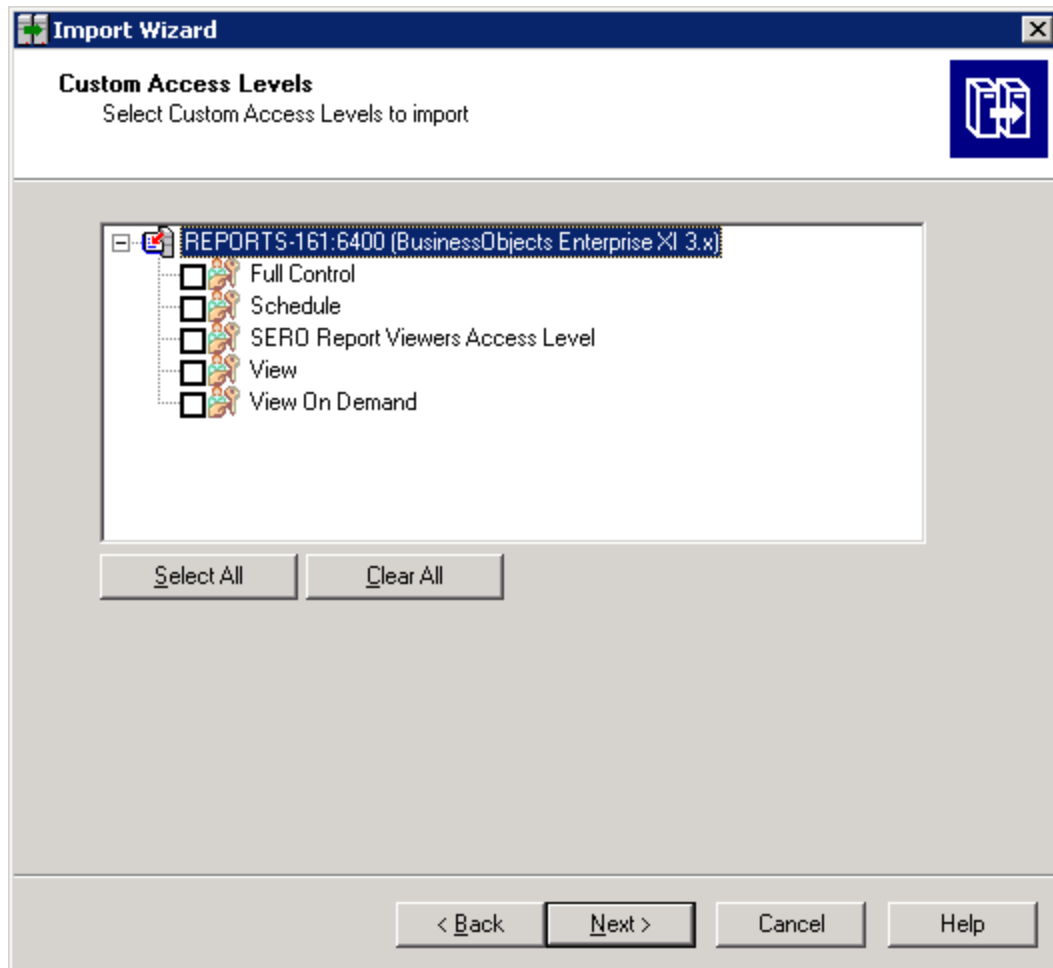
The screenshot shows a Windows-style dialog box titled "Import Wizard" with a close button (X) in the top right corner. Below the title bar, the text "Destination environment" is displayed, followed by the instruction "Select the destination environment to which the Wizard will export content." To the right of this text is a blue square icon containing a white document with a right-pointing arrow. The main area of the dialog is light gray and contains a smaller white box with a document icon and the text: "Enter the name of the BusinessObjects Enterprise XI 3.1 destination CMS. You also need to specify your user name and password." Inside this box are four input fields: "CMS Name:" with the text "CMS Name" entered, "User Name:" with "Administrator" entered, "Password:" which is empty, and "Authentication:" which is a dropdown menu currently showing "Enterprise". At the bottom of the dialog are four buttons: "< Back", "Next >", "Cancel", and "Help".

7. Make sure that the name of your Report Optimizer server is entered in the CMS Name box. Enter the Report Optimizer user name and password. Enter Administrator for the user name and the password for the Administrator user. The default password for the Administrator account is Changeme123.
8. Click **Next**. It could take several minutes for the Select Objects to Import window to open.
9. In the Select Objects to Import window, click the **Clear All** button.
10. Select the **Import application folders and objects** option, as shown in the following image.

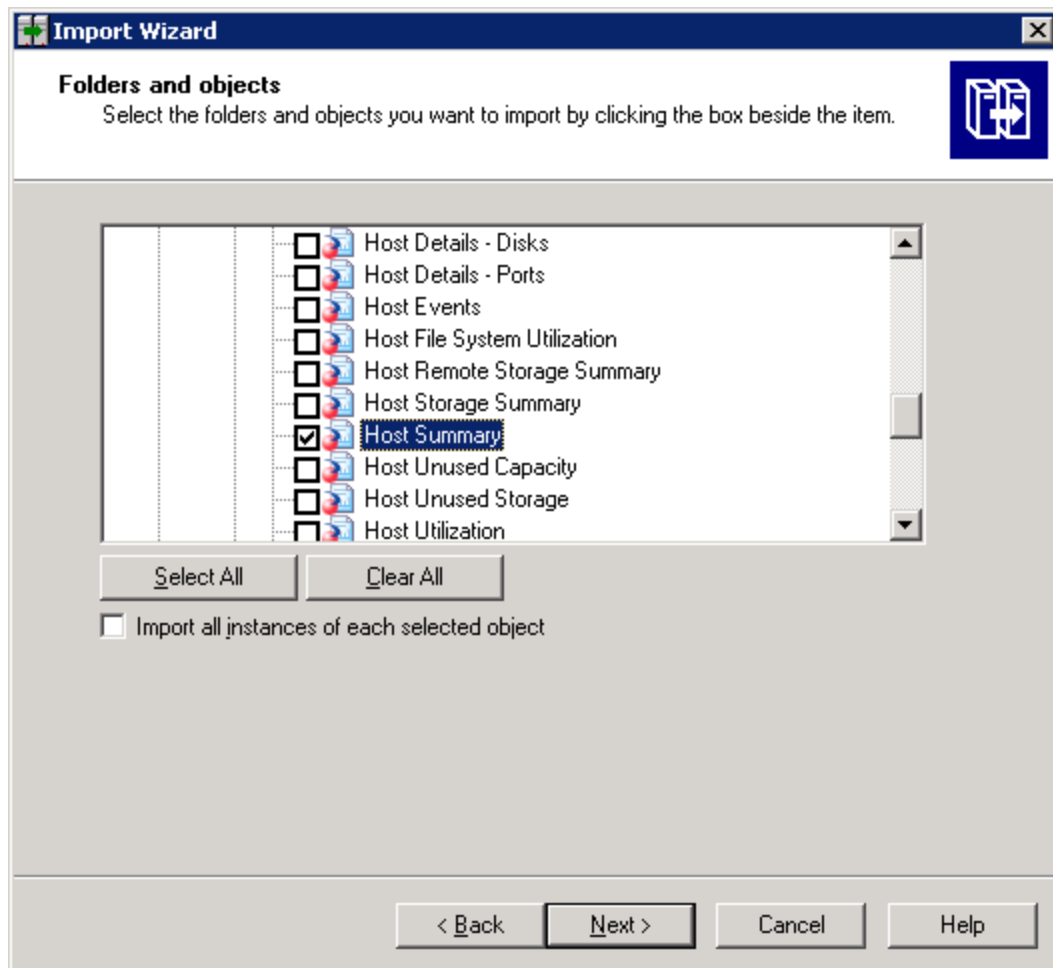


11. Click **Next**.
12. When you are shown the A Note on Importing Universes window, click **Next**.

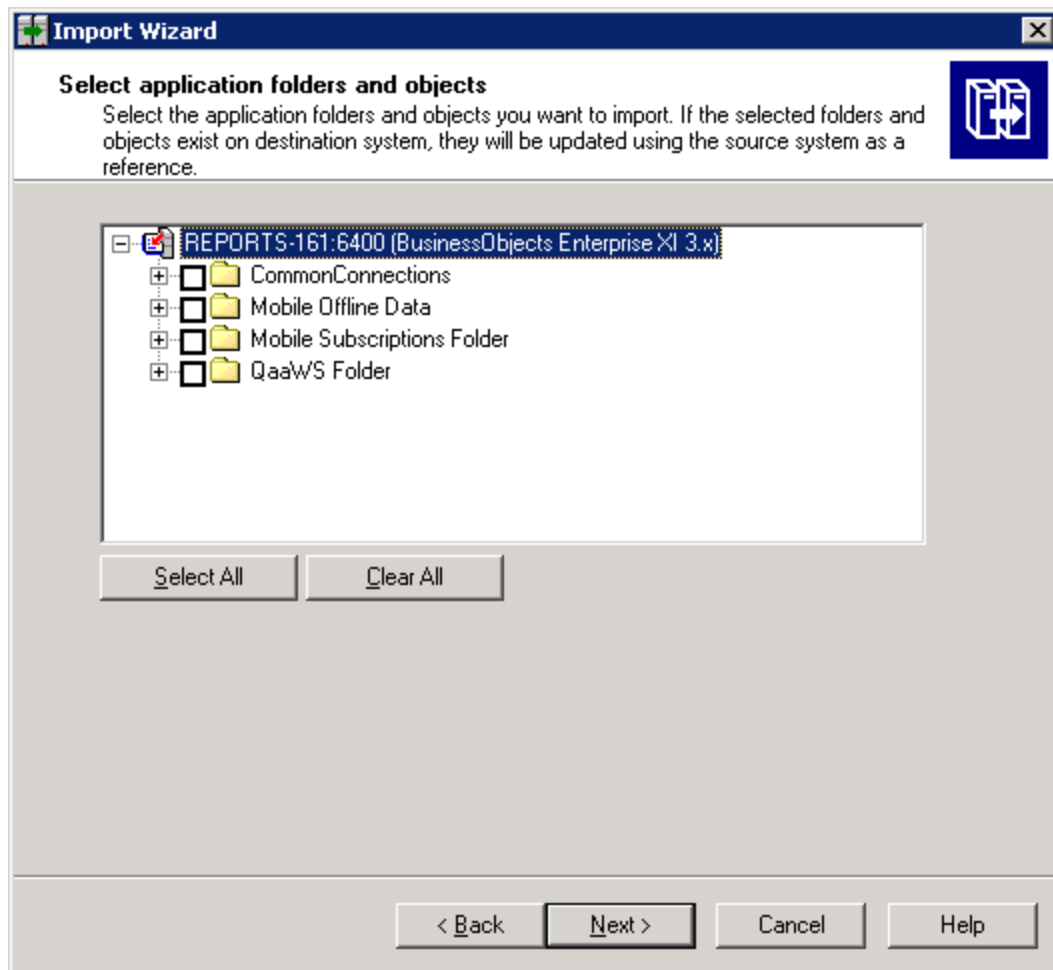
13. Do not select any options in the Custom Access Window, as shown in the following image.



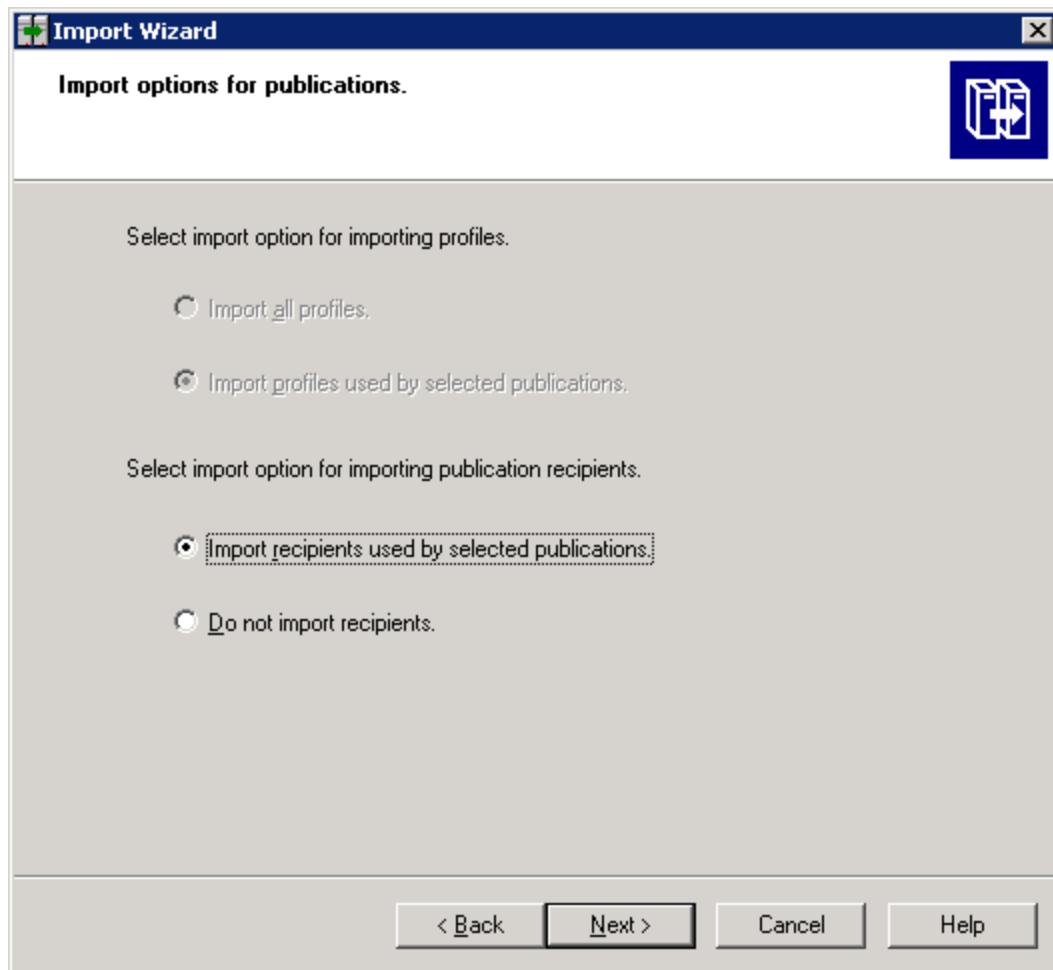
14. Click **Next**.



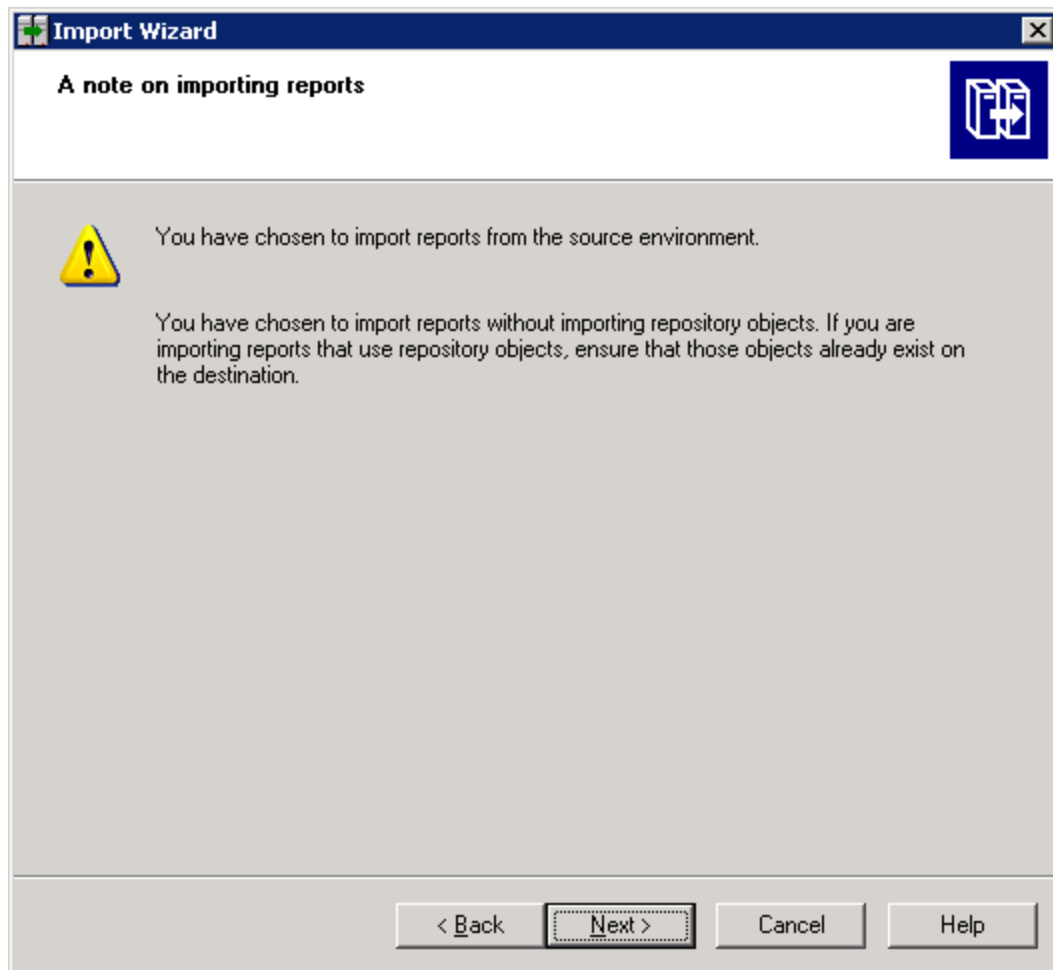
15. Select the customized report that you want to merge into the main BIAR file under "Report Pack".
16. Click **Next**.
17. Do not select any options in the Select Application Folders and Objects window.



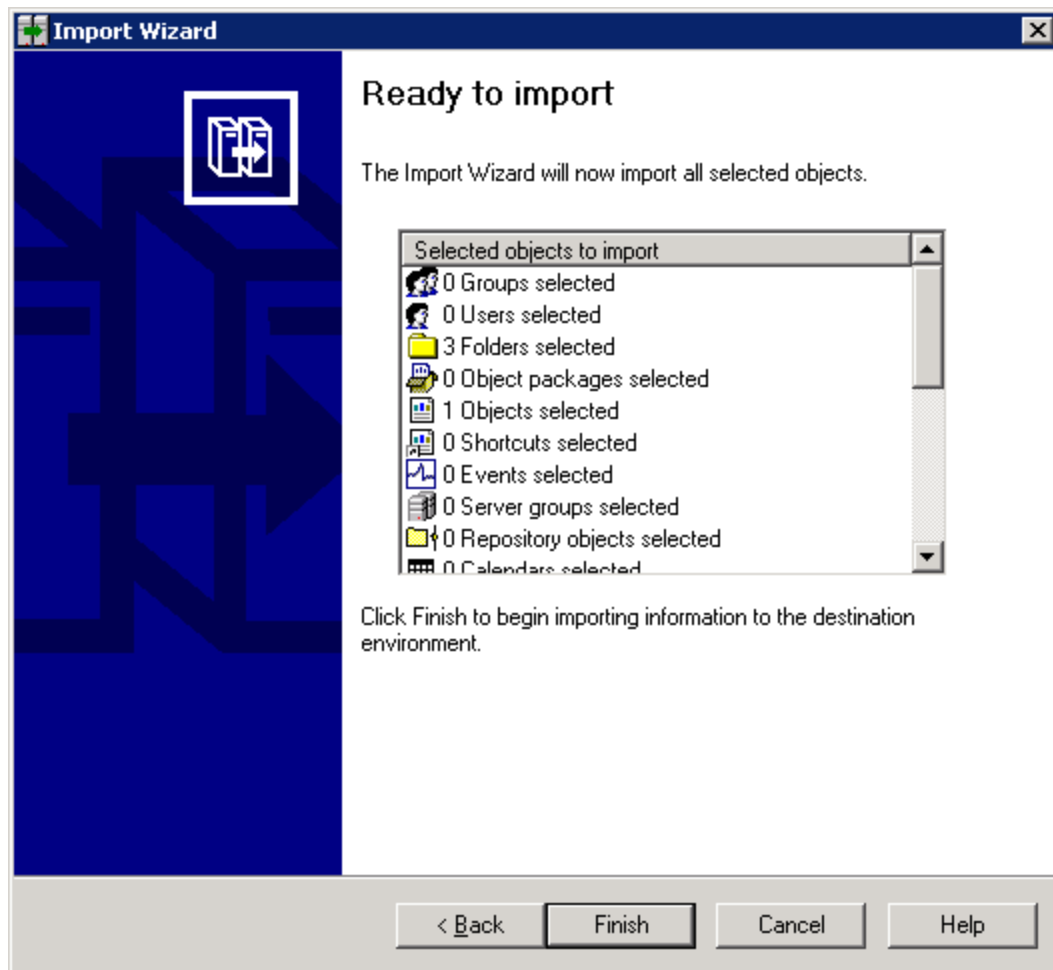
18. Click **Next**. Do not select any options in the Import Options for Publications window.



19. Click **Next**. Then, click **Next** again after viewing the note on importing reports.



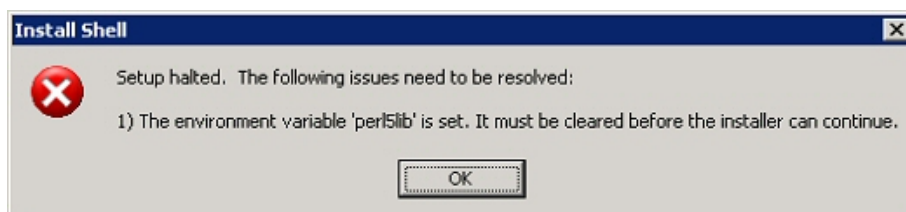
20. Click **Finish** to begin the import process.



“The environment variable ‘perl5lib’ is set.” Message

(Windows Only) If the perl5lib environment variable is set, the installation/migration fails with the following message:

Perl5lib Environment Variable Message



This variable could have been set by another application. The environment variable could also have been set if your upgrade of Oracle was suddenly stopped; for example, as a result of a power outage. You must remove the perl5lib environment variable before you can run the Install/Migrate wizard again. For information about removing environment variables, refer to the documentation for the Windows operating system.

Additional Entries Appear in the Discovery Pages

You might see additional entries in the Discovery pages after an upgrade.

For example, assume you have a Brocade SMI Agent running on 192.168.1.2 at 8959 and there are three switches added to this SMI-A, as shown in the following figure. In this example, two entries are created for 192.168.1.2 and six entries are created for three switches: two for each switch.

HP Storage Essentials places a checkmark next to items added in Discovery Step 1 but cannot obtain additional information in Discovery Step 2 or Discovery Step 3.

All entries with a checkmark can be deleted. In this example, seven entries can be deleted.

Duplicate Entries on the Discovery Pages

<input checked="" type="checkbox"/>	IP Address/ DNS Name	Type	Elements	Quarantined	User Name
<input checked="" type="checkbox"/>	https://192.168.1.2:8959	SMI-S Server (Switch)	ovevasw1, ovevasw2, twintop		Administrator
<input checked="" type="checkbox"/>	cxws://192.168.1.3	Host	QUANTUM		Administrator
<input checked="" type="checkbox"/>	https://192.168.1.4:5989	SMI-S Server (Array)	NEO		companyadmin

<input type="checkbox"/>	IP Address/DNS Name	User	Comment	Test
<input checked="" type="checkbox"/>	192.168.1.2			Test
<input type="checkbox"/>	192.168.1.4			Test
<input type="checkbox"/>	https://192.168.1.2:8959/interop	Administrator		Test
<input type="checkbox"/>	https://192.168.1.4:8959/interop	companyadmin		Test
<input type="checkbox"/>	192.168.1.3			Test
<input checked="" type="checkbox"/>	192.168.1.5			Test
<input checked="" type="checkbox"/>	192.168.1.5:8959	Administrator		Test
<input checked="" type="checkbox"/>	192.168.1.6			Test
<input checked="" type="checkbox"/>	192.168.1.6:8959	Administrator		Test
<input checked="" type="checkbox"/>	192.168.1.7			Test
<input checked="" type="checkbox"/>	192.168.1.7:8959	Administrator		Test

Troubleshooting the Oracle Database

When installing or migrating an Oracle database, be aware of these known considerations:

- "Use Only the Installation Wizard (or UNIX Scripts) to Install/Upgrade Oracle" on the next page
- "Existing Oracle Database Is Detected" on the next page
- "Unable to Install the Oracle Database on Linux" on the next page

Use Only the Installation Wizard (or UNIX Scripts) to Install/Upgrade Oracle

With this release of the product, the Oracle database is automatically installed using the new Installation Wizard (or UNIX scripts) developed to install the management server along with the Oracle database used by the management server. Installing Oracle separately is no longer recommended.

Do not install the Oracle database separately, the management server Installation Wizard (or UNIX scripts) automatically configures the Oracle database for use with the management server. If you install the Oracle database separately, the database will not meet the configuration settings required by the management server.

Existing Oracle Database Is Detected

(Linux installations Only) If the UNIX installation scripts detect an existing Oracle database, the following message is displayed: “Existing Oracle Database is Detected.”

Unable to Install the Oracle Database on Linux

The installation of the Oracle database on Linux does not work when the dba group exists in an external database, such as LDAP. The Oracle Universal Installer attempts to verify that the oracle user belongs to the dba group. This verification fails since the oracle user’s group is not listed in `/etc/group`.

The following error is logged in the `Oracle_InstallBaseSoftware_Output.log` file:

```
ERROR: Oracle Installation probably failed - Timeout error.
```

Please check the log files under `/opt/oracle/oraInventory/logs`.

The `/opt/oracle/oraInventory/logs` directory contains a file, such as `installActions {timestamp}.log`.

The following error also appears in the `installActions {timestamp}.log` file:

```
SEVERE: [FATAL] [INS-35341] User is not a member of the following  
chosen OS groups: [dba, dba]
```

```
CAUSE: User is not a member of one or more of the chosen OS groups.
```

```
ACTION: Please choose OS groups of which user is a member.
```

To resolve this issue, do the following:

1. Disable LDAP authentication on system when installing HP Storage Essentials.
2. Ensure that Linux group lookup is performed with files before ldap. Find the group and password entries in the `/etc/nsswitch.conf` file and ensure ldap is entered as a lookup method after files. The following is an example of the group and passwd entry:
 - `group: files ldap`
 - `passwd: files ldap`
3. Enable LDAP authentication after installing HP Storage Essentials.

Receiving HTTP ERROR: 503 When Accessing the Management Server

If you receive a message resembling the following when you try to access the management server, make sure your database for the management server is running. If it is not, start the database.

```
Receiving HTTP ERROR: 503 javax.ejb.EJBException: null;
```

Windows

In the Services window, make sure the OracleOraHome11gR2TNSListener service has started and is set to automatic. For information on how to access the Services window, see the Windows documentation.

If the OracleOraHome11gR2TNSListener service has not started, but the AppStorManager service has started, start the OracleOraHome11gR2TNSListener service, and then restart AppStorManager.

UNIX

To verify that the Oracle service started, enter the following at the command prompt:

```
# ps -ef | grep ora
```

If the service started, output similar to the following is displayed:

```
/opt/oracle/product/9.2.0.1.0/bin/tnslsnr LISTENER -inherit
./appstormservice /opt/productname/ManagerData/conf/unix-wrapper.

oracle   356      1  0   Jul 30 ?           0:01 ora_pmon_APPIQ
oracle   358      1  0   Jul 30 ?           0:26 ora_dbw0_APPIQ
oracle   360      1  0   Jul 30 ?           1:13 ora_lgwr_APPIQ
oracle   362      1  0   Jul 30 ?           0:39 ora_ckpt_APPIQ
oracle   364      1  0   Jul 30 ?           0:10 ora_smon_APPIQ
oracle   366      1  0   Jul 30 ?           0:00 ora_reco_APPIQ
oracle   368      1  0   Jul 30 ?
```

To start the service for Oracle, enter the following at the command prompt:

```
# /etc/rc3.d/S98dbora start
```

To stop the service for Oracle, enter the following at the command prompt:

```
# /etc/rc3.d/S98dbora stop
```

If you are starting the services manually, start the Oracle service before the service for the management server.

Web Intelligence Processing Server Does Not Start

(Report Optimizer on Linux) If the Web Intelligence Processing Server does not start or you are shown the error message "Cannot initialize Report Engine server (RWI: 00226) (Error: INF)" when you try to run a report, restart Report Optimizer by entering following commands:

1. To stop Report Optimizer enter the following command:

```
/etc/init.d/BobjEnterprise120 stop
```

2. To start Report Optimizer enter the following command:

```
/etc/init.d/BobjEnterprise120 start
```


We appreciate your feedback!

If an email client is configured on this system, by default an email window opens when you click [here](#).

If no email client is available, copy the information below to a new message in a web mail client, and then send this message to se.help.feedback@hp.com.

Product name and version: HP Data Protector Reporter, 9.6.0

Document title: Quick Start Guide

Feedback:

Quick Start Guide

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