HP Service Health Reporter

for the Windows® and Linux operating systems

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Installation and Configuration Guide

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1 Introduction

HP Service Health Reporter (SHR) is a cross-domain historical infrastructure performance reporting solution. It displays both top-down reports from Business Service Management (BSM) Business Service and Business Application or HP Operations Manager (HPOM) Node Group perspective to the underlying infrastructure and bottoms-up reports from the infrastructure to the impacted Business Services and Business Applications or Node Groups. It leverages the topology information to show how the underlying infrastructure's health, performance, and availability are affecting your business services and business applications in the long term.

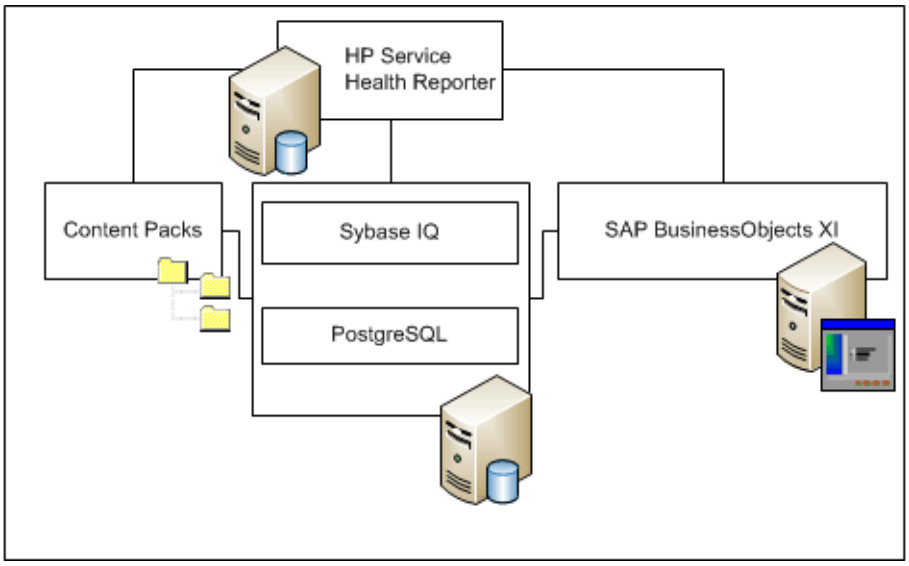
Using the reports created by SHR, you can compare and analyze the usage and performance data of different IT elements and achieve the following goals:

- Analyze the load and efficiency of your IT infrastructure.
- Forecast the performance and plan your capacity and usage.
- Identify the patterns of problems affecting your business and IT environment.

SHR collects data from different data sources, processes the data, and generates reports with the processed data. SHR uses its components like the Sybase IQ database for storing performance data, SAP BusinessObjects for reporting and PostgreSQL database for storing management data. The collector component of SHR collects data from RTSM, HP OM, BSM Profile database, BSM Management database, Operations manager i (OMi), HP SiteScope, and HP Operations agent.

All the components of SHR can be installed on a single system. If a single system is not capable of supporting all the components of SHR, the data collector and the Sybase IQ components can be installed on separate systems. If the data sources are distributed over a large area, there is an option to deploy an SHR collector on different systems. It reduces the network load and ensures connectivity to the data sources.

SHR Components



HP provides product support only for the versions of Sybase IQ and SAP BusinessObjects that are shipped with SHR. HP does not provide any support for preexisting licenses of these products on your system.

Note: The SAP BusinessObjects shipped with HP Service Health Reporter can only be used with HP Service Health Reporter database.

For additional information about SHR, its architecture, and functionality, see the *HP Service Health Reporter Concepts Guide*.

SHR Deployment Scenarios

You can deploy SHR in the following environments:

- With BSM Service and Operations Bridge (SaOB)
- With Application Performance Management (APM)
- With HPOM
- With VMware vCenter

BSM Service and Operations Bridge

In this deployment scenario, Run-time Service Model (RTSM) is the source of the topology information for SHR and must be installed in this deployment environment.

HP products supported in this deployment scenario include:

- BSM platform with one or more of its applications such as HP SiteScope, Real User Monitor (RUM), and Business Process Monitor (BPM) as the data acquisition products
- HPOM with the following Smart Plug-ins:

  - Oracle database Smart Plug-in
  - Microsoft SQL Server database Smart Plug-in
  - IBM WebSphere Application Server Smart Plug-in
  - Oracle WebLogic Application Server Smart Plug-in
  - Microsoft Active Directory Smart Plug-in
  - Microsoft Exchange Smart Plug-in
  - Systems Infrastructure Smart Plug-in
  - Virtualization Infrastructure Smart Plug-in
- HP Network Node Manager i Software (NNMi) with HP Network Node Manager iSPI Performance for Metrics Software
- BSM Operations Management (OMi) as the operations bridge in the BSM solution

For more information about the BSM Service and Operations Bridge deployment scenario, see the *SHR Concepts Guide*.

Application Performance Management

In the APM deployment scenario, RTSM is the source of topology information and must be installed in this deployment environment.

HP products supported in this deployment scenario include BSM platform with one or more of its applications such as HP SiteScope, RUM, BPM, or in a few instances, NNMi as the data acquisition products.

For more information about the Application Performance Management deployment scenario, see the *SHR Concepts Guide*.

HPOM

In the HPOM deployment scenario, the HPOM database server is the source of the topology information for SHR. HPOM must be installed in this deployment environment. HPOM database server can include:

- HPOM for Windows
- HPOM for UNIX
- HPOM for Linux
- HPOM for Solaris

HP products supported in this deployment scenario include:

- HPOM with the following Smart Plug-ins:
  - Oracle database Smart Plug-in
  - Microsoft SQL Server database Smart Plug-in
  - IBM WebSphere Application Server Smart Plug-in
  - Oracle WebLogic Application Server Smart Plug-in
  - Microsoft Active Directory Smart Plug-in
  - Microsoft Exchange Smart Plug-in

  - Systems Infrastructure Smart Plug-in
  - Virtualization Infrastructure Smart Plug-in
- HP Operations agent
- HP Network Node Manager i Software (NNMi) with HP Network Node Manager iSPI Performance for Metrics Software

For more information about the HPOM deployment scenario, see the *SHR Concepts Guide*.

VMware vCenter

VMware vCenter is a distributed server-client software solution that provides a central and a flexible platform for managing the virtual infrastructure in business-critical enterprise systems. VMware vCenter centrally monitors performance and events, and provides an enhanced level of visibility of the virtual environment, thus helping IT administrators to control the environment with ease.

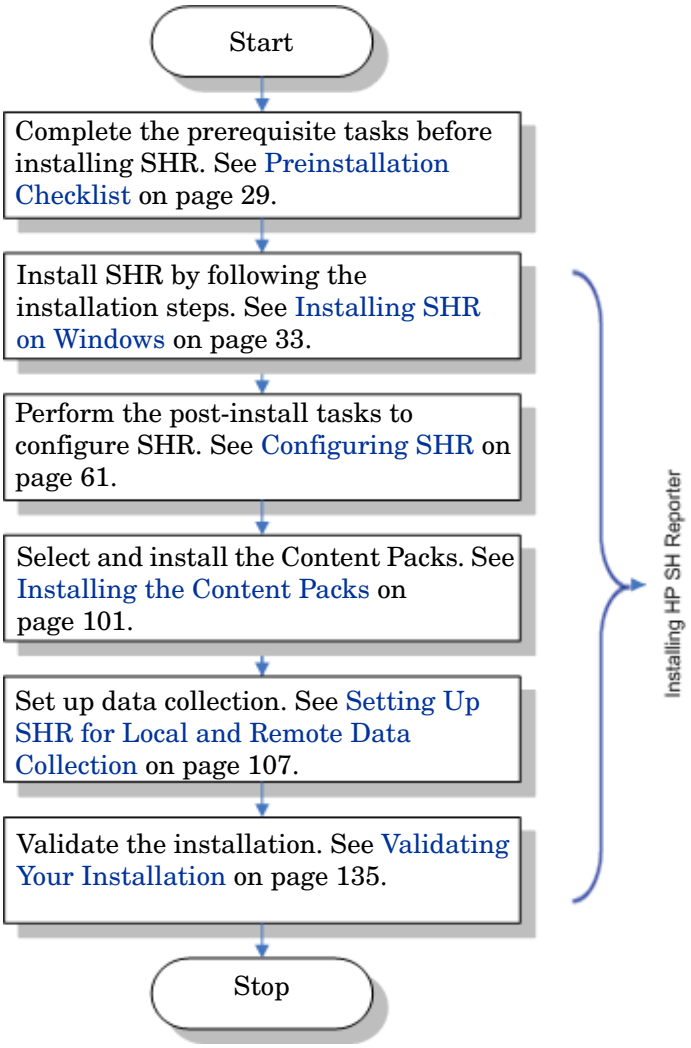
SHR collects virtualization performance metrics from the VMware vCenter database.

In the VMware vCenter deployment scenario, the VMware vCenter database server is the source of the topology information for SHR. VMware vCenter must be installed in this deployment environment. Collection configuration for the VMware vCenter data sources are possible with the following deployment scenarios:

Topology	**Data source**
RTSM	RTSM is the source of topology information and VMware vCenter is the data source.
HPOM	HPOM is the source of topology information and VMware vCenter is the data source.
VMware vCenter	VMware vCenter is the source of topology information and VMware vCenter is the data source. Only System Management and Virtualization Infrastructure Content Packs are supported in this scenario.

Installation Flowchart

Click the links provided in the flowchart to see the relevant sections.



Installation Media

The installation media for SHR includes the following:

- HP Service Health Reporter 9.30 installation files
- Sybase IQ 15.4 ESD 1
- SAP BusinessObjects XI 3.1 Service Pack 5 (SP5) Fix Pack 5.3
- PostgreSQL 9.0.4
- Content Packs
- Xcelsius installation files
- Collector installers (to install collectors on remote servers)

Overview of Installation

The Sybase IQ database, which is packaged with the SHR media, stores and processes the data that SHR uses for creating reports. The SHR installer gives you an option to install the Sybase IQ database on a separate server (and not on the server where SHR is installed). As a result, you can create one of the following environments after installing SHR:

- **Single-system environment**

  SHR and Sybase IQ are installed on the same system in this environment.

- **Dual-system environment (remote database)**

  SHR and Sybase IQ are installed on different systems. Sybase IQ client is installed on the core SHR system. To create a dual-system environment, it is recommended that you first install Sybase IQ, and then install SHR.

SHR Collectors on Remote Systems

A **collector** is a collection component that helps SHR collect data from various data sources across the network. By installing a collector on a remote server, you can enhance the performance of SHR. You can install the collector on as many remote servers as you like, and thereby, you can distribute the load across a group of servers.

You can install a collector on a remote system that runs on any of the operating systems supported by SHR (see Software Requirements on page 19). The SHR system and the remote collector system need not run on the same operating system. You can also install the collector on multiple remote servers running on different operating systems.

The SHR installer always installs a collector instance on the SHR system. You cannot skip the collector installation on the SHR system even when you choose to install the collector on remote servers.

SHR Documentation Set

The following is a list of manuals in the SHR documentation set:

- Release Notes (in the HTML format)
- Concepts Guide (in the PDF format)
- Installation and Configuration Guide (in the PDF format)
- Installation and Configuration Guide for High-Availability Cluster Environments
- Online Help for Administrators (in the HTML format)
- Online Help for Users (in the HTML format)
- Handbook of Reports (in the PDF format)
- Content Development - Getting Started Guide (in PDF format)

The PDF manuals and Release Notes are located in the **Documentation** directory on your installation media. After installation, the manuals will be available in the `<Installation_Directory>/PMDB/Documentation` folder.

In this instance, *<Installation_Directory>* is the location where you install SHR.

On Windows, you can also open these documents by clicking **Start** → **Programs** → **HP Software** → **SH Reporter** → **Documentation**.

To check for recent updates or to verify that you are using the most recent edition, visit the URL: **http://h20230.www2.hp.com/selfsolve/manuals**.

2 Installation Prerequisites

In a dual system setup (where Sybase IQ is installed on a dedicated system), these prerequisites must be met on both the SHR host as well as the remote Sybase IQ system.

These prerequisites also apply to remote systems where you want to install the SHR collector.

Hardware Requirements

For a list of hardware requirements, see the *HP Service Health Reporter Performance, Sizing, and Tuning Guide*, which is available for download on the HP Software product manuals web site (**http://h20230.www2.hp.com/selfsolve/manuals**).

Software Requirements

For the list of software and their versions supported with SHR, see the *HP Service Health Reporter Support Matrix*.

Operating System Requirements

Before you can install SHR, you must update your operating system software, establish network connectivity, and disable anti-virus software.

Windows

Make sure that all required Windows operating system patches are installed.

Swap space

Make sure the swap space is twice the size of the RAM.

Requirements for Windows 2003

If you are installing SHR on the Windows Server 2003 x64 SP2 operating system, you must install the following components:

- **Microsoft .NET Framework 2.0 (64-bits)**

  To install the .NET Framework 2.0, follow these steps:

  a. Log on to the host system as administrator.

  b. Click **Start** → **Programs** → **Internet Explorer**. Internet Explorer opens.

  c. Type the following URL in the Address bar to open the Microsoft Download Center web site:

http://www.microsoft.com/downloads/details.aspx?FamilyID=B44A0000-ACF8-4FA1-AFFB-40E78D788B00&displaylang=en

> The URL must be typed out as a single line without any spaces.

d. Click **Download** to download the .NET Framework version 2.0 (x64) redistributable package.

e. After the download completes, browse to the location where the file was downloaded, and then double-click the `NetFx64.exe` setup file. The Microsoft .NET Framework 2.0 (x64) Setup wizard opens.

f. On the Welcome to Microsoft .NET Framework 2.0 (x64) Setup page, click **Next** to continue. The End-User License Agreement page opens.

g. After reviewing the license agreement, select the **I accept the terms of the License Agreement** check box and click **Install**. The Installing components page opens.

h. After the installation completes, the Setup Complete page opens. Click **Finish** to complete the installation.

- **Window Server 2003 x64 update KB925336**.

> If you are installing SHR on the French version of the Windows Server 2003 x64 SP2 system, you must install the `WindowsServer2003.WindowsXP-KB971812-x64-FRA.exe` patch in addition to all other operating system patches.

To install the update KB925336, follow these steps:

a. Log on to the host system as administrator.

b. Click **Start** → **Programs** → **Internet Explorer**. Internet Explorer opens.

c. Type the following URL in the Address bar to open the Microsoft Download Center web site:

http://www.microsoft.com/downloads/details.aspx?FamilyId=4BBC5917-C1AC-402C-86D9-0A8E3B9921FF&displaylang=en

> The URL must be typed out as a single line without any spaces.

d. Click **Download** to download the update.

e. After the download completes, browse to the location where the file was downloaded, and then double-click the `WindowsServer2003.WindowsXP-KB925336-x64-ENU.exe` setup file to install an operating system update. The Hotfix for Windows x64 (KB925336) wizard opens.

f. Click **Next** to continue. The License Agreement page opens.

g. Review the license agreement, select **I Agree**, and then click **Next** to continue. The Updating Your System page opens.

h. Click **Finish** to complete the installation.

i. Restart your system.

Linux

- **Libraries (for Red Hat Enterprise Linux 6.x only)**

  Make sure the following libraries are available on the SHR system:

  The list indicates the minimum required versions of required libraries. You can install a higher version of each library, if available.

  - libXext-1.1-3.el6.x86_64
  - libXext-1.1-3.el6.i686
  - libXext-devel-1.1-3.el6.i686
  - libXext-devel-1.1-3.el6.x86_64
  - libstdc++-4.4.4-13.el6.x86_64
  - libstdc++-4.4.4-13.el6.i686
  - libstdc++-devel-4.4.4-13.el6.x86_64
  - compat-libstdc++-33-3.2.3-69.el6.x86_64
  - compat-libstdc++-33-3.2.3-69.el6.i686
  - libXtst-1.0.99.2-3.el6.i686
  - libXtst-devel-1.0.99.2-3.el6.i686
  - libXtst-1.0.99.2-3.el6.x86_64
  - libXau-1.0.5-1.el6.i686
  - libXau-devel-1.0.5-1.el6.i686
  - libXau-1.0.5-1.el6.x86_64
  - libXdmcp-1.0.3-1.el6.i686
  - libXdmcp-devel-1.0.3-1.el6.i686
  - libxcb-1.5-1.el6.x86_64
  - libxcb-devel-1.5-1.el6.i686
  - libxcb-1.5-1.el6.i686
  - libXrender-0.9.5-1.el6.i686
  - libXrender-0.9.5-1.el6.x86_64
  - glibc-2.12-1.7.el6.x86_64
  - glibc-2.12-1.7.el6.i686
  - libgcc-4.4.1-13.el6.i686
  - libgcc-4.4.4-13.el6.x86_64
  - libX11-devel-1.3-2.el6.i686
  - libX11-1.3-2.el6.i686
  - libX11-1.3-2.el6.x86_64
  - libXi-1.3-3.el6.x86_64
  - libXi-devel-1.3-3.el6.i686
  - libXi-1.3-3.el6.i686

- alsa-lib-1.0.22-3.el6.i686
- alsa-lib-1.0.22-3.el6.x86_64
- alsa-lib-devel-1.0.22-3.el6.i686
- alsa-lib-devel-1.0.22-3.el6.x86_64
- nss-softokn-freebl-3.12.7-1.1.el6.i686
- ncurses-libs-5.7-3.20090208.el6.i686
- xorg-x11-proto-devel-7.6-13.el6.noarch
- tcsh-6.17-8.el6.x86_64

- **Swap space**

  Make sure the swap space is twice the size of the RAM.

  To allocate sufficient swap space, follow these steps:

  a. Log on to the system as root.

  b. To set up the swap space by creating a new swap file, run the following commands :

     - `dd if=/dev/zero of=<swapfile_full_path> bs=1M count=<swap_size_in_MB>`
     - `mkswap <swapfile_full_path>`
     - `swapon <swapfile_full_path>`

     In this instance, <*swapfile_full_path*> is the name of the new swap file (including full path to the file) and <*swap_size_in_MB*> is the space (in MB) that you want to allocate.

     For example, to allocate swap space by creating a new `/extraswap` file:

     ```
     dd if=/dev/zero of=/extraswap bs=1M count=16384
     ```

     ```
     mkswap /extraswap
     ```

     ```
     swapon /extraswap
     ```

  c. For the change to remain in effect even after a system restart, add the following line in the `/etc/fstab` file:

     <*swapfile_full_path*> `swap swap defaults 0 0`

     In this instance, <*swapfile_full_path*> is the name of the newly created swap file (in step b).

     For example:

     ```
     /extraswap swap swap defaults 0 0
     ```

Port Availability

The SHR uses a number of default ports for its different services.

Service	Port Number	Protocol	Inbound	Outbound	Description
HP PMDB Platform Message Broker	21401	TCP	Yes	Yes	The Message Broker service listens on this port when other SHR services send/receive messages.
HP PMDB Platform DB Logger Service	21408	TCP	Yes	Yes	The DB Logger Service persists logs in the database through this port.
HP PMDB Platform Collection Service	21409	TCP	Yes	Yes	JMX management port for the Collection Service. The IM service monitors using this interface.
HP PMDB Platform IM Service	21410	TCP	Yes	No	JMX management port for IM Service.
HP PMDB Platform Timer	No port	NA	NA	NA	The Timer service for SHR.
HP PMDB Platform Administrator	21411	TCP	Yes	No	SHR web application server port, which hosts the Administration web application. The Report cross-launch functionality depends on this service.
HP Software Communication Broker	383	TCP	Yes	Yes	SHR uses this port to communicate with collectors installed on remote servers.
Administration Console web server	21416	TCP	Yes	Yes	JMX management port for the SHR administration web server.
HP PMDB Platform Sybase Service	21424	TCP	Yes	Yes	The port for the Sybase IQ server.
Sybase IQ Agent 15.4	21423	TCP	Yes	No	Port for the Sybase IQ Agent.

Service	Port Number	Protocol	Inbound	Outbound	Description
HP-SHR-Postgre - PostgreSQL Server 9.0	21425	TCP	Yes	Yes	Port for the PostgreSQL service.
Apache Tomcat	8080	TCP	Yes	No	This is the SAP BOBJ Application Service port. The SAP BOBJ Central Management Console and the SAP BOBJ InfoView web applications are hosted on this port.
SAP BOBJ Central Management Server	6400	TCP	Yes	Yes	This is the port for the SAP BOBJ Central Management Server, which is mainly used for SAP BOBJ authentication purposes.
Server Intelligence Agent (HOML01GEATON)	6410	TCP	Yes	Yes	Port for the SAP BOBJ Server Intelligence Agent, which manages all SAP BOBJ-related tasks.
BOE120SQLAW	2638	TCP	Yes	Yes	Port for the SAP BOBJ repository database.
BOE120MYSQL	3306	TCP	Yes	Yes	Port for the SAP BOBJ repository database.
RTSM	21212	TCP	No	Yes	This is the port that is configured in the Administration Console for the RTSM data source. Using this port, SHR connects to RTSM.

Service	Port Number	Protocol	Inbound	Outbound	Description
HPOM	Any	TCP	No	Yes	This is the port that is configured in the Administration Console for the HPOM database. SHR uses this port to connect to the HPOM database.
HP Operations Agent	383	TCP	No	Yes	SHR uses this port to connect to the HP Operations agent.
HP BSM Profile database	Any	TCP	No	Yes	This is the port that is configured in the Administration Console for the Profile database. SHR uses this port to connect to the Profile database and the OMi database.

Firewall Requirements

For Windows. If you use firewall software, you must open the SHR ports in the firewall. For instructions, see your firewall documentation.

For Linux. You must disable firewall completely.

To disable firewall, run the following commands after logging on as root:

```
/etc/init.d/iptables stop
/etc/init.d/ip6tables stop
```

Web Browser Requirements

To view the Administration Console in Internet Explorer, you must enable the ActiveX and the JavaScript controls.

Browsers are supported on Windows only. You must always use a Windows system to log on to the SHR console, even when SHR is installed on Linux.

Enable ActiveX Controls

Perform the following steps to enable ActiveX controls in 7.x, 8.x, or 9.x:

1. Open Internet Explorer.
2. Click **Tools** → **Internet Options**. The Internet Options dialog box opens.

3 On the **Security** tab, click the **Custom level** button.

4 Scroll down to the **ActiveX controls and plug-ins** section.

5 Select the **Enable** option for all the available options under **ActiveX controls and plug-ins**.

6 Click **OK**.

7 Click **Yes** in the Warning message box.

8 Click **Apply** and then click **OK**.

Enable JavaScript Controls

Perform the following steps to enable JavaScript controls in Internet Explorer 7.x, 8.x, or 9.x:

1 Open Internet Explorer.

2 Click **Tools** → **Internet Options**. The Internet Options dialog box opens.

3 On the **Security** tab, click the **Custom level** button.

4 Scroll down to the **Scripting** section.

5 Select the **Enable** option for all the available options under **Scripting**.

6 Click **OK**.

7 Click **Yes** in the Warning message box.

8 Click **Apply** and then click **OK**.

Preinstallation Tasks

After making sure the above prerequisites are met, you must perform a series of tasks to prepare the server for the SHR installation.

Task 1: Disable Anti-Virus

Anti-virus applications can hinder the installation of SHR. Temporarily disable any antivirus software that might be running.

Re-enable the anti-virus software after the installation is complete.

Task 2: *Only for Linux.* Prepare the Linux Server

On the Linux server, you must perform a set of additional steps.

Disable SELinux

To disable SELinux, in the `/etc/sysconfig/selinux` file, set `SELINUX = disabled`.

Configure the Kernel Parameters (Only for Red Hat Enterprise Linux 6.x)

Skip this section if you do not use Red Hat Enterprise Linux 6.x.

To configure the Kernel parameters, follow these steps, open the file `/etc/sysctl.conf` file and set the values of the parameters as given below:

> If higher values are specified for these parameters already, do not make any modifications.

- kernel.msgmnb = 65536
- kernel.msgmax = 65536
- kernel.shmmax = 68719476736
- kernel.shmall = 4294967296
- kernel.sem = 250 1024000 250 4096
- vm.max_map_count = 1000000

Modify Network Configuration Files

To configure the network:

1 Configure hostname shortname in `/etc/sysconfig/network` as:

```
NETWORKING=yes
HOSTNAME=server1
```

Make sure the HOSTNAME parameter is set to the hostname of the system (and not the FQDN of the system)

2 Configure /etc/hosts as:

```
127.0.0.1    localhost.localdomain localhost
192.168.0.1  server1.example.com server1
```

Any additional hosts should be added after these two lines.

3 Configure the resolve order. To configure the resolve order, open the files mentioned in the following table and set the parameters to the values as shown in the table.

Open the file	**Set parameters to the value**
`/etc/nsswitch.conf`	`hosts:`*files dns*
`/etc/host.conf`	`multi on` `order hosts,bind`

4 Configure domain name in the `/etc/resolv.conf` file.

```
domain domain.example.com
nameserver <ip-addr1>
nameserver <ip-addr2>
search domain.example.com
```

Configure the limits.conf File

Open the `/etc/security/limits.conf` file and increase the number of open files by setting the following values:

```
* soft    nofile  65535
* hard    nofile  65535
```

Configure the 90-nproc.conf File (Only for Red Hat Enterprise Linux 6.x)

Skip this section if you do not use Red Hat Enterprise Linux 6.x.

Open the `/etc/security/limits.d/90-nproc.conf` file and comment out the following line (by adding a # character in the beginning):

```
#*soft    nproc     1024
```

Restart

Restart the Linux system for all the changes to take effect.

Task 3: Verify the Fully Qualified Domain Name (FQDN) of the system

Before performing the SHR installation, you must verify that DNS lookup returns the accurate FQDN of the host system. If the entry for the DNS lookup is different from the host name of the system, this can result in login failure on the Administration Console. This can occur because during the SAP BOBJ installation, the host name of the system is used for creating the servers/services and registering them.

To verify the FQDN of the host system, follow these steps:

1. Open the command prompt.
2. Type the following command to check the host name of the system:

   On Windows

   `hostname`

   On Linux

   `hostname -f`

   Note down the hostname of the system.
3. Type the following command to view the IP address of the system:

   On Windows

   `ipconfig`

   On Linux

   `ifconfig`
4. Type the following command to verify the FQDN for the displayed IP address:

   `nslookup` <*IP address*>

   In this instance, <*IP address*> is the IP address of the host system.

Ensure that the name displayed after running the DNS Lookup command matches the name displayed after running the HOSTNAME command. If the names do not match, you must change the hostname of the system.

Task 4: *Only for Windows.* Disable User Account Control (UAC)

Perform this task only if the host system runs the Windows Server 2008 with Service Pack 2 or Windows Server 2008 R2 with Service Pack 1 operating system.

If the host system runs the Windows Server 2008 with Service Pack 2, follow these steps:

1. Click **Start** → **Control Panel.** The Control Panel window opens.
2. In the Control Panel window, double-click **User Accounts**.
3. In the User Accounts window, click **User Accounts**.
4. In the User Accounts tasks window, click **Turn User Account Control on or off**.
5. If UAC is currently configured in Admin Approval Mode, the **User Account Control** message appears. Click **Continue**.
6. Clear the **Use User Account Control (UAC) to help protect your computer** check box, and then click **OK**.
7. Click **Restart Now** to apply the change.

If the host system runs the Windows Server 2008 R2 with Service Pack 1, follow these steps:

1. Click **Start** → **Control Panel.** The Control Panel window opens.
2. In the Control Panel window, double-click **User Accounts**.
3. In the User Accounts window, click **User Accounts**.
4. In the User Accounts tasks window, click **Change User Account Control Settings**.
5. In the User Accounts Control Settings window, move the slider to the bottom to select the **Never notify** option, and then click **OK**.
6. If UAC is currently configured in Admin Approval Mode, the **User Account Control** message appears. Click **Continue**.
7. Click **Restart Now** to apply the change.

Task 5: *Only for Windows.* Set a static IPv6 address on Windows Server 2008

When installing SHR on a Windows Server 2008 server where the communication protocol is IPv6, you must assign a static IPV6 address.

The interface ID is randomly derived in Windows Server 2008 by default, rather than based on the Extended Unique Identifier (EUI)-64 address. You must disable the random interface IDs. For more information, see Microsoft's documentation available at **www.microsoft.com**.

Preinstallation Checklist

Before you proceed with the installation of SHR, make sure that the following tasks were completed.

☐ Your hardware meets the requirements for SHR.	See the *HP Service Health Reporter Performance, Sizing, and Tuning Guide*.
☐ You are using the operating system and web browser that support SHR.	See Software Requirements on page 19.
☐ You have installed the required patches for your operating system.	See Operating System Requirements on page 19.

☐ You have identified port numbers for network and client connectivity.	See Port Availability on page 23.
☐ You have disabled all anti-virus applications that might hinder the installation of SHR.	See Disable Anti-Virus on page 26.
☐ You have verified the FQDN of the host system where you want to install SHR.	See Verify the Fully Qualified Domain Name (FQDN) of the system on page 28.
☐ You have enabled the necessary controls for your web browser.	See Web Browser Requirements on page 25.

The SHR installer does not support installation rollback and forced reinstallation. In the event of an unsuccessful installation, you must manually remove all the files that were placed by the installer (see Uninstalling SHR Manually on page 172).

Preparing for Installation

The electronic distribution of SHR comes with three different files. The physical distribution of SHR includes three different DVDs. To be able to install SHR, you must reassemble these files or DVDs into a single ISO file.

Reassembling the Media

On Windows

1. Log on as administrator.
2. Copy the ISO parts (.PART1, .PART2, and .PART3 files) into a common directory.
3. Go to the directory where you copied the ISO parts:

   cd <*directory*>
4. Run the following commands:

   copy /b TD185-1500?.part? SHR.iso

All ISO parts are now combined into the `SHR.iso` file. You can use this merged ISO file to install SHR.

On Linux

1. Log on as root.
2. Copy the ISO parts (.PART1, .PART2, and .PART3 files) into a common directory.
3. Go to the directory where you copied the ISO parts:

   cd <*directory*>
4. Run the following commands:

   cat TD185-1501?.part? > SHR.iso

All ISO parts are now combined into the `SHR.iso` file.

5 Mount the merged ISO file.

Run the following command to mount the ISO file:

`mount -o loop SHR.iso /`<*local_dir*>

In this instance, <*local_dir*> is a local directory on the system.

6 Create a new directory, and then copy the contents of the <*local_dir*> directory into the new directory.

You must copy the ISO file to a new directory where the filesystem has read-write access. You cannot install from the mount directory.

7 *Optional.* You can unmount the ISO file.

To unmount the ISO file, run the following command:

`umount /`<*local_dir*>

8 Go to the newly created directory (that you created in step 6) and start installing the product with the installer program.

Additional Considerations

- Log on to the system as root or administrator. On Windows, you must be a member of the Local Administrators group.
- Make sure that system time does not change during the course of the installation. Make sure the system does not automatically transition to the daylight saving time during installation.
- Do not install SHR from a network share. Because of the large size of the installation files, installation of SHR over the network is not supported.

3 Installing SHR on Windows

Single System Installation: Install SHR and Sybase IQ on a Single System

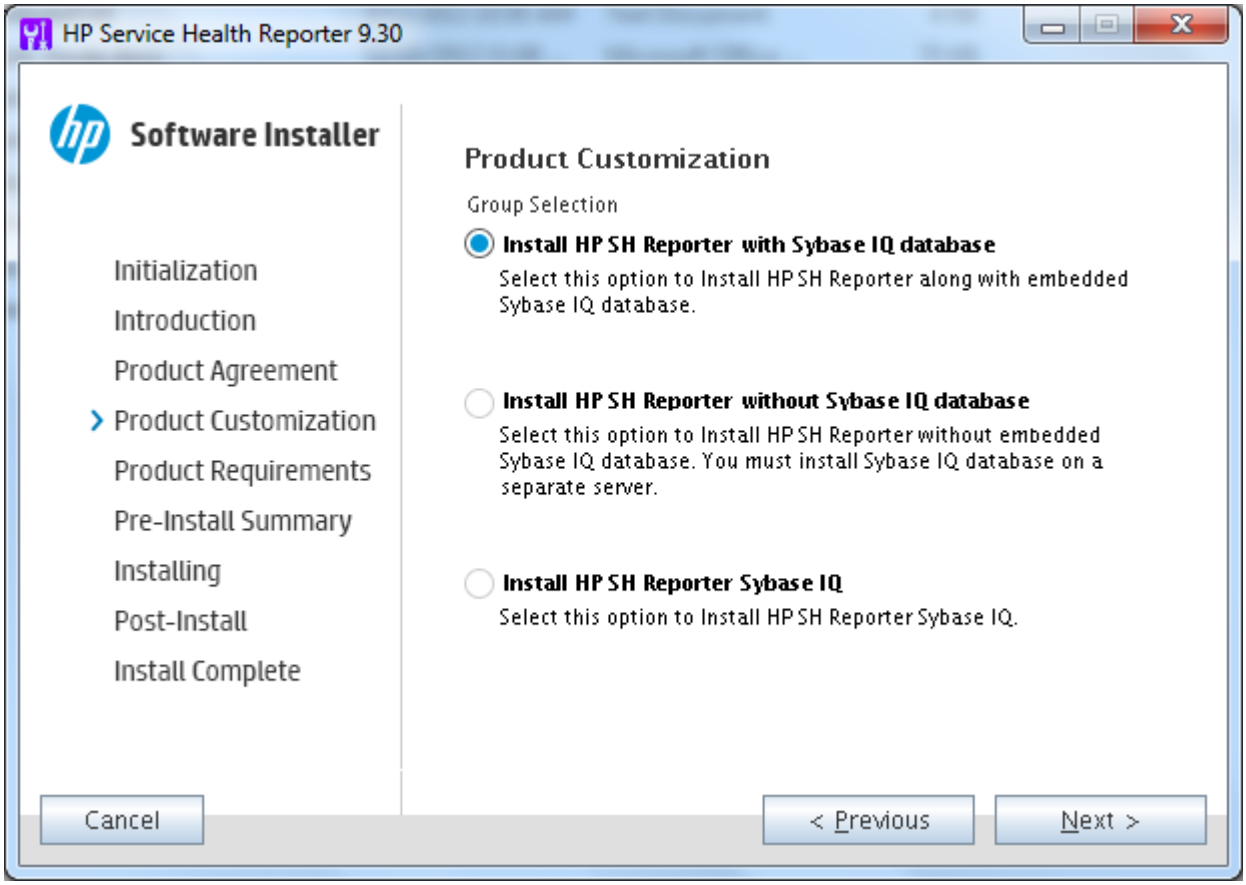
To install with the help of the installation wizard, follow these steps:

1. Run the following file at the media root:

   `HP-SHR_9.30_setup.exe`

2. Select the language in which you want to install SHR, and then click **OK**.
3. The Introduction page opens. Review the note on the Introduction page, and then click **Next**.
4. The License Agreement page opens. Review the license agreement, select **I accept...**, and then click **Next**.

5 The Product Customization page opens. On the Product Customization page, select the first option, and then click **Next**.The **Choose the Folder** dialog box opens. The installer



enables you to choose a non-default installation directory only on Windows. If you like to choose a non-default folder for SHR, make necessary changes, and then click **Next**.

Make sure that the non-default folder name does not contain spaces or any special characters other than - (hyphen).

6 The installer performs checks for installation prerequisites and shows the result of the check on the Install Check page.

If the check is successful, click **Next**.

If the prerequisite check fails or shows warning messages, make sure that all the prerequisites are met (see Installation Prerequisites on page 19), and then start the installation again.

7 The Pre-Installation Summary page opens. Review the summary, and then click **Install**.

8 After the installation is complete, click **Done**.

9 *Only on Windows 2003*. Restart the system.

Post-Installation Task

On a system with the Simplified Chinese or Japanese locale, follow these steps:

1. Run the following command to stop the Sybase IQ service:

   `dbstop -y -c uid=dba;pwd=sql;eng=`<*server engine name*>**`;dbn=utility_db;links=tcpip{host=`**<*host name*>**`.`**<*domain name*>**`;port=21424}`**

   In this instance, <*server engine name*> refers to the name of the Sybase server engine, <*host name*> refers to the name of the system hosting the SHR database and <*domain name*> is the name of your domain according to your network configuration.

   This command must be typed as a single line.

2. Manually delete the following files after installation:

- *%PMDB_HOME%*`\Sybase\IQ-15_4\Bin64\dblgzh_iq12.dll`
- *%PMDB_HOME%*`\Sybase\IQ-15_4\Bin64\dblgja_iq12.dll`

Dual System Installation: Install SHR and Sybase IQ on Separate Systems

A typical installation of SHR installs the Sybase IQ server and client on the same host system along with the SHR application. However, SHR also provides you with an option to remotely install the Sybase IQ server on a separate server. In this type of installation, only the Sybase IQ client is installed with SHR on the host system.

It is recommended that, for the dual server installation, you install Sybase IQ before installing SHR.

Installing Sybase IQ from the SHR Media

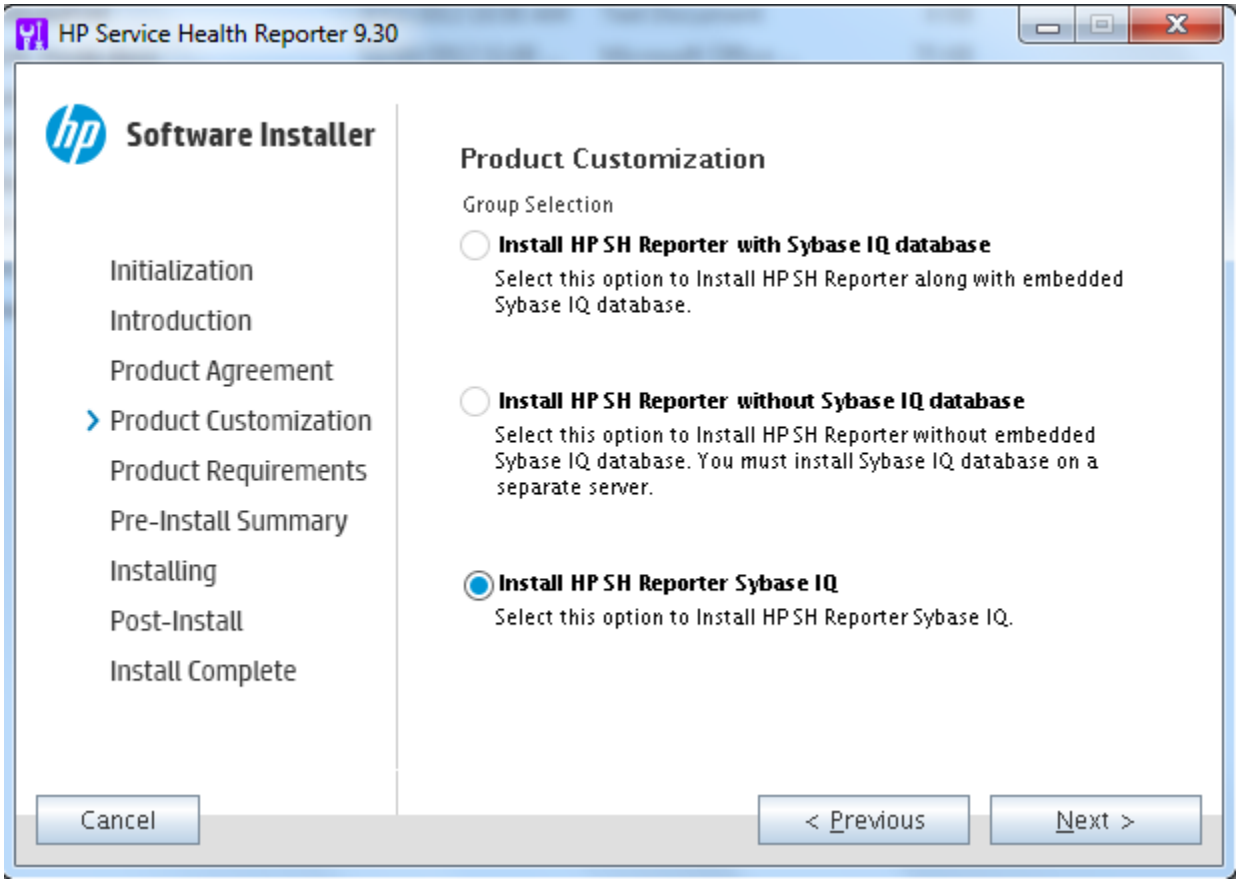
To install with the help of the installation wizard, follow these steps:

1. Run the following file at the media root:

   `HP-SHR_9.30_setup.exe`

2. Select the language in which you want to install SHR, and then click **OK**.
3. The Introduction page opens. Review the note on the Introduction page, and then click **Next**.
4. The License Agreement page opens. Review the license agreement, select **I accept...**, and then click **Next**.

5 The Product Customization page opens. On the Product Customization page, select the third option, and then click **Next**.



6 The **Choose the Folder** dialogue box opens. The installer enables you to choose a non-default installation directory only on Windows. If you like to choose a non-default folder for SHR, make necessary changes, and then click **Next**.

Make sure that the non-default folder name does not contain spaces or any special characters other than - (hyphen).

7 The installer performs checks for installation prerequisites and shows the result of the check on the Install Check page.

If the check is successful, click **Next**.

If the prerequisite check fails or shows warning messages, make sure that all the prerequisites are met (see Installation Prerequisites on page 19), and then start the installation again.

8 The Pre-Installation Summary page opens. Review the summary, and then click **Install**.

9 After the installation is complete, click **Done**.

10 *Only on Windows 2003*. Restart the system.

Post-Installation Task

On a system with the Simplified Chinese or Japanese locale, manually delete the following files from the system where you installed Sybase IQ:

- *%PMDB_HOME%*`\Sybase\IQ-15_4\Bin64\dblgzh_iq12.dll`

- *%PMDB_HOME%*\Sybase\IQ-15_4\Bin64\dblgja_iq12.dll

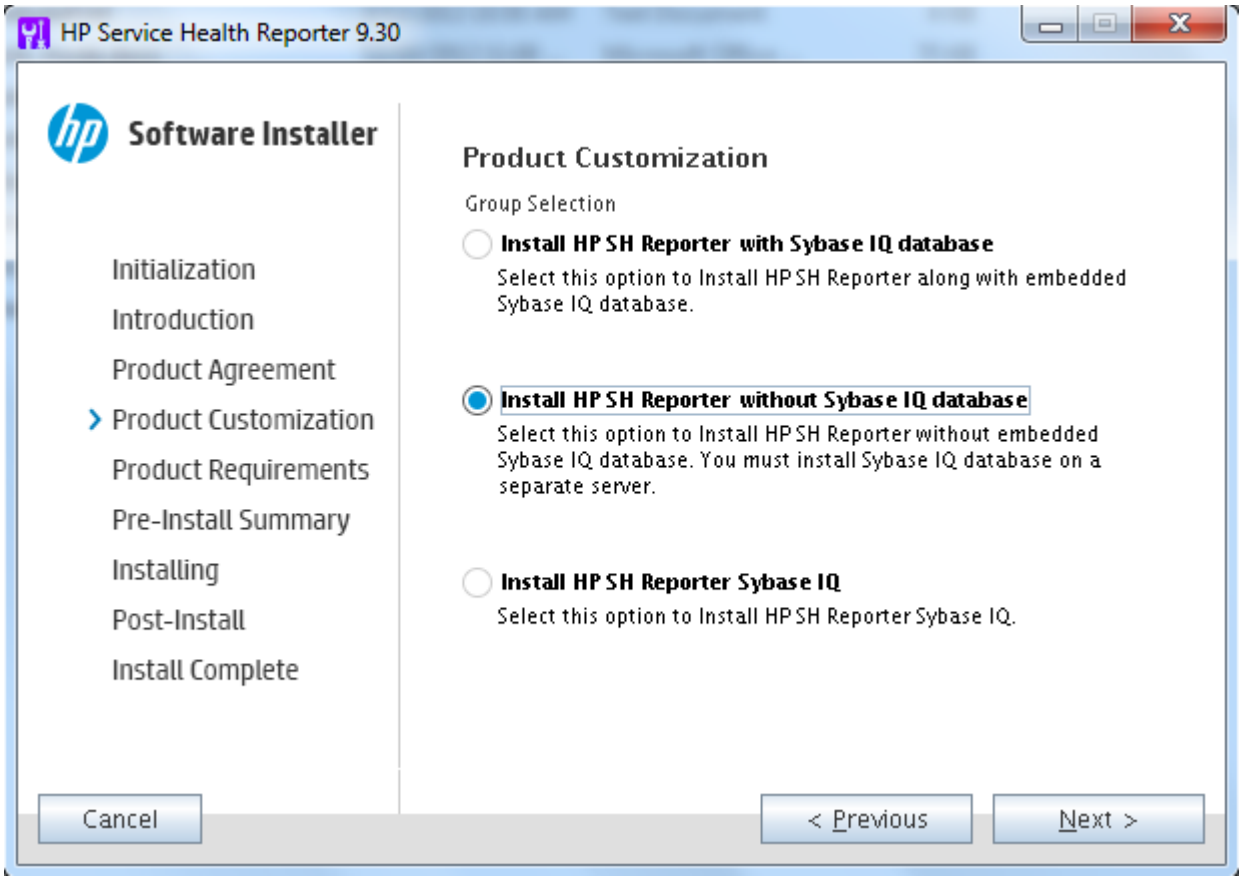
Installing SHR on a Dedicated System

To install with the help of the installation wizard, follow these steps:

1. Run the following file at the media root:

   HP-SHR_9.30_setup.exe

2. Select the language in which you want to install SHR, and then click **OK**.
3. The Introduction page opens. Review the note on the Introduction page, and then click **Next**.
4. The License Agreement page opens. Review the license agreement, select **I accept...**, and then click **Next**.
5. The Product Customization page opens. On the Product Customization page, select the second option, and then click **Next**.



6. The **Choose the Folder** dialogue box opens. The installer enables you to choose a non-default installation directory only on Windows. If you like to choose a non-default folder for SHR, make necessary changes, and then click **Next**.

   Make sure that the non-default folder name does not contain spaces or any special characters other than - (hyphen).

7. The installer performs checks for installation prerequisites and shows the result of the check on the Install Check page.

If the check is successful, click **Next**.

If the prerequisite check fails or shows warning messages, make sure that all the prerequisites are met (see Installation Prerequisites on page 19), and then start the installation again.

8 The Pre-Installation Summary page opens. Review the summary, and then click **Install**.

9 After the installation is complete, click **Done**.

10 *Only on Windows 2003*. Restart the system.

Creating a Sybase IQ Service on Windows

On a remote Sybase IQ (Windows) system, you must configure Sybase IQ to run as a Windows service. The SHR Linux installer creates the Sybase IQ service on the remote system by default.

When you run Sybase IQ as a Windows service, it lets you start a server automatically in the background whenever you start the machine. The server will continue to run as long Windows runs in the machine.

To create the Sybase IQ service:

1 Log on to the system where you installed Sybase IQ.

2 Set the *PMDB_HOME* environment variable on the remote system:

a Open the System Properties dialog box.

On Windows 2003 systems, click **Control Panel**-> **System** ->**Advanced** tab

On Windows 2008 systems, right-click **My Computer**, and then select **Properties** -> **Advanced System Settings** -> **Advanced**.

b Click **Environmental Variables**. The **Environmental Variables** dialog opens.

c Click **New** under **System Variables.**

Type **PMDB_HOME** in the **Variable name** text box and **<*INSTALLDIR*>\PMDB** in the **Variable value** text box.

In this instance, **<*INSTALLDIR*>** is the parent directory of the Sybase IQ installation directory. It is the same path that you chose for product installation in the install wizard.

3 Copy the following files from the SHR system to the remote database system. If the target directories do not exist on the remote database system, create the target directories and copy the following files to the respective locations:

- *%PMBD_HOME%*\bin\SybaseServiceCreation.bat to *%PMBD_HOME%*\bin directory
- *%PMBD_HOME%*\bin\JavaService\JavaService.exe to *%PMBD_HOME%*\bin\JavaService directory
- *%PMBD_HOME%*\bin\JavaService\JavaServiceDebug.exe to *%PMBD_HOME%*\bin\JavaService directory
- *%PMBD_HOME%*\bin\JavaService\LGPL.txt to *%PMBD_HOME%*\bin\JavaService directory
- *%PMBD_HOME%*\config\BSMRLogConfig.xml to *%PMBD_HOME%*\config directory
- *%PMBD_HOME%*\config\BSMRLogConfigClient.xml to *%PMBD_HOME%*\config directory

- *%PMBD_HOME%*\data\config.prp to *%PMBD_HOME%*\data directory
- *%PMBD_HOME%*\lib\activemq-all-5.1.0.jar to *%PMBD_HOME%*\lib directory
- *%PMBD_HOME%*\lib\commons-logging-1.0.4.jar to *%PMBD_HOME%*\lib directory
- *%PMBD_HOME%*\lib\commons-logging-api.jar to *%PMBD_HOME%*\lib directory
- *%PMBD_HOME%*\lib\log4j-1.2.15.jar to *%PMBD_HOME%*\lib directory
- *%PMBD_HOME%*\lib\utils.jar to *%PMBD_HOME%*\lib directory

4 Manually create the log directory under %PMDB_HOME%.

5 If Sybase service is already created using the **Sybase IQ Service Manager**, then this service needs to be removed. To verify:

a Click **Start** -> **Run**

b Type **Services.msc**

c Delete the Sybase service if it exists.

6 Create the Sybase service.

a Open command prompt.

b Go to the *%PMDB_HOME%*\bin folder.

c Run the following command:

%PMDB_HOME%\bin\SybaseServiceCreation.bat –install <*INSTALLDIR* >

In this instance, <***INSTALLDIR***> is the parent directory of the Sybase IQ installation directory. It is the same path that you chose for product installation in the install wizard.

7 Start the database.

a Click **Start** -> **Run**

b Type **Services.msc**

c In the Services window, start the HP_PMDB_Platform_Sybase service

Verify that IQSRV15.exe is visible in the **Process** tab of the **Task Manager**.

If you want to stop the database, follow these steps:

1 Click **Start** -> **Run**

2 Type **Services.msc**

3 Stop the HP_PMDB_Platform_Sybase service.

Installing SAP BusinessObjects Language Packs

If you have installed SHR on Linux, skip this section. On Linux, the SHR 9.30 installer automatically installs all necessary SAP BusinessObjects language packs.

SHR 9.30 is available in ten different languages. You can select the language of your choice at the time of installation. The installer installs the SAP BusinessObjects language pack for the selected language. However, in the future, if you change the locale of the SHR system to another supported language, you must separately install the SAP BusinessObjects language pack for that language.

To install an additional SAP BusinessObjects language pack, follow these steps:

1. Log on to the system where you installed SHR.
2. Make sure that SHR is successfully installed with the default language pack.

   To check that the default language pack is installed successfully, launch the SAP BusinessObjects InfoView portal (**http://**<*SHR_HostName*>**:8080/InfoViewApp**), and then go to **InfoView Page > Preferences > General > Product Locale**. The Product Locale box lists the installed language packs.

   In this instance, <*SHR_HostName*> is the fully qualified domain name of the SHR system.
3. Make sure that the SHR 9.30 media is available on the system.
4. Go to the following directory:

   `%PMDB_HOME%\BOLanguagepacks\Setupfiles`
5. Run the following command:

   `BO_LanguagepackInstall.bat` <*SHR_media_root*> <*lang_pack_name*>

   In this instance:

   - <*SHR_media_root*> is the path to the root of the SHR 9.30 media (that is, the directory where the SHR 9.30 installer is available). Do not type the name of the installer and do not use a trailing \ character.

     For example, if the SHR media is extracted into the `E:\Installer` directory, which means the SHR installer (`HP-SHR_9.30_setup.exe`) exists in the `E:\Installer` directory, you must run the following command:

     `BO_LanguagepackInstall.bat E:\Installer` <*lang_pack_name*>
   - <*lang_pack_name*> is the name of the SAP BusinessObjects language pack. The following table provides names of language packs for all supported locales:

Language	Language Pack Name
German	de
English	en
Spanish	es
French	fr
Italian	it
Korean	ko
Dutch	nl

Language	Language Pack Name
Portuguese	pt
Russian	ru
Chinese	zh_CN

Since the language pack installation requires a significant amount of time, you must correctly choose the language pack of your interest while running the command.

You can install multiple language packs by providing multiple language pack names in the command (separated by spaces). Separate two language pack names *only by a single* space character. For example, to install both Spanish and Korean language packs, run the following command:

`BO_LanguagepackInstall.bat` <*SHR_media_root*> **`es ko`**

Configuring the Desktop Heap Memory

Within a single user's session, every desktop object is associated with a desktop heap memory. The desktop heap stores certain user interface objects such as windows, menus, and hooks. However, failures related to desktop heap can occur for the following reasons:

- If the session view space for a given session is completely utilized and a new desktop heap cannot be created.
- If an existing desktop heap allocation is completely utilized and it is impossible for threads that use that desktop to use more desktop heap.

Desktop heap exhaustion can prevent certain processes from starting or cause processes to fail. To avoid desktop heap usage issues, you must change the default value of the heap memory in the Registry Editor:

1. Click **Start** → **Run**. The Run dialog box opens.
2. Type **`regedit`** in the **Open** field, and then press **ENTER**. The Registry Editor window opens.
3. On the left pane, expand **HKEY_LOCAL_MACHINE**, expand **SYSTEM**, expand **CurrentControlSet**, expand **Control**, expand **Session Manager**, and then click **SubSystems**.
4. On the right pane, right-click **Windows**, and then click **Modify**. The Edit String dialog box opens.
5. In the **Value data** box, change the value **ObjectDirectory=\Windows SharedSection=1024,20480,768** to **ObjectDirectory=\Windows SharedSection=1024,20480,1536**.
6. Restart your system after making the changes in the Registry Editor.

Performing the above steps helps you to avoid certain data processing stream failures (with Error Status Codes 128 or 832) in SHR, which prevents the movement of data through the stages of the collection framework—aggregation, transformation, and staging.

4 Installing SHR on Linux

Single System Installation: Install SHR and Sybase IQ on a Single System

You can install the product with the help of the installation wizard, or you can use the command line console. To install with the help of the wizard, see Installing with the Installation Wizard on page 44. To install from the command line console, see Installing from the Command Line Console on page 45.

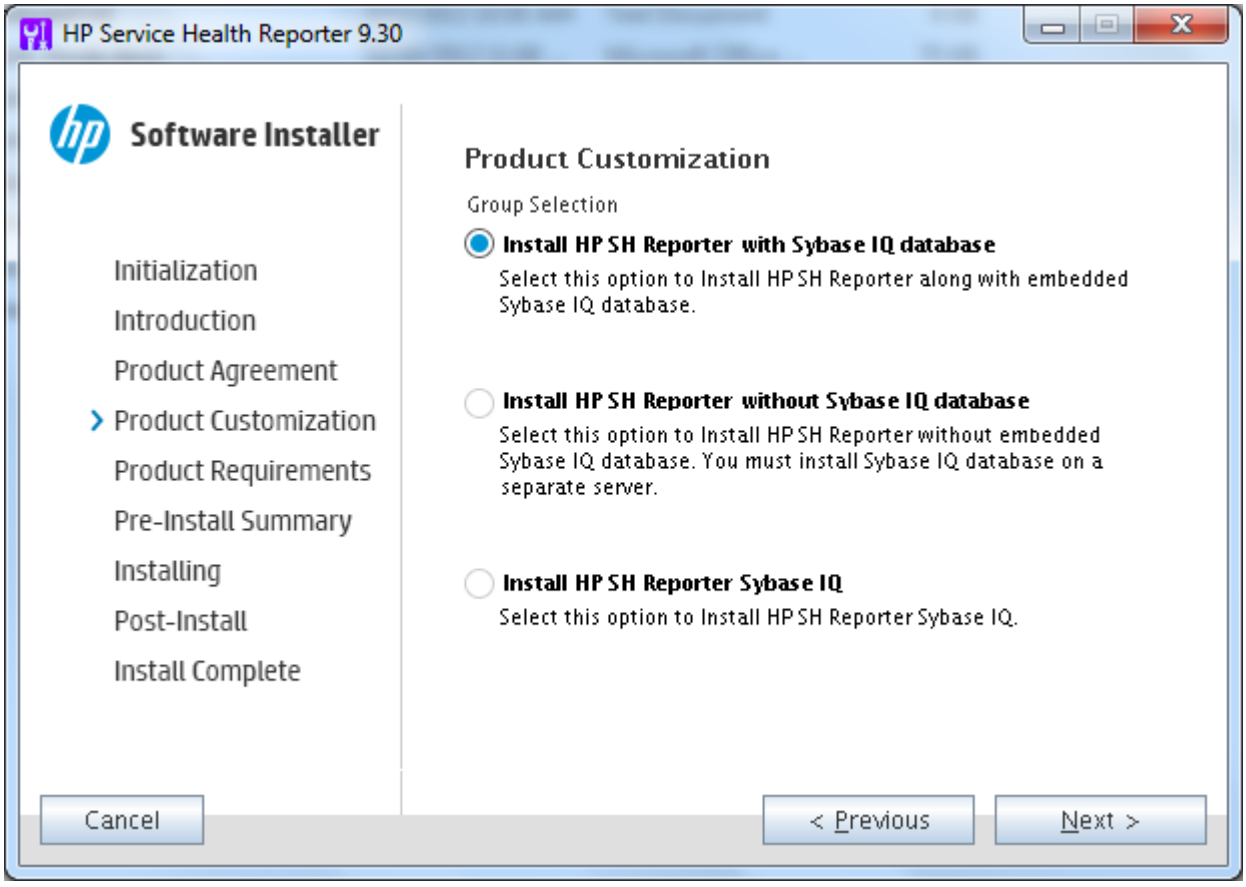
Installing with the Installation Wizard

To install with the help of the installation wizard, follow these steps:

1. Run the following command at the media root:

   ```
   ./HP-SHR_9.30_setup.bin
   ```

2. Select the language in which you want to install SHR, and then click **OK**.
3. The Introduction page opens. Review the note on the Introduction page, and then click **Next**.
4. The License Agreement page opens. Review the license agreement, select **I accept...**, and then click **Next**.
5. The Product Customization page opens. On the Product Customization page, select the first option, and then click **Next**.



6. The installer performs checks for installation prerequisites and shows the result of the check on the Install Check page.

   If the check is successful, click **Next**.

   If the prerequisite check fails or shows warning messages, make sure that all the prerequisites are met (see Installation Prerequisites on page 19), and then start the installation again.
7. The Pre-Installation Summary page opens. Review the summary, and then click **Install**.
8. After the installation is complete, click **Done**.

Installing from the Command Line Console

To install from the command line console, follow these steps:

1. Go to the media root.
2. At the command prompt, type the following command:

   ```
   ./HP-SHR_9.30_setup.bin -i console
   ```

3. Press **Enter** to start the installation.

   At any point in time during installation, you can type back to go to the previous page and type quit to cancel the installation.

4. The Choose Locale section appears. Choose the locale in which you want to install SHR, and then press **Enter**.
5. The installer shows the introductory information in the console. Press **Enter**.
6. The installer shows the license agreement details. Type **Y** to accept the agreement, and then press **Enter**.
7. The installer shows different installation options. Type **1** to install SHR with Sybase IQ, and then press **Enter**. The installer performs necessary prerequisite checks and shows the result of the check in the console.
8. If the prerequisite check fails or shows warning messages, make sure that all the prerequisites are met (see Installation Prerequisites on page 19), and then start the installation again.

   If the prerequisite check is successful, press **Enter**.

   The installer shows preinstallation summary in the console. Press **Enter** to start the installation.

Post-Installation Task

On a system with the Simplified Chinese or Japanese locale, manually delete the following files after installation:

- `$PMDB_HOME/Sybase/IQ-15_4/res/dblgzh_iq12_eucgb.res`
- `$PMDB_HOME/Sybase/IQ-15_4/res/dblgzh_iq12_cp936.res`
- `$PMDB_HOME/Sybase/IQ-15_4/res/dblgja_iq12_eucjis.res`
- `$PMDB_HOME/Sybase/IQ-15_4/res/dblgja_iq12_sjis.res`

Dual System Installation: Install SHR and Sybase IQ on Separate Systems

A typical installation of SHR installs the Sybase IQ server and client on the same host system along with the SHR application. However, SHR also provides you with an option to remotely install the Sybase IQ server on a separate server. In this type of installation, only the Sybase IQ client is installed with SHR on the host system.

It is recommended that, for the dual server installation, you install Sybase IQ before installing SHR.

Installing Sybase IQ from the SHR Media

You can install the product with the help of the installation wizard, or you can use the command line console . To install with the help of the wizard, see Installing with the Installation Wizard. To install from the command line console, see Installing from the Command Line Console on page 45.

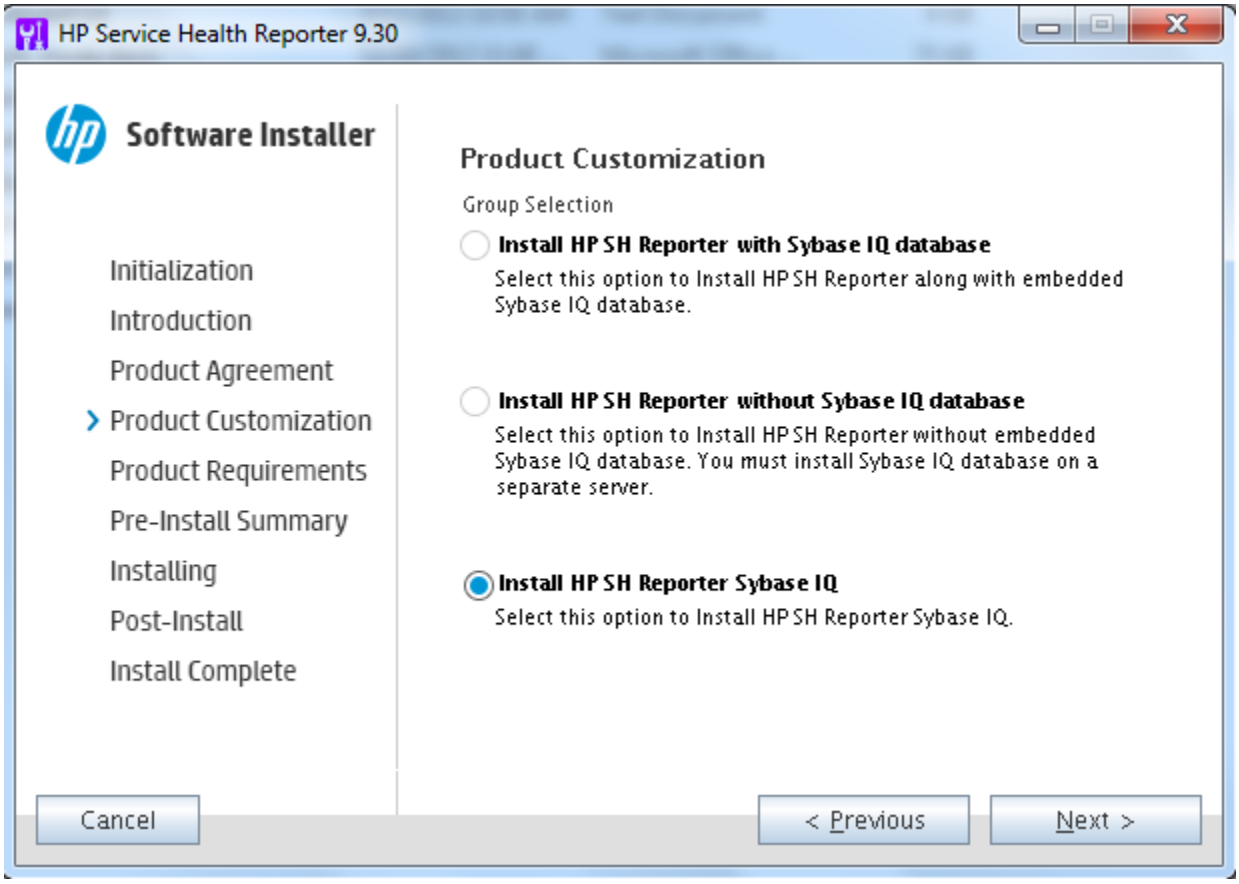
Installing with the Installation Wizard

To install with the help of the installation wizard, follow these steps:

1. Run the following command at the media root:

   `./HP-SHR_9.30_setup.bin`

2. Select the language in which you want to install SHR, and then click **OK**.
3. The Introduction page opens. Review the note on the Introduction page, and then click **Next**.
4. The License Agreement page opens. Review the license agreement, select **I accept...**, and then click **Next**.
5. The Product Customization page opens. On the Product Customization page, select the third option, and then click **Next**.The installer performs checks for installation



prerequisites and shows the result of the check on the Install Check page.

If the check is successful, click **Next**.

If the prerequisite check fails or shows warning messages, make sure that all the prerequisites are met (see Installation Prerequisites on page 19), and then start the installation again.

6 The Pre-Installation Summary page opens. Review the summary, and then click **Install**.

7 After the installation is complete, click **Done**.

Installing from the Command Line Console

To install from the command line console, follow these steps:

1 Go to the media root.

2 At the command prompt, type the following command:

```
./HP-SHR_9.30_setup.bin -i console
```

3 Press **Enter** to start the installation.

At any point in time during installation, you can type back to go to the previous page and type quit to cancel the installation.

4 The Choose Locale section appears. Choose the locale in which you want to install SHR, and then press **Enter**.

5 The installer shows the introductory information in the console. Press **Enter**.

6 The installer shows the license agreement details. Type **Y** to accept the agreement, and then press **Enter**.

7 The installer shows different installation options. Type **3** to install Sybase IQ, and then press **Enter**. The installer performs necessary prerequisite checks and shows the result of the check in the console.

8 If the prerequisite check fails or shows warning messages, make sure that all the prerequisites are met (see Installation Prerequisites on page 19), and then start the installation again.

If the prerequisite check is successful, press **Enter**.

The installer shows preinstallation summary in the console. Press **Enter** to start the installation.

Post-Installation Task

On a system with the Simplified Chinese or Japanese locale, manually delete the following files from the system where you installed Sybase IQ:

- `$PMDB_HOME/Sybase/IQ-15_4/res/dblgzh_iq12_eucgb.res`
- `$PMDB_HOME/Sybase/IQ-15_4/res/dblgzh_iq12_cp936.res`
- `$PMDB_HOME/Sybase/IQ-15_4/res/dblgja_iq12_eucjis.res`
- `$PMDB_HOME/Sybase/IQ-15_4/res/dblgja_iq12_sjis.res`

Installing SHR on a Dedicated System

You can install the product with the help of the installation wizard, or you can use the command line console. To install with the help of the wizard, see Installing with the Installation Wizard. To install from the command line console, see Installing from the Command Line Console on page 45.

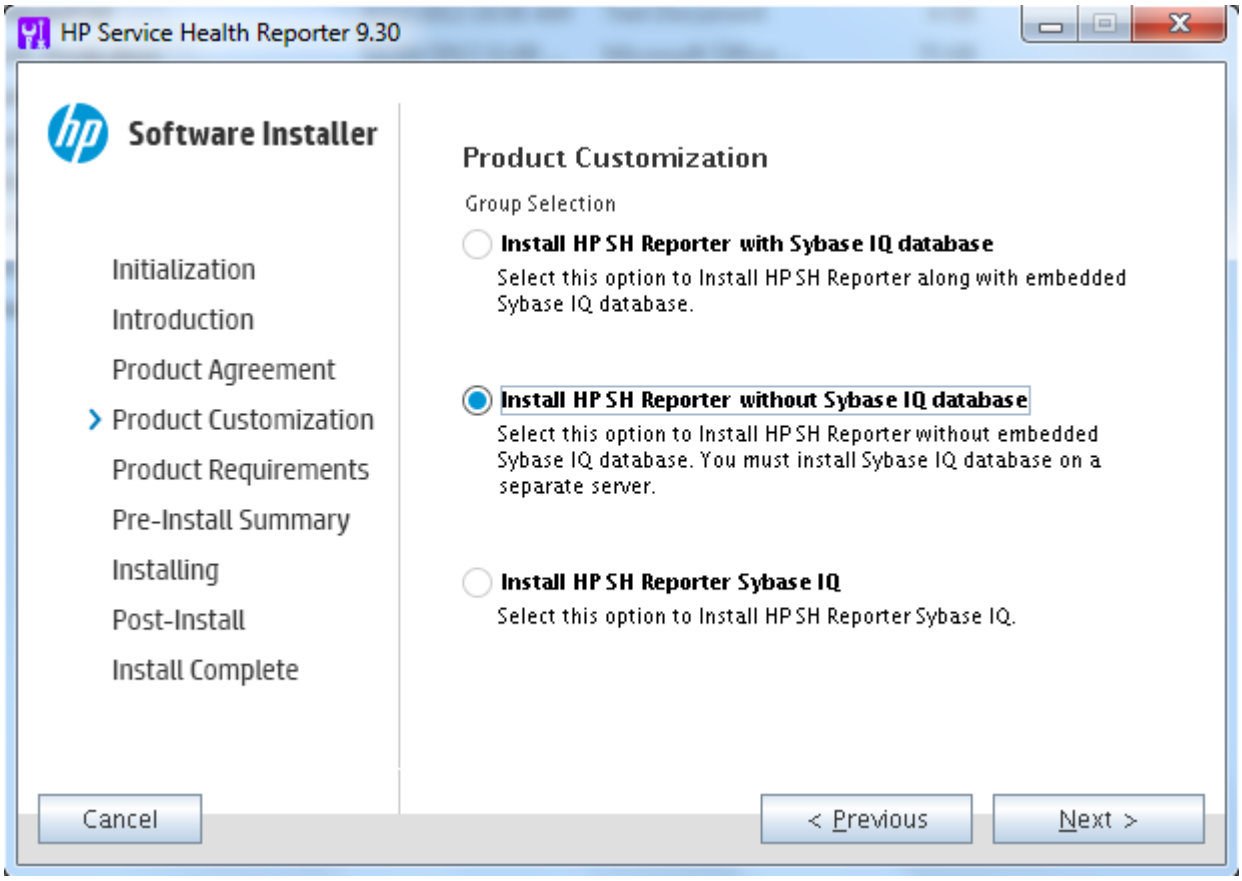
Installing with the Installation Wizard

To install with the help of the installation wizard, follow these steps:

1. Run the following command at the media root:

   ```
   ./HP-SHR_9.30_setup.bin
   ```

2. Select the language in which you want to install SHR, and then click **OK**.
3. The Introduction page opens. Review the note on the Introduction page, and then click **Next**.
4. The License Agreement page opens. Review the license agreement, select **I accept...**, and then click **Next**.
5. The Product Customization page opens. On the Product Customization page, select the second option, and then click **Next**.



6. The installer performs checks for installation prerequisites and shows the result of the check on the Install Check page.

If the check is successful, click **Next**.

If the prerequisite check fails or shows warning messages, make sure that all the prerequisites are met (see Installation Prerequisites on page 19), and then start the installation again.

7 The Pre-Installation Summary page opens. Review the summary, and then click **Install**.

8 After the installation is complete, click **Done**.

Installing from the Command Line Console

To install from the command line console, follow these steps:

1 Go to the media root.

2 At the command prompt, type the following command:

```
./HP-SHR_9.30_setup.bin -i console
```

3 Press **Enter** to start the installation.

At any point in time during installation, you can type back to go to the previous page and type quit to cancel the installation.

4 The Choose Locale section appears. Choose the locale in which you want to install SHR, and then press **Enter**.

5 The installer shows the introductory information in the console. Press **Enter**.

6 The installer shows the license agreement details. Type **Y** to accept the agreement, and then press **Enter**.

7 The installer shows different installation options. Type **2** to install SHR (without Sybase IQ), and then press **Enter**. The installer performs necessary prerequisite checks and shows the result of the check in the console.

8 If the prerequisite check fails or shows warning messages, make sure that all the prerequisites are met (see Installation Prerequisites on page 19), and then start the installation again.

If the prerequisite check is successful, press **Enter**.

The installer shows preinstallation summary in the console. Press **Enter** to start the installation.

5 Installing the SHR Collector on a Remote System

This is an optional procedure.

In a typical installation of SHR, the data collector is installed on the same system where SHR is installed. However, SHR also provides you with an option to install the collector on a separate server. You can have collectors installed on multiple systems depending on your need. You can install a collector on a remote system that runs on any of the operating systems supported by SHR (see Software Requirements on page 19). The SHR media includes two different installer programs for the collector—one for Windows and one for Linux.

To install a collector on a remote system, follow these steps:

1. All requirements listed in Software Requirements on page 19 must be met on the system where you want to install the remote collector.
2. Go to the `packages` directory on the SHR 9.30 media.
3. To install the collector on Windows, find the following file:

   `HP-SHR-09.30-RemoteCollector.exe`
4. To install the collector on Linux, find the following file:

   `HP-SHR-09.30-RemoteCollector.tar.gz`
5. Transfer the file to the system where you want to install the collector.
6. Log on to the system where you want to install the collector as root or administrator.
7. Make sure that the remote system and the SHR system are in the same time zone.
8. Make sure the system is registered in the Domain Name System (DNS).

   Alternatively, make sure that:

   - The `hosts` file on the SHR system includes an entry of the collector system.
   - The `hosts` file on the collector system includes an entry of the SHR system.

   The `hosts` file is located in:

   On Windows: `C:\Windows\System32\drivers\etc`

   On Linux: `/etc/hosts`
9. **Install the collector on Windows:**

   a. Go to the directory where you transferred the `HP-SHR-09.30-RemoteCollector.exe` file.

   b. Run the `HP-SHR-09.30-RemoteCollector.exe` file.

   c. The Introduction page opens. Review the note on the Introduction page, and then click **Next**.

   d. The License Agreement page opens. Review the license agreement, select **I accept...**, and then click **Next**.

e The Choose the folder dialog box opens. The installer enables you to choose non-default installation directories only on Windows. If you like to choose non-default folders for the collector, make necessary changes, and then click **Next**.

Make sure that the non-default folder name does not contain spaces or any special characters other than - (hyphen).

f The installer performs checks for installation prerequisites and shows the result of the check on the Install Check page. If the check is successful, click **Next**.

g The Pre-Installation Summary page opens. Review the summary, and then click **Install**.

h After the installation is complete, click **Done**.

i *Only on Windows 2003.* Restart the system.

10 **Install the collector on Linux:**

a Extract the contents of the `HP-SHR-09.30-RemoteCollector.tar.gz` file into a local directory by running the following command:

```
tar -xvf HP-SHR-09.30-RemoteCollector.tar.gz
```

The command extracts the `HP-SHR-09.30-RemoteCollector.tar` file from the archive.

b Run the following command to install with the installation wizard:

```
./HP-SHR-RemotePoller_9.30_setup.bin
```

— The Introduction page opens. Review the note on the Introduction page, and then click **Next**.

— The License Agreement page opens. Review the license agreement, select **I accept...**, and then click **Next**.

— The installer performs checks for installation prerequisites and shows the result of the check on the Install Check page. If the check is successful, click **Next**.

— The Pre-Installation Summary page opens. Review the summary, and then click **Install**.

— After the installation is complete, click **Done**.

Alternatively, you can run the following command to install in the console mode:

```
./HP-SHR-RemotePoller_9.30_setup.bin -i console
```

— Press **Enter** to start the installation.

At any point in time during installation, you can do type back to go to the previous page and type quit to cancel the installation.

— The Choose Locale section appears. Choose the locale in which you want to install SHR, and then press **Enter**.

— The installer shows the introductory information in the console. Press **Enter**.

— The installer shows the license agreement details. Type **Y** to accept the agreement, and then press **Enter**. The installer checks that all prerequisites are met.

— Press **Enter**. The installer shows preinstallation summary in the console. Press **Enter** to start the installation.

Alternatively, you can run the following command to run the installer in the command line console:

```
./HP-SHR-RemotePoller_9.30_setup.bin -i console
```

— Press **Enter** to start the installation.

At any point in time during installation, you can type back to go to the previous page and type quit to cancel the installation.

— The Choose Locale section appears. Choose the locale in which you want to install SHR, and then press **Enter**.

— The installer shows the introductory information in the console. Press **Enter**.

— The installer shows the license agreement details. Type **Y** to accept the agreement, and then press **Enter**.

— The installer shows preinstallation summary in the console. Press **Enter** to start the installation.

The collector is enabled to collect data from data sources only after you complete Task 9: Configure Collectors Installed on Remote Systems on page 70.

6 Upgrading SHR

You can upgrade SHR 9.20 to SHR 9.30 with the installer program provided with the SHR 9.30 media. You cannot upgrade any older versions of SHR directly to SHR 9.30.

Prerequisites for Upgrade

Before you proceed with the upgrade of SHR, make sure that the following tasks were completed:

1. The SHR setup is completely backed up. It is recommended that you back up the SHR system prior to upgrading to avoid any data losses due to an unsuccessful upgrade. See the *Database Backup and Recovery* section in the *SHR Installation and Configuration Guide 9.20*.
2. Obtain the hot-fix **`SHR_92_HF_014`** from HP Support and apply it on the SHR 9.20 server.
3. Stop all SHR services.
4. Open Task Manager and make sure that the `iqsrv15` process is not running. If the `iqsrv15` process continues to run, manually end the process in Task Manager.
5. If you modified the following properties files, take a backup of each of them:
   - *%PMDB_HOME%*`\config\ramscheduler.properties`
   - *%PMDB_HOME%*`\config\Aggregate_config.xml`
   - *%PMDB_HOME%*`\config\Collection.properties`
6. Make sure that all prerequisites listed in Installation Prerequisites on page 19 are met. You must perform all tasks in the Preinstallation Tasks on page 26.
7. *Skip this step if you do not use HP Service Health Optimizer (SHO).* SHR 9.30 does not integrate or coexist with any versions of SHO. When SHO 9.20 and SHR 9.20 are installed on the same system, you must reinstall SHR on a different system before upgrading it to the version 9.30.

   Follow these steps before upgrading to SHR 9.30:

   a. Take a backup of the SHR data on the system where SHR and SHO coexist. See the *Database Backup and Recovery* chapter in the *HP Service Health Reporter 9.20 Installation and Configuration Guide* for more information.

   b. Install SHR 9.20 on a different system. See the *HP Service Health Reporter 9.20 Installation and Configuration Guide* for more information.

   c. Recover the backed-up SHR data on the system where you installed SHR (in step b). See the *Database Backup and Recovery* chapter in the *HP Service Health Reporter 9.20 Installation and Configuration Guide* for more information.

   d. Upgrade the newly installed SHR instance to the version 9.30.

After upgrading to the version 9.30, you must remove the old instance of SHR 9.20 from the server where SHO 9.20 is installed.

Backing Up SHR 9.20 Databases

It is recommended that you take backup of all SHR databases to prevent loss of data due to an unsuccessful upgrade. For more information, see the *Database Backup and Recovery* section in the *HP Service Health Reporter 9.20 Installation and Configuration Guide*.

Stopping SHR Services

To stop SHR services, follow these steps:

1. Log on to the SHR system.
2. Open the Services window.
3. Stop the following services:
   - HP_PMDB_Platform_Administrator
   - HP_PMDB_Platform_Collection
   - HP_PMDB_Platform_DB_Logger
   - HP_PMDB_Platform_IM
   - HP_PMDB_Platform_Message_Broker
   - HP_PMDB_Platform_PostgreSQL
   - HP_PMDB_Platform_Sybase
   - HP_PMDB_Platform_Timer

Upgrading SHR

Follow the installation instructions in Installing SHR on Windows on page 33 to upgrade SHR to the 9.30 version.

- If Sybase IQ is installed with SHR 9.20 on a single system, follow the instructions in the Single System Installation: Install SHR and Sybase IQ on a Single System on page 33 to complete the upgrade.
- If Sybase IQ and SHR 9.20 are installed on separate systems, follow the instructions in the Dual System Installation: Install SHR and Sybase IQ on Separate Systems on page 35 to complete the upgrade.

The installer automatically makes appropriate selection on the Select Group page; do not change this selection.

In a dual system environment, always upgrade the remote Sybase IQ before upgrading SHR and make sure that the Sybase IQ database is up and running before upgrade.

To upgrade Content Packs, see Upgrading Content Packs on page 105.

Post-Upgrade Configurations

Perform the following tasks after upgrading SHR:

Perform these tasks for both single system and dual system environments.

Task 1: Reapplying Access Levels for the Universe Connection

Perform this task only if specific read/write access is granted to the SAP BusinessObjects users.

When you upgrade an SHR Content Pack, the old out-of-the-box Universe connections are recreated. Therefore, if you apply access at each connection level, you must grant access again for the universe connection.

For more information about enabling user access levels, see the SAP BusinessObjects documentation.

Task 2: Verify that SHR is Upgraded Successfully

- Launch the following URL and make sure that you are able to log on to the Administration console as administrator:

  http://<*SHR_Server_FQDN*>**:21411/BSMRApp**

- Launch the following URL and make sure that you are able to log on to the InfoView console as administrator:

  http://<*SHR_Server_FQDN*>**:8080/InfoViewApp**

If you are able to successfully log on as administrator, SHR is upgraded successfully. If you see an authentication error, you must restore the backed-up databases and file store on the system, and perform the upgrade procedure again. See the *Database Backup and Recovery* section in the *HP Service Health Reporter 9.20 Installation and Configuration Guide* for restoring the backed-up database and file store.

Task 3: Reinstating the Backed-Up Properties Files

Skip this task if you did not perform step 5 on page 55.

Reinstate the backed-up properties files (see step 5 on page 55) in the *%PMDB_HOME%*`\config folder`.

Task 4: Uninstalling MySQL

The SAP BusinessObjects package included in SHR 9.20 used the MySQL database. However, the SAP BusinessObjects package included in SHR 9.30 does not use the MySQL database. Therefore, after upgrading SHR, you must uninstall MySQL from the SHR server.

To uninstall MySQL from the SHR server:

1. Go to **Start** → **All Programs** → **BusinessObjects XI 3.1** → **BusinessObjects Enterprise** → **Central Configuration Manager**.

   The Central Configuration Manager window opens.

2. Right-click **Server Intelligence Agent** and then click **Stop**.

3. Right-click **Server Intelligence Agent** and then click **Properties**.

The Server Intelligence Agent Properties window opens.

4 Click the Dependency tab.

5 Select **BOE120MySQL** from the dependencies list and click **Remove**.

6 On the Dependency tab, click **Add**.

The Add Dependency window opens.

7 Select **BOE120SQLAW** from the dependencies list and click **OK**.

8 Click **OK**.

9 Right-click **Server Intelligence Agent**, and then click **Start**.

10 Stop the BOE120MySQL service.

To stop the BOE120MySQL service:

a Click **Start** → **Run**. The Run dialog box opens.

b Type `services.msc` in the **Open** field, and then press **ENTER**. The Services window opens.

c On the right pane, right-click **BOE120MySQL**, and then click **Stop**.

11 Copy the contents of the following folder from the SHR 9.20 installation media to the SHR server:

`<drive letter of the CD ROM>\HPSHR-09.20.000-Win5.2_64-release\packages\BO\package\`

12 Go to **Start** → **Control Panel**.

13 Double-click **Add or Remove Programs**.

14 Select **SAP BusinessObjects Enterprise XI 3.1 SP3** and click **Change**.

The SAP BusinessObjects Enterprise XI 3.1 SP3 Setup window opens.

15 In the SAP BusinessObjects Enterprise XI 3.1 SP3 Setup window, select **Modify or Change** and click **Next**.

16 On the Select Feature page, go to **SAP BusinessObjects Enterprise** → **Server Components** → **Central Management Server**.

17 Select MySQL.

18 Click  and then select **Entire Feature will be Unavailable**.

19 Click **Next**.

20 Provide the following details:

CMS Hostname	The FQDN of the server. For example, if the complete server name is server.example.com, then use just server as the input value.
Port	6400
Password	Type the SAP BusinessObjects administrator password.

21 Click **Next**.

22 Specify the location of the package folder that you copied to the SHR server in step 11 above.

23 Click **Finish**.

24 Delete the `MySQL` folder from <*`drive letter of the directory where SAP BusinessObjects is installed`*>`:\Program Files (x86)\BusinessObjects\MySQL5`.

25 Go to **Start** → **All Programs** → **BusinessObjects XI 3.1** → **BusinessObjects Enterprise** → **32-bit data source (ODBC)**.

The 32-bit data source (ODBC) window opens.

26 Click **System DSN** tab.

27 On the System DSN tab, select **BusinessObjects Audit Server** and **BusinessObjects CMS** and click **Remove**.

28 Click **OK**.

29 Enable all SAP BusinessObjects servers:

a Log on to the Central Management Console by launching the following URL:

http://<*SHR_System_FQDN*>**:8080/CmcApp**

In this instance, <*SHR_System_FQDN*> is the fully qualified domain name of the SHR system.

Log on as SAP BusinessObjects Administrator.

Do not change any other default selections on this page.

b Click  **Servers**.

c Right-click each server, and then click **Enable Server**.

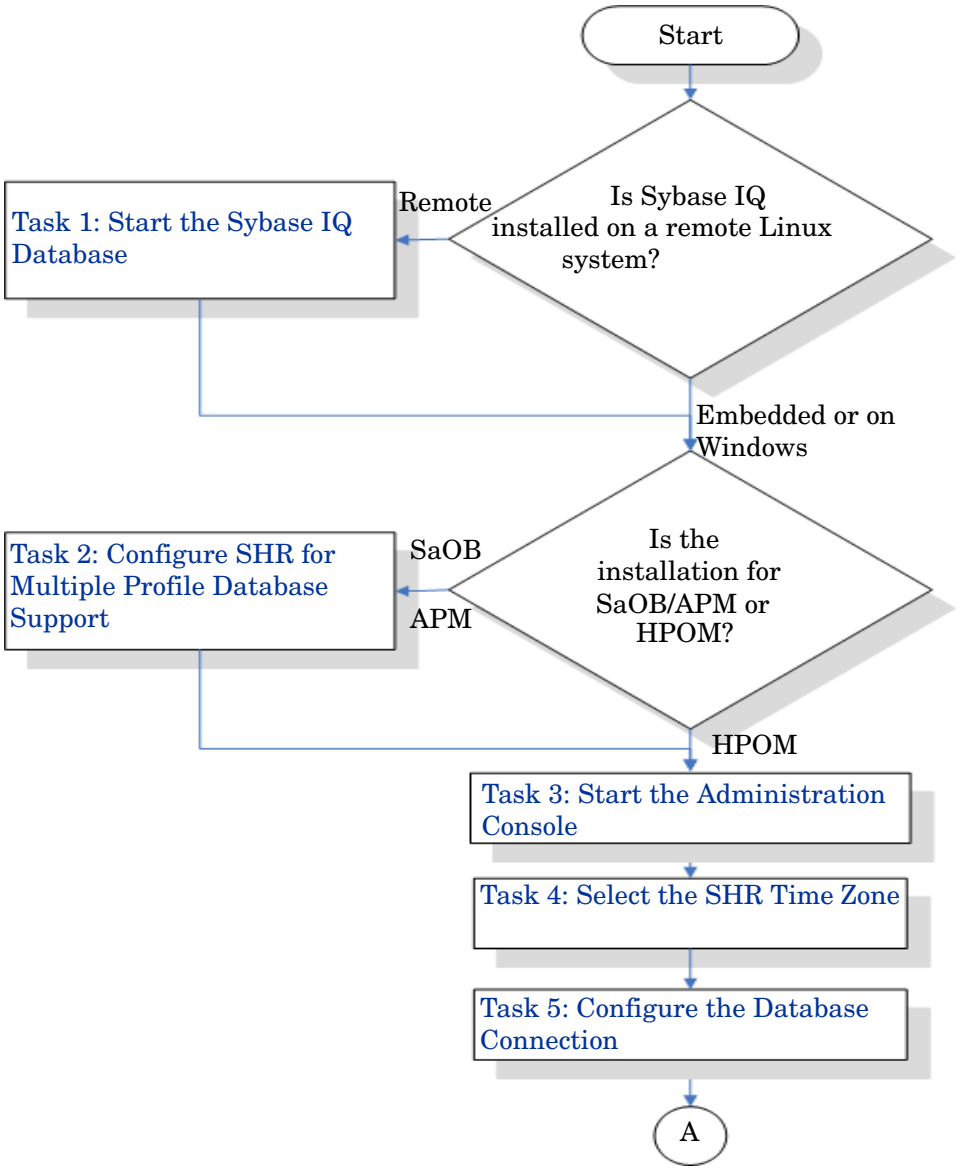
MySQL is uninstalled from the SHR system.

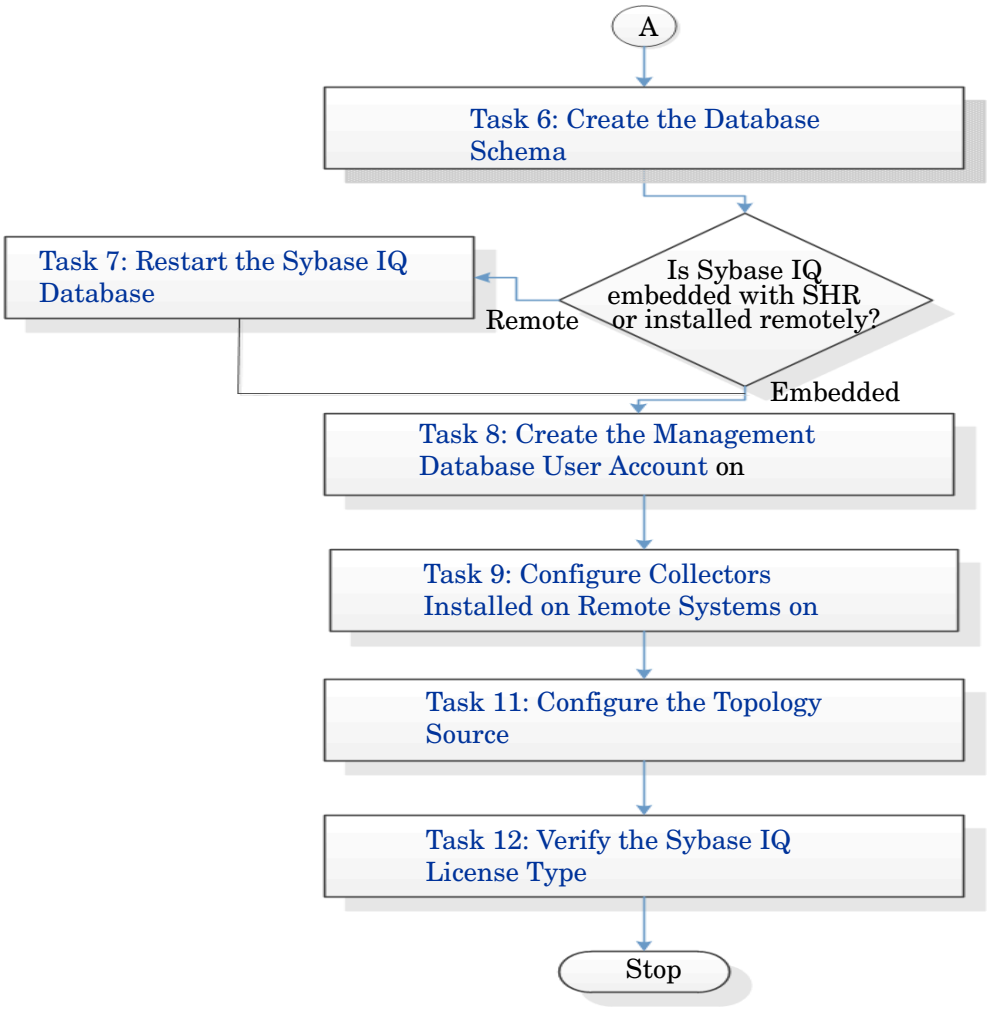
7 Configuring SHR

You must perform all the post-install configuration tasks described in this chapter immediately after installing or upgrading SHR, but before you install or upgrade the Content Packs through the Deployment Manager.

The following flowchart gives you an overview of the post-install or post upgrade tasks for SHR.

Click the links provided in the flowchart to see the relevant sections mentioned.





Note, all services of SHR will be restarted automatically post upgrade.

Steps performed to complete a task are same on Windows and Linux unless mentioned explicitly.

Task 1: Start the Sybase IQ Database

Perform this task only if you installed Sybase IQ on a remote Linux system. Otherwise, proceed to Task 2: Configure SHR for Multiple Profile Database Support on page 63.

On the Linux system, run the following commands:

1. `cd /etc/init.d`
2. `service HP_PMDB_Platform_Sybase status`

If the command output shows that the `HP_PMDB_Platform_Administrator` service is stopped, run the following command:

```
service HP_PMDB_Platform_Sybase start
```

Task 2: Configure SHR for Multiple Profile Database Support

Perform this task only if you want to configure RTSM as the topology source for SHR. If you want to configure HPOM or VMware vCenter as the topology source, skip this task and proceed to Task 3: Start the Administration Console on page 63.

SHR supports the configuration of and data collection from multiple Profile databases that are deployed in your HP BSM environment.

However, to ensure that SHR identifies and displays all the existing Profile databases in the Administration Console, follow these steps:

1. Log on to the HP BSM host system through remote access.

If your HP BSM setup is distributed where the gateway and data processing servers are separate entities, you need to access the data processing server.

2. Browse to the `%topaz_home%\Conf` folder.
3. Copy the following files from the `%topaz_home%\Conf` folder to the `%PMDB_HOME%\config` folder on the SHR system:
   - `encryption.properties`
   - `seed.properties`

If you are configuring the Management/Profile database under Oracle RAC, you also need to copy the file `bsm-tnsnames.ora` to the `%PMDB_HOME%\config` folder on the SHR system. See Configure the Profile Database Data Source Connections on page 116.

After copying the files, you need to start the HP PMDB Platform Administrator service. Perform the following steps:

For Windows

1. On the SHR system, click **Start** → **Run**. The Run dialog box opens.
2. In the **Open** field, type **`services.msc`**. The Services window opens.
3. On the right pane, right-click **HP_PMDB_Platform_Administrator**, and then click **Start**.
4. Close the Services window.

For Linux

Type the following command at the command prompt:

```
service HP_PMDB_Platform_Administrator start
```

Task 3: Start the Administration Console

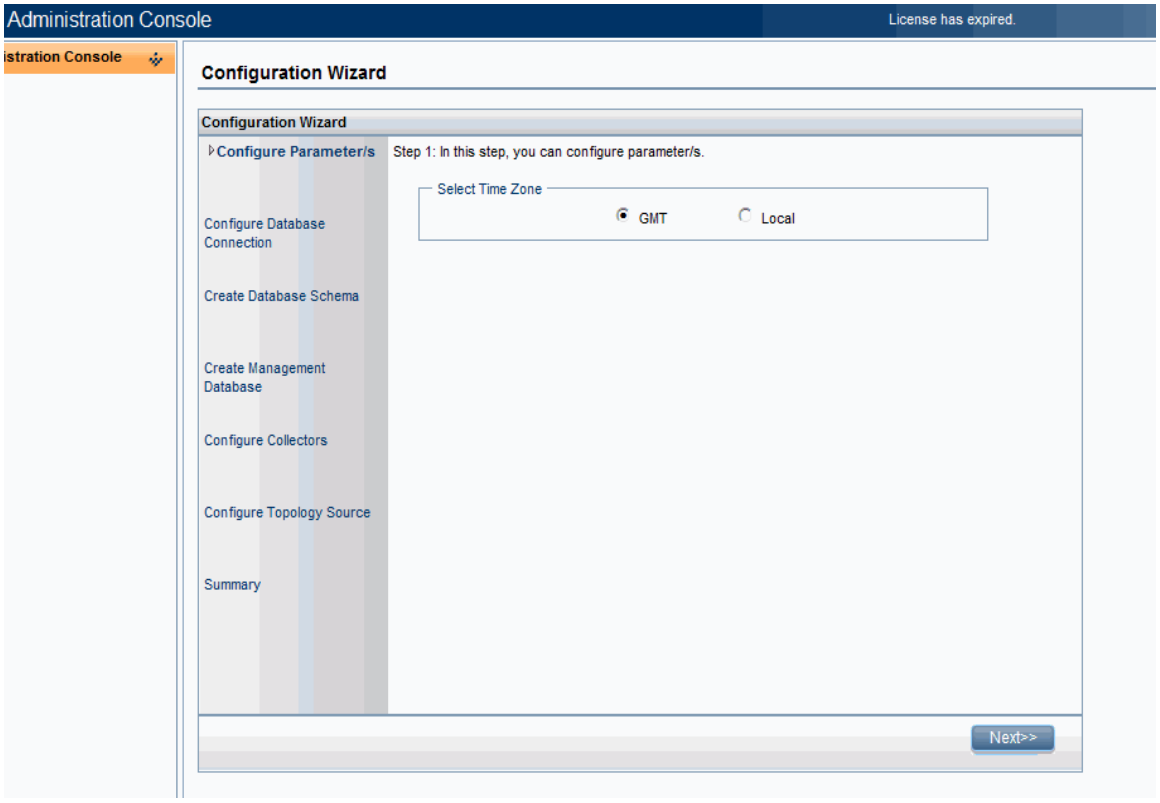
1. Launch the Administration Console in a web browser:
   a. Launch the following URL:

      http://<*SHR_Server_FQDN*>**:21411/BSMRApp**

   b. Type **`administrator`** in the **Login Name** field and click **Log In** to continue. The Home page opens.

      If you use any other user account to access the Administration Console, make sure that the user account has administrator privileges.

The post-install HP Service Health Reporter Configuration Wizard appears only if you did not complete the post-install configuration tasks. The Wizard supports session state persistence, which enables you to resume and continue a previously-interrupted configuration session.



Task 4: Select the SHR Time Zone

On the Configure SHR Parameter/s page, select the time zone, that is, GMT or Local, under which you want SHR to operate.

To select the time zone:

1 Under **Select HP SH Reporter Time Zone**, perform any one of the following steps:

- Select **GMT** if you want SHR to follow the GMT timing.
- Select **Local** if you want SHR to follow the local system timing.

> The time zone that you select here applies to the SHR system and reports. However, the runtime information for processes, such as collection and workflow streams, is always based on local time irrespective of selection.

2 Click **Next**. The Configure Database Connection page opens.

Task 5: Configure the Database Connection

On the Configure Database Connection page, provide the details of the database server where you want to create a database for SHR.

To configure a database connection:

1. On the Configure Database Connection page, select **Remote Database** if SHR is installed with remote Sybase IQ. Else, proceed to the next step.
2. Under **Enter Database Connection Parameter**, type the following values:

   Host name - Name or IP address of the host where the Sybase IQ database server is running.

   Port - Port number to query the database server. The default port is **`21424`**.

   Server name - Name of the Sybase IQ server. Ensure that the Sybase IQ server name is unique across the subnet.

   The server name displayed in this field is only for informational purposes. You must not change the server name at any time.

3. Under **Enter Database User (DBA Privilege) and Password**, type the following values:

   User name - Name of the Sybase IQ database user. The user must have DBA privileges. The default user name is **`dba`**.

   Password - Password of the database user. The default password is **`sql`**.

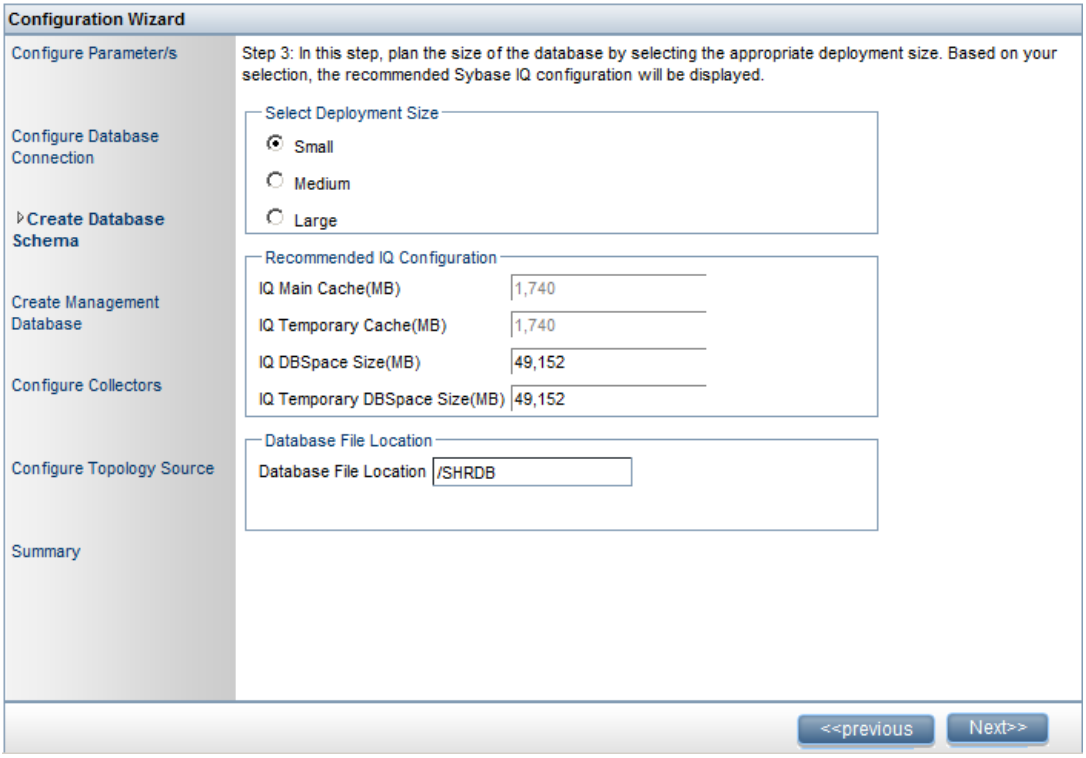
   It is recommended that you change the default password before proceeding with the post-install configuration tasks. To change the password, see the Sybase IQ documentation at **http://sybooks.sybase.com/**

4. Under **Choose Password For PMDB Database User (PMDB_ADMIN)**, type the following values:

   Admin Password - Password of the PMDB database administrator.

   Confirm Admin Password - Retype the same password to confirm it.

5 Click **Next**. The Create Database Schema page opens.



Task 6: Create the Database Schema

On the Create Database Schema page, specify the database deployment size, that is, the number of nodes from which SHR will collect data. Based on your selection, SHR calculates and displays the recommended database size.

To create the database schema:

1 Under **Select Deployment Size**, select one of the following data volumes based on your requirements.

Small	-	This option enables SHR to support data collection from less than 500 nodes.
Medium Volume	-	This option enables SHR to support data collection from 500 to 5000 nodes.
Large	-	This option enables SHR to support data collection from 5000 to 20000 nodes.

2 Under **Recommended IQ Configuration**, type the following values:

IQ Main Cache(MB)	-	The recommended size of the main buffer cache for the Sybase IQ main store. This value is set by default.
IQ Temporary Cache(MB)	-	The recommended size of the temporary buffer size for the Sybase IQ temporary store. This value is set by default.
IQ DBSpace Size (MB)	-	The recommended size for the IQ_System_Main dbspace, which stores the main database files. This size can be modified.
IQ Temporary DBSpace Size(MB)	-	The recommended size for the IQ_System_Temp dbspace, which stores the temporary database files. This size can be modified.

3 If SHR is installed with embedded Sybase IQ, follow these steps:

In the **Database File Location** field, type the location where the database files will be stored; for example, `C:\HP-SHR\Sybase\db` (for Windows), `opt/HP/BSM/Sybase/db` (for

> Ensure that you have sufficient system resources to support the SHR data collection volume that you select. For information about the resource requirements for the selected volume, see the HP Service Health Reporter Support Matrix at **http://support.openview.hp.com/sc/support_matrices.jsp**.

Linux)

a Click **Next**. A confirmation dialog box opens.

b Click **Yes**. If the database connection and schema creation is successful, a confirmation page opens with the schema creation status.

c Click **Next** to continue.

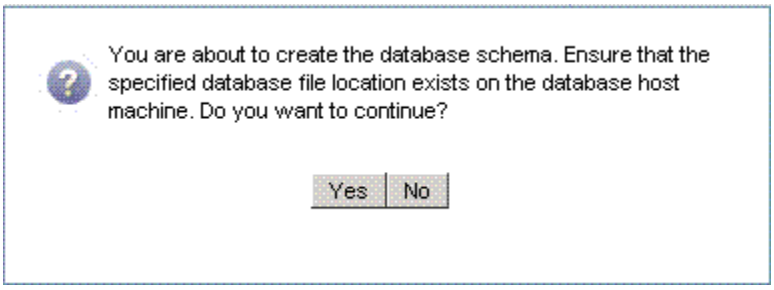
If the database connection and schema creation fails, click the **Previous** button to check the values provided.

4 If SHR is installed with remote Sybase IQ, follow these steps:

In the **Database File Location** field, type the location where the database files will be stored; for example, `C:\HP-SHR\Sybase\db (for Windows), /opt/HP/BSM/Sybase/db` (for Linux). Create the database folder before typing the path in the Database File Location field.

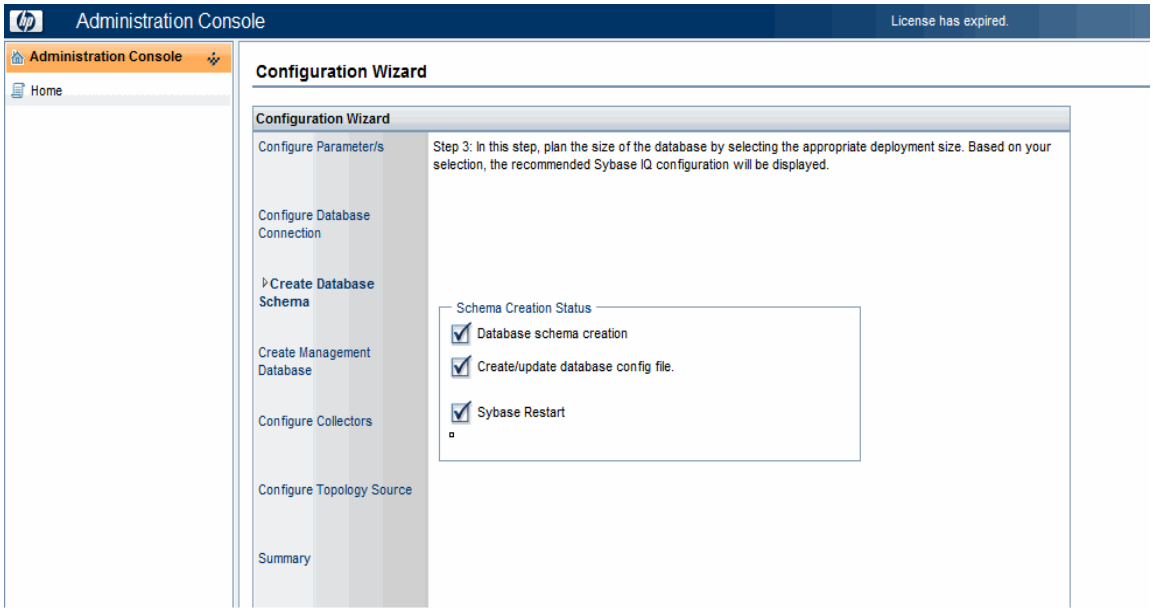
> Ensure that you have sufficient system resources to support the SHR data collection volume that you select. For information about the resource requirements for the selected volume, see the HP Service Health Reporter Support Matrix at **http://support.openview.hp.com/sc/support_matrices.jsp**.

d Click **Next**. A confirmation dialog box opens.



Validate the existence of the database folder on the remote database host machine.

e Click **Yes**. If the database connection and schema creation is successful, a confirmation page opens with the schema creation status.



Copy the newly created `pmdbConfig.cfg` file and the `config.prp` file to the remote system, and then restart the database. To copy the files to the remote system, follow the instructions on the Configuration Wizard page.

5 Click **Next** to continue.

If the database connection and schema creation fails, click the **Previous** button to check the values provided.

6 Only on systems with four or fewer CPUs, follow these steps:

a Log on to the system where Sybase is installed.

b Open the following file with a text editor:

On Windows

```
%PMDB_HOME%\..\IQ-15_4\scripts\pmdbconfig.cfg
```

On Linux

```
$PMDB_HOME/../IQ-15_4/scripts/pmdbconfig.cfg
```

c Add the following line at the end of the file:

```
-iqgovern 50
```

d Save the file.

e Restart the `HP_PMDB_Platform_Sybase` service.

Task 7: Restart the Sybase IQ Database

Perform this task only if you have installed SHR with remote Sybase IQ. Otherwise, proceed directly to Task 8: Create the Management Database User Account on page 70.

For this task, you must first stop the Sybase IQ database from running. Then, using the Sybase IQ Service Manager, you must create a Sybase IQ service. Using this service, you can then restart the Sybase IQ database.

Perform the following steps:

On Windows

1. Log on to the remote Sybase system.
2. Click **Start** → **Run**. The Run dialog box opens.
3. Type **cmd** and press **ENTER** to open the Command Prompt window.
4. At the command prompt, type the following commands to restart the Sybase IQ database and then press **ENTER**:
   - **dbstop -y -c uid=dba;pwd=sql;eng=**<*server engine name*>**;dbn=utility_db;links=tcpip{host=**<*host name*>.<*domain name*>**;port=21424}**
   - **dbstart -y -c uid=dba;pwd=sql;eng=**<*server engine name*>**;dbn=utility_db;links=tcpip{host=**<*host name*>.<*domain name*>**;port=21424}**

   In this instance, <*server engine name*> refers to the name of the Sybase server engine, <*host name*> refers to the name of the system hosting the SHR database, and <*domain name*> is the name of your domain according to your network configuration.

   This command must be typed as a single line.
5. Start the Sybase IQ service.

   To start the Sybase IQ service:

   a. Click **Start > Run**. The Run dialog box opens.

   b. Type **services.msc** in the Open field, and then press **ENTER**. The Services window opens.

   c. In the right pane, right-click the newly created Sybase IQ service, and then click **Start**.
6. On the SHR host system, in the Administration Console, review the database connection and schema creation details and click **Next**. The Create Management Database page opens.

On Linux

1. Log on to the remote Sybase system.
2. Run the following command to stop the Sybase IQ service:

   service HP_PMDB_Platform_Sybase stop
3. Run the following command to start the Sybase IQ service:

   service HP_PMDB_Platform_Sybase start

4 On the SHR host system, in the Administration Console, review the database connection and schema creation details and click **Next**. The Create Management Database page opens.

Task 8: Create the Management Database User Account

The management database refers to the online transaction processing (OLTP) store used by SHR to store its run-time data such as data process job stream status, changed tables status, and node information.

On the Create Management Database page, provide the user details for the management database.

To create the management database user account:

1 Under **Enter Management Database User (DBA Privilege) and Password**, type the following values:

User name	-	Name of the PostgreSQL database administrator. The default value is **postgres**.
Password	-	Password of the PostgreSQL database administrator. The default is **PMDB92_admin@hp**.

2 Under **Enter HP SH Reporter Management Database User Information**, type the following values if you want to change the password of the management database user:

User name	-	Name of the management database user. The default value is **pmdb_admin**.
New Password	-	Password of the management database user.
Confirm New Password	-	Retype the same password to confirm it.

3 Click **Next**. The Summary page opens.

4 Review the database connection and management database details and then click **Next**. The Configure Collectors page opens.

Task 9: Configure Collectors Installed on Remote Systems

After you install a collector on a remote system (see Installing SHR on Windows on page 33), you must configure the collector. Before you proceed to configure the collector, it is mandatory to run the following command on the remote system:

On Windows

```
"perl %PMDB_HOME%\bin\scripts\configurePoller.pl <SHR system's fully
qualified hostname>"
```

On Linux

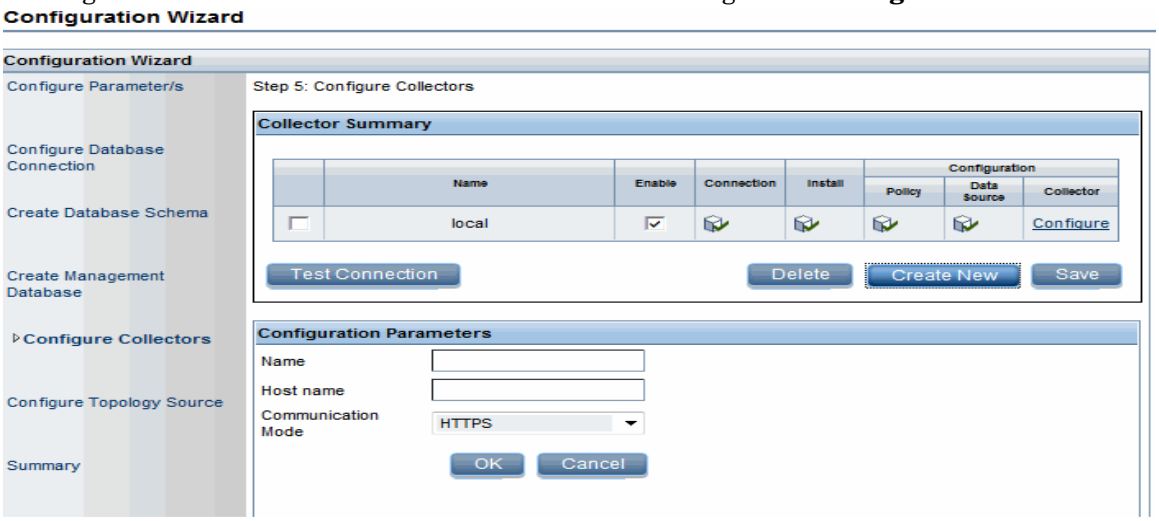
```
"perl $PMDB_HOME/bin/scripts/configurePoller.pl <SHR system's fully qualified
hostname>"
```

The command above ensures that a certificate is exchanged between the SHR system and the collector system; this exchange sets up the communication channel between SHR and the collector.

To configure a new collector, follow these steps:

You can configure an instance of collector to use only one instance of SHR. Configuring a collector with multiple instances of SHR is not supported.

1 Log on to the Administration Console of SHR and navigate to **Configure Collectors** .



2 Click **Create New**, **Configuration Parameters** section opens, type the following values:

Name		Display name of the collector that is installed on a remote system. The name must not contain spaces or special characters.
Host names	-	Collector host name
Communication Mode		Communication protocol between SHR and the collector. It may be secure (HTTPs) or insecure (HTTP).

3 Click **OK** to complete the creation of the collector, and then click **Save**.

4 Click **Test Connection** to check the status of the connection. If the status report shows Test Connection Failed, follow these steps:

a Log on to the collector system.

b Check that the `HP_PMDB_Platform_Collection` is started.

If the service is not started, manually start the service.

To start the service manually on Windows, open the Services window, right-click the `HP_PMDB_Platform_Collection` service, and then click **Start**.

To start the service manually on Linux, go to the `/etc/init.d` directory, and then run the following command:

```
service HP_PMDB_Platform_Collection start
```

Also, see Troubleshooting Collector Installation on page 232.

Task 10: Configure SHR Collector for Data Collection from HP Performance Agent

You must perform this configuration task to enable SHR collector to collect fact data from HP Performance Agent when you have:

- Installed HP Performance Agent in Linux with a non-root user account.
- Changed the default port (383) on which HP Performance Agent is configured *(Linux and Windows)*.

If you have multiple collectors, you must perform this configuration on the collector to which HP Performance Agent is assigned.

1 Open the command line interface and type the following:

```
ovconfchg -edit
```

The configuration file opens.

2 Enter the following information in the configuration file.

```
[bbc.cb.ports]
PORTS=<Agent hostname>:<port>
```

where, **<Agent hostname>** is the FQDN of the HP Performance Agent hostname

and **<port>** is the port configured for HP Performance Agent.

To find the **<port>**,

a Log on to the HP Performance Agent system.

b Run the command: **ovconfchg -edit**

c Search for the string: `[bbc.cb] SERVER_PORT=<port>`

Example

```
[bbc.cb.ports]
PORTS=host.example.com:2006
```

3 Run the following commands.

```
ovc -kill
ovc  -start
```

4 Restart the SHR Collector.

5 Verify that the HP_PMDB_Platform_Collection service is running.

Task 11: Configure the Topology Source

Before you can configure SHR for data collection, you must configure the topology source. The topology source configuration tasks are organized into the following categories:

- If SHR is deployed in the BSM Service and Operations Bridge or Application Performance Management environment, see Configuring RTSM Topology Source for SHR on page 73.
- If SHR is deployed in the HPOM environment, see Configuring HPOM Topology Source for SHR on page 82.

- If SHR is deployed in the VMware vCenter environment, see Configuring VMware vCenter Topology Source for SHR on page 92

Note: You must select the topology source during post-install configuration of SHR. You can not switch among the topology sources (RTSM, HPOM, and VMware vCenter) after wards.

Configuring RTSM Topology Source for SHR

In the BSM Service and Operations Bridge or Application Performance Management environment, RTSM is the source of the topology information for SHR. The topology information includes all CIs as modeled and discovered in RTSM. Node resource information is directly obtained from HP Operations agent, Performance Agent, and HP SiteScope.

Node resource is a local dimension in HP Operations agent, Performance Agent, and HP SiteScope.

To configure the RTSM topology source in SHR, you must perform the following tasks:

Task 1: Deploy the Topology Views

In the HP BSM environment, RTSM is used to discover the CIs and generate the topology views. To configure SHR to collect domain-specific data, you first need to deploy those topology views for each Content Pack.

These topology views contain the specific CI attributes that Contents Packs use to collect the relevant data. However, these topology views can vary from one Content Pack to another.

For example, the Exchange Server Content Pack might require a topology view that lists exchange servers, mailbox servers, mailbox and public folder stores, and so on. A System Management Content Pack, however, might require a different topology view that lists all the Business Applications, business services, and system resource, such as CPU, memory, disk, within the infrastructure. Based on these views, the CI attributes for each Content Pack may vary.

To deploy the topology model views for the Content Packs in the HP BSM server:

1. Log on to the HP BSM host system as administrator.
2. Log on to the host system that has SHR installed on it as administrator through remote access from the HP BSM host system.

Browse to `%PMDB_Home%\packages` (for Windows) or `$PMDB_HOME\packages` (for Linux) and copy the following topology views.

Content Pack	View Name	Location

BPM (Synthentic Transaction Monitoring)	`EUM_BSMR.zip`	**For Windows**
		`%PMDB_HOME%\pacakges\EndUserManagement\ETL_BPM.ap\source\cmdb_views`
		For Linux
		`$PMDB_HOME\pacakges\EndUserManagement\ETL_BPM.ap\source\cmdb_views`

Real User Transaction Monitoring	`EUM_BSMR.zip`	**For Windows**
		`%PMDB_HOME%\packages\EndUserManagement\ETL_RUM.ap\source\cmdb_views`
		For Linux
		`$PMDB_HOME\packages\EndUserManagement\ETL_RUM.ap\source\cmdb_views`

Network	`SHR_Network_Views.zip`	**For Windows**
		`%PMDB_HOME%\packages\Network\ETL_Network_NPS.ap\source\cmdb_views`
		For Linux
		`$PMDB_HOME\packages\Network\ETL_Network_NPS.ap\source\cmdb_views`

System Management	`SM_BSM9_Views.zip`	**For Windows**
		`%PMDB_HOME%\packages\SystemManagement\ETL_SystemManagement_PA.ap\source\cmdb_views`
		For Linux
		`$PMDB_HOME\packages\SystemManagement\ETL_SystemManagement_PA.ap\source\cmdb_views`

Oracle	`SHR_DBOracle_Views.zip`	**For Windows**
		`%PMDB_HOME%\Packages\DatabaseOracle\ETL_DBOracle_DBSPI.ap\source\cmdb_views\SHR_DBOracle_Views.zip`
		For Linux
		`$PMDB_HOME\Packages\DatabaseOracle\ETL_DBOracle_DBSPI.ap\source\cmdb_views\SHR_DBOracle_Views.zip`

Content Pack	View Name	Location
Oracle WebLogic Server	J2EEApplication.zip	**For Windows** %PMDB_HOME%\packages\ApplicationServer\ETL_AppSrvrWLS_WLSSPI.ap\source\cmdb_views **For Linux** $PMDB_HOME\packages\ApplicationServer\ETL_AppSrvrWLS_WLSSPI.ap\source\cmdb_views
IBM WebSphere Application Server	J2EEApplication.zip	**For Windows** %PMDB_HOME%\packages\ApplicationServer\ETL_AppSrvrWBS_WBSSPI.ap\source\cmdb_views **For Linux** $PMDB_HOME\packages\ApplicationServer\ETL_AppSrvrWBS_WBSSPI.ap\source\cmdb_views
Microsoft SQL Server	SHR_DBMSSQL_Views.zip	**For Windows** %PMDB_HOME%\packages\DatabaseMSSQL\ETL_DBMSSQL_DBSPI.ap\source\cmdb_views **For Linux** $PMDB_HOME\packages\DatabaseMSSQL\ETL_DBMSSQL_DBSPI.ap\source\cmdb_views
Microsoft Exchange Server	SHR_Exchange_Business_View.zip	**For Windows** %PMDB_HOME%\packages\ExchangeServer\ETL_Exchange_Server2007.ap\source\cmdb_views **For Linux** $PMDB_HOME\packages\ExchangeServer\ETL_Exchange_Server2007.ap\source\cmdb_views
Microsoft Active Directory	SHR_AD_Business_View.zip	**For Windows** %PMDB_HOME%\packages\ActiveDirectory\ETL_AD_ADSPI.ap\source\cmdb_views **For Linux** $PMDB_HOME\packages\ActiveDirectory\ETL_AD_ADSPI.ap\source\cmdb_views

For example, to copy the System Management zip files, browse to `%pmdb_home%\packages\System_Management\System_Management.ap\CMDB_View\SM_BSM9_Views.zip` and copy the `SM_BSM9_Views.zip` file to the HP BSM host system.

3 On the HP BSM host system, click **Start** → **Programs** → **Internet Explorer**. The web browser opens.

4 In the web browser, type the following URL:

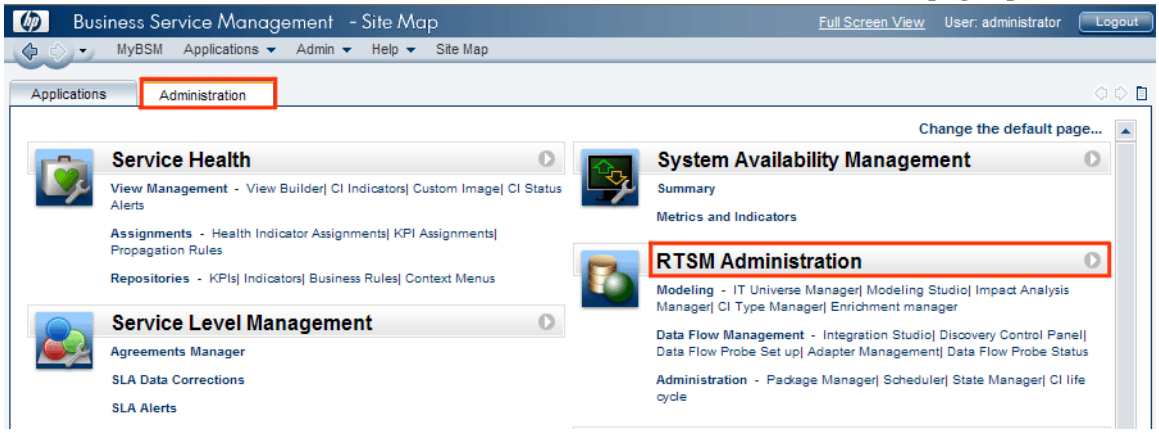
`http://<server_name>.<domain_name>/HPBSM`

In this instance, *<server_name>* is the name of the HP BSM server, and *<domain_name>* is the name of the user's domain according to the user's network configuration.

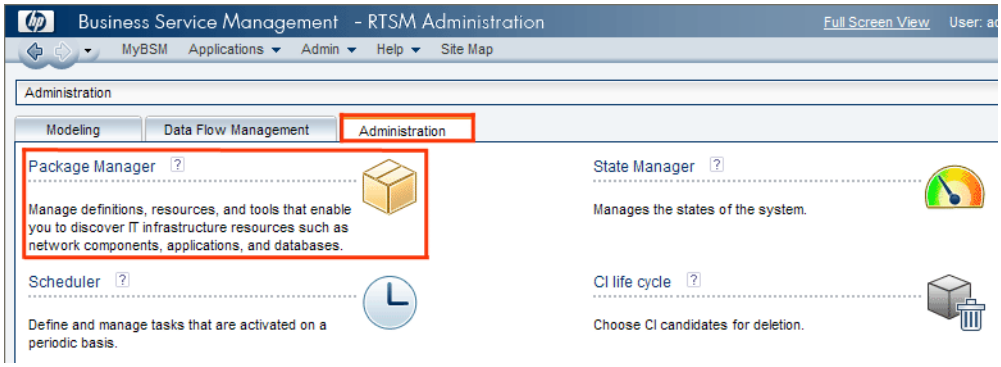
The Business Service Management Login page opens.

5 Type the login name and password and click **Log In**. The Business Service Management - Site Map opens.

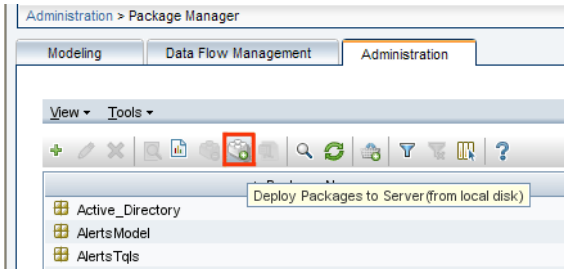
6 Click **Administration** → **RTSM Administration**. The RTSM Administration page opens.



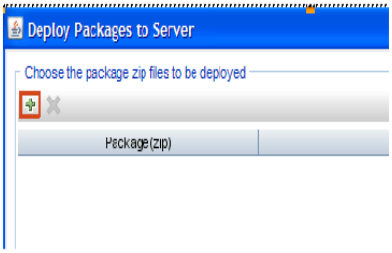
7 Click **Administration** → **Package Manager**. The Package Manager page opens.



8 Click the **Deploy Packages to Server (from local disk)** icon. The Deploy Package to Server dialog box opens.



9 Click the **Add** icon.



The Deploy Package to Server (from local disk) dialog box opens.

10 Browse to the location of the Content Pack zip files, select the required files, and then click **Open**.

You can view and select the TQL and ODB views that you want to deploy under **Select the resources you want to deploy** in the **Deploy Package to Server (from local disk)** dialog box. Ensure that all the files are selected.

11 Click **Deploy** to deploy the Content Pack views.

For Linux

Open the browser and proceed from step 4 on page 76

Enabling CI Attributes for a Content Pack

Each Content Pack view includes a list of CI attributes that are specific to that Content Pack. The CI attributes that are required for data collection are automatically enabled in each of the Content Pack views after you deploy them.

To enable additional CI attributes to collect additional information relevant to your business needs:

1 Click **Start** → **Programs** → **Internet Explorer**. The web browser opens.

2 In the web browser, type the following URL:

`http://`<*server_name*>**`.`**<*domain_name*>**`/HPBSM`**

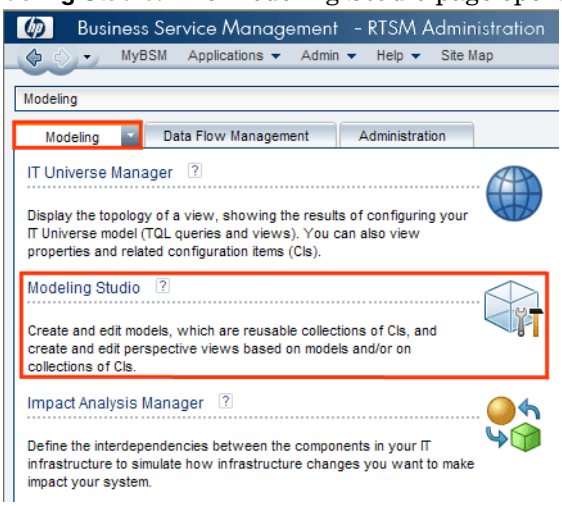
In this instance, <*server_name*> is the name of the HP BSM server, and <*domain_name*> is the name of the user's domain according to user's network configuration.

The Business Service Management Login page opens.

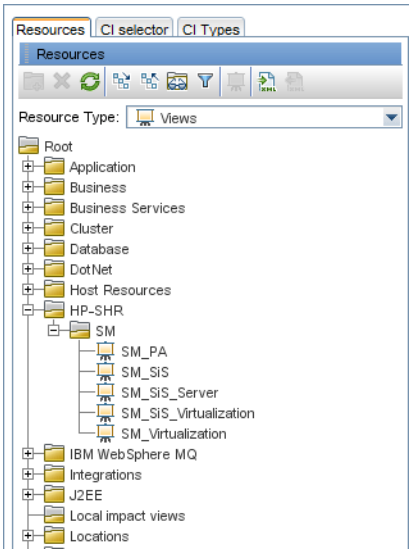
3 Type the login name and password and click **Log In**. The Business Service Management Site Map opens.

4 Click **Administration** → **RTSM Administration**. The RTSM Administration page opens.

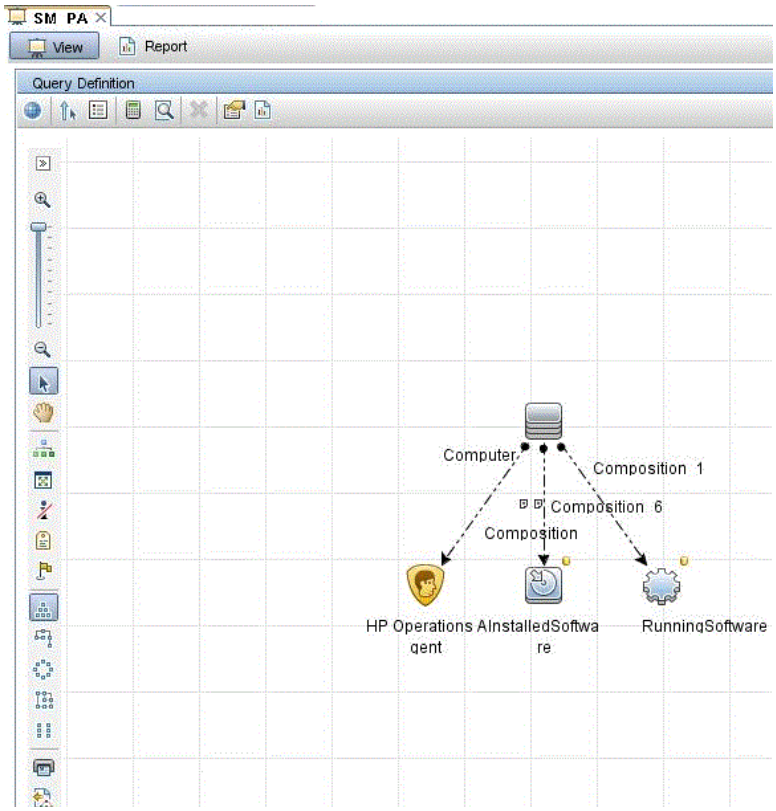
5 Click **Modeling** → **Modeling Studio**. The Modeling Studio page opens.



6 In the Resources pane, expand **HP-SHR**, expand a Content Pack folder and double-click a topology view to open it.

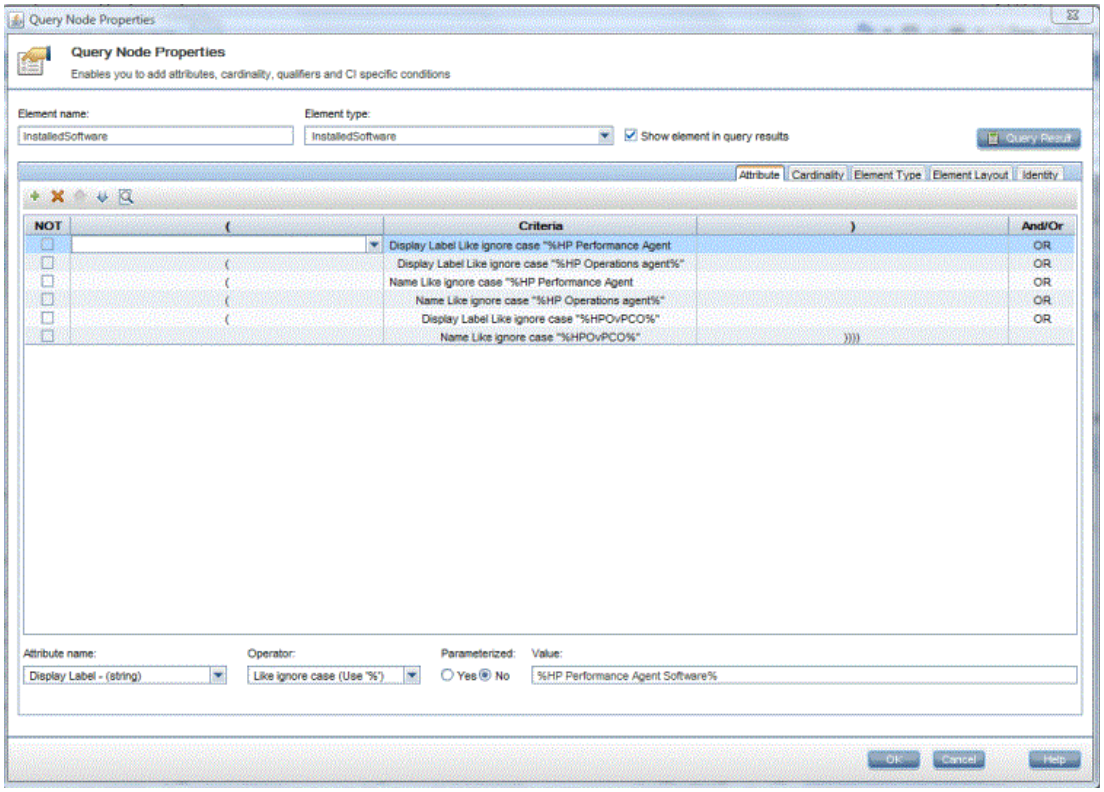


7 In the Topology pane, right-click any node in the topology diagram, and then click **Query Node Properties** to view the list of CI attributes for the selected node.



The Query Node Properties dialog box opens.

8 Click **Attributes**. Select the attributes that you want to enable and then click **OK**.



You have successfully deployed the Content Packs views based on the type of deployment scenario selected for SHR.

Task 2: Configure SiteScope to integrate with SHR

HP SiteScope is an agentless monitoring solution designed to ensure the availability and performance of distributed IT infrastructures—for example, servers, operating systems, network devices, network services, applications, and application components.

For SHR to collect data for the physical nodes from SiteScope, you must first create the monitors in SiteScope. Monitors are tools for automatically connecting to and querying different kinds of systems and applications used in enterprise business systems. These monitors collect data about the various IT components in your environment and are mapped to specific metrics that are used by SHR such as CPU usage, memory usage, and so on. After you create the monitors, you must also enable SiteScope to log data in HP Operations agent/ BSM profile database so that SHR can collect the required data from the agent. Perform this task only if you have SiteScope installed in your environment. Otherwise, proceed to the next task.

For the list of monitors (including the counters and measures) to be created in SiteScope, see SiteScope Monitors for HP Service Health Reporter on page 235.

For more information about creating monitors in SiteScope, see the *Using SiteScope* and the *Monitor Reference* guides. This document is available at the following URL:

http://h20230.www2.hp.com/selfsolve/manuals

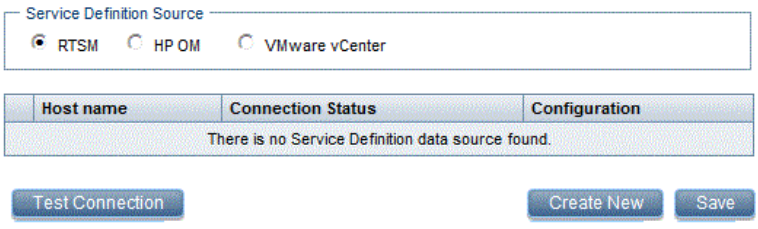
Enable integration between SiteScope and BSM to transfer the collected topology data by the SiteScope monitors to BSM. For more information about SiteScope integration with BSM, see *Working with Business Service management (BSM)* of the *Using SiteScope* guide.

To integrate SiteScope with SHR, follow these steps:

1. Log on to the host system that has SHR installed on it as administrator.
2. Access SiteScope by typing the SiteScope address in a Web browser. The default address is: **http://<*SiteScope host name*>:<*port number*>/SiteScope**.
3. Enable SiteScope to integrate with HP Operations agent for data logging. For more information, see *Working with Operations Manager and BSM Using the HP Operations Agent* of the *Using SiteScope* guide.
4. Set the number of monitors and the frequency at which data is fed into the HP Operations agent integration. While the default SiteScope configuration enables running thousands of monitors, sizing is important for planning the maximum number of monitors, metrics, and monitors types that can be stored within the SiteScope-HPOM metrics integration. For more information, see *Sizing Recommendations for SiteScope-Operations Manager Metrics Integration* of the *Using SiteScope* guide.

Task 3: Configure RTSM Service Definition Source

On the Configure Topology Source page, you can configure the RTSM service definition source to provide the topology information of the managed environment.



To configure, follow these steps:

1 Under **Service Definition Source**, select **RTSM** to create a RTSM data source connection.

You cannot change the topology source after it has been configured on the Service Definition page.

2 Click **Create New**. The Connection Parameters dialog box opens.

3 Type the following values in the **Connection Parameters** dialog box:

Host name	-	IP address or FQDN of the BSM server. If your HP BSM installation is distributed, type the name of the data processing server (DPS) in the **Host name** field.
Port	-	Port number to query the RTSM web service. The default port number is 21212. If the port number has been changed, contact your database administrator for more information.
User name	-	Name of the RTSM web service user. The default user name is **admin**.
Password	-	Password of the RTSM web service user. The default password is **admin**.
Collection Station	-	If you installed collectors on remote systems, you can choose either the local collector or a remote collector. To configure a remote collector with this service definition source, select one of the available remote systems in the drop-down list. To use the collector that was installed by default on the SHR system, select local.

4 Click **OK**.

You can create only one RTSM data source connection. After the connection is created, the **Create New** button is disabled by default. Since this configuration is a one-time setup, make sure that you type in the correct values.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes made on this page.

7 In the message box, click **Yes**. A `Saved Successfully` message appears in the Information message panel.

For more information about configuring the RTSM service definition source, see the *HP Service Health Reporter Online Help for Administrators* topic, *Managing the enterprise topolgy*.

8 Click **Next** to continue. The Summary page opens.

9 Click **Finish** to complete the post-install configuration tasks. The Deployment Manager page opens.

After you reboot the system, you can proceed with installing the required Content Packs. For more information, see Installing the Content Packs on page 101.

If you wish to collect virtualization data from VMware vCenter, configure VMware vCenter for data collection after installing the content packs. See Configuring VMware vCenter Topology Source for SHR on page 92

If you configured a remote collector with the service definition, make sure to restart the collector service on the collector system after installing Content Packs.

To restart the service manually on Windows, open the Services window, right-click the `HP_PMDB_Platform_Collection` service, and then click **Restart**.

To restart the service manually on Linux, go to the `/etc/init.d` directory, and then run the following command:

```
service HP_PMDB_Platform_Collection --full-restart
```

Configuring HPOM Topology Source for SHR

In the HPOM deployment scenario, the HPOM database is the source of the topology information of the managed nodes. SHR supports data collection from HPOM for Windows, Unix, Linux, and Solaris databases.

The topology relationship is limited to node groups, nodes, and node resources. The group information is obtained from the HPOM node groups. Node resource information is discovered by SHR based on the rules defined by Content Packs.

Prerequisite Tasks

Before configuring the HPOM topology source connection, you must perform certain prerequisite tasks depending on how HPOM is installed in your environment—whether within a domain or as a standalone system.

Configuring SHR Services when SHR is Installed in a Domain

If SHR is installed on a system which is part of a domain, you must log into the system with the local user having administrator privileges, such as **DOMAIN\Administrator**. Start the HP PMDB Platform Administrator and HP PMDB Platform Collection service. You must configure the services for the domain before configuring the HPOM service definition source connection.

Task 1: Configure HP PMDB Platform Administrator Service for the Domain

To configure, follow these steps:

1. Click **Start** → **Run**. The Run dialog box opens.
2. Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.
3. On the right pane, right-click **HP_PMDB_Platform_Administrator**, and then click **Stop**.
4. Right-click **HP_PMDB_Platform_Administrator** and then click **Properties**. The SHR Service Properties dialog box opens.
5. On the **Log on** tab, select **This account**.
6. Type **`DOMAIN\Administrator`** in the field (where Administrator is the local user having administrator privileges).

7 Type the user password in the **Password** field.

8 Retype the password in the **Confirm password** field.

9 Click **Apply** and then click **OK**.

10 On the right pane, right-click **HP_PMDB_Platform_Administrator**, and then click **Start**.

Task 2: Configure HP PMDB Platform Collection Service for the Domain

Perform the following steps:

1 Click **Start** → **Run**. The Run dialog box opens.

2 Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.

3 On the right pane, right-click **HP_PMDB_Platform_Collection_Service**, and then click **Stop**.

4 Right-click **HP_PMDB_Platform_Collection_Service** and then click **Properties**. The SHR Collection Service Properties dialog box opens.

5 On the **Log on** tab, select **This account**.

6 Type **`DOMAIN\Administrator`** in the field (where Administrator is the local user having administrator privileges).

7 Type the user password in the **Password** field.

8 Retype the password in the **Confirm password** field.

9 Click **Apply** and then click **OK**.

10 On the right pane, right-click **HP_PMDB_Platform_Collection_Service**, and then click **Start**.

These steps are mandatory only if the product is being installed for a domain user. These steps are not required if the product is installed for a local user.

After performing the configuration steps, proceed with the HPOM service definition connection configuration.

Creating Database User Account on an HPOM Database Server

Performing this task depends on how Microsoft SQL Server is set up in the HPOM environment and how you can configure SHR to communicate with the HPOM database server. There are two possible scenarios:

- **Scenario 1**: HPOM for Windows 8.x/9.x is installed on one system with Microsoft SQL Server 2005 or Microsoft SQL Server 2008 installed on the same system or a remote system. SHR, which is installed on another system, can be configured to connect to SQL Server either through Windows authentication or SQL Server authentication (mixed-mode authentication). The authentication method defined in SQL Server can be used in SHR to configure the HPOM database connection.
- **Scenario 2**: HPOM for Windows 8.x uses Microsoft SQL Server 2005 Express Edition that is embedded with it by default. Similarly, HPOM for Windows 9.x uses the embedded Microsoft SQL Server 2008 Express Edition by default. The authentication mode in this scenario is Windows NT authentication. However, in this case, a remote connection between SQL Server and SHR is not possible. Therefore, you must create a user account for SHR so that mixed-mode authentication is possible in this scenario.

Before creating the user account, you must first enable mixed-mode authentication. For the steps, see the following URL:

http://support.microsoft.com

To create a user name and password for authentication purposes, perform the following steps. If you are using Microsoft SQL Server 2008, the steps are similar to the following steps performed in SQL Server 2005:

1 Create a user name and password:

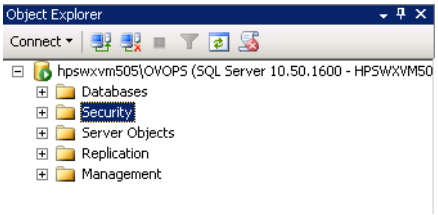
a Log on to the HPOM system with embedded Microsoft SQL Server 2005.

b Click **Start** → **Programs** → **Microsoft SQL Server 2005** → **SQL Server Management Studio**. The Microsoft SQL Server Management Studio window opens.

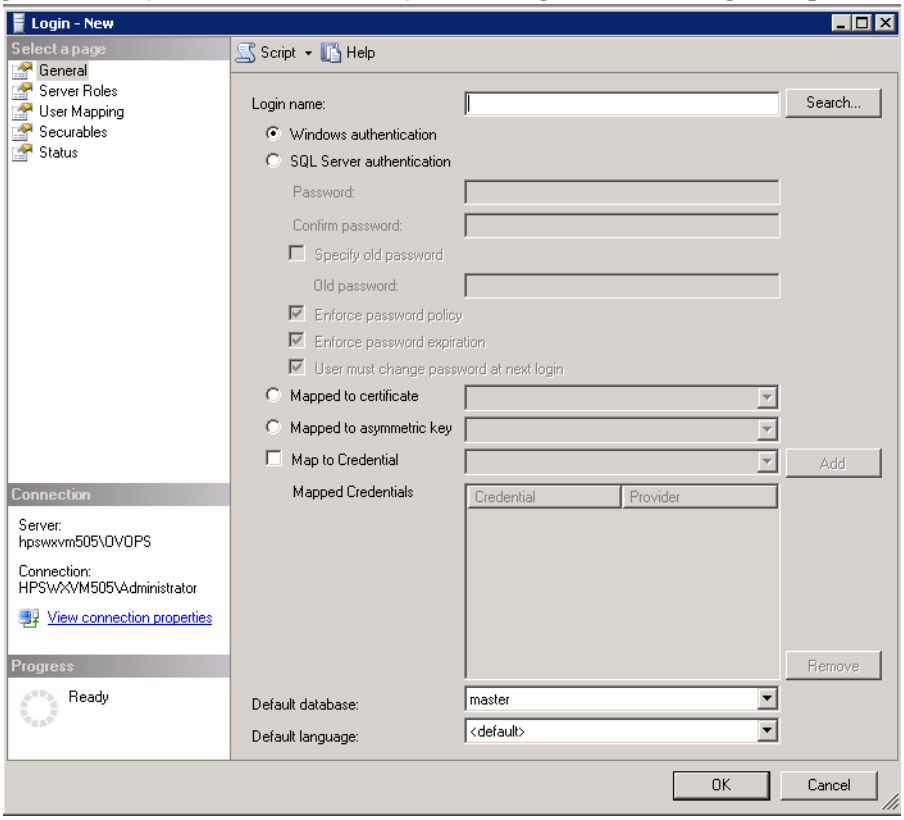
If SQL Server Management Studio is not installed on your system, you can download it from the relevant section of Microsoft web site using the following URL: **http://www.microsoft.com**

c In the **Connect to Server** dialog box, select **NT Authentication** in the **Authentication** list, and then click **Connect**.

d In the **Object Explorer** pane, expand **Security**.



e Right-click **Logins** and click **New Login**. The Login - New dialog box opens.



f In the **Login name** field, type a user name. Specify the other necessary details.

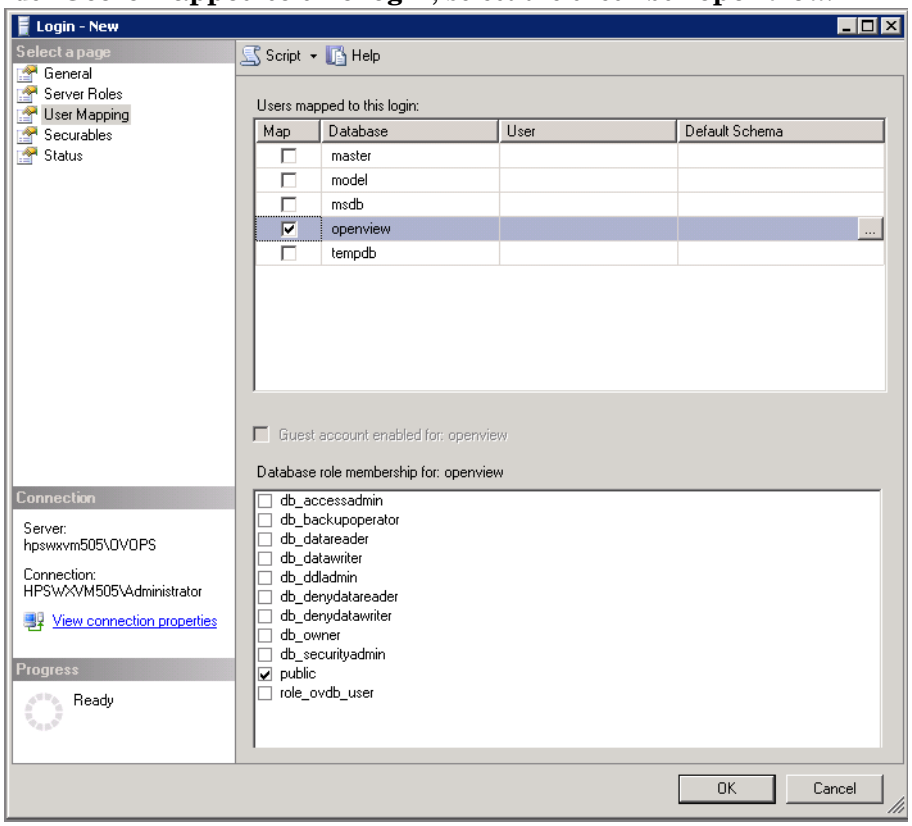
g Select the **SQL Server authentication** radio button.

h In the **Password** field, type the password.

i In the **Confirm password** field, retype the password. You can disable the password enforcement rules to create a simple password.

j Click **User Mapping**.

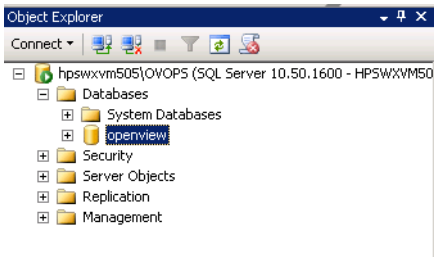
k Under **Users mapped to this login**, select the check box **openview**.



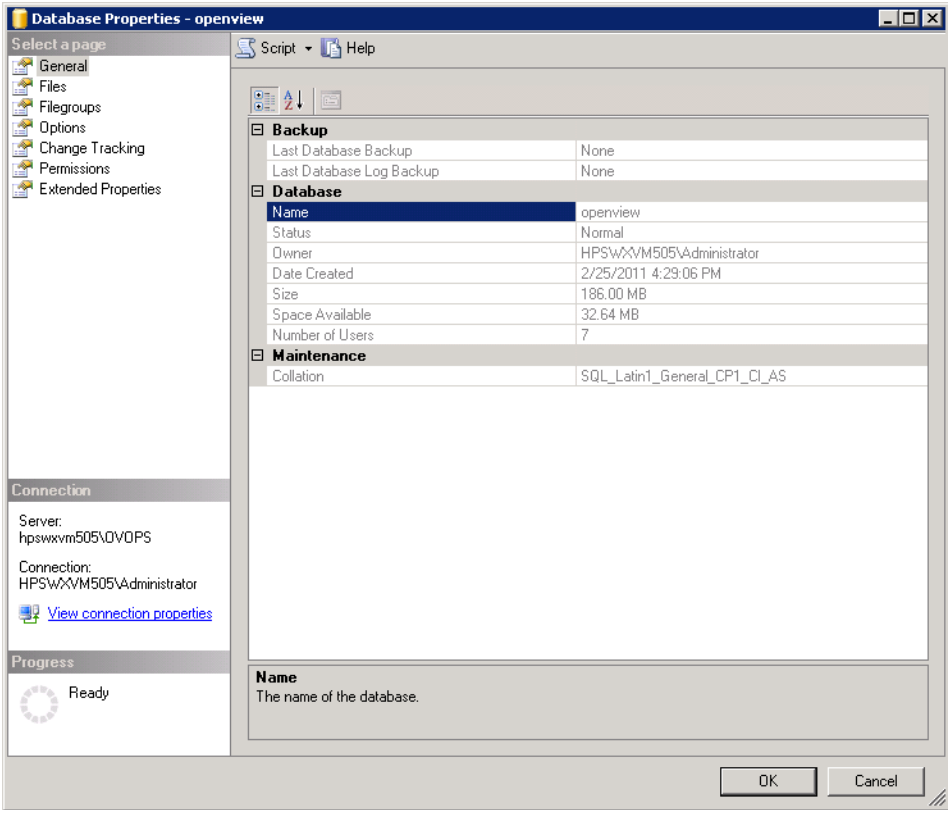
l Click **OK** to create the user name and password.

2 The database user must have at least the **Connect** and **Select** permissions. To enable **Connect** and **Select** permissions for the newly created user account, follow these steps:

a In the **Object Explorer** pane, expand **Databases**.



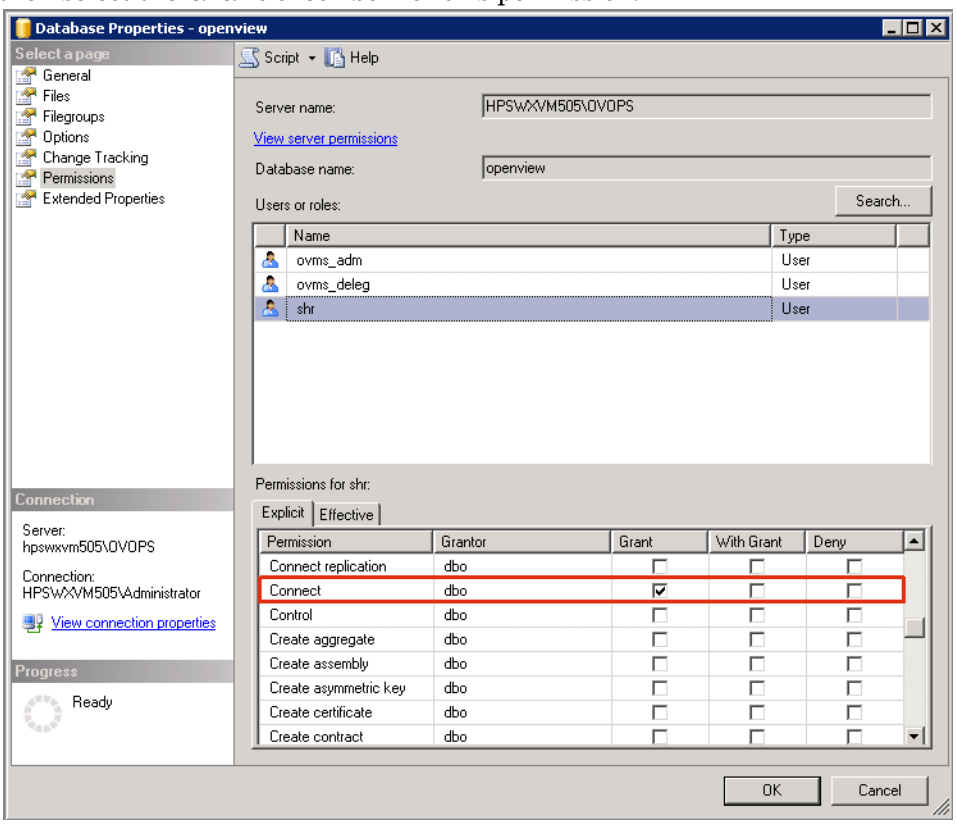
b Right-click **openview** and then click **Properties**. The Database Properties - openview dialog box opens.



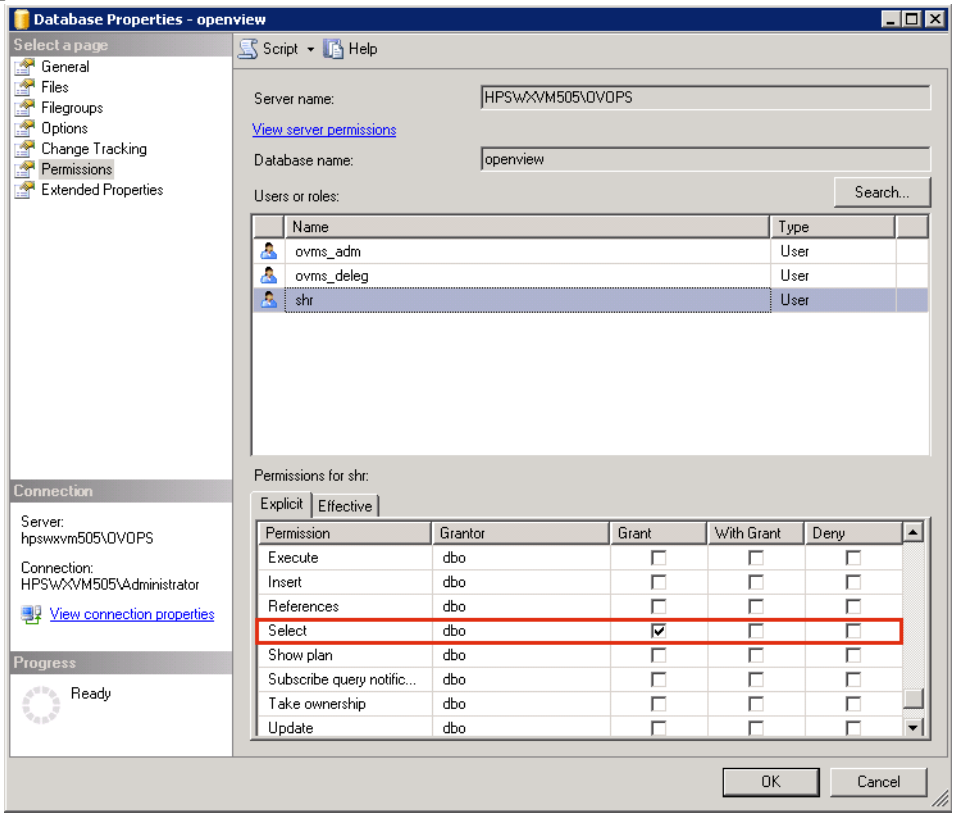
c Under the **Select a page** pane, click **Permissions**.

d Under **Users or roles**, click the newly created user account.

e Under **Explicit permissions for test**, scroll down to the **Connect** permission, and then select the **Grant** check box for this permission.



f Scroll down to the **Select** permission and select the **Grant** check box for this permission.

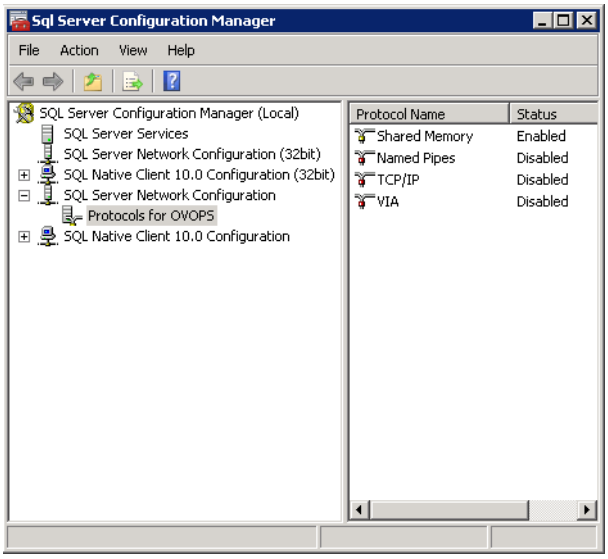


g Click **OK**.

3 Check for the HPOM server port number:

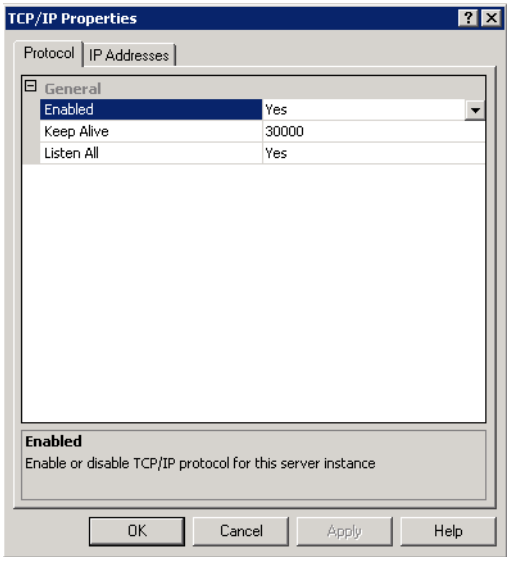
a Click **Start** → **Programs** → **Microsoft SQL Server 2005** → **Configuration Tools** → **SQL Server Configuration Manager**. The SQL Server Configuration Manager window opens.

b Expand **SQL Server Network Configuration** and select **Protocols for OVOPS**. If the instance name has been changed, select the appropriate instance name.



c On the right pane, right-click **TCP/IP**, and then click **Enable**.

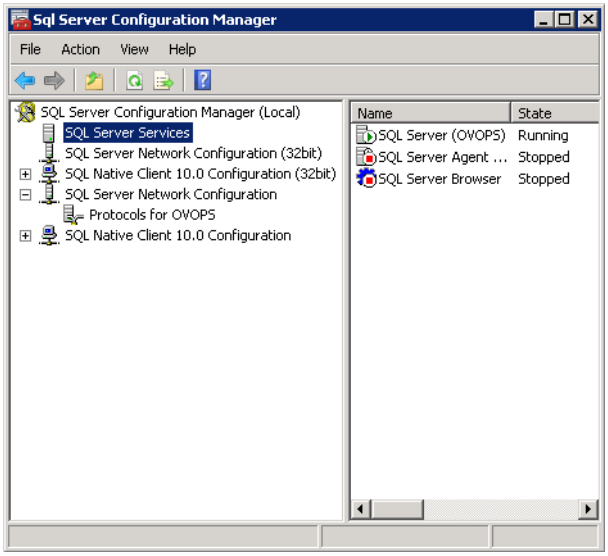
d Right-click **TCP/IP** again, and click **Properties**. The TCP/IP Properties dialog box opens.



e On the **IP Addresses** tab, under the **IPAll**, note down the port number.

4 Restart the HPOM database server:

a In the SQL Server Configuration Manager window, click **SQL Server Services**.



b On the right pane, right-click **SQL Server (OVOPS)**, and then click **Restart**.

You can use the newly created user name, password, and the observed instance name and port number when configuring the HPOM data source connection in the Administration Console.

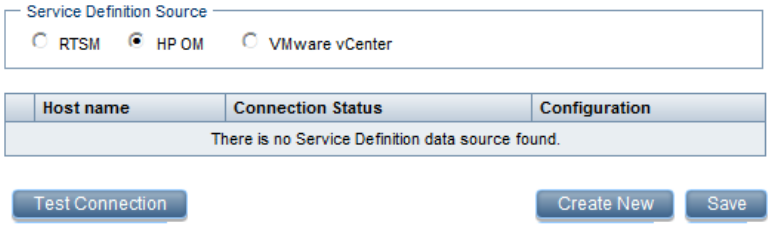
You can perform these steps by using the command prompt utility, **osql**. For more information, visit the Microsoft website at the following URL:

http://support.microsoft.com

Proceed to configuring the HPOM topology source and the HPOM data source connections in SHR for data collection. Perform the following tasks:

Configure HPOM Service Definition Source

On the Configure Topology Source page, you can configure the HPOM service definition source to provide the topology information of the managed environment.



The default SQL Server Express that gets installed with HPOM for Windows does not accept remote connections.

Follow these steps:

1 Under **Service Definition Source**, select **HP OM** to create an HPOM data source connection.

You cannot change the topology source after it has been configured on the Service Definition page.

2 Click **Create New**. The Connection Parameters dialog box opens.

3 Specify or type the following values in the **Connection Parameters** dialog box:

If you are using the database method of authentication to connect to the HPOM database server, you must provide the user details that have the select and connect permissions for the “openview” database here.

Datasource Type - Select the type of HPOM that is configured in your environment. The options include:

- HPOM for Windows
- HPOM for Unix
- HPOM for Linux
- HPOM for Solaris

Database Type - Depending on the data source type that you select, the database type is automatically selected for you. For the HPOM for Windows data source type, the database type is MSSQL. For the HPOM for Unix, HPOM for Linux, or HPOM for Solaris, the database type is Oracle.

Host name - IP address or fully-qualified domain name (FQDN) of the HPOM database server.

Database instance - System identifier (SID) of the database instance in the data source. The default database instance is OVOPS. If MSSQL Server is configured to use default (unnamed) database instance, leave this field empty.

Port - Port number to query the HPOM database server.

To check the port number for the database instance, such as OVOPS, see Checking for the HPOM Server Port Number on page 92.

Windows Authentication - Option to enable Windows Authentication for accessing the HPOM database. The user can use the same credentials to access HPOM as that of the Windows system hosting the database. This option only appears if HPOM for Windows is selected as the data source type.

User name - Name of the HPOM database user. For the HPOM for Windows data source type, if the Windows Authentication option is selected, this field is disabled and appears empty.

Password - Password of the HPOM database user. For the HPOM for Windows data source type, if the Windows Authentication option is selected, this field is disabled and appears empty.

Collection Station - If you have installed collectors on remote systems, you can choose either the local collector or a remote collector.

To configure a remote collector with this service definition source, select one of the available remote systems in the drop-down list.

To use the collector that was installed by default on the SHR system, select local.

4 Click **OK**.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes.

7 In the message box, click **Yes**. A `Saved Successfully` message appears in the information message panel.

You can configure additional HPOM data sources by performing step 2 to step 7.

To collect data from non-domain hosts, appropriate DNS resolutions must be made by the HPOM administrator for these hosts so that they are reachable by SHR, which is installed in the domain.

For more information about configuring HPOM service definition sources, see the *HP Service Health Reporter Online Help for Administrators* topic, *Managing the enterprise topology*.

8 Click **Next** to continue. The Summary page opens.

9 Click **Finish** to complete the post-install configuration tasks. The Deployment Manager page open.

Checking for the HPOM Server Port Number

If SQL Server is the database type used in HPOM, see step 3 in Creating Database User Account on an HPOM Database Server on page 83 to check for the HPOM server port number.

If Oracle is the database type in HPOM, perform the following steps to check for the port number:

1 Log on the Oracle server.

2 Browse to the `$ORACLE_HOME/network/admin` or `%ORACLE_HOME%\NET80\Admin` folder.

3 Open the `listener.ora` file. The port number for the HPOM server is listed in the file.

If you wish to collect virtualization data from VMware vCenter, configure VMware vCenter for data collection after installing the content packs. See Configuring VMware vCenter Topology Source for SHR on page 92

If you configured a remote collector with the service definition, make sure to restart the collector service on the collector system after installing Content Packs.

To restart the service manually on Windows, open the Services window, right-click the **`HP_PMDB_Platform_Collection`** service, and then click **Restart**.

To restart the service manually on Linux, go to the `/etc/init.d` directory, and then run the following command:

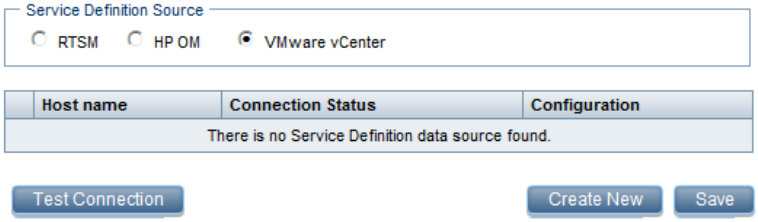
```
service HP_PMDB_Platform_Collection --full-restart
```

Configuring VMware vCenter Topology Source for SHR

VMware vCenter is a distributed server-client software solution that provides a central and a flexible platform for managing the virtual infrastructure in business-critical enterprise systems. VMware vCenter centrally monitors performance and events, and provides an enhanced level of visibility of the virtual environment, thus helping IT administrators to control the environment with ease.

SHR collects virtualization performance metrics from the VMware vCenter database.

On the Configure Topology Source page, you can configure the VMware vCenter Service Definition Source to provide the topology information of the managed environment.



To configure, follow these steps:

1 Under **Service Definition Source**, select **VMware vCenter** to create a VMware vCenter data source connection.

> You cannot change the topology source after it has been configured on the Service Definition page.

2 Click **Create New**. The Connection Parameters dialog box opens.

3 Specify or type the following values in the **Connection Parameters** dialog box:

Host name	-	IP address or FQDN of the VMware vCenter database server.
User name	-	Name of the VMware vCenter database user.
Password	-	Password of the VMware vCenter database user.
Collection Station	-	If you have installed collectors on remote systems, you can choose either the local collector or a remote collector. To configure a remote collector with this service definition source, select one of the available remote systems in the drop-down list. To use the collector that was installed by default on the SHR system, select local.

Configuring the connection parameters for **VMware vCenter** on the **Service Definition Source** populates the corresponding information on the **VMware vCenter Data Collection Source** page.

4 Click **OK**.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes.

7 In the message box, click **Yes**. A `Saved Successfully` message appears in the Information message panel.

You can configure additional VMware vCenter data sources by performing step 2 on page 81

If you configured a remote collector with the service definition, make sure to restart the collector service on the collector system after installing Content Packs.

To restart the service manually on Windows, open the Services window, right-click the `HP_PMDB_Platform_Collection` service, and then click **Restart**.

To restart the service manually on Linux, go to the `/etc/init.d` directory, and then run the following command:

```
service HP_PMDB_Platform_Collection --full-restart
```

Task 12: Verify the Sybase IQ License Type

If Sybase IQ is installed on a system that uses the Intel EM64T processor, you must verify the Sybase IQ license type in the `pmdb.lmp` file. If the license type is not the OEM CPU License, it causes the Sybase IQ license to expire after one month and the database stops working.

Follow these steps:

On Windows

1. Browse to the location where the database files are stored. This is location you specified in step 3 on page 67.
2. Open the `pmdb.lmp` file in an Text Editor.
3. Verify the license type, `LT=AC`. If the value of LT is not AC, change it to AC.
4. Save the changes and close the file.

After you change the license type in the `pmdb.lmp` file, you must restart the database. Follow these steps:

1. Click **Start** → **Run**. The Run dialog box opens.
2. Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.
3. On the right pane, right-click the **HP_PMDB_Platform_Sybase** service, and then click **Restart**.

For Linux

Type the given command at the prompt:

```
service HP_PMDB_Platform_Sybase restart
```

Proceed to installing the Content Packs.

Enabling SHR to Coexist with the HP Operations Agent

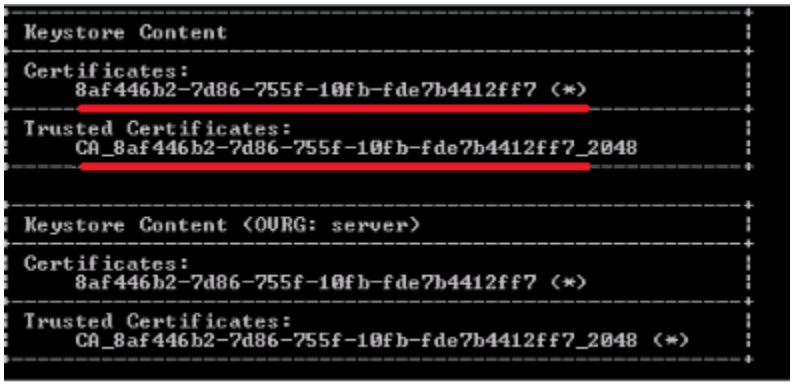
If you want to install SHR and then install HP Operations agent on the same system, you must perform the following additional configuration steps:

1. Install HP Operations agent on an SHR system.
2. Log on to the system as administrator or root.
3. In the command-line console, run the following command:

   ```
   ovcert -list
   ```

   The list of certificates installed on the system is displayed.
4. From the command-line console, note down the contents of the Certificates and Trusted Certificates field under the Keystore Content section.

Example:



5 On the SHR system, run the following command:

`ovcert -remove` *<certificate_content>*

In this instance, *<certificate_content>* is the complete string of characters that appears under the Certificates section.

6 On the SHR system, run the following command:

`ovcert -remove` *<trusted_certificate_content>*

In this instance, *<trusted_certificate_content>* is the complete string of characters that appears under the Trusted Certificates section.

7 Use the `oainstall.vbs -configure` or `oainstall.sh -configure` command to configure the agent to work with the HPOM management server. For more information, see the *HP Operations Agent Installation and Configuration Guide*.

8 In the HPOM console, accept the certificate request of the SHR node.

9 If you use HPOM for Windows, follow these steps:

a Create a new policy under **Policy Management > Policies grouped by type > Agent policies > Flexible Management**.

b Copy the following contents to the policy:

```
#
# Template for message forwarding to another management server
#
TIMETEMPLATES
# None
#
# Responsible Manager Configurations
#
RESPMGRCONFIGS
# Responsible target Manager: target
# Responsible source Manager: source
RESPMGRCONFIG
     DESCRIPTION "Responsible managers"
     SECONDARYMANAGERS
        SECONDARYMANAGER
                NODE IP 0.0.0.0 "OM_SERVER"
                DESCRIPTION "Management Server OM_SERVER"
                SECONDARYMANAGER
```

```
                NODE IP 0.0.0.0 "SHR_SERVER"
                DESCRIPTION "Backup Server for OM_SERVER"
        ACTIONALLOWMANAGERS
                ACTIONALLOWMANAGER
                NODE IP 0.0.0.0 "OM_SERVER"
                DESCRIPTION "Management Server OM_SERVER"
                ACTIONALLOWMANAGER
                NODE IP 0.0.0.0 "SHR_SERVER"
                DESCRIPTION "Backup Server for OM_SERVER"
    MSGTARGETRULES
```

c Replace `OM_SERVER` with the FQDN of the HPOM management server and `SHR_SERVER` with the FQDN of the SHR system.

d Click **Check Syntax** and make sure that the content is valid.

e Deploy the policy to the SHR system.

10 If you are using HPOM on UNIX/Linux, follow these steps:

a Log on to the management server as root.

b Run the following command:

`cp /etc/opt/OV/share/conf/OpC/mgmt_sv/tmpl_respmgrs/backup-server /etc/opt/OV/share/conf/OpC/mgmt_sv/respmgrs/allnodes`

c Edit the `/etc/opt/OV/share/conf/OpC/mgmt_sv/respmgrs/allnodes/backup-server` file to replace `M1` with the FQDN of the HPOM management server and `M2` with the FQDN of the SHR system.

d Run the following command:

`opcragt –dist` <*SHR Nodename*>

11 Run the following command on the SHR system:

`ovcert -exporttrusted -file` <*filename*> **`-ovrg server`**

In the instance, <*filename*> is the name with which you want to save the certificate. You must specify the complete path to the certificate file.

12 Run the following command on the SHR system:

`ovcert -importtrusted -file` <*filename*>

In the instance, <*filename*> is the name of the file that you exported in the previous step. You must specify the complete path to the certificate file.

13 On the SHR system, run the following command:

`ovcert -trust` <*SHR_Server*> **`-ovrg server`**

In this instance, <*SHR_Server*> is the FQDN of the SHR system.

14 Run the following command on the SHR system:

`ovc -restart`

15 Run the following command on the SHR system:

`ovcert -list -ovrg server`

The trust certificates are displayed. If trust certificates are absent, perform the following steps:

16 Run the following commands on the SHR server:

ovcert -exporttrusted -file <filename1>

ovcert -importtrusted -file <filename1> -ovrg server

ovcert -exportcert -file <filename2> -pass <any password>

ovcert -importcert -file <filename2> -pass <password entered in earlier step> -ovrg server

ovc -restart

ovdeploy -env PMDB_HOME -ovrg server

The value of the PMDB_HOME environment variable must display.

17 Run the following command on the SHR system:

ovc -status -level 8

The SHR Policy call backs (`shrcb`) parameter must be listed.

If not listed, run the following command:

ovcreg -add $PMDB_HOME/config/shr.xml

18 Run the following command on the SHR system:

ovc -restart

Enabling an SHR Collector on a Remote System to Coexist with the HP Operations Agent

If you want to install an SHR collector on a remote system that already has HP Operations agent installed, perform the following additional configuration steps:

1 Install SHR collector on the remote system that already has HP Operations agent installed.

2 Log on to the collector system as administrator or root.

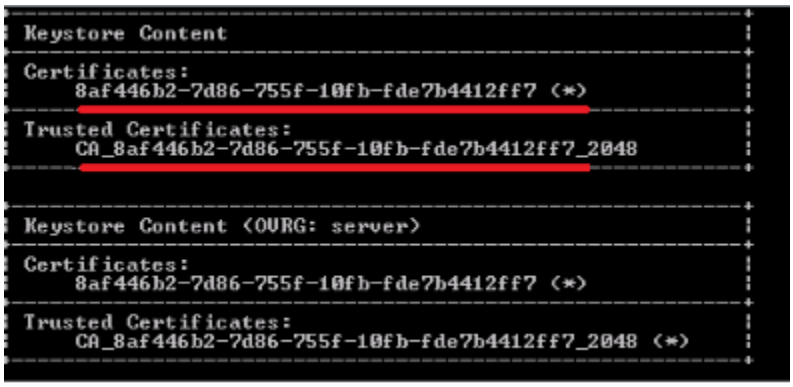
3 In the command-line console, run the following command:

ovcert -list

In the command-line console, the command shows a list of all certificates installed on the system.

4 From the command-line console, note down the contents of the Certificates and Trusted Certificates field under the Keystore Content section.

Example:



5 On the collector system, run the following command:

ovcert -remove <*certificate_content*>

In this instance, <*certificate_content*> is the complete string of characters that appears under the Certificates section.

6 On the collector system, run the following command:

ovcert -remove <*trusted_certificate_content*>

In this instance, <*trusted_certificate_content*> is the complete string of characters that appears under the Trusted Certificates section.

7 Run the following command on the collector system:

On Windows

perl %PMDB_HOME%\bin\scripts\configurePoller.pl <*HPOM_Server*>

On Linux

perl $PMDB_HOME/bin/scripts/configurePoller.pl <*HPOM_Server*>

8 In the HPOM console, accept the certificate request of the SHR node.

9 If you are using HPOM for Windows, follow these steps:

a Create a new policy under **Policy Management > Policies grouped by type > Agent policies > Flexible Management**.

b Copy the following contents to the policy:

```
# Template for message forwarding to another management server
#
TIMETEMPLATES
# None
#
# Responsible Manager Configurations
#
RESPMGRCONFIGS
# Responsible target Manager: target
# Responsible source Manager: source
RESPMGRCONFIG
    DESCRIPTION "Responsible managers"
    SECONDARYMANAGERS
       SECONDARYMANAGER
               NODE IP 0.0.0.0 "OM_SERVER"
```

```
                DESCRIPTION "Management Server OM_SERVER"
                SECONDARYMANAGER
                NODE IP 0.0.0.0 "SHR_SERVER"
                DESCRIPTION "Backup Server for OM_SERVER"
        ACTIONALLOWMANAGERS
                ACTIONALLOWMANAGER
                NODE IP 0.0.0.0 "OM_SERVER"
                DESCRIPTION "Management Server OM_SERVER"
                ACTIONALLOWMANAGER
                NODE IP 0.0.0.0 "SHR_SERVER"
                DESCRIPTION "Backup Server for OM_SERVER"
    MSGTARGETRULES
```

c Replace `OM_SERVER` with the FQDN of the HPOM management server and `SHR_SERVER` with the FQDN of the SHR system.

d Click **Check Syntax** and make sure that the content is valid.

e Deploy the policy to the collector system.

10 If you are using HPOM on UNIX/Linux, follow these steps:

a Log on to the management server as root.

b Run the following command:

`cp /etc/opt/OV/share/conf/OpC/mgmt_sv/tmpl_respmgrs/backup-server /etc/opt/OV/share/conf/OpC/mgmt_sv/respmgrs/allnodes`

c Edit the `/etc/opt/OV/share/conf/OpC/mgmt_sv/respmgrs/allnodes/backup-server` file to replace `M1` with the FQDN of the HPOM management server and `M2` with the FQDN of the SHR system.

d Run the following command:

`opcragt -dist` <*SHR Nodename*>

11 Run the following command on the SHR system:

`ovcert -exporttrusted -file` <*filename*> **`-ovrg server`**

In the instance, <*filename*> is the name with which you want to save the certificate. You must specify the complete path to the certificate file.

12 Manually copy the exported certificate onto the collector system.

13 Run the following command on the collector system:

`ovcert -importtrusted -file` <*filename*>

In the instance, <*filename*> is the name of the file that you copied in the previous step. You must specify the complete path to the certificate file.

14 Run the following command on the collector system:

`ovc -restart`

Ensuring Continuous SHR Collection on the System after HP Operations Agent is Uninstalled

If HP Operations agent is uninstalled from a system where SHR and HP Operations agents coexisted, you must perform the following steps to ensure an error-free collection of data by the SHR system:

1. On the system where SHR or SHR Remote Collector was uninstalled, run the following command:

   `ovcert -certreq`

2. Run the following command on the SHR system:

   `ovcm -listpending -l`

   Note the request ID.

3. Run the following command on the SHR system:

   `ovcm -grant <request ID from the earlier step>`

4. Run one of the following commands:

   a. To verify the connectivity to the SHR local collector:

      `ovdeploy -env PMDB_HOME -ovrg server`

      The value of the PMDB_HOME environment variable from the SHR system appears.

   b. To verify the connectivity to the SHR Remote Collector:

      `ovdeploy -env PMDB_HOME -ovrg server -host <remote collector hostname>`

      The value of the PMDB_HOME environment variable from the SHR Remote Collector appears.

8 Installing the Content Packs

For installing the required Content Packs, SHR provides the Deployment Manager utility through the Administration Console. This web-based interface simplifies the process of installation by organizing the Content Packs based on the domain, the data source applications from where you want to collect data, and the specific Content Pack components you want to install to collect the data.

It is recommended to stop the HP PMDB Platform Timer Service before updating Content packs in case of upgrade from SHR 9.20 to SHR 9.30. If Content pack update fails, it will roll back to previous state.

Customizing out-of-the-box reports is not supported; such reports are overwritten by default reports after you upgrade Content Packs.

Creating reports by modifying a Content Pack's universe is also not supported and such reports will not work after you update the Content Pack.

Selecting the Content Pack Components

A Content Pack is a data mart—a repository of data collected from various sources—that pertains to a particular domain, such as system performance or virtual environment performance, and meets the specific demands of a particular group of knowledge users in terms of analysis, content presentation, and ease of use. For example, the System Performance content provides data related to the availability and performance of the systems in your IT infrastructure. Content Packs also include a relational data model, which defines the type of data to be collected for a particular domain, and a set of reports for displaying the collected data.

Content Packs are structured into the following layers or components:

- **Domain component**: The Domain or Core Domain component defines the data model for a particular Content Pack. It contains the rules for generating the relational schema. It also contains the data processing rules, including a set of standard preaggregation rules, for processing data into the database. The Domain component can include the commonly-used dimensions and cubes, which can be leveraged by one or more Report Content Pack components. The Domain Content Pack component does not depend on the configured topology source or the data source from where you want to collect data.
- **ETL (Extract, Transform, and Load) component**: The ETL Content Pack component defines the collection policies and the transformation, reconciliation, and staging rules. It also provides the data processing rules that define the order of execution of the data processing steps.

  The ETL Content Pack component is data source dependent. Therefore, for a particular domain, each data source application has a separate ETL Content Pack component. For example, if you want to collect system performance data from the HP Performance Agent,

you must install the SysPerf_ETL_PerformanceAgent component. If you want to collect system performance data from HP SiteScope, you must install either SysPerf_ETL_SiS (sourcing data logged in CODA) or SysPerf_ETL_SiS_DB (sourcing data logged in BSM Profile database).

A single data source application can have multiple ETL components. For example, you can have one ETL component for each virtualization technology supported in Performance Agent such as Oracle Solaris Zones, VMware, IBM LPAR, and Microsoft HyperV. The ETL component can be dependent on one or more Domain components. In addition, you can have multiple ETL components feeding data into the same Domain component.

- **Reports' component**: The Report Content Pack component defines the application-specific aggregation rules, business views, SAP BOBJ universes, and the reports for a particular domain. Report components can be dependent on one or more Domain components. This component also provides the flexibility to extend the data model that is defined in one or more Domain components.

The list of Content Pack components that you can install depends on the topology source that you configured during the post-install configuration phase of the installation. Once the topology source is configured, the Deployment Manager filters the list of Content Pack components to display only those components that can be installed in the supported deployment scenario. For example, if RTSM is the configured topology source, the Deployment Manager only displays those components that can be installed in the SaOB and APM deployment scenarios.

For more information about each Content Pack and the reports provided by them, see the *HP Service Health Reporter Online Help for Users*.

Installing the Content Pack Components

Do not install the Content Pack components without performing the tasks in Configuring SHR on page 61.

Use the Deployment Manager utility to install the Content Pack components.

To install the Content Packs, follow these steps:

1. Launch the Administration Console in a web browser:
   a. Launch the following URL:

      http://<*SHR_Server_FQDN*>**:21411/BSMRApp**

   b. Type **`administrator`** in the **Login Name** field and click **Log In** to continue. The Home page opens.

      If you use any other user account to access the Administration Console, make sure that the user account has administrator privileges.

2. On the left pane, click **Administration**, and then click **Deployment Manager**. The Deployment Manager page opens.

The Deployment Manager displays the Content Pack components that can be installed in the supported deployment scenario. By default, all the Content Pack components, specific for the deployment scenario, are selected for installation. You can modify the selection by clearing the selected content, the data source application, or the Content Pack components from the list. The following table lists the content that is specific to each deployment scenario:

Table 1 List of Content Packs

Content	BSM Service and Operations Bridge	HP Operations Manager	Application Performance Management	VMware vCenter	RTSM
Default	✓	✓	✓	✓	
System Performance	✓	✓		✓	
Virtual Environment Performance	✓	✓		✓	
Synthetic Transaction Monitoring	✓		✓		
Health and Key Performance Indicators	✓		✓		
IBM WebSphere Application Server	✓	✓			
Microsoft Active Directory	✓	✓			
Microsoft Exchange Server	✓	✓			
Microsoft SQL Server	✓	✓			
Cross-Domain Operations Events	✓				
Real User Transaction Monitoring	✓		✓		
Network Performance[a]	✓	✓			
Operations Events	✓	✓			
Oracle	✓	✓			

Content	BSM Service and Operations Bridge	HP Operations Manager	Application Performance Management	VMware vCenter	RTSM
Oracle WebLogic Server	✓	✓			
SiteScope ProfileDB (Virtual Environment Performance)					✓
SiteScope ProfileDB (System Performance)					✓

a. You must use the NetworkPerf_ETL_PerfiSPI9.20_NonRTSM ETL content in an RTSM deployment of SHR when Network Mode Manager i (NNMi) is not integrated with BSM.

3 Click **Deploy**.

The Deployment Manager starts installing the selected Content Pack components.

The **Status** column displays the progress of the installation. The Deployment Manager page automatically refreshes itself to display the updated status.

If some workflow streams are running, the Deployment Manager displays the following message:

```
All the required services are stopped but a few jobs are still
active. Please try after some time.
```

If you see this message, wait for some time till all workflow streams are completed.

After the installation completes, **Installation Successful** is displayed in the **Status** column for each Content Pack component.

Reinstalling the Network Performance Content Pack

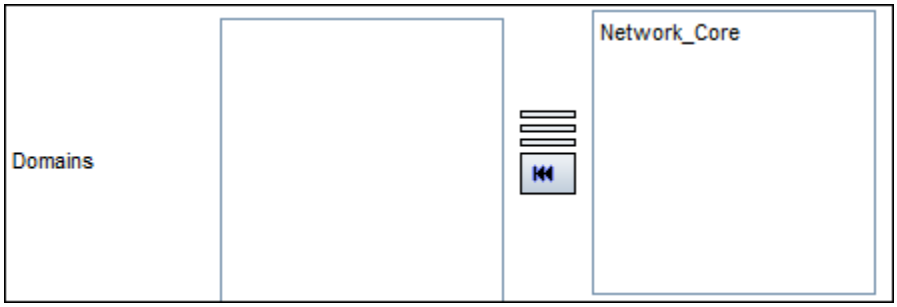
If you reinstall the Network Performance Content Pack, you must perform the following additional steps after installing the Content Pack installation with Deployment Manager:

1 In the Administration Console, go to Collection Configuration.

2 Click **Generic Databases**.

3 For the NPS system, click **Configure**. The Connection Parameters section appears.

4 In the Domains field, make sure Network_core is transferred to the right pane by clicking .



5 Click **OK**.

Upgrading Content Packs

After successfully upgrading SHR to 9.30, you must upgrade all Content Packs installed on the SHR system with the help of the Deployment Manager.

To upgrade Content Packs, follow these steps:

1 Launch the Administration Console in a web browser:

a Launch the following URL:

http://<*SHR_Server_FQDN*>**:21411/BSMRApp**

b Type **`administrator`** in the **Login Name** field and click **Log In** to continue. The Home page opens.

If you use any other user account to access the Administration Console, make sure that the user account has administrator privileges.

2 On the left pane, click **Administration**, and then click **Deployment Manager**. The Deployment Manager page opens.

3 Select the Content Packs that are highlighted with the icon in the Installed Version column, and then click **Install/Upgrade**.

9 Setting Up SHR for Local and Remote Data Collection

After installing the Content Packs, you must configure SHR to collect data with Local Data Collector (collector that exists with SHR server) or Remote Data Collector (collector that collects data from remote data sources).

The configuration of both Local and Remote Collector depends on the type of deployment scenario and topology source you have configured for SHR.

The data collection configuration tasks are organized into the following categories:

- If you have installed SHR in the HPOM deployment scenario, see Setting Up Data Collection in the HPOM Deployment Scenario on page 108.
- If you have installed SHR in the BSM Service and Operations Bridge deployment scenario, see Data Collection in the BSM Service and Operations Bridge Deployment Scenario on page 116.
- If you have installed SHR in the Application Performance Management deployment scenario, see Setting Up Data Collection in the Application Performance Management Deployment Scenario on page 129.
- If you have installed SHR in the VMware vCenter deployment scenario, see Setting Up Data Collection in the VMware vCenter Deployment Scenario on page 133.

Setting Up Data Collection in the HPOM Deployment Scenario

You must configure the following data collectors in SHR:

- HPOM database collector to retrieve events and messages from the HPOM database and collect data from the various nodes.
- HP Performance Agent collector to collect data of enterprise applications, database, and system resources from the various managed nodes.

Configure Enterprise Application Data Sources

You must configure the data sources to provide data for the various Content Packs that you have installed.

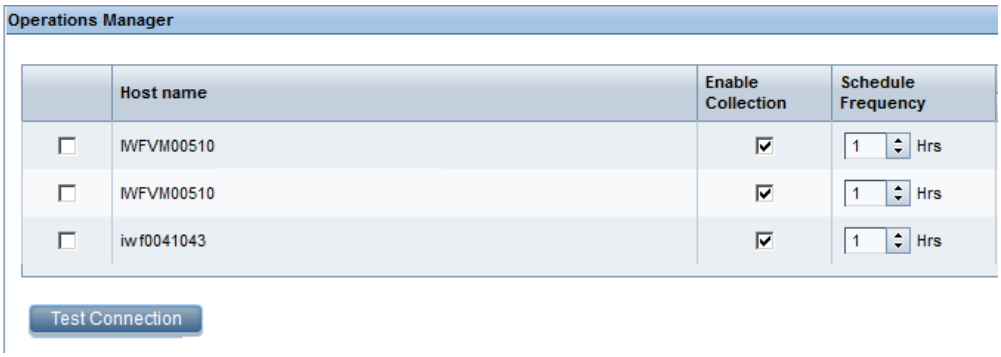
Configure the HPOM Database Connection

If you have installed the HPOM Content Pack and created the topology source connection for HPOM on the Service Definition page, the same data source connection appears on the Operations Manager page. You not do need to create a new data source connection. You can test the existing connection and save it.

However, updating the data source connection on the Service Definition page does not update the connection details on the Operations Manager page.

To configure the database connection:

1. In the Administration Console, click **Collection Configuration** → **Operations Manager**. The Operations Manager page opens.



2. Select the check box next to the host name and then click **Test Connection** to test the connection.
3. Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

   You can configure additional HPOM data sources by clicking the **Create New** button. You can modify a specific data source connection by clicking **Configure**.
4. To change the HPOM data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 1 and 24 hours in the **Hrs** box.
5. Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

Modify an HPOM data source connection

Following are the steps to modify an HPOM data source connection:

In the Administration Console, click **Collection Configuration** → **Operations Manager**. The Operations Manager page opens.

6 Click **Configure**. The Connection Parameters dialog box opens.

If you are using the database method of authentication to connect to the HPOM database server, you must provide the user details that have the select and connect permissions for the **openview** database here.

7 In the Connection Parameters dialog box, type the following values:

Host name	Address (IP or name) of the HPOM database server.
Port	Port number to query the HPOM database server. The default port is 1433 if SQL Server is the database type and 1521 if Oracle is the database type.
Database Instance	System Identifier (SID) of the HPOM database instance. The default database instance is OVOPS. If MSSQL Server is configured to use default (unnamed) database instance, leave this field empty.
Database type	The type of database engine that is used to create the HPOM database. It can either be Oracle or MSSQL.
Windows Authentication	If you have selected MSSQL as the database type, you have the option to enable Windows authentication for MSSQL, that is, the user can use the same credentials to access SQL Server as that of the Windows system hosting the database.
User name	Name of the HPOM database user. If the Windows Authentication option is selected, this field is disabled.
Password	Password of the HPOM database user. If the Windows Authentication option is selected, this field is disabled.
Collection Station	To specifies whether it is Local or installed on a remote system.

For information about the database host name, port number, and SID, contact your HPOM database administrator.

8 Click **OK**.

9 Click **Test Connection** to test the connection.

10 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

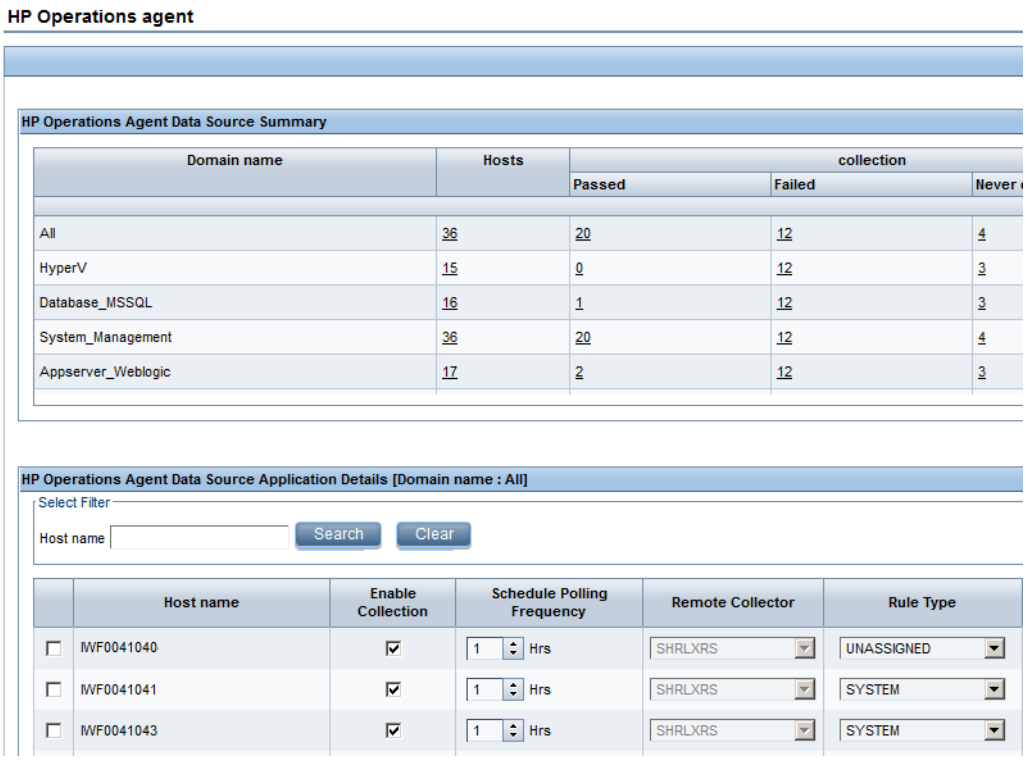
For more information about configuring HPOM data source connections, see the *HP Service Health Reporter Online Help for Administrators* topic, Managing HPOM data collection.

Configure the HP Operations Agent Data Sources

In the HPOM deployment scenario, you do not need to create new HP Operations agent data source connections because, by default, all the nodes on which HP Operations agents are installed are automatically discovered when the topology information is collected. These HP Operations agent data sources or nodes are listed in the HP Operations agent Data Source page of the Administration Console.

To view the list of HP Operations agent data sources:

1 In the Administration Console, click **Collection Configuration** → **HP Operations Agent**. The HP Operations agent page opens.



2 To view detailed information about the HP Operations agent data sources, click the view name or the number in the HP Operations Agent Data Source Summary table. The PA Data Source Details table appears.

3 To change the data collection schedule for one or more hosts, specify a polling time between 1 and 24 hours in the **Hrs** box in the **Schedule Polling Frequency** column.

4 If you have installed collectors on remote systems, you can choose either the local collector or a remote collector in the Remote Collector column.

If you have installed collectors on remote systems, you must assign a collector (local or remote) to each agent node. If you skip this step despite installing remote collectors, SHR will not receive any data from agent nodes; all the nodes will remain in the unassigned state.

To assign a remote collector to collect the agent data, select one of the available remote systems in the drop-down list.

To use the collector that was installed by default on the SHR system, select local.

5 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

6 Close the Administration Console.

If the HP Performance Agent node in your time zone has undergone a Daylight Saving Time (DST) transition, SHR reports created on a period across the DST transition might display gaps in data.

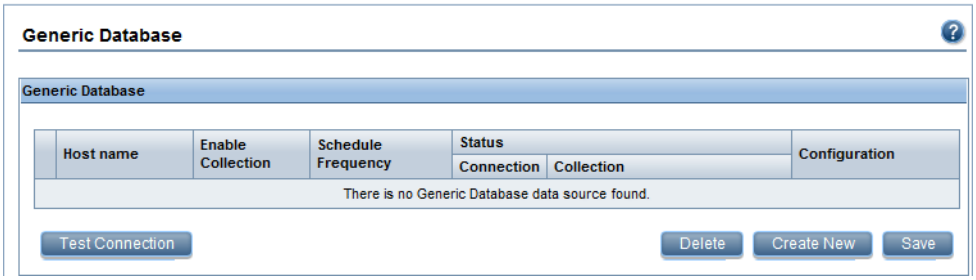
For more information about configuring HP Operations agent data source connections, see the *HP Service Health Reporter Online Help for Administrators* topic, *Managing PA Data Source data collection*.

Configure the Network Data Source Connection

If you have installed the Network Content Pack, you must configure SHR to collect network-related data from NNMi. NNMi uses the Network Performance Server (NPS) as the repository for network performance data. Using the Generic Database page in the Administration Console, you can configure SHR to collect the required data from the NPS. This page also allows you to configure connections to generic databases that use Sybase, Oracle, or SQL Server as the database system.

To configure the NPS data source connection:

1 In the Administration Console, click **Collection Configuration** → **Generic Database**. The Generic Database page opens.



2 Click **Create New** to create the NPS data source connection. The Connection Parameters dialog box opens.

3 Specify or type the following values in the **Connection Parameters** dialog box:

Host name	-	Address (IP or FQDN) of the NPS database server.
Port	-	Port number to query the NPS database server.
TimeZone	-	The time zone in which the database instance is configured.
Database type	-	The type of database engine that is used to create the NPS database.
Domain	-	Select the domain(s) for which you want SHR/Remote Collector to collect data from the selected database type.
URL	-	The URL of the database instance.

Host name	-	Address (IP or FQDN) of the NPS database server.
User name	-	Name of the NPS database user.
Password	-	Password of the NPS database user.
Collection Station	-	To specify whether it is a Local / Remote collector.

Domain appears only after the installation of NetworkPerf_ETL_PerfiSPI9.10 or NetworkPerf_ETL_PerfSPI9.20 content pack. The content pack version depends on the **HP Network Node Manager iSPI Performance for Metrics Software** version installed in your environment.

4 Click **OK**.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

7 To change the data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 1 and 24 hours in the **Hrs** box.

8 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

Modify A Generic Database Connection

1 In the Administration Console, click **Collection Configuration** → **Generic Database**. The Generic Database page opens.

2 Click **Configure**.The Connection Parameters dialog box opens.

3 In the Connection Parameters dialog box, type the following values:

Host name	Address (IP or name) of the generic database server.
Port	Port number to query the database server.
TimeZone	The time zone under which the database instance is configured.
Database type	The type of database engine that is used to create the generic database. It can be Sybase IQ, Sybase ASE, Oracle, or MSSQL.
Domain	Select the domain(s) for which you want SHR to collect data from the selected database type.
URL	The URL of the database instance.
User name	Name of the generic database user.
Password	Password of the generic database user.
Collection Station	To specify whether it is a Local / Remote Collector.

4 Click **OK**.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

Data collection for all the newly created data source connections is enabled by default. For more information about configuring network data source connections, see the *HP Service Health Reporter Online Help for Administrators* topic, *Managing collection from generic databases*.

Restart Data Collection Service

If you have configured the Network Data Source connection, then you must restart the data collection service. To restart the data collection service, follow the steps below:

1 Log on to the host system as an administrator.

2 Click **Start** → **Run.** The run dialog box opens.

3 Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.

4 Right-click **`HP PMDB Platform Collection`** and select **Stop** to stop the service.

5 This stops the collection service. Close the services window.

To restart the collection service:

For Windows

1 Log on to the host system as an administrator.

2 Click **Start** → **Run.** The Run dialog box opens.

3 Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.

4 Right-click **`HP PMDB Platform Collection`** and select **Start** to start the service.

5 Collection services are started. Close the window.

For Linux

1 Log on to the host system as root.

2 To stop Data Collection Service, type the following command at the prompt:

```
service HP_PMDB_Platform_Collection stop
```

3 To start Data Collection Service, type the following command at the prompt:

```
service HP_PMDB_Platform_Collection start
```

Configuring VMware vCenter Datasource Connection

You can configure VMware vCenter as the data collection source to collect virtualization metrics in the HPOM deployment scenario.

Perform the following steps:

1 In the Administration Console, click **Collection Configuration** → **VMware vCenter**. The VMware vCenter Data Source page opens.

2 Click **Create New** to test the connection. The **Connection Parameters** dialog box opens.

3 In the **Connection Parameters** dialog box, type the following values:

Host name	IP address or FQDN of the VMware vCenter database server.
User name	Name of the VMware vCenter database user.
Password	Password of the VMware vCenter database user.
Collection Station	To specify whether it is a Local / Remote Collector.

You can configure additional VMware vCenter data sources using step 2 on page 113 for each VMware vCenter connection that you wish to create.

4 To change the VMware vCenter data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 5 and 60 minutes in the **Mins** box.

5 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

6 In the VMware vCenter server, grant the user the following permissions:

— Set the **datastore** permission to **Browse Datastore**.

— Set the **datastore** permission to **Low Level File Operations**.

— Set the **sessions** permission to **Validate session**.

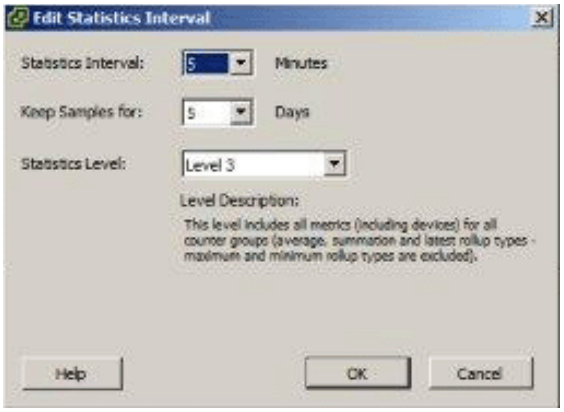
7 In the VMware vCenter server, set the Statistics Level:

a In the vSphere Client, click **Administration → vCenter Server Settings**.

b In the vCenter Server Settings window, click **Statistics**. The Statistics Interval page displays the time interval after which the vCenter Server statistics will be saved, the time duration for which the statistics will be saved and the statistics level.

c Click **Edit.**

d In the **Edit Statistics Interval** window, set the **Statistics Interval** from the drop-down list. For the statistics level that you select, the Edit Statistics Interval window displays the type of statistics which will be collected for that level. You must set the minimum statistic level as 2.



Modifying a VMware vCenter data source connection

1. In the Administration Console, click **Collection Configuration** → **VMware vCenter**. The VMware vCenter page opens.
2. Click **Configure**. The **Connection Parameters** dialog box opens.
3. In the **Connection Parameters** dialog box, type the following values:

Host name	IP address or FQDN of the VMware vCenter database server.
User name	Name of the VMware vCenter database user.
Password	Password of the VMware vCenter database user.
Collection Station	To specify whether it is a Local / Remote Collector.

4. Click **OK**.
5. Click **Test Connection** to test the connection.
6. Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.
7. To change the data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 5 and 60 minutes in the **Mins** box.
8. Select the check box in the **Enable Collection** column to enable data collection. Clear to stop data collection.
9. Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

After installing the Content Packs and configuring SHR to collect data, you must wait for at least three hours before you can view the data in the data store tables.

SHR starts to collect the historical data from the various configured data sources in the HPOM managed environment and generates the required reports. For more information about how to view the reports, see the *HP Service Health Reporter Online Help for Users*.

Data Collection in the BSM Service and Operations Bridge Deployment Scenario

You must configure the following data collectors in SHR:

- The database collector to collect historical synthetic transaction monitoring and real user monitoring data from the Profile database and the Management database. It also collects events, messages, availability, and performance Key Performance Indicators (KPIs) from the databases of the data source such as Profile database, Management database, HPOM, and HP OMi databases.
- The HP Performance Agent collector to collect system performance metrics and data related to applications, databases, and system resources. The data is collected by the HP Performance Agents that are installed on the managed nodes.

Configure Enterprise Application Data Sources

You can use the Administration Console to configure the data sources from where SHR will collect data for the various Content Packs you installed.

Configure the Profile Database Data Source Connections

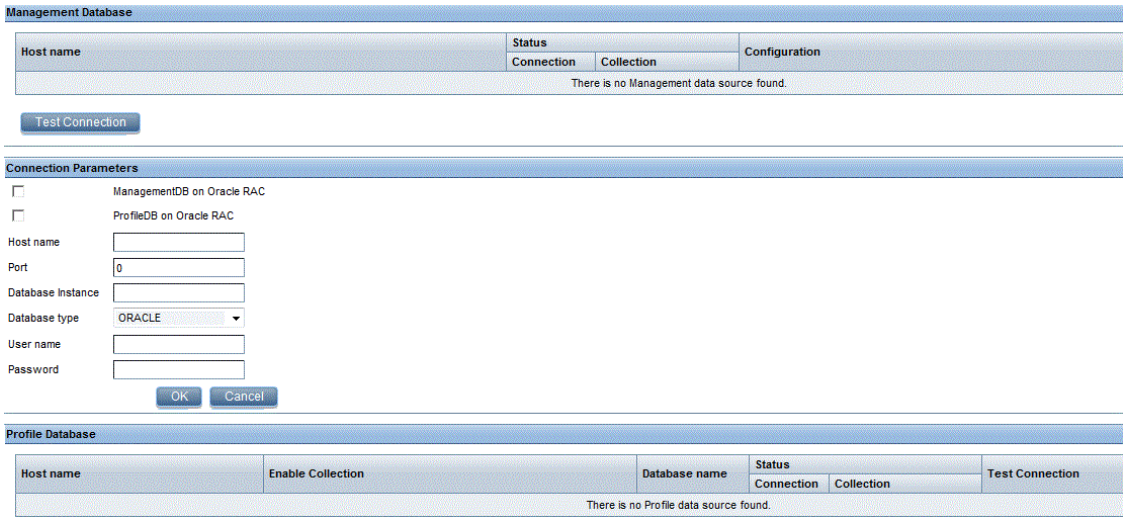
In your HP BSM deployment, you might have set up multiple Profile databases for scaling because one database might not be enough to store all the data. You may also require multiple Profile database to store critical and non-critical data. The information about the various Profile databases deployed in your environment is stored in the Management database.

To configure the multiple Profile database connections, you only need to configure the Management database on the ManagementDB / ProfileDB page. After the Management database data source connection is configured, SHR discovers all the deployed Profile databases and lists them on the ManagementDB / ProfileDB page.

Perform the following steps:

1 In the Administration Console, click **Collection Configuration** → **ManagementDB / ProfileDB**. The ManagementDB / ProfileDB page opens.

2 Under **Management Database**, click **Create New**. The Connection Parameters dialog box opens.



3 Type the following values in the **Connection Parameters** dialog box:

Host Name — Name of the Management database server. Host name is not displayed when Management DB on Oracle RAC is selected or when both Management DB on Oracle RAC and Profile DB on Oracle RAC are selected.

Port - Port number to query the Management database server. Port number is not displayed when Management DB on Oracle RAC is selected.

Database instance - System Identifier (SID) of the Management database instance. Database instance is not displayed when Management DB on Oracle RAC is selected. If MSSQL Server is configured to use default (unnamed) database instance, leave this field empty.

For information about the database host name, port number, and SID, contact your database administrator.

Database type - The type of database engine that is used to create the Management database. It can either be Oracle or MSSQL.

Windows Authentication - If you have selected MSSQL as the database type, you have the option to enable Windows Authentication for MSSQL; that is, the user can use the same credentials to access SQL Server as that of the Windows system hosting the database.

Management DB on Oracle RAC — This option appears only if you have selected Oracle as the database type. If only ManagementDB on Oracle RAC is selected and Profile DB on Oracle RAC is not selected, the profile database details are configured automatically.

ProfileDB on Oracle RAC — This option appears only if you have selected Oracle as the database type. Configure the profile database parameters only when this option is selected. You have to configure Profile DB manually from the Profile DB page on the Administration Console of SHR.

Database name - Name of the database. This field appears only if MSSQL is selected as the database type.

Service Name		This option appears only if Management DB on Oracle RAC is selected.
User name	-	Name of the Management database user, which was specified in the BSM Configuration Wizard when setting up the Management database. If the Windows Authentication option is selected, this field is disabled and appears empty.
Password	-	Password of the Management database user, which was specified in the BSM Configuration Wizard when setting up the Management database. If the Windows Authentication option is selected, this field is disabled and appears empty.

Service name is displayed instead of the **Host name** when users select either Management DB on Oracle RAC or both Management DB on Oracle RAC and Profile DB on Oracle RAC.

4 Click **OK**.

You can only create a single Management database data source connection. After the connection is created, the **Create New** button is disabled by default. Since this configuration is a one-time setup, make sure that you type in the correct values.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes made on this page. A `Saved Successfully` message appears in the Information message pane.

After you save the newly created Management database connection, SHR (local collector or remote collector) retrieves the Profile database information from the Management database data source and lists all the existing Profile database data sources under the Profile Database section of the page.

Data collection for the Profile database data source is enabled by default. In addition, the collection frequency is scheduled for every one hour.

In case of a Remote Collector, the collection station has to be selected from the **Database type** drop down box provided in the Profile Database section of the page.

For more information about configuring Profile database data source connections, see the *HP Service Health Reporter Online Help for Administrators* topic, *Managing ManagementDB / ProfileDB data collection*.

Enable KPI Data Collection for Service Health CIs

KPIs are high-level indicators of a CI's performance and availability. The KPI data pertaining to certain logical Service Health CIs, such as Business Service, Business Application, Business Process, and Host, are logged by default in the Profile database. SHR collects this data from the database for reporting.

However, the KPI data for other CI types are not automatically logged in the Profile database. To enable the logging of the KPI data for these CI types, you must configure the CIs in the HP BSM. For more information, see the *Persistent Data and Historical Data* section of the *HP Business Service Management - Using Service Health* guide. This guide is available at the following URL for the product, *Application Performance Management (BAC)*:

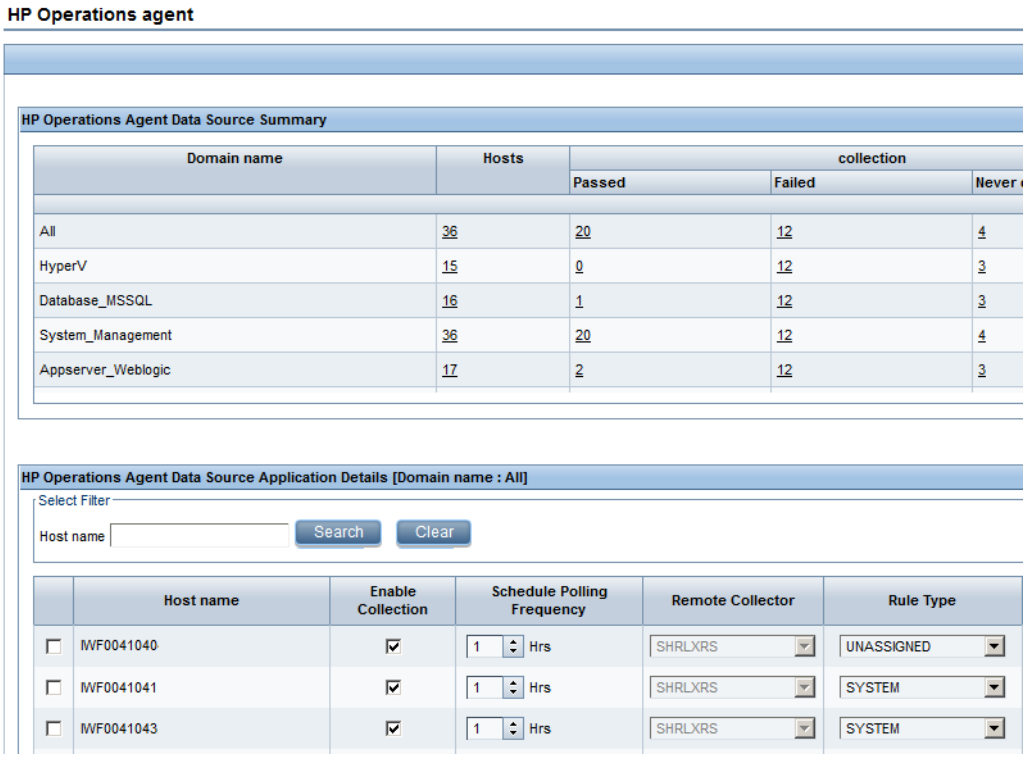
http://h20230.www2.hp.com/selfsolve/manuals

Configure the HP Performance Agent Data Source Connections

In the RTSM deployment scenario, you do not need to create new HP Performance Agent data source connections because, by default, all the nodes on which HP Performance Agent is installed are automatically discovered when the topology information is collected. These HP Performance Agent data sources or nodes are listed in the PA Data Source page of the Administration Console.

To view the list of HP Performance Agent data sources:

1 In the Administration Console, click **Collection Configuration** → **HP Operations agent**. The HP Operations Agent Data Source page opens.



2 To view detailed information about the HP Operations agent data sources, click the view name or the number in the HP Operations Agent Data Source Summary table. The HP Operations Agent Data Source Details table appears.

3 To change the data collection schedule for one or more hosts, specify a polling time between 1 and 24 hours in the **Hrs** box in the **Schedule Polling Frequency** column.

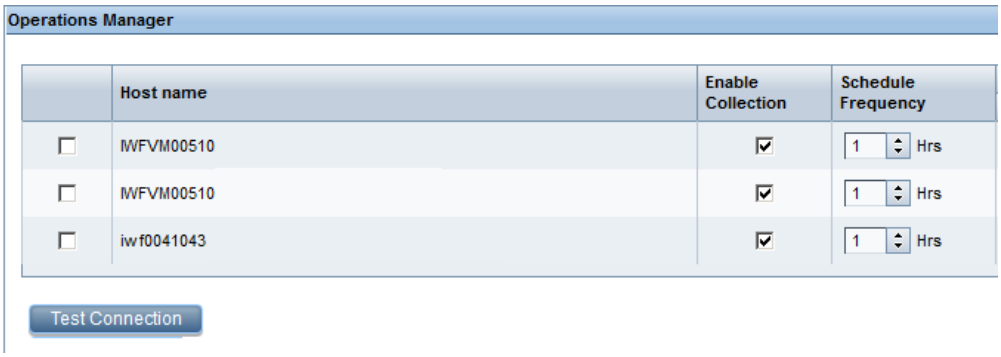
4 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

For more information about configuring HP Operations agent data source connections, see the *HP Service Health Reporter Online Help for Administrators* topic, *Managing PA Data Source data collection*.

Configure the HPOM Database Connection

If you have installed the HPOM Content Pack, perform the following steps:

1 In the Administration Console, click **Collection Configuration** → **Operations Manager**. The Operations Manager page opens.



2 Click **Create New** to create a new data source connection. The Connection Parameters dialog box opens.

3 In the **Connection Parameters** dialog box, type the following values:

> If you are using the database method of authentication to connect to the HPOM database server, you must provide the user details that have the select and connect permissions for the “openview” database here.

Host name - IP address or FQDN of the HPOM database server.

Port - Port number to query the HPOM database server.

The default port is 1433 if SQL Server is the database type and 1521 if Oracle is the database type.

To check for the port number, see Checking for the HPOM Server Port Number on page 92.

Database Instance - System identifier (SID) of the HPOM database instance. The default database instance is OVOPS. If MSSQL Server is configured to use default (unnamed) database instance, leave this field empty.

Database type - The type of database engine that is used to create the HPOM database. It can either be Oracle or MSSQL. The name is openview.

Windows Authentication - If you select MSSQL as the database type, you have the option to enable Windows Authentication for MSSQL; that is, the user can use the same credentials to access SQL Server as that of the Windows system hosting the database.

User name - Name of the HPOM database user. If the Windows Authentication option is selected, this field is disabled and appears empty.

Password - Password of the HPOM database user. If the Windows Authentication option is selected, this field is disabled and appears empty.

Collection Station - To specify whether it is a Local / Remote Collector

4 Click **OK**.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

You can configure additional HPOM data sources by performing the steps, step 2 on page 120. To modify a specific data source connection click on **Configure**.

7 To change the HPOM data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 1 and 24 hours in the **Hrs** box.

8 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

To modify an existing HPOM data source connection, see Modify an HPOM data source connection on page 109

For more information about configuring HPOM data source connections, see the *HP Service Health Reporter Online Help for Administrators* topic, *Managing HPOM data collection*.

Configure the HP OMi Database Connection

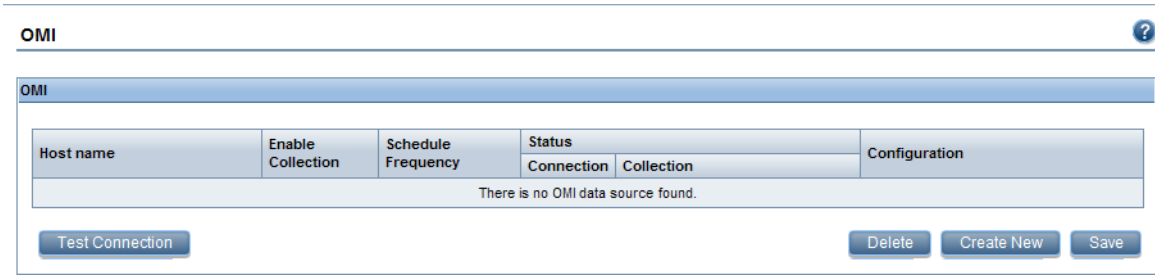
If you install the HP OMi Content Pack, you must configure the HP OMi database connection for data collection.

Before you create a new HP OMi data source connection, make sure that a data source connection for the Management database exists on the Management DB / Profile DB page. This data connection is required to retrieve Assigned User/Group information for HP OMi, which is stored in the Management database.

If you have one or more OMi setups in your environment, you must configure the OMi data source that belongs to the HP BSM RTSM that was configured as the topology source.

To configure the HP OMi data source connections:

1 In the Administration Console, click **Collection Configuration** → **OMI**. The OMI page opens.



2 Click **Create New** to create a new HP OMi data source connection. The Connection Parameters dialog box opens.

3 Specify or type the following values in the **Connection Parameters** dialog box:

Host name	-	Address (IP or FQDN) of the HP OMi database server.
Port	-	Port number to query the HP OMi database server.
Database instance	-	System Identifier (SID) of the HP OMi database instance. If MSSQL Server is configured to use default (unnamed) database instance, leave this field empty. For information about the database hostname, port number and SID, contact your HP OMi database administrator.
Database type	-	The type of database engine that is used to create the HP OMi database. It can either be Oracle or MSSQL.
Windows Authentication	-	If you selected MSSQL as the database type, you have the option to enable Windows Authentication for MSSQL; that is, the user can use the same credentials to access SQL Server as that of the Windows system hosting the database.
Database name	-	Name of the database. This field appears only if MSSQL is selected as the database type.
User name	-	Name of the HP OMi database user. If the Windows Authentication option is selected, this field is disabled and appears empty.
Password	-	Password of the HP OMi database user. If the Windows Authentication option is selected, this field is disabled and appears empty.
Collection Station	-	To specify whether it is a Local / Remote Collector

4 Click **OK**.

You can create only one HP OMi data source connection. After the connection is created, the **Create New** button is disabled by default. Make sure that you type in the correct values.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

7 To change the HP OMi data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 1 and 24 hours in the **Hrs** box.

8 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

Modify An HP OMi Data Source Connection

1 In the **Administration Console**, click **Collection Configuration** → **OMI**. The OMI page opens.

2 For a specific host, click **Configure**. The **Connection Parameters** dialog box appears.

3 In the **Connection Parameters** dialog box, type the following values:

Host name	Address (IP or name) of the HP OMi database server.
Port	Port number to query the HP OMi database server.
Database type	The type of database engine that is used to create the HP OMi database. It can either be Oracle or MSSQL.
Database instance	System Identifier (SID) of the HP OMi database instance. If MSSQL Server is configured to use default (unnamed) database instance, leave this field empty.
Windows Authentication	If you have selected MSSQL as the database type, you have the option to enable Windows authentication for MSSQL, that is, the user can use the same credentials to access SQL Server as that of the Windows system hosting the database.
Database name	Name of the database. This field appears only if MSSQL is selected as the database type. If MSSQL Server is configured to use default database instance, leave this field empty.
User name	Name of the HP OMi database user. If the Windows Authentication option is selected, this field is disabled.
Password	Password of the HP OMi database user. If the Windows Authentication option is selected, this field is disabled.
Collection Station	To specify whether it is a Local / Remote Collector

For information about the database hostname, port number, and SID, contact your HP OMi database administrator.

4 Click **OK**

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

7 To change the HP OMi data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 1 and 24 hours in the **Hrs** box.

8 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

Data collection for all the newly created data source connections is enabled by default. For more information about configuring HP OMi data source connections, see the *HP Service Health Reporter Online Help for Administrators* topic, *Managing HP OMi data collection*.

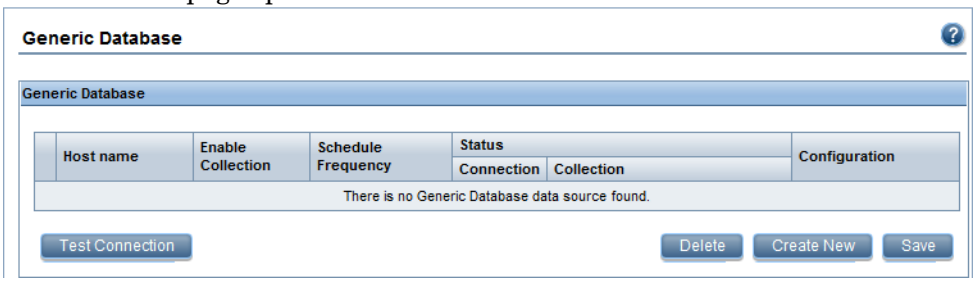
SHR starts to collect the historical data from the various configured data sources and generates the necessary reports. For more information about how to view the reports, see the *HP Service Health Reporter Online Help for Users*.

Configure the Network Data Source Connection

If you have install the Network Content Pack, you must configure SHR (Local Data Collector) or Remote Collector to collect network-related data from NNMi. NNMi uses the NPS as the repository for network performance data. Using the Generic Database page in the Administration Console, you can configure SHR to collect the required data from the NPS. This page also allows you to configure connections to generic databases that use Sybase, Oracle, or SQL Server as the database system.

To configure the NPS data source connection:

1 In the Administration Console, click **Collection Configuration** → **Generic Database**. The Generic Database page opens.



2 Click **Create New** to create the NPS data source connection. The Connection Parameters dialog box opens.

3 Specify or type the following values in the **Connection Parameters** dialog box:

Host name	-	Address (IP or FQDN) of the NPS database server.
Port	-	Port number to query the NPS database server.
TimeZone	-	The time zone in which the database instance is configured.
Database type	-	The type of database engine that is used to create the NPS database.
Domain	-	Select the domain(s) for which you want SHR to collect data from the selected database type.
URL	-	The URL of the database instance.
User name	-	Name of the NPS database user.
Password	-	Password of the NPS database user.
Collection Station	-	To specify whether it is a Local / Remote Collector.

Domain appears only after the installation of NetworkPerf_ETL_PerfiSPI9.10 or NetworkPerf_ETL_PerfSPI9.20 content pack. The content pack version depends on the **HP Network Node Manager iSPI Performance for Metrics Software** version installed in your environment.

4 Click **OK**.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

7 To change the data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 1 and 24 hours in the **Hrs** box.

8 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

Data collection for all the newly created data source connections is enabled by default. For more information about configuring network data source connections, see the *HP Service Health Reporter Online Help for Administrators* topic, *Managing collection from generic databases*.

Modify a Generic Database Connection

1 In the Administration Console, click **Collection Configuration** → **Generic Database**. The Generic Database page opens.

2 Click **Configure**.The Connection Parameters dialog box opens.

3 In the Connection Parameters dialog box, type the following values:

Host name	Address (IP or name) of the generic database server.
Port	Port number to query the database server.
TimeZone	The time zone under which the database instance is configured.
Database type	The type of database engine that is used to create the generic database. It can be Sybase IQ, Sybase ASE, Oracle, or MSSQL.
Domain	Select the domain(s) for which you want SHR to collect data from the selected database type.
URL	The URL of the database instance.
User name	Name of the generic database user.
Password	Password of the generic database user.
Collection Station	To specify whether it is a Local / Remote Collector

4 Click **OK**.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

Restart Data Collection Service

If you have configured the Network Data Source connection, then you must restart the data collection service. To restart the data collection service, follow the steps below:

1 Log on to the host system as an administrator.

2 Click **Start** → **Run.** The run dialog box opens.

3 Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.

4 Right-click **HP PMDB Platform Collection** and select **Stop** to stop the service.

5 This stops the collection service. Close the services window.

To restart the collection service:

1 Log on to the host system as an administrator.

2 Click **Start** → **Run.** The run dialog box opens.

3 Type **services.msc** in the **Open** field, and then press **ENTER**. The Services window opens.

4 Right-click **HP PMDB Platform Collection** and select **Start** to start the service.

5 Collection services are started. Close the window.

For Linux

Type the following command at the prompt and press enter

```
service HP_PMDB_Platform_Collection restart
```

Configuring VMware vCenter Datasource connection

You can configure VMware vCenter as the data collection source to collect virtualization metrics when RTSM is the topology source.

To configure VMware vCenter Datasource connection,

1 In the Administration Console, click **Collection Configuration** → **VMware vCenter**. The VMware vCenter Data Source page opens.

2 Click **Create New** to test the connection. The **Connection Parameters** dialog box opens.

3 In the **Connection Parameters** dialog box, type the following values:

Host name	IP address or FQDN of the VMware vCenter database server.
User name	Name of the VMware vCenter database user.
Password	Password of the VMware vCenter database user.
Collection Station	To specify whether it is a Local / Remote Collector.

You can configure additional VMware vCenter data sources by performing step 2 on page 120.

4 To change the VMware vCenter data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 5 and 60 minutes in the **Mins** box.

5 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

6 In the VMware vCenter server, grant the user the following permissions:

— Set the **datastore** permission to **Browse Datastore**.

— Set the **datastore** permission to **Low Level File Operations**.

— Set the **sessions** permission to **Validate session**.

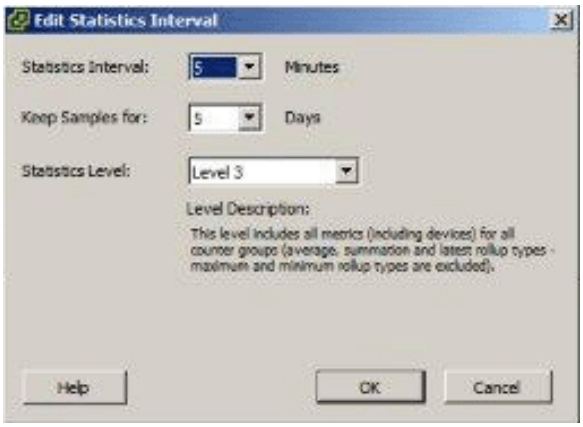
7 In the VMware vCenter server, set the Statistics Level:

a In the vSphere Client, click **Administration → vCenter Server Settings**.

b In the vCenter Server Settings window, click **Statistics**. The Statistics Interval page displays the time interval after which the vCenter Server statistics will be saved, the time duration for which the statistics will be saved and the statistics level.

c Click **Edit.**

d In the **Edit Statistics Interval** window, set the **Statistics Level** from the drop-down list. For the statistics level that you select, the Edit Statistics Interval window displays the type of statistics which will be collected for that level. You must set the minimum statistic level as 2.



Modifying A VMware vCenter Data Source Connection

1 In the Administration Console, click **Collection Configuration → VMware vCenter**. The VMware vCenter page opens.

2 Click **Configure**. The **Connection Parameters** dialog box opens.

3 In the **Connection Parameters** dialog box, type the following values:

Host name	IP address or FQDN of the VMware vCenter database server.
User name	Name of the VMware vCenter database user.
Password	Password of the VMware vCenter database user.
Collection Station	To specify whether it is a Local or installed on a remote system.

4 Click **OK**.

5 Click **Test Connection** to test the connection.

6 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

7 To change the data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 5 and 60 minutes in the **Mins** box.

8 Select the check box in the **Enable Collection** column to enable data collection. Clear to stop data collection.

9 Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

After installing the Content Packs and configuring SHR to collect data in the RTSM deployment scenario, you must wait for at least three hours before you can view the data in the data store tables.

Setting Up Data Collection in the Application Performance Management Deployment Scenario

In the Application Performance Management environment, you need to configure the database collector to collect historical synthetic transaction monitoring and real user monitoring data from the Profile database and the Management database. System-related data is collected from the CODA agent running on the SiteScope server or BSM profile database.

The tasks for configuring SHR in this deployment scenario is similar to that of the BSM Service and Operations Bridge deployment scenario, with a few changes. You do not need to configure the HP Performance Agent, HPOM, Network, and HP OMi data source connections in the Administration Console.

To configure the multiple Profile database connections to provide RUM and BPM data, see Configure the Profile Database Data Source Connections on page 116.

After installing the Content Packs and configuring SHR to collect data in the RTSM deployment scenario, you must wait for at least three hours before you can view the data in the data store tables.

SHR starts to collect the historical data from the various configured data sources and generates the necessary reports. For more information about how to view the reports, see the *HP Service Health Reporter Online Help for Users*.

Configuring HP Performance Agent Data Collection in a Firewall Environment or Through a Proxy

If a network firewall exists, you must configure HP Performance Agents to communicate with SHR through the firewall. You can also configure HP Performance Agent data collection through a proxy server.

For steps to configure communication between SHR and the HP Performance Agent managed nodes in a firewall environment or through a proxy server, see the *Operations Manager Firewall Concepts and Configuration Guide*. This guide is available at the following URL:

http://h20230.www2.hp.com/selfsolve/manuals

Configuring the HP Operations Agent for Data Collection in Secure Mode

The HP Operations agent supports HTTP 1.1-based communications interface for data access between client and server applications. However, you can also configure data collection from HP Operations agent-managed nodes via the secure (HTTPS) mode.

For HTTPS communication, the agents must support CODA 8.xx; otherwise, HTTP or DCE method will be used. Because HTTPS communication is certificate-based, certificates must be installed on the SHR system and on the managed nodes. The SHR system acts as a certificate client and the certificate server (certificate authority) is provided by the HP management server. The client certificates must be exchanged to establish HTTPS communication.

If SSL_SECURITY option is set to ALL or REMOTE in the [coda] namespace on the HP Performance Agent systems, HTTP communication fails. Only HTTPS is supported.

For the steps to install the certificate, see the *HP Operations Manager for Windows Certificate Management in Environments with Multiple HP Software Products* white paper. For additional information, see the *HP Operations Manager for Unix HTTPS Agent Concepts and Configuration Guide*. These documents are available at the following URL:

http://h20230.www2.hp.com/selfsolve/manuals

Start the HP OpenView Ctrl Service and the HP PMDB Platform Collection Service

After configuring the HTTPS communication, perform the following steps:

On Windows

1. On the SHR system, click **Start** → **Run**. The Run dialog box opens.
2. Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.
3. On the right pane, right-click **HP OpenView Ctrl Service**, and then click **Start**.
4. Right-click **HP_PMDB_Platform_Collection**, and then click **Restart**.
5. Close the Services window.

For Linux

Type the following command at the prompt and press enter

```
service HP_PMDB_Platform_Collection restart
```

Configuring the Report Drill Feature Settings

SHR includes the SAP BusinessObjects InfoView portal that enables you to view the generated reports. SAP BusinessObjects InfoView provides a Drill feature that you can use to view information at a daily, monthly, and yearly level. However, when drilling up or down within a report, sections of the report might not display the relevant data for the specified level. This is because the report blocks lose the synchronization between the Drill options in the report. To ensure that the reports display the correct data, you need to re-establish the synchronization by configuring the SAP BusinessObjects InfoView Preference settings.

To configure the Drill feature settings:

1. Launch the Administration Console in a web browser:
   a. Launch the following URL:

      http://<*SHR_Server_FQDN*>**:21411/BSMRApp**

   b. Type **`administrator`** in the **Login Name** field and click **Log In** to continue. The Home page opens.

2. In the Administration Console, click **Administration** → **SAP BOBJ**. The SAP BOBJ page opens.
3. Click **Launch InfoView** to open SAP BusinessObjects InfoView. The BusinessObjects InfoView Login page opens.
4. Type the SAP BusinessObject InfoView user name and password in the **User Name** and **Password** field, respectively.
5. Click **Log On**. The SAP BusinessObjects InfoView portal opens.
6. Under **Personalize**, click **Preferences**. The Preferences page opens.
7. Click **Web Intelligence**.
8. Under **Drill options**, select the **Synchronize drill on report blocks** option.
9. Click **OK**.
10. Close the web browser.

Creating a Password for the SHR Administrator Account

If you want to create a password for the default Administrator user name, perform the following steps:

1. Launch the Administration Console in a web browser:
   a. Launch the following URL:

      http://<*SHR_Server_FQDN*>**:21411/BSMRApp**

   b. Type **`administrator`** in the **Login Name** field and click **Log In** to continue. The Home page opens.
2. In the Administrator Console, click **Administration** → **SAP BOBJ**. The SAP BOBJ page opens.
3. Access the SAP BOBJ Central Management Console (CMC) from the SAP BOBJ page.
4. On the CMC login screen, in the **User Name** field, type **`Administrator`**.
5. Click **Log On**. The CMC Home screen opens.
6. Click **Users and Groups**. The Users and Groups screen opens.
7. On the right pane, double-click **Administrators**.
8. Right-click **Administrator** and then click **Properties**. The Properties:Administrator dialog box opens.
9. Under **Enterprise Password Settings**, in the **Password** field, type a new password.
10. In the **Confirm** field, retype the password. You can change the Administrator user name, if required, and specify other necessary details on this screen.
11. Click **Save & Close** to accept the changes.
12. Click **Log Out** to exit the Central Management Console.

Displaying Privacy Information on the Login Screen of the Web Service

If you want to display privacy policy information for the system that you are using to access the Administration Console web service, you can manually customize the Login screen by editing the `Privacy.html` file. To customize the Login screen, follow these steps:

1. On the SHR system, browse to `%PMDB_HOME%\adminServer\webapps\BSMRApp`.
2. Open the `Privacy.html` file in a Text Editor.
3. Follow the instructions provided in the file to edit the content. In this file, you can:
   - Provide a header message for the Login screen.
   - Provide an image of the company logo to be displayed on the Login screen. The logo image must be placed in the `%PMDB_HOME%\adminServer\images folder`.
   - Provide the privacy message.
4. Save the file. The Login screen displays the company-specific privacy information.

Setting Up Data Collection in the VMware vCenter Deployment Scenario

In the VMware vCenter environment, you must configure the VMware vCenter data collector to collect virtualization metrics from the VMware vCenter data source.

Configuring the VMware vCenter Datasource connection

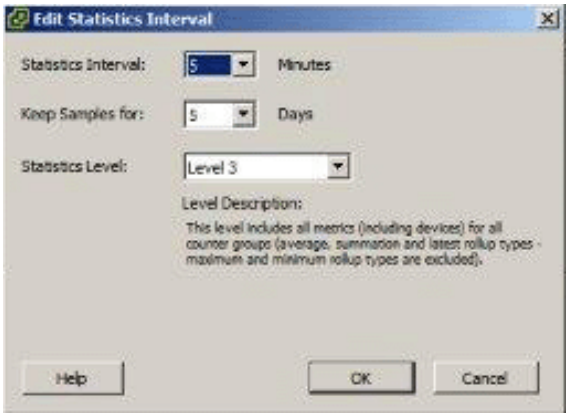
In VMware vCenter deployment scenario, the VMware vCenter sources configured for topology collection are automatically configured by SHR for collecting performance data.

Perform the following steps:

1. In the Administration Console, click **Collection Configuration** → **VMware vCenter**. The VMware vCenter Data Source page opens.
2. Select the check box next to the host name and then click **Test Connection** to test the connection.
3. Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

   You can configure additional VMware vCenter data sources by clicking the **Create New** button.
4. To change the VMware vCenter data polling schedule for one or more hosts, in the **Schedule Frequency** column, specify a polling time between 5 and 60 minutes in the **Mins** box.
5. Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.
6. In the VMware vCenter server, grant the VMware vCenter user the following permissions:
   - Set the **datastore** permission to **Browse Datastore**.
   - Set the **sessions** permission to **Validate session**.
7. In the VMware vCenter server, set the Statistics Level:
   a. In the vSphere Client, click **Administration** → **vCenter Server Settings**.
   b. In the vCenter Server Settings window, click **Statistics**. The Statistics Interval page displays the time interval after which the vCenter Server statistics will be saved, the time duration for which the statistics will be saved and the statistics level.
   c. Click **Edit.**
   d. In the Edit Statistics Interval window, set the **Statistics Interval** from the drop-down list. For the statistics level that you select, the Edit Statistics Interval window displays the type of statistics which will be collected for that level.

Set the minimum statistics interval as 5 minutes.



If multiple VMware vCenter are used for topology collection, then perform the sequence of steps following, step 2 on page 133 for each VMware vCenter connection that you want to create.

Modifying A VMware vCenter Data Source Connection

1. In the Administration Console, click **Collection Configuration** → **VMware vCenter**. The VMware vCenter page opens.
2. Click **Configure**. The **Connection Parameters** dialog box opens.
3. In the **Connection Parameters** dialog box, type the following values:

Host name	IP address or FQDN of the VMware vCenter server.
User name	The valid user name to access the VMware vCenter server.
Password	The valid password to access the VMware vCenter server.
Collection Station	To specify whether it is a Local or installed on a remote system.

4. Click **OK**.
5. Click **Test Connection** to test the connection.
6. Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.
7. To change the data collection schedule for one or more hosts, in the **Schedule Frequency** column, specify a collection time between 5 and 60 minutes in the **Mins** box.
8. Select the check box in the **Enable Collection** column to enable data collection. Deselect to stop data collection.
9. Click **Save** to save the changes. A `Saved Successfully` message appears in the Information message panel.

10 Validating Your Installation

After you install the SHR software and the Content Packs and configure SHR to collect data from the various data sources, verify if the product is working properly.

This chapter covers certain validation tasks that you can perform to verify the success of the installation. After installing and configuring SHR, wait for at least three hours before performing the following validation tasks.

Check the SHR Services

You must check whether the SHR services are running, including the SAP BOBJ and Sybase IQ services.

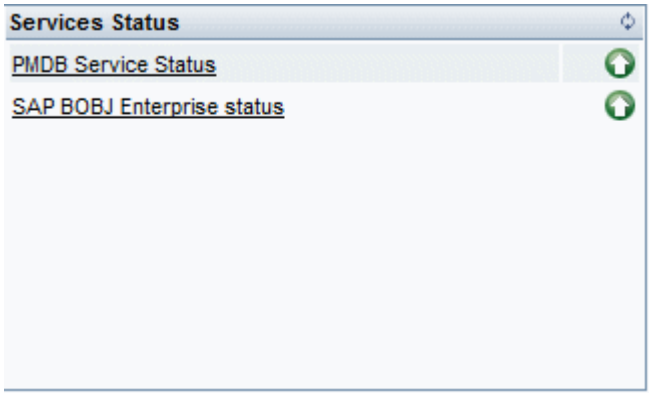
To check for the services in the Administration Console, perform the following steps:

1. Launch the Administration Console in a web browser:
   a. Launch the following URL:

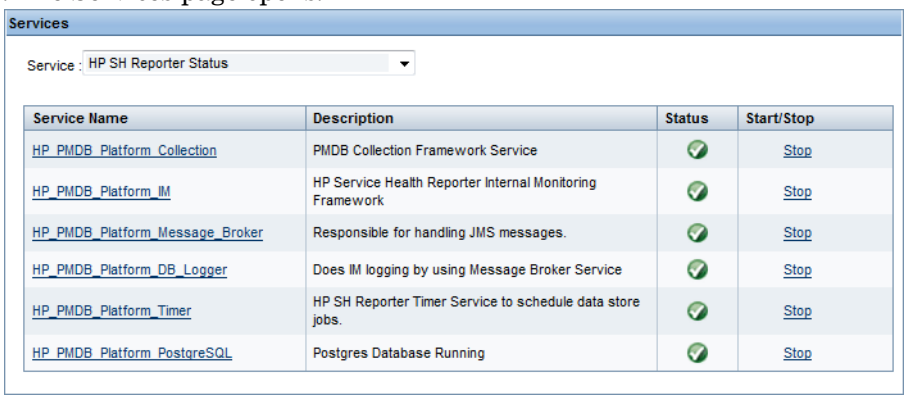
      http://<*SHR_Server_FQDN*>**:21411/BSMRApp**

   b. Log on as **`administrator`**. The Home page opens
2. On the Home page, observe the status of the SHR and SAP BOBJ services in the **Services Status** section.

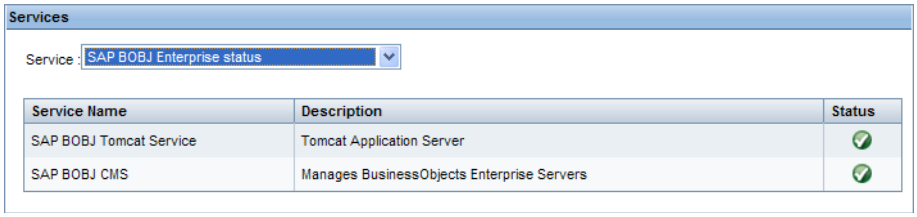
   The icon indicates that the services are up and running.



3 Click the **HP SH Reporter Status** hyperlink to view the list of individual services and their status. The Services page opens.



4 In the **Service** list, select **SAP BOBJ Enterprise Status** to view the list of SAP BOBJ services.



Alternatively, you can also check the services by performing the following steps:

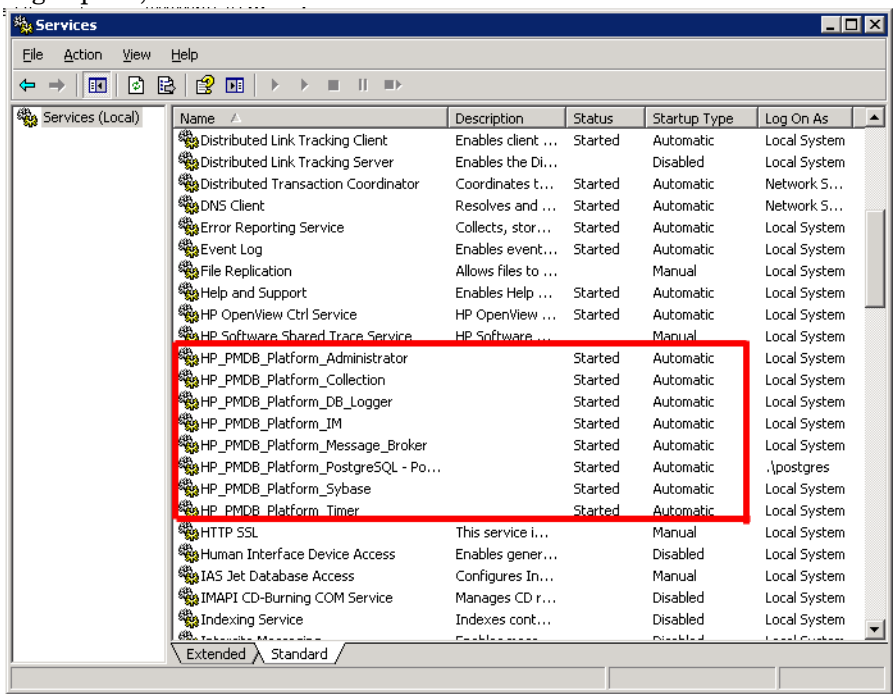
On Windows

1 Log on to the SHR system.

2 Click **Start** → **Run**. The Run dialog box opens.

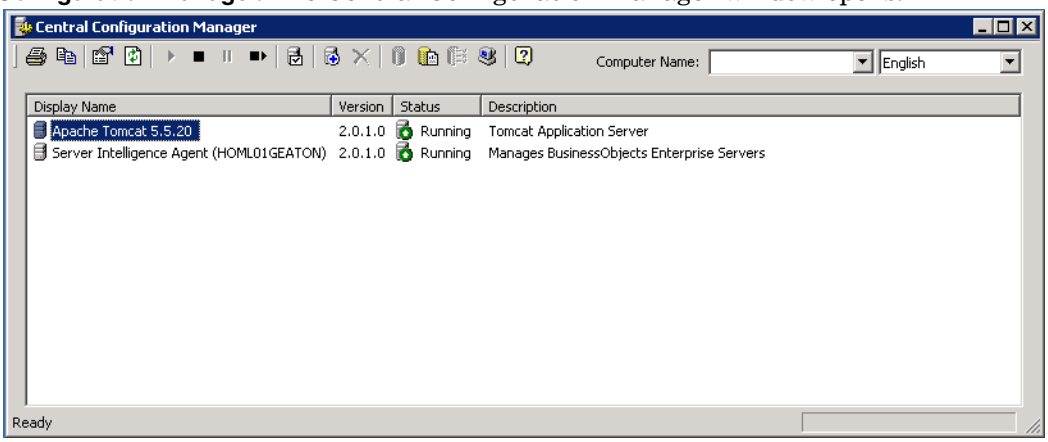
3 Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.

4 On the right pane, view the status of the SHR services.



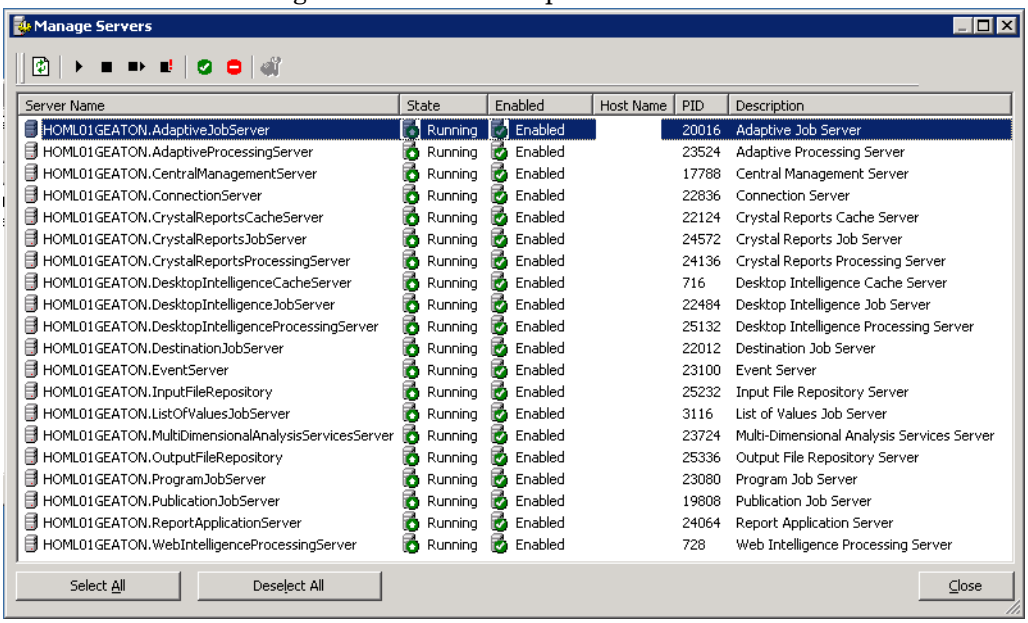
To check the status of the SAP BOBJ services, you can use the SAP BOBJ Central Configuration Manager. Perform the following steps:

1 Click **Start** → **Programs** → **BusinessObjects XI 3.1** → **BusinessObjects Enterprise** → **Central Configuration Manager**. The Central Configuration Manager window opens.



2 Click the  button. The Log On dialog box opens.

3 Click **Connect**. The Manage Servers window opens.



4 Note the status of the listed SAP BOBJ services. All services must be enabled and running.

On Linux

1 Log on as root.

2 Run the following command:

```
chkconfig --list
```

The command output includes the following services if all SHR services are running satisfactorily:

- HP_PMDB_Platform_Administrator
- HP_PMDB_Platform_Collection

- HP_PMDB_Platform_DB_Logger
- HP_PMDB_Platform_IM
- HP_PMDB_Platform_Message_Broker
- HP_PMDB_Platform_PostgreSQL
- HP_PMDB_Platform_Sybase
- HP_PMDB_Platform_Timer

Also, the status of each service for the last interval must be `On`.

To check the status of the SAP BOBJ services, run the following commands at the command prompt:

1. **`su - SHRBOADMIN`**
2. **`cd /opt/HP/BSM/BO/bobje`**
3. **`sh ccm.sh -display -username Administrator -password`** *<password>*

   In this instance, *<password>* is the password of the SHR administrator. By default, SHR administrator account is created without a password. If you did not create a password for the SHR administrator, run the following command:

   `sh ccm.sh -display -username Administrator -password`

   The command output shows the status of SAP BOBJ services. All services must be enabled and running.

Check for the SHR Database

After checking the SHR services, you can check if the Performance Management database (PMDB) created during the post-install configuration phase exists. You can perform this task in the following four ways:

Check the Log File

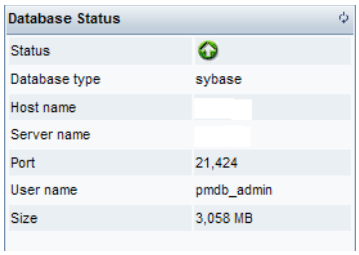
You can make sure that the database is created without any errors by checking the `postinstallconfig.log` file that is located in the `%PMDB_HOME%\log` folder on Windows and in the `$PMDB_HOME\log` folder on Linux.

Check the Administration Console

You can check the status of the database in the Administration Console. Perform the following steps:

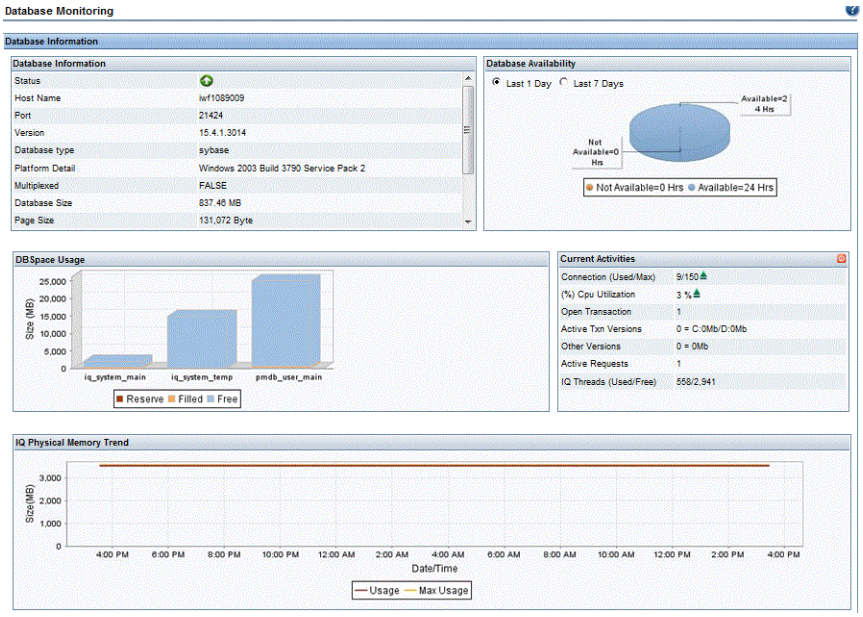
1. Click **Start** → **Programs** → **HP Software** → **SH Reporter** → **Administration**. The Administration Console opens.
2. Type the user credentials in the Login screen and click **Log In**. The SHR Home page opens.

3 On the Home page, observe the status of the PMDB database in the **Database Status** section.



4 On the left pane, click **Internal Monitoring** → **Database Monitoring** to view more information about the database. The Database Monitoring page opens.

On this page, you can view the detailed database information, connection status, availability, and space usage of the database.

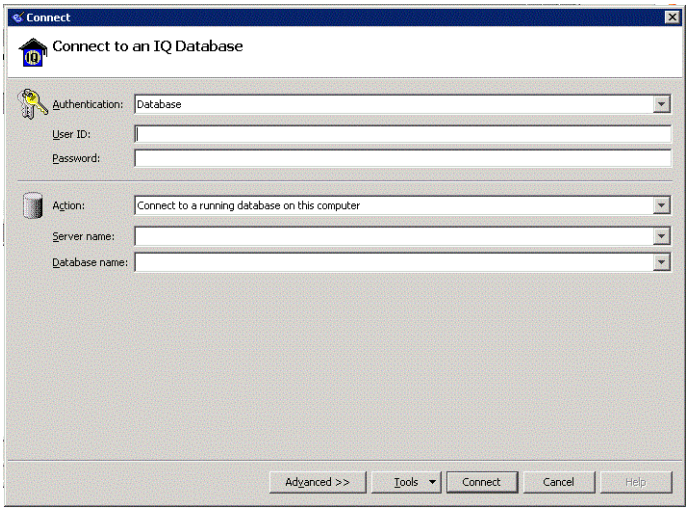


Check for the Database Using Sybase Central

You can also use Sybase Central to check for the PMDB database. Perform the following steps:

1 Click **Start** → **Programs** → **Sybase** → **Sybase IQ 15.4** → **Sybase Central Java Edition**. The Sybase Central window opens.

2 On the main toolbar, click the button. The Connect dialog box opens.



3 On the **Identification** tab, select **Supply user ID and password**, and then in the **User ID** and **Password** boxes, type the PMDB database credentials.

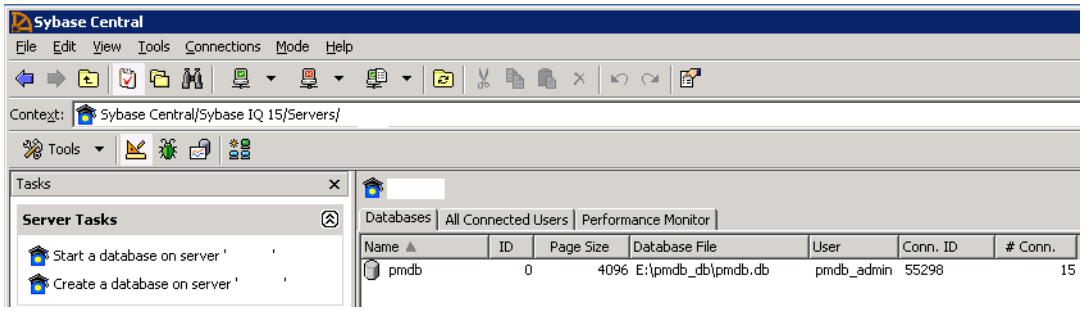
4 On the **Database** tab, in the **Server name** list, select the database server.

5 Click **Tools**, and in the pop-up menu, click **Test Connection** to check the connection to the database server.

6 In the Test Connection message box, click **OK**.

7 Click **OK** to close the Connect dialog box.

8 Note that Sybase Central displays the PMDB database if it exists.



Check the Topology Collection Status

After you have verified that the SHR installation was successful, you must verify whether SHR has been properly configured to collect topology data. By default, topology data collection is scheduled to run once a day. You can check if topology collection has occurred by using the Administration Console.

To check the status of the topology collection, perform the following steps:

1 Click **Start** → **Programs** → **HP Software** → **SH Reporter** → **Administration**. The Administration Console opens.

2 Type the user credentials in the Login screen and click **Log In**. The SHR Home page opens.

3 On the left pane, click **Topology Source** → **Service Definition**. The Service Definition page opens.

4 In the **Collection** columns of the table, make sure that  icon is displayed. This icon indicates that the topology data collection was successful.

For Linux

Open the browser and type the default address

http://<*server name*>.<*domain name*>:21411/BSMRApp/

where <*server name*> is the name of the host system on which you have installed SHR and <*domain name*> is the name of your domain according to your network configuration.

Check for the View CSV Files

After topology collection takes place, SHR creates certain View files for the topology data. These CSV files are stored in the `%PMDB_HOME%\reconcil_registry\cmdbRegistry` folder. To verify that topology collection, check the folder for the CSV files. The `reconcil_registry` folder contains the following folders:

- `cachedRegistry`
- `cmdbRegistry`
- `registryDump`

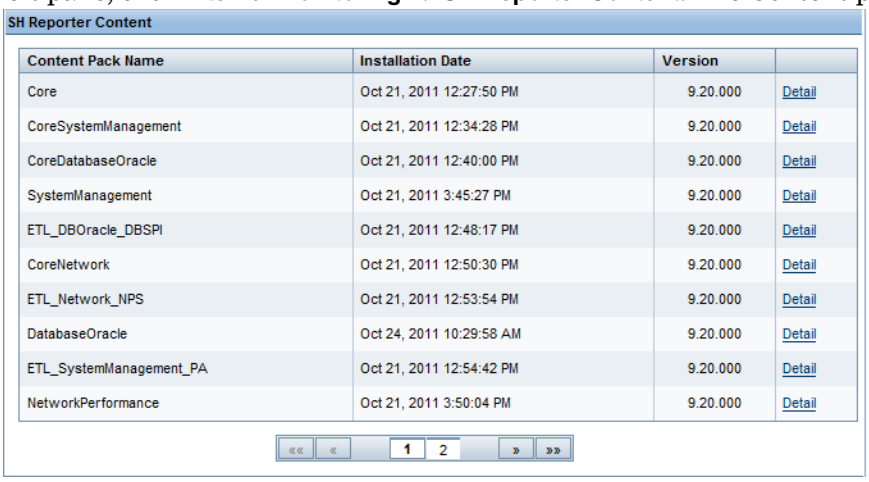
Check for the Installed Content Packs

You can verify if all the required Content Packs are installed by using the Administration Console. To view the list of Content Packs, perform the following steps:

1 Click **Start** → **Programs** → **HP Software** → **SH Reporter** → **Administration**. The Administration Console opens.

2 Type the user credentials in the Login screen and click **Log In**. The SHR Home page opens.

3 On the left pane, click **Internal Monitoring** → **SH Reporter Content**. The Content page opens.

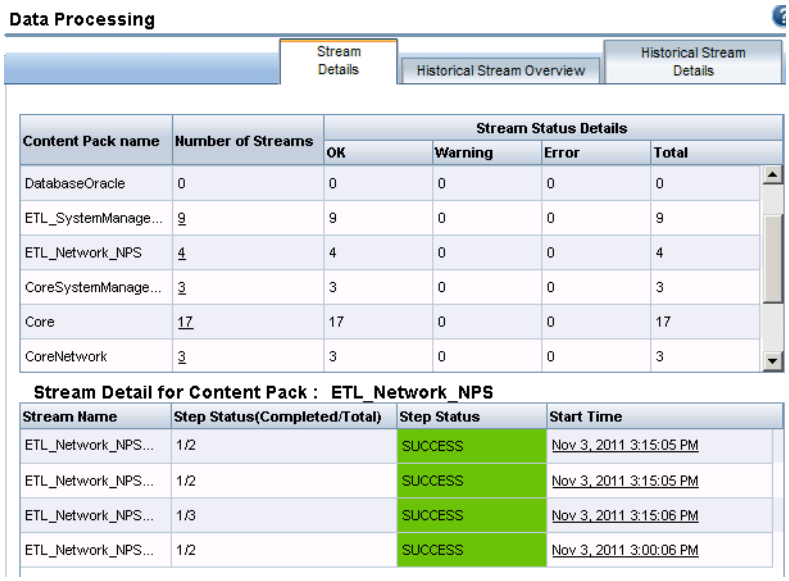


On this page, all the installed Content Packs are displayed with the date of installation.

Check the Stream Status for the Content Packs

Verify the data processing tasks performed by SHR are running properly without any errors. You can verify data aggregation on the collected data and data is loaded into the database for reporting by checking the workflow stream status in the Administration console. For the installed Content Packs, all workflow streams must either be running or completed successfully, but not in the waiting state. To view the stream details, perform the following steps:

1. Click **Start** → **Programs** → **HP Software** → **SH Reporter** → **Administration**. The Administration Console opens.
2. Type the user credentials in the Login screen and click **Log In**. The SHR Home page opens.
3. On the left pane, click **Internal Monitoring** → **Data Processing**. The Data Processing page opens.



On this page, you can check the number of workflow streams that are running for each Content Pack and the status of those streams.

For Linux

To check the number of workflow streams that are running for each Content Pack and the status of those streams, you need to open the Data Processing page by performing the following:

Open the browser and type the default address

http://<*server name*>.<*domain name*>:21411/BSMRApp/

where <*server name*> is the name of the host system on which you have installed SHR and <*domain name*> is the name of your domain according to your network configuration.

Check the Stage Folder tor CSV Files

Additionally, you can verify the data is loaded into the PMDB database by checking the `%PMDB_HOME%\stage\failed_to_load` folder (for Windows), the `$PMDB_HOME\stage\failed_to_load` folder (for Linux). If data has been successfully loaded to the stage tables, there should not be any CSV files in the `failed_to_load` folder.

After data is loaded into the stage tables, it is moved into the database. If data fails to load to the stage table, it is moved to the `failed_to_stage` folder. If data has been successfully stored in the database, there are no CSV files in the `failed_to_stage` and `failed_to_load` folders.

The CSV files for the workflow streams that are completed successfully are moved into the `archive` folder.

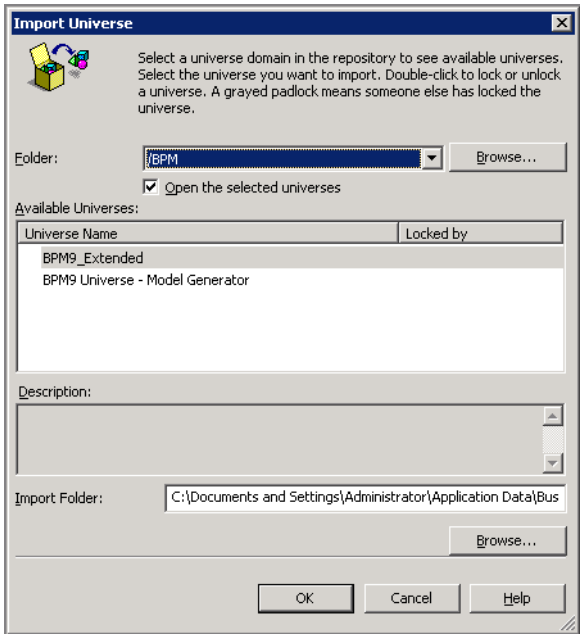
For the stream aggregation information, you can also check the `aggregate.log` file located in the `%PMDB_HOME%\log` folder (for Windows), and on the `$PMDB_HOME$\log` folder (for Linux). For data loading information, you can check the `loader.log` file.

Check the SAP BusinessObjects Universe

The SAP BusinessObjects universes are files that contain objects and classes that map the source data structure in the database to the business terms used by the business users. These universes are used by SAP BusinessObjects Enterprise in generating the Web Intelligence reports. You can verify if the SAP BusinessObjects universe exists for each Content Pack.

To check for the universes, perform the following steps:

1. Click **Start** → **Programs** → **BusinessObjects XI 3.1** → **BusinessObjects Enterprise** → **Designer**.
2. In the User Identification dialog box, click **OK**. The Universe Designer opens.
3. On the File menu, click **Import** to import a Content Pack universe into the Universe Designer. The Import Universe dialog box opens.



4. In the **Folder** list, select the Content Pack folder. The available universes for that Content Pack is listed in the **Available Universes** section.

5 Select a universe that you want to view and click **OK**.

6 In the Import Universe message box, click **OK**.

The selected universe is displayed in the Designer.

For Linux

The Universe Designer is not available, the SAP BusinessObjects Client tool has to be used instead.

To connect to the SAP BusinessObjects server do the following:

a Go to `/<extracted bits location>/packages/BO/BusinessObjectsXI-3.1`

where, `<extracted bits location>` is the location where the SAP BusinessObjects Client tool is extracted.

b Extract `BusinessObjectsXI-3.1-Clienttools.zip`.

Following two folders are extracted

`SP5Client`

`SP5.3Client`

c Open the `SP5Client` folder and double-click **setup.exe**.

Follow the instructions that appear on the screen.

d After the `SP5Client` is installed, open the `SP5.3Client` folder and double-click **setup.exe**.

Follow the instructions that appear on the screen.

e Connect to SAP BusinessObjects Linux server, then follow the steps from step 3 on page 143

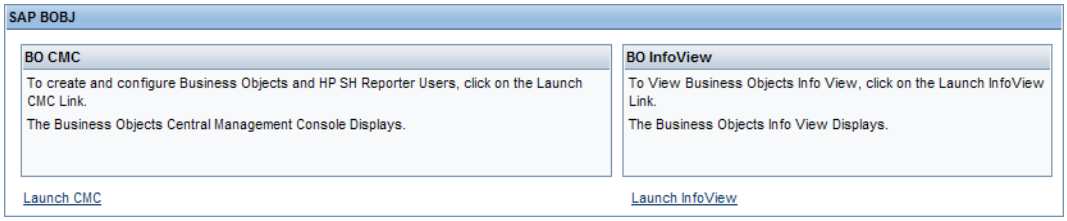
Check for the Report Folders in SAP BusinessObjects InfoView

To check for the Report Folders in InfoView, perform the following steps:

1 Click **Start** → **Programs** → **HP Software** → **SH Reporter** → **Administration**. The Administration Console opens.

2 Type the user credentials in the Login screen and click **Log In**. The SHR Home page opens.

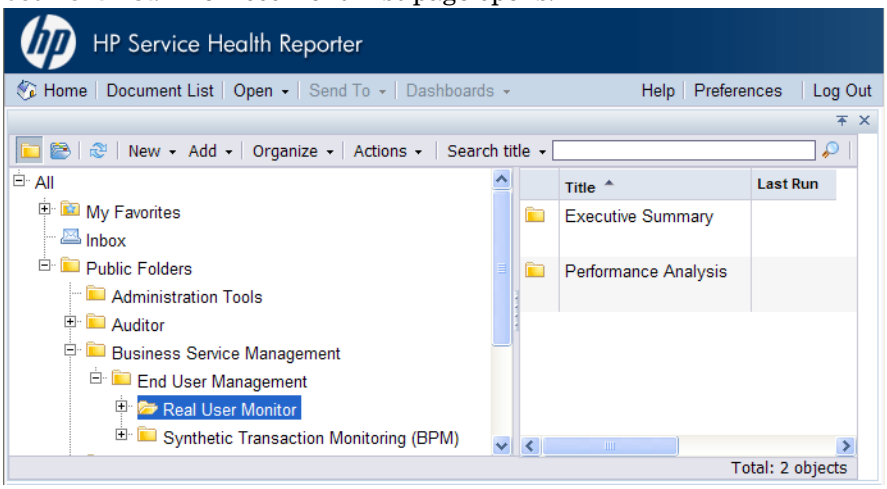
3 On the left pane, click **Administration** → **SAP BOBJ**. The SAP BOBJ page opens.



4 On the right pane, click **Launch InfoView**. The SAP BOBJ InfoView login screen opens.

5 Type the user credentials and click **Log On**. The SAP BOBJ InfoView opens.

6 Click **Document List**. The Document List page opens.



7 Expand the report folders on the left pane and check if the reports are displayed on the right pane.

If you can view the relevant information on the Administration Console and in the reports in SAP BOBJ InfoView after performing these tasks, then SHR has been installed and configured properly in your environment.

11 Client Authentication Certificate for SHR

SHR has two console interfaces, the Administration console and the SAP BusinessObjects InfoView. Administration console enables you to administer and monitor SHR whereas, SAP BusinessObjects InfoView console enables you to view reports and dashboards.You can run both the consoles in a secured environment with HTTPS network protocol or in a non-secured environment with HTTP network protocol.The default protocol for both the consoles is HTTP. In order to set up a secured environment, you have to configure HTTPS communication for Administration console and SAP BusinessObjects InfoView console.

Authentication and Authorization

SHR uses SAP BusinessObjects for authentication and authorization. SAP BusinessObjects user accounts are managed by SAP BusinessObjects Central Management console. You must be a SAP BusinessObjects administrator to access SHR Administration console. SHR uses username/password based authentication mechanism by default. You can also configure SHR to use client certificate based authentication by following the steps in Configuring for Certificate-based Authentication. on page 151 for Administration console and for SAP BusinessObjects view, To Configure SAP BusinessObjects InfoView And Open Document on page 153. SHR verifies the identity of the user by validating the certificate and authorizes the user using SAP BusinessObjects.

Prerequisites of Certificate Based Authentication

Before you configure certificate based authentication ensure that the following prerequisites are met.

Task 1: Create a keystore file containing SHR server certificate and private key.

The keystore file is password protected. SHR enables you to configure keystore location and password using keystorepath and keystorepasswd properties. Keystore path should be specified using forward slash in windows system. Keystoretype property enables you to specify the type of the keystore, supported values are **JKS** and **PKCS12**. The certificate alias in the keystore is specified using the keyalias property as shown in the following table:

Property name	**Example**
`Keystorepath`	`C:\\certs\\serverkeystore.jks`
`Keystorepasswd`	`changeit`
`Keyalias`	`shserver`
`Keystoretype`	`JKS`

Task 2: Create a keystore file containing the Certifying Authority (CA) certificates.

You must create a keystore file containing the CA certificates trusted by the SHR server. This file is password protected. SHR enables you to configure truststore by setting the **truststorepath**, **truststorepasswd**, and **truststoretype** properties to values as shown in the following table:

Property name	Example of values
`truststorepath`	`C:\\certrelated\\Trustkeystore`
`truststorepasswd`	`changeit`
`truststoretype`	`JKS`

Task 3: Determine if certificate revocation check should be enabled.

You should set **com.sun.net.ssl.checkRevocation** to true, to enable certificate revocation check. SHR supports two methods of checking for revoked certificates.

- Certificate Revocation List (CRL) - A CRL contains information about revoked certificates and is downloaded from the CA. SHR extracts the CRL distribution point URL from the certificate. You should set **com.sun.security.enableCRLDP** to true to enable this check.
- Online Certificate Status Protocol (OSCP) - OSCP is a protocol for checking revocation of a single certificate using an online service called an OSCP responder. You should set **ocsp.enable** to true to enable revocation check using OCSP protocol. SHR extracts the OCSP URL from the certificate for validating the certificate. If you want to configure a local OCSP responder service, SHR enables you to configure it using **ocsp.responderURL** property.

For details, on how to enable certificate revocation, CRL and OSCP see Task 3 on page 148

Task 4: Determine the proxy server address if there is a proxy between the SHR server and internet.

In case of a proxy server, you must set it to enable SHR server to download the CRL. You can configure the proxy server as:

`http.proxyHost`	set the http proxy Hostname
`http.proxyPort`	set the http proxy Port number
`https.proxyHost`	set the https proxy Hostname
`https.proxyPort`	set the https proxy Port number

For details, see Task 4 on page 151

Task 5: Determine the username extraction mechanism.

The username extraction mechanism depends on the format of your certificate. The user name extracted from the certificate should match the user names configured in SAP BusinessObjects. SHR enables you to extract username using two mechanisms

- SubjectDN ,
- Subject Alternative Name (SAN)

To configure the username extraction mechanism you have to make the changes in properties field, entry, type, pattern and OID in the `server.xml` file.

```
<Realm className="com.hp.bto.bsmr.SHRSecureAuth.auth.SHRRealm"
field="SubjectDN" entry="CN" Type="" oid="" pattern=""
useSubjectDNonMatchFail="true"/>
```

- To extract username from SubjectDN, set the following values to the properties

Property name	Value
field	SubjectDN
entry	set to CN to indicate CN as the username set to OU to indicate OU as the username

The entry property enables you to specify the entry that should be considered as username in SubjectDN. You can also use a pattern to extract username from SubjectDN instead of using entry parameter. To configure a pattern to extract user name from SubjectDN, use pattern parameter. For example, if the pattern is configured as EMAILADDRESS=(.+)@) and if abc@hp.com is the value of emailaddress field, then abc is extracted as the user name.

- To extract username from Subject Alternative Name (SAN)

Set the property field to the value SAN. You can configure **rcf822Name** or **otherName** part of the SAN username using the property **Type**. To configure rcf822Name, set the value of the property **Type** to **rcf822Name**. To configure otherName set the value of the property **type** to **otherName** and set the value of object identifier (OID) to **OID.**

By default, SHR extracts username from CN.

You can configure SHR to allow a user to log on using smart card only. To enable smart card logon, you must set the property **smartcard.enable** to **true**.

The location of the file `server.xml` is shown in the table below:

For configuring	Path
Administrator console	%PMDB_HOME%\adminserver\conf (for Windows) $PMDB_HOME/adminserver/conf (for Linux)
SAPInfoview BusinessObjects	%PMDB_HOME%\BOWebServer\conf (for Windows) $PMDB_HOME/BOWebServer/conf (for Linux)

Task 6: Import Certificate and Configure Browser.

- Import the certificate that has been issued by the root CA to the SHR server. Import it to your web browser using the **Trusted Root Certificate** tab available in the Internet Explorer. For details, see the Internet Explorer help.
- Configure your web browser to accept the protocol TLSv1, here v1 indicates the version.

For High Availability, configure both servers.

SHR enables you to configure certificate based authentication for Administration console interface and SAP BusinessObjects InfoViewApp interface.

To Configure SHR Administration Console

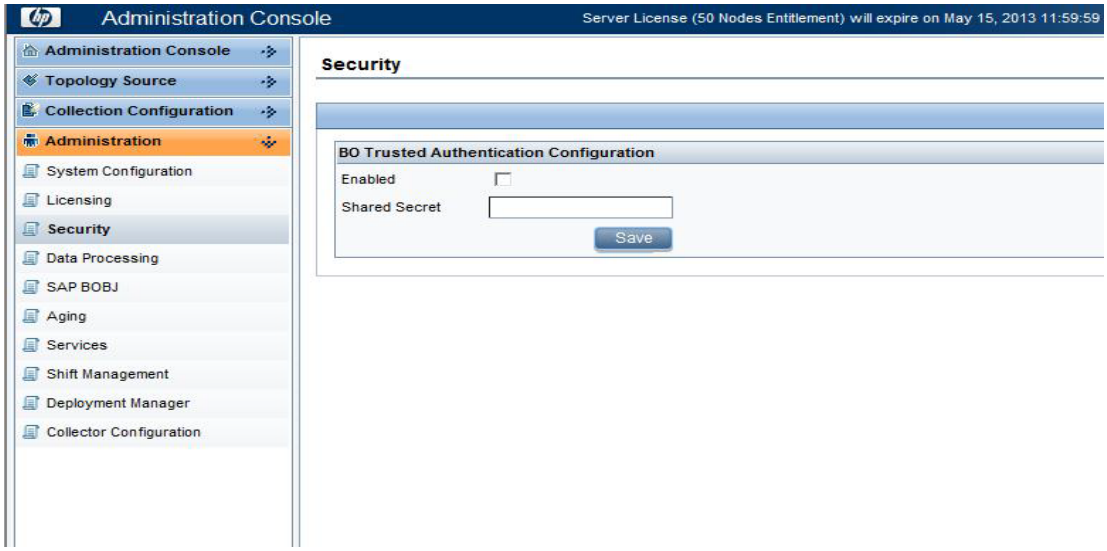
Before you proceed, ensure that the post-install configuration of SHR is successful. To configure SHR Administration console for Certificate Based Authentication:

Task 1: Configuring shared secret.

Shared secret is used to establish trusted authentication. Your must enter the shared secret in character format only.

a. Type `http://<HostName>:21411/BSMRApp/` on the browser to log on to the Administration Console of SHR.

b. Navigate to **Administration → Security → BO Trusted Authentication**

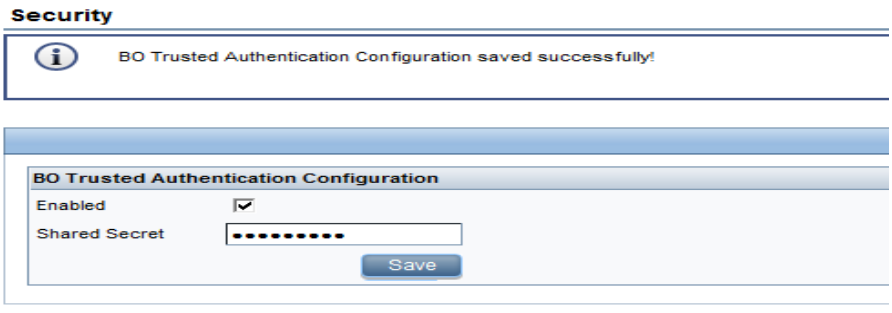


c. Select the **Enabled** check box.

d. Type the **Shared Secret**.

e. Click **Save.**

After successful configuration, the message given below is displayed:



Task 2: Stop HP_PMDB_Platform_Administrator service.

To stop HP_PMDB_Platform_Administrator service follow the first three steps of Configure HP PMDB Platform Administrator Service for the Domain on page 82

For Linux

Run the command

```
service HP_PMDB_Platform_Administrator stop
```

Task 3: Configuring the config.prp file.

Set the following fields in `config.prp` located at `%PMDB_HOME%\data` (for Windows) and `$PMDB_HOME/data` (for Linux) to the given values.

Field	Value
`shr.loginMethod`	`certbased`
`shr.auth.classes`	`com.hp.bto.bsmr.security.auth.BOTrustedAuthenticator`

Task 4: Configuring for Certificate-based Authentication.

Specify following parameters in `adminserverclientauth.prp` file located at `%PMDB_HOME%\data` folder (for Windows) and `$PMDB_HOME/data` (for Linux). Edit the following fields and set the values according to the given description::

Field	Description
`truststorepath`	Full path of the truststore file, which is to use to validate client certificates.
`truststorepasswd`	The password to access the trust store.
`truststoretype`	The type of keystore used for the trust store.
`keystorepath`	Full path of the keystore file where you have stored the server certificate to be loaded.
`keystorepasswd`	The password used to access the server certificate from the specified keystore file.
`keystoretype`	The type of keystore file to be used for the server certificate.
`keyAlias`	The alias used to for the server certificate in the keystore
`smartcard.enable`	Set to true to enable smart card logon and to false to disable smart card logon.
`http.proxyHost`	HTTP proxy Host name.
`http.proxyPort`	HTTP proxy Port number.
`com.sun.net.ssl.checkRevocation`	Set it as true for enabling revocation and to false to disable revocation.
`com.sun.security.enableCRLDP`	Set it to true to enable CRL revocation, otherwise set it to false.
`ocsp.enable`	Set it to true to enable OSCP based revocation, otherwise set it to false.
`ocsp.responderURL`	Set the OCSP responder URL.

You must set the OSCP based revocation to false, when the CRL based revocation is set to true and vice versa.

After setting the properties value, do the following:

For Windows

a. Go to the `%PMDB_HOME%\bin` folder.

b. Run the command

```
perl adminserverclientauth.pl -authType clientcert -configFile <config file location>
```

where <*config file location*> indicates the full path of `adminsever.prp` file

For example, `%PMDB_HOME%\data\adminserverclientauth.prp`

For Linux

a. Go to `$PMDB_HOME/bin` folder.

b. Run the command

```
perl adminserverclientauth.pl -authType clientcert -configFile <config file location>
```

where <*config file location*> indicates the full path of `adminsrver.prp` file

For example, `$PMDB_HOME/data/adminserverclientauth.prp`

Task 5: Configure Username Extraction.

Ensure that CN entry in the SubjectDN field is extracted as username by SHR. Modify the file `server.xml` as described in Task 5 on page 148.

Task 6: Start the HP_PMDB_Platform_Administrator service.

To start the service, use the Services window (on Windows) or the `service` command (on Linux).

Task 7: Verify certificate based authentication.

a. Type http://<HostName>:21411/BSMRApp/ on the Web browser to log on to the Administration Console of SHR.

b. Click on **Log on with a digital certificate**.

To Configure SAP BusinessObjects InfoView And Open Document

To configure the InfoView console and Open Document for certificate based authentication:

Task 1: Stop the SAP BusinessObject WebServer Service:

For Windows

a Log on to the host system as administrator.

b Click **Start** → **Run**. The Run dialog box opens.

c Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.

d Right-click the **Business Object WebServer service** and select **Stop** to stop the service.

For Linux

a Go to `/opt/HP/BSM/PMDB/BOWebServer/bin`

b Run the command

```
./shutdown.sh
```

Task 2: Stop the HP_PMDB_Platform_Administrator Administrator service.

To stop the HP_PMDB_Platform_Administrator service, follow the first three steps of Configure HP PMDB Platform Administrator Service for the Domain on page 82

For Linux

```
service HP_PMDB_Platform_Administrator stop
```

Task 3: Edit the config.prp file.

In the file config.prp, located at `%PMDB_HOME%\data` folder (for Windows) and `$PMDB_Home/data`(for Linux), set the given value to the field.

Field	Value
`bo.protocol`	`https`

Task 4: Set up the certificate-based configuration.

Set the following fields in the file BOclientauth.prp, located at `%PMDB_HOME%\data` folder (for Windows) and `$PMDB_HOME/data` (for Linux) to the values as given in the description.

Field	Description
`truststorepath`	Full path to the `truststore` file
`truststorepasswd`	The password to access the trust store
`truststoretype`	The type of key store used for the trust store
`keystorepath`	Full path of the keystore file where you have stored the server certificate to be loaded.
`keystorepasswd`	The password used to access the server certificate from the specified keystore file.
`keystoretype`	The type of keystore file to be used for the server certificate.
`keyAlias`	The alias used to for the server certificate in the keystore.
`smartcard.enable`	Set it to true for enabling smart card logon or else set it to false.
`http.proxyHost`	HTTP proxy Host name
`http.proxyPort`	HTTP proxy Port number
`https.proxyHost`	HTTPS proxy Host name
`https.proxyPort`	HTTPS proxy Port number
`com.sun.net.ssl.checkRevocation`	Set it to true to enable revocation or else set it to false.
`com.sun.security.enable-CRLDP`	Set it to true to enable CRL revocation or else set it to false.
`ocsp.enable`	Set it to true for OSCP based revocation or else set it to false.
`ocsp.responderURL`	Set the OSCP responder URL.

You must set the OSCP-based revocation to false, when the CRL based revocation is set to true and vice versa.

After setting the properties, do the following:

For Windows

a Go to the `%PMDB_HOME%\bin` folder.

b Run the command

```
perl BOclientauth.pl -authType clientcert -configFile <config file location>
```

where <*config file location*> indicates the full path of `BOclientauth.prp file`.For example, `%PMDB_HOME%\data\BOclientauth.prp.`

For Linux

a Go to the `$PMDB_HOME/bin` folder.

b Run the command

```
perl BOclientauth.pl -authType clientcert -configFile <config file location>
```

where <*config file location*> indicates the full path of `BOclientauth.prp` file.

For example, `$PMDB_HOME/data/BOclientauth.prp.`

Task 5: Start the SAP BusinessObjects WebServer Service.

a Log on to the host system as administrator.

b Click **Start** → **Run**.

c Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.

d Right-click the **SAP BusinessObject WebServer service** and select **Start** to start the service.

For Linux

a Go to the `/opt/HP/BSM/PMDB/BOWebServer/bin` folder.

b Run the command `./startup.sh`

Task 6: Verify certificate based authentication.

a Type **http://<HostName>:8080/InfoViewApp** on the Web browser to log on to the InfoView Console of SHR.

b Log on to InfoView console.

c If you see the screen given below, then the configuration is complete.

.

d You can now login to the InfoView console with a digital certificate.

Task 7: Enabling InfoView to authenticate users through LDAP or Active Directory.

a From the SHR system, open the `web.xml` file located at *%PMDB_HOME%/BOWebServer/webapps/InfoViewApp/WEB-INF/web.xml*.

b Set the value of the **`<authentication.visible>`** parameter to **`<true>`**.

c Save and close the file.

d Restart the web application server.

To Configure Username Extraction Method

Username extraction can be configured by editing the `server.xml` file, for details, see Determine the username extraction mechanism. on page 148.

12 Configuring Secure Connection for SHR (HTTPS)

SHR has two console interfaces, the Administration console and the SAP BusinessObjects InfoView. It is possible to run both the consoles in a secured environment with HTTPS network protocol or in a non-secured environment with HTTP network protocol. The default protocol for both the consoles is HTTP. In order to set up a secured environment for Administration console and SAP BusinessObjects InfoView console, you must configure HTTPS network protocol.

Creating a keystore File

Before you configure secure connection, you must create a `keystore` file containing the SHR server certificate and private key. To create a keystore file using keytool, run the following command:

```
keytool -genkey -keystore keystore.jks -alias mykey
```

It is possible to create a keystore file using other tools.

The keystore file is password-protected. SHR enables you to configure keystore location and password using keystorepath and keystorepasswd properties. Keystore path should be specified using forward slash in windows system. Keystoretype property enables you to specify the type of the keystore, supported values are **JKS** and **PKCS12.** The certificate alias in the keystore is specified using the keyalias property as shown in the following table:

Property name	**Example**
`Keystorepath`	`C:/certs/serverkeystore.jks`
`Keystorepasswd`	`changeit`
`Keyalias`	`shserver`
`Keystoretype`	`JKS`

Configuring Secure Connection (HTTPS)

You can configure secure connection for the Administration console and the InfoView console.

For the Administration console of SHR

To configure a secure connection for the Administrations console of SHR:

Task 1: Stop the HP_PMDB_Platform_Administrator service

Windows

To stop HP_PMDB_Platform_Administrator service:

1. Click **Start** → **Run**. The Run dialog box opens.
2. Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.
3. On the right pane, right-click **HP_PMDB_Platform_Administrator**, and then click **Stop**.

Linux

Run the command

```
service HP_PMDB_Platform_Administrator stop
```

Task 2: Edit the server.xml file

Take a backup of the `server.xml` file before editing.

1. Uncomment the SSL Connector tag that has the **port** value set to `21412`.
2. Set the following fields in the `server.xml` file, located at:

   Windows

   `%PMDB_HOME%\adminserver\conf/`

   Linux

   `$PMDB_HOME/adminserver/conf/`

Field	Description
`keystorefile`	Full path of the keystore file where you have stored the server certificate to be loaded.
`keystorepasswd`	The password used to access the server certificate from the specified keystore file.
`keystoretype`	The type of keystore file to be used for the server certificate.
`keyAlias`	The alias used to for the server certificate in the keystore.

Task 3: Edit the config.prp file

Take a backup of the `config.prp` file before editing.

Set the following fields in the `config.prp` file, located at:

Windows

`%PMDB_HOME%\data`

Linux

`$PMDB_HOME/data`

Field	Value
`bo.protocol`	`https`
`bo.ssl.enabled.port`	`8443`

`bo.ssl.enabled.port` is set to the port number specified in the port attribute of connector tag in the `server.xml` file, the default value is 8443.

Task 4: Start the HP_PMDB_Platform_Administrator service

Windows

To stop HP_PMDB_Platform_Administrator service:

1. Click **Start** → **Run**. The Run dialog box opens.
2. Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.
3. On the right pane, right-click **HP_PMDB_Platform_Administrator**, and then click **Start**.

Linux

Run the command

`service HP_PMDB_Platform_Administrator start`

Task 5: Verify the configuration.

To verify the configuration, log on to the Administration console using the following URL:

https://<*hostname*>: 21412/BSMRApp

where, <*hostname*> is the name of the SHR system.

For the InfoView Console of SHR

To enable HTTPS communication for InfoView Console of SHR:

Task 1: Stop the SAP BusinessObjects Webserver service.

Windows

To stop the SAP BusinessObject WebServer service:

1. Click **Start** → **Run**. The Run dialog box opens.
2. Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.
3. On the right pane, right-click **SAP BusinessObject WebServer**, and then click **Stop**.

Linux

Go to `/opt/HP/BSM/PMDB/BOWebServer/bin`, and then run the following command:

`./shutdown.sh`

Task 2: Edit the server.xml file

Take a backup of the `server.xml` file before editing.

Open the `server.xml` file located at `%PMDB_HOME%\BOWebServer\conf` (for Windows) or `$PMDB_HOME/BOWebServer/conf` (for Linux):

Perform the following steps:

1. Uncomment the SSL Connector tag that has the **port** value set to 8443.
2. Set the following fields in the file to the values as given in the description.

Field	Description
`keystorefile`	Full path of the keystore file where you have stored the server certificate to be loaded.
`keystorepasswd`	The password used to access the server certificate from the specified keystore file.
`keystoretype`	The type of keystore file to be used for the server certificate.
`keyAlias`	The alias used to for the server certificate in the keystore.

Task 3: Start the SAP BusinessObjects WebServer.

Windows

To stop SAP BusinessObject WebServer service:

1. Click **Start** → **Run**. The Run dialog box opens.
2. Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.
3. On the right pane, right-click **SAP BusinessObject WebServer**, and then click **Stop**.

Linux

Go to `/opt/HP/BSM/PMDB/BOWebServer/bin`, and then run the following command:

`./startup.sh`

Task 4: Verify configuration.

To verify whether the configuration is successful:

- Log on to **https://<*hostname*>:8443/InfoViewApp**

  where, <*hostname*> is the name of the SHR system.
- Log on to **https://<*hostname*>:8443/CmcApp**

  where, <*hostname*> is the name of the SHR system.

13 Licensing

By default, SHR includes a temporary, instant-on license, which is valid for 60 days. To continue using SHR after 60 days, you must install a permanent license.

The SHR license includes:

- **HP Service Health Reporter Software**

  This license includes the data collection framework, the SAP BusinessObjects Enterprise, a high-performance Performance Management Database for storing and processing the collected metrics, and the out-of-the-box Content Packs. Also included is an entitlement to collect and report on the metrics for up to 50 nodes.

- **Additional scalability packs of 50 nodes**

  Additional data collection and reporting entitlements can be added to grow the solution to fit your environment.

SHR is integrated with the HP License Manager licensing package for its licensing needs. The HP License Manager provides the SHR license framework and the functionality of installing a temporary or permanent license.

To obtain a permanent license, you can either use the HP License Manager or directly retrieve the license from the HP Password Center by using the HP Webware web site.

Obtaining a Permanent License Key

To obtain a permanent license key, follow these steps:

1. Open the SHR Administration Console by launching the following URL:

   http://<*server name*>**:21411/BSMRApp/logon.jsp**

   In this instance, <*server name*> is the fully qualified domain name of the system where SHR was installed.

2. Click **Administration > Licensing**. The HP License Key Delivery Service page opens.
3. Click **Generate New Licenses** under Welcome.
4. Log on to HP Passport with your user ID and password. If you do not have an account, you must create one before you can proceed. The Order Number page opens.
5. Type the order number in the Order number field and click **Next**. The Product Selection page opens.
6. Select **PERM** and click **Next**. The License Redemption page opens.
7. Select Find or create a license owner, and then type in your email address in the License Owner e-mail address field.
8. Type the IP address of the SHR host system and click **Next**. The Create license owner page opens.

9 Type in the license owner information:

Field	Description
Create license owner (End-User) information	Name, phone number, and email address of the license owner.
Company e-mail domain	Domain name of the license owner's company.
Mailing address	Mailing address of the license owner.
License owner privacy policy (Optional)	Optional settings for License owner privacy policy.

10 Click **Next** to continue. The Transaction summary page opens.

11 Review the summary and click **Next** to continue. The License certificate page opens.

12 Review the license certificate information, save the license to your system, and then close the License certificate page.

Installing the Permanent License Key

To install the permanent license, follow these steps:

On Windows

1 Log on to the SHR system as administrator.

2 Click **Start > Programs > HP Software > SH Reporter > License Manager**. The Retrieve/Install License Key window opens.

3 Click **Install/Restore License Key from file**. The Install/Restore License Key from file page opens.

4 Browse to the location of the saved license certificate, click **View file content**, select **PERM**, and then click **Install**.

On Linux

1 Log on to the SHR system as root.

> While using an X client application to remotely connect to the Linux system, do not use the BROADCAST mode and make sure that the `DISPLAY` environment variable on the Linux system is correctly configured.

2 The name of the license file (that you saved in step 12) starts with a . (dot) character. You must rename this file by removing the . (dot) character.

3 Run the following command:

```
$PMDB_HOME/bin/LicenseManager.sh
```

The Retrieve/Install License Key window opens.

4 Click **Install/Restore License Key from file**. The Install/Restore License Key from file page opens.

5 Browse to the location of the saved license certificate, click **View file content**, select **PERM**, and then click **Install**.

SAP BOBJ License Reactivation

The SAP BOBJ license depends on the validity of the SHR license. If the SHR license expires, the SAP BOBJ license is automatically deactivated and, as a result, all the SAP BOBJ servers are disabled. After you renew the SHR license and access the Administration Console, SHR automatically reactivates the SAP BOBJ license. However, the SAP BOBJ servers remain in the disabled state. To ensure that SAP BOBJ works, you must manually enable the servers by performing the following steps:

1 Log on to the Central Management Console by launching the following URL:

http://<*SHR_System_FQDN*>**:8080/CmcApp**

In this instance, <*SHR_System_FQDN*> is the fully qualified domain name of the SHR system.

Log on as Administrator.

2 Click  **Servers**.

3 Right-click each server, and then click **Enable Server**.

Licenses to Use (LTUs)

Table 1 presents all the LTUs available for SHR.

Table 1 [a]Licenses to Use

LTU	Stock-keeping Unit (SKU)	Description
HP Service Health Reporter Standard Edition 50 Service Health Nodes SW E-LTU	TD905AAE	This LTU includes the following Content Packs: • Systems/Virtualization Management Content Pack • SPI Content Packs • Event Content Packs (OM, OMi) The BSM EUM and Network Content Packs are not available with this LTU.
HP Service Health Reporter Advanced 50 Service Health Nodes SW E-LTU	TJ756AAE	This LTU entitles the user to use all out-of-the-box Content Packs available with SHR.
HP Service Health Reporter Upgrade from Standard to Advanced 50 Service Health Nodes SW E-LTU	TD906AAE	This Upgrade LTU entitles the user to upgrade from the Standard Edition to the Advanced Edition of SHR.
HP Service Health Reporter add 50 Nodes for Standard or Advanced Service Health Nodes SW E-LTU	TJ757AAE	This is an add-on pack to add entitlement for 50 additional nodes for SHR.
Performance Insight to Service Health Reporter Advanced Core for Migration Software E-LTU	TJ773AAE	This is a migration pack for Performance Insight users to migrate to the HP Service Health Reporter Advanced Core LTU (50 Nodes).
Performance Insight to Service Health Reporter Advanced Migration 250 Service Health Software E-LTU	TJ774AAE	This is a migration pack for Performance Insight users to migrate to the HP Service Health Reporter Advanced 250 Nodes LTU.

Table 1 [a]Licenses to Use

LTU	Stock-keeping Unit (SKU)	Description
Performance Insight to Service Health Reporter Advanced Migration 1000 Service Health Software E-LTU	TJ775AAE	This is a migration pack for Performance Insight users to migrate to the HP Service Health Reporter Advanced 1000 Nodes LTU.
Performance Insight to Service Health Reporter Advanced Migration 5000 Service Health Software E-LTU	TJ776AAE	This is a migration pack for Performance Insight users to migrate to the HP Service Health Reporter Advanced 5000 Nodes LTU.
Performance Insight to Service Health Reporter Advanced Migration Unlimited Service Health Software E-LTU	TJ777AAE	This is a migration pack for Performance Insight users to migrate to the HP Service Health Reporter Advanced Core LTU (Unlimited Nodes).

a. A node is a real or virtual computer system, or a device (for example a printer, router, or bridge) on a network.

14 Uninstalling SHR

You can remove individual Content Packs without removing the entire application. You can remove the SHR application by using the HP Software Installer. This process removes all installed components including the Content Packs.

Taking a Backup of Databases

Before you start the uninstallation of SHR, you can back up SHR databases. For more information about backing up databases, see Database Backup and Recovery on page 181.

Uninstalling Content Packs

Before you uninstall SHR, you must uninstall content packs. If you have HP Service Health Optimizer (SHO) and SHR installed on the same system, you can retain the following content packs that are required for SHO and uninstall all other SHR content packs:

Common content pack components:

- Core_Domain
- VirtualEnvPerf_Domain
- VirtualEnvPerf_Domain_VMWare
- SysPerf_Domain
- vCenter Collector Content Pack

Components when RTSM is the topology source:

- SysPerf_ETL_PerformanceAgent (optional, only for standalone hosts)
- VirtualEnvPerf_ETL_HyperV_PerformanceAgent (optional, only for HyperV hosts)

Components when HPOM is the topology source:

- SysPerf_ETL_PerformanceAgent (optional, only for standalone hosts)
- VirtualEnvPerf_ETL_HyperV_PerformanceAgent (optional, only for HyperV hosts)

Avoid uninstalling individual Content Packs at 11 P.M. This is because during uninstallation, the PMDB Platform Timer service is stopped. However, for maintenance, SHR pauses the data processing streams at 9 P.M. and restarts the streams at 11 P.M. daily. To restart a stream, the PMDB Platform Timer service must be running. If the PMDB Platform Timer service is stopped, SHR cannot resume the paused data processing streams.

Alternatively, you can manually resume the job streams or wait for the next cycle, that is, next day 11 P.M. To resume the stream, you must run the following commands:

- `abcAdminUtil -resume -type loadBatch`
- `abcAdminUtil -resume -type runStep`

To remove the Content Packs by using the Deployment Manager:

1. Launch the following URL:

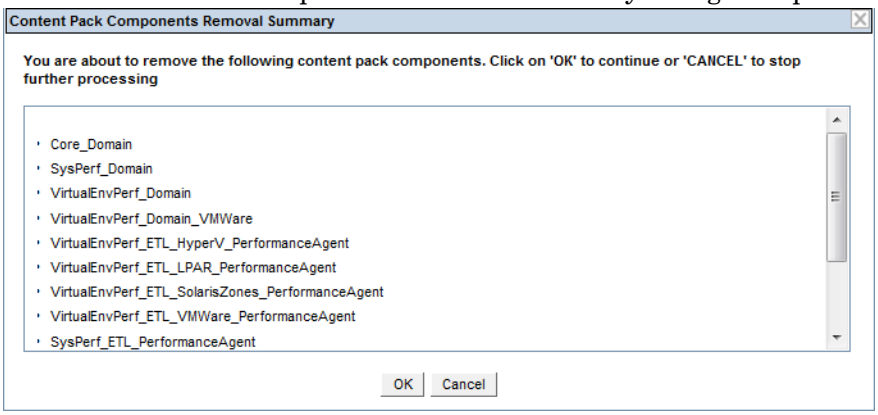
   http://<*SHR_Server_FQDN*>**:21411/BSMRApp**

2. Type **`administrator`** in the **Login Name** field and click **Log In** to continue. The Home page opens.

   If you use any other user account to access the Administration Console, make sure that the user account has administrator privileges.

3. On the left pane, click **Administration** and then click **Deployment Manager**. The Deployment Manager page opens.

4. In the **Remove** column, click the icon for the Content Pack component that you want to remove. The Content Pack Components Removal Summary dialog box opens.



   This dialog box displays the list of Content Pack components that will be removed by the Deployment Manager. This list includes the selected Content Pack component and other dependent components.

5. Click **OK**.

You successfully uninstalled Content Packs.

Uninstalling SHR

To remove the entire SHR application along with all the Content Packs, you can directly uninstall the application.

Perform the following steps to remove SHR:

1. *Skip this step if Sybase IQ is installed on a remote system.* Manually stop the Sybase IQ processes.

   On Windows

   a. From the Services window, stop the HP PMDB Platform Sybase service.

   b. Open Windows Task Manager, go to the Processes tab, and then end the following processes:

      — `iqsrv15.exe`

      — `dbisql.exe`

   On Linux

   a. Run the following commands:

      `ps -ef|grep iqsrv15`

      `ps -ef  | grep dbisql`

   b. Note down the process IDs displayed by the output of each command.

   c. Run the following commands:

      `kill -9` <*pid_1*>

      `kill -9` <*pid_2*>

      In this instance, <*pid_1*> and <*pid_2*> are the process IDs that you noted down in step b.

2. Start the HP Software Installer:

   On Windows

   Click **Start** → **Programs** → **HP Software** → **SH Reporter** → **Uninstall**.

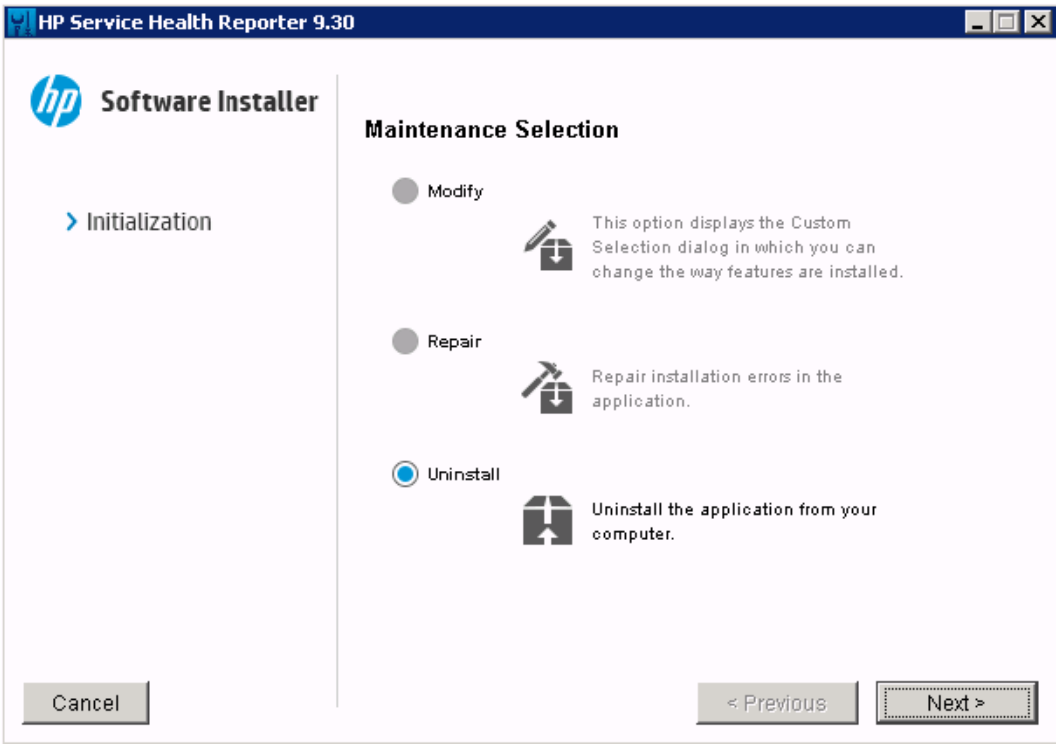
   On Linux

   Go to `/opt/OV/Uninstall/HP-SHR` and run the `setup.bin` file.

   The HP Software Installer opens.

   HP Software Installer checks the system for any applications or services that might affect the uninstallation process such as anti-virus software. If HP Software Installer detects a problem, a warning or error is generated, and an Application requirements check warnings window opens.

3 Click **Continue**. The Application Maintenance page opens.



4 Under **Maintenance Selection**, make sure that **Uninstall** is selected, and then click **Next**. The Pre-Uninstall Summary page opens.

> SHR does not support the **Modify** or **Repair** options displayed in the HP Software Installer. These options are disabled by default.

5 Click **Uninstall**. The Uninstalling page opens.

6 After the uninstallation is completed, the Delete dialog box opens.

7 Click **Yes** to delete the SHR directory. The Uninstall Complete page opens.

8 Click **Done** to complete the uninstallation.

9 Click **Yes** in the System Restart message box to restart your system.

10 Browse to SHR directory and check that the SHR database directories have been deleted. If the folders exist, manually delete them.

You successfully uninstalled SHR from your system.

After uninstallation, some files may remain on the system. The residual files do not impact reinstallation of SHR on the same system.

You can search for the directory on the system that contains the SHR database files, and then manually delete the directory.

Additionally, you can delete the following directories:

- On Windows: The complete SHR installation directory
- On Linux: `/opt/HP/BSM`

  You can also delete the `/opt/OV` directory if no other HP Software products are installed on the system.

Uninstalling Remote Sybase IQ

Perform the following steps if you have installed the Sybase IQ server on a remote system:

Before performing the remote Sybase IQ uninstallation steps, you must first remove SHR from the host system. This ensures that the remote database schema is removed after the Sybase IQ uninstallation.

1. Log on to the remote Sybase IQ system.
2. Manually stop the Sybase IQ processes.

   On Windows

   a. From the Services window, stop the HP PMDB Platform Sybase service.

   b. Open Windows Task Manager, go to the Processes tab, and then end the following processes:

      — `iqsrv15.exe`

      — `dbisql.exe`

   On Linux

   a. Run the following commands:

      `ps -ef|grep iqsrv15`

      `ps -ef  | grep dbisql`

   b. Note down the process IDs displayed by the output of each command.

   c. Run the following commands:

      `kill -9` <*pid_1*>

      `kill -9` <*pid_2*>

      In this instance, <*pid_1*> and <*pid_2*> are the process IDs that you noted down in step b.

3. Follow these steps only on Windows:

   a. Click **Start** → **Programs** → **Administrative Tools** → **Services**. The Services window opens.

   b. Right-click **Sybase IQ Agent 15.4** and then click **Stop**.

   c. Right-click the Sybase IQ service that you created and then click **Stop**.

   d. Open the command prompt.

   e. Go to the `%PMDB_HOME%\bin` folder.

   f. Run the following command:

      `%PMDB_HOME%\bin\SybaseServiceCreation.bat -remove` <*INSTALLDIR*>

      In this instance, <***`INSTALLDIR`***> is the parent directory of the Sybase IQ installation directory. It is the same path that you chose for product installation in the install wizard.

4. Start the HP Software Installer.

   On Windows

   a. Click **Start** → **Settings** → **Control Panel**.

   b. Click **Add or Remove Programs** in the Control Panel window.

c In the **Add or Remove Programs** dialog box, click **HP Service Health Reporter SybaseIQ**, and then click **Change/Remove**.

On Linux

Go to `/opt/OV/Uninstall/HP-SHR` and run the `setup.bin` file.

The HP Software Installer opens.

HP Software Installer checks the system for any applications or services that might affect the uninstallation process such as an anti-virus software. If HP Software Installer detects a problem, a warning or error is generated, and an Application requirements check warnings window opens.

5 Click **Continue**. The Application Maintenance page opens.

6 Under **Maintenance Selection**, make sure that **Uninstall** is selected and then click **Next**. The Pre-Uninstall Summary page opens.

7 Click **Uninstall**. The Uninstalling page opens.

After the uninstallation is completed, the Delete dialog box appears.

8 Click **Yes** to delete the SHR directory. The Uninstall Complete page opens.

9 Click **Done** to complete the uninstallation.

10 Browse to Sybase IQ directory and check if the `HP-SHR` folder has been deleted. If the folder exists, manually delete it.

11 Click **Yes** in the System Restart message box to restart your system.

You successfully uninstalled the Sybase IQ server from your remote system.

Uninstalling SHR Manually

If your SHR installation fails because of unexpected circumstances such as power outage or hardware failure, you can perform the following steps to manually clean up the existing SHR installation before proceeding with a new installation:

Task 1: Stop all SHR services

For Windows

1 Log on to the host system as administrator.

2 Click **Start** → **Run**. The Run dialog box opens.

3 Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.

4 Right-click the following services and select **Stop** to stop the service:

- HP PMDB Platform Message Broker
- HP PMDB Platform Administrator
- HP PMDB Platform IM
- HP PMDB Platform DB Logger
- HP PMDB Platform Collection
- HP PMDB Platform Timer

- HP_PMDB_Platform_PostgreSQL - PostgreSQL Server 9.0
- HP PMDB Platform Sybase
- Sybase IQ Agent 15.4

If you have Sybase IQ installed on a remote system, you must stop the Sybase IQ Agent 15.4 service on the remote system.

5 Close the Services window.

For Linux

1 Type the following commands at the prompt:

- **`cd /etc/init.d`**
- **`service HP_PMDB_Platform_Administrator stop`**
- **`service HP_PMDB_Platform_Collection stop`**
- **`service HP_PMDB_Platform_DB_Logger stop`**
- **`service HP_PMDB_Platform_IM stop`**
- **`service HP_PMDB_Platform_Message_Broker stop`**
- **`service HP_PMDB_Platform_PostgreSQL stop`**
- **`service HP_PMDB_Platform_Sybase stop`**
- **`service TrendTimer stop`**
- **`service`** BobjEnterprise120 **`stop`**

2 Go to the following directory:

`/opt/HP/BSM/BO/bobje`

3 Run the following command:

`./sawstop.sh`

When prompted for password, specify **`pmdb_admin`**.

Task 2: Remove SAP BOBJ and PostgreSQL

For Windows

1 On the Windows desktop, click **Start** → **Settings** → **Control Panel**.

2 Click **Add or Remove Programs** in the Control Panel window.

3 In the Add or Remove Programs dialog box, click the following items (one at a time), and then click **Change/Remove** to uninstall SAP BOBJ Enterprise:

a SAP BusinessObjects Enterprise XI 3.1 SP4

b SAP BusinessObjects Enterprise XI 3.1 FP 4.1

c SAP BusinessObjects Enterprise XI 3.1 SP5

d SAP BusinessObjects Enterprise XI 3.1 FP 5.3

4 Follow the instructions in the uninstallation wizard to complete the uninstallation.

5 In the Add or Remove Programs dialog box, click **PostgreSQL 9.0**, and then click **Change/Remove**.

6 Follow the instructions in the uninstallation wizard to complete the uninstallation.

For Linux

To remove SAP BOBJ, run the following shell command

- ps -U SHRBOADMIN | awk '{print $1}' | xargs -i kill {}
- rm -rf /opt/HP/BSM/BO
- rm -f /etc/init.d/BobjEnterprise120
- find / -name "*BobjEnterprise*" -exec rm -f {} \;
- rm -rf /tmp/.SQLAnywhere
- rm -rf /root/.sqlanywhere12
- userdel -rf SHRBOADMIN

To remove PostgreSQL, run the following shell command:

- /opt/HP/BSM/Postgres/uninstall-postgresql --mode unattended
- userdel postgres
- chkconfig --del HP_PMDB_Platform_PostgreSQL
- rm -f /etc/init.d/HP_PMDB_Platform_PostgreSQL
- rm -rf /opt/HP/BSM/Postgres/

Task 3: Remove Sybase IQ

For Windows

1. From the Services window, stop the HP PMDB Platform Sybase service.
2. Open Windows Task Manager, go to the Processes tab, and then end the following processes:
   a. `iqsrv15.exe`
   b. `dbisql.exe`
3. On the Windows desktop, click **Start** → **Settings** → **Control Panel**.
4. Click **Add or Remove Programs** in the Control Panel window.
5. Click **Sybase IQ Server Suite 15.4 (64-bit)** in the Add or Remove Programs window, and then click **Change/Remove** to remove the Sybase IQ application.
6. Click **Sybase IQ Server Suite 15.4 ESD 1 (64-bit)** in the Add or Remove Programs window, and then click **Change/Remove** to remove the Sybase IQ application.
7. In the Sybase IQ uninstallation wizard, click **Next** on the Welcome page.
8. Ensure that the features that you want to remove are listed on the Pre-Uninstallation Summary page, and then click **Next**.
9. Click **Next** and then click **Uninstall**.
10. On the Delete User Files page, select the **Delete All of These Files** check box, and click **Next**.
11. Click **Done** to complete the uninstallation process.
12. Select the **Yes, restart my computer** option and then click **Finish** to restart your system.

For Linux

To remove Sybase IQ, run the following shell commands:

- /opt/HP/BSM/Sybase/sybuninstall/IQSuite/uninstall -i silent
- /opt/HP/BSM/Sybase/sybuninstall/IQClientSuite/uninstall -i silent
- rm -rf /opt/HP/BSM/Sybase
- chkconfig --del HP_PMDB_Platform_Sybase
- rm -f /etc/init.d/HP_PMDB_Platform_Sybase

Task 4: Remove Windows Registry entries (only for Windows)

Perform this task only if no other HP products are installed on your system.

1. On the Windows desktop, click **Start** → **Run**.
2. In the Run dialog box, type **regedit** and press **ENTER**. The Registry Editor window opens.
3. Expand **HKEY_LOCAL_MACHINE**, expand **Software**, and then expand **Hewlett-Packard**.
4. Click a folder and note the package name and the product code.

Task 5: Remove the SHR components

For Windows

1. To uninstall the components, on the Windows desktop, click **Start** → **Run**.
2. In the Run dialog box, type **cmd** and press **ENTER**. The Command Prompt window opens.
3. At the command prompt, type the following command to uninstall a component:

   `msiexec /x <`*`product code value`***`>`**

   In this instance, <*product code value*> is the value that is listed in the right pane of the Registry Editor window for a particular components. For example, to uninstall the HPPmdbMsgBus component, type:

   `msiexec /x {F44672D8-C8A9-45F6-A215-C9CF138E6ED1}`

   Perform this step for all the components listed under BSM and HP OpenView.

For Linux

To remove rpm packages, follow these steps:

1. Create an empty file and save the file as `shrPkgList` under the `/tmp` directory.
2. With a text editor, add the following lines to the `shrPkgList` file:

   Do not change the sequence while adding these lines to the `shrPkgList` file.

```
HPPmdbBORebrand
HPPmdbTomcat
HPBSMR9CP
HPPmdbMsgBus
HPPmdbCore
HPPmdbAdmin
HPPmdbLicAP
HPPmdbABC
HPPmdbCommon
HPPmdbCollector
HPPmdbPerl
HPSHRADApp
HPSHROraDBETL
HPSHRNwENps92
```

```
HPSHREumCore
HPSHRSM
HPSHRSmEtlPa
HPSHROraDBApp
HPSHRWLSEtl
HPSHRMSSqlCore
HPSHREumEtlRum
HPSHRSmCoreVVM
HPSHRExchCore
HPSHRADEtl
HPSHREtlSHlthBSM
HPSHRWBSEtl
HPSHRCoreWBS
HPSHRADCore
HPSHRCoreAppS
HPSHRCoreSHlth
HPSHRExchEtl07
HPSHROM
HPSHREumBpm
HPSHRNwPerf
HPSHRSmVVm
HPSHRSmEtlVvmSiS
HPSHRSmEtlVvmPa
HPPmdbABC
HPPmdbBOTomcat
HPPmdbAdmin
HPSHRSmEtlVHyPa
HPPmdbSybIQESD1
HPSHROmEtl
HPSHRMSSqlEtl
HPSHRCoreWLS
HPSHRSmEtlSisDB
HPSHRSmV
HPSHRSmEtlVVmVc
HPSHREumRum
HPPmdbSybaseIQ
HPSHRWLSApp
HPSHROMiEtl
HPSHRSmCoreV
HPSHROraDBCore
HPSHRSmEtlSis
HPSHRNwENpsN92
HPSHRWBSApp
HPSHRCoreOMi
HPSHRExchEtl10
HPSHREumEtlBpm
HPSHRNwCore
HPSHRSmEtlVSolPa
HPPmdbLicAP
HPSHRExchApp
HPSHRSmCore
HPSHRSmEtlVLprPa
HPSHRCoreCP
HPSHRMSSqlApp
HPSHRMSAppCore
```

```
HPSHRSHlthA
HPOvJPacc
HPOvJbbc
HPOvJsec
HPOvJxpl
HPOvSecCS
HPOvSecCC
HPOvConf
HPOvDepl
HPOvCtrl
HPOvBbc
HPOvSecCo
HPOvXpl
HPOvPerlA
HPBsmFndJRE
```

3 Run the following command:

```
for i in `cat /tmp/shrPkgList`; do echo Uninstalling: $i | tee -a /
tmp/shrPkgRemove; rpm -e $i 2>&1 | tee -a /tmp/shrPkgRemove; done
```

The command output shows the following error message in the command line console:

```
basename: invalid option -- 'e'

Try `basename --help' for more information.
```

Ignore the error.

Task 6: Remove specific environment variables

For Windows

1 In the Control Panel window, double-click **System**. The System Properties dialog box opens.

2 Click the **Advanced** tab, and then click the **Environment Variables** button. The Environment Variables dialog box opens.

3 Delete the following variables:

- IQPORT
- SYBASE
- SYBROOT

For Linux

To remove specific environment variables, run the command:

```
rm -f /etc/profile.d/setenv.sh
```

Task 7: Remove the SHR Folders

For Windows

1 Browse to the SHR install directory.

2 Delete all the folders.

Once all the above tasks are performed, restart your system.

For Linux

To remove the SHR folders, run the command:

```
rm -rf /opt/HP/BSM
```

If no other HP Software products are installed on the system, delete the /opt/OV directory by running the following command:

```
rm -rf /opt/OV
```

Task 8: Restart the System (Linux Only)

Restart the system to free up the ports that were used by SHR.

Uninstalling SHR in the Console Mode (on Linux)

To uninstall SHR from the command line console, perform the following steps:

1. Log on to the local system
2. At the new prompt type the command

   ```
   /opt/OV/Uninstall/HP-SHR/setup.bin -i console
   ```
3. Press **1** to continue uninstallation.
4. A screen appears with pre-installation summary, press **ENTER** to continue.

   The installer automatically checks and uninstalls the application packages.
5. Follow the prompts to complete uninstallation.

After uninstallation, some files may remain on the system. The residual files do not impact reinstallation of SHR on the same system.

You can search for the directory on the system that contains the SHR database files, and then manually delete the directory.

Additionally, you can delete the following directories:

- On Windows: The complete SHR installation directory
- On Linux: `/opt/HP/BSM`

  You can also delete the `/opt/OV` directory if no other HP Software products are installed on the system.

Uninstalling a Collector Installed on a Remote System

To remove the collector application, follow these steps:

1. Start the HP Software Installer.

   On Windows

   Go to `%ovinstalldir%\Uninstall\HP-SHR-RemotePoller` and run the `setup.exe` file.

On Linux

Go to `/opt/OV/Uninstall/HP-SHR-RemotePoller` and run the `setup.bin` file.

The HP Software Installer opens.

2 On the HP Software Installer language selection page, select the required language and then click **OK**.

HP Software Installer checks the system for any applications or services that might hinder the uninstallation process such as anti-virus software. If HP Software Installer detects a hindrance, a warning or error is generated, and an Application requirements check warnings window opens.

3 Click **Continue**. The Application Maintenance page opens.

4 Under **Maintenance Selection**, make sure that **Uninstall** is selected, and then click **Next**. The Pre-Uninstall Summary page opens.

SHR does not support the **Modify** or **Repair** options displayed in the HP Software Installer. These options are disabled by default.

5 Click **Uninstall**. The Uninstalling page opens.

6 After the uninstallation is completed, the Delete dialog box appears.

7 Click **Yes** to delete the Remote Collector directory. The Uninstall Complete page opens.

8 Click **Done** to complete the uninstallation.

After uninstallation, some files may remain on the system. The residual files do not impact reinstallation of the collector on the same system.

You can delete the following directories after uninstallation:

- On Windows: The complete collector installation directory if no other HP Software products are installed on the system.
- On Linux: `/opt/HP/BSM`

  You can also delete the `/opt/OV` directory if no other HP Software products are installed on the system.

After uninstalling the collector, you must clean up the SHR system to remove the traces of collection configuration data. To clean up the SHR system, follow these steps:

1 Log on to the Administration Console.

2 Go to the **Topology Source > Service Definition** tab.

3 For each definition that is set up with the collector that you uninstalled, follow these steps:

   a Click **Configure**.

   b If the Collection Station property is set to the uninstalled collector, make necessary changes. (You can set the property to Local if no collectors are currently installed on remote systems.)

   c Click **Save**.

   d Click **OK**.

4 Go to the Collection Configuration tab.

5 For each data source, delete the connections that were configured with the collector that you uninstalled.

6 Go to the Administration tab, and then go to the Collection Configuration page.

7 Delete the uninstalled collector.

15 Database Backup and Recovery

SHR enables you to back up and recover the database to prevent data loss in the event of a database failure. It is recommended that you take regular backup of the database before you begin using SHR in production.

SHR enables you to back up and recover the Sybase IQ database, the SAP BusinessObjects database, and the SAP BusinessObjects file store to prevent data loss in the event of a disaster. It is recommended that you take regular backup of the Sybase IQ database, the SAP BusinessObjects database, and the SAP BusinessObjects file store before you begin using SHR in production.

SHR provides the following database backup options:

- **Full Backup:** A full backup enables you to take a complete backup of the following SHR databases (including the database files and transaction logs):
  - Sybase IQ
  - SAP BusinessObjects (SQL Anywhere)
  - Management database tables (PostgreSQL)

  In addition, you can take a complete backup of the SAP BusinessObjects file store.

  It is recommended to take a full backup every week.
- **Incremental Backup:** An incremental backup enables you to take a backup of the transaction logs. It takes a backup of the files that have been modified or added since the last full backup. It is recommended to take an incremental backup daily.

You must schedule the full backup and the incremental backup tasks to run at regular intervals.

In the event of a database failure, SHR enables you to recover the database from the backup location.

Backing Up SHR Databases on Windows

Backing Up the Sybase IQ Database

Task 1: Edit the Backup Scripts

SHR provides two backup scripts, one each for full backup and incremental backup respectively, that you must edit to fit your requirements before you begin the backup process. These scripts are available in the `%PMDB_HOME%\scripts\Sybase` folder. The scripts are:

- For Full Backup: `%PMDB_HOME%\scripts\Sybase\IQ_backup_full.sql`

- For Incremental Backup:
  `%PMDB_HOME%\scripts\Sybase\IQ_backup_incr_since_full.sql`

To edit the scripts, follow these steps:

1. Browse to the `%PMDB_HOME%\scripts\Sybase` folder.
2. Open `IQ_backup_full.sql` with the Notepad application.

   In the last parameter within the .sql script, create a folder (for example, `E:\HP-SHR\Backup`) where you want to save the backup files.

   ```
   dsi_pmdb_backup
   'FULL',NULL,'READWRITE_FILES_ONLY',NULL,NULL,NULL,NULL,NULL,'D','location_for_backup'
   ```

   Similarly, for the incremental backup, enter the location for backup as follows:

   ```
   dsi_pmdb_backup
   'INCREMENTAL_SINCE_FULL',NULL,'READWRITE_FILES_ONLY',NULL,NULL,NULL,NULL,NULL,'D','location_for_backup'
   ```

   For an SHR installation with a remote database, **location_for_backup** denotes a valid path on the SybaseIQ database server.

The scripts are run through two batch files `Execute_FullBackup_Script.bat` and `Execute_IncrSncFullBackup_Script.bat` for full backup and incremental backup respectively. These batch files are available in `%PMDB_HOME%\DR\`.

After the scripts are run, a database backup is created with file name suffixed with day of the week at the specified location.

Task 2: Edit the Copy Backup Script

SHR provides a Copy Backup script that takes a backup of the previous full backup file in the specified location.

To edit the copy backup script, open the `%PMDB_HOME%\DR\Copy_Backup.bat` script with a text editor, and then enter the location of the existing full backup file and the location where you want to save the copied files before starting the full backup procedure.

```
COPY "location of existing full backup file" "copy to location">
%PMDB_HOME%\tmp\Copy_Backup.txt 2>&1 /Y /V
```

For an SHR installation with a remote database, you must run this script on the system where the Sybase IQ database is installed.

An example of the script is as follows:

```
COPY "E:\HP-SHR\Backup\Full*" "E:\HP-SHR\Backup\Old\" >
%PMDB_HOME%\tmp\Copy_Backup.txt 2>&1 /Y /V
```

Task 3: Schedule the Backup

To take regular backup of the database, you must schedule to run the backup scripts by using the Windows Task Scheduler. It is recommended to run a full backup once a week and an incremental backup once a day.

When Sybase IQ is installed on a remote system, do not schedule this task on the SHR system. Make sure to schedule the backup activity on the system where the Sybase IQ database is installed.

Schedule to Run the Copy Backup Script

The Copy Backup script creates a copy of the full backup database files in the specified location to avoid overwriting an existing full backup. You must schedule to run the Copy Backup script every time before you run the full backup script.

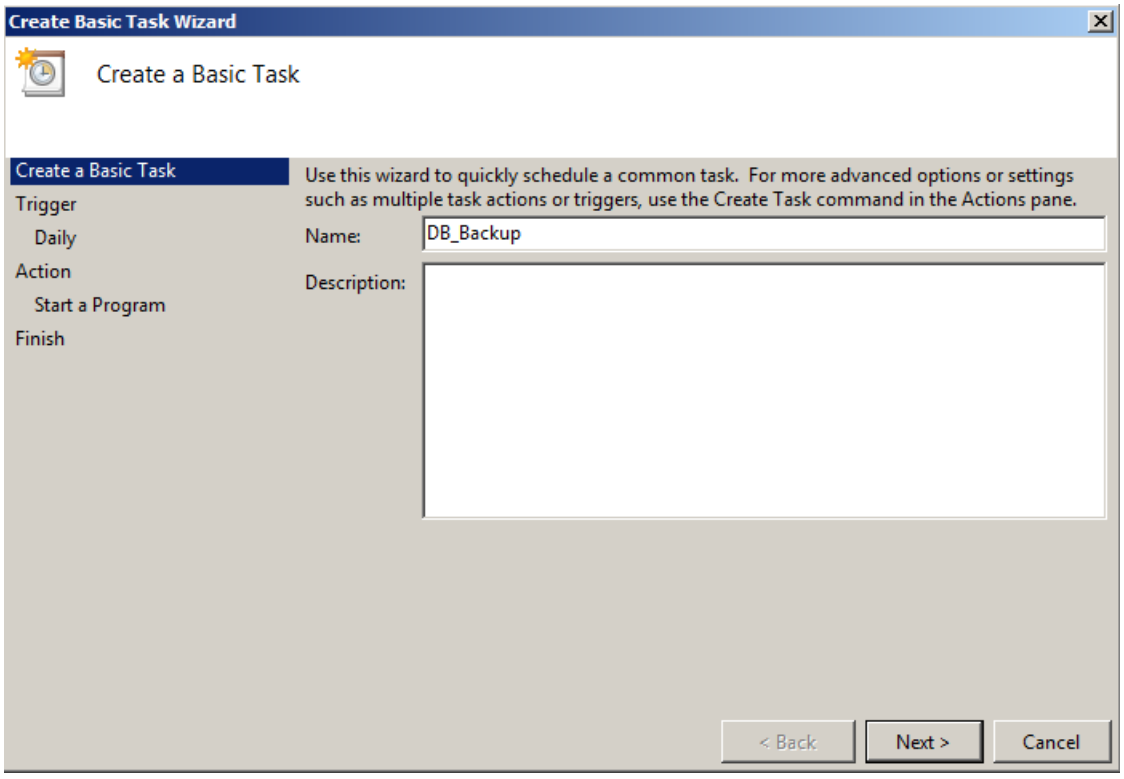
On Windows 2003

1. Go to **Start-> Settings -> Control Panel -> Scheduled Tasks.**
2. Double-click **Add Scheduled Task**. The Scheduled Task wizard opens.
3. Click **Next.**
4. Browse to `%PMDB_HOME%\DR`, and then select `Copy_Backup.bat`.
5. Click **Next**.
6. Type a name for the task and click **Weekly** under **Perform this task**. This defines the frequency at which the task will be performed.
7. Click **Next**.
8. Select the time and day you want the task to begin:
   a. Set the start time.
   b. Do not change the default value of 1 for the frequency of weeks.
   c. Select the day of the week. It is recommended to schedule this task on a day when the workload is less. You can select multiple days if you want to take a full backup more than once a week.
9. Click **Next**.
10. Enter the user name and password to set the account information.
11. Click **Finish**.

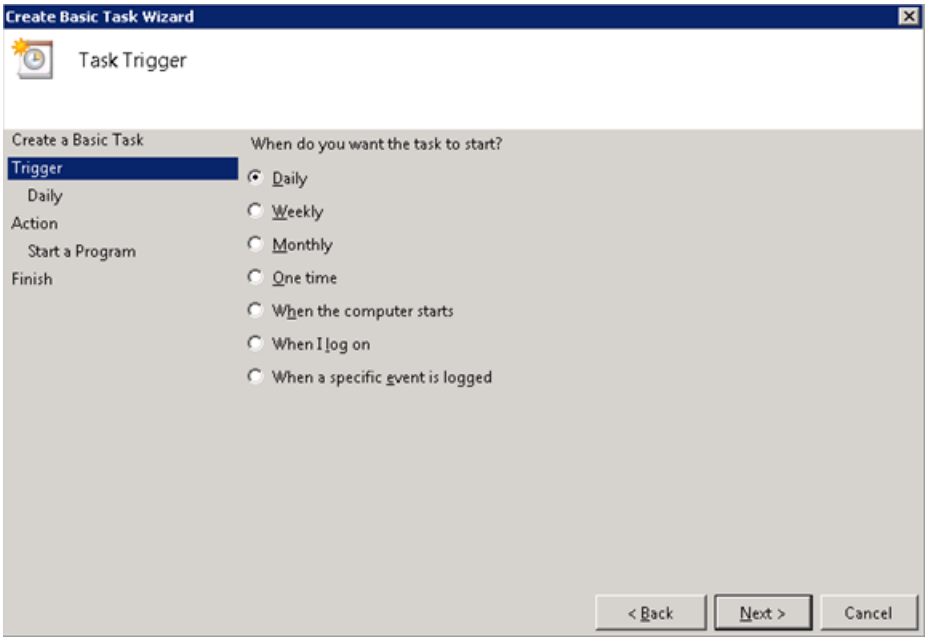
On Windows 2008

1. Go to **Start-> Control Panel -> System and Security -> Administrative Tools -> Schedule Tasks**. The Task Scheduler window opens.

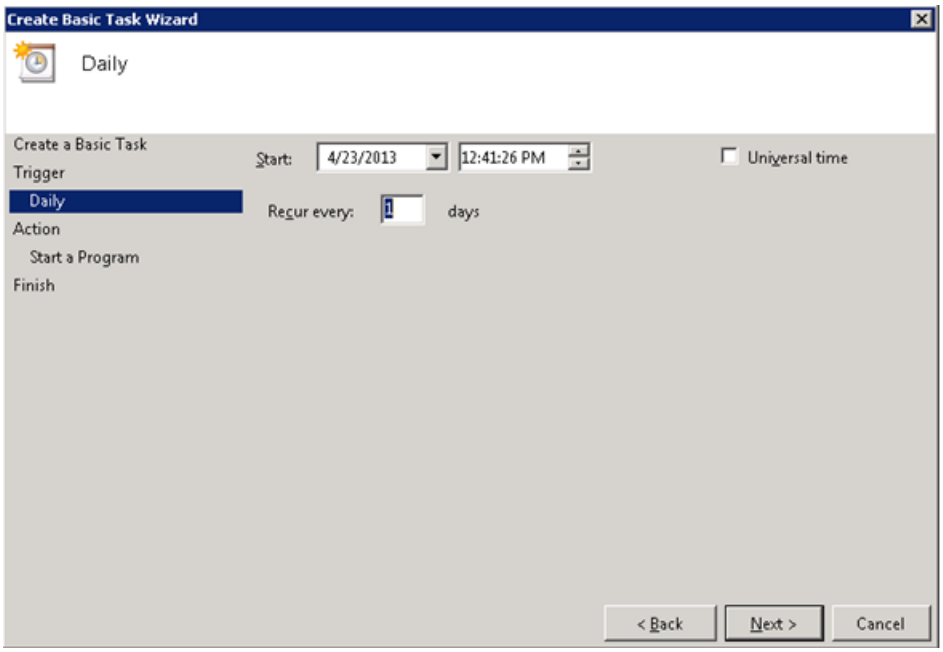
2 In the Task Scheduler window, click **Create Basic Task**. The Create Basic Task wizard opens.



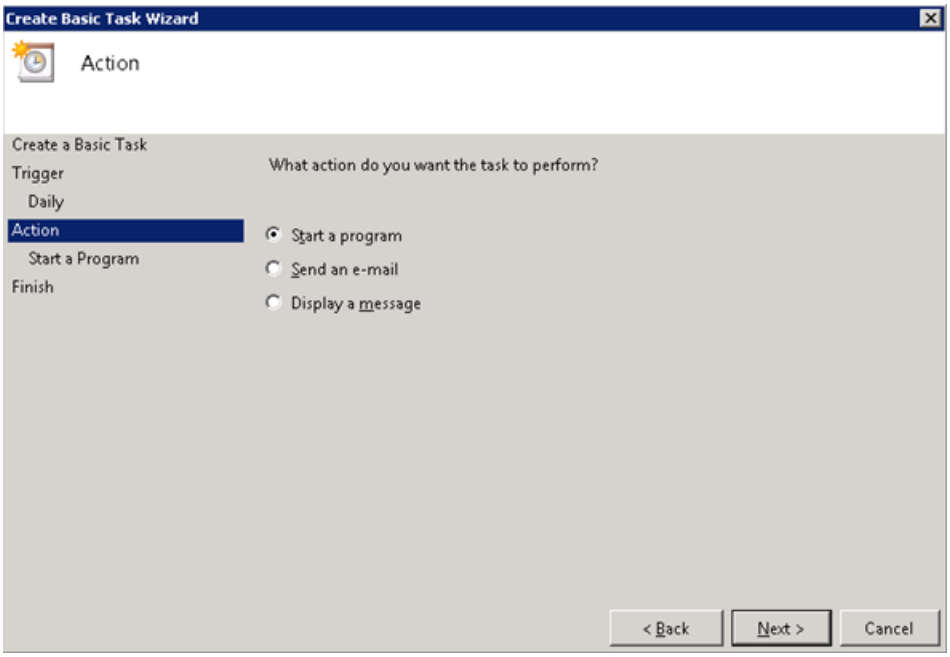
3 Type a name for the task, and then click **Next**.



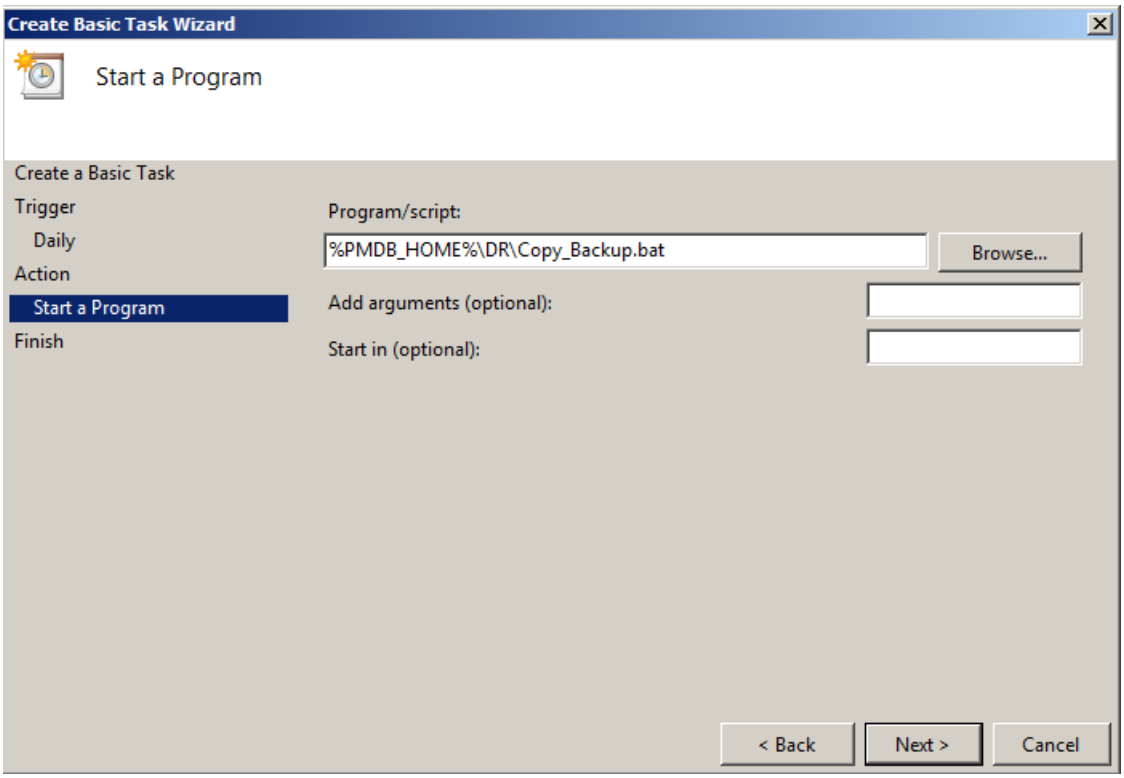
4 Select Daily, and then click **Next**.



5 Select the start time, type **1** in the Recur every field, and then click **Next**.



6 Select **Start a program**, and then click **Next**.



7 Browse to `%PMDB_HOME%\DR`, select `Copy_Backup.bat`, and then click **Next**.

8 Click **Finish**.

Schedule to Run the Full Backup Script

You must schedule to run the Full Backup script *after* the Copy Backup script.

On Windows 2003

1 Go to **Start-> Settings -> Control Panel -> Scheduled Tasks.**

2 Double-click **Add Scheduled Task**. The Scheduled Task wizard opens.

3 Click **Next.**

4 Browse to `%PMDB_HOME%\DR`, and then select **`Execute_FullBackup_Script.bat`**. Click **Next**.

5 Type a name for the task and click **Weekly** under **Perform this task**. This defines the frequency at which the task will be performed. Click **Next**.

6 Select the time and day you want the task to begin:

   a Set the start time.

   b Do not change the default value of 1 for the frequency of weeks.

   c Select the day of the week. It is recommended to schedule this task on a day when the workload is less. You can select multiple days if you want to take a Full Backup more than once a week.

7 Click **Next**.

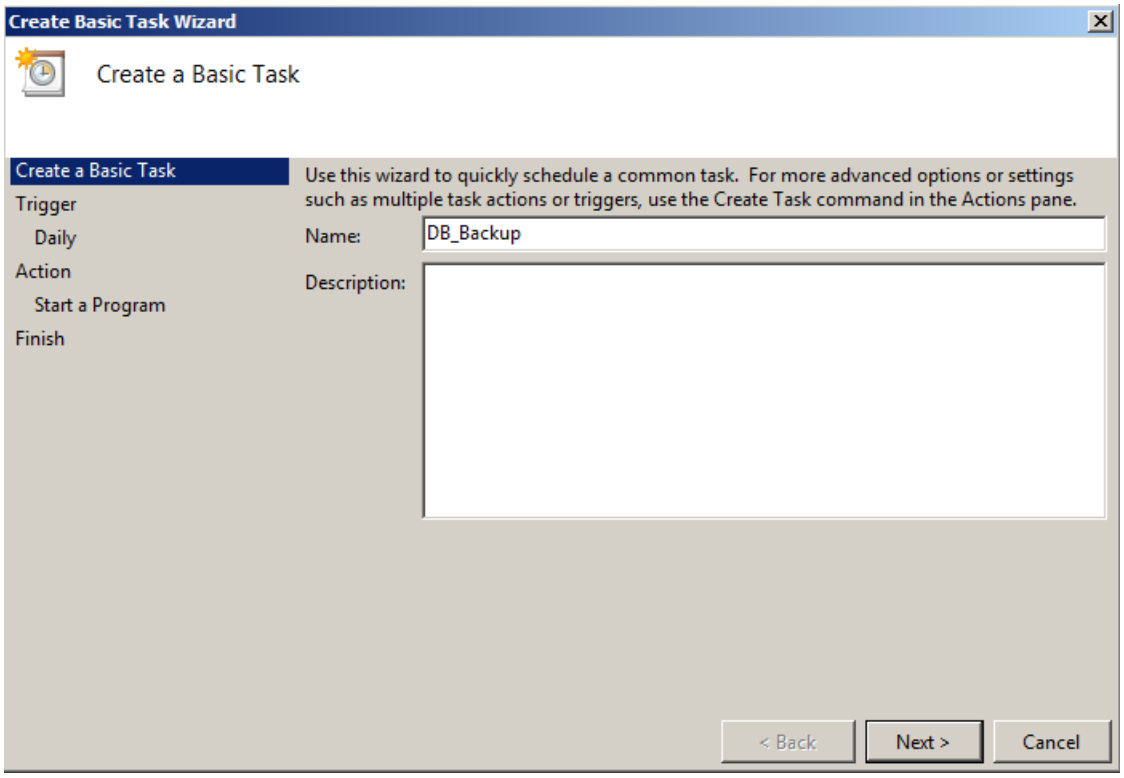
8 Enter the user name and password to set the account information.

9 Click **Finish**.

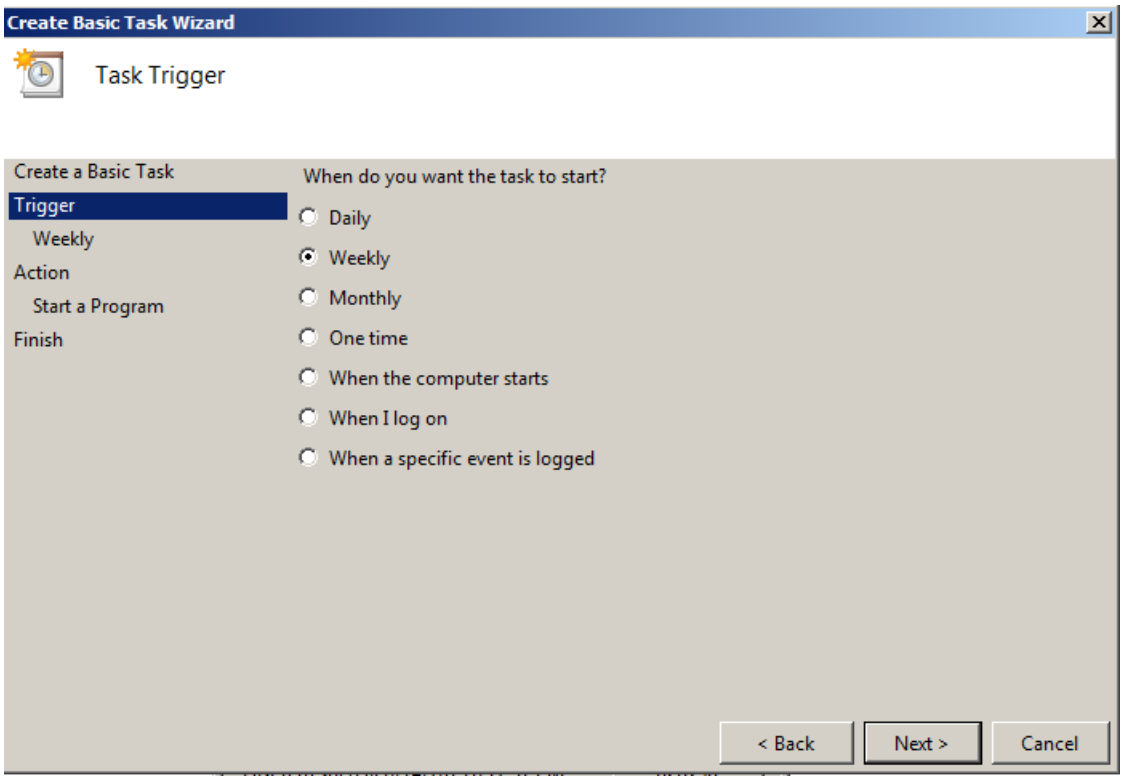
On Windows 2008

1 Go to **Start-> Control Panel -> System and Security -> Administrative Tools -> Schedule Tasks**. The Task Scheduler window opens.

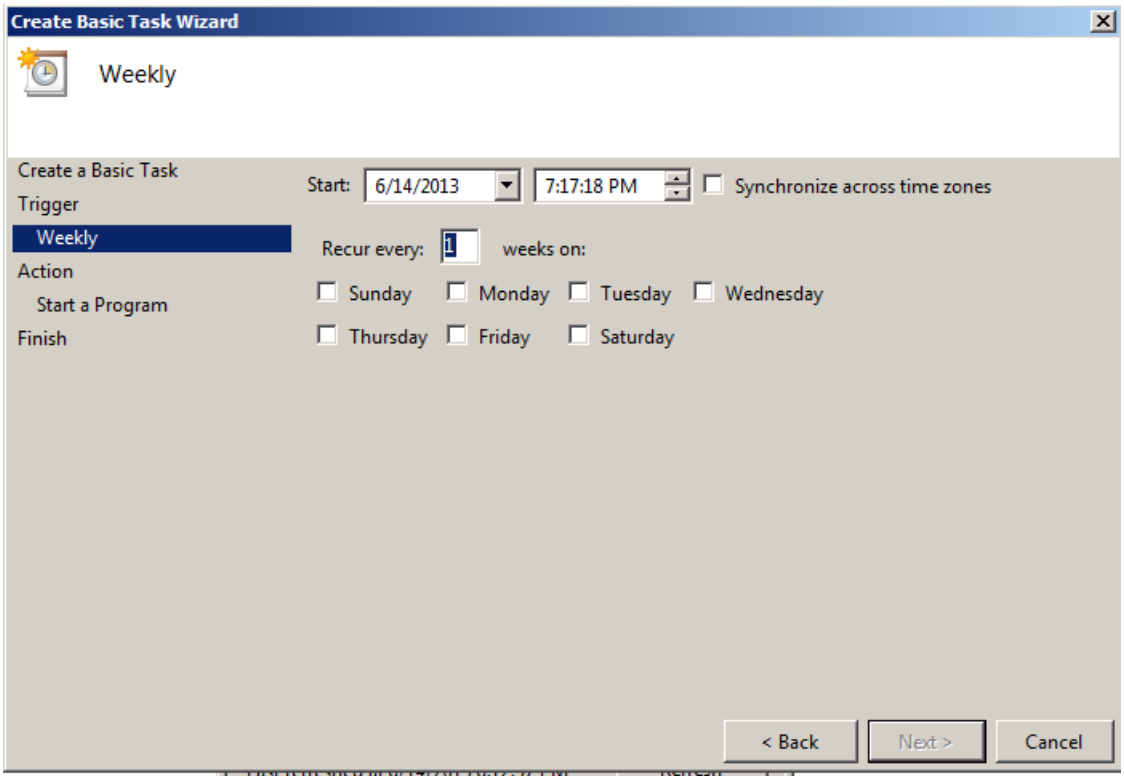
2 In the Task Scheduler window, click **Create Basic Task**. The Create Basic Task wizard opens.



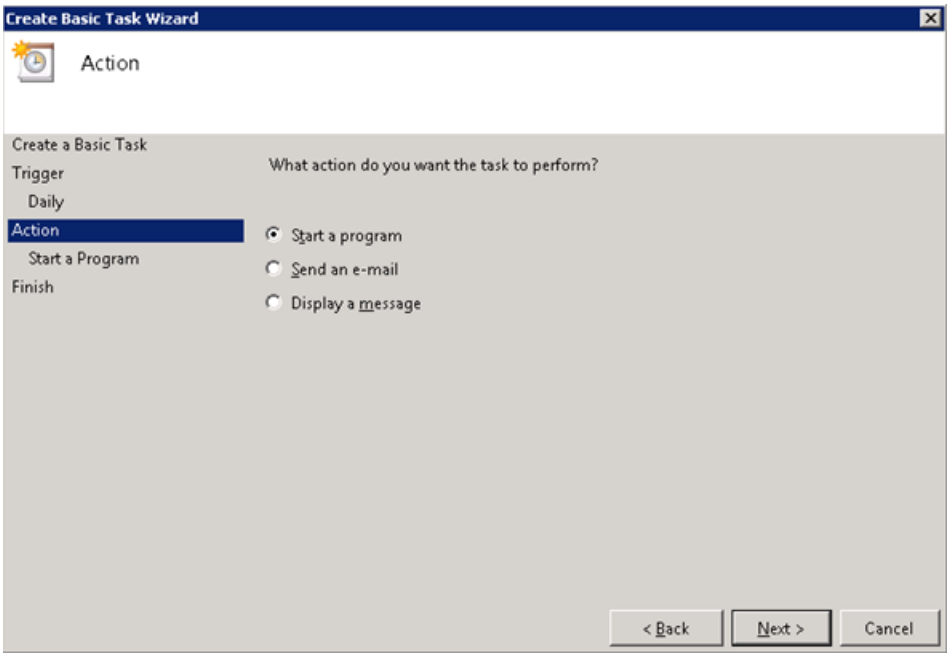
3 Type a name for the task, and then click **Next.**



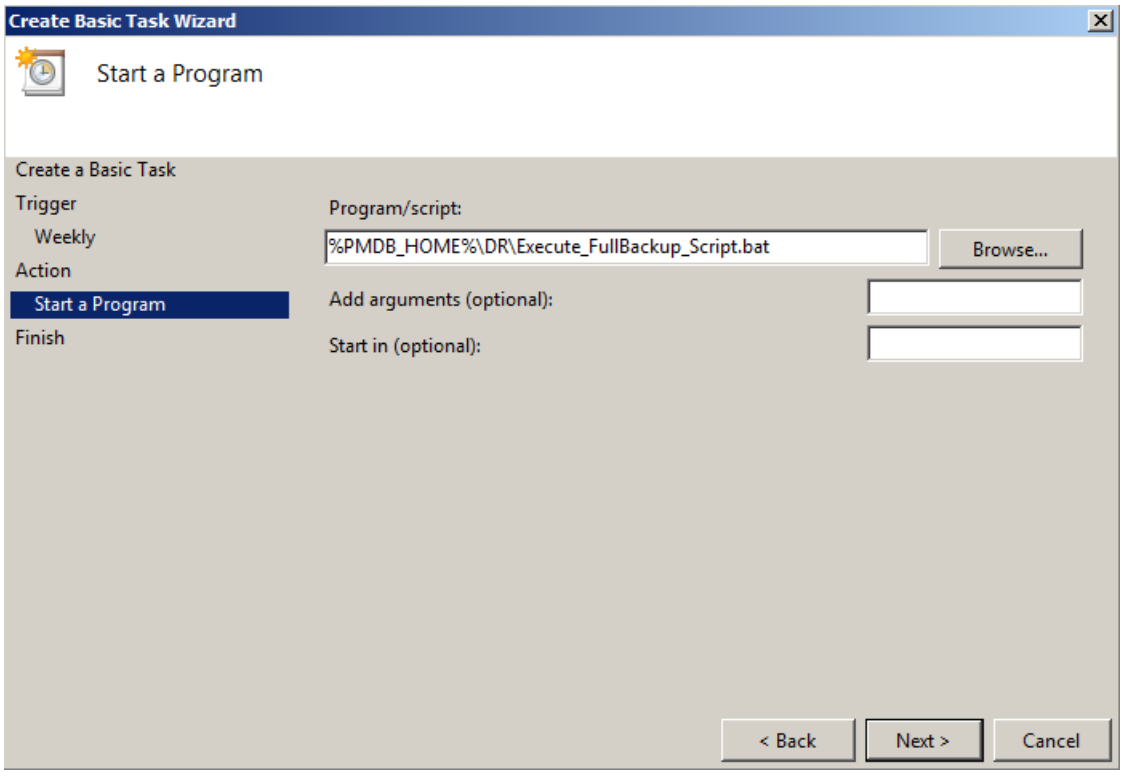
4 Select Weekly, and then click **Next.**



5 Select the start time, day of the week, type one in the Recur every field, and then click **Next.**



6 Select **Start a program**, and then click **Next**.



7 Browse to `%PMDB_HOME%\DR`, select `Execute_FullBackup_Script.bat`, and then click **Next**.

8 Click **Finish**.

Schedule to Run the Incremental Backup Script

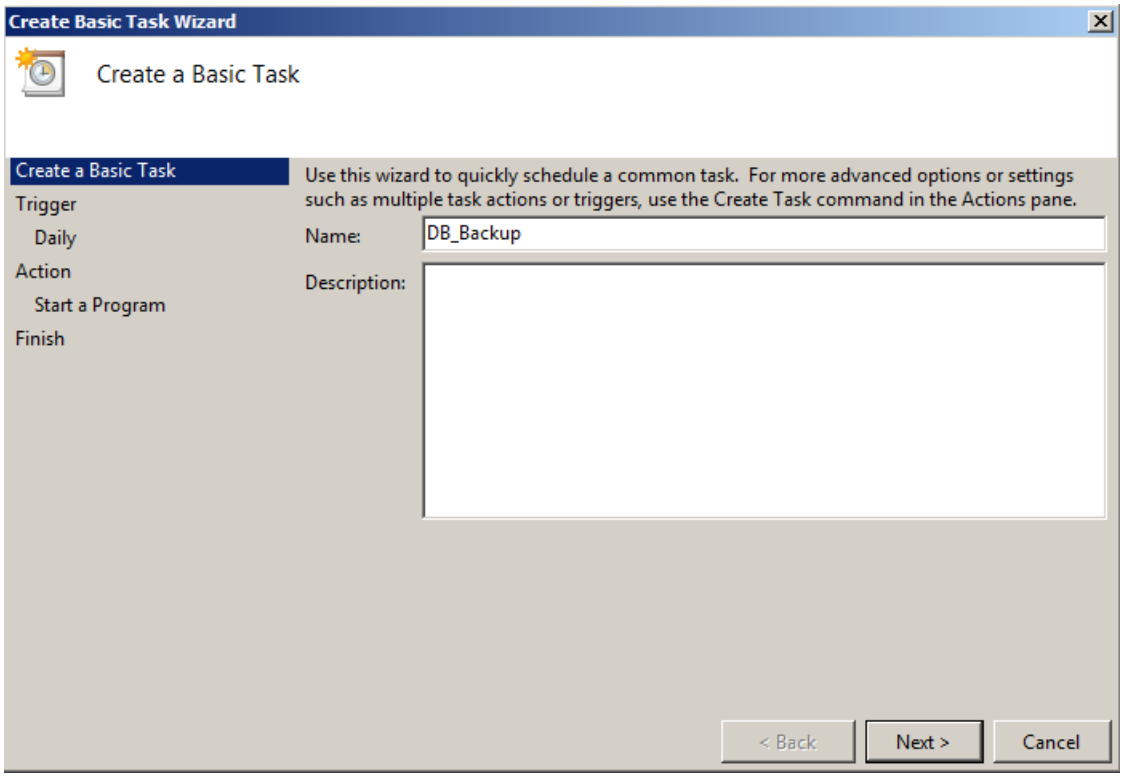
You must schedule to run the Incremental Backup script once a day.

On Windows 2003

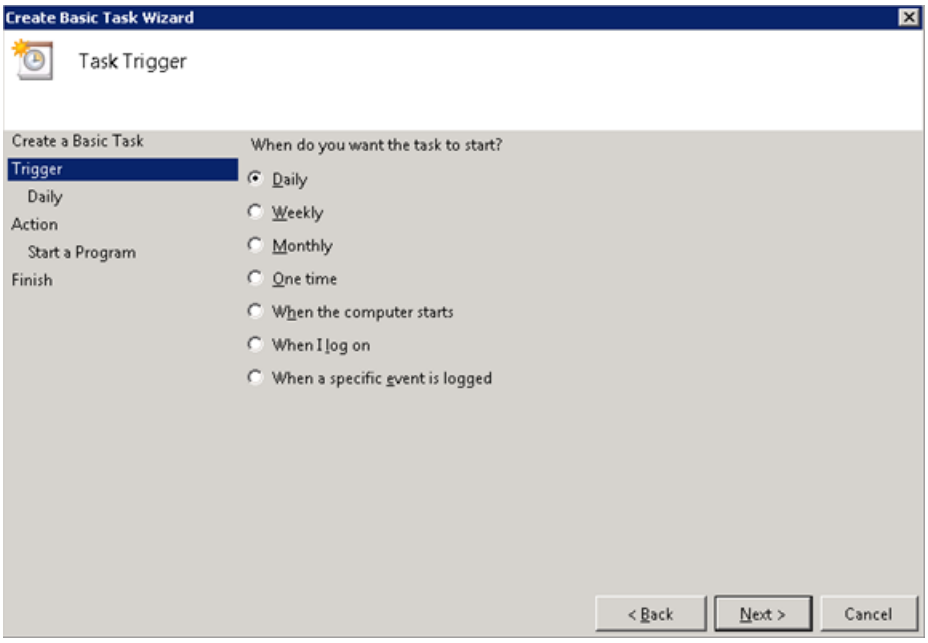
1. Select **Daily**, and then click **Next**.Go to **Start-> Settings -> Control Panel -> Scheduled Tasks.**
2. Double-click **Add Scheduled Task**. The Scheduled Task wizard opens.
3. Click **Next.**
4. Browse to `%PMDB_HOME%\DR`, and then select **`Execute_IncSncFullBackup_Script.bat`**. Click **Next**.
5. Type a name for the task and click **Daily** under **Perform this task**. This defines the frequency at which the task will be performed. Click **Next**.
6. Select the time and day you want the task to begin:
   a. Set the start time.
   b. Do not change the default value of **Daily** under **Perform this task**.
   c. Set the start date.
7. Click **Next**.
8. Enter the user name and password to set the account information.
9. Click **Finish**.

On Windows 2008

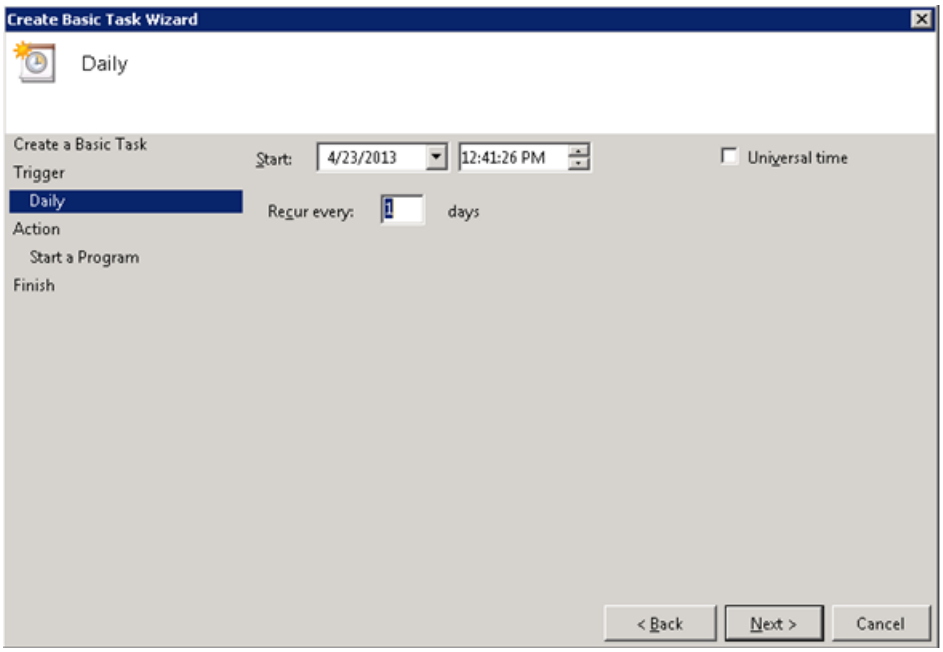
1. Go to **Start-> Control Panel -> System and Security -> Administrative Tools -> Schedule Tasks**. The Task Scheduler window opens.
2. In the Task Scheduler window, click **Create Basic Task**. The Create Basic Task wizard opens.



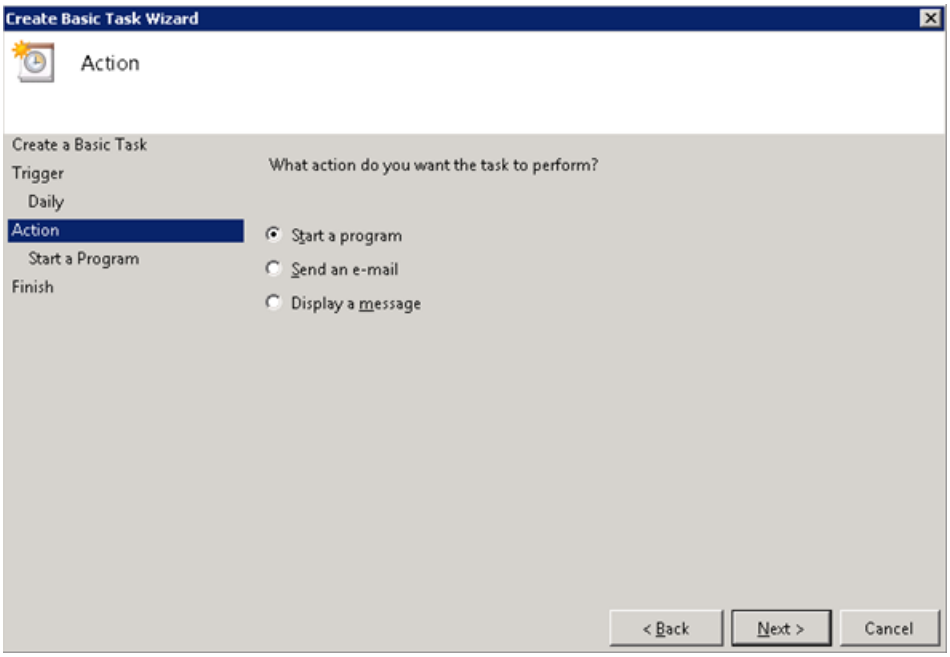
3 Type a name for the task, and then click **Next.**



4 Select the start time, type **1** in the Recur every field, and then click **Next**.



5 Select **Start a program**, and then click **Next.**



6 Browse to `%PMDB_HOME%\DR`, select `Execute_IncSncFullBackup_Script.bat`, and then click **Next**.

7 Click **Finish**.

Backing Up the SAP BusinessObjects Database and File Store

The `%PMDB_HOME%\DR\Execute_BO_FullBackup.bat` script helps you take a backup of the SAP BusinessObjects database and file store. To schedule the backup, follow these steps:

On Windows 2003

1 Go to **Start-> Settings -> Control Panel -> Scheduled Tasks.**

2 Double-click **Add Scheduled Task**. The Scheduled Task wizard opens.

3 Click **Next.**

4 Browse to `%PMDB_HOME%\DR`, and then select **`Execute_BO_FullBackup.bat`** .

5 Click **Next**.

6 Type a name for the task and click **Daily** under **Perform this task**. This defines the frequency at which the task will be performed.

7 Click **Next**.

8 Select the time and day you want the task to begin:

   a Set the start time.

   b Do not change the default value of **Daily** under **Perform this task**.

   c Set the start date.

9 Click **Next**.

10 Enter the user name and password to set the account information.

11 Select the **Open advanced properties** check box.

12 Click **Finish**. The dialog box for advanced properties opens.

13 In the Run field, type the following arguments after `Execute_BO_FullBackup.bat`:

<*backup_path*> <*SAP_BusinessObjects_InstalledDrive*>

In this instance:

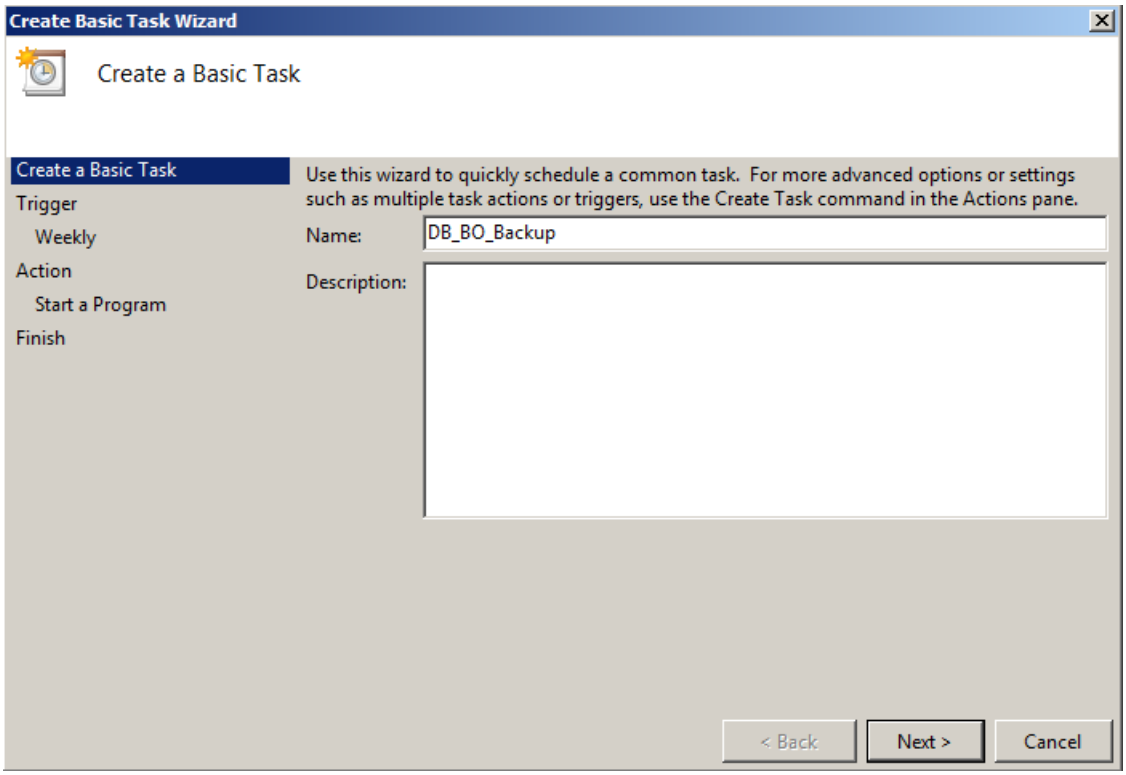
- <*backup_path*> is the directory where you want to store the backed-up files and data.
- <*SAP_BusinessObjects_InstalledDrive*> is the drive where SAP BusinessObjects is installed. By default, this is the `C:\` drive. If a different drive was selected for SAP BusinessObjects during SHR installation, enter that drive.

Note: If you want to backup the files to a custom folder, you must create it earlier.

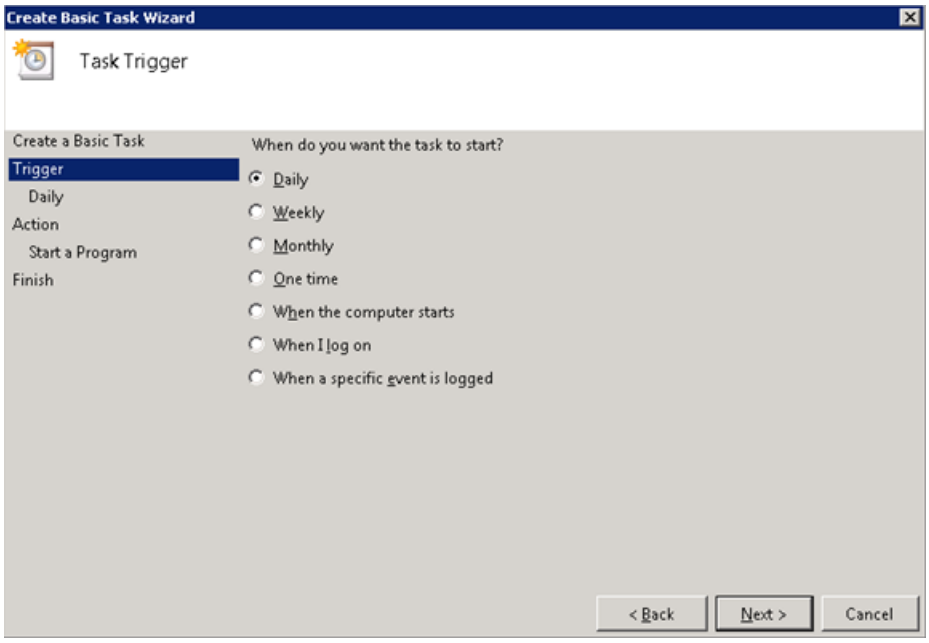
On Windows 2008

1 Go to **Start-> Control Panel -> System and Security -> Administrative Tools -> Schedule Tasks**. The Task Scheduler window opens.

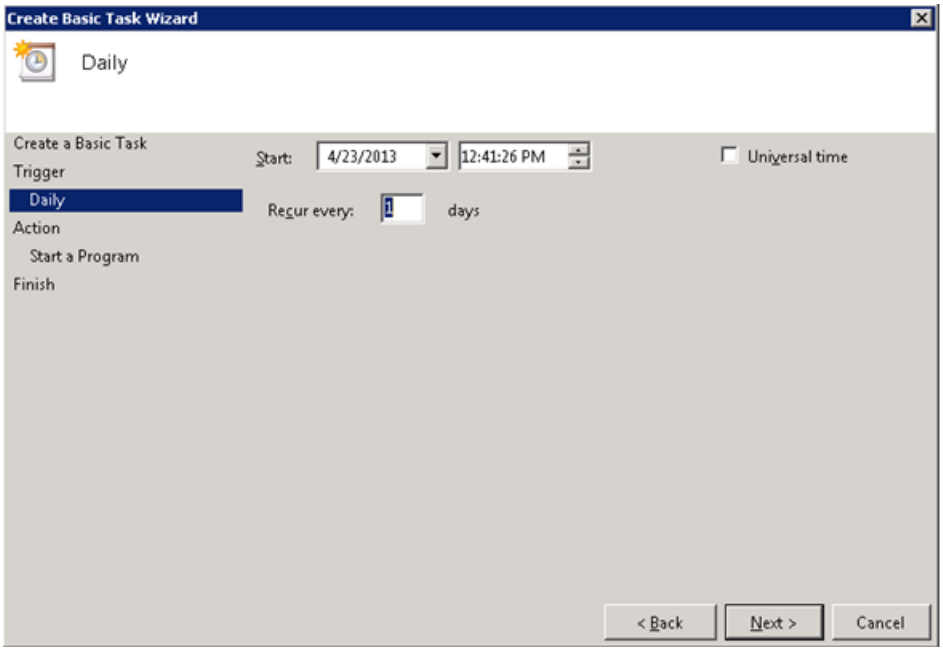
2 In the Task Scheduler window, click **Create Basic Task**. The Create Basic Task wizard opens.



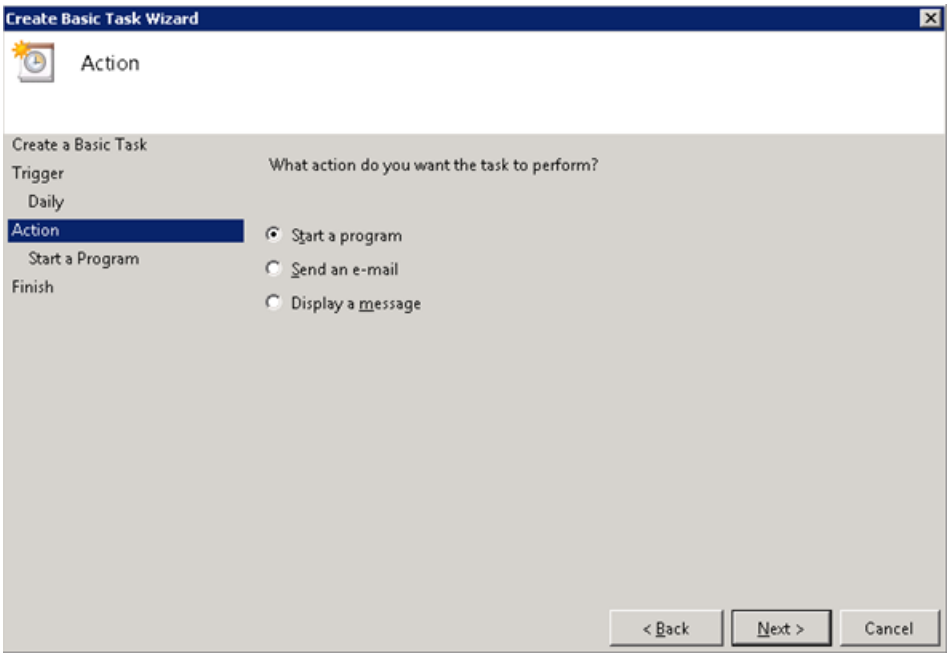
3 Type a name for the task, and then click **Next.**



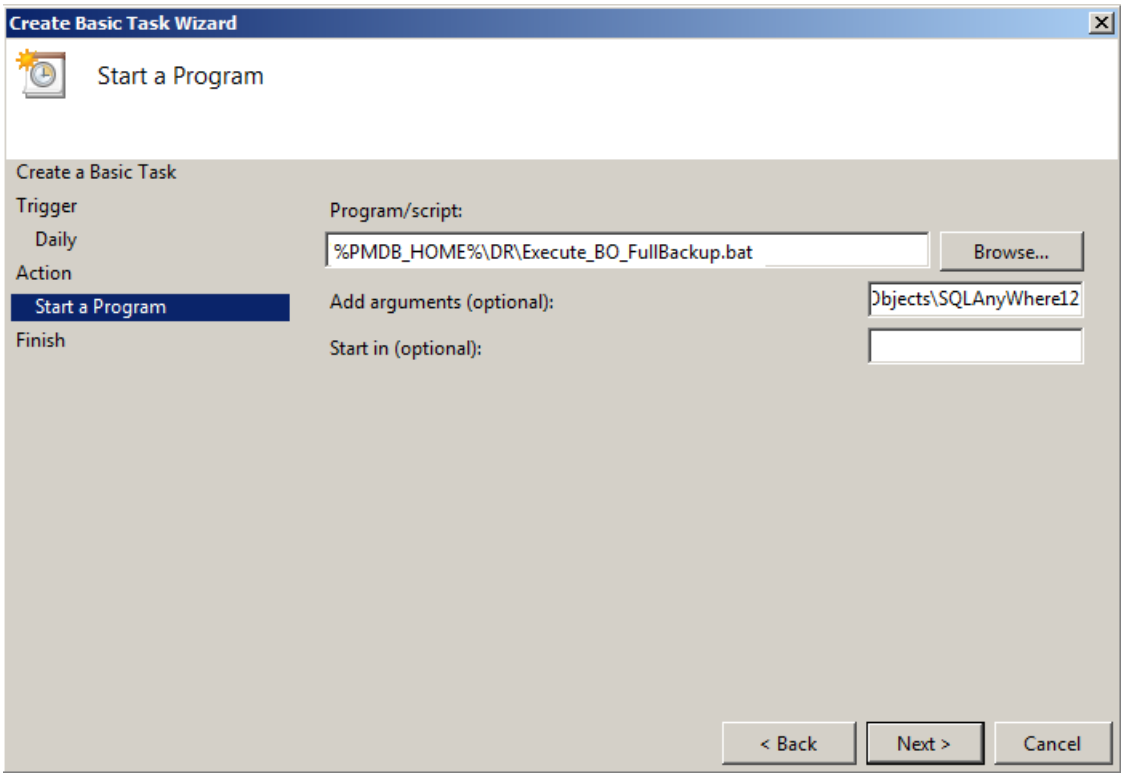
4 Select **Daily**, and then click **Next**.



5 Select the start time, type **1** in the Recur every field, and then click **Next**.



6 Select **Start a program**, and then click **Next**.



7 Browse to `%PMDB_HOME%\DR`, select **`Execute_BO_FullBackup.bat`**, and then click **Next**.

8 In the Add arguments field, type the following details:

<backup_path> <SAP_BusinessObjects_InstalledDrive>

Include a space between two items.

In this instance:

- *<backup_path>* is the location where you want to store the backed-up files and data.
- *<SAP_BusinessObjects_InstalledDrive>* is the drive where SAP BusinessObjects is installed. By default, this is the `C:\` drive. If a different drive was selected for SAP BusinessObjects during SHR installation, enter that drive.

Note: If you want to backup the files to a custom folder, you must create it earlier.

9 Click **Finish**.

Backing Up the Management Database Table

Task 1: Edit the Backup Scripts

SHR provides the `%PMDB_HOME%\scripts\MgmtDB\Postgres\backup_aggregate_control.sql` and `%PMDB_HOME%\DR\DB_tables_backup.bat` scripts to back up the management database table. You must manually edit the `backup_aggregate_control.sql` script to specify the backup location. To edit the script, follow these steps:

1 Browse to the `%PMDB_HOME%\scripts\MgmtDB\Postgres` folder.

2 Open `backup_aggregate_control.sql` with a text editor.

3 Go to the following line:

```
Copy dwabc.AGGREGATE_CONTROL TO
E'E:\\bo_backup\\backup_AGGREGATE_CONTROL.dat'
```

4 Replace `E:\\bo_backup` with the directory where you want to back up the data.

While specifying the directory path, type `\\` instead of `\`.

5 Save the file.

Task 2: Schedule to Run the Backup Script

You must schedule to run the backup script once a day.

On Windows 2003

1 Go to **Start-> Control Panel -> Scheduled Tasks.**

2 Double-click **Add Scheduled Task**. The Scheduled Task wizard opens.

3 Click **Next.**

4 Browse to `%PMDB_HOME%\DR`, and then select **`DB_tables_backup.bat`**.

5 Do not type anything in the Add arguments field.

6 Click **Next**.

7 Type a name for the task and click **Daily** under **Perform this task**. This defines the frequency at which the task will be performed.

8 Click **Next**.

9 Select the time and day you want the task to begin:

   a Set the start time.

   b Do not change the default value of **Daily** under **Perform this task**.

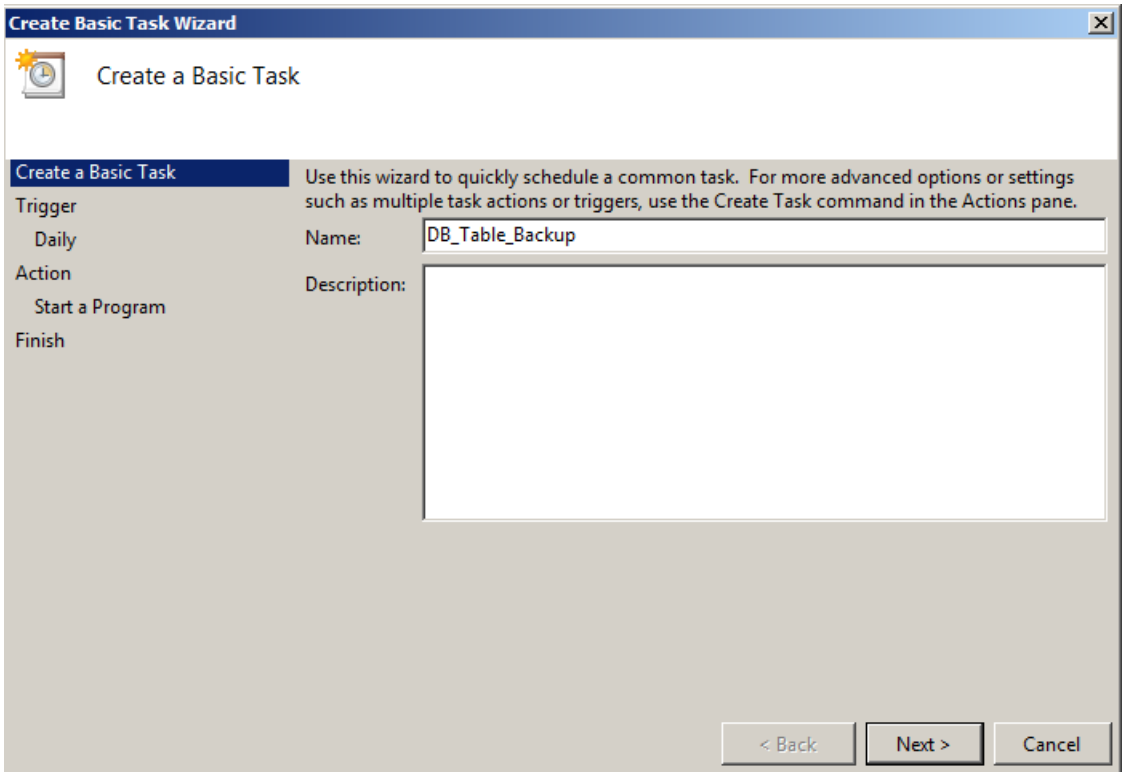
   c Set the start date.

10 Click **Next**.

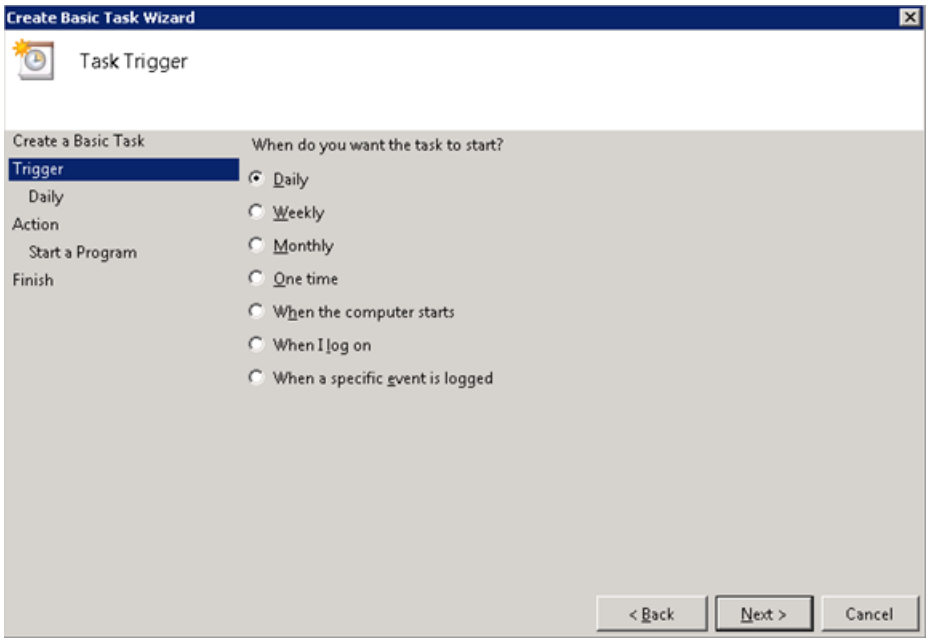
On Windows 2008

1 Go to **Start-> Control Panel -> System and Security -> Administrative Tools -> Schedule Tasks**. The Task Scheduler window opens.

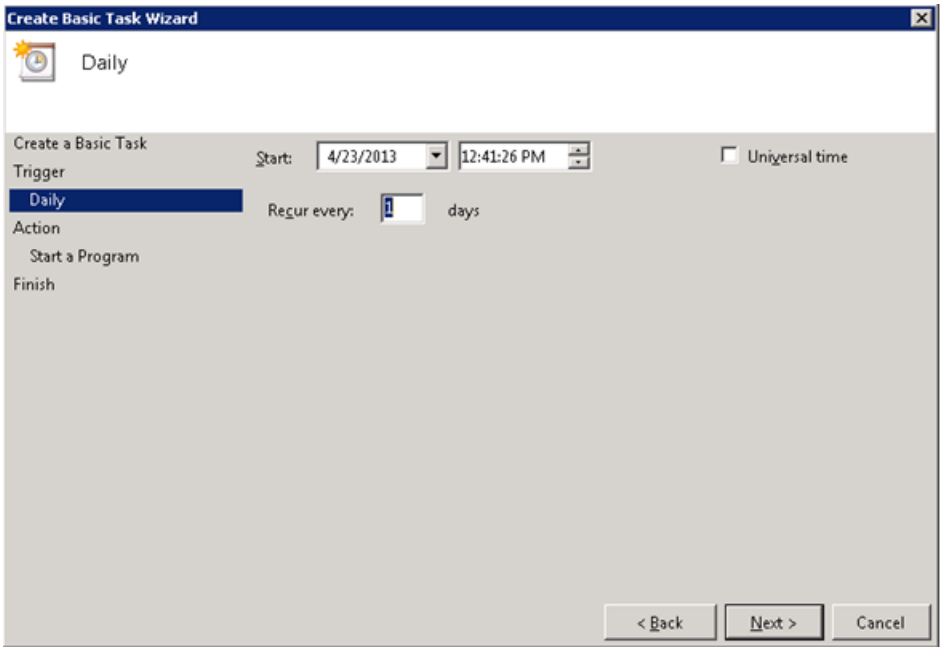
2 In the Task Scheduler window, click **Create Basic Task**. The Create Basic Task wizard opens.



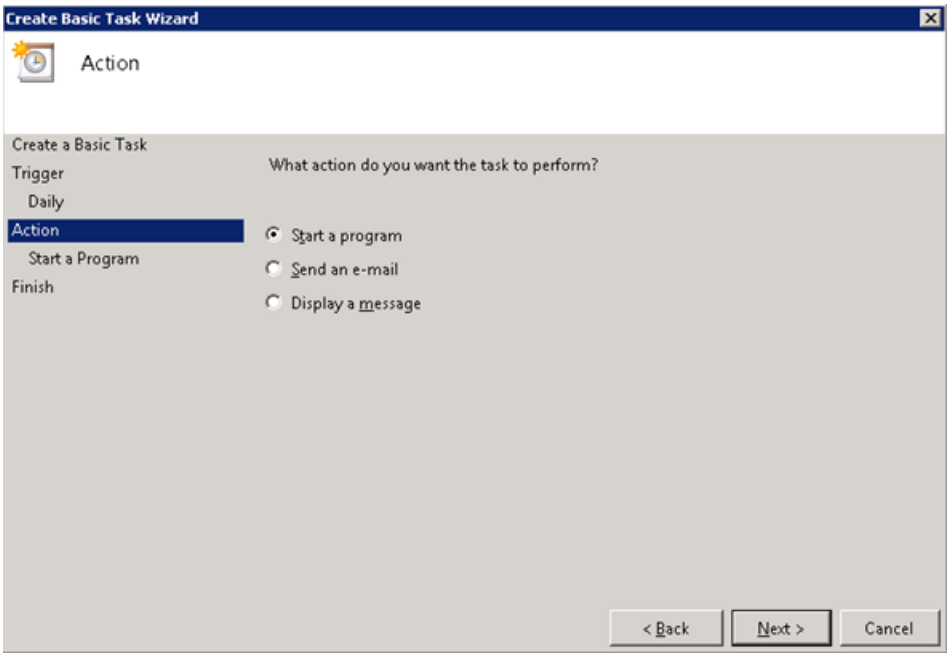
3 Type a name for the task, and then click **Next.**



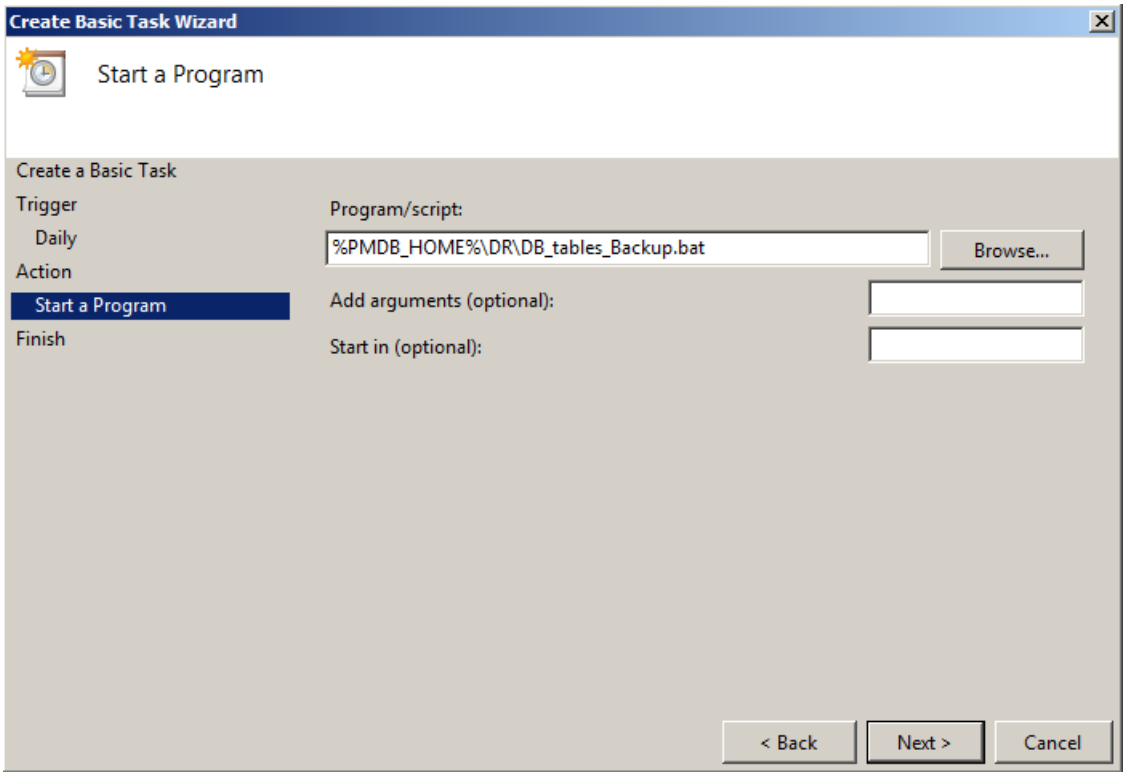
4 Select Daily, and then click **Next**.



5 Select the start time, type one in the Recur every field, and then click **Next**.



6 Select **Start a program**, and then click **Next**.



7 Browse to `%PMDB_HOME%\DR`, select **`DB_tables_Backup.bat`**, and then click **Next**.

Backing Up SHR Databases on Linux

Backing Up the Sybase IQ Database

Task 1: Edit the Backup Scripts

SHR provides two backup scripts, one each for full backup and incremental backup respectively, you must edit to fit your requirements before you begin the backup process.

These scripts are available in the `$PMDB_HOME/scripts/Sybase` directory.

These scripts are:

- For Full Backup: `IQ_backup_full.sql`
- For Incremental Backup: `IQ_backup_incr_since_full.sql`

To edit the scripts follow these steps:

1. Browse to the `$PMDB_HOME/scripts/Sybase` directory.
2. Open `IQ_backup_full.sql` with a text editor application.
3. In the last parameter within the .sql script, create a directory where you want to save the backed-up files. That is, replace `location_for_backup` with the actual location.

   For example:

Default String

```
dsi_pmdb_backup
'FULL',NULL,'READWRITE_FILES_ONLY',N
ULL,NULL,NULL,NULL,NULL,'D','locatio
n_for_backup'
```

After Modifying

```
dsi_pmdb_backup
'FULL',NULL,'READWRITE_FILES_ONLY'
,NULL,NULL,NULL,NULL,NULL,'D',
'/backup'
```

4. Similarly, in the incremental backup script (`IQ_backup_incr_since_full.sql`), replace the `location_for_backup` string with the actual backup location.

   For example:

Default String

```
dsi_pmdb_backup
'INCREMENTAL_SINCE_FULL',NULL,'READW
RITE_FILES_ONLY',NULL,NULL,NULL,NULL
,NULL,'D','location_for_backup'
```

After Modifying

```
dsi_pmdb_backup
'INCREMENTAL_SINCE_FULL',NULL,'REA
DWRITE_FILES_ONLY',NULL,NULL,NULL,
NULL,NULL,'D','/backup'
```

The above .sql scripts will be run by the following Shell scripts:

- Execute_FullBackup_Script.sh (Full Back up)
- Execute_IncSncFullBackup_Script.sh (Incremental Back up)

These Shell scripts are available in the `$PMDB_HOME/DR` directory.

After running these scripts, a database backup is created with file name suffixed with day of the Week at the specified location.

Task 2: Edit the Copy Scripts

SHR provides a script for copying backed-up database files into a specific directory.

To edit the copy script, type the location where the backed-up database file exists and the location where you want to copy the copied files before starting the full backup procedure. You must run this script on the system where the Sybase IQ database is installed.

```
COPY "location of existing full backup file" "copy to location"> $PMDB_HOME/
tmp/Copy_Backup.txt 2>&1
```

Replace `location of existing full backup file` and `copy to location` with actual location details.

An example of the script:

```
cp "/disk1/HP-SHR/Backup/Full*" "/disk1/HP-SHR/Backup/Old/" > $PMDB_HOME/tmp/
Copy_Backup.txt 2>&1
```

Task 3: Schedule the Backup

To take regular backup of the database, you must schedule to run the backup scripts by using the Linux CronJobs scheduler. It is recommended that you take a full backup once a week and an incremental backup once a day.

The Copy Backup script creates a copy of the full backup database files in the specified location to avoid overwriting an existing backup. You must schedule to run the Copy Backup script every time before you run the full backup script.

Follow these steps to set up a cronjob scheduler on Linux:

1. To edit your `crontab` file, type the following command at the Linux Terminal:

   `crontab –e`

2. Schedule to run the copy backup script every day:

   Type the following line in the `crontab` file.

   `0 15 * * * $PMDB_HOME/DR/Copy_Backup.sh`

   In the above example, the copy backup script is run every day at 15:00 Hours.

3. Schedule to run the full backup script once a week:

   Type the following line in the `crontab` file.

   `0 15 * * 1 $PMDB_HOME/DR/Execute_FullBackup_Script.sh`

   In the above example, the full backup script is run on the first day of the week at 15:00 Hours.

4. Schedule to run the incremental backup script every day:

   Type the following line in the `crontab` file.

   `0 15 * * * $PMDB_HOME/DR/Execute_IncSncFullBackup_Script.sh`

   In the above example, the incremental backup script is run every day at 15:00 Hours.

5. After adding the entries, save the `crontab` file.

Backing Up the SAP BusinessObjects Database and File Store

The `$PMDB_HOME/DR/Execute_BO_FullBackup.sh` script helps you take a backup of the SAP BusinessObjects database and file store.

To schedule the backup, follow these steps:

1. Log on to the SHR system as root.
2. To edit your `crontab` file, type the following command at the command prompt:

   `crontab -e`
3. Add a line to the `crontab` file to invoke the `$PMDB_HOME/DR/Execute_BO_FullBackup.sh` script once every week.

   Example:

   `0 15 * * 1 $PMDB_HOME/DR/Execute_BO_FullBackup.sh /root/SHR_Backup`

   In the above example, the `$PMDB_HOME/DR/Execute_BO_FullBackup.sh` script is invoked on the first day of the week at 15:00 hours and the backed-up data file is stored at `/root/SHR_Backup`.
4. Save the `crontab` file.

Backing Up the Management Database Tables

The `DB_Tables_Backup.sh` script enables you to back up the management database tables. Before you schedule to run the script, you must modify the `backup_aggregate_control.sql` script, which is used by `DB_Tables_Backup.sh`.

Task 1: Edit the backup_aggregate_control.sql Script

1. Open the `backup_aggregate_control.sql` script from the `$PMDB_HOME/scripts/MgmtDB/Postgres` directory with a text editor.
2. Locate the following line:

   `Copy AGGREGATE_CONTROL TO /root/temp/backup_AGGREGATE_CONTROL.dat'`
3. Replace `/root/temp` with a location where you want to store the backed-up management database file. Do not specify a directory that does not exist on the system.

   For example, to store the backed-up management database file into the `/tmp/dbtables` directory, replace `/root/temp` with `/tmp/dbtables`.
4. Save the file.

Task 2: Schedule to Run DB_Tables_Backup.sh the Script

1. Log on to the SHR system as root.
2. To edit your `crontab` file, type the following command at the command prompt:

   `crontab -e`
3. Add a line to the `crontab` file to invoke the `$PMDB_HOME/scripts/BO/DB_Tables_Backup.sh` script once every day.

   Example:

   `0 15 * * * $PMDB_HOME/scripts/DR/DB_Tables_Backup.sh`

   In the above example, the `$PMDB_HOME/scripts/DR/DB_Tables_Backup.sh` script is invoked on the at 15:00 hours everyday.
4. Save the `crontab` file.

Restoring SHR Databases

Before restoring the backed-up data, you must install SHR 9.30 on the system with the SHR 9.30 media. After the installation is complete, you must transfer all backed-up data into a local directory onto the system.

Restoring SHR on Windows

Restoring Sybase

To restore the Sybase IQ database, follow these steps:

1. Stop the HP_PMDB_Platform_Sybase service by following these steps:
   a. Click **Start** → **Run**. The Run dialog box opens.
   b. Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.
   c. On the right pane, right-click the **HP_PMDB_Platform_Sybase** service, and then click **Stop**.
   d. From the **Windows Task Manager**, select the **Processes** tab, look for `iqsrv15.exe`, right-click it and select **End Process**.
2. Search for all files with extensions `.db`, `.log`, and `.iq` from the database file location and move these files to any other location on the system. These files are recreated by the restore process.
3. Start SybaseIQ server. At the command prompt run the following command:

   ```
   start_iq
   @<installation_directory>\Sybase\IQ-15_4\scripts\pmdbConfig.cfg
   ```

   Type the command in a single line.
4. Connect to SybaseIQ server by following these steps:
   a. On the SHR system, click **Start-> Run**. The Run dialog box opens.
   b. Type **`dbisql`** in the Open field and press **ENTER**. The Connect dialog box on Interactive SQL program opens.
   c. On the **Identification** tab, type the following:
      – In the User ID field, type **`dba`**
      – In the Password field, type **`sql`**
      – In the Server Name field, type the name of the server where the SHR SybaseIQ database is installed
      – In the Database name field, type **`utility_db`**
   d. Click **Connect**. The Interactive SQL window opens.
5. Restore the Full Backup.

   On the SQL Statements box type the following sql statement:

   `RESTORE DATABASE` <*location where database files were present*> **`FROM`** <*location where the backup file is saved*>

For example: **RESTORE DATABASE** 'E:\SybaseDB\pmdb.db' **FROM** 'E:\HP-SHR\backup\Full.Sunday'

6 Restore the Incremental Backup, if any, after restoring a Full Backup.

If several incremental backup files are available, select and restore the latest incremental backup. For example, if the database fails on a Thursday and a Full Backup had been taken on the previous Sunday, you must restore the Full Backup files of Sunday followed by the Incremental Backup taken on the previous Wednesday.

To restore the Incremental Backup on the SQL Statements box type the following sql statement:

RESTORE DATABASE <*location where database files were present*> **FROM** <*location where the incremental backup file is saved*>

For example: **RESTORE DATABASE** 'E:\SybaseDB\pmdb.db' **FROM** 'E:\HP-SHR\backup\Incr_sncfull.Wednesday'

Restoring the SAP BusinessObjects Database and File Store

To restore the SAP BusinessObjects database and file store, follow these steps:

1 Log on to the SHR system and open SAP BusinessObjects Central Configuration Manager.

2 Stop the Server Intelligence Agent and BusinessObjects web server.

3 Rename the existing file store folder. The default location of the file store is `C:\Program Files (x86)\BusinessObjects\BusinessObjects Enterprise 12.0\FileStore`.

You can rename it to `FileStore_old`.

4 Run the restore script:

full_restore.bat <*backedup_path*> "<*sqlanywherepath*>" "<*Filestorepath*>" <*backupfoldername*>

In this instance:

- <*backedup_path*> is the directory where you placed the backed-up SAP BusinessObjects database files
- <*sqlanywherepath*> is the SAP BusinessObjects database directory (default: `C:\Program Files (x86)\BusinessObjects\SQLAnyWhere`)
- <*Filestorepath*> is the SAP BusinessObjects file store directory (default: `C:\ProgramFiles(x86)\BusinessObjects\BusinessObjects`)
- <*backupfoldername*> is the folder within where backed-up files are present

5 Delete the original SAP BusinessObjects server:

a Go to the SQL Anywhere home directory. The default location is <*SAP_BusinessObjects_Install_Drive*>`\Program Files (x86)\BusinessObjects\SQLAnyWhere12\bin`.

b Double-click the **dbisqlc** file. The Connect to SQL Anywhere window opens.

c In the Connect to SQL Anywhere window, type the following details:

— User ID: Type the hostname of the SHR system (not FQDN)

— Password: Type **pmdb_admin**.

— Server name: **BOE120SQLAW_**<*SHR_hostname*>

Leave the Database Name field blank, do not change any other settings, and then click **OK**. The SQL Anywhere console opens.

d In the command pane, type the following query:

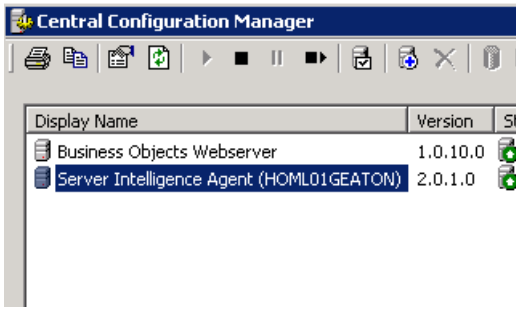
```
delete from cms_infoobjects6 where parentid=16 or parentid=59;
```

e Click **Execute**.

6 Create a new Server Intelligent Agent:

a From the Start menu, click **Programs > BusinessObjects XI 3.1 > Central Configuration Manager**. The Central Configuration Manager window opens.

b In the Central Configuration Manager window, note down the name of the Server Intelligence Agent (displayed within parenthesis).



c Go to <*SAP_BusinessObjects_Install_Directory*>`\BusinessObjects Enterprise 12.0\win32_x86`.

The default SAP BusinessObjects installation directory is `C:\Program Files (x86)\BusinessObjects\BusinessObjects Enterprise 12.0`.

d Delete all files that start with `_boe`.

e Delete the Server Intelligence Agent by running the following command:

`sc delete boe120sia`<*name*>

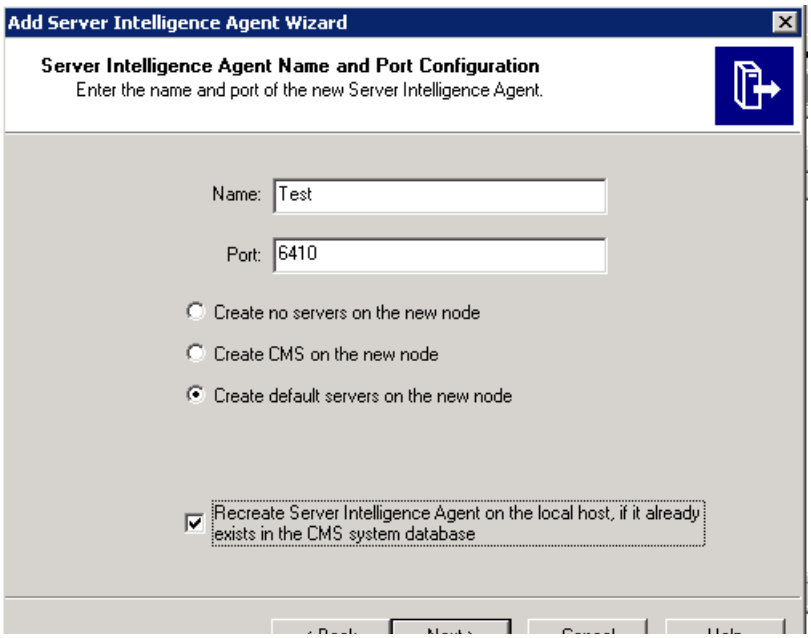
In this instance, <*name*> is the name of the Sever Intelligence Agent that you noted down in step b.

The following message appears in the command line console:

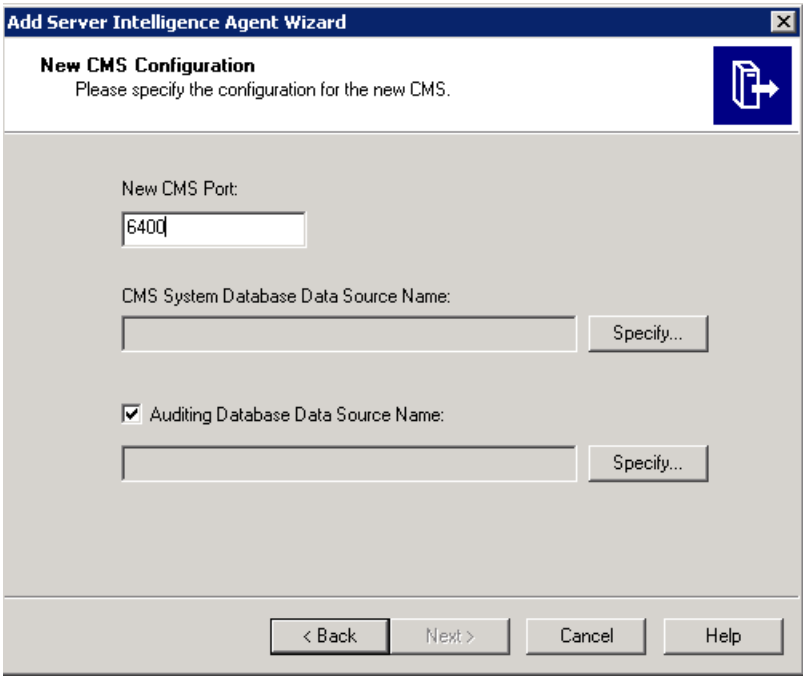
```
[SC] DeleteService SUCCESS
```

f In the Central Configuration Manager window, right-click and stop **BusinessObjects Webserver**, and then click **Add Server Intelligent Agent** (). The Add Server Intelligence Agent wizard opens.

g In the Add Server Intelligence Agent wizard, click **Next.**



h Type a name for the Server Intelligence Agent, type **6410** for port, select the **Create Default Servers** option, select the **Recreate Server Intelligence Agent on** check box, and then click **Next**. The New CMS Configuration page opens.



i Type **6400** for new CMS port.

j Under the CMS System Database..., click **Specify**. The Create Database Driver dialog box opens.

k In the Create Database Driver dialog box, select **SQL Anywhere (ODBC)**, and then click **OK**. The Select Data Source window opens.

l In the Select Data Source window, go to Machine Data Source, select **BOE120**, and then click **OK**.

m In the Connect to SQL Anywhere window, type the host name of the SHR system as the user ID, type the SQL Anywhere database password, and then click **OK**. Do not change any other settings. Do not select **Encrypt Password**.

n *Optional.* Enable auditing.

— Under the Auditing Database Data Source.. check box, click **Specify**. The Create Database Driver dialog box opens.

— In the Create Database Driver dialog box, select **SQL Anywhere (ODBC)**, and then click **OK**. The Select Data Source window opens.

— In the Select Data Source window, go to Machine Data Source, select **BOE120_Audit**, and then click **OK**.

— In the Connect to SQL Anywhere window, type the host name of the SHR system as the user ID, type the SQL Anywhere database password, and then click **OK**. Do not change any other settings. Do not select **Encrypt Password**.

o Click **Next**.

p Click **Next**.

q Click **Finish**. A new Server Intelligence Agent is created.

r Start the Server Intelligence Agent.

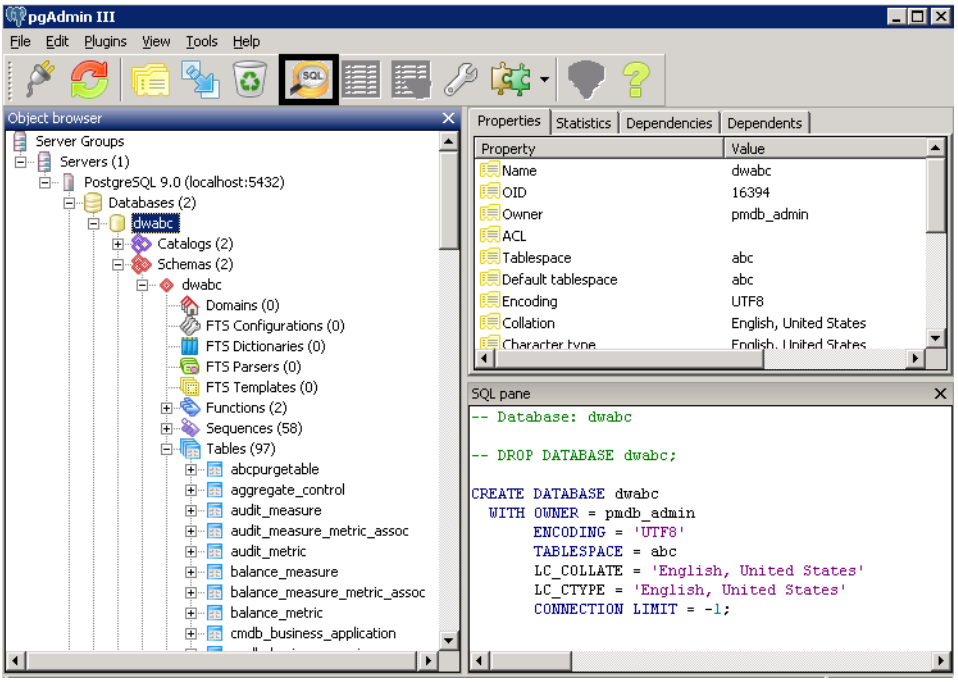
Restoring the Management Database Table

To restore the management database table, follow these steps:

1 Log on to the SHR system.

2 From the Start menu, go to **Programs > PostgreSQL 9.2 > PgAdmin III**.

3 Connect to the database by providing the password. Launch the sql query analyzer by clicking the sql icon.



4 Run the following query to restore the database tables:

- **`Delete From dwabc.aggregate_control table`**
- **`COPY dwabc.aggregate_control from '`***<Path of the backupfile>*`\backup_AGGREGATE_CONTROL.dat'`**

  In this instance, <*Path of the backupfile*> is the directory where you placed the backed-up management database table.

Post-Restore Tasks

1. After restoring the database, you must start the database to access it.

   To start the Sybase IQ database follow these steps:

   a. Click **Start** → **Run**. The Run dialog box opens.

   b. Type **`services.msc`** in the **Open** field, and then press **ENTER**. The Services window opens.

   c. On the right pane, right-click the **HP_PMDB_Platform_Sybase** service, and then click **Start**.

2. At the command prompt, type the following command to start the Sybase IQ database:

   `start_iq @<`*Installation_Directory*`>\Sybase\IQ-15_4\scripts\pmdbConfig.cfg <`***Sybase datafiles location***`>\pmdb.db`**

   In this instance, <*Installation_Directory*> is the location where you install SHR and **<***Sybase datafiles location***>** is the location where Sybase IQ database files are stored**.**

3. Launch dbisql and log on to Sybase.

4. Use the following update script to set DB_HOST and DB_SERVER_NAME in the table IM_DB_DBINFO:

   - **`UPDATE IM_DB_DBINFO SET DB_HOST=`***<shrsystemname>*`,DB_SERVER_NAME=`***<dbServerName>**
   - **`COMMIT`**

   In this instance, <*shrsystemname*> is the name of the new SHR system and <*dbServerName*> is the name of the server where the Sybase database for the newly installed SHR is hosted.

5. Use the following update script to set hostname, osname, and source in the table IM_PM_OS_INFO:

   - **`UPDATE IM_PM_OS_INFO SET hostname='`***<shrsystemname >*`',osname='`***<shrsystem osname>*`','`***<source>*`' where hostname='`***<old hostname>***'**
   - **`COMMIT`**

   In this instance, <*shrsystemname*> is the name of the new SHR system and <*shrsystemname*> is the name of operating system on the new SHR system.

   <*old hostname*> is the name of the old SHR system.

   If the HP Operations agent is installed on the SHR system, type **`HP Performance Agent`** for <*source*>; otherwise, type **`Sun JMX`**.

6. Use the following update script to set `hostname`, `osname`, and `source` in the table IM_PM_APPS_INFO:

- **UPDATE IM_PM_APPS_INFO SET hostname='**< *shrsystemname* >**', hostos ='**<*shrsystem osname*>**','**< *hostinfo* > **where hostname='**<*oldhostname*>**'**
- **COMMIT**

7 Restart the following SHR services from the Services window:

- HP_PMDB_Platform_Administrator
- HP_PMDB_Platform_IM

8 Stop the following services:

- HP_PMDB_Platform_Collection
- HP_PMDB_Platform_Timer

9 Configure data sources (Configuring SHR on page 61).

10 Start the following services:

- HP_PMDB_Platform_Collection
- HP_PMDB_Platform_Timer

Restoring SHR on Linux

Restoring Sybase

To restore the Sybase database, follow these steps:

1 Stop the **HP_PMDB_Platform_Sybase** service:

- **cd /etc/init.d**
- **service HP_PMDB_Platform_Sybase stop**

2 Run this command: `ps -ef|grep iqsrv15`

Note the process ID displayed by the command output.

3 Run this command by entering the process ID in <*pid*>: **kill -9 <*pid*>**

4 Search for all files with extensions .db, .log, and .iq from the database file location and move those files to any other location on the system. Those files are recreated by the restore process.

5 Start the SybaseIQ server. At the command prompt, run the following command:

start_iq @/opt/HP/BSM/Sybase/IQ-15_4/scripts/pmdbConfig.cfg

Type the command in a single line.

6 Connect to SybaseIQ server:

```
dbisql –c
"uid=dba;pwd=sql;dbn=utility_db;eng=<server_name>;commlinks=tcpip(hos
t=<host_name>;commlinks=tcpip(host=<host_name>;port=21424)"
```

Example:

```
dbisql -c
"uid=dba;pwd=sql;dbn=utility_db;eng=SHRLR02;commlinks=tcpip(host=SHRL
R02.DOMAIN.COM;p
```

7 Restore the Full Backup on the same path/drive:

On the SQL Statements box, type the following sql statement:

```
RESTORE DATABASE <location where database files were present> FROM
<location where the backup file is saved>
```

For example:

```
RESTORE DATABASE '/root/SHR_Sybase/pmdb.db' FROM '/root/HPSHR/backup/
Full.Sunday'
```

8 Run the following command to restore the database on a different path/drive

```
RESTORE DATABASE <location where database files were present> from
<location where the backup file is saved>

RENAME IQ_SYSTEM_MAIN TO <path to pmdb.iq>

RENAME IQ_SYSTEM_TEMP TO <path to pmdb.iqtmp>

RENAME pmdb_user_main TO <path to pmdb_user_main01.iq>
```

Make sure the path to `pmdb.db` exists.

Run all the above commands together.

9 Restore the Incremental Backup, if any, after restoring a Full Backup.

If several incremental backup files are available, select and restore the latest incremental Backup.

To restore the Incremental Backup on the same path/drive in the SQL Statements box, type the following sql statement:

`RESTORE DATABASE` <*location where database files were present*> **`FROM`** <*location where the incremental backup* **`file is saved>`**

```
RENAME IQ_SYSTEM_MAIN TO <path to pmdb.iq>

RENAME IQ_SYSTEM_TEMP TO <path to pmdb.iqtmp>

RENAME pmdb_user_main TO < path to pmdb_user_main01.iq>
```

10 Stop and start the Sybase services:

- **`service HP_PMDB_Platform_Sybase stop`**
- **`service HP_PMDB_Platform_Sybase start`**

Restoring SAP BusinessObjects Database and File Store

To restore the SAP BusinessObjects database and file store, follow these steps:

1 Copy the backed-up SAP BusinessObjects database and file store on a system where SHR 9.30 is installed.

2 Log on to the system as root.

3 Run the following command to stop the web server:

```
sh /opt/HP/BSM/BO/bobje/tomcatshutdown.sh
```

4 Switch to the SAP BusinessObjects administrator by running the following command:

```
su – SHRBOADMIN
```

5 Run the following command to stop all Server Intelligence Agent servers:

```
sh /opt/HP/BSM/BO/bobje/stopservers
```

6 Stop the SQL Anywhere service:

sh /opt/HP/BSM/BO/bobje/sawstop.sh

While prompted for password, specify the SQL Anywhere database password.

7 Take a backup of all SQL Anywhere Data Base files under the by running the following command:

cp /opt/HP/BSM/BO/bobje/SQLAW/Bin/*BOE120* *<backup_path>*

In this instance, *<backup_path>* is the directory where you want to back up the existing SQL Anywhere database files.

8 Switch to root by running the following command:

su root

9 Copy the backed-up SAP BusinessObjects database file (that you backed up in Backing Up the SAP BusinessObjects Database and File Store on page 192) to following location:

`/opt/HP/BSM/BO/bobje/SQLAW/Bin`

10 Run the following commands to grant adequate rights to the SAP BusinessObjects user:

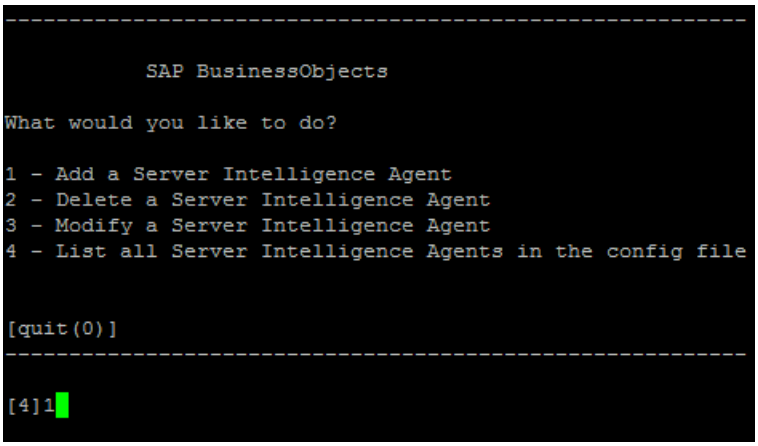
a **chown SHRBOADMIN:root *BOE120***

b **chmod 755 *BOE120***

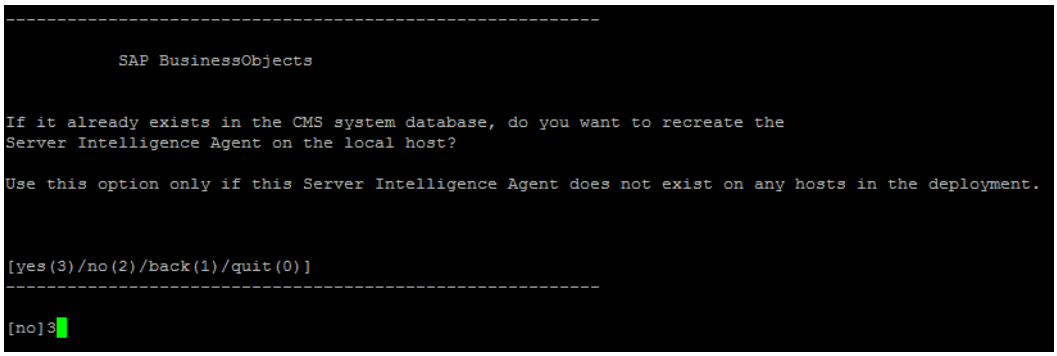
11 Create a new Server Intelligence Agent by running the following command:

sh /opt/HP/BSM/BO/bobje/serverconfig.sh

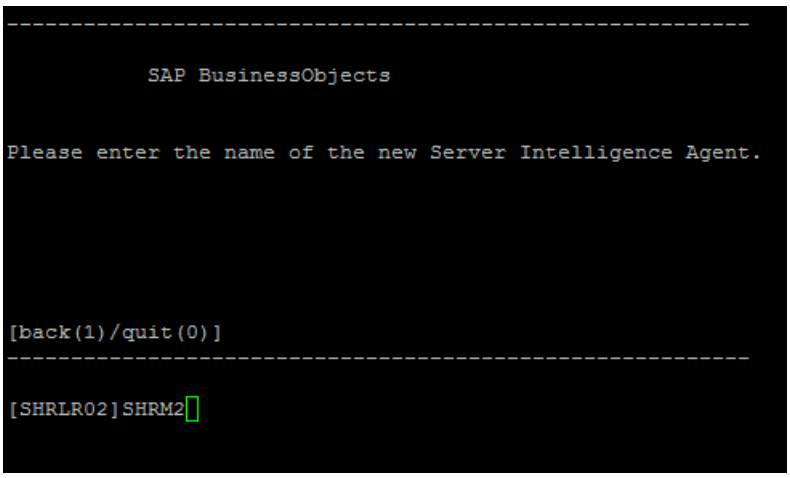
The SAP BusinessObjects wizard opens in the command line console.



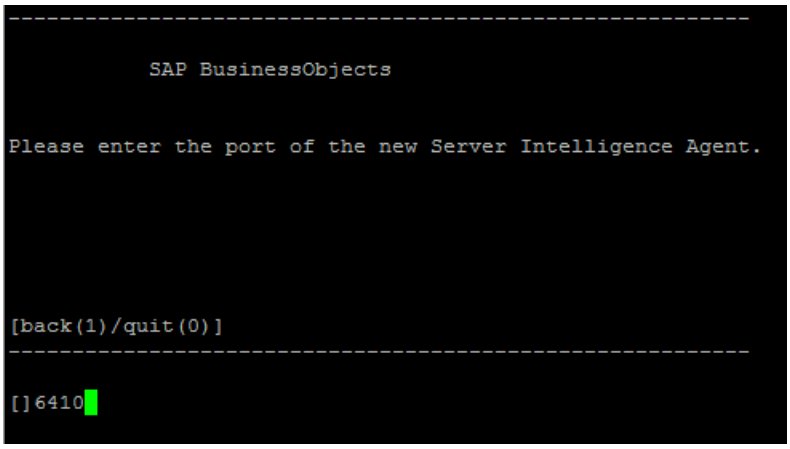
12 Type **1**, and then press **Enter**.



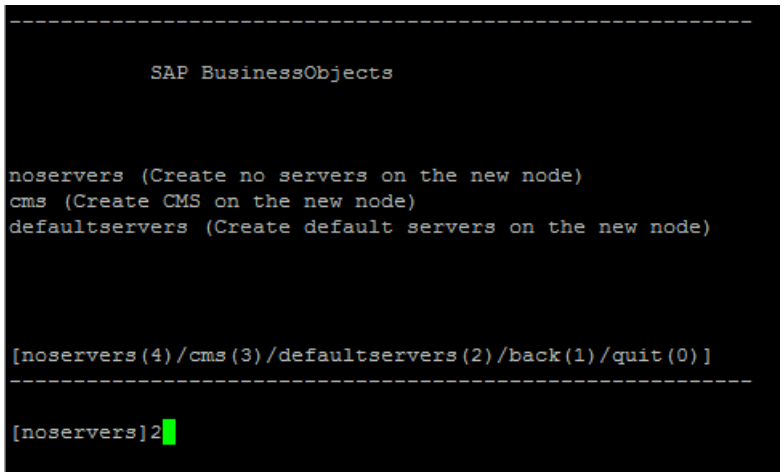
13 Type **3**, and then press **Enter**.



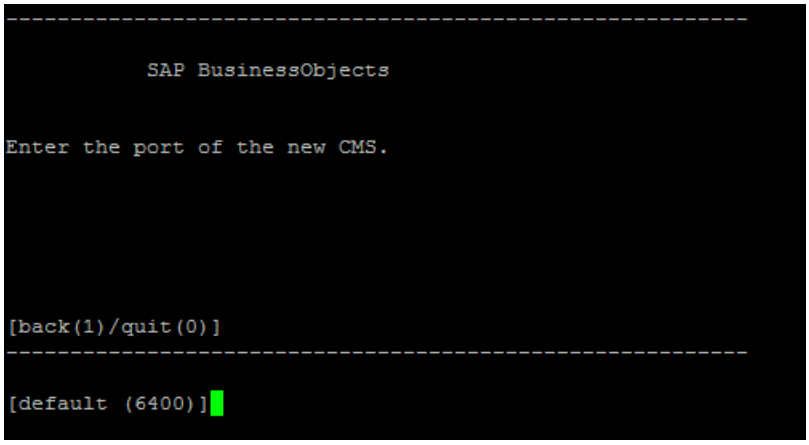
14 Specify a name for the agent (as a best practice, type the hostname of the system as the name of the agent), and then press **Enter**.



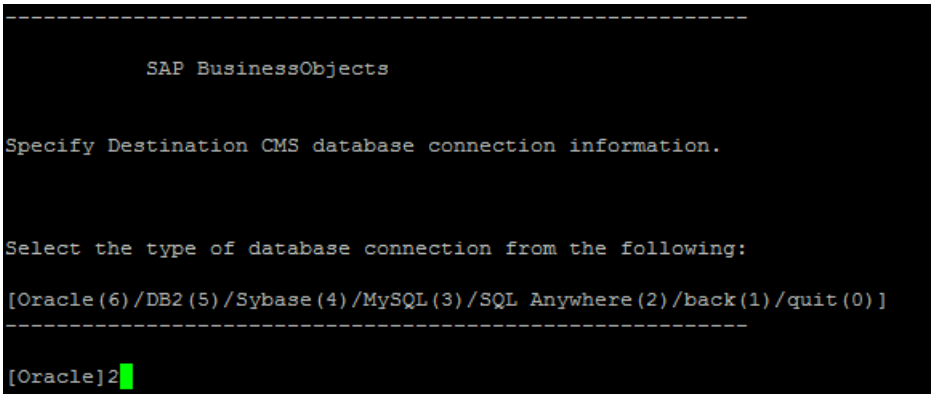
15 Type **6410** as the port number, and then press **Enter**.



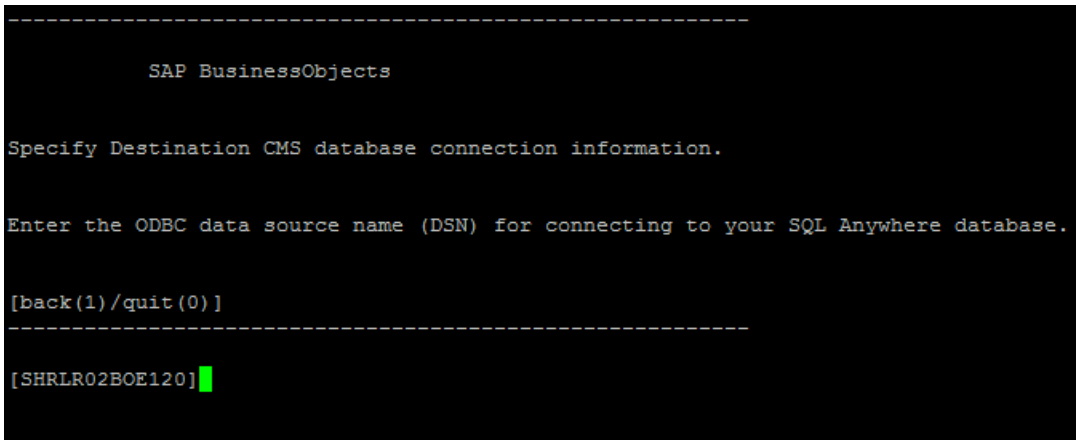
16 Type **2** (default server), and then press **Enter**.



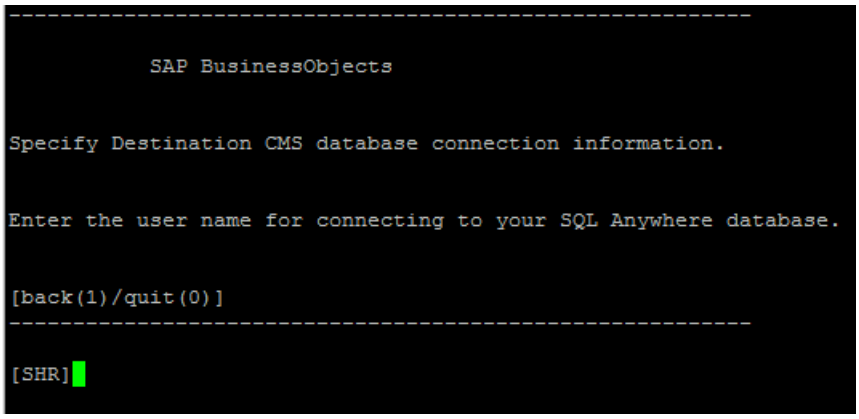
17 Type **6100** as the port number, and then press **Enter**.



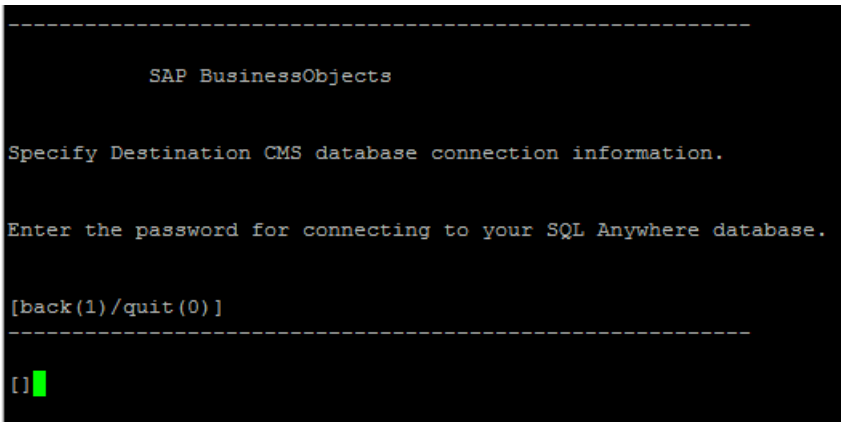
18 Type **2** (SQL Anywhere), and then press **Enter**.



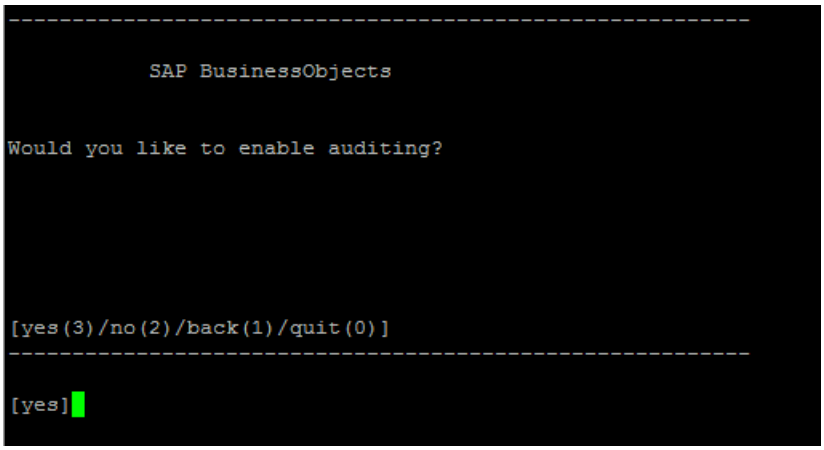
19 Press **Enter** (the correct server is selected by default).



20 Press **Enter** (the correct user name is selected by default).



21 Type a password (note down for future reference), and then press **Enter**.



22 Select **Yes**, and then press **Enter**.

23 Type **2** (SQL Anywhere), and then press **Enter**.

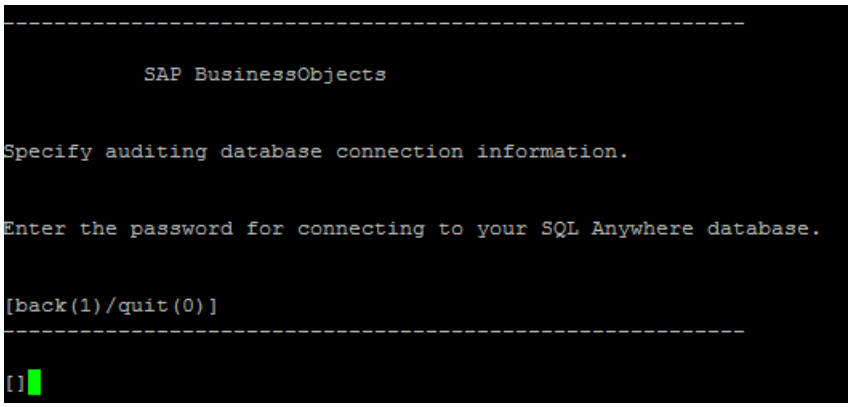
24 Type the ODBC data source name, and then press **Enter**.

The data source name is of the following format:

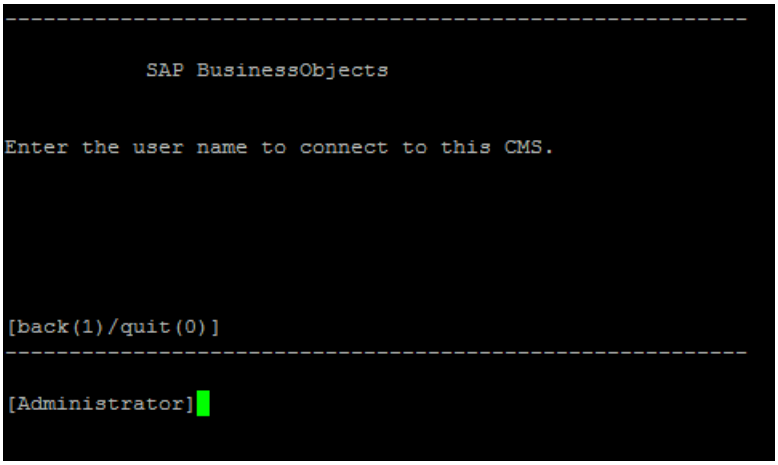
<*agent_name*>**BOE120_Audit**

<*agent_name*> is the name that you selected in step 14 on page 212.

25 Press **Enter** (the correct user name is selected by default).

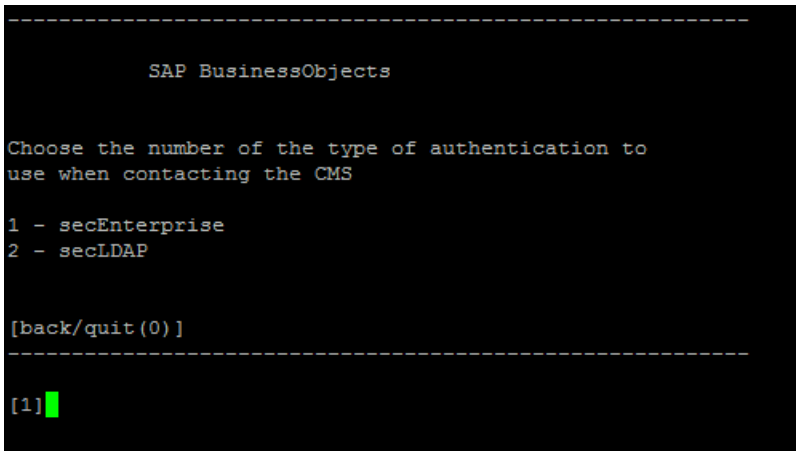


26 Type a password (note down for future reference), and then press **Enter**.



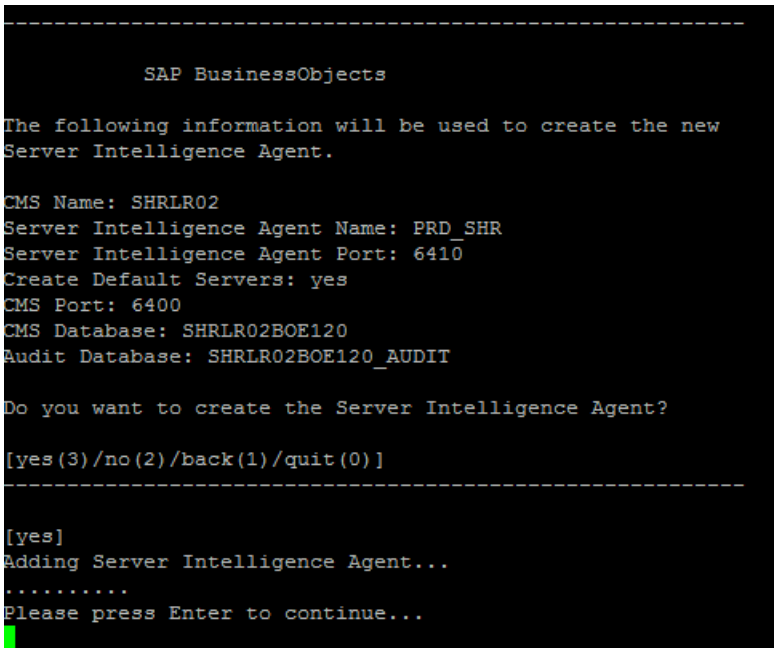
27 Press **Enter**. The correct user (Administrator) is selected by default.

28 Press **Enter** when prompted for password.

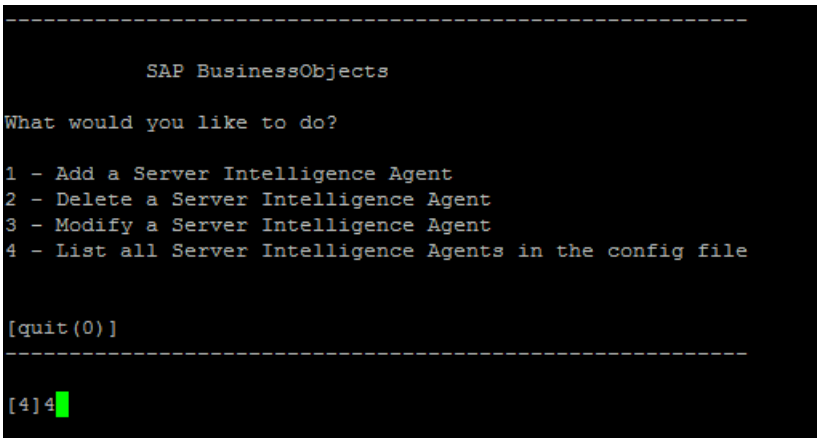


29 Type **1** (secEnterprise), and then press **Enter**.

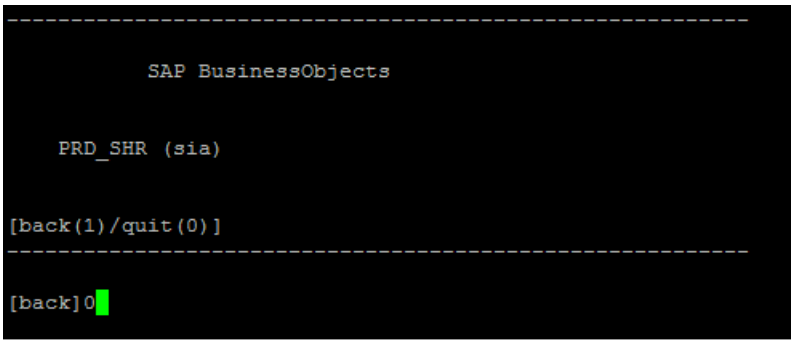
30 Type **yes**, and then press **Enter**.



31 Press **Enter**.



32 Type **4**, and then press **Enter**.



33 Type **0**, and then press **Enter**.

34 Run the following command to start the newly added agent:

```
sh /opt/HP/BSM/BO/bobje/startservers
```

35 Wait for two minutes, and then make sure the server is running. Run the following command to see the status:

```
ls /opt/HP/BSM/BO/bobje/serverpids
```

36 Run the following command:

a cd /opt/HP/BSM/BO/bobje

b **`./ccm.sh ?]updateobjects ?]cms`** <*SHR_hostname*>**`:6400`**

Restoring the Management Database Table

1 Launch PgAdminIII.

2 Connect to the database by providing the password.

3 Launch the sql query analyzer

4 Run the following query to restore the database tables:

```
Delete From dwabc.aggregate_control table
COPY dwabc.aggregate_control from
'<backup_path>\backup_AGGREGATE_CONTROL.dat'
```

In this instance, <*backup_path*> is the directory where you placed the backed-up management database file.

16 Troubleshooting SHR Installation

This section of the guide covers the possible problems that can cause SHR installation to fail and how you can troubleshoot them.

SHR Log Files

SHR maintains a set of log files for each of its modules such as the installer, collector, loader, metadata repository, internal monitoring, Administration Console, Package Manager, SHR services, and data processing. In the event of a failure, the error messages are recorded in these log files. You can use these log files as troubleshooting tools in case you encounter any issues with SHR.

This section includes:

- Installation log files
- Post-install configuration log files

Installation Log Files

When you encounter problems during the installation of SHR or the Content Packs, the HP Software Installer generates error messages that notify you about the installation failure. However, the error messages might not provide all the information required to help you resolve the problems. Instead, you can use the installation log files as one of your troubleshooting tools. The following table lists the installation log files and the locations.

Log File	Location

SHR installation log file	*Windows:*
	`%temp%\..\HPOvInstaller\HP-SHR_9.30\HP-SHR_9.30_<timestamp>_HPOvInstallerLog.html`
	`%temp%\..\HPOvInstaller\HP-SHR_9.30\HP-SHR_9.30_<timestamp>_HPOvInstallerLog.txt`
	Linux:
	`/tmp/../HPOvInstaller/HP-SHR_9.30/HP-SHR_9.30_<timestamp>_HPOvInstallerLog.html`
	`/tmp/../HPOvInstaller/HP-SHR_9.30/HP-SHR_9.30_<timestamp>_HPOvInstallerLog.txt`
	This folder also stores log files for each component of SHR. However, for troubleshooting purposes, you can use the Installer Log.
	The log file on Linux may include the following error message even after a successful installation:
	`/bin/bash: error importing function definition for 'module'`
	Ignore this message.

Content Pack installation log file	*Windows:* %PMDB_HOME%\log\packagemanager.log *Linux:* $PMDB_HOME/log/packagemanager.log
SAP BusinessObjects Enterprise log files	*Windows:* <*SAP BOBJ Install Directory*>`\BusinessObjects Enterprise 12.0\Logging\BOEInstall_0.log` <*SAP BOBJ Install Directory*>`\BusinessObjects Enterprise 12.0\Logging\BOE_FP_3_5_Install_0.log` *Linux:* */opt/HP/BSM/BO/setup/logs/*`BusinessObjects.12.5.log` */opt/HP/BSM/BO/setup/logs/*`BusinessObjects_FP_5_3.12.5.log`

Log File	Location
PostgresSQL installation log file	*Windows:* *%tmp%*\bitrock_installer.log or *%tmp%*\install-postgresql.log *Linux:* /*tmp*/bitrock_installer.log or /*tmp*/install-postgresql.log
Sybase IQ installation log file	*Windows:* *%SYBASE%*/*log*/IQ_Suite.log *Linux:* *$SYBASE*/*log*/IQ_Suite.log
Postgresql-<date and time>.log	Log file for the PostgreSQL service.

Post-Install Configuration Log File

The post-install configuration log file contains details on operations performed during the post-install configuration phase. The log file (postinstallconfig.log) can be accessed from %PMDB_HOME%\log (Windows) or .$PMDB_HOME/log (Linux).

This log file contains:

- Details on database schema creation on Sybase IQ.
- Details on SHR Management database schema creation on MySQL.

Troubleshooting SHR Installation

The following are the possible problems that can cause SHR installation to fail and their mode of troubleshooting:

Environment Variables Not Set in a Virtual Machine

Problem

If SHR is installed on a virtual machine that is not restarted after the installation, the environment variables set by the installer will not be available to the user.

Solution

After installing SHR, restart the virtual machine.

Environment Variables Set in One Session Is Not Visible in Another Session

Problem

The environment variables set during the installation are not visible during the post-install session. This can cause the post-installation configuration and content pack installation to fail.

Solution

This problem occurs only when SHR is installed during one Terminal Service Client session and the post-installation configuration tasks are attempted in another Terminal Service Client session.

To resolve this, follow these steps:

1. In the current session, on the desktop, right-click **My Computer**, and then click **Properties**. The System Properties dialog box opens.
2. Click the **Advanced** tab.
3. Click **Environment Variables**. The Environment Variables dialog box opens.
4. Click **OK**.
5. Click **OK** in the System Properties dialog box.

Database Schema Creation Takes a Long Time

Problem

During the post-install configuration stage, on the Create Database Schema page of the Administration Console, clicking the **Next** button after typing the required values produces no activity and the users have to wait for a long time for the process to complete.

Solution

Clear the web browser cache, reload the page, and perform the steps again.

Content Pack Installation Fails

Problem

When a content pack installation fails, the Administration Console displays the installation failure. However, the data processing streams for that failed Content Pack are not updated in the Administration Console.

Solution

To resolve this problem, you must uninstall the failed Content Pack. For the steps, see Uninstalling Content Packs on page 167.

Content Pack Uninstallation Fails

Problem

When removing the Content Packs, the uninstallation process fails and the following error message is displayed:

`SQL Anywhere Error -210: User 'pmdb_admin' has the row in '<table_name>' locked`

This failure occurs when one or more database connections have a shared lock on a database stage table.

Solution

Follow these steps:

1. Log on to the host system as administrator.
2. Click **Start** → **Programs** → **Administrative Tools** → **Services**. The Services window appears.
3. On the right pane, right-click the following services and click **Stop** to stop the following services:

- HP_PMDB_Platform_Collection
- HP_PMDB_Platform_Timer

4. On the desktop, in the notification bar, right-click the **Sybase IQ server icon**, and then click **Shut down** <*host name*>.

If the Sybase IQ server icon does not appear in the notification bar, type the following command in the Command Prompt window to shut down Sybase IQ:

`dbstop -y -c uid=dba;pwd=sql;eng=`<*server engine name*>**`;dbn=utility_db;links=tcpip{host=`**<*host name*>.<*domain name*>**`;port=21424}`**

In this instance, <*server engine name*> refers to the name of the Sybase server engine, <*host name*> refers to the name of the system hosting the SHR database and <*domain name*> is the name of your domain according to your network configuration.

To restart the Sybase IQ service, in the Services window, right-click the **HP_PMDB_Platform_Sybase**, and then click **Start**.

Note: If you installed Sybase IQ remotely, then you must start the Sybase service that you created on the remote system.

Wait for all active streams to complete running:

1. Click **Start** → **Run**. The Run dialog box opens.
2. Type **`cmd`** in the Open field, and then press **ENTER**. The Command Prompt window opens.
3. Type the following command to pause the loading of the job stream:

   ```
   abcAdminUtil -pause -type loadBatch
   ```

4. Wait for all the loaded job streams to complete running.
5. Check the status by typing the following command:

   ```
   abcMonitor -stream ID=ALL, state=active
   ```

To verify if the tables are locked, perform the following steps:

1. Click **Start** → **Programs** → **Sybase** → **Sybase IQ 15.4** → **Interactive SQL Java**. The Interactive SQL Java console opens.
2. In the Connect dialog box, on the Identification tab, select **`Supply user ID and password`**.
3. Type the user name and password and then press **OK**.
4. Under **SQL Statements,** type **`sp_iqlocks`**, and then click the **Execute all SQL statement(s)** button to run the command.

If there are locked tables, wait for a few minutes for all workflow streams to complete and then run the command again. If there are no locked tables, you can proceed with the removal of the Content Packs.

Sybase IQ Uninstallation Fails

Problem

Uninstalling SHR does not remove Sybase IQ Server Suite 15.4 (64-bit).

Solution

Follow these steps:

1. On the Windows desktop, click **Start** → **Settings** → **Control Panel**
2. Click **Add** or **Remove Programs** in the Control Panel window.
3. Click **Sybase IQ Server Suite 15.4** (64-bit) in the Add or Remove Programs window and then click **Change/Remove** to remove the Sybase IQ application.
4. In the Sybase IQ uninstallation wizard, click **Next** on the Welcome page.
5. Ensure that the features that you want to remove are selected and then click **Next**.
6. Click **Next** and then click **Uninstall**.
7. In the Remove Existing File message box, click **Yes to All**.
8. In the Restore Environment Variable message box, click **Yes to All**.
9. Click **Finish** to complete the uninstallation process.
10. Select the **Yes, restart my computer** option and then click **Finish** to restart your system.

Installation Failure Caused by Native Windows Installer Error

Problem

During the installation of SHR, the installation process halts and the following error message is displayed:

```
Unable to proceed with installation since the required native installer check failed.
```

Solution

This problem occurs when the native Windows Installer files are damaged or missing, or if the Windows Installer service is unregistered or damaged. To resolve this problem, you must re-register the Windows Installer. Unregistering and reregistering Windows Installer corrects many Windows installation issues. Follow these steps:

1. Click **Start** → **Run**. The Run dialog box opens.
2. In the Open field, type **cmd**, and press **ENTER**. The Command Prompt window opens.
3. At the command prompt, type the following command to unregister the Windows Installer:

   msiexec /unregister
4. Type the following command to re-register the Windows Installer:

   msiexec /regserver

The Progress Bar on the Wizard Screen Does not Change

Problem

The progress bar on the installation or uninstallation wizard does not indicate any change in status for a long time and the **Done** button becomes enabled.

Solution

This problem occurs when the installation or uninstallation wizard fails to refresh the status of the progress bar. If you experience this, follow these steps:

1. Open the installation or uninstallation log file:
   - The installation or uninstallation log file on Windows:

     `%TEMP%\HPOvInstaller\HP-SHR_9.30\HP-SHR_9.30_<timestamp>_HPOvInstallerLog.txt`
   - The installation or uninstallation log file on Linux:

     `/tmp/HPOvInstaller\HP-SHR_9.30/HP-SHR_9.30_<timestamp>_HPOvInstallerLog.txt`
2. Review the contents of the file.
3. If no error messages exist in the log file, click **Done**.

Installer Stops Responding

Problem

The installer stops responding and the following error message appears on the installation wizard:

```
Port Availability check - requirement checker listener not available
```

Solution

On Windows

End the installation process from Windows Task Manager.

On Linux

Go back to the command line console from where you started installation process, and then press **Ctrl+C**.

Problem

The installer stops responding without showing any error messages.

Solution

1. Wait for six hours.
2. Check the installation log file.
3. If you see error messages in the log file, end the installation process.

   On Windows

   End the installation process from Windows Task Manager.

   On Linux

   Press **Ctrl+C** in the command line console from where you started installation process
4. Delete all the installed files manually by following the instructions in Uninstalling SHR Manually on page 172.
5. Restart the installation process.

Installation Wizard on Linux Abruptly Disappears

Problem

To install SHR on Linux, if you connect to the Linux system remotely with the help of an X client application using the BROADCAST mode, the installation wizard abruptly disappears or fails to open.

Solution

While using an X client application to remotely connect to the Linux system, do not use the BROADCAST mode.

Validation Error on the Install Complete Page (Windows only)

Problem

On the Product Customization screen, if you specify an installation drive that does not exist on the system, the installer shows an error. After specifying a correct installation folder with the correct drive, if you click **Next**, the installation succeeds. However, the Install Complete page on the wizard shows validation error at the end of the installation.

Solution

Ignore the message and click **Done**.

Installation Failure Caused by SAP BOBJ Error

Problem

While running the HP Software Installer, the installation fails and the following error message is displayed:

```
SAP BusinessObjects is installed on the system. Please Uninstall it before
installing HP SH Reporter.
```

Solution

If you have any component that is used by SHR, such as SAP BOBJ or Sybase IQ, already installed on your system, the SHR installation will fail as the Installer tries to install the components that are bundled with the product.

To resolve this problem, you must remove the existing components from the system and run the Installer again.

Remote Sybase IQ Database Creation Fails

Problem

In the HP Service Health Reporter Configuration Wizard, while trying to create the Sybase database file on a remote system, the post-install fails and the following error message is displayed:

<*time stamp*>,690 INFO,
com.hp.bto.bsmr.dao.helper.CreateSybaseIQDatabase.logDBLoginInfo, Database Info
[username->dba;serverName-><*server_name*>_remote;Dbhostname-><host_name>;port->21421]

<*time stamp*>,018 ERROR,
com.hp.bto.bsmr.dao.helper.CreateSybaseIQDatabase.executeSQL, Could not connect to the database.

<*time stamp*>,049 ERROR,
com.hp.bto.bsmr.dao.helper.CreateSybaseIQDatabase.executeSQL, Specified database not found

<*time stamp*>,081 ERROR,
com.hp.bto.bsmr.dao.helper.CreateSybaseIQDatabase.executeSQL, SQLCODE=-83, ODBC 3 State="08001"

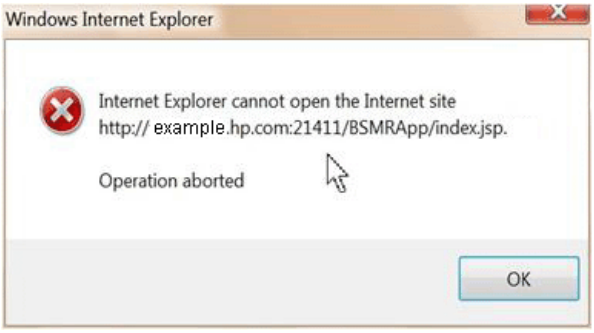
Solution

This error occurs if the database file location specified in the HP Service Health Reporter Configuration Wizard includes space in the file path. To resolve this problem, on the remote system, make sure that the specified database file location exists on the remote system. In addition, make sure that the path provided in the Post-Install wizard does not contain any spaces.

Unable to Log on to the Administration Console

Problem

After typing in the user credentials in the Administration Console Login screen and clicking the Log in button, the following error message is displayed:



Solution

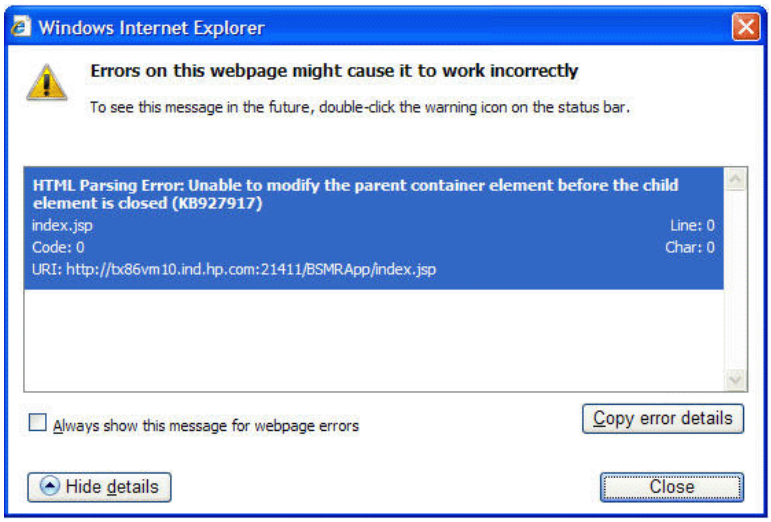
To resolve this problem, follow these steps:

1. Click **OK** in the message box.
2. Clear the web browser cache:
   a. In Internet Explorer, on the menu bar, click **Tools**, and then click **Internet Options**. The Internet Options dialog box opens.
   b. Make sure that the **General** tab is displayed.
   c. Under Browsing history, click **Delete**. The Delete Browsing History dialog box opens.
   d. Click **Delete files** in the Temporary Internet Files section.
   e. Click **Close** and then click **OK**. Your cache should now be clear.
3. Retype the user credentials in the **Login Name** and **Password** fields.
4. Click **Log in**. The Administrative Console opens.

Intermittent Behavior of the Administration Console

Problem

At times, the Administration Console does not work properly. After opening the Administration Console, the following Windows error message appears:



Solution

To resolve this problem, you must clear the web browser cache. See Unable to Log on to the Administration Console on page 230

Post-installation Configuration Failure Caused by Change in IPv6 Address in Windows Server 2008

Problem

After the installation, if you restart a system that uses a dynamic IPv6 address, the system takes an automatically-generated IPv6 address instead of the static IPv6 address. The post-installation configuration fails as a result of this change in the IPv6address. This problem is observed in Windows Server 2008.

Solution

The interface ID is randomly derived in Windows Server 2008 by default, rather than based on the Extended Unique Identifier (EUI)-64 address.

To resolve this problem, you must disable the random interface IDs. For more information, see Microsoft documentation.

Uninstallation of the Remote Sybase Database Fails

Problem

The uninstallation wizard fails to uninstall the remote Sybase IQ database and shows the following message on the Initialization page:

```
The installer was unable to locate the installer MEDIA.
```

Solution

Manually uninstall Sybase IQ.

Residual Database Files After Uninstallation

Problem

After uninstalling SHR (or the remote Sybase database), database files remain on the system.

Solution

After the uninstallation is complete, you must manually delete the directory that contains the following SHR database files:

- `pmdb.db`
- `pmdb.iq`
- `pmdb.iqmsg`
- `pmdb.iqtmp`
- `pmdb.lmp`
- `pmdb.log`
- `pmdb_user_main01.iq`

Search for the directory on the system that contains the SHR database files, and then manually delete the directory.

BobjEnterprise120 service creation fails

Problem

When manual uninstallation of SHR on a Linux server fails, the BobjEnterprise120 service might not be created.

Solution

Run the following commands to stop the BusinessObjects services:

```
# su SHRBOADMIN
$ ./stopservers
$ sh tomcatshutdown.sh
$ su root
```

Enter the password and go back to the root user prompt.

Troubleshooting Collector Installation

If you uninstall a collector and reinstall it on a system, SHR fails to communicate with the collector and error messages appear when you try to configure the collector in the Administration Console.

You can occasionally experience this issue even after installing the collector for the first time.

To resolve this, manually import the certificate from the SHR system to the collector system by following these steps:

1. Log on to the collector system.
2. Run the following command:

   `ovcoreid`

   Note down the ID displayed in the console.
3. Log on to the SHR system.
4. Run the following command:

   `ovcm -issue -file` <*file*> **`-name`** <*node name*> **`-coreid`** <*core_ID*>

   In this instance, <*core_ID*> is the ID that you noted down in step 2.

   The command prompts for a password. If you do not want to use a password, press **Enter** without typing anything.

   In this instance, <*file*> is the name of the certificate file that you want to manually import to the collector system; you must specify the file name with complete path to the directory where you want to store the file. <*node name*> is the FQDN of the collector system.
5. Transfer the certificate file to the collector system.
6. Log on to the collector system.
7. Run the following command:

   `ovcert -importcert -file` <*file*>

A SiteScope Monitors

This appendix provides you with additional information relevant to HP Service Health Reporter.

SiteScope Monitors for HP Service Health Reporter

The following table lists the monitors that are used to collect the virtualization metrics.

Monitor Name	Counter	Measure Name
VMware Performance	HostSystem\state	hardware.memorySize
VMware Performance	HostSystem\state	summary.hardware.numCpuCores
VMware Performance	HostSystem\state	summary.hardware.cpuMhz
VMware Performance	HostSystem\state	summary.hardware.numNics
VMware Performance	HostSystem\Realtime\sys	uptime.latest[]
VMware Performance	HostSystem\Realtime\mem	usasge.average[]
VMware Performance	HostSystem\Realtime\mem	consumed average[]
VMware Performance	HostSystem\Realtime\cpu	usage.average[]
VMware Performance	HostSystem\Realtime\cpu	ready.summation[]
VMware Performance	HostSystem\Realtime\disk	usage.average[]
VMware Performance	HostSystem\Realtime\disk	read.average[]
VMware Performance	HostSystem\Realtime\disk	write.average[]
VMware Performance	HostSystem\Realtime\net	received.average[]

Monitor Name	Counter	Measure Name
VMware Performance	HostSystem\Realtime\net	transmitted.average[]
VMware Performance	HostSystem\Realtime\net	packetsRx.summation[]
VMware Performance	HostSystem\Realtime\net	packetsTx.summation[]
VMware Performance	HostSystem\Realtime\net	usage.average[]
VMware Performance	Virtual Machine\state	config.hardware.memoryMB
VMware Performance	Virtual Machine\state	config.cpuAllocation.shares.shares
VMware Performance	Virtual Machine\state	config.hardware.numcpu
VMware Performance	Virtual Machine\state	config.memoryAllocation.reservation
VMware Performance	Virtual Machine\state	config.memoryAllocation.limit
VMware Performance	Virtual Machine\state	config.cpuAllocation.reservation
VMware Performance	Virtual Machine\state	config.cpuAllocation.limit
VMware Performance	Virtual Machine\Realtime\sys	uptime.latest[]
VMware Performance	Virtual Machine\Realtime\mem	usage.average[]
VMware Performance	Virtual Machine\Realtime\mem	consumed.average[]
VMware Performance	Virtual Machine\Realtime\mem	active.average[]
VMware Performance	Virtual Machine\Realtime\mem	overhead.average[]
VMware Performance	Virtual Machine\Realtime\mem	swapin.average[]

Monitor Name	Counter	Measure Name
VMware Performance	Virtual Machine\Realtime\mem	swapout.average[]
VMware Performance	Virtual Machine\Realtime\mem	vmmemctltarget.average[]
VMware Performance	Virtual Machine\Realtime\mem	usage.average[]
VMware Performance	Virtual Machine\Realtime\mem	ready.summation[]
VMware Performance	Virtual Machine\Realtime\mem	usagemhz.average[]
VMware Performance	Virtual Machine\Realtime\mem	wait.summation[]
VMware Performance	Virtual Machine\Realtime\mem	ready.summation[]
VMware Performance	Virtual Machine\Realtime\mem	usage.average[]
VMware Performance	Virtual Machine\Realtime\mem	read.average[]
VMware Performance	Virtual Machine\Realtime\mem	write.average[]
VMware Performance	Virtual Machine\Realtime\mem	received.average[]
VMware Performance	Virtual Machine\Realtime\mem	transmitted.average[]

Monitor Name	Counter	Measure Name
VMware Performance	Virtual Machine\Realtime\mem	packetsRx.summation[]
VMware Performance	Virtual Machine\Realtime\mem	packetsTx.summation[]
VMware Performance	Virtual Machine\Realtime\mem	usage.average[]

The following table lists the monitors that are used to collect the system management metrics.

Monitor Name	Counter	Measure Name
Windows		
Windows Resources	Memory	Memory\Pages Output/sec
Windows Resources	Memory	Memory\% Committed Bytes In Use
Windows Resources	Network Interface	Packets Received/sec
Windows Resources	Network Interface	Packets Sent/sec
Windows Resources	Network Interface	Bytes Received /sec
Windows Resources	Network Interface	Bytes Sent /sec
Windows Resources	Network Interface	Packets /sec
Windows Resources	Network Interface	Network Interface\Bytes Total/sec
Windows Resources	PhysicalDisk	PhysicalDisk_Total\Disk Bytes/sec
Windows Resources	PhysicalDisk	Disk Bytes/sec
Windows Resources	PhysicalDisk	Disk Read Bytes/sec
Windows Resources	PhysicalDisk	Disk Write Bytes/sec
Windows Resources	System	System\Processor Queue Length
Windows Resources	System	System UP Time
Memory	N/A	MB free
Memory	N/A	percentage used
CPU	N/A	utilization
CPU	N/A	utilization cpu#

Monitor Name	Counter	Measure Name
Unix		
Unix Resources	File Systems	capacity
Unix Resources	File Systems	kbytes
Unix Resources	File Systems	Use%
Unix Resources	File Systems	Used
Unix Resources	File Systems	Capacity
Unix Resources	File Systems	Used
Unix Resources	File Systems	%Used
Unix Resources	File Systems	(1024-blocks)-(Free)
Unix Resources	Network Interface	packets
Unix Resources	Network Stats	Network Stats\Ipkts
Unix Resources	Network Stats	Network Stats\Opkts
Unix Resources	Network Interface	ReceiveBytes
Unix Resources	Network Interface	TransmitBytes
Unix Resources	Network Interface	ipackets
Unix Resources	Network Interface	opackets
Unix Resources	Network Interface	rbytes
Unix Resources	Network Interface	obytes
Unix Resources	Queue length	Queue length\runq-sz
Unix Resources	Queue Statistics Machine\state	Queue Statistics\runq-sz
Unix Resources	Uptime	Uptime\Uptime

B Installing Xcelsius

An Xcelsius report is an interactive Flash-based report created by using the SAP BusinessObjects Xcelsius Enterprise tool. To create Xcelsius Flash-based reports in SHR, you must install the Xcelsius 2008 application, which is included on the SHR installation media. Xcelsius 2008 is not required for viewing the reports. Therefore, Xcelsius installation is optional.

Microsoft Excel, as a base, is a prerequisite for Xcelsius.

Hardware and Software Requirements for Installing Xcelsius 2008

Component	Version
Processor type	1.0 GHz processor
Physical memory	1 GB of RAM
Disk space	350 MB
Operating system	The following operating systems are supported: • Microsoft Windows XP • Microsoft Windows Server 2003 • Microsoft Windows Vista
Software	The following versions of Microsoft Office are supported: • Microsoft Office 2003 • Microsoft Office XP. • Microsoft Office 2007

Xcelsius 2008 bundled with SHR 9.30 does not support Microsoft Office 2010. It is supported only when Xcelsius 2008 sp5 is installed.

Installing Xcelsius (Optional)

Perform the following steps:

1. Copy the Excelsius_2.00.166_DVD-2.zip file from the installation media packages folder to a location of your choice.
2. Extract the file.
3. Click **Start** → **Run**. The Run dialog box opens.
4. Type **cmd** and press **ENTER** to open the Command Prompt window.
5. At the command prompt, type the following command to open the directory that contains the Xcelsius command:

cd <*extracted file path*>**\IT_Analytics_2.00\DVD-2\IT_Analytics_2.00\Setup\BO Installers\xcelsius**

In this instance, <*extracted file path*> is the location where you extracted the Xcelsius setup files.

This command must be typed as a single line.

6. At the command prompt, type the following command to install Xcelsius:

install-xcelsius.bat -installdir "<*installation directory*>**"**

In this instance, <*installation directory*> is the location where you want to install the Xcelsius files.

7. Close the Command Prompt window.

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Product name and version: HP Service Health Reporter 9.30

Document title: Installation and Configuration Guide

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