

HP Automation Insight

For the Red Hat Enterprise Linux[®] and SUSE Enterprise Linux[®]
operating systems

Software Version: 1.0

Administrator Guide

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Software Release Date: July 2014



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Welcome to HP Automation Insight

HP Automation Insight (AI) is an HP product that leverages HP Vertica Analytics Database technology and provides a complete set of ETL tools, dimensional data model, reports, dashboards and analytics systems and content for the HP suite of automation tools.

HP AI provides advanced analysis on cloud automation activities that enables you to leverage the suite of HP cloud and data center automation software to make decisions based on real-time and historical data. The data analyzed is collected from HP software products such as HP Server Automation (SA) that perform automation and monitoring services in the cloud.

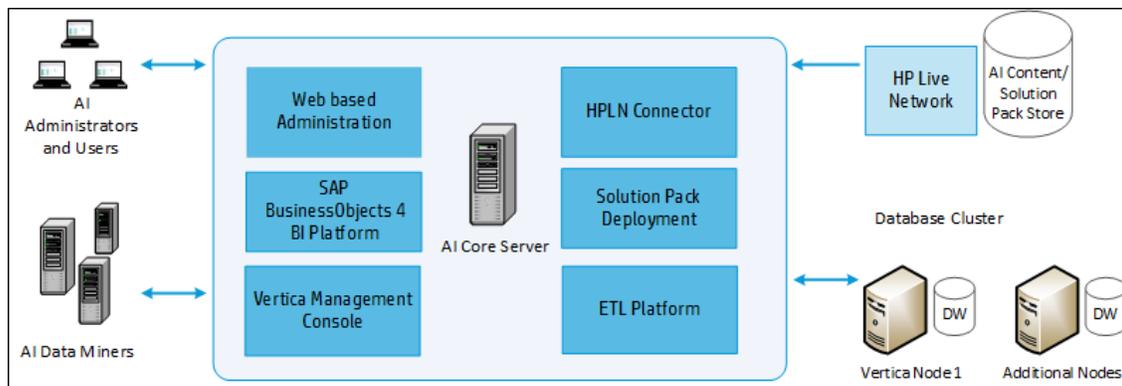
This document is designed for HP AI administrators, who are responsible for all HP AI administration tasks. They control the privileges and permissions available to each user role, and they decide which servers will have HP AI installed. HP AI administrators may also be responsible for installing and updating HP AI.

To see tasks needed to install and configure HP AI for the first time, see the *HP Automation Insight Installation Guide*.

HP AI Components and Architecture

HP AI provides a data warehouse that uses HP Vertica as the database, and delivers content based on solution packs that contain ETL and model definitions, universes, and standard reports. HP AI solution packs are deployable from the web administration user interface and can be automatically updated from HPLN. Using SAP BusinessIntelligence, HP AI provides both standard and customizable reports that enable you to monitor the state of your data center. The HP AI web administration user interface provides web-based administration of the HP AI product.

HP AI Components and Architecture



HP AI Components

HP AI Gateway—HTTPS proxy that creates the port to which all clients connect. The HTTP proxy provides reverse proxy for the following components:

- SAP BI launch pad
- SAP BO Central Management Console (CMC)
- HP Vertica Management Console web application

Apache Directory Server—Internal LDAP server used for user and group management. The directory server includes a custom authenticator feature used by HP AI to perform delegated authentication to systems such as HP Server Automation.

SAP BusinessObjects Web Intelligence—Enterprise reporting and dashboard platform used to perform data analysis.

AI Administration Web Application—Web application used to configure and manage HP AI subsystems.

AI Data Loader—Application that loads data into the HP AI data warehouse.

AI Data Miner—Application that extracts data from external HP source systems, such as HP Server Automation (SA.)

AI Platform—AI component that includes all management functions.

AI Solution Pack Deployer—Application that deploys solution pack content to other HP AI components, such as HP Vertica and SAP BusinessObjects.

HP Live Network—HP system that hosts HP AI solution packs and downloads using LiveNetwork Connector.

HP Server Automation—An HP product that HP AI extracts data from and to which it delegates user authentication. HP SA is data center automation software that centralizes and streamlines many data center functions and automates critical areas of data center server management.

Rsync—Tool HP AI uses to transfer data files from data miners over the Secure Sockets Layer (SSL.)

Vertica Database System—Database that hosts the HP AI data warehouse and provides analytic functions.

HP AI Core Directory Structure

| Path | Description |
|-----------------|--|
| /opt/HP/CBI | Location of HP AI binary files. |
| /etc/opt/HP/CBI | Location of HP AI configuration files. |
| /var/opt/HP/CBI | Location of data files. |
| /var/log/HP/CBI | Location of log files. |
| /opt/vconsole | Location of Vertica Management Console files. |
| /etc/init.d | Location of HP AI start, stop, and status scripts. |

HP AI URLs

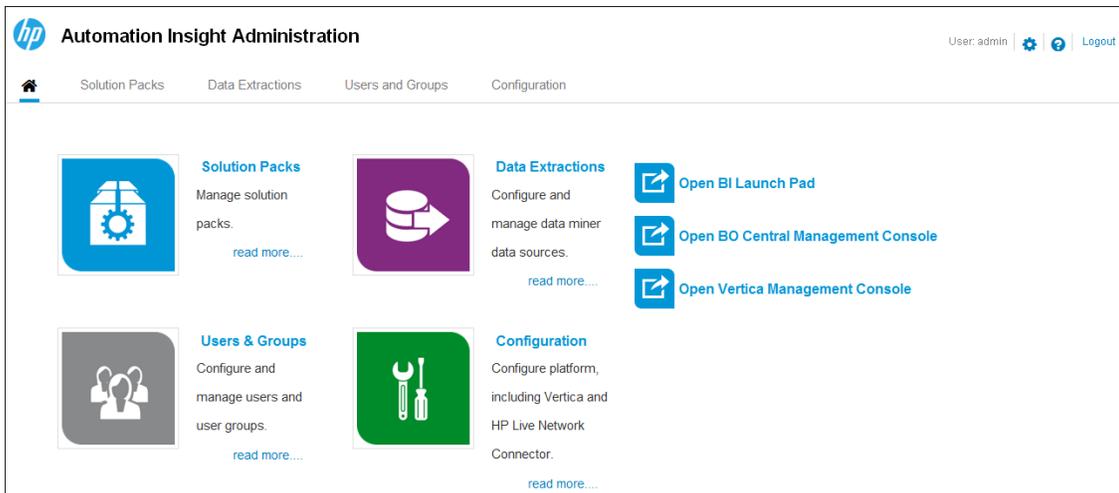
You can log in to the HP AI interfaces at the URLs in the following table.

| Interface | URL |
|---|---|
| HP AI web administration user interface | https://ai-core:4443/ai-admin |
| Business Intelligence Launch Pad | https://ai-core:4443/ai-user/BOE/BI |
| BO Central Management Console | https://ai-core:4443/ai-user/BOE/CMC |
| Vertica Management Console | https://ai-core:4443/webui/ |

Note: You can also log in to the BI Launch Pad and the SAP BusinessObjects Central Management Console (CMC) from the HP AI web administration user interface. You must log in as Admin to CMC. You must select LDAP as the authentication method to access the BI Launch Pad and CMC.

HP Automation Insight Web Administration User Interface

After you install HP AI, you can use the HP AI web administration user interface for all administration tasks.



The HP AI web administration user interface provides web-based management for administration tasks, including management and configuration in these areas:

Solution Packs

- View, deploy, and undeploy solution packs

Data Extractions

- Configure HP AI supported data sources
- Check data miner states
- Perform ETL-specific remining

Users and Groups

- Manage passwords
- Configure and manage users and groups
- Enable a data source as an authentication source

Configuration

- Configure the HP Vertica Database
- Configure HP Live Network
- Configure and manage data management jobs

Open BI Launch Pad

- View and launch dashboards and reports
- Schedule reports
- Build custom reports

Open BO Central Management Console

- Set the Business Intelligence authentication method
- Schedule LDAP group updates for users
- Check server status
- Configure the adaptive job server
- Set security access levels for HP AI users and groups
- Set security access levels on folders

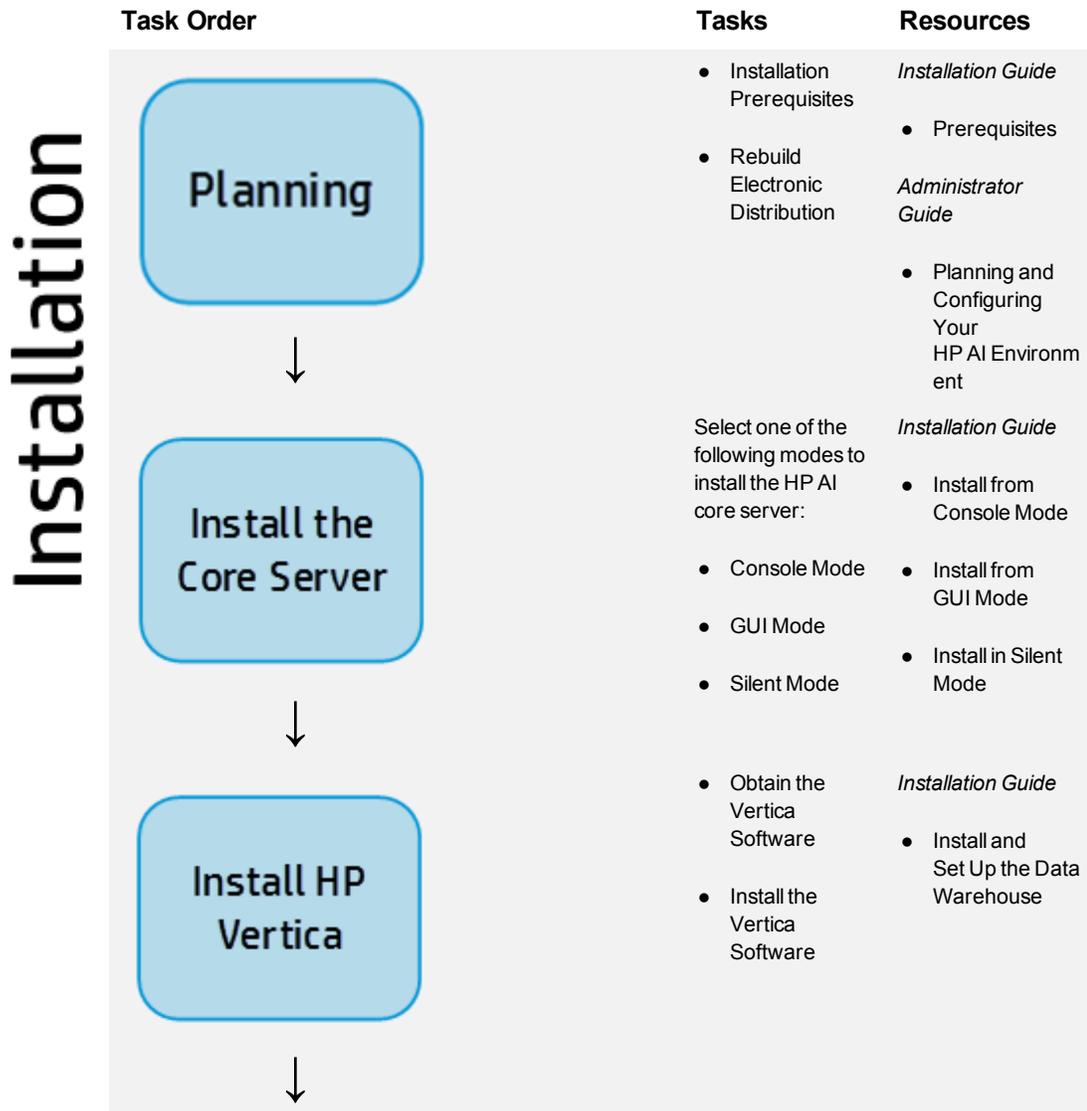
Open Vertica Management Console

- Configure and manage the HP Vertica Management Console

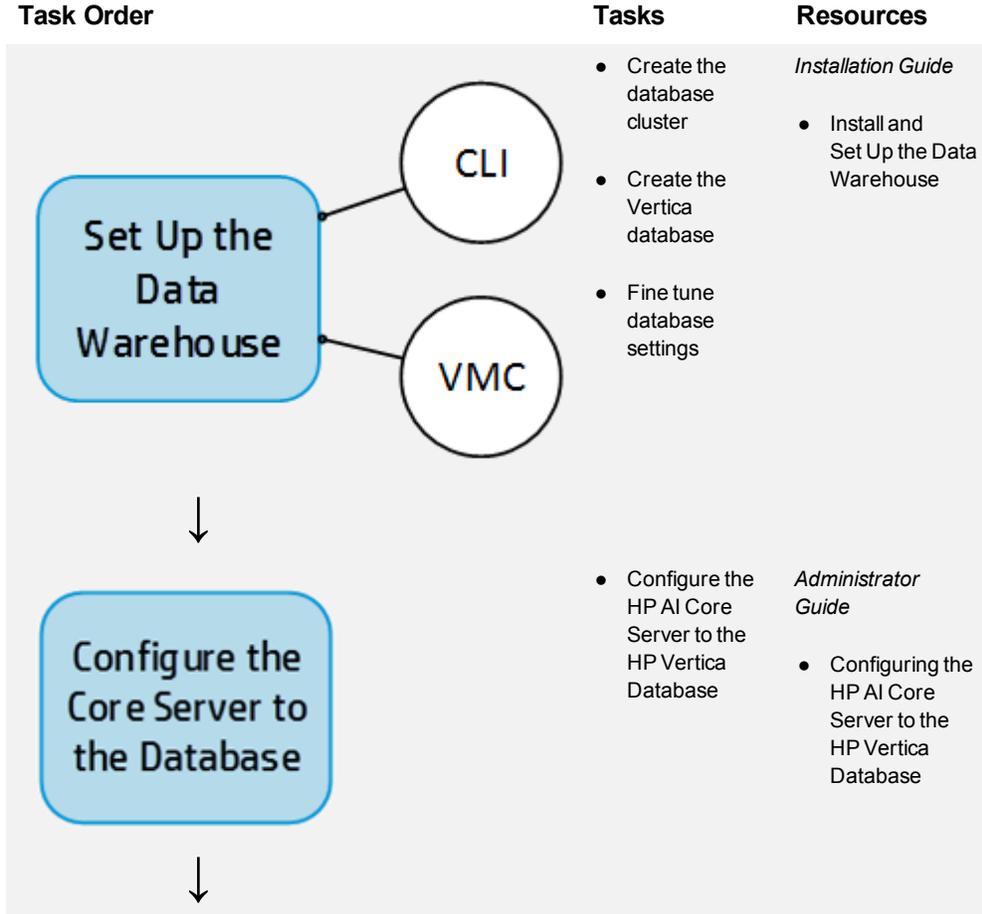
HP Automation Insight Workflow

This section presents the general workflow for installing and configuring HP Automation Insight for the first time.

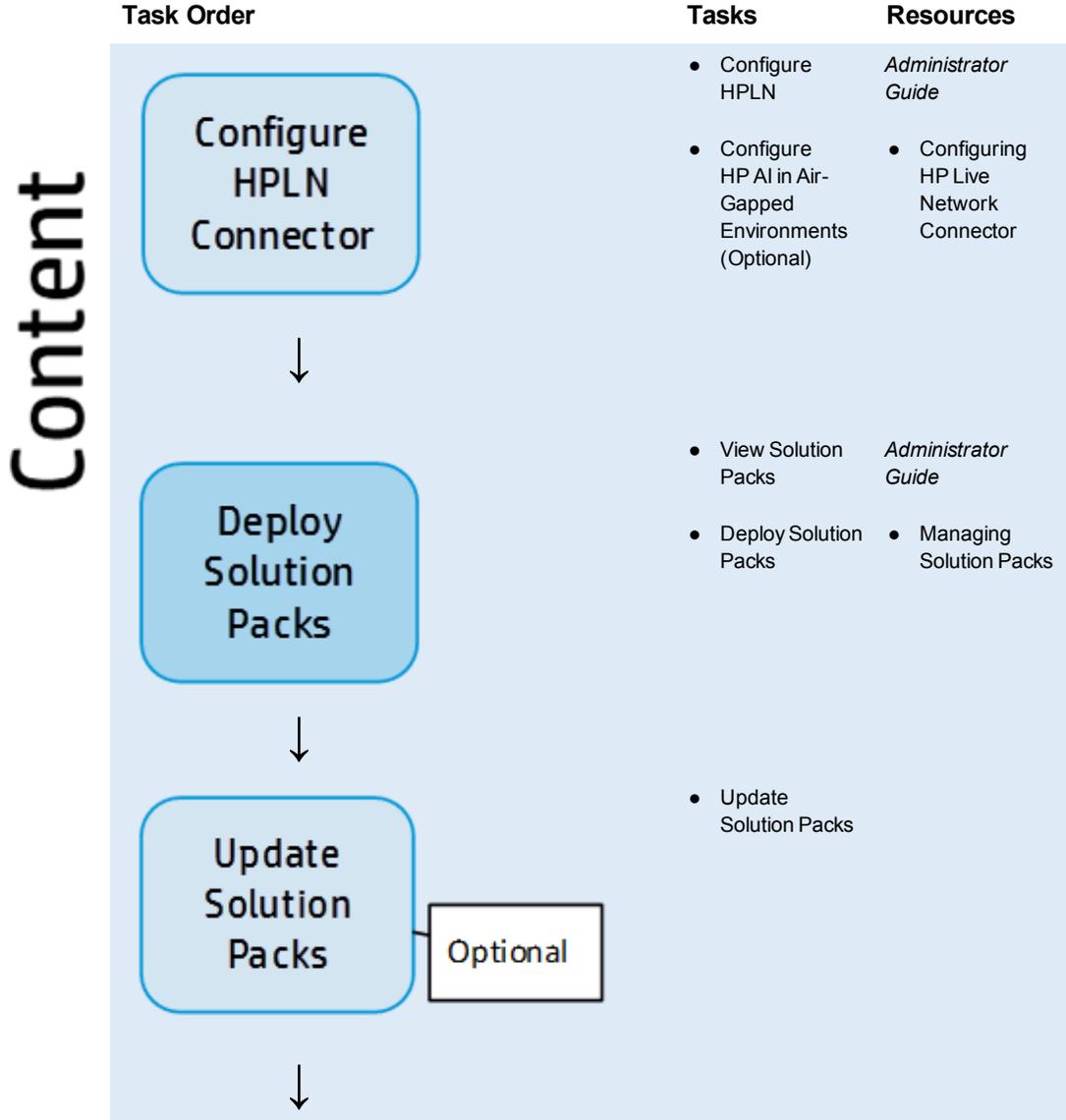
HP Automation Insight Workflow



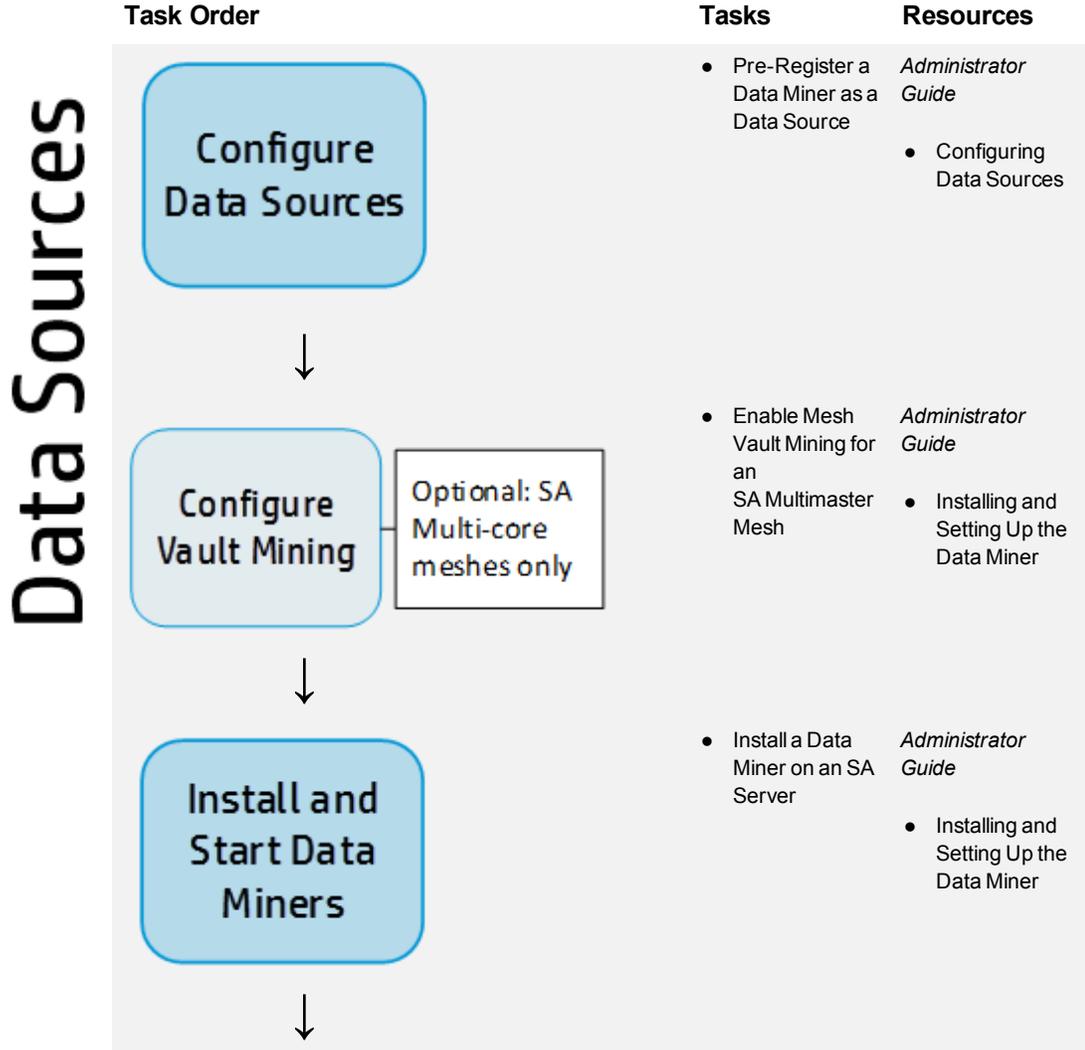
HP Automation Insight Workflow, continued



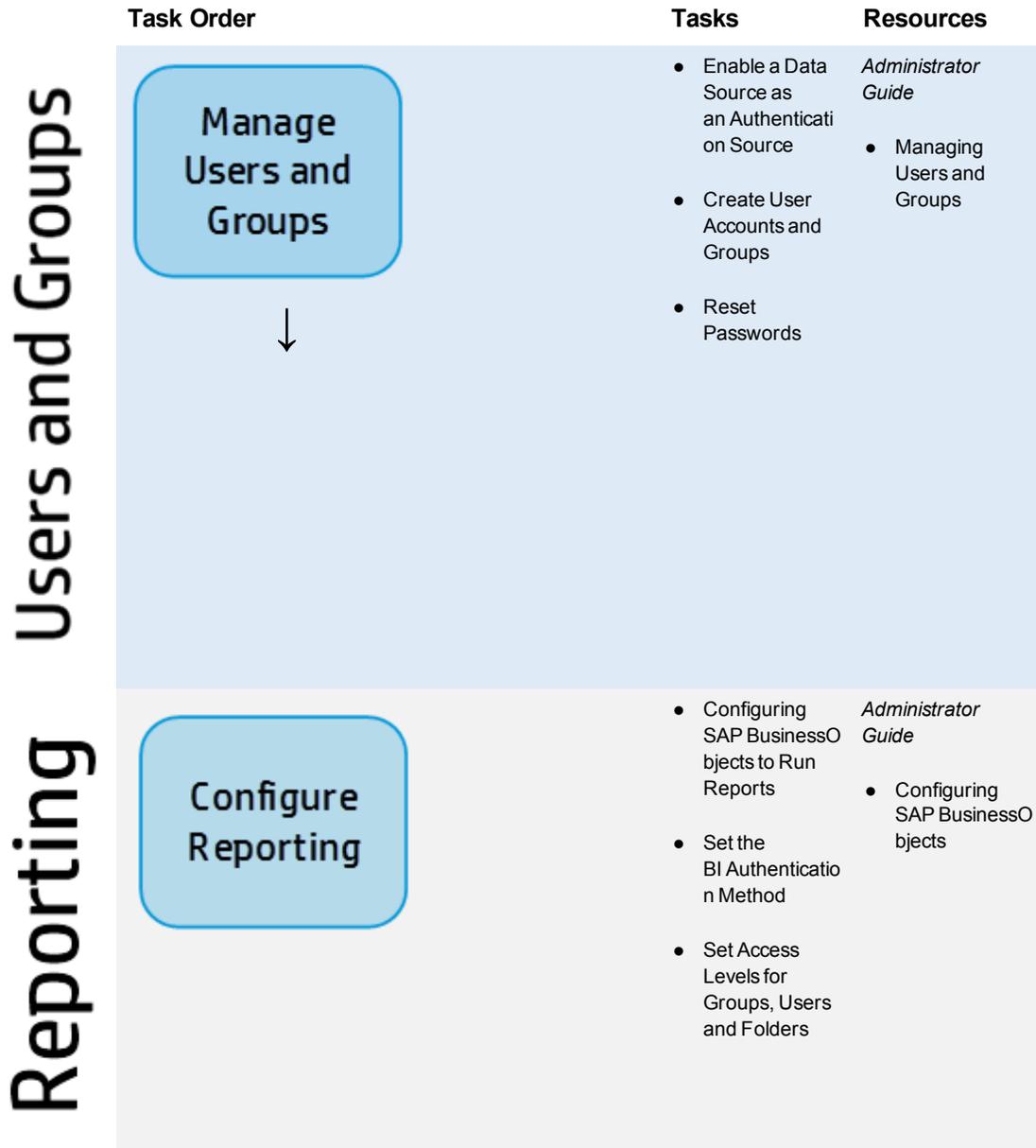
HP Automation Insight Workflow, continued



HP Automation Insight Workflow, continued



HP Automation Insight Workflow, continued



HP Automation Insight Documentation

This section lists the HP AI manuals and describes how to download the latest HP AI manuals.

Access the HP AI documentation listed below at: <http://h20230.www2.hp.com/selfsolve/manuals>

| Document | URL |
|--|---|
| <i>HP Automation Insight Quick Start Guide</i> | http://support.openview.hp.com/selfsolve/document/KM00901789/binary/AutomationInsight_QuickStart_100.pdf |

| Document | URL |
|---|---|
| <i>HP Automation Insight Installation Guide</i> | http://support.openview.hp.com/selfsolve/document/KM00939718/binary/AutomationInsight_Installation_100.pdf |
| <i>HP Automation Insight Administrator Guide</i> | http://support.openview.hp.com/selfsolve/document/KM00901790/binary/AutomationInsight_Administrator_100.pdf |
| <i>HP Automation Insight User Guide</i> | http://support.openview.hp.com/selfsolve/document/KM00901791/binary/AutomationInsight_User_100.pdf |
| <i>HP Automation Insight Support Matrix</i> | http://support.openview.hp.com/selfsolve/document/KM00939716/binary/AutomationInsight_SupportMatrix_100.pdf |
| <i>HP Automation Insight Release Notes</i> | http://support.openview.hp.com/selfsolve/document/KM00939711/binary/AutomationInsight_ReleaseNotes_100.pdf |
| <i>HP Automation Insight Troubleshooting Guide</i> | http://support.openview.hp.com/selfsolve/document/KM00939720/binary/AutomationInsight_Troubleshooting_100.pdf |
| <i>HP Automation Insight Vertica Cluster Load Balancing and Failover</i> | http://support.openview.hp.com/selfsolve/document/KM00939721/binary/AutomationInsight_VerticaCluster_LoadBalancing_Failover_100.pdf |
| <i>HP Automation Insight Migrate BSAE Universes and Reports</i> | http://support.openview.hp.com/selfsolve/document/KM01001236/binary/AutomationInsight_Migrate_BSAE_Universes_Reports_100.pdf |
| <i>HP Automation Insight SA Compliance User Guide</i> <i>HP Automation Insight SA Inventory and Usage User Guide</i> <i>HP Automation Insight AI System Health User Guide</i> <i>HP Automation Insight SA User Management User Guide</i> | Solution pack user guides are provided with solution packs and are available for download from the HP Automation Insight portal on HPLN: https://hpln.hp.com/group/automation-insight |

HP Vertica Database Documentation

Access HP Vertica Database documentation at the URLs in the following table, or click ? on the HP AI web administration user interface:

| Document | URL |
|--|---|
| <i>HP Vertica Analytics Platform 6.1.x Administrator's Guide</i> | https://my.vertica.com/docs/6.1.x/PDF/HP_Vertica_6.1.x_AdminGuide.pdf |

| Document | URL |
|--|---|
| <i>HP Vertica Analytics Platform 6.1.x Installation Guide</i> | http://my.vertica.com/docs/6.1.x/PDF/HP_Vertica_6.1.x_InstallGuide.pdf |
| <i>HP Vertica Analytics Platform 6.1.x Supported Platforms</i> | http://my.vertica.com/docs/6.1.x/HP_Vertica_6.1.x_Supported_Platforms.pdf |

For more information about the HP Vertica database, go to the HP Vertica Analytics 6.1.x Product Documentation web site at the following URL:

<http://www.vertica.com/documentation/documentation-6-1/>

SAP BusinessObjects Documentation

Access SAP BusinessIntelligence Platform 4.0 Support Package 7 documentation at the URLs in the following table, or click ? on the HP AI web administration user interface:

| Document | URL |
|---|---|
| <i>Business Intelligence Platform Administrator Guide</i> | http://help.sap.com/businessobject/product_guides/boexir4/en/xi4sp7_bip_admin_en.pdf |
| <i>BI Launch Pad User Guide</i> | http://help.sap.com/businessobject/product_guides/boexir4/en/xi4sp4_bip_iv_en.pdf |
| <i>SAP BusinessObjects Web Intelligence Users Guide</i> | http://help.sap.com/businessobject/product_guides/boexir4/en/xi4sp4_ia_en.pdf |
| <i>BI Workspaces User Guide</i> | http://help.sap.com/businessobject/product_guides/boexir4/en/xi4_bi_workspace_user_en.pdf |

For more information about SAP BusinessObjects 4.0, go to the SAP BusinessObjects Business Intelligence platform 4.0 web site at the following URL: <http://help.sap.com/bobip40>.

Get the Latest HP AI Manuals

You can download the latest AI manuals as follows.

1. Go to <http://support.openview.hp.com/selfsolve/manuals>.
2. Log in with your HP Passport.

To get an HP passport, select the link “New Users - Please register.”

3. In the Product field, select Automation Insight.
4. In the Product Version field, select a version of HP AI.

5. In the Operating System field, select any operating system.
6. Select the Search button. This displays the HP AI manuals available for the product version you selected.
7. Select any manual to download it.

How to Find Information Resources

To access the information resources for the included products, use any of the following methods:

- Access individual documents by title and version with Documentation Libraries.
- Use the All Manuals Downloads .zip file to download PDFs of the documentation set to a local directory.
- Find documents on the HP Software Documentation Portal.
- Click the ? in the HP AI web administration user interface.
- Access solution pack user guides from HPLN for your solution pack.

To access individual documents:

1. Go to the Documentation Library for the product: **Automation Insight Documentation Library**.
2. Log in using your HP Passport credentials.
3. Locate the desired document title and version and then click the **go** link.

To use the complete documentation set in a local directory:

1. To download the complete documentation set to a local directory:
 - a. Go to the All Manuals Download for the product: **Automation Insight All Manuals Download**.
 - b. Log in using your HP Passport credentials.
 - c. Download the ZIP file to a local directory.
 - d. Unzip the file to a local directory.
2. To locate a document in the local directory, search through the filenames to identify the desired document.
3. To search for a keyword across all documents in the documentation set:

- a. Open any PDF document in the local directory.
- b. Select **Edit > Advanced Search** (or Shift+Ctrl_F).
- c. Select the All PDF Documents option and browse for the local directory.
- d. Enter your keyword and click **Search**.

Planning and Configuring Your HP AI Environment

Welcome to HP Automation Insight. Prior to starting your installation, take time to review the *HP Automation Insight Installation Guide*, as well as the Release Notes. This section provides required and recommended settings to optimize the performance of your HP AI environment.

Hardware Requirements and Sizing Guidelines

The following tables provide the minimum hardware requirements and sizing guidelines for HP Automation Insight 1.0 and HP Vertica.

HP AI Core Server Hardware Requirements and Sizing Guidelines

| | Minimum | Recommended |
|--|---------|-------------|
| Recommended memory | 32 GB+ | 64 GB+ |
| Recommended number of 2.6+ GHz speed CPUs | 4 | 4 |
| Recommended storage under root directory (/) | 200 GB | 300 GB |

Note: HP AI can be installed on Virtual Machines (VMs).

Note: The screen resolution for the HP AI client must be 1024 x 768.

HP Vertica Database Hardware Requirements and Sizing Guidelines

| | Very Small | Small | Medium/Large |
|--|-------------------------------|-------------------------------|--|
| Number of HP SA managed servers | 1–250 | 250–3000 | 3000+ |
| Number of concurrent HP AI users | 5 | 10 | 10+ |
| Recommended HP Vertica edition | Enterprise Special AI License | Enterprise Special AI License | Enterprise |
| Recommended number of HP Vertica nodes | 1 or 3 | 3 | 3 or 5 (add additional nodes as needed) |
| Recommended memory (for each node) | 16–32 GB+ | 32–64 GB+ | 64–96 GB+ |

HP Vertica Database Hardware Requirements and Sizing Guidelines, continued

| | Very Small | Small | Medium/Large |
|---|------------|--------|--------------|
| Recommended number of 2.6+ GHz speed CPUs (for each node) | 4 | 4–8 | 8+ |
| Recommended storage for each HP Vertica node for one year of data retention | 300 GB | 500 GB | 500 GB–1 TB+ |

Note: HP Vertica cannot be installed on VMs.

See the SAP BusinessObjects documentation available from the **Help** menu on the HP AI web administration user interface for detailed sizing recommendations for SAP BusinessObjects.

See the [HP Vertica Hardware Planning Guide](#) for detailed sizing recommendations for HP Vertica.

Database Settings

To avoid errors when loading data into the HP Vertica database, you must reset the default Vertica Maximum Clients and Lock Timeout settings.

Maximum Clients

By default, HP Vertica allows a maximum of 50 client sessions and 5 administrator sessions. HP recommends setting the maximum number of client sessions to 100.

To connect to vsql and increase the maximum number of client sessions to the recommended value of 100, perform the following steps:

1. Connect to any HP Vertica node using ssh.
2. Change to the database super user:

```
#su - dbadmin
```

3. Connect to vsql:

```
$ /opt/vertica/bin/vsql
```

4. Enter the super user password when prompted.
5. Type the following command:

```
=> SELECT SET_CONFIG_PARAMETER('MaxClientSessions', 100);
```

Lock Timeout

To avoid errors during data loading related to an expired lock timeout in HP Vertica, perform the following steps to connect to vsql and increase the database lock timeout to the recommended value of 1800:

1. Connect to any HP Vertica node using ssh.
2. Change to the database super user:

```
#su - dbadmin
```

3. Connect to vsql:

```
$ /opt/vertica/bin/vsql
```

4. Enter the super user password when prompted.
5. Type the following command:

```
=> SELECT SET_CONFIG_PARAMETER('LockTimeout', 1800);
```

For more information about using MC to configure and manage your HP Vertica database settings, see the "Configuring the Database" section in the [HP Vertica Analytics Platform 6.1.x Administrator's Guide](#).

Resource Pool Setting for Small Environments

If you have a small environment of less than 250 servers, you must change the resource pool memory from 8 to 4 GB before you can configure the HP AI core server to the HP Vertica database.

To increase the resource pool memory to 4 GB, perform the following steps:

1. Change to the following directory on the HP AI core server:

```
/opt/HP/CBI/database-scripts/
```

2. Create a backup copy of the `cbidb-user-setup-vertica.sql` file.
3. Open the `cbidb-user-setup-vertica.sql` file in a text editor.
4. Change the memory size for the `cbi_admin_pool` to 4 GB.

Find the following line:

```
CREATE RESOURCE POOL cbi_admin_pool MEMORYSIZE '8G' MAXMEMORYSIZE NONE  
RUNTIMEPRIORITY HIGH RUNTIMEPRIORITYTHRESHOLD 0 QUEUE_TIMEOUT 3600;
```

Change this line to the following:

```
CREATE RESOURCE POOL cbi_admin_pool MEMORYSIZE '4G' MAXMEMORYSIZE NONE  
RUNTIMEPRIORITY HIGH RUNTIMEPRIORITYTHRESHOLD 0 QUEUETIMEOUT 3600;
```

5. Save the `cbidb-user-setup-vertica.sql` file.

Report Settings

The following sections provide recommended settings for optimizing your HP AI reporting. Not all settings may apply to your environment.

BO Connection Parameters

When HP Automation Insight is installed, the following are the default BO connection parameters. Depending on the size of your environment, you may need to adjust these default settings. These settings can be changed in the `/etc/opt/HP/CBI/businessobjects/cbi-bo.properties` file. When a BO connection parameter value is updated, HP AI automatically applies the updates to the BO Universe.

BO_DATA_CONNECTION_POOL_TIME=10

The Connection Pool Timeout parameter specifies the length of time BO keeps a connection open while waiting for a report query to execute. The default timeout is 10 minutes. If you have a very large environment of 25,000 or more servers, you may experience long delays (more than one hour) when loading reports. To mitigate this issue, set the default connection pool timeout parameter to 60.

BO_DATA_CONNECTION_FETCH_SIZE=5

The Array Fetch Size parameter specifies the maximum number of rows that can be retrieved in each fetch. The default value is 5. The maximum value is 1000. You can increase this value depending on your network and HP AI configuration. The greater the value of the array fetch size parameter, the faster BO retrieves rows from HP Vertica. You must ensure that you have adequate client system memory (AI machine memory). The optimal recommended value for HP AI is 500.

If you increase the array fetch size parameter to a value greater than 100, you must also increase the threshold limits of the BI web intelligence server.

BO_DATA_CONNECTION_BINDSIZE=10

The Array Bind Size parameter specifies the size of the bind array. The bind array is the area in memory where batches of data are stored before being sent to the database. When the bind array fills, the data is transmitted to the database. The larger the size of the bind array, the more rows of data can be loaded in a single operation, improving the performance of data loading. You must ensure that you have adequate system memory in HP AI before you set a large bind array size. HP recommends setting the bind array size to a value of no more than five times the array fetch size.

BO_DATA_CONNECTION_TIMEOUT=600

The login timeout parameter is the number of minutes before a connection times out and an error message is displayed. You can set a maximum connection timeout value of 1000.

Web Intelligence Server Memory Settings

HP recommends increasing the default memory settings when the Web Intelligence Report server memory consumption reaches the maximum allocated values. When the memory consumption reaches the maximum, you will see the following:

- A Web Intelligence Server alarm concerning memory limits
- Server Busy messages when trying to open or run new reports

In large environments (environments with 5000 or more servers) when reports are expected to process large amounts of data (more than half a million records), HP recommends increasing the BusinessIntelligence server Memory Upper Threshold and Memory Maximum Threshold values. HP also recommends setting the following minimum values for the memory if it is possible to do so, regardless of the size of your environment.

Set these values based on the amount (size) of RAM present on the HP AI core server and the size of the data source environments.

If you have a large environment with 45000 or more servers, HP recommends resetting the default memory settings.

To set the web intelligence server memory settings , perform the following steps:

1. Log on to the CMC.
2. In the Organize column, click **Servers**. The CMC Servers window opens.
3. Expand **Service Categories** and select **Web Intelligence Services**.
4. In the right pane, double-click on **ai.WebIntelligenceProcessingServer**. The properties window opens.
5. In the left pane, select **Properties**.
6. In the Web Intelligence Core Service section, set the following values:
 - a. Memory Upper Threshold (MB): 8000
 - b. Memory Maximum Threshold (MB): 12500
7. Click **Save & Close**.
8. Right-click on **ai.WebIntelligenceProcessingServer** and select **Restart Server**.

Web Intelligence Server Document Cache Size

HP recommends increasing the Web Intelligence Server document cache size to at least 20 GB.

The default maximum document cache size is 1 GB. This is typically quite small for most organizations. With a cache size of 1 GB, cached documents can be pushed out of the cache. As a result, users may experience varying levels of performance. HP recommends increasing the maximum document cache size to 20 GB. A cache size of 20 GB or even 50 GB is not uncommon.

To set the default maximum cache size to the recommended value of 20 GB, perform the following steps:

1. Log on to the CMC.
2. In the Organize column, click **Servers**. The CMC Servers window opens.
3. Expand **Service Categories** and select **Web Intelligence Services**.
4. In the right pane, double-click on **ai.WebIntelligenceProcessingServer**. The properties window opens.
5. In the left pane, select **Properties**.
6. In the Web Intelligence Common Service section, set the Maximum Document Cache Size to 20 GB.
7. Click **Save & Close**.
8. Right-click on **ai.WebIntelligenceProcessingServer** and select **Restart Server**.

Disable Platform Search

The platform search functionality in the Business Intelligence server performs indexing of documents, reports and universes. This functionality is enabled by default.

HP AI reports do not use the platform search functionality. Enabling platform search on a universe can significantly impact the performance of both the HP AI server as well as the HP Vertica database cluster. HP recommends disabling platform search in the BI server.

To disable platform search in the BI server, perform the following steps:

1. Log on to the CMC.
2. In the Manage column, click **Applications**. The CMC Applications window opens.
3. Double-click on **Platform Search**. The properties window opens.
4. Select **Stop Indexing**.
5. Click **Save & Close**.

If you do not disable platform search in the BI server, HP recommends disabling platform search for universes.

To disable platform search for a universe, perform the following steps:

1. Log on to the CMC.
2. In the Manage column, click **Applications**. The CMC Applications window opens.
3. Double-click on **Platform Search**. The properties window opens.
4. Uncheck **Universe** in Content Types.
5. Click **Save & Close**.

Apply Filters on Reports

HP recommends that you generate reports with a maximum of 10 million rows. A rough estimate of the number of rows can be found using the following formula for Summary reports, Detailed reports, and Dashboards:

Number of Rows = (Servers) X (Device Groups) X (Patches/Packages/Audit Rules/Items) X (Number of Days)

Device Groups = Average number of device groups to which a server is attached.

Patches/Packages/Audit Rules/Items = Average number of items for a server.

Number of Days = Number of days for which the report is run.

You can optimize your report executions by applying the following filters and parameters:

- Select only needed policies for the report
- Select the appropriate number of days
- Reduce the scope of the data by filtering based on Facility and Device Groups, when applicable

Browser Settings

Browsers such as Mozilla and IE (Internet Explorer) have response timeout values. The timeout values vary by browser. If you experience "Connection Timeout" messages (usually after 5 to 10 minutes) while running specific reports, it means that the report may take more time to complete than the default connection timeout value for your browser. In such cases, HP recommends increasing the Connection/Response timeouts in your browsers for these reports.

Mozilla

The default timeout value for Mozilla (Version 29) is 5 Minutes. If there are "Connection timeout" errors on the browser, increase the browser timeout value. Perform the following steps to edit the default timeout value for Mozilla Firefox:

1. Open a new tab.
2. Type **about:config** in the address bar.
3. Right-click on **network.http.response.timeout** and select **Modify**
4. Set the value to 3600. The value is displayed in seconds. This changes the value to 1 hour.

Internet Explorer

Visit the following Microsoft support site for more information about setting the connection timeout value for Internet Explorer based on your environment requirements.

Starting and Stopping HP AI Components

To start or stop the HP AI core server, the HP Vertica database, and SAP BusinessObjects at the same time, type the following commands as root on the HP AI core server:

```
/etc/init.d/cbi-core start
```

```
/etc/init.d/cbi-core stop
```

HP AI Core Server

When you install the HP AI core server, it starts automatically. Type the following command as root to stop the HP AI core server:

```
/etc/init.d/cbid stop
```

Type the following command as root to start the HP AI core server:

```
/etc/init.d/cbid start
```

Note: The `cbid stop` and the `cbid start` commands stop and start only the HP AI core server, not SAP Business Objects or the HP Vertica database.

HP AI Core Components

To start an HP AI core component, type the following command as root:

```
/etc/init.d/cbid start component
```

Type the following command as root to stop an HP AI core component:

```
/etc/init.d/cbid stop component
```

where *component* can be any of the following HP AI core components:

- `apacheds`
- `platformservices`
- `dataloader`
- `contentloader`
- `tomcat`
- `gateway`
- `rsync`

HP Vertica Management Console

When you install the HP AI core server, the HP Vertica Management Console starts automatically. Type the following command as root on the HP AI core server to stop the Vertica Management Console:

```
/etc/init.d/vertica-console stop
```

Type the following command as root to start the HP Vertica Management Console:

```
/etc/init.d/vertica-console start
```

SAP BusinessObjects 4

When you install the HP AI core server, SAP BusinessObjects 4 starts automatically. Type the following command as root on the HP AI core server to stop SAP BusinessObjects:

```
/etc/init.d/SAPBOBJEnterpriseXI40 stop
```

Type the following command as root to start SAP BusinessObjects:

```
/etc/init.d/SAPBOBJEnterpriseXI40 start
```

Configuring HP Live Network Connector

The HP Live Network connector (LNC) provides a direct link between your HP Automation Insight product and HPLN. The LNC provides real-time downloads of content and content updates for HP AI. The LNC installs on all platforms supported by HP AI and is critical in keeping your software up to date.

For more information about how to install and configure HP Live Network Connector, see the *HP Live Network Connector User Guide*, available from the **Resources** tab of the [HP Live Network Connector portal](#) on HPLN.

Configure HP Live Network

Use the Live Network connector (LNC) to automate downloads of solution pack updates. An HPLN account is required. To open an HPLN account, visit the HP Live Network web site at the following URL:

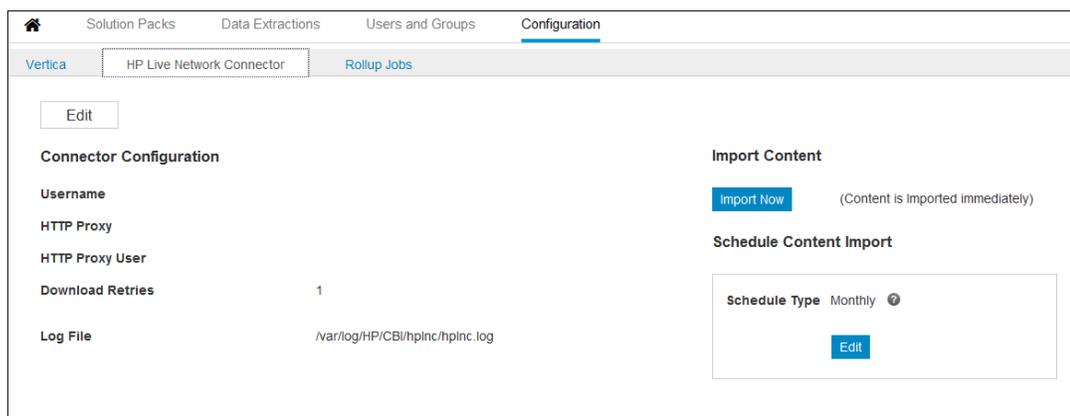
<https://hpln.hp.com>

To enable the LNC, perform the following steps:

1. Log in to the HP AI web administration user interface.

`https://ai-core:4443/ai-admin/`

2. Click the **Configuration** tab.
3. Click the **HP Live Network Connector** tab. The HP Live Network Connector Settings page opens.
4. Click the **Edit** button. The Connector Configuration page opens.



5. Enter a user name and password. If your system allows access to the HP Live network only through a proxy, enter the HTTP proxy in the format `hostname:port`, the HTTP proxy user,

and HTTP proxy password.

6. Click **Configure**.
7. Click **Import Now** to begin importing updated solution pack content. You can also schedule a daily, weekly, or monthly import.

Configure HP Live Network in Air-Gapped Environments

When importing HPLN content to a system that operates in an air-gapped environment, you need at least one system that has connectivity so you can download the content and move it to the air-gapped system.

In an air-gapped environment, if the isolated node is running 3.0 or greater LNC and the connected system is pre-3.0, the isolated node will not be able to import content created with the connected system LNC. You must update your connected LNC before exporting content.

In this section, the separate environments are named as follows:

- **Connected system:** A system that is allowed to make a connection over the Internet to the HP Live Network.
- **Isolated system:** A system that is not allowed to connect to the Internet.

The process for importing content to an air-gapped environment requires downloading the content to the connected system first, exporting the downloaded content to a temporary directory, and then importing the content onto the isolated system.

Install and Configure HP Live Network on a Connected HP AI Core Server

To install and configure HPLN on a connected HP AI core server and copy the content and HP LNC to the isolated HP AI core server, perform the following steps:

1. Log on to the connected system.
2. Follow the steps in the "Live Network Connector Installation" section of the *HP Live Network Connector User Guide*.
3. Log on to the Live Network connector project page on the HP Live Network at the following URL:

<https://hpln.hp.com/group/hp-live-network-connector>

4. Download the latest LNC installer for the operating system of the isolated system where you

want to install the LNC.

5. Configure the LNC on the connected system to download the following services and streams to import to the isolated system:

```
/opt/opsware/hpln/lnc/bin/live-network-connector write-config --product=ai
```

```
/opt/opsware/hpln/lnc/bin/live-network-connector write-config --  
stream=content.sa_inventory --enable
```

```
/opt/opsware/hpln/lnc/bin/live-network-connector write-config --  
stream=content.core --enable
```

```
/opt/opsware/hpln/lnc/bin/live-network-connector write-config --  
stream=content.sa_compliance --enable
```

```
/opt/opsware/hpln/lnc/bin/live-network-connector write-config --  
stream=content.sa_user --enable
```

```
/opt/opsware/hpln/lnc/bin/live-network-connector write-config --  
stream=content.health --enable
```

Note: You can also perform the export for a particular stream.

6. To download the additional files needed to install the LNC onto the isolated system, open a command prompt and change the directory to the directory where you installed the LNC.
7. Enter the following command to download all HP AI services and streams:

```
/opt/opsware/hpln/lnc/bin/live-network-connector download-export -e  
/var/opt/export_ai --platform=linux2 --product=ai
```

Or, enter the following command to download a specific stream:

```
/opt/opsware/hpln/lnc/bin/live-network-connector download-export -e  
/var/opt/export_ai platform=linux2 -product=ai --stream=content.sa_inventory
```

where *platform* is the platform of the isolated system (win32, linux2, or sunos5) and *export_ai* is the directory to store the downloaded content.

8. (Optional) Transfer the LNC installer file that you downloaded in Step 4 from the connected system to a temporary directory on the isolated system:

```
scp HPLN-connector-installer-3.40.00-linux2.zip
```

9. Type the following command to transfer the system `/var/opt/export_ai` directory for the downloaded files and their contents from the connected system to the isolated system:

```
scp -r /var/opt/export_ai root@<IsolatedHost>/ai/export_ai
```

where `/ai/export_ai` can be any directory on the isolated HP AI core server.

Install HP Live Network on an Isolated HP AI Core Server

To install the HP Live Network Connector on an isolated HP AI core server, perform the following steps:

1. Log on to the isolated HP AI core server.
2. Change to the directory that you transferred the LNC installer file to in the [""Install and Configure HP Live Network on a Connected HP AI Core Server""](#) section.
3. Navigate to the directory where you downloaded the .zip file, and then unzip the file. Keep the subdirectory structure intact.
4. Run the LNC installer. For example, on Linux, enter the following command:

```
./install
```

5. Press **Enter**. The following prompt appears:

```
Is an Internet connection to the HP Live Network available? [Y/N]
```

6. Enter **N** and then press **Enter**. The following prompt appears:

```
Install directory [.]
```

7. Perform one of the following two actions:

- Press **Enter** to accept the default directory.

or

- Enter a fully qualified directory path, and then press **Enter**.

The following prompt appears:

```
Import directory:
```

8. Enter the full path of the `export_dir` directory that you transferred from the connected system, and then press **Enter**.

The following prompt appears:

```
Will install as follows
```

```
Install dir: Install directory path
```

```
Import dir: export directory path
```

```
Proceed with install? [Y/N]
```

9. Perform one of the following two actions:

- To change any of the values shown, enter **N** and then press **Enter**. Go to step 6.
- To complete the installation, enter **Y** and then press **Enter**.

10. Press **Enter** to finish the installation process when the following text displays on the screen:

```
Update Live Network connector version 3.40 successfully installed.
```

Import HPLN Content to an Isolated HP AI Core Server

You can import the content of a particular stream or from all streams to the isolated HP AI core server from the export directory you created in the ["Install and Configure HP Live Network on a Connected HP AI Core Server" on page 31](#) section.

Import Content from a Specific Stream

Type the following command to import the content of a specific stream:

```
/opt/opsware/hpln/lnc/bin/live-network-connector import --reload -i /ai/export_  
ai/ --product=ai --stream-name
```

where *stream-name* is the stream input parameter. For example:

```
/opt/opsware/hpln/lnc/bin/live-network-connector import --reload -i /ai/export_  
ai/ --product=ai --stream=content.sa_inventory
```

The following output appears while the stream is imported:

```
Determining content status information...
```

```
Finished determining content status information...
```

```
Importing updates...
```

```
Importing content from stream livenet.lnc
```

```
Import of content from stream livenet.lnc was successful
```

```
Importing content from stream livenet.ai
```

```
Import of content from stream livenet.ai was successful
```

```
Done importing updates.
```

Import Content from All Streams

Type the following command to import content from all streams:

```
/opt/opsware/hpln/lnc/bin/live-network-connector import --reload -i /ai/export_  
ai/ --product=ai
```

Managing Solution Packs

Use the **Solution Packs** tab of the HP AI web administration user interface to view available solution packs, the deploy status of solution packs, and to deploy solution packs.

HP AI solution packs provide packaged content that deploys HP AI components. Solution packs provide the following content:

- **Data Models**—Data tables, views, and projections that are created in the HP Vertica database.
- **ETL Definitions**—Extract, transform, and load definitions files for the data miner. ETLs define how to extract data from source systems.
- **Reports and Dashboards**—HP-created operational, tactical and strategic reports and dashboards on data center and cloud management operational data.
- **Data Management Jobs**—Data management and transformation jobs.

HP AI provides automatic deployment of solution packs from HP Live Network. Solution packs deployed from HPLN pack have the Auto Deploy flag set to TRUE.

When an HP AI administrator deploys a solution pack, all of the ETLs, data models, and BusinessObjects universes, reports, and dashboards included in that solution pack are deployed by the HP AI solution pack deployer.

After you install HP AI, the available solution packs can be found in the `/var/opt/HP/CBI/solutionpacks` directory.

The solution packs available with HP AI 1.0 are listed in the following table.

| Solution Pack | File Name | Description |
|----------------------------------|-------------------------------------|---|
| HP SA Server Inventory and Usage | CBI-SA-SP-00201-1.0.0-SNAPSHOT.zip | This solution pack contains information about your SA servers and how you use those servers. |
| HP SA Compliance | CBI-SA-SP-00202-1.0.0-SNAPSHOT.zip | This solution pack contains information about audit, patch and software compliance status for SA servers. |
| HP SA User Management | CBI-SA-SP-00203-1.0.0-SNAPSHOT.zip | This solution pack contains information about user management and activity on SA servers. |
| AI System Health | CBI-CBI-SP-00101-1.0.0-SNAPSHOT.zip | This solution pack provides reports to help you evaluate how well your HP AI system can perform at your required quality level. |

View Solution Packs

Perform the following steps to view a solution pack:

1. Log in to the HP AI web administration user interface.

`https://ai-core:4443/ai-admin`

2. Click the **Solution Packs** tab.



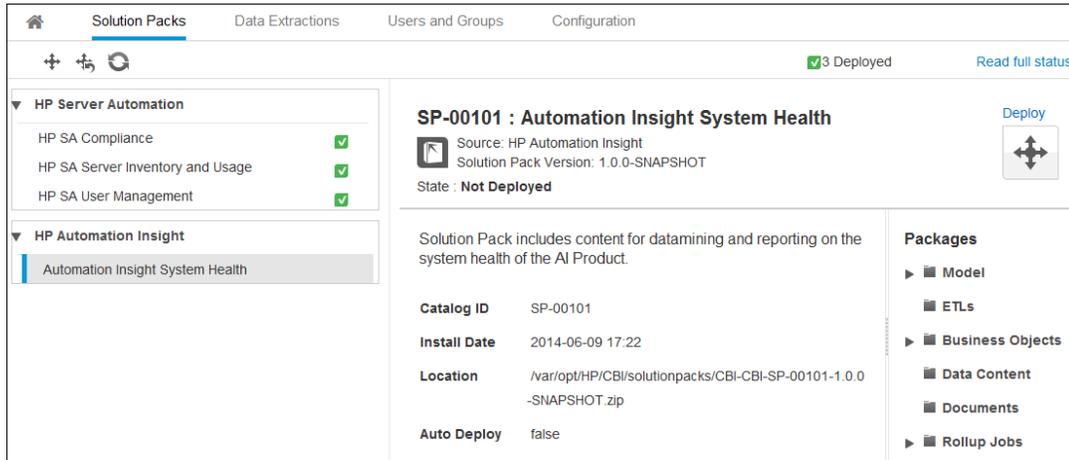
3. Click a solution pack to see more information in the right pane. Available solution packs appear in the left pane, grouped by data source type, such as HP Server Automation.

Deploy Solution Packs

Deploying a solution pack deploys the related ETLs, the data models that create tables in the HP Vertica database server, and SAP BusinessObjects content such as the universes, reports, and dashboards included in the solution pack into the HP AI core server.

To deploy a solution pack, perform the following steps:

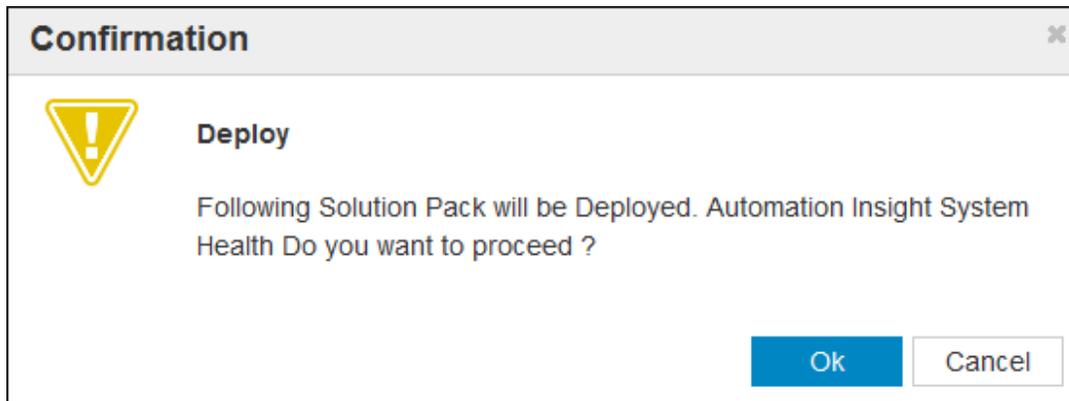
1. Select the check box for the solution pack to deploy. You can select multiple solution packs to deploy at the same time if all of the selected solution packs are not already deployed.



2. Click the **Deploy (+)** icon above the left pane of the HP AI web administration user interface.

Note: If you are deploying a single solution pack, click the **Deploy (+)** icon at the top right corner of the HP AI web administration user interface..

The solution pack deployer asks for confirmation.



3. Click **OK** to start the deployment. The solution pack deployment status window opens.

| Status ✕ | | | |
|---|----------------------------------|--------|-----------------|
| Catalog ID | Name | Status | Deployment Time |
| SP-00201 | HP SA Server Inventory and Usage | ✓ | 00:2:23 |
| SP-00101 | Automation Insight System Health | ⏸ | |
| SP-00203 | HP SA User Management | ✓ | 00:1: |
| SP-00202 | HP SA Compliance | ✓ | 00:2:22 |

Note: Status auto refreshes every 30 seconds.

[Ok](#)

After the solution pack deployment starts, you can monitor the status in the deployment status window. Click the "Read full status" link in the top right corner to view the Solution Pack Deployment status window.

One of the following status icons will appear for each solution pack:

-  Deployment has failed
-  Deployment is successful
-  Waiting for deployment
-  Deployment is in progress

Undeploy Solution Packs

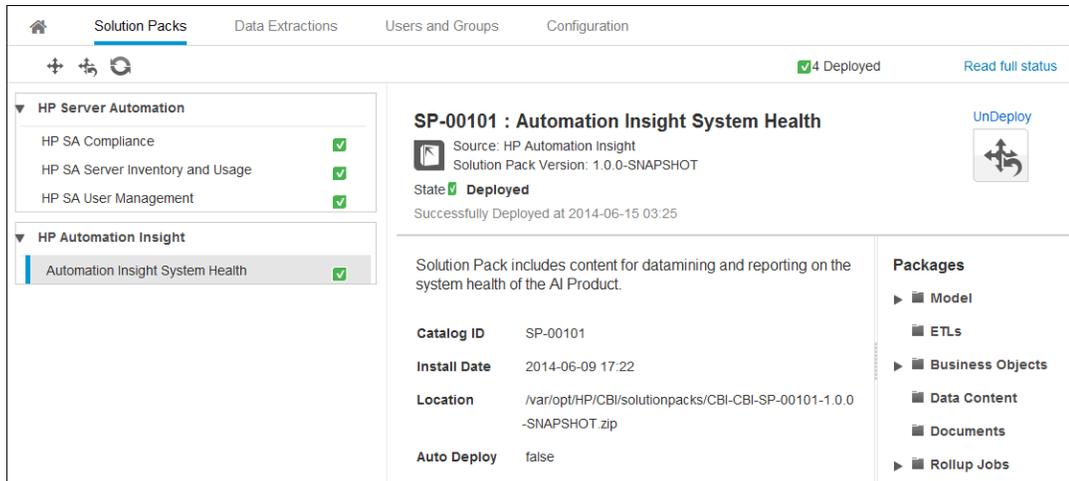
You can undeploy a solution pack that is in the Deployed state. The solution pack must be in Deployed state to be eligible for undeployment. Undeploy only solution packs that you no longer want to use. Use caution when undeploying a solution pack. Undeploying a solution pack results in the following actions:

- ETLs and data models are removed.
- SAP BusinessObjects content such as universes, reports, and dashboards are removed from the HP AI core server.
- Historical data integrity is lost, as data is not mined or loaded.

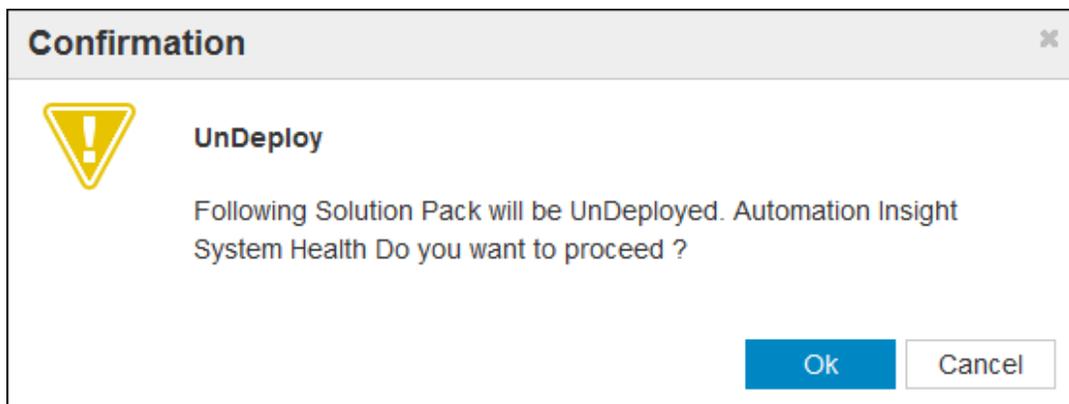
Note: When you undeploy a solution pack, the undeployment does not delete tables that have data.

To undeploy a solution pack, perform the following steps:

1. Select the solution pack to undeploy. You can select multiple solution packs for undeployment. Only solution packs that are in a deployed state can be undeployed.



2. Click the **UnDeploy** (↔) icon. The solution pack undeployer asks for confirmation.



3. Click **OK** to start the undeployment.

Managing Data Management Jobs

When you deploy a solution pack, the data management jobs associated with that solution pack start automatically. Data management jobs provide aggregated data for reports from source systems, enabling you to perform trending analysis of your data over time. HP AI provides compliance and database data management jobs.

View and Modify Compliance Data Management Jobs

To view and modify a scheduled compliance data management job, perform the following steps:

1. Log in to the HP AI web administration user interface.

`https://ai-core:4443/ai-admin`

2. Click the **Configuration** tab.
3. Click the **Data Management Jobs** tab. The list of data management jobs and their properties is shown in the left pane.

| Job Name | Scheduling | Next Run | Previous Run | Last Run Status |
|---|------------|------------------|------------------|-----------------|
| Database Analyze Statistics Job | Scheduled | 2014-06-11 17:06 | 2014-06-11 16:06 | Successful |
| Database Constraint Violation Healthcheck Job | Scheduled | 2014-06-11 21:45 | 2014-06-10 21:46 | Successful |
| HPSA Audit Compliance Daily | Scheduled | 2014-06-11 21:08 | 2014-06-10 21:10 | Successful |
| HPSA Audit Compliance Hourly | Scheduled | 2014-06-11 17:08 | 2014-06-11 16:09 | Successful |
| HPSA Patch Compliance Daily | Scheduled | 2014-06-11 21:45 | 2014-06-10 21:46 | Successful |
| HPSA Patch Compliance Hourly | Scheduled | 2014-06-11 17:12 | 2014-06-11 16:13 | Successful |
| HPSA Software Compliance Daily | Scheduled | 2014-06-11 20:09 | 2014-06-10 20:09 | Successful |
| HPSA Software Compliance Hourly | Scheduled | 2014-06-11 17:12 | 2014-06-11 16:13 | Successful |

4. In the left pane, select the compliance data management job to view. Information about the compliance data management job is displayed in the right pane.
5. (Optional) To modify the scheduled compliance data management job, click the Edit (✎) icon.

Schedule [Run Now](#)

HPSA Audit Compliance Daily

Description:
Daily Rollup Job that rolls up Audit Compliance Data, for previous day on which job is run

Scheduling:

Recurrence DAILY

Schedule Time 5 : 6 PM

Input Options start=PREV_DAY debug=true

Last Run Time 10.04.2014 05:06 PM

Output message=Successfully completed rollup of audit compliance data
 status=0,

Log

```
"20140411 00:06:39.510+0000 INFO starting rollup job for date: 20140409"  
"20140411 00:06:41.204+0000 INFO Successfully completed rollup of audit compliance data  
for date: 20140409"
```

Note: Compliance Data management jobs have the following default values:

recurrence: DAILY

start: PREV_DAY

debug: true

You do not need to specify these settings unless the default values are not suitable for your deployment.

6. (Optional) Select a time to start the next run of the compliance data management job.

7. (Optional) Enter the beginning and end dates for the compliance data management job to collect data in the Input Options field. Enter inputs for the data management job separated by line in the format *name=value*. For example:

```
start=PREV_DAY
```

8. Click **Save**.

Note: selecting the **Stop** button on the **Schedule** tab stops the current schedule for the selected data management job, but does not stop the data management job.

Start an Adhoc Compliance Data Management Job

In addition to the scheduled data management jobs that are provided with HP solution packs, you can start an adhoc compliance data management job to collect data from a range of dates. This is useful if you have missing data in your database due to a device failure or network outage.

To schedule an adhoc compliance data management job, perform the following steps:

1. Log in to the HP AI web administration user interface.

```
https://ai-core:4443/ai-admin
```

2. Click the **Configuration** tab.
3. Click the **Data Management Jobs** tab.
4. In the left pane, select a compliance data management job.
5. In the right pane, click the **Run Now** tab.

Schedule Run Now

HPSA Audit Compliance Daily

Job runs only once for the specified inputs

Refresh Play

Rollup job inputs:

Run rollup job for time period starting from date

Till date

Options

```
start=TODAY
debug=true
```

Output

Log

Note: Click on refresh to get the latest logs

- (Optional) Enter the From date and Till date for the selected job.
- (Optional) In the Options field, enter the beginning and end dates for the job. Enter input options separated by line and in the format *name=value*. For example:

```
start=PREV_DAY
```

- Click the Run Now () button.

View and Modify Database Data Management Jobs

HP AI provides two database data management jobs, the Database Analyze Statistics and the Database Constraint Violation Healthcheck job.

Database Analyze Statistics Job

The Database Analyze Statistics job is used to analyze statistics on tables in `cbi_data` schema. The default mode (smart mode) is to determine database tables that need to have statistics analyzed on them and then run for only those tables. You can also specify a list of tables on which to run analyze statistics.

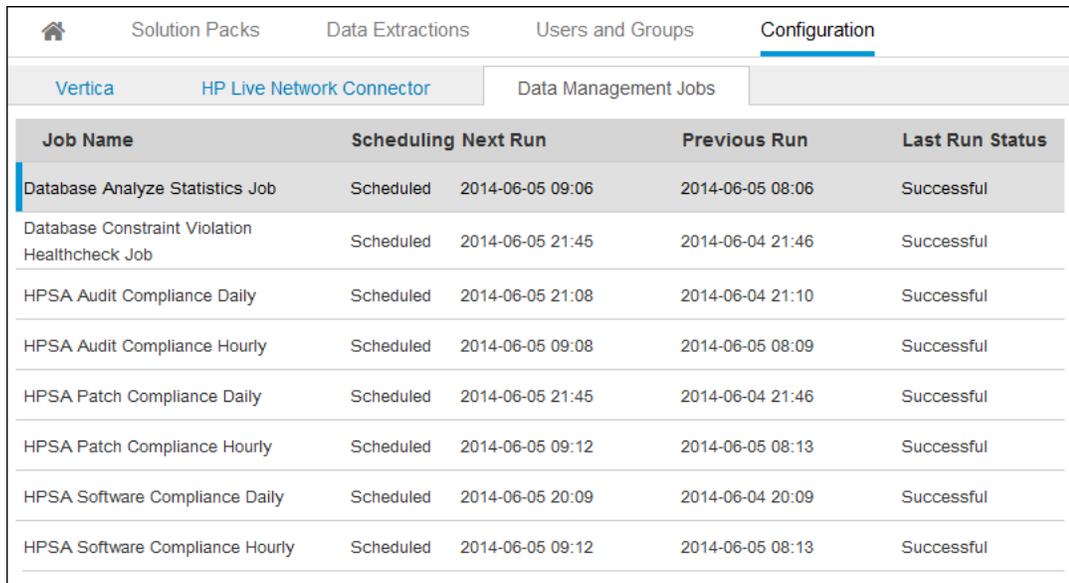
This job provides data to the query optimizer which recommends the best plan to execute a query.

To view and modify a scheduled Database Analyze Statistics data management job, perform the following steps:

1. Log in to the HP AI web administration user interface.

`https://ai-core:4443/ai-admin`

2. Click the **Configuration** tab.
3. Click the **Data Management Jobs** tab. The list of data management jobs and their properties is shown in the left pane.



| Job Name | Scheduling | Next Run | Previous Run | Last Run Status |
|---|------------|------------------|------------------|-----------------|
| Database Analyze Statistics Job | Scheduled | 2014-06-05 09:06 | 2014-06-05 08:06 | Successful |
| Database Constraint Violation Healthcheck Job | Scheduled | 2014-06-05 21:45 | 2014-06-04 21:46 | Successful |
| HPSA Audit Compliance Daily | Scheduled | 2014-06-05 21:08 | 2014-06-04 21:10 | Successful |
| HPSA Audit Compliance Hourly | Scheduled | 2014-06-05 09:08 | 2014-06-05 08:09 | Successful |
| HPSA Patch Compliance Daily | Scheduled | 2014-06-05 21:45 | 2014-06-04 21:46 | Successful |
| HPSA Patch Compliance Hourly | Scheduled | 2014-06-05 09:12 | 2014-06-05 08:13 | Successful |
| HPSA Software Compliance Daily | Scheduled | 2014-06-05 20:09 | 2014-06-04 20:09 | Successful |
| HPSA Software Compliance Hourly | Scheduled | 2014-06-05 09:12 | 2014-06-05 08:13 | Successful |

4. In the left pane, select the Database Analyze Statistics Job. Information about the job is displayed in the right pane.
5. (Optional) To modify the job, click the Edit (✎) icon.

Database Analyze Statistics Job

Description:
Job that checks and updates statistics for All or Specified data tables

Scheduling:
Recurrence: HOURLY
Schedule Time: 5 : 6 PM

Input Options:
threshold_limit=1000
debug=false
table_list=+

Save **Cancel**

Last Run Time: 2014-06-11 16:06

Output: "Successfully completed database analyze statistics job"

Log:
"20140611 23:06:23.637+0000 INFO Retrieved tableString as +"
"20140611 23:06:23.638+0000 INFO Retrieved limit as 1000"
"20140611 23:06:23.639+0000 INFO starting database analyze statistics job at UTC Time: 20140611 23:06:23.639+0000"
"20140611 23:06:25.354+0000 INFO Successfully completed analyze statistics for table: sa_audit_exception_d"
"20140611 23:06:25.443+0000 INFO Successfully completed analyze statistics for table: sa_audit_rules_d"

Note: Click on refresh to get the latest logs

6. (Optional) Select a time to start the next run of the job.
7. (Optional) Update the Input Options to select the tables to update statistics. You can specify a single table, multiple tables, or all tables.

Example to specify a single table:

```
table_list=datasource_d
```

Example to specify multiple tables:

```
table_list=datasource_d,sa_server_id
```

Example to specify all tables:

```
table_list=*
```

Example to specify smart inclusion of tables in the `cbi_data` schema (the default value):

```
table_list=+
```

8. Click **Save**.

Note: selecting the **Stop** button on the **Schedule** tab stops the current schedule for the selected data management job, but does not stop the data management job.

Database Constraint Violation Healthcheck Job

The Database Constraint Violation Healthcheck job is used to check and fix database constraint violations. The HP Vertica database allows constraint violations. The HP AI data loading process is designed to prevent constraint violations, but they may occur. This job accepts a list of key or item lifecycle tables, runs constraint analysis on the tables, and fixes any unique constraint violations it finds.

Caution: Use this job only under the supervision of HP customer support.

To view and modify a scheduled Database Constraint Violation Healthcheck data management job, perform the following steps:

1. Log in to the HP AI web administration user interface.

```
https://ai-core:4443/ai-admin
```

2. Click the **Configuration** tab.

3. Click the **Data Management Jobs** tab. The list of data management jobs and their properties is shown in the left pane.

| Vertica | HP Live Network Connector | Data Management Jobs | | | |
|---|---------------------------|----------------------|------------------|-----------------|--|
| Job Name | Scheduling | Next Run | Previous Run | Last Run Status | |
| Database Analyze Statistics Job | Scheduled | 2014-06-11 17:06 | 2014-06-11 16:06 | Successful | |
| Database Constraint Violation Healthcheck Job | Scheduled | 2014-06-11 21:45 | 2014-06-10 21:46 | Successful | |
| HPSA Audit Compliance Daily | Scheduled | 2014-06-11 21:08 | 2014-06-10 21:10 | Successful | |
| HPSA Audit Compliance Hourly | Scheduled | 2014-06-11 17:08 | 2014-06-11 16:09 | Successful | |
| HPSA Patch Compliance Daily | Scheduled | 2014-06-11 21:45 | 2014-06-10 21:46 | Successful | |
| HPSA Patch Compliance Hourly | Scheduled | 2014-06-11 17:12 | 2014-06-11 16:13 | Successful | |
| HPSA Software Compliance Daily | Scheduled | 2014-06-11 20:09 | 2014-06-10 20:09 | Successful | |
| HPSA Software Compliance Hourly | Scheduled | 2014-06-11 17:12 | 2014-06-11 16:13 | Successful | |

4. In the left pane, select the Database Constrain Violation Healthcheck Job. Information about the job is displayed in the right pane.
5. (Optional) To modify the job, click the Edit () icon.

Schedule **Run Now**

Database Constraint Violation Healthcheck Job

Description:
Job that checks and fixes database constraint violations on specified data tables

Scheduling:
Recurrence DAILY
Schedule Time 9 : 45 PM

Input Options
debug=false
table-list=datasource_d

Save **Cancel**

Last Run Time 2014-06-10 21:46

Output "Successfully completed database analyze statistics job"

Log

```
"20140611 04:46:37.512+0000 INFO Retrieved tableString as undefined"  
"20140611 04:46:37.512+0000 INFO Retrieved limit as undefined"  
"20140611 04:46:37.514+0000 INFO starting database analyze statistics job at UTC Time:  
20140611 04:46:37.514+0000"  
"20140611 04:46:39.064+0000 INFO Successfully completed analyze statistics for table:  
sa_audit_exception_d"  
"20140611 04:46:39.149+0000 INFO Successfully completed analyze statistics for table:  
sa_audit_rules_d"
```

Note: Click on refresh to get the latest logs

- (Optional) Select a time to start the next run of the data management job.
- (Optional) Update the Input Options to select the tables to check and fix constraint violations. You can specify a single table, multiple tables, or all tables.

Example to specify a single table:

```
table_list=datasource_d
```

Example to specify multiple tables:

```
table_list=datasource_d,sa_server_id
```

Example to specify all tables:

```
table_list=*
```

Note: Only key and item lifecycle tables are supported

8. Click **Save**.

Note: Selecting the **Stop** button on the **Schedule** tab stops the current schedule for the selected data management job, but does not stop the data management job.

Start an Adhoc Database Data Management Job

In addition to the scheduled database data management jobs that are provided with HP solution packs, you can start an adhoc database data management job.

Database Analyze Statistics Job

To schedule an adhoc Database Analyze Statistics job, perform the following steps:

1. Log in to the HP AI web administration user interface.

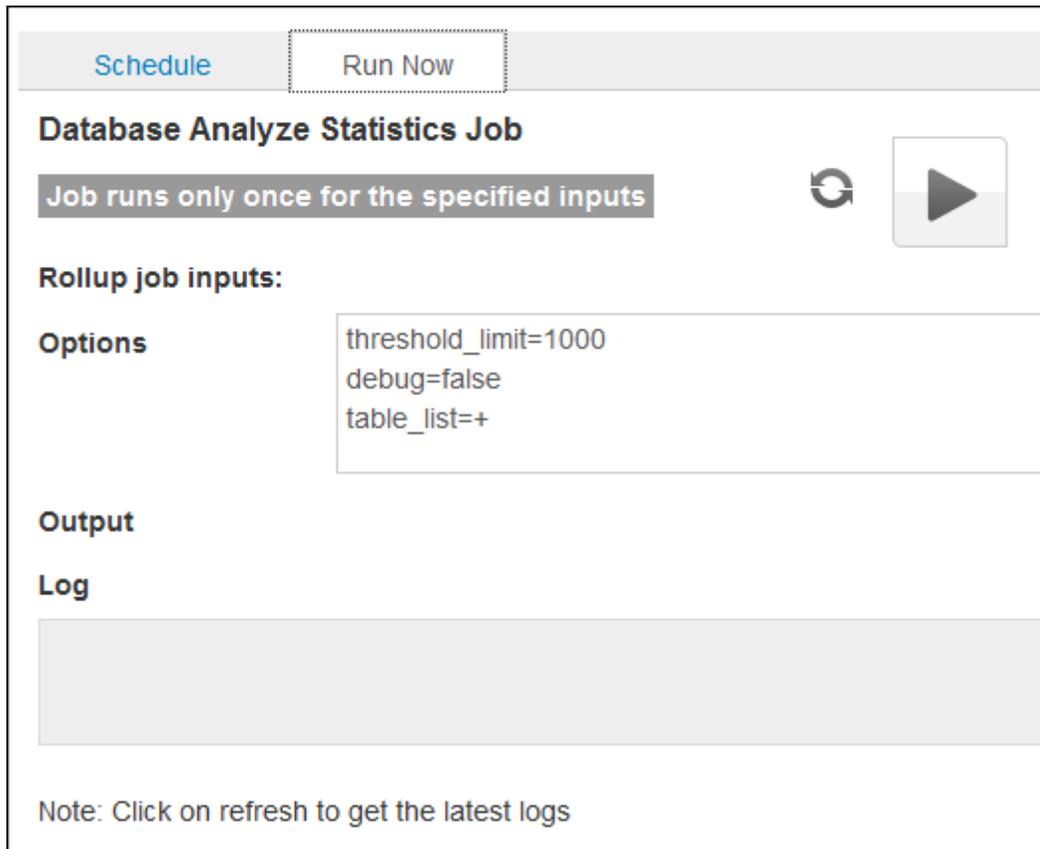
```
https://ai-core:4443/ai-admin
```

2. Click the **Configuration** tab.

3. Click the **Data Management Jobs** tab.

4. In the left pane, select the Database Analyze Statistics data management job.

5. In the right pane, click the **Run Now** tab.



6. (Optional) Update the input options to select the tables to update statistics. You can specify a single table, multiple tables, or all tables.

Example to specify a single table:

```
table_list=datasource_d
```

Example to specify multiple tables:

```
table_list=datasource_d,sa_server_id
```

Example to specify all tables:

```
table_list=*
```

Example to specify smart inclusion of tables in the cbi_data schema (the default value):

```
table_list=+
```

7. Click the Run Now () button.

Database Constraint Violation Healthcheck Job

Caution: Use this job only under the supervision of HP customer support.

To schedule an adhoc Database Constraint Violation Healthcheck job, perform the following steps:

1. Log in to the HP AI web administration user interface.

`https://ai-core:4443/ai-admin`

2. Click the **Configuration** tab.
3. Click the **Data Management Jobs** tab.
4. In the left pane, select the Database Constraint Violation Healthcheck job.
5. In the right pane, click the **Run Now** tab.

The screenshot displays the configuration page for the 'Database Constraint Violation Healthcheck Job'. At the top, there are two tabs: 'Schedule' and 'Run Now', with 'Run Now' being the active tab. Below the tabs, the job title 'Database Constraint Violation Healthcheck Job' is shown. A warning message states 'Job runs only once for the specified inputs'. To the right of the warning are a refresh icon and a play button icon. Under the heading 'Rollup job inputs:', there is a text area containing the following options: 'debug=false' and 'table-list=datasource_d'. Below this is the 'Output' section, followed by a 'Log' section which is currently empty. At the bottom of the interface, a note reads: 'Note: Click on refresh to get the latest logs'.

6. (Optional) Update the Options to select the tables to check and fix constraint violations. You can specify a single table, multiple tables, or all tables.

Example to specify a single table:

```
table_list=datasource_d
```

Example to specify multiple tables:

```
table_list=datasource_d,sa_server_id
```

Example to specify all tables:

```
table_list=*
```

Note: Only key and item lifecycle tables are supported

7. Click the **Run Now** () button.

Configuring Data Sources

Perform the following tasks to configure data sources for HP AI.

Pre-register a Data Miner for SA Enterprise as a Data Source

To pre-register a data miner for SA Enterprise from the HP AI web administration user interface, perform the following steps:

1. Log on to the HP AI web administration user interface:

`https://ai-core:4443/ai-admin`

2. Click the **Data Extractions** tab.

3. Click the **Create** icon (✱) in the toolbar. The HP AI data source creation page opens in the right pane.

The screenshot displays the HP AI web administration user interface for configuring a data source. The page is titled "MY HP-SA System" and features a "Data Source Type" dropdown menu set to "HP Server Automation" and a "Connection URL" field containing "16.166.49.96:1521/truth". Below this, there are two tabs: "Details" (selected) and "ETL Specific Mining". The "Details" tab contains several configuration fields: "Data Base Type" (Oracle), "*Database User" (opsware_admin), "*Password" (masked with dots), and "*Confirm Password" (masked with dots). To the right, there are fields for "*JDBC Driver Class" (oracle.jdbc.driver.OracleDriver) and "*JDBC Protocol" (jdbc:oracle:thin:@). At the bottom, there is a "Data Extraction Properties" section with a large empty text area and "Save" and "Cancel" buttons.

4. Enter the data source name.
5. Select **HP Server Automation** from the Data Source Type drop-down menu.
6. Enter the Connection URL. The connection URL is the name of the data source in the format *ip-address:port/SID*. For example:

16.166.49.96:1521/truth
7. Select the Oracle data base type. The JDBC Driver Class and the JDBC Protocol fields are automatically populated depending on the database type selected.
8. Enter the database user name.
9. Enter and confirm the database user password.
10. Click **Save**.
11. Click **Refresh** () icon.
12. In the left pane, select the new data source. The details of the data source configuration are displayed in the right pane.
13. Write down the registration code. The registration code consists of upper-case alphanumeric characters. You will need to enter the registration code when you configure the data miner on the SA server.

Configuring the HP AI Core Server to the HP Vertica Database

To configure the HP Vertica Database, perform the following steps on the **Configure** tab of the HP AI web administration user interface:

1. Log in to the HP AI web administration user interface:

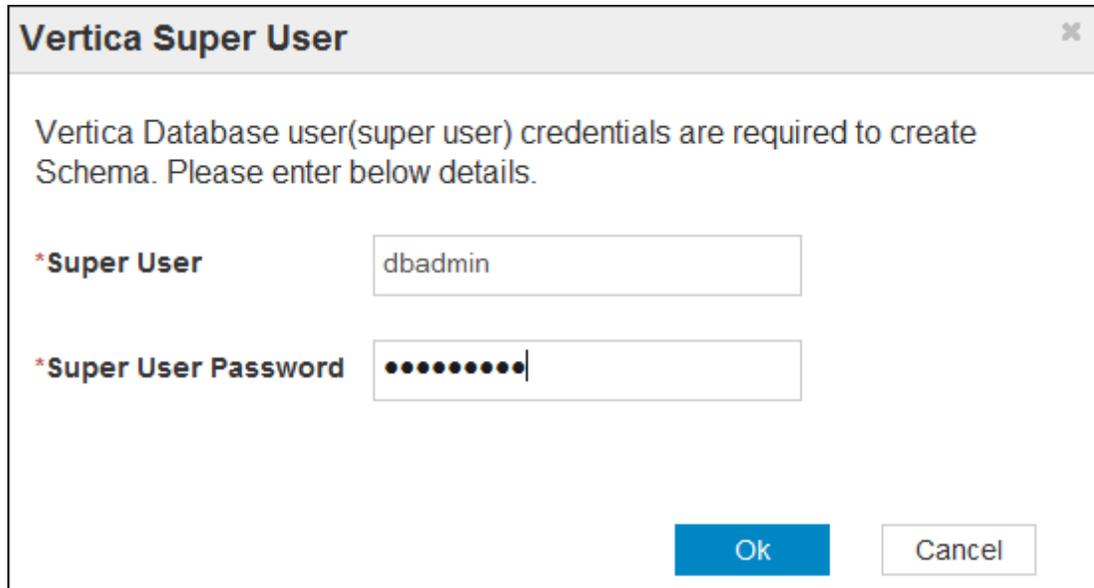
`https://ai-core:4443/ai-admin/`

2. Click the **Configuration** tab.
3. Click the **Vertica** tab.
4. Click the **Edit** button.

The screenshot shows a web-based configuration interface for HP Vertica. At the top, there are navigation tabs: 'Solution Packs', 'Data Extractions', 'Users and Groups', and 'Configuration' (which is selected). Below these are sub-tabs: 'Vertica', 'HP Live Network Connector', and 'Rollup Jobs'. The main content area has an 'Edit' button and a note: '* All fields are Mandatory'. The configuration is divided into two sections: 'Database Node' and 'Users'. Under 'Database Node', there are fields for 'Host Name' (filled with 'cbi_demo2-db.hpswabs.adapps.hp.c'), 'Port' (filled with '5433'), and 'Database Name' (filled with 'cbidb'). Under 'Users', there are fields for 'Admin User' (filled with 'cbi_admin'), 'Admin User Password' (masked with dots), 'Confirm Admin User Password' (masked with dots), 'Viewer User' (filled with 'cbi_viewer'), 'Viewer User Password' (masked with dots), and 'Confirm Viewer User Password' (masked with dots). At the bottom, there is a checkbox for 'Force schema configuration' with a help icon, and two buttons: 'Configure' and 'Cancel'.

5. Enter a host name and port for the HP Vertica database.

6. Enter and confirm the password for the cbi_admin and cbi_viewer users.
7. Click **Configure**. The Vertica Super User dialog opens.



Vertica Super User

Vertica Database user(super user) credentials are required to create Schema. Please enter below details.

*Super User

*Super User Password

Ok Cancel

8. Enter the Vertica database super user name (dbadmin) and password. The Vertica Super User user name and password are created during the initial installation and set up of the HP Vertica database.
9. Click **OK**.
10. Select the **Data Extractions** tab.

Go to the **Data Extractions** tab to establish the connection between the HP Vertica database and the data source.

For information about how to install and set up the HP Vertica database, see the "Installing and Setting Up the Data Warehouse" section in the *HP Automation Insight Installation Guide*.

Reset the HP Vertica Admin and Viewer User Password

To reset the HP Vertica admin and viewer user passwords, perform the following steps:

1. Log in to the HP AI web administration user interface:

`https://ai-core:4443/ai-admin/`

2. Click the **Configuration** tab.

3. Click the **Vertica** tab.
4. Click the **Edit** button.
5. Enter and confirm the password for the `cbi_admin` and `cbi_viewer` users.
6. Click **Configure**.
7. Type the following command to restart the HP AI services:

```
# /etc/init.d/cbid restart
```

Reset the HP Vertica Super User Password

To reset the HP Vertica Super User password, perform the following steps:

1. SSH to the HP Vertica database server as the root user.
2. Connect to the HP Vertica database server as the super user, for example:

```
su - dbadmin
```

3. Use a text editor to view the `vertica.conf` file, for example:

```
vi /home/dbadmin/cbidb/v_cbidb_node0001_catalog/vertica.conf
```

4. Add the following line to the `vertica.conf` file:

```
ClientAuthentication = local
```

5. Connect to the HP Vertica database, and type the following command:

```
ALTER USER superuser IDENTIFIED BY 'newpassword';
```

6. Remove the line that is added in the `vertica.conf` file.
7. Use the Administration Tools to restart the HP Vertica node. Type the following command to launch the HP Vertica Administration Tools:

```
/opt/vertica/bin/adminTools
```

8. Select **Stop Database**.
9. Select **OK**.
10. Select **Start Database**.
11. Select **OK**.

Migrating Reports and Universes from BSAE

If you are an existing BSAE customer, you can migrate your reports and universes into HP AI.

Migrate Reports and Universes

To migrate reports and universes from BSAE to HP AI, perform the following tasks:

1. Install the BO 3.0 Client Tools
2. Import the BIAR File from the BSAE Server
3. Run the Upgrade Management Tool on the HP AI Core Server
4. Install of the BO 4.0 Client Tools
5. Update the oracle.sbo File
6. Create the BSAE-JDBC Connection
7. Restart the SAP BusinessObjects Services on the HP AI Core Server

See the [HP Automation Insight: Migrate BSAE BusinessObjects Universes and Reports](#) document for details.

Configure the HP AI Data Miner after Migration

After the BSAE reports and universes are migrated, you can configure the HP AI data miner on a single SA core or on a multimaster SA core.

Data Miner on a SA Single Core

If you want to mine data from the HP AI data miner only, and not from the BSAE data miner, you must stop and unregister the data miner on the BSAE server before you install and configure the HP AI data miner.

If you want to mine data from both the HP AI data miner and the BSAE data miner, you must install and configure the HP AI data miner in a different directory than the BSAE data miner.

Data Miner on a MultiMaster Mesh

If the BSAE data miner is installed on an SA multimaster mesh, perform the following steps to configure the HP AI data miner in the mesh to mine data. The HP AI data miner collects data continuously from both local and remote transactions in an SA multimaster mesh setup.

If you want to mine data from the HP AI data miner only, and not from the BSAE data miner, you must stop and unregister the data miner on the BSAE server before you install and configure the HP AI data miner.

Note: In an SA multimaster mesh, do not install the BSAE and the HP AI data miner on a single node. Processing of vault transactions are not reported when more than one data miner is running on the same node in a mesh setup. In order to continue mining data using both the BSAE and the HP AI data miners, install the HP AI and the BSAE data miners on different nodes of the mesh.

1. Enable vault mining in the SA multimaster mesh in the node where you want to install the data miner. See "[Enable Vault Mining for an SA Multimaster Mesh](#)" for instructions.
2. Install and start the HP AI data miner. See "[Install the Data Miner on an SA Server](#)" section for instructions.

You can now run migrated BSAE reports from HP AI.

Installing and Setting Up the Data Miner

About Data Miners

The function of a data miner is to collect data from source systems. When you successfully configure a data miner, its first task is to collect the current state information from the source system and send that information to the HP AI core server for loading. The amount of data in your source system at the time the data miner is installed will directly affect the amount of time it will take for this data to be available for reporting. In some cases, it can take as long as several days.

Factors in your environment to consider when estimating the time it will take to have data available include the speed of the hardware, the number of managed servers, and the number of jobs and job content being mined.

Before You Install a Data Miner

If the data miner is installed on a server that is remotely located from the HP AI data warehouse server, set the same time zone on the data miner server, the HP AI core server, and the HP Vertica database server. You may experience problems if these time zones are different.

Data Miner Configuration Set Up

You must pre-register your data miner on the HP AI web administration user interface. The data-extraction configuration helps you set up the information required by a data miner to connect to its data source. As part of the process, a registration token is generated that you will need when you configure the data miner.

Additional SA Configuration Options

The data miner periodically connects to HP AI and retrieves miscellaneous configuration settings. You can set these options in the database extraction properties text area located at the bottom of the Configuration Entry Panel. You can set the SA data miner configuration settings listed in the table below.

Data Miner Configuration Settings

| Parameter | Definition | Default |
|-----------------------|---|-------------------------|
| VaultConfigFileDir | Specifies the location of the vault configuration file. | /etc/opt/opsware/vault/ |
| InitialCollectionDate | The start date and time of a data miner. Set a future value to delay the start. | 1980-01-01 12.00.00 |

Data Miner Configuration Settings, continued

| Parameter | Definition | Default |
|-----------------------|--|---------------------|
| DataFileChunkSize | The number of transactions in a data miner data file. | 1500 |
| FileTransferGroupSize | The number of files per rsync transfer, per zip file. | 250 |
| FileTransferInterval | The frequency of file transfer tasks, in milliseconds. | 30,000 (30 seconds) |
| DataFileUseClearText | The data miner base64 encodes data to support both UTF8 and embedded CDATA. Set to true to use only CDATA. Note: If true, data XML may fail to load, and some occurrences of UTF8 data may cause the data file to fail signature validation. | False |

Note: Use for debugging only.

Installing and Configuring Data Miners for SA Enterprise

HP Server Automation (SA) is configured by default to retain transactions for the last seven days. If the data miner remains inactive for longer than the retention period it is possible that SA transactions will not be mined. Perform the following tasks to ensure that SA transactions are mined:

- Monitor the data miner and ensure that it remains active on the SA server
- Set the monitoring interval to less than the default SA retention period

You can install the data miner in the `/opt/opsware/dataminer` directory on the SA server.

Enable Vault Mining for an SA Multimaster Mesh

A data miner collects data continuously for both local and remote transactions in an SA multimaster mesh. Only one data miner can connect to a specific HP AI core server and SA multimaster mesh.

You must not install data miners on more than one server in the multimaster mesh. You must install the data miner on an SA server in the mesh that runs a vault daemon.

Note: If you have a BSAE installation, and want to mine data into both the HP AI and the BSAE servers, perform the following steps on both the HP AI and BSAE servers.

To enable SA mesh vault mining, perform the following steps before you install the data miner:

1. Log in to a server in the multimaster mesh using the SAS Web Client.
2. In the Navigation Panel, select **Server -> Managed Servers**.
3. In the main pane, find the row for the server where you intend to install the SA data miner. Note the value in the Facility column of that row.
4. In the Navigation Panel, select **Administration -> System Configuration**, and then click the Facility name that matches the value you noted in the previous step.
5. Check if the `/var/opt/opsware/vault/spool` directory exists. If it does not, create it.
6. Set the `cmdbsharedirectory` parameter to `/var/opt/opsware/vault/spool`.
7. Set the `cmdbbufferflushsize` parameter to 15360.
8. Set the `cmdbbufferflushtimeout` parameter to 2000.
9. Set the `cmdbmaxfileage` parameter to 7.
10. Click **Save**.
11. Type the following command to restart the vault daemon on the server where the data miner is installed:

```
- /etc/init.d/opsware-sas restart vaultdaemon
```

Install the Data Miner on an SA Server

Prerequisites

A prerequisite for SA multimaster mesh is that the data miner must be installed on the system where the vault daemon is running. In addition, certain command center (OCC) Client jar files (available with the command center component of SA) and the `vault.jar` file must be present on the data source system where the data miner is to be installed. If the command center component is not present on the system, you must copy the OCC Client jar files to the data source system from a system where the command center component is installed.

To add the required OCC client jar files, perform the following steps before you install the data miner:

1. Log on to the SA system where the vault daemon is running as root.
2. Ensure that the `vault.jar` file is present in the `/opt/opsware/vault/bin` directory.

If the `vault.jar` file is not present in `/opt/opsware/vault/bin` directory, type the following commands to manually copy the file from a system where the Model Repository Multimaster Component is installed to the system where you want to install the data miner:

- a. `mkdir -p /opt/opsware/vault/bin`
- b. `cd /opt/opsware/vault/bin`
- c. `scp <SA_Model_Repository_Multimaster_Component>:/opt/opsware/vault/bin/vault.jar .`

In this instance, `<SA_Model_Repository_Multimaster_Component>` is the fully qualified domain name of the system where the Model Repository Multimaster Component is installed.

3. Type the following commands to copy the OCC Client jar files to the SA system from the system where the Command Center component is installed:

- a. `mkdir -p /opt/opsware/occ/occ/lib`
- b. `cd /opt/opsware/occ/occ/lib`
- c. `scp <SA_Command_Center>:/opt/opsware/occ/occ/lib/mail.jar .`
- d. `mkdir -p /opt/opsware/occclient`
- e. `cd /opt/opsware/occclient`
- f. `scp <SA_Command_Center>:/opt/opsware/occclient/wlclient.jar .`
- g. `scp <SA_Command_Center>:/opt/opsware/occclient/jsch-latest.jar .`
- h. `scp <SA_Command_Center>:/opt/opsware/occclient/json.jar .`
- i. `scp <SA_Command_Center>:/opt/opsware/occclient/opsware_rmi.jar .`
- j. `scp <SA_Command_Center>:/opt/opsware/occclient/spoke_client.jar .`
- k. `scp <SA_Command_Center>:/opt/opsware/occclient/twistclient.jar .`
- l. `scp <SA_Command_Center>:/opt/opsware/occclient/cfl.jar .`

In this instance, `<SA_Command_Center>` is the fully qualified domain name of the system where the SA command center component is installed.

Installation Procedure

To copy the data miner files to the SA server and to install the data miner on the SA server, perform the following steps:

Note: If you have a BSAE installation, and want to mine data into both the HP AI and the BSAE servers, you must use a different directory for the HP AI and the BSAE data miner.

1. Log on to the SA server.
2. Type the following commands to copy the `dataminer.tar` file from `/var/opt/HP/CBI/client` on the HP AI core server to the `/opt/opsware/dataminer` directory on the SA server:

- a. `mkdir -p /opt/opsware/dataminer`
- b. `cd /opt/opsware/dataminer`
- c. `scp <yourAIServer>:/var/opt/HP/CBI/dataminer/client/dataminer.tar .`

3. Extract the contents of the `dataminer.tar` file:

```
tar -xvf dataminer.tar
```

4. (Optional, for SUSE 10 platforms only) Type the following commands as root to use native `rsync` instead of the `rsync` that is bundled with the data miner installation:

```
/opt/opsware/dataminer/dataminer.sh stop
```

```
cd /opt/opsware/dataminer/client/linux64
```

```
mv rsync /tmp # Take backup of rsync file to any other directory on the local file system
```

```
ln -s `which rsync` rsync
```

```
/opt/opsware/dataminer/dataminer.sh start
```

5. Type the following command to run the data miner setup:

```
./dmsetup.sh
```

Note: Skip this step if the Command Center component is already installed on this system.

The following prompt appears:

```
Please enter the registration token provided after this data miner was
configured on the AI server: []
```

6. Enter the registration token that was generated on the HP AI web administration user interface. The following prompt appears:

```
Updating token in dataminer.conf
```

```
Would you like to have this dataminer automatically start up when the system
reboots? y/n:
```

7. Type **y**, and then press **Enter**. The following prompt appears:

```
Dataminer is now configured for startup:
```

You can also use command-line parameters with `dmsetup.sh` to run non-interactively, as described in "[Run dmsetup.sh Using Command-Line Parameters](#)".

8. Type the following command to start the data miner:

```
./dataminer.sh start
```

9. To monitor the data miner progress, enter the following command to view the `dataminer.log` file:

```
tail -f /opt/opsware/dataminer/logs/dataminer.log
```

Remining starts within the default time interval of 30 seconds.

Run dmsetup.sh Using Command-Line Parameters

You can enter optional parameters when you launch `dmsetup.sh`. For example, entering the `dmsetup.sh --help` command on a server where the data miner is installed displays the available parameters and the definitions of those parameters. The following table displays the available parameters and their definitions.

dmsetup.sh Parameters

| Parameter | Use |
|----------------------------|--|
| <code>--token Token</code> | Configures the data miner to use the token <i>Token</i> . |
| <code>--autostart</code> | Sets the data miner to start at system boot. |
| <code>--noautostart</code> | Sets the data miner to not start automatically at system boot. |
| <code>--unregister</code> | Removes the specified data miner from the list of data miners running on the server. |

dmsetup.sh Parameters, continued

| Parameter | Use |
|------------|---|
| --register | Adds the specified data miner to the list of data miners running on the server. |
| --help | Displays the parameters usable with dmsetup.sh and their definitions. |

List Data Miners

To list the data miners on a server, perform the following steps:

1. Log on to the server on which the data miner is running, and then open a terminal window.
2. Type the following commands:

```
/etc/init.d/cbi-dataminer-1 list  
  
cd /opt/opsware/dataminer  
  
./dataminer.sh list
```

The following is an example of the output from the `list` option:

```
The following DataMiners are registered on this machine:  
DataMiner #1 token:3M2C2 location /opt/opsware/dataminer type:SAS  
DataMiner #2 token:XXX123 location /opt/opsware/dataminerx type:Not yet  
retrieved from AI Core
```

Unregister a Data Miner

To remove the start up information for a data miner from the list of data miners running on a server, perform the following steps:

1. Perform the steps in "[List Data Miners](#)"
2. Note the token value displayed for the data miner you want to remove.
3. Stop the data miner before unregistering it from SA:

```
./dataminer.sh stop
```

4. Change to the directory where the data miner is installed:

```
cd /opt/opsware/dataminer
```

5. Type the following command to unregister the data miner:

```
./dmsetup.sh --unregister --token TOKEN
```

Unregistering a data miner comments out the entry for that data miner in the `dataminers.conf` file. In this instance, `TOKEN` is the token value of the data miner you noted in Step 2.

Read the `dataminers.conf` File

When you run the `dmsetup.sh` script, it creates or updates the file `/etc/opt/opsware/omdb/dataminers.conf`. This file includes information about all data miners installed on that server. If the `dataminers.conf` file exists when you install a new data miner, `dmsetup.sh` updates the file with the new information, and adds 1 to the `ConfiguredDataMiners` value. When uninstalling a data miner, `dmsetup.sh` comments out the specified data miner entry in `dataminers.conf`, and then decreases the `ConfiguredDataMiners` value by 1.

Start a Data Miner from the Command Line

To start a data miner from the command line, perform the following steps:

1. Log on to the server where the data miner is installed.
2. Change to the directory where the data miner is installed.
3. Type the following command to start the data miner:

```
./dataminer.sh start
```

4. Tail the `dataminer.log` file to observe the progress:

```
tail -f /opt/opsware/dataminer/logs/dataminer.log
```

Output similar to the following is displayed:

```
INFO - - - - - "Configuration Path = /opt/opsware/dataminer"  
INFO - - - - - "Using configuration file  
/opt/opsware/dataminer/dataminer.conf"  
INFO - - - - - "Initializing..."  
INFO - - - - - "Running on Linux"  
INFO - - - - - "Cached Configuration file has been updated, reloading"  
INFO - - - - - "Boot certificate not found Attempt to import"  
INFO - - - - - "Boot certificate successfully imported"  
INFO - - - - - "DataMiner successfully registered"
```

5. When you are satisfied that the data miner is correctly configured and collecting data, you can stop the `tail` command.

Stop a Data Miner from the Command Line

To stop a data miner from the command line, perform the following steps:

1. Log on to the server that the data miner is running on, and then open a terminal window.
2. Perform the steps in the "[List Data Miners](#)" section to list the data miners on the server.
3. Identify the data miner you want to stop by reading the list output, and note the number of that data miner.
4. Type the following command where *number* is the number you identified in the list output:

```
/etc/init.d/opsware-dataminer-number stop
```

5. Repeat the previous step for all data miner numbers shown in the list output to stop all of the data miners on a server.

Remine Data

Data mining in HP AI is an automatic process. HP AI uses ETLs to automatically remine data when its definition is changed and marked with a new number. Data is also remined when a new ETL is added to the system. If mined data is accidentally removed from the database table, or existing data is not mined due to an error, you can manually trigger an initial mine for a specific ETL or ETLs.

Note: Manually triggering a remine on a specific ETL or on all ETLs should be done only under the supervision of HP Support.

Check Data Extraction States

To check the data extraction state of a data source, perform the following steps:

1. Log in to the HP AI web administration user interface:

```
https://ai-core:4443/ai-admin
```

2. Select the **Data Extractions** tab.
3. Select a data source in the left pane. The data extraction state is displayed in the right pane:



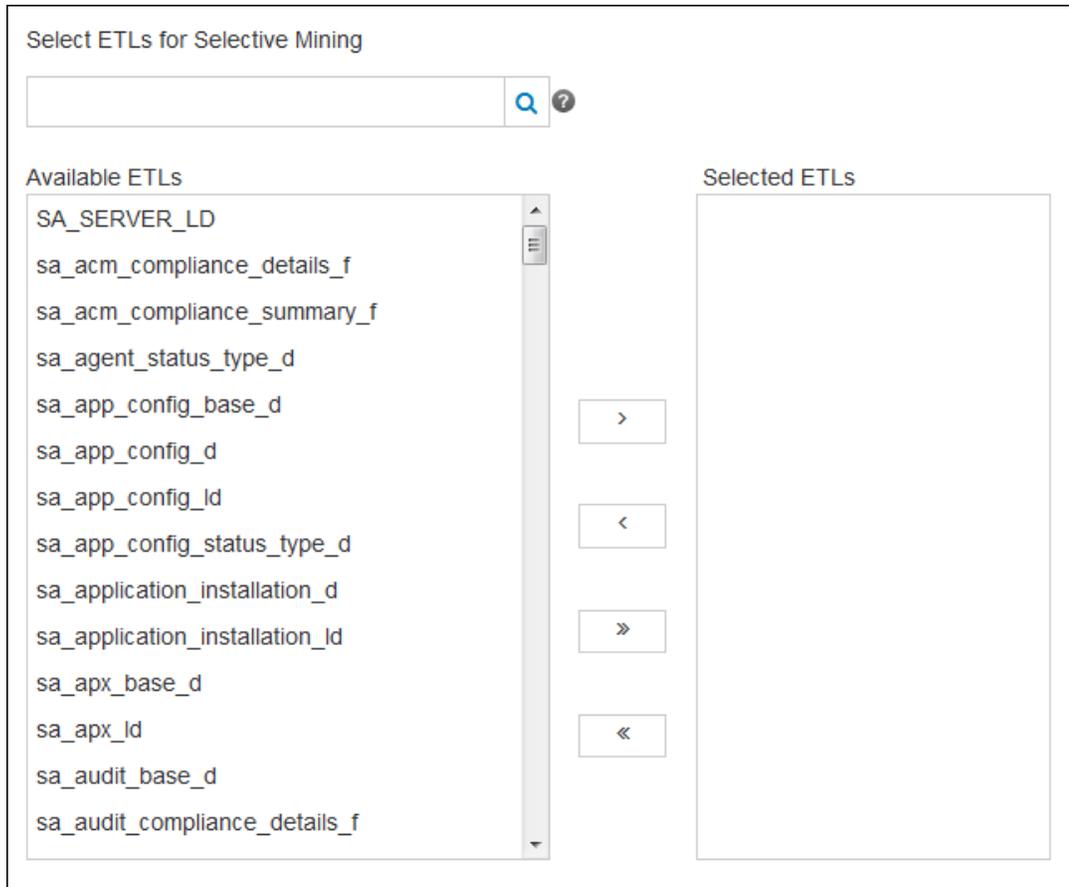
Start an ETL-Specific Remine

To start an ETL-specific data remine from the HP AI web administration user interface, perform the following steps:

1. Log in to the HP AI web administration user interface:

`https://ai-core:4443/ai-admin`

2. Select the **Data Extractions** tab.
3. Click the name of the data source to expand the list of available ETLs in the left pane.
4. Click the **ETL Specific Mining** tab in the right pane.



5. Enter a search term in the **Select ETLs for Selective Mining** box to narrow the list of available ETLs.
6. Select one or more ETLs in the **Available ETLs** list.
7. Use the right arrow, or drag and drop, to move the selected ETLs to the **Selected ETLs** pane.
8. Click **Save** to start the remine.

Managing Users and Groups

When you first install HP AI, default users and groups are created automatically. You can create additional groups of users that you want to be able to perform specific actions and access specific data using group-based authentication (often called "role-based authentication.")

Group names should be unique among groups. System groups created during installation cannot be deleted. You can modify a system group, but you cannot modify a system group name.

Users and groups created from the HP AI web administration user interface are automatically synchronized to the Business Intelligence CMC. The default scheduled synchronization interval is one hour.

Use the **Users and Groups** tab of the HP AI web administration user interface to configure and manage users and user groups.

HP AI provides the following types of users and groups:

- System users and groups, such as the administrator user and group created during installation
- Users created using the HP AI web administration user interface
- Users imported into HP AI from external systems such as HP Server Automation

The following default users are automatically created when you install HP AI:

- admin
- content
- dataminer

The following default groups are automatically created when you install HP AI

- Administrators
- BOAdministrators
- BOUsers
- contentloader
- dataminer

The Admin User

The admin user in HP AI is the first user created during installation and is given automatic group membership to the default user groups. The admin user can create, modify, and delete users and groups. The admin user is also able to configure HP AI components, including data miners, data

sources, and the data warehouse from the HP AI web admin user interface. The admin user account cannot be deleted.

Non-Admin Users

Non-admin users in HP AI are able to view, edit, create, and run reports.

External Authentication Users

Users and groups that are imported into HP AI are read only and cannot be deleted.

Users that are created from the HP AI web administration user interface and are assigned to a default group such as Administrators, BOAdministrators, or BOUsers are updated into the Central Management Console (CMC) after approximately one hour.

Groups that are created from the HP AI Web administration user interface and users assigned to these groups are updated into CMC after the scheduled time of 1 hour.

To synchronize a user immediately into CMC, you must update LDAP. Log in to CMC and select **Authentication -> LDAP ->Update**.

To synchronize a group immediately into CMC, you must log in to CMC and select **Authentication-> LDAP -> Add cn=<groupname>,ou=groups,dc=cbi,dc=com ->Update**.

Mapped LDAP Member Groups

Add LDAP group (by cn or dn):

- seclDAP:cn=bousers, ou=groups, dc=cbi, dc=com
- seclDAP:cn=dataminer, ou=groups, dc=cbi, dc=com
- seclDAP:cn=contentloader, ou=groups, dc=cbi, dc=com
- seclDAP:cn=newgroup, ou=groups, dc=cbi, dc=com

LDAP alias options

Schedule user's LDAP alias updates

Schedule regular updates of LDAP aliases for users.
Note that this will also update the groups.

Last Scheduled Update: There is no record of a previous update attempt.
Next Scheduled Update: User alias update (including roles) has not been scheduled.

New Alias Options

- Assign each added LDAP alias to an account with the same name
- Create a new account for every added LDAP alias

Alias Update Options

- Create new aliases when the Alias Update occurs
- Create new aliases only when the user logs on

New User Options

- New users are created as named users
- New users are created as concurrent users

Attribute Binding Options

- Import Full Name, Email Address and other attributes
- Set priority of LDAP attribute binding relative to other attribute bindings

Schedule User's LDAP Group Updates

Schedule regular updates of LDAP groups for users.

Last Scheduled Update: There is no record of a previous update attempt.
Next Scheduled Update: Roles update has not been scheduled.

On-Demand LDAP Update

- Update LDAP user groups now
- Update LDAP user groups and aliases now
- Do not update LDAP user groups and aliases now

Enable Kerberos Authentication

For more information on CMC, see the "Central Management Console" section of the *Business Intelligence Platform Administrator Guide*.

Default Groups

When you install HP AI and log in for the first time, three default user groups are created automatically: the Administrators group, the BOUsers group and the BOAdministrators group. The contentloader and dataminer groups are also created.

Users in the Administrators group have full access to all of the functions in the HP AI web administration user interface. Members of the BOUsers group are able to create and view reports. Users in the BOAdministrators group are able to manage SAP BusinessObjects.

Create a User Account

Create user accounts and add them to the BOUsers group for anyone you want to be able to view, edit, create, and run reports.

User names should be unique among users. System users created during installation can not be deleted. You can modify a system user, but you cannot modify a system user name.

To create a user account, perform the following steps:

1. Log in to the HP AI web administration user interface.

`https://ai-core:4443/ai-admin`

2. Select the **Users and Groups** tab.
3. Click the **Create User** (🔑) icon. The Create User window opens.

Create User ✕

*All fields are Mandatory

User Name **Groups:**

Password

Confirm Password

First Name

Family Name

Email

4. In the Create User window, enter the following user information:
 - **User Name:** The user name must be at least four characters long and cannot contain special characters.
 - **Password:** Enter and confirm the user password. The password can contain regular and special characters.
 - **First Name:** The first name must be at least two characters long.
 - **Family Name:** The family name must be at least two characters long.
 - **Email:** Email address of the user.
5. Click **Create**.

Change the Login Password of a User

To change the login password of a user, perform the following steps:

1. Log in to the HP AI web administration user interface.
`https://ai-core:4443/ai-admin`
2. Select the **Users and Groups** tab.
3. Select the **Users** tab.
4. Select a user.
5. Click the **Edit** (✎) icon. The Edit User window opens.
6. Enter and confirm the new user password.
7. Click **Update**.

Modify Group Membership

To modify a user's group membership, perform the following steps:

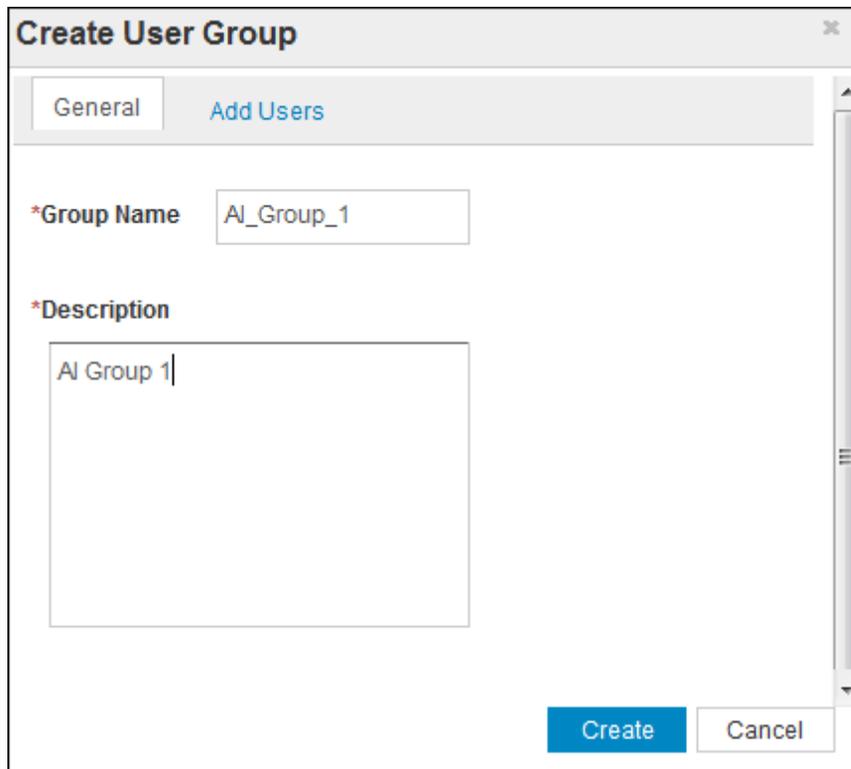
1. Log in to the HP AI web administration user interface.
`https://ai-core:4443/ai-admin`
2. Select the **Users and Groups** tab.
3. Select the **Groups** tab.
4. Select a group.

5. Click the **Edit** (✎) icon. The Edit User Group window opens.
6. Select the **Add Users** tab.
7. Select the user in the Available Users list, and click the > icon to add the user to the Selected Users list.
8. Click **Update**.
9. Repeat Steps 4 through 8 to add the user to other groups.

Create a Group and Add Users

To create a new user group and add users to that group, perform the following steps:

1. Log in to the HP AI web administration user interface.
`https://ai-core:4443/ai-admin`
2. Select the **Users and Groups** tab.
3. Select the **Groups** tab.
4. Click the **Create Group** (👤) icon. The Create User Group window opens.



The screenshot shows a 'Create User Group' dialog box. The title bar reads 'Create User Group' with a close button (X) on the right. Below the title bar are two tabs: 'General' (selected) and 'Add Users'. The 'General' tab contains the following fields:

- *Group Name: AI_Group_1
- *Description: AI Group 1

At the bottom right of the dialog, there are two buttons: 'Create' (highlighted in blue) and 'Cancel'.

5. Select the **General** tab.
6. Enter a name and description for the group. The Group Name cannot contain blank space characters.
7. Select the **Add Users** tab.
8. Select the user or users in the Available Users list, and then click the > icon to add the user to the Selected Users list.
9. Click **Create**.

The authentication settings for the newly created group are updated in the CMC in one hour by default. To update the settings immediately, log in to the CMC. See "[Configuring SAP BusinessObjects](#)" for more information.

Enable a Data Source as an Authentication Source

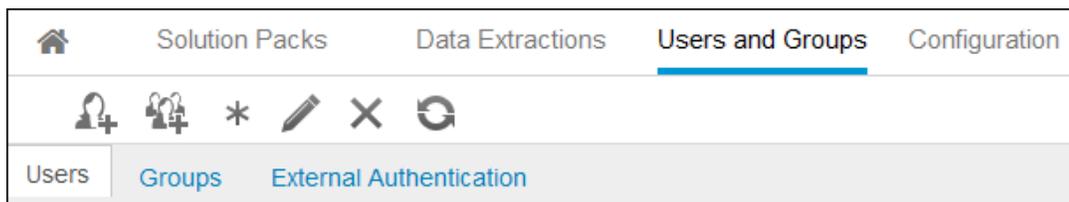
You can enable a data source, such as SA, as an authentication source. This allows users of that data source to log in to the CMC and the BI launch pad to run reports without creating an HP AI user.

Perform the following steps to enable a data source as an authentication source for HP AI:

1. Log in to the HP AI web administration user interface:

`https://ai-core:4443/ai-admin`

2. Select the **Users and Groups** tab.
3. Select the **External Authentication** tab.



4. Click the Create (*) icon. The Create Authentication Source window opens.

Create Authentication Source ✕

*All fields are Mandatory

| | |
|---------------------------|---|
| Name | <input type="text" value="SA90"/> |
| Source Type | HP Server Automation |
| Source ? | <input type="text" value="16.166.49.90"/> |
| Port | <input type="text" value="443"/> |
| Super User ? | <input type="text" value="admin"/> |
| Super User Password | <input type="password" value="••••••••"/> |
| Confirm Password | <input type="password" value="••••••••"/> |

5. Enter the following information:

- **Name:** A name for the authentication source. Do not include any special characters in the authentication source name.
- **Source Type:** Select a source type from the pull down menu.
- **Port:** Port number for the data source. The default port is 443.
- **Authentication IP:** IP address of the data source.
- **Super User:** Enter the username of the data source super user.
- **Super User Password:** The password for the data source super user.
- **Confirm Password:** The password for the data source super user.

6. Click **Create**.

Select the edit (✎) icon to edit or the delete (✕) icon to delete an external authentication source.

Note: After you enable the data source, the data source users synchronize to HP AI and to BusinessObjects after the scheduled default time of one hour.

When you log in to BI or CMC using an external user such as an SA data source user, the user name should be appended with an '@' and followed by the data source name provided in the "Create Authentication Source" window. For example user1@My-SA. You must also select LDAP as the authentication type.

Reset the HP AI Administrator Password

User and administrator passwords for the HP AI core server, the HP Vertica database, and the data miner are created during HP AI installation. After installation, you can reset these passwords.

To reset the HP AI administrator password from the HP AI web administration user interface, perform the following steps:

1. Log in to the HP AI web administration user interface:

`https://ai-core:4443/ai-admin/`

2. Click the **Users and Groups** tab.
3. Click the **Users** tab in the left pane.
4. Select the admin user.
5. Click the Edit () icon. The **Edit User** window opens.

Edit User admin ✕

*All fields are Mandatory

User Name admin **Groups:**

Password **Administrators**

Confirm Password **BOUsers**

First Name ai **BOAdministrators**

Family Name administrator

Email

6. Enter and confirm the new password. You can also change the admin user first name, family name and contact email.

The password must contain at least one character and can include letters, numbers, and any of the following special characters:

~!@#%^&*-_+=

The password cannot contain any other special characters or blank spaces.

7. Click **Update**.

Reset the HP AI Administrator Password Using the Password Reset Utility

The HP AI administrator password is needed to access the HP AI web administration user interface. If you forget the HP AI administrator password or need to change it, you can use the `ai-password-resetter-utility-1.0-bundle.zip` file. This file is installed as part of the HP AI core server installation and is available in the `/var/opt/HP/CBI/tools` directory.

To change the HP AI administrator password using the password reset utility, perform the following steps:

1. Change to the tools directory:

```
cd /var/opt/HP/CBI/tools
```

2. Create a directory for the password reset utility, for example:

```
mkdir ai-password-resetter-utility
```

3. Move the password reset utility .zip file to the password reset utility directory, for example:

```
mv ai-password-resetter-utility-1.0.0-SNAPSHOT-bundle.zip ai-password-resetter-utility/
```

4. Change to the password reset directory:

```
cd ai-password-resetter-utility
```

5. Unzip the password reset utility .zip file:

```
unzip ai-password-resetter-utility-1.0.0-SNAPSHOT-bundle.zip
```

6. Type the following command to run the password reset utility:

```
./ai-admin-password-resetter.sh -r
```

7. Enter a new password when prompted by the utility.

To verify the new password, log in to the HP AI web administration user interface with the new password.

Configuring SAP BusinessObjects

Use the Central Management Console (CMC) to configure SAP BusinessObjects parameters and perform administrative tasks (including user, content, and server management) and to configure security settings.

All users can log on to the CMC to change their own preference settings. Only members of the Administrators group can change management settings, unless a user is explicitly granted rights to do so. Roles can be assigned in the CMC to grant user privileges to perform minor administrative tasks, such as managing users in your group and managing reports in folders that belong to your team.

You can access the CMC from the HP AI web administration user interface. You can also access the BO CMC directly from the following URL:

<https://ai-core:4443/cbi-user/BOE/CMC>

Set the Business Intelligence Authentication Method

To set the BI authentication method, perform the following steps:

1. Log in to the HP AI web administration user interface.

<https://ai-core:4443/ai-admin>

2. Click **Open BO Central Management Console**. The CMC log in page appears.

Log On to the Central Management Console | [Help](#)

Enter your user information and click Log On.
(If you are unsure of your account information, contact your system administrator.)

System:

User Name:

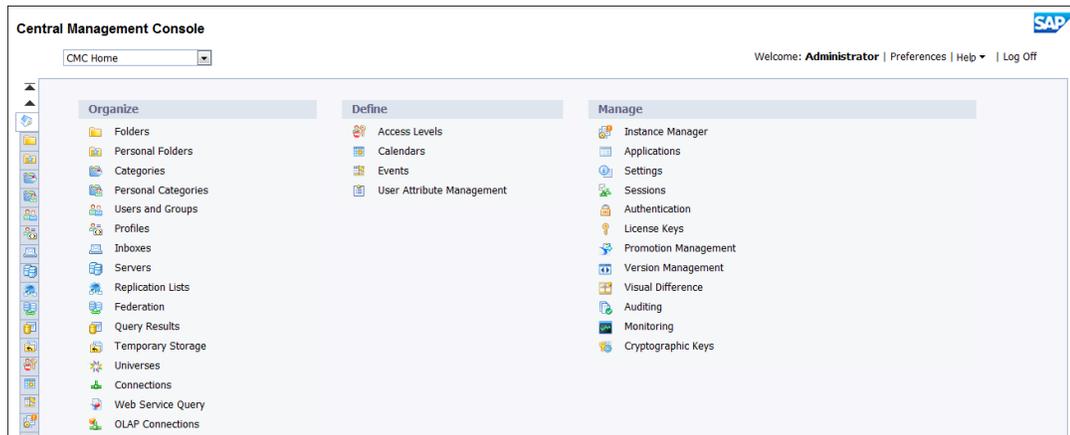
Password:

Authentication:

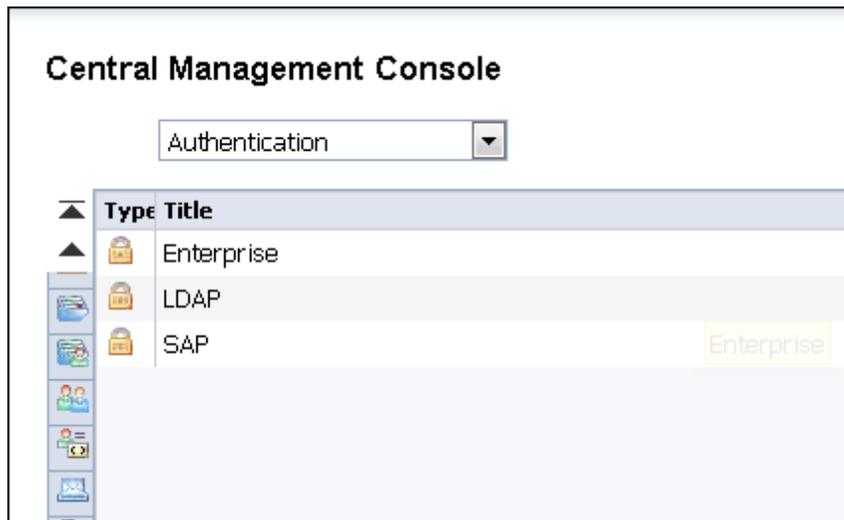
3. Enter the user name and password that you created during the HP AI installation, and then click **Log On**.

Note: You can log in to the BI launch pad with your SA user name and password if SA has been enabled as an authentication source; for example, `username@ai-authenticator-name`. Select LDAP as the authentication type if you are logging in as an SA user.

4. Select **LDAP** as the authentication type.
5. Click **Log On**. The CMC home page opens.



6. Under Manage, click **Authentication**. The CMC authentication page opens.



7. Double-click on **LDAP**. The LDAP settings window opens.

LDAP

LDAP Authentication is enabled

Synchronize Data Source Credentials with Log On

Enable and update user's Data Source Credentials at logon time

LDAP Server Configuration Summary

To change a setting, click on the value to start the LDAP Configuration Wizard.

| | |
|--|---------------------|
| LDAP Hosts: | 127.0.0.1:10389 |
| LDAP Server Type: | Custom |
| Base LDAP Distinguished Name: | dc=cbi,dc=com |
| LDAP Server Administration Distinguished Name: | uid=admin,ou=system |
| LDAP Referral Distinguished Name: | " " |
| Maximum Referral Hops: | 0 |
| SSL Type: | Basic (no SSL) |
| Single Sign-On Type: | None |

Mapped LDAP Member Groups

Add LDAP group (by cn or dn):

| | |
|--|---------------------------------------|
| secLDAP:cn=administrators, ou=groups, dc=cbi, dc=com | <input type="button" value="Delete"/> |
| secLDAP:cn=boadministrators, ou=groups, dc=cbi, dc=com | |
| secLDAP:cn=bousers, ou=groups, dc=cbi, dc=com | |
| secLDAP:cn=contentloader, ou=groups, dc=cbi, dc=com | |

8. Verify that the box next to **LDAP Authentication is enabled** is checked. Verify that the LDAP hosts port is 10389 and that the Base LDAP Distinguished Name is dc=cbi, dc=com. Note that these values are set during HP AI installation.

Schedule Users' LDAP Group Updates

By default, BI updates user authentication once an hour. To change the default schedule, perform the following steps:

1. Log in to the CMC,
2. Under Manage, click **Authentication**. The CMC authentication page opens.
3. Double-click on **LDAP**. The LDAP settings window opens.

4. In the LDAP settings window, click **Schedule**.



The Schedule: Update Authentication Group Membership window opens.

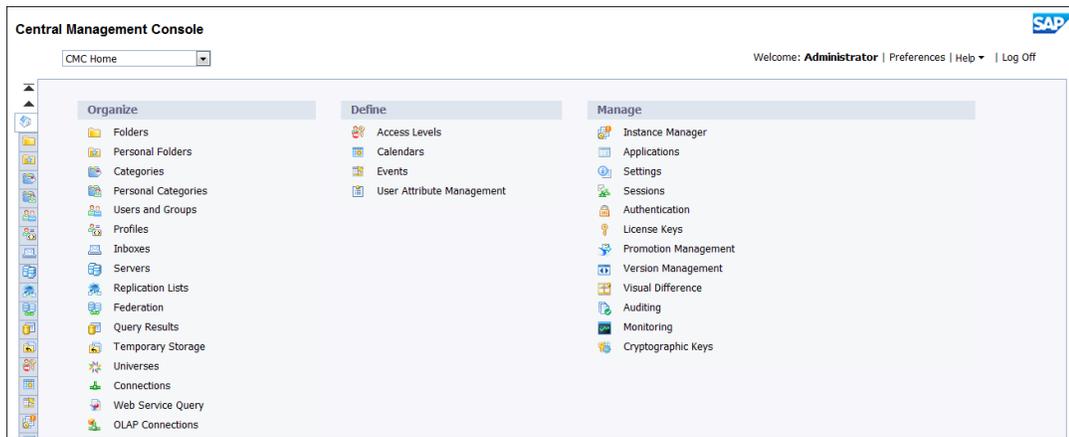


5. Select a value in the **Run object** drop-down menu or select Start and End date and times to schedule an update at a specific time.
6. Click **Schedule**.

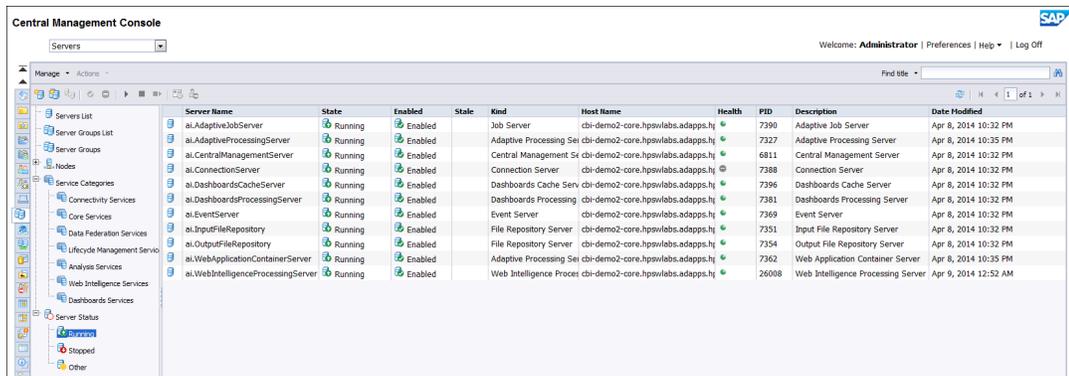
Check Server Status

To check the BI server status, perform the following tasks:

1. Log on to the CMC.



2. In the Organize column, click **Servers**. The CMC Servers window opens.
3. Expand the Server Status section, and click **Running**.



Configure the Adaptive Job Server

The adaptive job server is the server responsible for scheduling jobs for SAP BusinessObjects reporting. To configure the adaptive job server, perform the following steps:

1. Log on to the CMC.
2. In the left pane, click **Servers List**.
3. In the Server Name column, right-click on **ai.AdaptiveJobServer** and select **Properties**.
4. In the Properties window, click **Destination**.
5. Select the destination type (FTP Server, BI Inbox, File System, or Email).
6. Click **Save & Close** to return to the CMC Servers window.

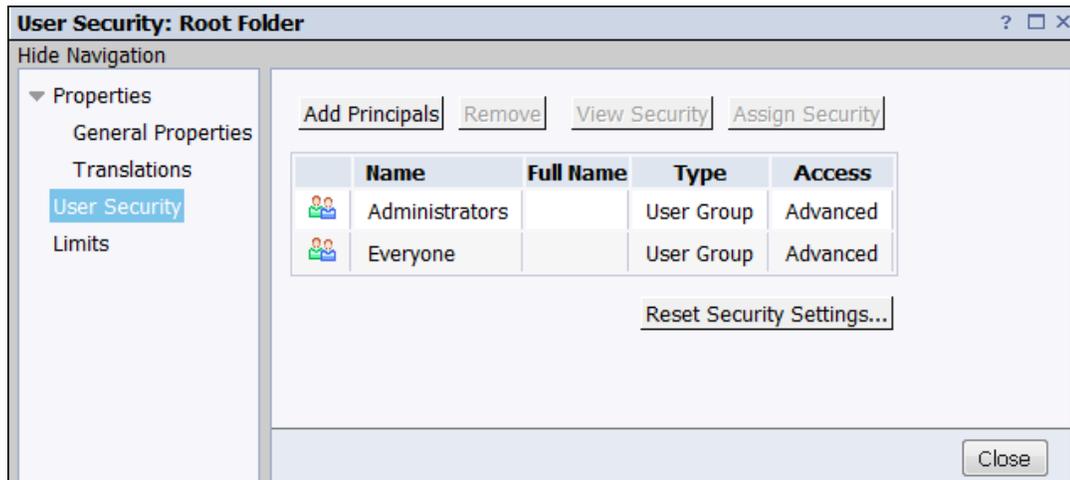
Set Security Access Levels for HP AI Users and Groups

Users and groups are created and modified in the HP AI web administration user interface.

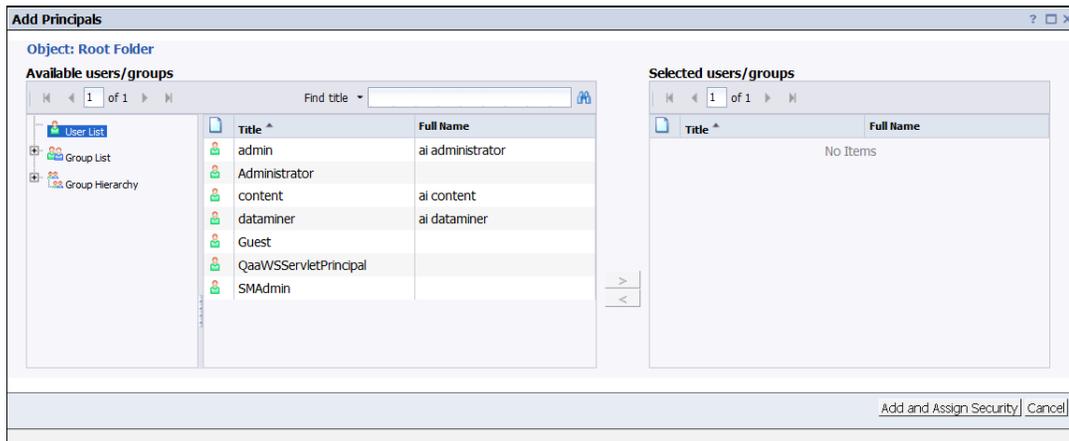
Users which are part of the BOUsers or BOAdministrators group do not have full access rights to view all BI objects in BI or the CMC launch page. In order to have access to these objects, every user or user group should be granted access level rights for each BI object.

After you add or modify a user or group in the HP AI web administration user interface, perform the following steps to set permissions for the user or group based on folder access permissions:

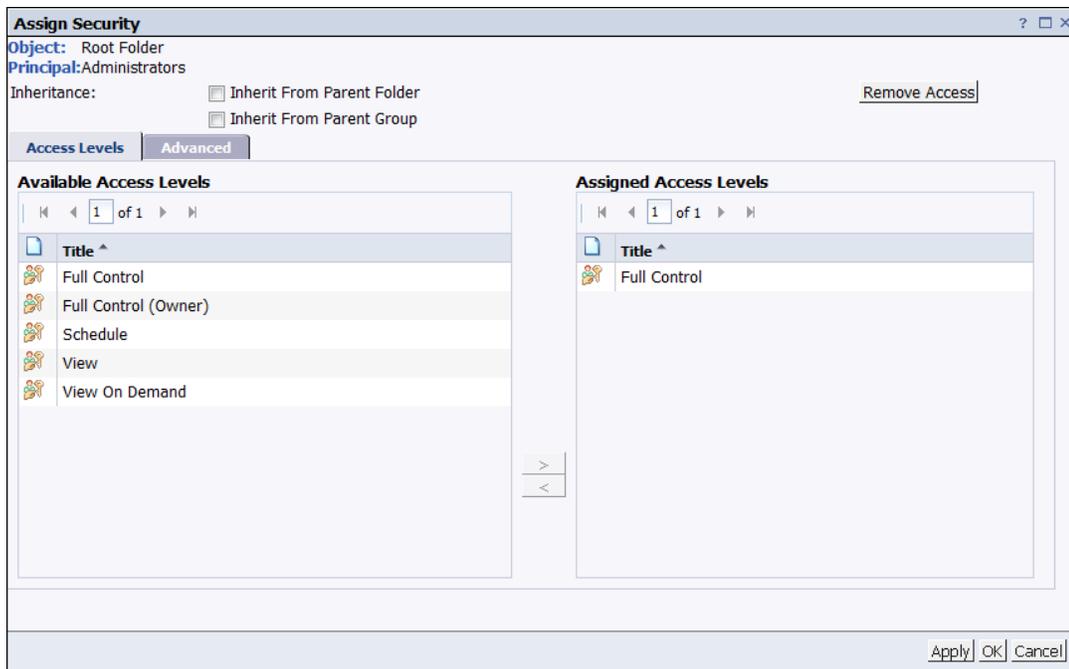
1. Log on to the CMC.
2. Under Organize, click **Folders**. The CMC Folders window opens.
3. Right-click **All Folders** and select **Properties**. The Properties: Root Folder window opens.
4. In the left pane, click **User Security**. The User Security: Root Folder window opens.



5. Click on the entry in the Access column to view the full details of a user's permissions in the Permissions Explorer: Root Folder window.
6. Close the Permissions Explorer: Root Folder window to return to the User Security: Root window.
7. Click **Add Principals**. The Add principals window opens.



8. Select any user or user group to which you want to grant access permissions and click the > icon.
9. Click **Add and Assign Security**. The Assign Security window opens.



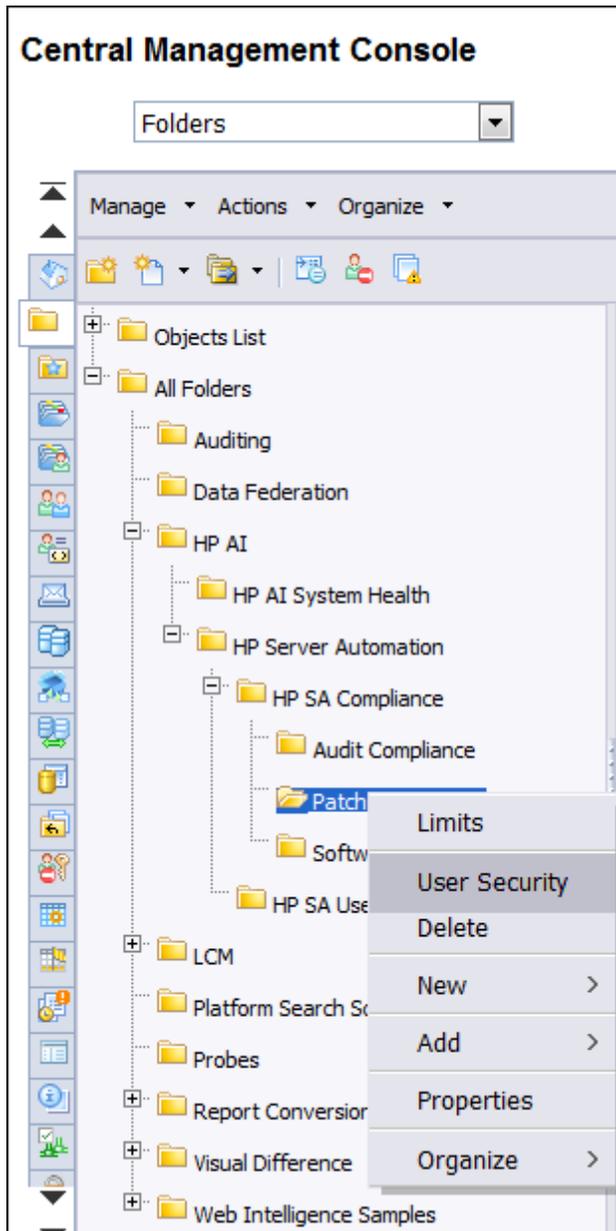
10. Select the security level in the Available Access Levels column for the selected user.
11. Click the > icon to add the level to the Assigned Access Levels column.
12. Click **Apply**.
13. Click **OK**.

Set Security Access Levels on BI Objects

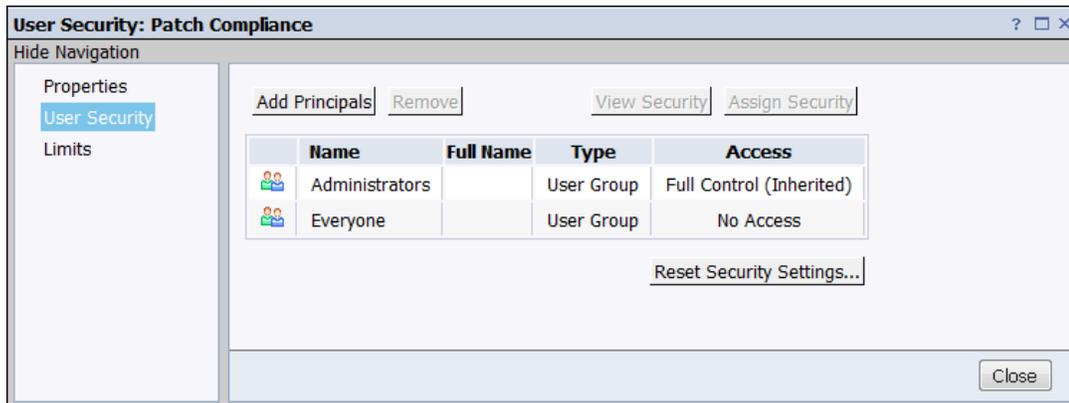
You can set security access for a user or group at the folder, Web Intelligence application, Universe, Connection, or Server level in CMC.

To set the access permissions of a folder for a user or group, perform the following steps:

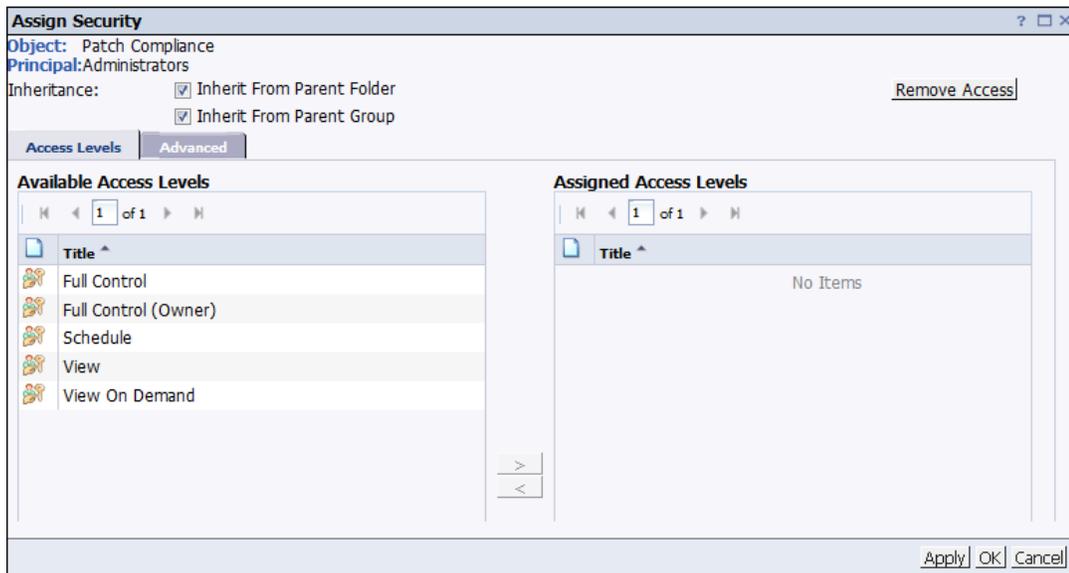
1. Log on to the CMC.
2. Select **Folders** from the pull-down menu.
3. In the left pane, right-click on a folder and select **User Security**.



The User Security window opens.



4. Select a user in the Name column and click **Assign Security** to change the user's security access level for the folder. The Assign Security window opens.



5. Select the security level in the Available Access Levels field for the selected user and
6. Click the > icon to add the level to the Assigned Access Levels box.
7. Click **Apply**.
8. Click **OK**.

Note: To run reports with non-Administrator user groups, repeat these steps to set security access levels for other BI objects such as Servers, Web Intelligence, Connections, and Universes.

For more information about setting access levels for users, groups, and folders, see the "Setting Rights" section in the [SAP BusinessObjects Business Intelligence Platform Administrator Guide](#).

Recommended BO Settings for Large Environments

If you have a large environment with 45000 or more servers, HP recommends resetting the default memory upper threshold, memory maximum threshold, and document setting cache size settings.

To set the memory and document cache settings to the recommended values, perform the following steps:

1. Log on to the CMC.
2. In the Organize column, click **Servers**. The CMC Servers window opens.
3. Expand **Service Categories** and select **Web Intelligence Services**.
4. In the right pane, double-click on **ai.WebIntelligenceProcessingServer**. The properties window opens.
5. In the left pane, select **Properties**.
6. In the Web Intelligence Core Service section, set the following values:
 - a. Memory Upper Threshold (MB): 8000
 - b. Memory Maximum Threshold (MB): 12500
7. In the Web Intelligence Common Service section, set the Maximum Document Cache Size to 20 GB. (The default is 1 GB.)
8. Click **Save & Close**.
9. Right-click on **ai.WebIntelligenceProcessingServer** and select **Restart Server**.

For more information about working with CMC, see the [SAP BusinessObjects Business Intelligence Platform Administrator Guide](#).

We appreciate your feedback!

If you have comments about this document, you can [contact the documentation team](#) by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on Administrator Guide (Automation Insight 1.0)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to ai-doc-feedback@hp.com.

