HP IT Business Analytics

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Linux ® operating system

Administrator Guide

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System Administrator

This section provides details about the System Administrator tasks in BA.

Logon

You access the Dashboard, STUDIO, EXPLORER, and ADMIN tabs from the main logon page.

Note: Only users with the required permissions can view specific tabs.

When you have completed your session, it is recommended that you log out to prevent unauthorized entry.

You access the IT Business Analytics application using a supported Web browser, from any computer with a network connection (intranet or Internet) to the servers. It is recommended to restore your browser settings to default.

The level of access granted to a user depends on the user's permissions. For details, see "User Management" on page 46.

You can initially access the ADMIN tab through the IT Business Analytics logon page, using your administrator user name and password, created during installation.

Tasks

This section includes:

Access the logon page

To access the logon page, enter:

- **https://<Fully Qualified Domain Name>:<port>/ba**. If you are using a non-default port you must update it in the URL. For details, see "Apache Web Server" on page 127.

The ADMIN tab is configured by default with Lightweight Single Sign-On (LW-SSO). LW-SSO enables you to log on and automatically have access to LW HP applications, without needing to log on to those applications. For details, see "LW-SSO " on page 129.

Change the default session timeout of the automatic Log out

Business Analytics automatically performs a security log out of the BA session. When the application is idle for a set amount of time the session times out, an automatic log out occurs, and the logon screen is displayed within the BA application. The timeout is set by default to 30 minutes and can be configured using:

$HPBA_Home/glassfish/glassfish/domains/BTOA/applications/fndwar/WEB-INF/web.xml

```
<session-config>
  <session-timeout>
    30
  </session-timeout>
</session-config>
```

Note: The automatic log out works in conjunction with the Business Analytics ping interval, configured in "Website" on page 116. You must select the **Enable Keepalive Session** check box to enable the automatic session timeout. An automatic log out occurs only after the session timeout has been attained and only on a ping request. If the ping mechanism has been turned off, then no automatic log out occurs. If a user-initiated request comes in between the time of the timeout and the ping, then the session idle time will be reset and the timer will start over again.

Configure the default lockout on log on

BA logon allows you, by default, 5 consecutive logon attempts before a 15 minute lockout. You can configure the lockout parameters using the following properties file.

To configure the lockout parameters:

1. Access the following file: **$HPBA_ Home/glassfish/glassfish/domains/BTOA/config/conf/bsf.properties.**
2. Search for the following parameters:
   - **accountLockoutMaxAttempts=5**
   - **accountLockoutLockoutPeriod=15**
3. Change the default logon attempts and lockout period. **0** means that there is no lockout time configured.
4. Save and restart the Glassfish service.

Access the logon page and all tabs

1. In a Web browser, enter the **https://<Fully Qualified Domain Name>:<port>/ba** URL for the fully qualified machine where BA is installed.

2. Enter the username and concept, and click **Log On**. After a successful logon, the user name appears at the top right of the page of the application.
3. Click the ADMIN tab to navigate the admin pages. Only users with the required permissions can view the ADMIN tab.

Note: To log on for the first time, use your administrator password created during installation.

User Authentication

User authentication depends on your configuration. For details, see "Users and authentication when working with SAP BusinessObjects and LDAP or without" on page 57.

User Passwords

Passwords can be changed in the **User Details** pane of the User Management page. Click **Edit Details** to change a user's password. For details, see "User Management" on page 46.

Note: Depending on your configuration (working with or without SAP BusinessObjects and with or without LDAP), the handling of the password can be different. For details, see "Users and authentication when working with SAP BusinessObjects and LDAP or without" on page 57.

A password must contain the following:

- At least 6 characters.
- Characters in upper and lower case or numbers.
- Must be different from username.

  For example: the user name "Jhon" cannot have a "Jhon11" or "11Jhon" password.

Note:

- Logon parameters are case-sensitive.
- If a password does not follow the correct conventions then the user is still created in SAP BusinessObjects Enterprise, however the password is not valid and must be changed.

Working with Secure Sockets Layer (SSL) in a Production Environment

When you log on to the IT Business Analytics application using the **http** or **https** format in a Production environment, the following scenarios can occur:

1. **http.**
   a. When you use the **http** format to access directly the Business Analytics application, a message states that a security certificate is issued. Click the **Continue to this website** link. In the Business Analyticspage, click the Certificate Error button in the browser toolbar. In the Certificate dialog box that opens, click the **View Certificate** link. In the wizard that opens,

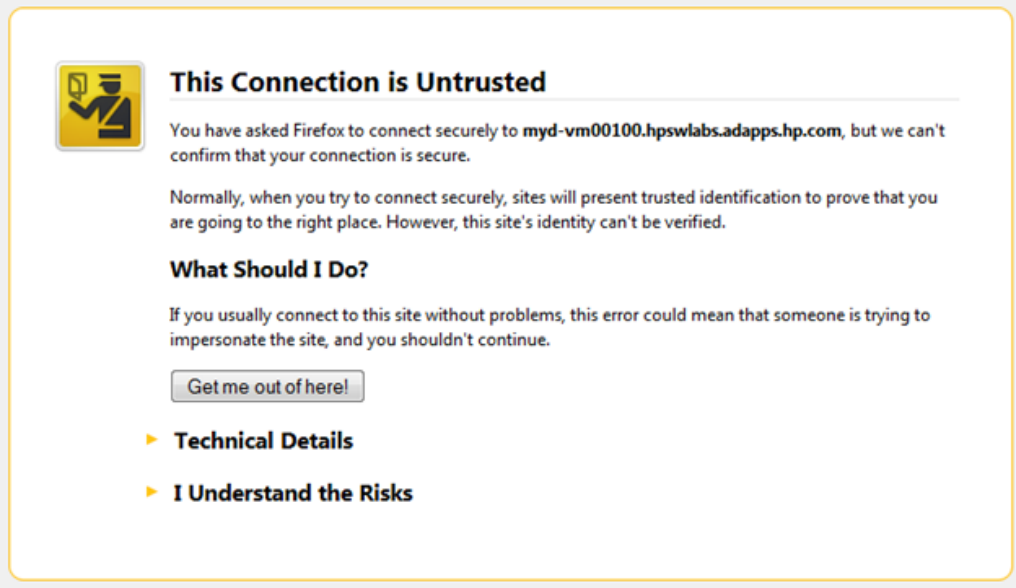
select the **Place all certificates in the following store**, select the **Trusted Root Certification Authorities** location, and click **OK**. Once you have installed the certificate, and entered your user and password, the Data Warehouse application transfers you back to the Business Analytics application.

2. **https.** When you use the **https** format:
   - **IE and Chrome.**
     i. When you use the **https** format to access the Business Analytics application, the security certificate issue is displayed. Click the security certificate. In the Certificate dialog box that opens, click the **View Certificate** link. In the wizard that opens, select the **Place all certificates in the following store**, select the **Trusted Root Certification Authorities** location, and click **OK**. Continue running the wizard. This warning message is not displayed again. The Data Warehouse application opens in SSL mode. After performing the logon operation, you can add the Business Analytics certificate in the successfully launched Business Analytics application page, not in the application page itself. When the **Java security warning** contains the correct publisher (Hewlett-Packard Company) you should accept the **Java security warning** by marking the **Always trust content from this publisher** check box in order for this popup not to be displayed again.

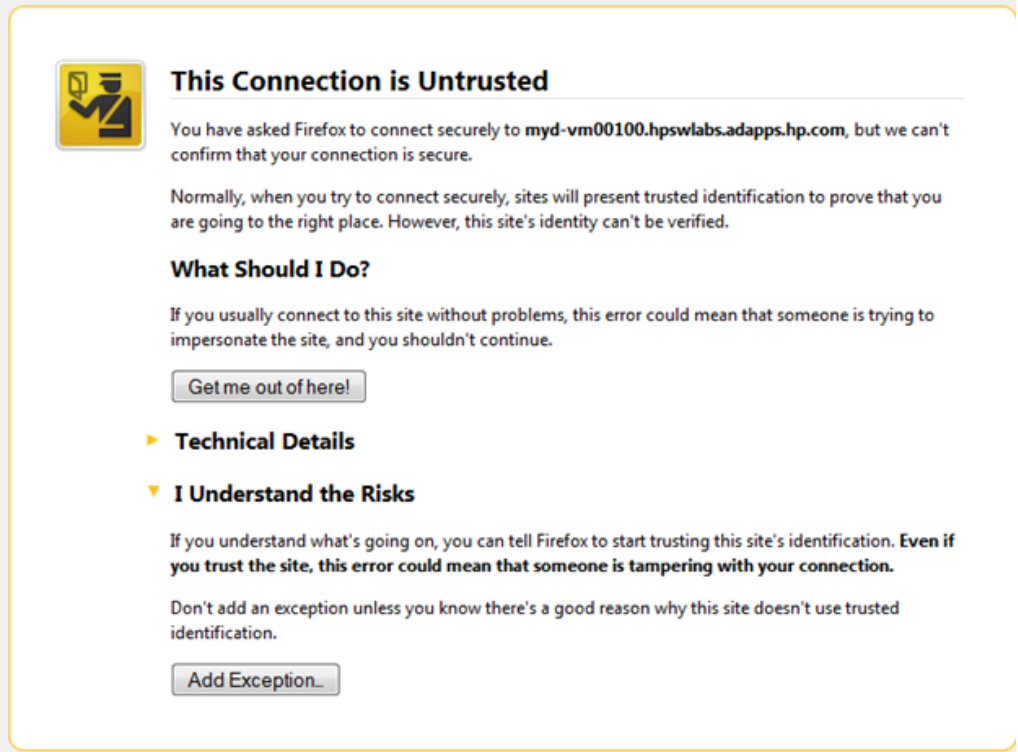
   - **Firefox.**

     When you use the **https** format to access directly the Business Analytics application, and you work with Firefox, you must perform the following procedure:

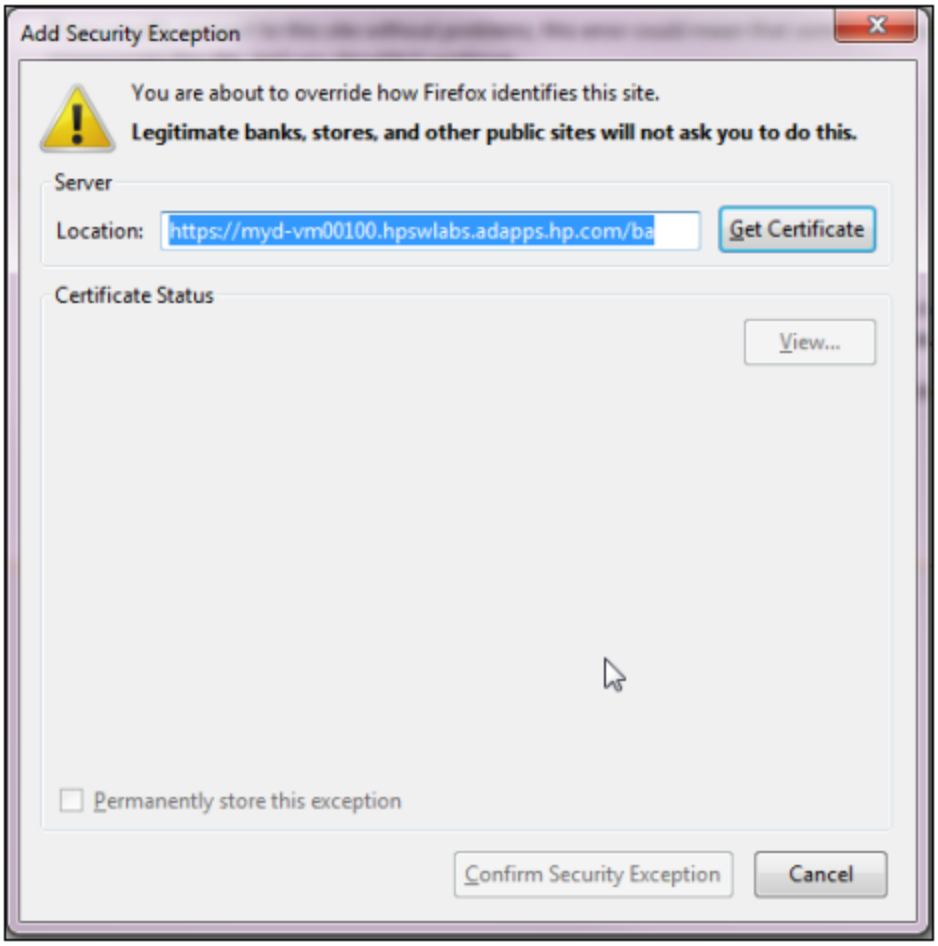
     i. Open the server using **https**. The following screen opens:



     ii. Click **I Understand the Risks.** The following page opens:



iii. Click **Add Exception**. The following screen opens:



iv. Click **Confirm Security Exception**.

Note: When you use the **https** format and you want to access SAP BusinessObjects Enterprise reports, the reports are displayed using the **http** format.

Log out

You can log out by clicking **Logout** (in the top right corner of the application). The session closes. To log on again, you must provide the user and password.

Shared Secret Key

Business Analytics functionality requires a connection to SAP BusinessObjects Enterprise through a trusted authentication. In order to configure the trusted authentication policy you must define the shared secret key.

The shared secret key, created in the post-install process, is used by the client and the CMS to create the trusted authentication password. This password is used to establish trust.

Note: To change the shared secret key you must change the key in SAP BusinessObjects Enterprise, run the run the maintenance Tool to update the BOE linkage and enter the new shared secret key. For details, see the *BA Installation Guide*.

Launch or Stop the Business Analytics Application

After you have installed Business Analytics, you can start the application. You can also stop the application.

Tasks

Launch Business Analytics

1. Log on to Linux using the BA user.
2. Go to the installation directory (<HP-BA>).
3. To start the postgres database, the MQ query, and the BA application, run the following command: **./supervisor/bin/hpba-start.sh**
4. To stop the postgres database, the MQ query, and the BA application, run the following command: **./supervisor/bin/hpba-stop.sh**
5. To list all the deployed war files, run the following command: **./bin/list-applications.sh**

Licenses

This section explains about the types of licenses, how to renew a license, and how to check if all your user licenses are valid.

To access:

Click **Help > About** in the upper right corner of the application.

Learn More | Tasks

Learn More

License Types

Two types of licenses are available:

- **Power Named User License.** This license is for every type of user with no limitation on the permissions.
- **Casual Named User/Viewer License.** This license is for users with a very limited set of permissions.

You cannot purchase a standalone **Casual Named User/Viewer License**. With the **Casual Named User/Viewer License** you must also purchase at least one **Power Named User License** (you must apply 2 License Keys).

Example

- If you want 50 Viewer users, you must purchase at least 1 **Power Named User License** (Advanced user) and 50 **Casual Named User/Viewer Licenses** (for the Viewer users).
- If you want 10 Advanced users and 15 Viewer users, you must purchase 10 **Power Named User Licenses** (for the Advanced users) and 15 **Casual Named User/Viewer Licenses** (for the Viewer users).

Who is Counted as Power Named Registered Users

In addition to Advanced users (assigned the Power Named User License), users with a set of permissions that is larger than and includes the following permissions: **View Page**, **Cascade Scorecard**, **Explorer Access**, **Forecast**, **View Scorecards**, **Manage Annotation**, and **Data Set** are also considered Advanced users and are counted accordingly. For details, see "Role Management" on page 33.

Tasks

This section includes:

Install your Licenses

Silent Installation:

You install your license by configuring the **ba-answer.xml** file.

1. Go to the field **installation:install.LICENSE_IS_EVALUATION** and set it to:
   - **true** when you want a temporary license. The 60 days Instant-on license is installed automatically. It corresponds to a Power Named User License.
   - **false** when you want to load a Power Named User License.
2. Go to the field **install.LICENSE_POWERUSER_FILE_PATH** and enter the path to the Power Named User License.

   This field is valid only if the **installation:install.LICENSE_IS_EVALUATION** field is set to **false**.
3. Go to the field **install.LICENSE_VIEWER_FILE_PATH** to provide the path to the Casual Named User/Viewer License.

   This field is valid only if the path to **install.LICENSE_POWERUSER_FILE_PATH** is valid.

Installation via the UI:

The installation procedure performed via the UI requires your license information during the installation. For details, see *BA Installation Guide*.

Examples:

```
        <field id="install.LICENSE_IS_EVALUATION" description="it indicates license type of product, which can be
'true' or 'false','true' means you don't have a valid license and you want to get an evaluation license,'false'
means you want to Load a Power Named User License or temporary license">
            <name>productTypeFlag</name>
            <dataType>string</dataType>
            <value>true</value>
        </field>
        <field id="install.LICENSE_POWERUSER_FILE_PATH" description="it indicates the license file path of power
user for installation, you need to input value to it if install.LICENSE_IS_EVALUATION is 'false'">
            <name>LicenseFilePathOfPowerUser</name>
            <dataType>string</dataType>
            <value>licenceFilePath</value>
        </field>
        <field id="install.LICENSE_VIEWER_FILE_PATH" description="it indicates the license file path of viewer for
installation, if you want to input your viewer license, your powerUser license must be valid">
            <name>LicenseFilePathOfViewer</name>
            <dataType>string</dataType>
            <value></value>
        </field>
```

Check or Renew your licenses using the Maintenance Tool

To check or renew your licenses, use the Maintenance Tool. For details, see "Update Licenses" on page 146.

Check users licenses

You can check if all the users of the application have valid licenses.

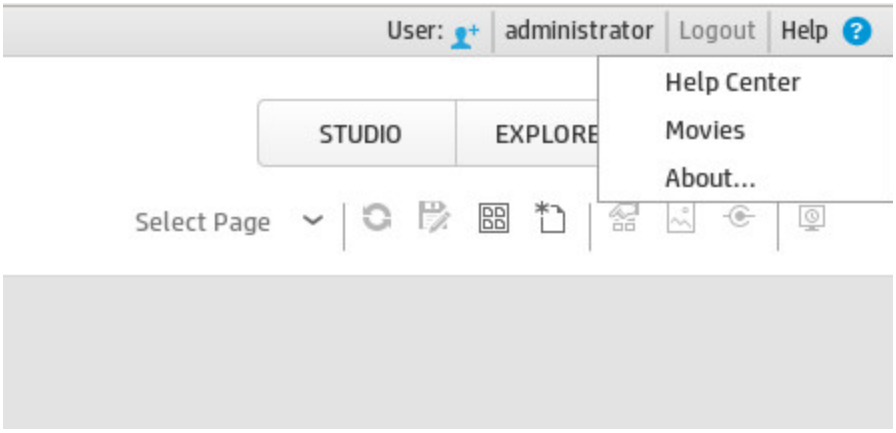
1. **Prerequisites:**

   If you are working with LDAP users, make sure you have performed the appropriate procedures. For details, see "LDAP Management" on page 57.

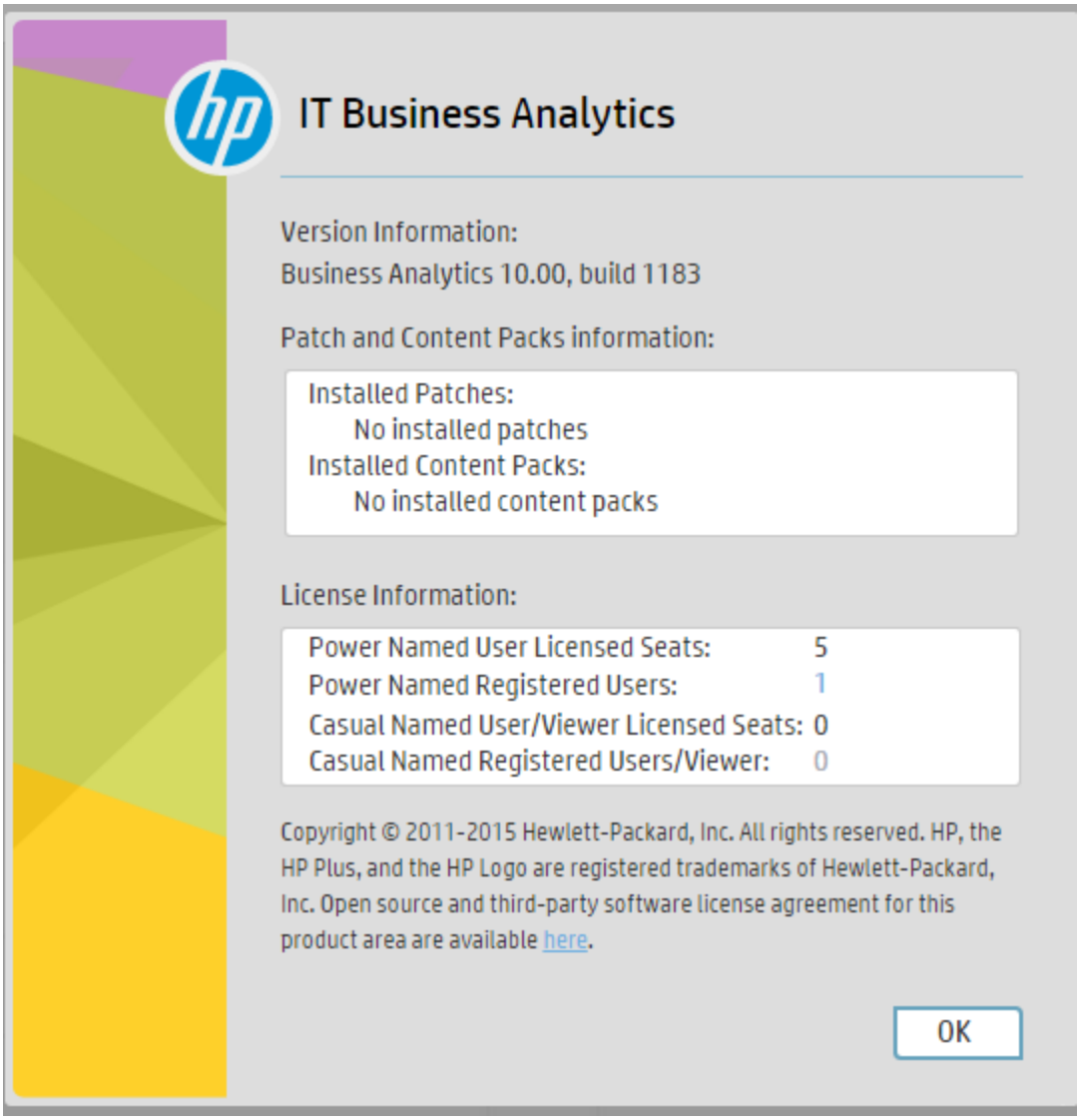
2. Get the user license information:

   a. Use an authorized HP user to log on to the customer's BA installation.

   b. Click **Help > About** in the top right-hand corner of the application display.



   The type of license (temporary or permanent), the number of registered users and the number of licensed seats (the number of purchased licenses) are displayed.

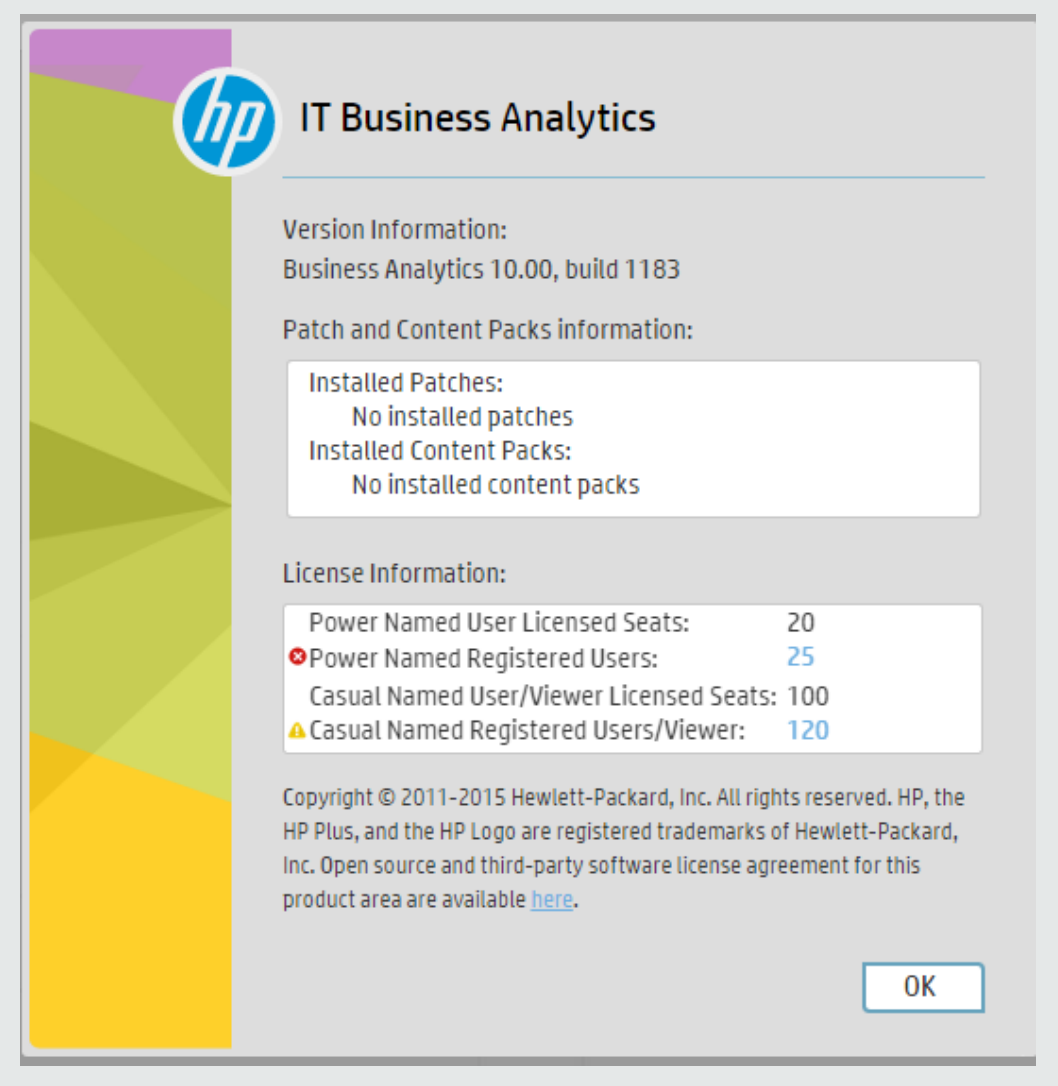


c. Click the number of users to view the details of the users. A list of the users is displayed.

When users do not have a valid license, a red icon is added to the left of the Registered users indication.

For details about who is counted as Power Named Registered Users, see "Who is Counted as Power Named Registered Users" on page 20

Note: An error image to the left of Registered Users and a tooltip indicate if there has been a breach of contract. User that are not part of the Viewer Users Group are considered Advanced Users and are counted accordingly.


IT Business Analytics
Version Information:
Business Analytics 10.00, build 1183
Patch and Content Packs information:
Installed Patches:
No installed patches
Installed Content Packs:
No installed content packs
License Information:
Power Named User Licensed Seats: 20
Power Named Registered Users: 25
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Casual Named Registered Users/Viewer: 120
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OK

Users, Roles, Resources, Permissions, LDAP, and Dimension Permissions

You use users, roles, resources, and permissions to configure who can do what and who can see what data in BA.

Learn More | Tasks

Learn More

Resources

A resource is a logical group of one or more BA application data items (for example Dashboard pages, or Scorecards. Once you define resources, you can attach the resource to a permission.

Roles and Permissions

Each role is a set of permissions. Permissions define which actions the user can perform and on which resources. For example, you can create a role that enables its users to create Dashboard pages.

Users and Groups

Each user has a list of roles that define their permissions. When you assign a role, that user only has access to specific portions of the application and specific resources that are relevant to their role. You can also define groups of users with the same roles or access rights. When you attach a user or group to a group, the user or group inherits all of the group's roles.

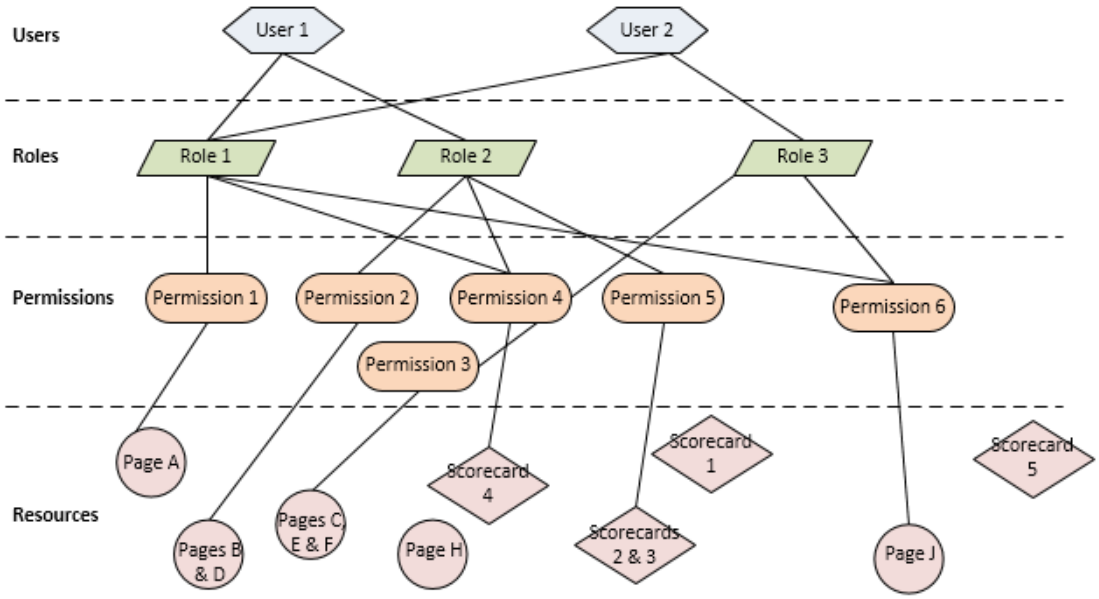
Typical users are:

Term	Description
Viewer Users	Users that have limited permissions and in most cases can only view content in the Dashboard and Explorer without any option to modify it. They will not have access to the STUDIO, and ADMIN tabs. In some cases we refer to them as Viewer users
Advanced Users	All users that are not Viewer users (including users under the Administrator group, Scorecard Administrator Group and users that are not under any group).
Scorecard Administrator	Type of Advanced user with permissions to create Scorecards and Dashboard pages
Super-Admin	Super user, a subset of the Advanced User – normally this user deals with the

Term	Description
	installation, foundation and permission issues. This user is the Admin user that was created during installation.

Diagram

The following diagram illustrates the relationship between users, groups, roles, permissions, and resources in the ADMIN tab.



Tasks

The Administrator uses the ADMIN tab to define users that have roles, which contain a set of permissions that may contain resources. It is recommended to create resources and attach them to permissions first in the user management process.

Resource Management

The Resource Management page enables you to view resource and resource types, as well as create a resource. You can also select instances or application data or components that comprise a resource.

To access:

Select **ADMIN** > **Users and Roles** > **Resource Management**.

Learn More | Tasks | UI Description

Learn More

Resources, Instances, and Scorecard Resources

Actions users can perform depend on their roles and permissions. Resources are the basis for user and role management. For each user or group, you assign a set of permissions called 'Role' that allow to perform specific actions on specific resources.

- **Resources.** A resource is a logical group of one or more application data sets or components. Once you define resources, you attach the resource to a permission.
- **Instances.** An instance is an application data or components that can be managed by a user according to the user's permissions.

  Instances are the available application data or components defined in the system.

  Note: Users that are created in the ADMIN tab and require permissions to view reports pages must be assigned those permissions in SAP BusinessObjects Enterprise.

- **Scorecard Resources.** BA enables you assign specific Scorecard resources to a user. Additionally, you can restrict user permissions and only allow then to view Scorecards, Dashboard pages and data that they have been assigned by the Administrator.

Tasks

This section includes:

Create a resource

1. Select **ADMIN** > **Users and Roles** > **Resource Management**.

2. In the **Resources** area, select the type of resource (for example **Scorecards**) in the tree, and click **Create resource** to create a new resource.
3. Enter the name of the resource in **Resource** and a description in **Details**.
4. Click **OK** to save your new resource.

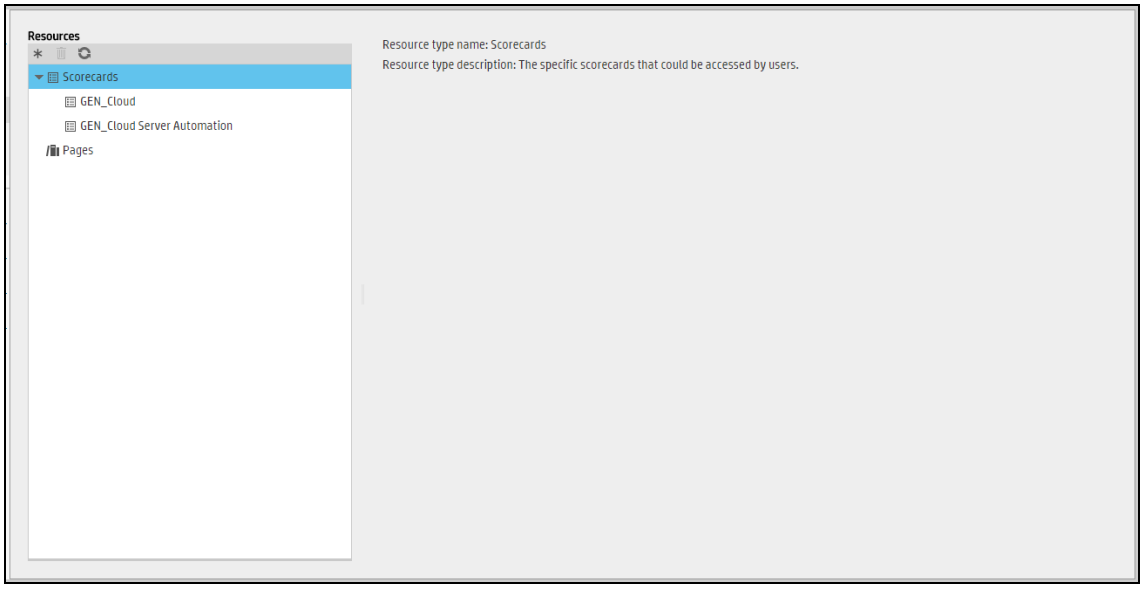
Manage instances

1. Select **Admin** > **Users and Roles** > **Resource Management**.
2. Select a resource in the **Resources** area.
3. In the **Instances** area of the **Resource Details** pane click **Add instances** to open the Manage Instances dialog box. Instances are the available application data or components defined in the system that are attached to resources.
4. Select the instance from the **Available Instances** list and use the arrows to move the instance to the **Selected Instances** list.
5. Click **OK** to save your changes.

UI Description

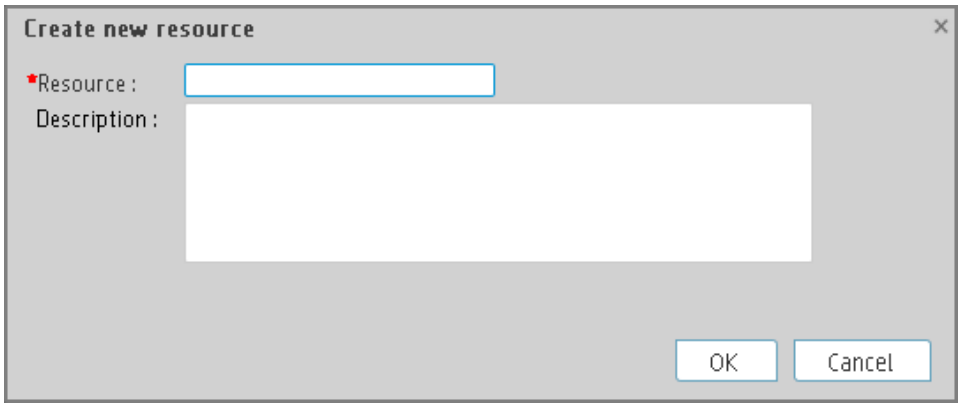
Resource Management Page

Click to refresh the page.



- ### Resources Pane

User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
	Select a resource and click **Create resource** to open the **Create new resource** dialog box and create a new resource of that type.  After you create the new resource, the Resource Details pane opens. For details, see "Resource Details Pane" on the next page.
	**Delete Resource.** Deletes the selected resource. If the resource is the only resource attached to a permission and that permission is attached to any roles, deleting the resource detaches the corresponding permissions from these roles.
	**Refresh.** Refreshes the displayed information.
<Resources Tree>	Contains the resource types and the resources defined for each type. By default, the tree includes the following resource types: • Scorecards • Pages

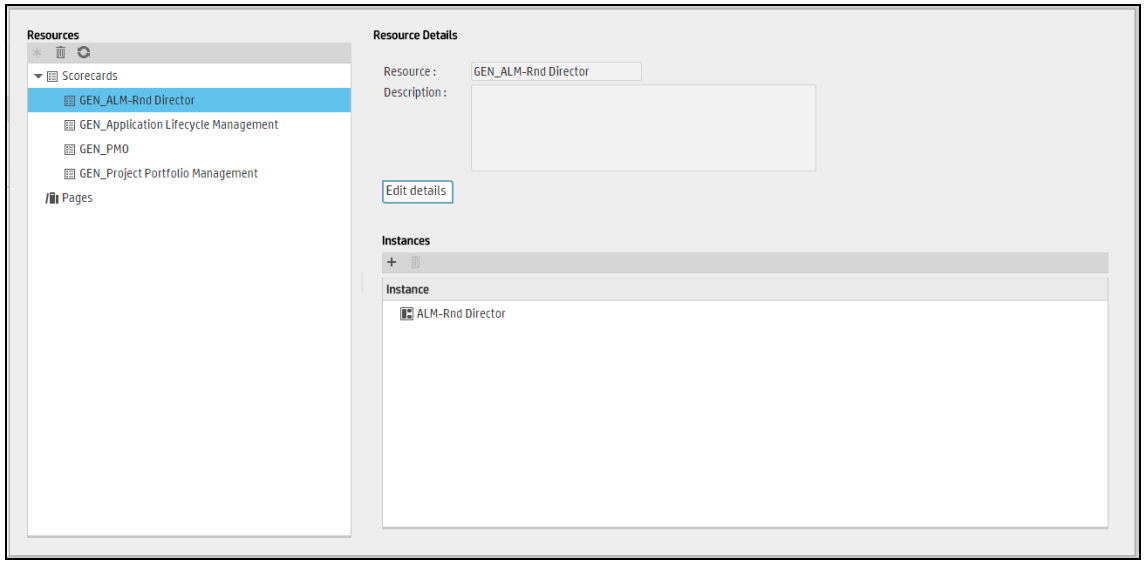
- ### <Right pane>

User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Resource type name	The name of the selected resource type.
Resource type description	The description of the selected resource type.

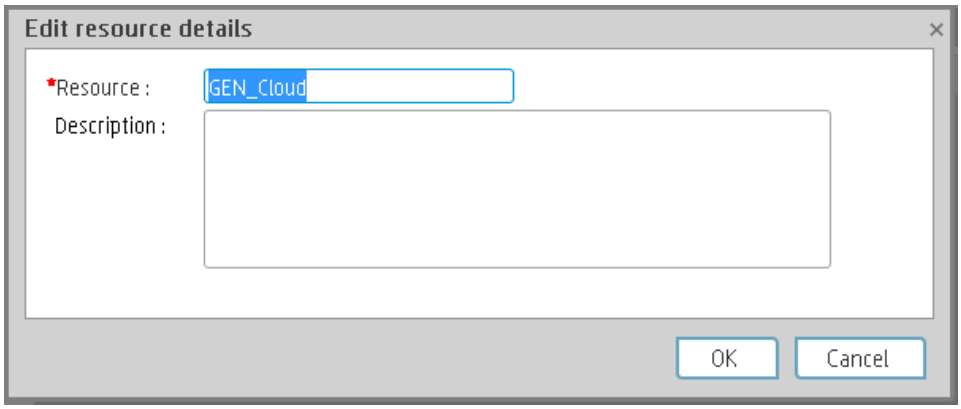
- ### Resource Details Pane

When you select a resource in the **Resources** pane, the details appear in this pane.



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

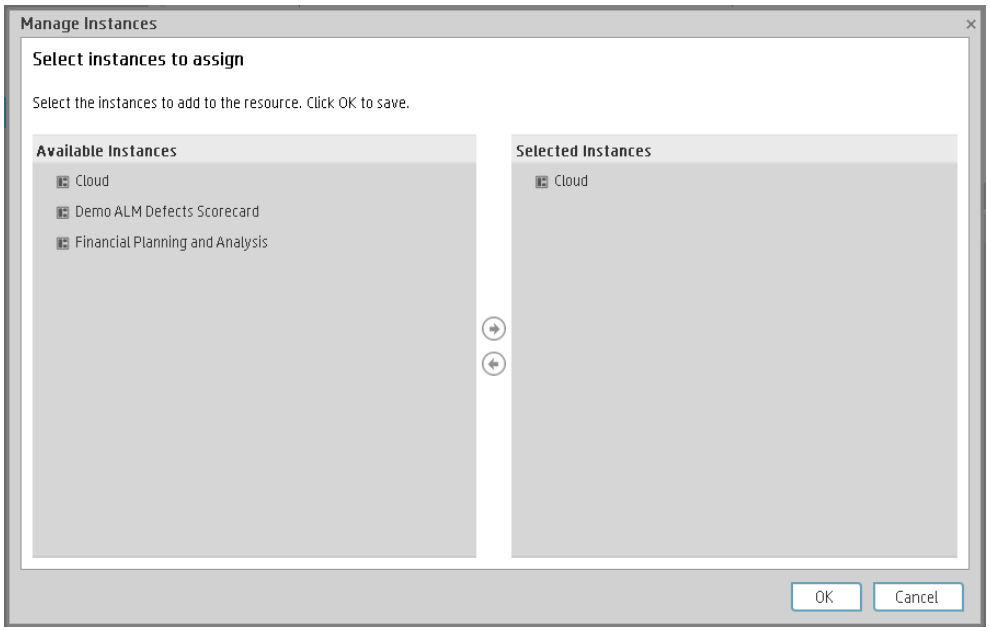
UI Element	Description
Resource type name	The name of the selected resource type. This information is displayed when you set the cursor on one of the resource types in the Resources pane.
Resource type description	The description of the selected resource type. This information is displayed when you set the cursor on one of the resource types in the Resources pane.
	**Add Instances.** Adds instances to the selected resource. Opens the Manage Instances dialog box. Each resource can have one or more assigned application data or component instances. In the Manage Instances dialog box, select a page from the **Available Instances** list and use the arrows to move the instance to the **Selected Instances** list. For details, see "Manage Instances Dialog Box" on the next page. These instances are the available pages defined in the system.
	**Remove Instances.** Removes the selected instance from the resource.
Description	The description of the selected resource.
Resource	The name of the selected resource.
Edit Details	Edits the selected resource name and description.

UI Element	Description
	
Resource Description	The description of the selected resource.
Resource Name	The name of the selected resource.
Instances	List of instances for the selected resource.

Manage Instances Dialog Box

This dialog box enables you to attach pages to a resource.

Select the resource and click the button.



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
 	Select an instance from the **Available Instances** list and use the arrows to move the instance to the **Selected Instances** list.
Available and Selected Instances	Each resource can have one or more assigned instances.

Role Management

You can define user roles and application permissions in the ADMIN tab. You can also assign resources to specific permissions.

To access:

Select **ADMIN**> **Users and Roles** > **Role Management**.

Learn More | Tasks | UI Description

Learn More

Roles and Permissions

Each role contains set of permissions. Permissions define which actions can be performed by the user. For example, you can create a role that enables its users to create pages or view specific ones. In some cases, actions can be performed according to the resource attached to a permission.

Note: Users that are created in the ADMIN tab and require permissions to view reports pages, must be assigned those permissions in SAP BusinessObjects Enterprise.

Resources

A resource is a logical group of one or more BA application data items (for example pages). Once you define resources, you attach the resources to a permission. For example, you can specify that the CIO has View permissions for CIO resources, while the Administrator has View permissions for all resources.

Tip: It is recommended to define resources prior to defining roles. For details, see "Resource Management" on page 27.

Pre-Defined Roles

Note: Every out-of-the-box Scorecard has its own dedicated resource and role.

BA roles can be assigned any permissions. BA roles are available with the following out-of-the-box permissions:

Pre-Defined Role (from A-Z)	Description	Permissions	Module
Administrator	The application administrator.	All Permissions	IT Business

Pre-Defined Role (from A-Z)	Description	Permissions	Module
	When a user with the **Administrator** role activates a CAP, everyone get permissions to view, edit, delete all the Scorecards in the CAP.		Analytics
Scorecard Administrator	Creates and manages specific Scorecards and Pages. Only a user with the Scorecard Administrator role can view the created Scorecard. Once a Scorecard is created, the system automatically generates a resource for the Scorecard and a role called GEN_ <Scorecard name>. This Scorecard can then only be managed by the Scorecard creator and users with the relevant GEN_<Scorecard name> role. In Dashboard, a user can only see a Scorecard when he has the relevant permission. If a component is configured with a specific Scorecard, Perspective, Objective, KPI, or KPI Breakdown, the user cannot see it, and the following message appears: **Data is not displayed because you do not have the correct viewing permissions.** **Contact your administrator.** When a user with the **Scorecard Administrator** role activates a CAP, only the user gets permissions to view, edit, delete all the Scorecards in the CAP. When a user with the **Scorecard Administrator** role drags a KPI from the **Public Metrics and KPIs** directory into a Scorecard in the Studio, a clone of the KPI is added to the Scorecard and the original KPI remains in the **Public Metrics and KPIs** directory to be available for other Scorecard Administrators. If a user with the **Administrator** role drags a KPI from the **Public Metrics and KPIs** directory into a Scorecard in the Studio, the	Administer Pages Cascade Scorecard Explorer Access Manage Annotation Manage Page Select KPI Studio Data Set	IT Business Analytics

<table>
<tr><th>Pre-Defined Role (from A-Z)</th><th>Description</th><th>Permissions</th><th>Module</th></tr>
<tr><td></td><td>KPI is added to the Scorecard and is removed from the Public Metrics and KPIs directory.</td><td></td><td></td></tr>
<tr><td>Viewer</td><td>Note: The Viewer user list of permissions cannot be modified (by any user).</td><td>
<table>
<tr><th>Permission</th><th>Viewer user allowed access</th></tr>
<tr><td>Users and roles</td><td>N</td></tr>
<tr><td>Administer pages</td><td>N</td></tr>
<tr><td>Edit settings</td><td>N</td></tr>
<tr><td>Data Source management</td><td>N</td></tr>
<tr><td>Admin access</td><td>N</td></tr>
<tr><td>Select KPI</td><td>N</td></tr>
<tr><td>View Settings</td><td>N</td></tr>
<tr><td>Manage page</td><td>N</td></tr>
<tr><td>View Scorecard</td><td>Y
The Super Administrator can assign the specific Scorecards the Viewer user can view.</td></tr>
<tr><td>View Page</td><td>Y
The Super Administrator can assign the specific Dashboard pages the Viewer user can view.</td></tr>
</table>
</td><td></td></tr>
</table>

Pre-Defined Role (from A-Z)	Description	Permissions	Module
		<table><tr><th>Permission</th><th>Viewer user allowed access</th></tr><tr><td>Manage annotations</td><td>Y</td></tr><tr><td>context management</td><td>N</td></tr><tr><td>Cascade Scorecard</td><td>Y</td></tr><tr><td>ABC Management</td><td>N</td></tr><tr><td>Explorer access</td><td>Y</td></tr><tr><td>Studio</td><td>N</td></tr><tr><td>Content acceleration packs</td><td>N</td></tr><tr><td>Data Set</td><td>Y</td></tr></table>	

Pre-Defined Permissions

BA Application Elements	Create and Edit	View
Studio	• To enter the STUDIO tab you need the **Studio** permission • To create Scorecards in the Studio, you need the **Studio** permission. **Note:** The **View Scorecard** permission enables customer with different departments to use BA. Each department can have its own Scorecards that cannot be viewed or used by other departments. This	• To view the STUDIO tab you need the **Studio** permission. • To view specific Scorecards (their Perspectives, Objectives, and KPIs) you need the **View Scorecard** permission for the relevant Scorecard. • To view all the standalone KPIs in the Studio, you need the **Select KPI** permission.

BA Application Elements	Create and Edit	View
	removes the need for each department to install its own BA instance. • To edit relevant Scorecards, you need the **View Scorecard** permission for the relevant Scorecard.	
Explorer	N/A	• To view the EXPLORER tab you need the **Explorer Access** permission • To view the relevant Scorecards (their Perspectives, Objectives, and KPIs) in Explorer, you need the **View Scorecard** permission. • To view all the standalone KPIs in the Studio, you need the **Select KPI** permission. • To view the prediction analysis, you need the **Forecast** permission. • To view the data set information you need the **Data Set** permission.
Admin	• To access the ADMIN tab but not the tabs in the ADMIN tab, you need the **Admin Access** permission.	• To access the ADMIN tab but not the tabs in the ADMIN tab, you need the **Admin Access** permission.

• Users and Roles
  • User Management
  • Role Management
  • Resource Management
  • LDAP Management
  • Dimension Level Permission
	• To view the ADMIN tab you need the **Admin Access** permission.
	• To modify the contents of the Users and Roles accordion tab you need the **Edit Settings** permission.
		• To view the ADMIN tab you need the **Admin Access** permission.
		• To view the Users and Roles accordion tab you need the **Users and Roles** permission.

BA Application Elements	Create and Edit	View
• Data Source Management	• To view the ADMIN tab you need the **Admin Access** permission. • To access the Data Source Management page and to activate the content packs you need the **Data Source Management** permission.	
• Content Flow Management	• To view the ADMIN tab you need the **Admin Access** permission. • To monitor and manage the ETL process for Data Warehouse you need the **ABC Management** permission.	

• Settings
  • Data Warehouse
  • Foundation
  • Single Sign-On
  • Pages
  • Website
  • Dashboard Settings
  • Engine Settings
  • Score Thresholds
  • BA Settings
	• To view the ADMIN tab you need the **Admin Access** permission.
	• To edit the contents of the Scorecard settings, Foundation settings, and Data Warehouse settings accordion tabs you need the **Edit Settings** permission.
		• To view the ADMIN tab you need the **Admin Access** permission.
		• To view the Scorecard settings, Foundation settings, and Data Warehouse settings accordion tabs you need the **View Settings** permission.

• Semantic Layer	• To view the ADMIN tab you need the **Admin Access** permission.	• To view the ADMIN tab you need the **Admin Access** permission. • To use the Context Designer feature you need the **Context Management** permission.
• Content Acceleration Pack	• To view the ADMIN tab you need the **Admin Access** permission. • To view, edit, delete Content Acceleration Packs, you need the **Content Acceleration Pack** permissions.	
Dashboard	• To add pages, view and modify all the pages in the Dashboard (add components, delete components, and even delete components) you need the **Administer Pages** permission.	• To add pages, view and modify all the pages in the Dashboard (add components, delete components, and even delete components) you need the **Administer Pages** permission. • To configure components on the page you need the **Select KPI**

BA Application Elements	Create and Edit	View
		permission
• Specific page in Dashboard	• To view and modify (add components, delete components, and even delete) the relevant page in the Dashboard you need the **Manage Page** permission. • To create a new page in Dashboard you need the **Administer Pages** permission. Once the page is created and assigned to a user, a user with the **Manage Page** permission can add components to the page, and modify it.	• To view a specific page in Dashboard you need the **View Page** permission for that page.
• Components on a page	• To view Scorecards you need the **View Scorecard** permission. • To view the contents of the Active KPIs area in all the components filters and to be able to move KPIs from the Active KPIs area to the Selected KPIs area in the filter you need the **Select KPI** permission. • If you do not have this permission, you can, in all the component filters, view the contents of the Selected KPIs area, you cannot modify the selection, and cannot view the contents of the Active KPIs area as the contents are grayed out.	• To view the small black arrow (near the Scorecard title) that indicates that the Scorecard has Cascading Scorecards and to be able to click the arrow to display the Cascading Scorecards for which you has permission you need the **Cascade Scorecard** permission. • If you do not have this permission, the small arrow is not displayed and you do not know that Cascading Scorecards are available. • To view specific Scorecards and data you need the **View Scorecard** permission.
Annotations (in Dashboard and Explorer)	• To edit or delete an existing annotation you need the **Manage Annotation** permission.	• If you do not have this permission, you can only view the annotation and the **Edit** and **Delete** buttons of the annotation are hidden.

Tasks

This section includes:

Create a role

1. Select **ADMIN**> **Users and Roles** > **Role Management**.
2. In the Roles area, click  to create a new role.
3. Enter the name and description for the role.
4. Click **OK** to save your role.

After creating a role, follow the procedure for attaching permissions and resources.

Edit role details

1. Select **ADMIN**> **Users and Roles** > **Role Management**.
2. In the Roles area, select a role.
3. In the Role Details area, click **Edit Details**.
4. Edit the role as required and click **OK**.

Attach permissions

1. Select **Admin** > **Users and Roles** > **Role Management**.
2. In the Roles area, select a role.
3. In the Role Details area, click  . The Assign Permission to Role wizard opens.
4. Select a permission from the list.
5. Attach a resource to the selected permission, if required.
6. Complete the wizard procedure to save your assignments.
7. Log off from BA and log on again to complete the permission assignments.

Add a resource to a permission

1. Select **ADMIN**> **Users and Roles** > **Role Management**.
2. In the Roles area, select a role.
3. In the Permissions list select a permission.
4. Click  to open the Assign Resources to Permissions page in the Assign Permission to Role wizard.
5. Select a permission and use the arrows to move the required resources from the Available Resources list to the Selected Resources list.

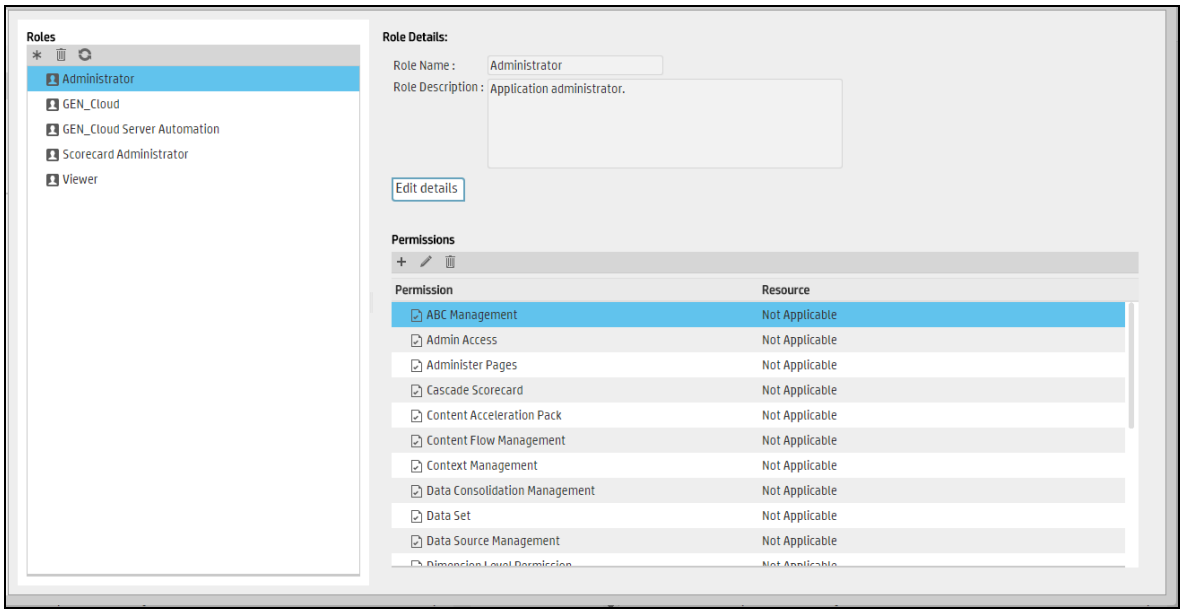
Use Case - Permissions

For details, see Use Case - Permissions in the *Getting Started with BA*.

UI Description

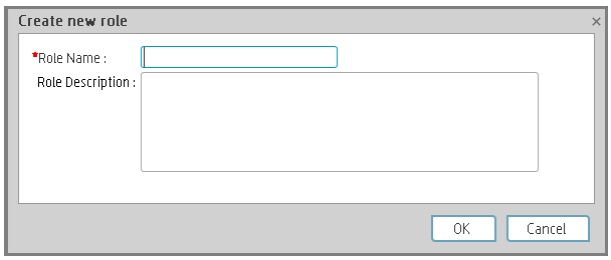
Role Management Page

Click to refresh the page.



- **Roles Area**

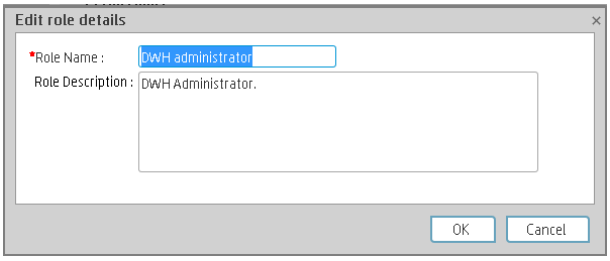
  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
	**Create Role.** Creates a new role.  Enter the **Role Name** and **Role Description** and click **OK**.

UI Element	Description
	**Delete Role.** Deletes the selected role.
	Click **Refresh** to refresh the display. When in BA, when you navigate to another tab and then return to **Admin > Users and Roles**, the display is not automatically refreshed. To refresh the display, click  in the toolbar.
<Role List>	A list of roles currently defined in the **ADMIN** tab. When you select a role, the details appear in the **Role Details** area and **Permissions** list. For a list of pre-defined roles, see "Pre-Defined Roles" on page 33.

- **Role Details Area**

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Role Name	The name of the selected role.
Role Description	The description of the selected role.
Edit Details	Edits the selected role name and description. 
	**Attach permission.** Assigns selected permissions to roles. You select permissions using the Assign Permission to Role wizard. For user interface details, see "Assign Permission to Role Wizard" on the next page.
	**Manage permission.** Modifies the selected permission. Opens the Assign Resources to Permissions page in the Assign Permission to Role wizard. For user interface details, see "Assign resources to permissions page" on page 44.
	**Detach permission.** Removes the selected permission from the role.
Permissions List	The list of permissions and resources for the selected role.
Permission	The permission sets and permissions attached to the selected role.

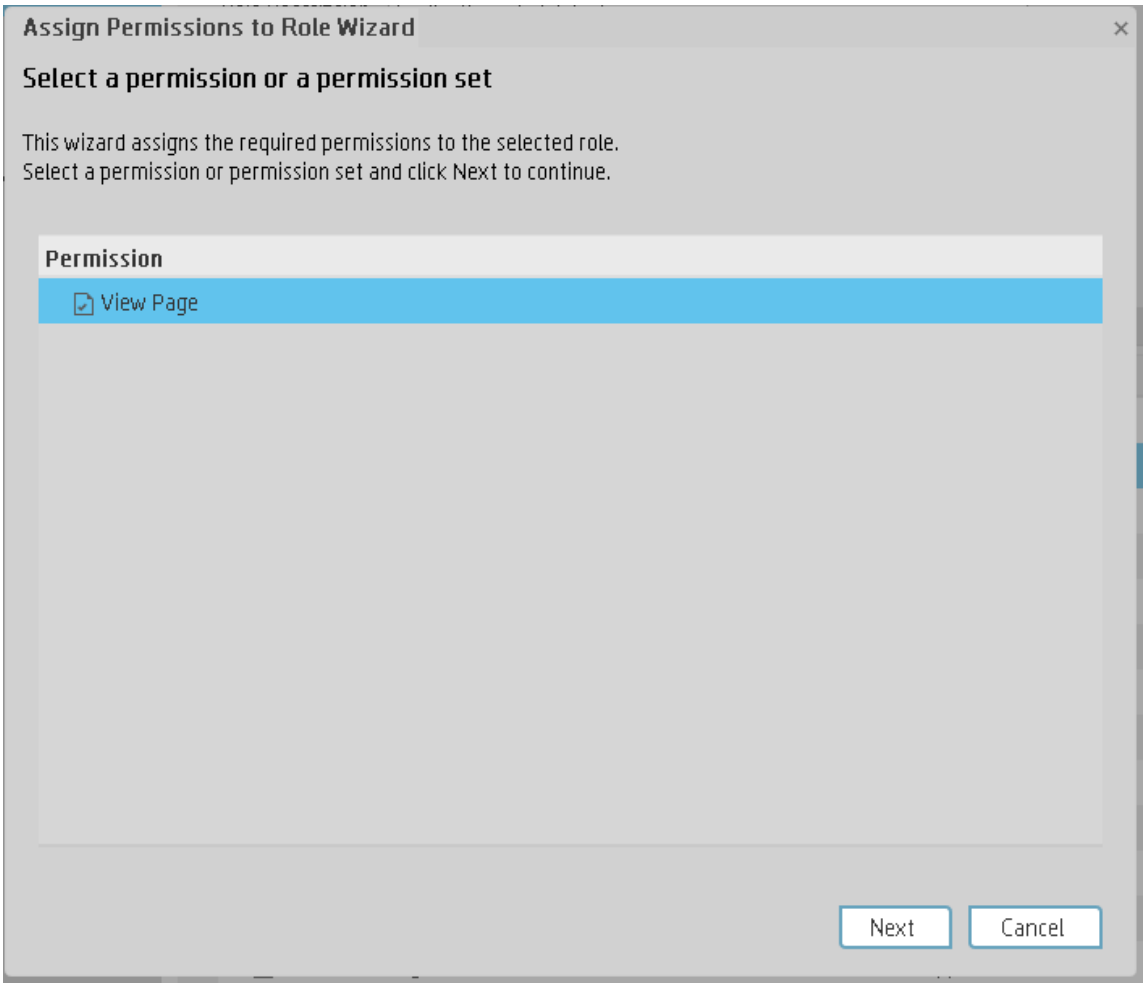
UI Element	Description
Resources	The list of resources for each permission. **Not Applicable.** None of the available resources apply to this permission. For details, see "Resource Management" on page 27. **<Resource Name>.** The permission is attached to a specific resource. **All.** The permission is applicable to all resources.

Assign Permission to Role Wizard

This wizard enables you to assign permissions to the selected role, as well as assign resources to the permissions. Click  to access the wizard.

Wizard Map	The Assign Permission to Role wizard contains: **Select Permission Page** > Assign Resources to Permissions Page > Confirmation Page.

- **Select Permission Page**



This page may lead directly to the Confirmation page depending on whether the selected permission has resources attached.

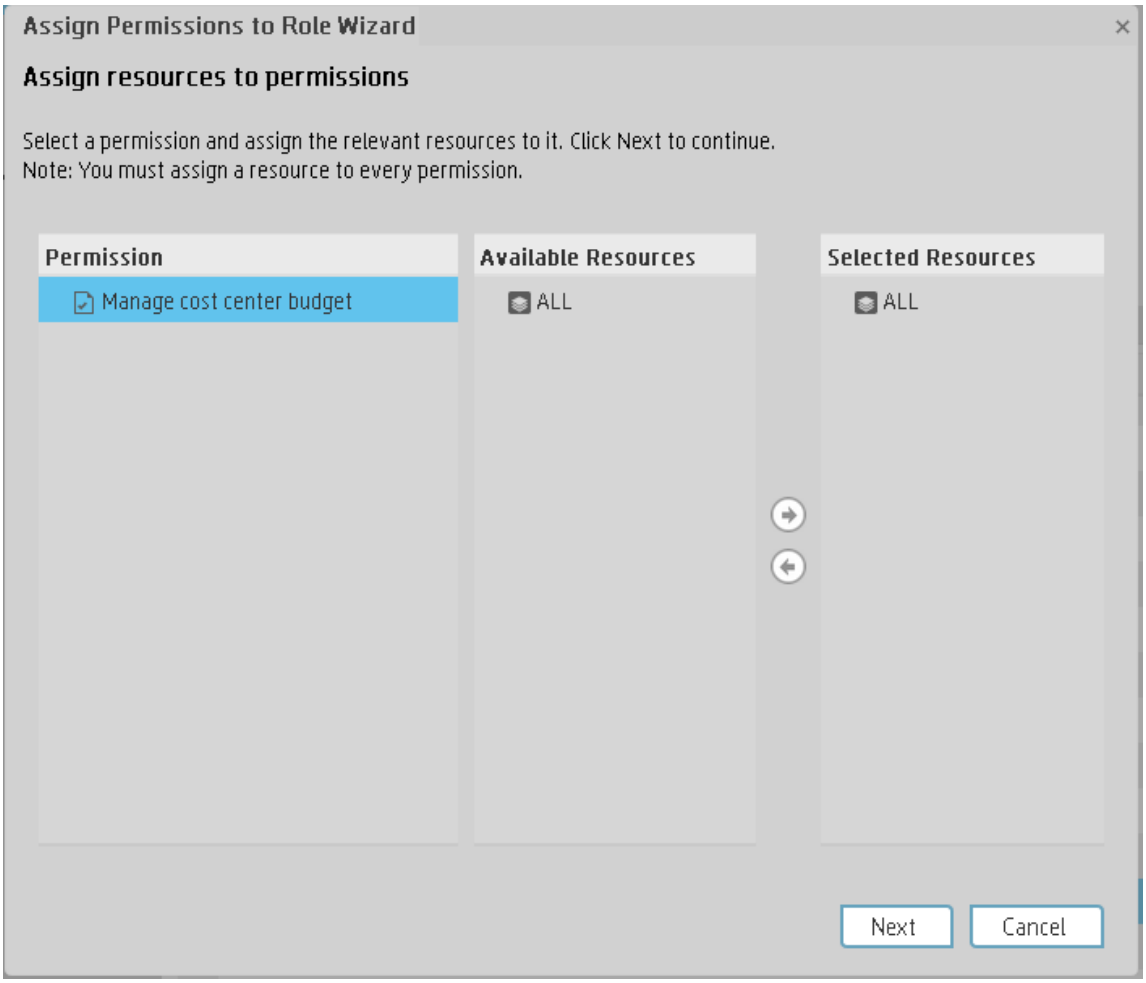
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
<Permissions tree>	Select a permission from the tree. Displays the pre-defined permissions. For details, see "Pre-Defined Permissions" on page 36.

- **Assign resources to permissions page**

  This page only appears if the permissions are applicable for a resource.

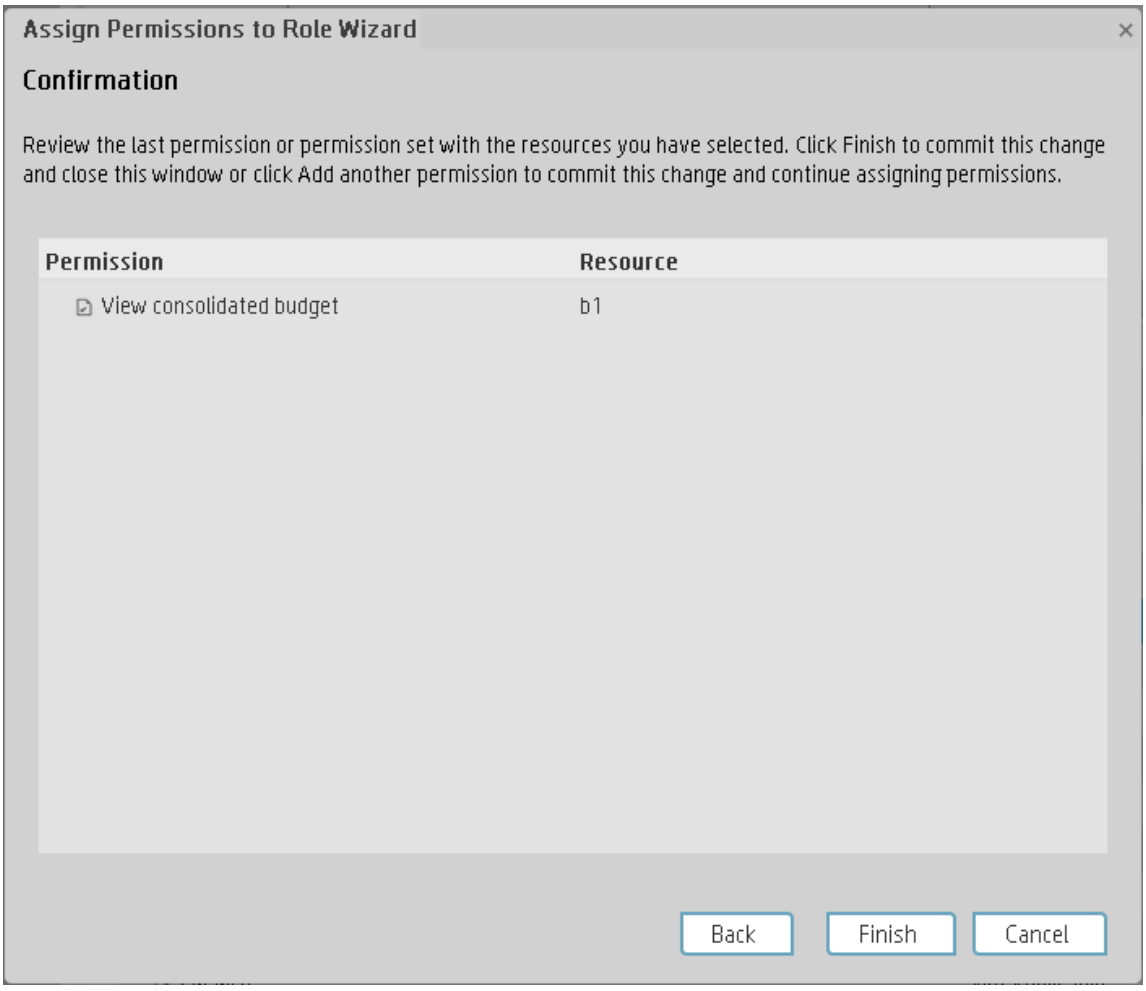
  Note: Click  to access this page directly.



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Permission	A tree containing the permissions.
	Select a permission and use the arrows to move the required resources from the **Available Resources** list to the **Selected Resources** list.
Available and Selected Resources	Each permission can be applicable for specific resources, for all resources, or not applicable to a resource.

- **Confirmation Page**



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Permission	The permissions assigned to this role.
Resource	The list of resources associated with the each permission.
Add another	Click to commit the current permission and continue in the wizard to add another permission. The "Select Permission Page" on page 43 opens.
Finish	Click to commit the assigned permissions and finish wizard functions.
Cancel	Click to cancel the current assignment. All previous actions in the wizard are still valid.

User Management

The User Management page enables you to add and edit users and groups, as well as add and edit their details.

To access:

Select **ADMIN**> **Users and Roles** > **User Management** to access the User Management page.

Learn More | Tasks | UI Description

Learn More

Resources, Roles, Permissions, Users, and Groups

- **Resources.** A resource is a logical group of one or more BA application data items (for example application data or components or budgets). Once you define resources, you attach the resource to a permission.
- **Roles and Permissions.** Each role is a set of permissions. Permissions define which actions the user can perform and on which resources. For example, you can create a role that enables its users to create Dashboard pages.
- **Users and Groups.** Each user has a list of roles that define their permissions. When you assign a role, that user only has access to specific portions of the program and specific resources that are relevant to their role. You can also define groups of users with the same roles or access rights. When you attach a user or group to a group, the user or group inherits all of the group's roles.

Managing Users

Users can be managed using either of the following, but not both:

- **Enterprise Users:** Users are created and managed in Business Analytics.
- **LDAP Users:** Users are created and managed on your LDAP server which is connected to Business Analytics. For details, see "LDAP Management" on page 57.

The Administrator uses the Admin tab to define users that have roles, roles that contain a set of permissions that may contain resources. It is recommended to create resources and attach them to permissions first in the user management process. For details, see "Role Management" on page 33.

Deleting a user or a group in User Management

- **Working without LDAP.** If you delete a user or a group in User Management, and the user or group is assigned a dimension:entity,the assignments are deleted. If as a result of the operation, the dimension:entity has no assigned user or group, is automatically assigned to the default **Dimension Permission Group for the Unassigned Entities**.
- **Working with LDAP.** If you delete a user or a group in LDAP, and the user or group is assigned a dimension:entity, the dimension:entity assignments are not removed (since the users and groups are managed in different databases). If as a result of the operation, the dimension:entity has no assigned user or group, it will not be automatically assigned to the default Dimension Permission Group for the Unassigned Entities, and the administrator must make sure to assign the permission manually in BA.

For details, see "Dimension Permissions" on page 97.

Tasks

This section includes:

Search for a user

1. Select **ADMIN**> **Users and Roles** > **User Management**.
2. In the **Search Users** tab, enter the search criteria.
3. Click **Search**. The relevant users are displayed.

Add a user

When using LDAP for user management, you cannot add LDAP users in Business Analytics directly. You must first create them in the LDAP server and then populate them into Business Analytics manually.

1. Select **Admin** > **Users and Roles** > **User Management**.
2. In the **Users & Groups** tab, select the group under which you want to add a user and click **Add User**  . The Add user dialog box opens.
3. Enter the relevant details.

Add a new group under the root

1. Select **ADMIN**> **Users and Roles** > **User Management**.
2. In the **Users & Groups** tab, click **Add group under the root**  .
3. Enter the **Group Name** and **Group Description** and click **OK**. The group is added under the root.

View permissions and resources for specific users

1. Select **ADMIN**> **Users and Roles** > **User Management**.
2. Select a user from the **Users & Groups** tab.
3. In the **Roles and Permissions** area, select a role to view the permissions and resources associated with the role.

Assign roles to users or groups

1. Select **ADMIN**> **Users and Roles** > **User Management**.
2. Select a user or group from the **Users & Groups** tab.
3. In the **Roles and Permissions** area, click **Assign role**  . The Assign Roles dialog box opens.
4. Select a role from the **Available Roles** list and use the arrows to move the role to the **Selected Roles** list.
5. Click **OK** to save your selections.

Unassign a role from a group

1. Select **ADMIN**> **Users and Roles** > **User Management**.
2. Select and expand the **Everyone** group.
3. Delete the role related to your specific Scorecard from the **Everyone** group. This Scorecard can now only be viewed by the Admin.
4. Assign the Manage Scorecards role to the specific users you want to view and manage the Scorecard.

Add Additional Pages to Dashboard and Grant Permissions

Users can be granted permissions to perform the following operations on user-defined pages and components: **View page**, **Manage Page** (change and delete specific page) and **Administrate pages** (add pages and full control on all pages in the system).

To create a new page in the Dashboard , contact your administrator. The administrator should:

1. Create the relevant page in HP IT Business Analytics.
2. Define the page Instance and Resource. For details, see "Resource Management" on page 27.
3. Give you (the Business Analyst - Dashboard Designer) the needed permissions to update the page. For details, see "Role Management" on page 33.
4. Give the relevant user (executive) the needed permissions to view the page. For details, see "Role Management" on page 33.

Configure User Permissions in Dashboard

Permissions to work with Dashboard components and pages are defined in **Admin > Users and Roles > User Management**.

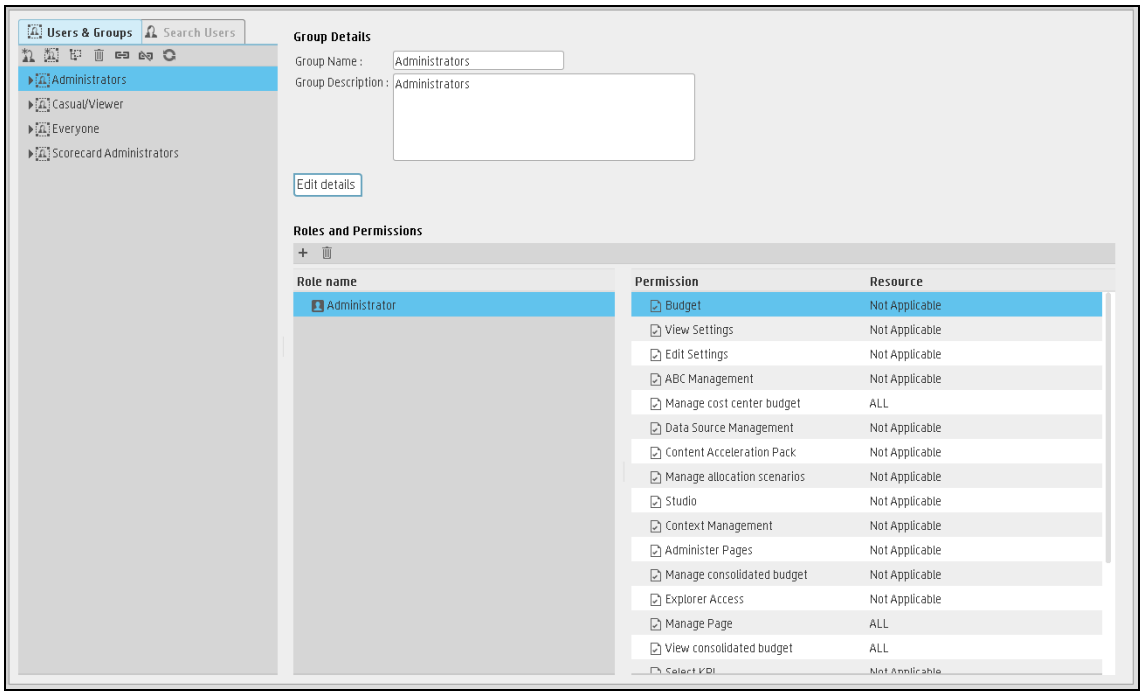
The operations that can be defined for a user are dependent on the area within Dashboard, as follows:

- **Predefined Pages.** These pages are defined out-of-the-box. They have a pre-defined layout but entities are not selected. Users with the relevant permissions can select the relevant entities using the component filters. Depending on their permissions, users can change the component layout in the page and the selections in the component filters. Note that out-of-the-box pages cannot be deleted. More information about the permissions is available in "Role Management" on page 33.
- **User Pages and User Components.** Users can be granted permissions to perform the following operations on user-defined pages and components: **View page**, **Manage Page** (change and delete specific page) and **Administrate pages** (add pages and full control on all pages in the system).

UI Description

User Management Page

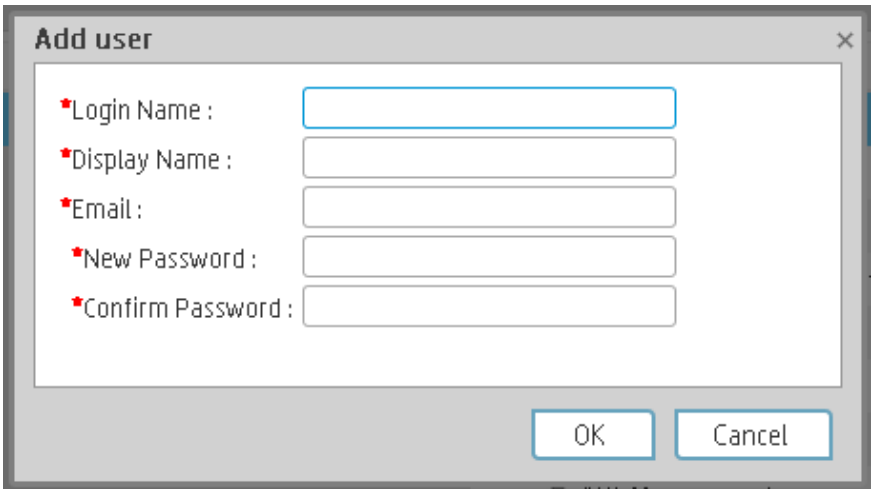
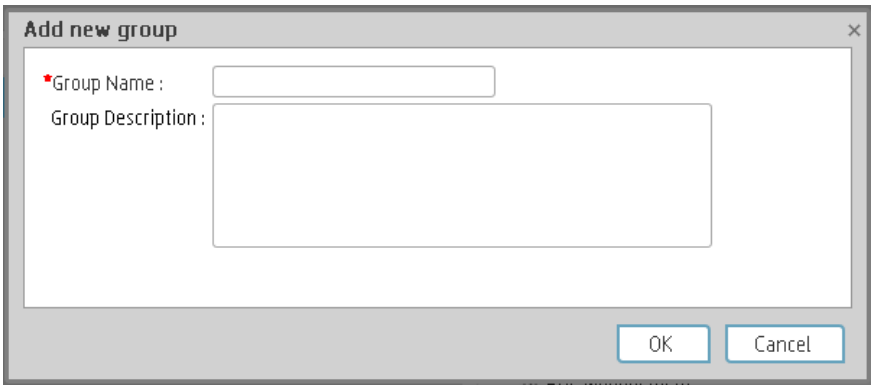
Click  to refresh the page.

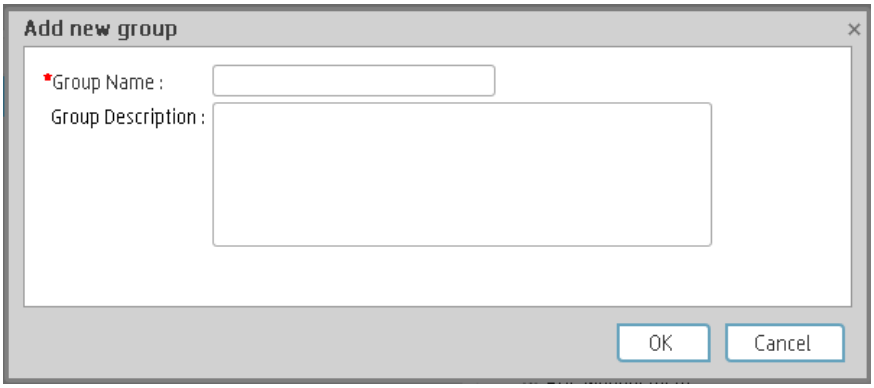


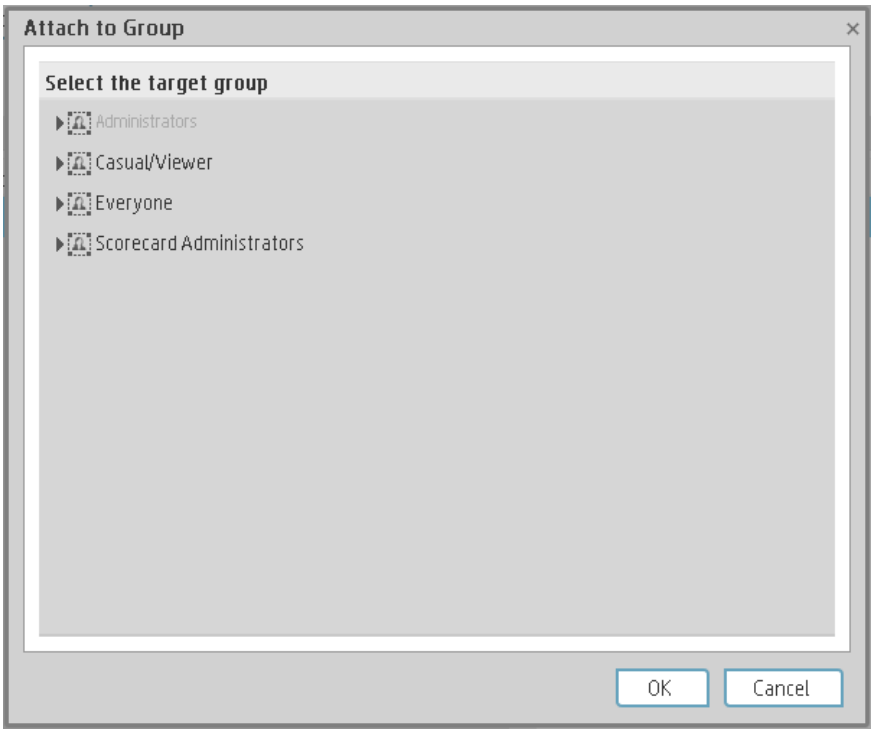
- **Users & Groups Tab**

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Users and Groups tree	A tree containing all of the existing groups and users attached to those groups. To find users that are not attached to a specific group, but are under the group **Everyone**, use the **Search Users** tab. For details, see "Search Users Tab" on page 53. When a user is added to LDAP, it is displayed in the Users and Groups tree after you log on to HP IT Business Analytics."Search Users Tab" on page 53
	**Create User**. Adds a new user under the selected group. The user inherits the group's roles.

UI Element	Description
	 Enter the user's **Login Name**, **Display Name**, **Email**, and **New Password** and click **OK**. When using LDAP for user management, you cannot add LDAP users in Business Analytics directly. You must first create them in the LDAP server and then populate them into Business Analytics manually.
	**Create group**. Creates a new group under a selected existing group. The group inherits the existing group's hierarchy.  Enter the **Group Name** and **Group Description** and click **OK**. **Available Groups** • **Administrators.** Users who can administer the system. • **Scorecard Administrators.** Users who can manage specific Scorecards and Pages according to the assigned roles and permissions. • **Casual Viewer.** Users with a very limited set of permissions. • **Everyone.** All users of the system.

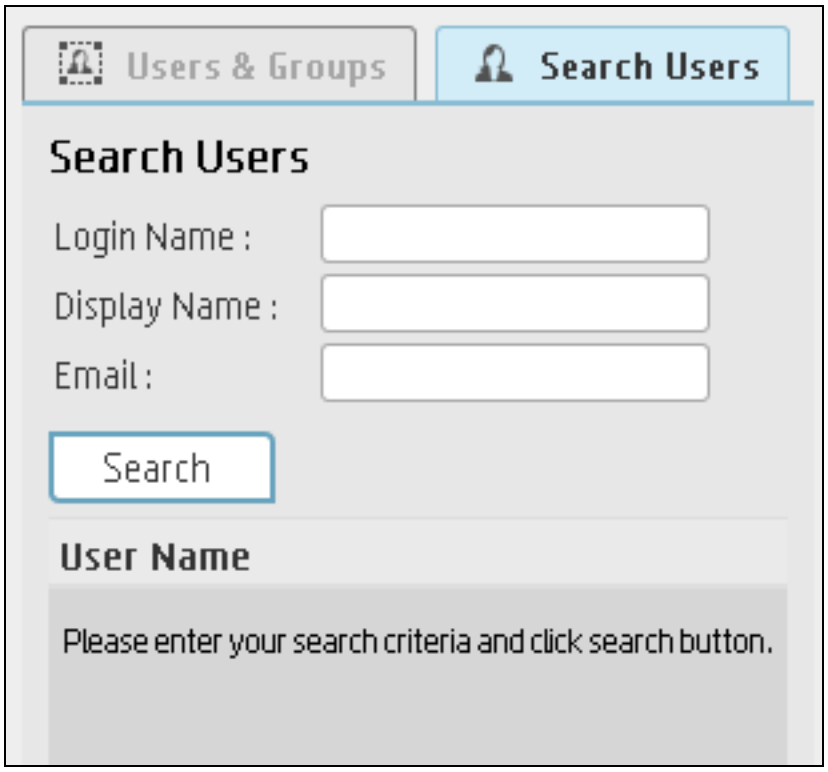
UI Element	Description
	Note: The following groups are the default groups available in SAP BusinessObjects Enterprise and exported to the ADMIN tab. They are not applicable to the Business Analytics application. • QaaWS Group Designer • Report Conversion Group Users • Test Root • Translators • Universe Design Users
	**Add group under the root**. Creates a new group under the root.  Enter the **Group Name** and **Group Description** and click **OK**.
	**Attach to group**. Attaches the selected user or group to a group. The users or groups inherit all of the group's roles.

UI Element	Description
	 Select the group and click **OK**.
	**Detach from group**. Detaches the selected user or group from a group. When you detach a user/group from a group, they no longer have the roles that they inherited from the group. When you detach a group from a group, it moves to the "root" of the groups and users tree.
	**Delete**. Deletes the selected user or group. When a group is deleted, its users still exist under a system group called Everyone.
	**Refresh.** Refreshes the displayed information.

- **Search Users Tab**

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Search Users	The search criteria.

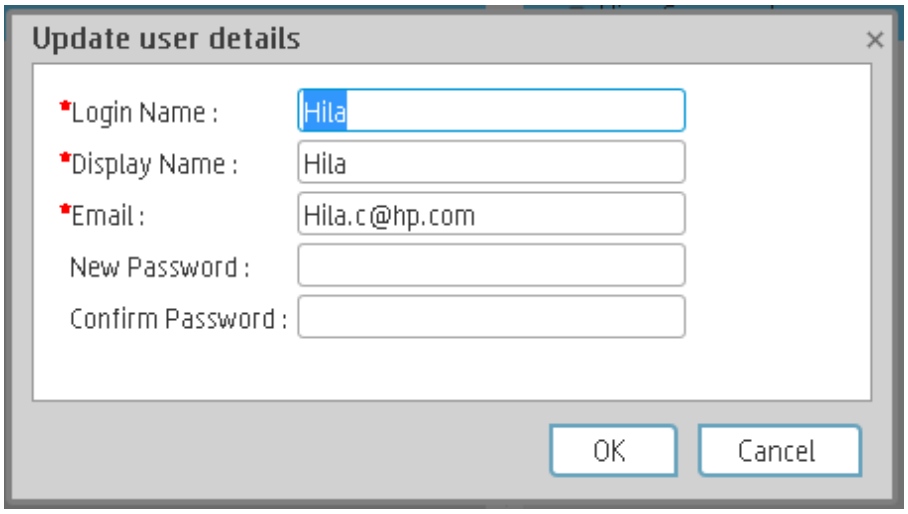
UI Element	Description
	 To search for users, enter some or all of the user details: **Login Name, Display Name, Email**.
Search	**Search**. Click to search for users that match the criteria entered in the **Search Users** tab.
User Name	A list of all users that match the search criteria.

- **User Details Pane**

  Select a user and click **User Details**.

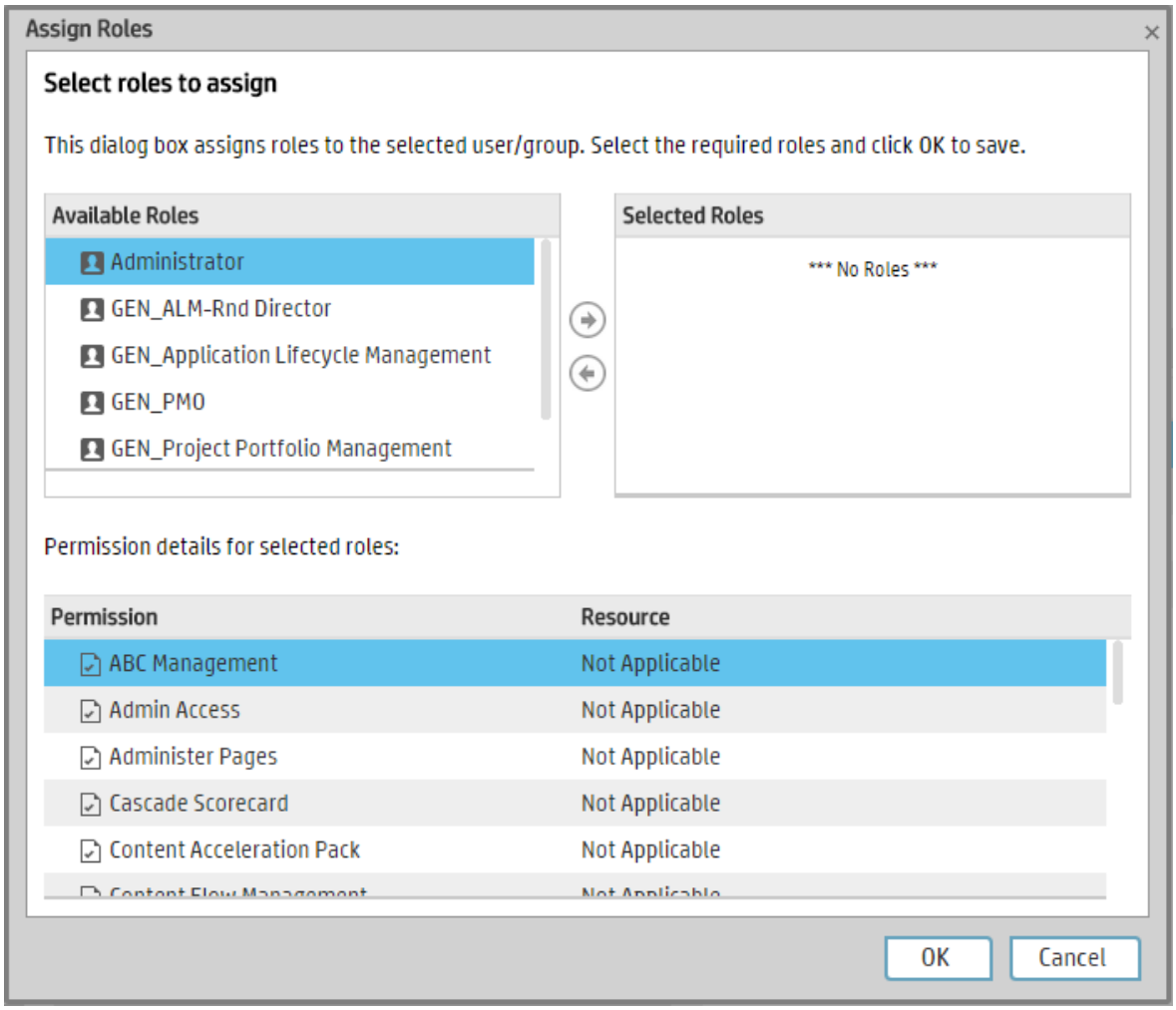
  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Login Name/ Group Name	The name of the selected user or group.
Display Name/ Group Description	The description of the selected user or group.
Edit Details	Edits the selected user or group details. Enables you to change a user password.

UI Element	Description
	
Roles and Permissions	The assigned roles and corresponding permissions and resources for the selected user or group.
	**Assign role**. Opens the Assign Roles dialog box that enables you to assign a role to the selected user or group.
	**Remove role**. Removes the selected role from the user or group.
Role name	The role assigned to the selected user or group.
Permission	List of permission names contained in the selected role.
Resource	The resource attached to the permission of the selected role. **N/A.** Not Applicable. None of the available resources apply to this permission. **<Resource Name>.** The permission is attached to a specific resource. **All.** The permission is applicable to all resources. For details, see "Resource Management" on page 27.

Assign Roles Dialog Box

Select a role in Roles and Permissions, and click  .



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
	Select a role from the **Available Roles** list and use the arrows to move the role to the **Selected Roles** list.
Available and Selected Roles	Each user or group can have one or more assigned roles.
Permission details	The read-only details about the permissions and corresponding resources for the selected role.
Resource	The list of resources for each permission: • **Not Applicable.** Used for permissions that do not require a specific resource setting.

UI Element	Description
	• **<Resource Name>.** The permission refers to a specific resource. • **All.** The permission is applicable to all resources.

LDAP Management

The LDAP Management page enables you to add and edit users and groups, as well as add and edit their details.

Users can be managed using either of the following, but not both:

- **Enterprise Users:** Users are created and managed in Business Analytics.
- **LDAP Users:** Users are created and managed on your LDAP server which is connected to Business Analytics. For details, see "LDAP Management" above.

The Administrator uses the Admin tab to define users that have roles, roles that contain a set of permissions that may contain resources. It is recommended to create resources and attach them to permissions first in the user management process. For details, see "Role Management" on page 33.

To access:

Select **ADMIN**> **Users and Roles** > **LDAP Management** to access the LDAP Management page.

Learn More | Tasks | UI Description

Learn More

Users and authentication when working with SAP BusinessObjects and LDAP or without

The users and authentication when working with or without SAP BusinessObjects and LDAP is as follows:

Operation	Working without SAP BusinessObjects and without LDAP	Working with SAP BusinessObjects and without LDAP	Working with SAP BusinessObjects and with LDAP
Manage users (create, remove, update)	In BA, in **ADMIN > Users and Roles**.	Users are created in BA, in **ADMIN > Users and Roles** Users created in BA are automatically transferred to SAP BusinessObjects. If a user is created in SAP BusinessObjects, it does not	Users are created in LDAP. If LDAP configures successfully, BA loads all the user information from LDAP automatically .

Operation	Working without SAP BusinessObjects and without LDAP	Working with SAP BusinessObjects and without LDAP	Working with SAP BusinessObjects and with LDAP
		appear in the list of users in BA.	
Passwords	Passwords can be changed in the **User Details** pane of the User Management page in BA. Click **Edit Details** to change a user's password.	Passwords can be changed in the **User Details** pane of the User Management page in BA. Click **Edit Details** to change a user's password. A password created in BA is automatically transferred to SAP BusinessObjects for the relevant user.	Passwords are created and stored in LDAP.
Roles, permissions, and groups	In BA, in **ADMIN > Users and Roles**.	In BA, in **ADMIN > Users and Roles**.	In BA, in **ADMIN > Users and Roles**.

Note:

- The format of the LDAP directory must be either Microsoft Active Directory or Sun ONE Directory. It cannot be an arbitrary directory structure.
- Active Directory provides two password options:
  - Option 1 - You must change the password at the next log on.
  - Option 2 - Password never expires.

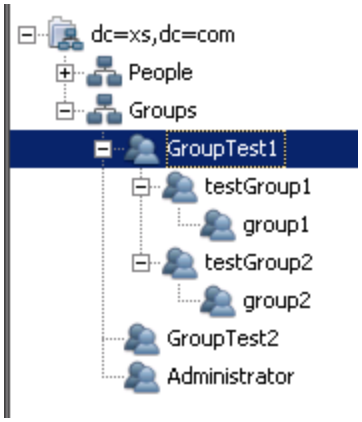
  HP IT Business Analytics only supports the second option.If you want to use the first option, you must log on to another system (not HP IT Business Analytics) the first time to change the password, and then use the new password to log on HP IT Business Analytics.
- When a user is added to LDAP, it is displayed in the Users and Groups tree after you log on to HP IT Business Analytics.
- When working with LDAP, you must make sure that LDAP is connected to BA and to SAP BusinessObjects. For details, see "Create a connection" on page 61.
- BA only supports the LDAP tab with Active Directory as a server type on that tab. Active Directory authentication via the active directory tab is not supported.
- We recommend to use LDAP for secure passwords and better password validation.

Searches for LDAP user groups

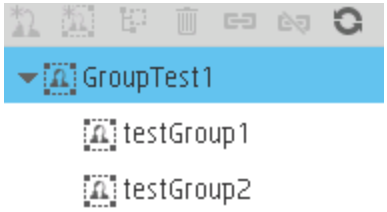
The root group filter specifies the groups that will be listed as the root group in BA.The group filter specifies the child groups that will be listed under the root groups.

The group scope should include the root groups and some of the child groups listed under the root group.

If, for example,you have the following configuration in the LDAP server:

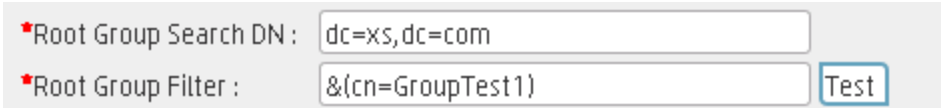


And you want to display the below group in BA:



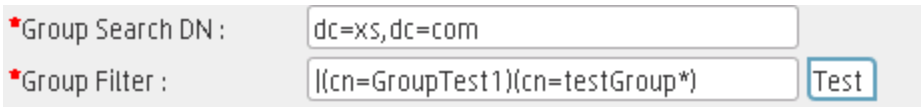
- If you click **Test** for the **Root Group Filter**, you only need to specify the **Root Group Search DN** and the **Root Group Filter** values.

  The **Root Group Search DN** is the starting search node and **dc=hpxs,dc=com** points to the root node. The Root Group Filter is used to locate the specific node: **GroupTest1**.



- Then the **Group Search DN** must include the root group value specified in the **Root Group Search DN** and the relevant child groups under the root group.

  In our example, the **Group Filter** should contain the root group: **GroupTest1** and the child groups: **testGroup1** and **testGroup2**.



LDAP and the Licenses

LDAP support the BA license set up. For details, see "Licenses" on page 20.

You create and manage users on your LDAP server which is connected to BA. The BA Administrator uses the ADMIN tab to define users that have roles, roles that contain a set of permissions that may contain resources. It is recommended to create resources and attach them to permissions first in the user management process. For details, see "Role Management" on page 33.

Tasks

This section includes:

Configure LDAP to work with Dimension Level Permission

Note: Make sure that you perform the update below before you configure LDAP.

1. Click **ADMIN**> **Users and Roles** > **LDAP Management** to access the LDAP Management page.
2. Fill in LDAP configuration information and then fill in the relevant information in **the Dimension Permission Group for New Entities**, and **Dimension Permission Group for Unassigned Entities** fields.
3. Click **Save**.

Note:

- If you have already set up Dimension Level Permissions and you start working with LDAP, note that all the existing DLPs are automatically set to **dlp.default.group.permission**. You must first perform the operation above and then click **ADMIN > Users and Roles > LDAP Management** and set up and enable LDAP.
- If you are working with DLP and LDAP and you want to stop working with LDAP, note that the existing DLPs are automatically set to **dlp.default.group.permission** . You must then perform the operation above and then click **ADMIN > Users and Roles > LDAP Management** and disable LDAP.

Check if LDAP mode is enabled

1. In theBA application, click **ADMIN > Users and Roles > LDAP Management**.
2. If the LDAP configuration has already been updated, a Warning message: **You have updated the LDAP configuration. Restart the server.** is displayed. Restart the server.

   If the configuration is not complete, enter the relevant values in the fields, and click **Save**. Then restart the server.

Create a connection

Note:

Configure LDAP to connect separately with:

- the Business Analytics server.
- optionally, the SAP BusinessObjects Enterprise server.

You create a connection and verify that the server information is correct.

1. After you enter the server information in the LDAP Management page, click **Next**.
2. If the connection is created successfully, the LDAP configuration page opens. You can then:
   a. Enter the information in the remaining fields
   b. Click **Back** to input different information in the server information fields.
3. When you check the **SSL** mode, the BA server attempts to connect with the LDAP server.

   If the server cannot perform the connection, the following error message is issued:

   The BA server cannot connect to the LDAP server.
   Make sure all the relevant certificates are imported.
   After the relevant certificates are imported, restart the BA server.

   In such a case, make sure that the relevant certificates are imported. After the import of the relevant certificates completes, restart the server.
4. If you need to import a certificate from a third-party Certificate Authority (CA) or if you need to generate a self-certificate:
   a. Make sure the certificate is supported by the LDAP server and placed in the correct keystore.
   b. Navigate to the BA server .
   c. Open CMD and import the certificate using the following command:
   %HPBA_Home%/jdk/bin/keytool -import -trustcacerts -alias hpxsldap-ssl -file <Certificate File Path> -keystore %HPBA_Home%/agora/jdk/jre/lib/security/cacerts
   d. At the **Enter keystore password:** prompt, enter **changeit**.
   e. When asked to trust this certificate, enter **y**.
   f. Restart the **HP Business Analytics** server.

Test the input fields

After verifying that the server information is correct and enables the connection to the server, test users with the Admin role.

1. After you enter the base and filter values for the root group, group, or user, click the relevant **Test** button to see whether there are results or not.
   - Root group info should only show the root group.
   - Group info should only show the group tree.
   - User info should show all users.

   For additional information, see "Searches for LDAP user groups" on page 59.
2. You can also select some of the LDAP users. These users will be assigned the Admin role, in the BA application, to these users.

Save and disable an LDAP configuration

After you have saved the LDAP configuration, the status of the LDAP changes to **Enabled**  and displays a warning message: **You have updated the LDAP configuration. Restart the server.**

After the LDAP Admin disables the LDAP mode:

- The users and groups used by BA are loaded from the **BA** local database and not from the LDAP server anymore.
- The LDAP Admin must create a new BA Admin user.

  If the BA Administrator name is the same as the BOE Administrator name (BOE Administrator was created during the installation of BA), then the BOE Administrator password is the same as the BA Admin password.

Configure LDAP

1. In the BA application, click **ADMIN > Users and Roles > LDAP Management**.
2. In the LDAP Management page, enter the server information. Click **Next**.
3. Enter all the DN and filter fields, and click **Test** in turn for the Test Root Group, the Test group, the Test Users, and then click **...** to select the users.
4. Click **Save**. A warning to restart the server is issued. Click **OK** to do so.
5. Click **...** to select **Dimension Permission Group for New Entities** and select **Dimension Permission Group for Unassigned Entities**.

Configure BOE to work with LDAP

Make sure you use the LDAP Authentication option:

1. Log on to the Central Management Console as an administrator.
2. Click **Authentication**, then click the **LDAP** tab.
3. Click **Start LDAP Configuration Wizard**.
4. In the **Add LDAP Host** (hostname: port) field, type your host and port information.
5. Click **Add**.
6. Click **Next**.
7. In the **LDAP Server Type** drop-down list, select your LDAP server, and click **Next**. This is where you select the type of server you are using: **Sun One** or **Active Directory**.
   a. If you select **Active Directory**, click **Show Attribute Mappings**.
   b. In the **Default User Search Attribute** field, enter **sAMAccountName**.
   c. In the **User Name** field, enter **sAMAccountName**.
8. In the **Base LDAP Distinguished Name** field, type the distinguished name, and click **Next**.
9. Type the LDAP host credentials:
   a. **LDAP Server Administration Credentials:** Enter the name and password for a user account that has rights to administer your LDAP server.
   b. **LDAP Referral Credentials:** Enter the same name and password you entered for LDAP Server Administration Credentials.
10. In the **Maximum Referral Hops** field, type the number of referral hops to limit forwarding the credential request. If you set this field to zero, no referral hops are allowed.
11. Click **Next**.
12. In the **Type of SSL** authentication drop-down list, select **Basic (no SSL)** and click **Next**.
13. In the **Authentication** drop-down list, select **Basic (no SSO)** and click **Next**.
14. Select the following LDAP options:
    a. **Create a new account for every added LDAP alias**
    b. **Create new aliases when Alias Update occurs**
    c. **New users are created as named users**
15. Click **Next**.
16. Click **Finish**.

Set up so BA users can use and view BOE reports in the BA application

To set up so BA users can use and view BOE reports in the BA application, the Admin must join a LDAP group to the group in the BOE that has permission to see the Reports. Then all the users in this LDAP group will have permission to use and see the BOE reports.

1. Log on to the Central Management Console as an administrator.

   Click **Authentication**, then click the **LDAP** tab.
2. Locate the **Add LDAP group (by cn or dn)** field in the LDAP screen. Enter the Group Name configured in the LDAP Server, and click **Add**. Scroll downwards and click **Update**.
3. Navigate to **Home > Group List**, right-click the group added in the previous and select **Member Of**. The Member Of dialog box opens.
4. Click **Join Group**.
5. Navigate to **Group List**, select a group that has authority to view the BO reports, and then click the right arrow (**>**) to add it to the **Destination Group**.
6. Click **OK**.

Configure BA to work with LDAP - Advanced LDAP Configuration

Note: Use this advanced procedure only if the wizard described in the UI Description section is not sufficient for your purposes. For details, see " UI Description" on page 82.

To configure BA to work with LDAP:

1. **Database changes.** In the Management database, in the SETTINGS_MANAGEMENT table create a new record with:
   - **context=foundation**
   - **name=fnd.uum.type**
   - **value=ldap**
2. **external-ldap.properties.** Define groups and users in LDAP. In the **%HPBA_Home%/glassfish/glassfish/domains/BTOA/config/conf/external-ldap.properties** file, enter the relevant parameter values or use the provided default:

Parameter	Description
ldapversion	**3** - LDAP V3. **2** - LDAP V2. **Default:** 3 **Example:** ldapVersion = 3
ldapHost	The name of the machine running the LDAP server. **Default:** localhost **Example:** ldapHost = ldap.hp.com
ldapPort	The port number of the machine running the LDAP server. **Default:** 389

Parameter	Description
	Example: ldapPort = 636
useAdministrator	**true.**The LDAPConnection is created with the provided Administrator username and password. **false.** The LDAPConnection is created without username/password. **Default:** false **Note:** If you work with LDAP V2, the LDAP connection must be created with the administrator username and password, so you must set useAdministrator = true. **Example:** useAdministrator = true
ldapAdministrator	The Administrator logon name used for creating the initial LDAP connection. The parameter is ignored if useAdministrator=false. **Default:**CN=Administrator **Example:** ldapAdministrator = CN=Administrator
ldapAdministrator Password	The Administrator logon password used for creating initial LDAPConnection. The parameter is ignored if useAdministrator=false. **Default:** <empty_value>
enableSSL	**true** - If the customer requires the SSL connection to LDAP. The SSL connection to the port defined in ldapPort property is attempted. **false** - Default. **Default:** false **Example:** enableSSL = false
baseDistinguish NameDelimiter	The regular expression used to separate names in parameters that accept a number of different names, like **usersBase**, **groupsBase**, and more. **Default:** \\s*;\\s* **Example:** baseDistinguishNameDelimiter = \\s*;\\s*
scopeDelimiter	The regular expression used to separate search scope string

Parameter	Description
	(SCOPE_SUB, SCOPE_ONE, SCOPE_BASE) in parameters that accept a number of different search scopes, like **usersScope**, **groupsScope**, and more. **Default:** \\s*,\\s* **Example:** scopeDelimiter = \\s*,\\s*
usersBase	The base DN (distinguished name) for users search. **Default:** dc=example, dc=com **Example:** usersBase = ou=People,dc=hp, dc=com
usersScope	**SCOPE_SUB** - The user search is a recursive search in the tree defined in **usersBase** property. **SCOPE_ONE** - The user search is performed across one level (direct children only) in the tree defined in **usersBase** property. **SCOPE_BASE** - The user search returns one entry maximum, as indicated in the **usersBase** property. **Default:** SCOPE_SUB **Example:** usersScope = SCOPE_SUB, SCOPE_SUB
usersFilter	The search filter, indicating what instances should be returned from the LDAP search. **Default:** (&(uid=*)(objectclass=inetOrgPerson)) **Example:** usersFilter = (&(uid=*) (objectclass=inetOrgPerson))
enableNestedGroups	**true** - The users and groups search works recursively and looks for all users in subgroups returned by the groups search filter. **false** - The users and groups search looks for users in the results by the groups search filter (it does not include subgroups. **Default:** true **Example:** enableNestedGroups = true
maximalAllowedGroups HierarchyDepth	The maximum allowed groups hierarchy depth. This parameter is relevant only if **enableNestedGroups=true**. A negative value allows unlimited depth.

Parameter	Description
	Default: 10 **Example:** maximalAllowedGroupsHierarchyDepth = 10
enableDynamicGroups	**true**- The search executes a URL query to bring all users for dynamic groups. **false** - The dynamic groups URLs are ignored by the URL query. **Default:** false **Example:** enableDynamicGroups = true
groupsBase.	The base dn (distinguished name) for groups search. **Default:** <userBase value> **Example:** groupsBase = ou=Groups,dc=hp, dc=com
groupsScope	**SCOPE_SUB** - The group search is a recursive search in the tree defined in **groupsBase** property. **SCOPE_ONE** - The group search is performed across one level (direct children only) in the tree defined in **groupsBase** property. **SCOPE_BASE** - The group search returns one entry maximum, as indicated in the **groupsBase** property. **Default:**SCOPE_SUB **Example:** groupsScope = SCOPE_SUB
groupsFilter	The search filter, indicating what instances should be returned from the LDAP search. **Default:** (|(objectclass=groupOfNames) (objecclass=groupOfUniqueNames)(objectclass=groupOfUrls) (objectclass=accessGroup)(objectclass=accessRole)) **Example:** groupsFilter = (|(objectclass=groupOfNames) (objectclass=groupOfUniqueNames) (objectclass=groupOfUrls)\ (objectclass=accessGroup) (objectclass=accessRole))
rootGroupsBase	The base dn (distinguished name) for root groups search. **Default:**<usersBase value>

Parameter	Description
	Example: rootGroupsBase = ou=People,dc=hp, dc=com
groupsScope	**SCOPE_SUB** - The root group search is a recursive search in the tree defined in **groupsBase** property. **SCOPE_ONE** - The root group search is performed across one level (direct children only) in the tree defined in **groupsBase** property. **SCOPE_BASE** - The root group search returns one entry maximum, as indicated in the **groupsBase** property. **Default:**SCOPE_SUB **Example:** rootGroupsScope = SCOPE_SUB
rootGroupsFilter	The search filter, indicating what instances should be returned from the LDAP search. **Default:** (|(objectclass=groupOfNames)(objecclass=groupOfUniqueNames)(objectclass=groupOfUrls)(objectclass=accessGroup)(objectclass=accessRole)) **Example:** rootGroupsFilter = (|(objectclass=groupOfNames)(objectclass=groupOfUniqueNames)(objectclass=groupOfUrls)\(objectclass=accessGroup)(objectclass=accessRole))
rolesBase	The base dn (distinguished name) for roles search. **Default:** <usersBase value> **Example:** rolesBase = ou=People,dc=hp, dc=com
rolesScope	**SCOPE_SUB** - Theroles search is a recursive search in the tree defined in **rolesBase** property. **SCOPE_ONE** - The roles search is performed across one level (direct children only) in the tree defined in **rolesBase** property. **SCOPE_BASE** - The roles search returns one entry maximum, as indicated in the **rolesBase** property. **Default:** SCOPE_SUB **Example:** rolesScope = SCOPE_SUB

Parameter	Description
rolesFilter	The search filter, indicating what instances should be returned from the LDAP search. **Default:** (|(objectclass=groupOfNames)(objecclass=groupOfUniqueNames)(objectclass=groupOfUrls)(objectclass=accessGroup)(objectclass=accessRole)) **Example:** rolesFilter = (|(objectclass=groupOfNames)(objectclass=groupOfUniqueNames)(objectclass=groupOfUrls)\(objectclass=accessGroup)(objectclass=accessRole))
rootRolesBase	The base dn (distinguished name) for root roles search. **Default:**<usersBase value> **Example:** rootRolesBase = ou=People,dc=hp, dc=com
rootRolesScope	**SCOPE_SUB** - The root groups search is a recursive search in the tree defined in **groupsBase** property. **SCOPE_ONE** - The root groups search is performed across one level (direct children only) in the tree defined in **groupsBase** property. **SCOPE_BASE** - The root groups search returns one entry maximum, as indicated in the **groupsBase** property. **Default:** SCOPE_SUB **Example:** rootRolesScope = SCOPE_SUB
rootRolesFilter	The search filter, indicating what instances should be returned from the LDAP search. **Default:** (|(objectclass=groupOfNames)(objecclass=groupOfUniqueNames)(objectclass=groupOfUrls)(objectclass=accessGroup)(objectclass=accessRole)) **Example:** rootRolesFilter = (|(objectclass=groupOfNames)(objectclass=groupOfUniqueNames)(objectclass=groupOfUrls)\(objectclass=accessGroup)(objectclass=accessRole))

Parameter	Description
enableDynamicRoles	**true**- The search executes a URL query to bring all users for dynamic groups. **false** - The dynamic groups URLs are ignored by the URL query. **Default:** false **Example:** enableDynamicRoles = true
enableNestedRoles	**true**- The users and groups search are recursive and looks for all users in subgroups returned by the group search filter. **false** - The users and groups search looks for users in the results by the group search filter (it does not include subgroups. **Default:** true **Example:** enableNestedRoles = true
maximalAllowedRoles HierarchyDepth	The maximum allowed groups hierarchy depth. This parameter is relevant only if **enableNestedGroups=true**. A negative value allows unlimited depth. **Default:** 10 **Example:** maximalAllowedRolesHierarchyDepth = 10
SIZELIMIT	This variable limits the total number of results, returned from LDAP by one search. **0** - no limit. LDAP may be (and usually is) configured to limit this number for non-administrators. In this case, the application may receive less results then expected. The usual limit is **1000**. **Default:** 0 **Example:** SIZELIMIT = 0
TIMELIMIT	This variable limits the total number of times spent by LDAP on one search. **0** - no limit. LDAP may be (and usually is) configured to limit this number for non-administrators. In this case, the application may receive less results then expected. **Default:** 0

Parameter	Description
	Example: TIMELIMIT = 0
REFERRALS	Some objects in LDAP may be just referrals to another LDAP that contains the required information. **true** - The search follows the references automatically, till the number indicated by the **REFERRALS_HOP_LIMIT** property. **false** - The search may not return all required results. This also happens when the number of HOPs is exceeded. **Default:** true **Example:** REFERRALS = false
REFERRALS_HOP_LIMIT	The number of times the referrals are followed, until the exception is thrown terminating the search. **Default:** 10 **Example:** REFERRALS_HOP_LIMIT = 10
ldapReferralHost	Referrals credentials (if needed). If ldapHost is defined as: • An IP, set ldapReferralHost as an IP. • A DNS name, set ldapReferralHost as a DNS name. • A string, for example LDAP host = ldap://test.net, port=389, set "ldapReferralHost = test.net", and set "ldapReferralPort = 389". **Example:** ldapReferralHost = test.net
ldapReferralPort	LDAP connections are to port 389, or 636 for secure connections. This searches the Active Directory (AD) Domain. For Active Directory: Use an LDAP search port and not a Global Catalog search port. **Default:** 389 (636 for secure connections) **Tip:** It is not recommended to use the Global Catalog LDAP connections: 3268 and 3269 (secure) that perform Forest wide searches (multiple domain searches). **Example:** ldapReferralPort = 389

Parameter	Description
ldapReferralUser	The username (used for creating referral LDAP Connection). **Default:** cn=Directory Manager **Example:** ldapReferralUser cn=Directory Manager
ldapReferralPassword	The password (used for creating referral LDAPConnection). **Default:** <empty password> **Example:** ldapReferralPassword = mercurypw
baseReferralDelimiter	The regular expression used to separate values in above referral parameters. **Example:** baseReferralDelimiter = \\s*;\\s*
ldapAuthNUsers ReferralBase	The base for authentication with users from referral. Specify only if you want to authenticate with users from the referred LDAP. **Example:** ldapAuthNUsersReferralBase = dc=test,dc=net
BATCHSIZE	The minimal size of chunks that must be received before the result may be processed. This parameter influences only the efficiency of lazy reading of the search results. **Default:** 1 **Example:** BATCHSIZE = 1
MAXBACKLOG	The size of queue, waiting for BATCH results, if BATCHSIZE is not 0. This parameter influences only the efficiency of lazy reading of the search results. **Default:** 1000 **Example:** MAXBACKLOG = 1000
attributeValuesDelimiter	The regular expression used to separate attribute names in parameters that accept a number of different attribute names, as **usersObjectClass**, **usersUniqueIDAttribute**, and more. **Default:** \\s*;\\s*

Parameter	Description
	Example: attributeValuesDelimiter = \\s*;\\s*
usersObjectClass	The object class used for storing the users information. **inetOrgPerson** - for SunOne Directory. **user** - for Microsoft Active Directory. **Default:** inetOrgPerson **Example:** usersObjectClass = inetOrgPerson
usersUniqueIDAttribute	The unique ID attribute. This attribute should store the actual login name of the user. The dn search and authentication functions suppose that this attribute is unique. **uid** - for SunOne Directory. **sAMAccountName** - for Microsoft Active Directory. **Default:** uid **Example:** usersObjectClass = inetOrgPerson
usersDisplayName Attribute	The attribute used to store the user's display name. The uniqueness of this attribute is not required. **cn** - for SunOne Directory. **cn** - for Microsoft Active Directory. **Default:** cn **Example:** usersDisplayNameAttribute = cn
usersLoginNameAttribute **usersFirstNameAttribute** **usersLastNameAttribute** **usersEmailAttribute** **usersPreferredLanguage Attribute** **usersPreferredLocation Attribute** **usersTimeZoneAttribute** **usersDateFormatAttribute** **usersNumberFormatAttribute** **usersWorkWeekAttribute** **usersTenantIDAttribute**	The default attributes that are supported ad hoc in the BSFPrincipal object. **Default:**Defaults are given for the SunOne directory server. usersLoginNameAttribute = **uid** usersFirstNameAttribute = **givenName** usersLastNameAttribute = **sn** usersEmailAttribute = **mail** usersPreferredLanguageAttribute = **preferredLanguage** usersPreferredLocationAttribute = **l** usersTimeZoneAttribute = **undefinedAttribute** usersDateFormatAttribute = **undefinedAttribute** usersNumberFormatAttribute = **undefinedAttribute**

Parameter	Description
	usersWorkWeekAttribute = **undefinedAttribute** usersTenantIDAttribute = **undefinedAttribute**
groupsObjectClass	The object class used for storing the static group information. **groupOfUniqueNames** - for SunOne Directory. **group** - for Microsoft Active Directory. **Default:** groupOfUniqueNames **Example:** groupsObjectClass = groupOfUniqueNames
groupsMembersAttribute	Attribute used to store the group's member information. **uniqueMember** - for SunOne Directory. **member** - for Microsoft Active Directory. **Default:** uniqueMember **Example:** groupsMembersAttribute = uniqueMember, member
groupsNameAttribute	Attribute used to store the group name. The uniqueness of this attribute is not required. **cn** - for SunOne Directory. **cn** - for Microsoft Active Directory. **Default:** cn **Example:** groupsNameAttribute = cn
groupsDisplayName Attribute	Attribute used to store the group's display name. The uniqueness of this attribute is not required. **cn** - for SunOne Directory. **cn** - for Microsoft Active Directory. **Default:** cn **Example:** groupsDisplayNameAttribute = cn
groupsDescription Attribute	Attribute used to store the group's description. The uniqueness of this attribute is not required. **description** - for SunOne Directory. **description** - for Microsoft Active Directory. **Default:** description

Parameter	Description
	Example: groupsDescriptionAttribute = description
dynamicGroupsClass	The object class used for storing the dynamic groups information. **groupOfUrls** - for SunOne Directory. Microsoft Active Directory is not supported. **Default:** groupOfUrls **Example:** dynamicGroupsClass = groupOfUrls
dynamicGroupsMember Attribute	Attribute used to store the search URL, defining the members of the dynamic group. **memberUrl** - for SunOne Directory. Microsoft Active Directory is not supported. **Default:** memberUrl **Example:** dynamicGroupsMemberAttribute = memberUrl
dynamicGroupsName Attribute	Attribute used to store the dynamic group name. The uniqueness of this attribute is not required. **cn** - for SunOne Directory. Microsoft Active Directory is not supported. **Default:** cn **Example:** dynamicGroupsNameAttribute = cn
dynamicGroupsDisplay NameAttribute	Attribute used to store the dynamic group's display name. The uniqueness of this attribute is not required. **cn** - for SunOne Directory. Microsoft Active Directory is not supported. **Default:** cn **Example:** dynamicGroupsDisplayNameAttribute = cn
dynamicGroups DescriptionAttribute	Parameter used to store the dynamic group's description. The uniqueness of this attribute is not required. **description** - for SunOne Directory. Microsoft Active Directory is not supported.

Parameter	Description
	Default: description **Example:** dynamicGroupsDescriptionAttribute = description
useBottomUpAlgorithm ForFindParent GroupsOfUserPlain	This parameter is used for optimization of function **FindParentGroupsOfUserPlain**. **true** - The algorithm should be the false, but for some LDAP Configurations it is possible that value false will be better. **false** - Change to **false** only if you experience performance issues with this specific function. **Default:**true **Example:** useBottomUpAlgorithmForFindParent GroupsOfUserPlain = true
notAGroupAttribute	When the search group is from LDAP, if the DN (distinguished name) includes these values, it is filtered and not treated as a group type. **Default:**uid, samaccountname **Example:** notAGroupAttribute = uid, samaccountname
rolesObjectClass	Object class used for storing the static role information. **Default:**groupOfUniqueNames **Example:** rolesObjectClass = groupOfUniqueNames, groupOfNames
rolesMembersAttribute	Attribute used to store the role's member information. **uniqueMember** - for SunOne Directory. **member** - for Microsoft Active Directory. **Default:**uniqueMember **Example:** rolesMembersAttribute = uniqueMember, member
rolesNameAttribute	Attribute used to store the role name. The uniqueness of this attribute is not required. **cn** - for SunOne Directory. **cn** - for Microsoft Active Directory.

Parameter	Description
	Default: cn **Example:** rolesNameAttribute = cn
rolesDisplayName Attribute	Attribute used to store the role display name. The uniqueness of this attribute is not required. **cn** - for SunOne Directory. **cn** - for Microsoft Active Directory. **Default:** cn **Example:** rolesDisplayNameAttribute = cn
rolesDescriptionAttribute	Attribute used to store the role description. The uniqueness of this attribute is not required. **description** - for SunOne Directory. **description** - for Microsoft Active Directory. **Default:** description **Example:** rolesDescriptionAttribute = description
dynamicRolesClass	Object class used for storing the dynamic roles information. **groupOfUrls** - for SunOne Directory. Microsoft Active Directory is not supported. **Default:** groupOfUrls **Example:** dynamicRolesClass = groupOfUrls
dynamicRolesMember Attribute	Attribute used to store the search URL, defining the members of the dynamic role. **memberUrl** - for SunOne Directory. Microsoft Active Directory is not supported. **Default:**memberUrl **Example:** dynamicRolesMemberAttribute = memberUrl
dynamicRolesName Attribute	Attribute used to store the dynamic role name. The uniqueness of this attribute is not required. **cn** - for SunOne Directory. Microsoft Active Directory is not supported. **Default:**cn

Parameter	Description
	Example: dynamicRolesNameAttribute = cn
dynamicRolesDisplay NameAttribute	Attribute used to store the dynamic role display name. The uniqueness of this attribute is not required. **cn** - for SunOne Directory. Microsoft Active Directory is not supported. **Default:**cn **Example:** dynamicRolesDisplayNameAttribute = cn
dynamicRoles DescriptionAttribute	Parameter used to store the dynamic role description. The uniqueness of this attribute is not required. **description** - for SunOne Directory. Microsoft Active Directory is not supported. **Default:**description **Example:** dynamicRolesDescriptionAttribute = description
notARoleAttribute	When the search group is from LDAP, if the DN (distinguished name) includes these values, it is filtered and not treated as a role type. **Default:** uid, samaccountname **Example:** notARoleAttribute = uid, samaccountname
vlvUsersBase	Base dn (distinguished name) for users search for Virtual List View (VLV) API. **Default:**dc=example, dc=com **Example:** vlvUsersBase = ou=People,dc=hp, dc=com
vlvUsersScope	**SCOPE_SUB** - The users search for Virtual List View (VLV) API is a recursive search in the tree defined in **usersBase** property. **SCOPE_ONE** - The users search for Virtual List View (VLV) API is performed across one level (direct children only) in the tree defined in **usersBase** property. **SCOPE_BASE** - The users search for Virtual List View (VLV) API returns one entry maximum, as indicated in the **usersBase** property. **Default:**SCOPE_SUB

Parameter	Description
	Example: vlvUsersScope = SCOPE_SUB
vlvUsersFilter	Search filter, indicating what instances should be returned from the LDAP search for Virtual List View (VLV) API. **Default:**(&(uid=*)(objectclass=inetOrgPerson)) **Example:** vlvUsersFilter = (&(uid=*) (objectclass=inetOrgPerson))
vlvGroupsBase	Base dn (distinguished name) for groups search for Virtual List View (VLV) API. **Default:**dc=example, dc=com **Example:** vlvGroupsBase = ou=Groups, dc=hp, dc=com
vlvGroupsScope	**SCOPE_SUB** - The groups search for Virtual List View (VLV) API is a recursive search in the tree defined in **vlvGroupsBase** property. **SCOPE_ONE** - The groups search for Virtual List View (VLV) API is performed across one level (direct children only) in the tree defined in **vlvGroupsBase** property. **SCOPE_BASE** - The groups search for Virtual List View (VLV) API returns one entry maximum, as indicated in the **vlvGroupsBase** property. **Default:**SCOPE_SUB **Example:** vlvGroupsScope = SCOPE_SUB
vlvGroupsFilter	Search filter, indicating what instances should be returned from the LDAP search for Virtual List View (VLV) API. **Default:**(&(uid=*)(objectclass=inetOrgPerson)) **Example:** vlvGroupsFilter = (|(objectclass=groupOfNames) (objectclass=groupOfUniqueNames) (objectclass=groupOfUrls)\ (objectclass=accessGroup) (objectclass=accessRole))
vlvRolesBase	Base dn (distinguished name) for users search. **Default:**dc=example, dc=com

Parameter	Description
	Example: vlvRolesBase = ou=People,dc=hp, dc=com
vlvRolesScope	**SCOPE_SUB** - The roles search for Virtual List View (VLV) API is a recursive search in the tree defined in **usersBase** property. **SCOPE_ONE** - The roles search for Virtual List View (VLV) API is performed across one level (direct children only) in the tree defined in **usersBase** property. **SCOPE_BASE** - The roles search for Virtual List View (VLV) API returns one entry maximum, as indicated in the **usersBase** property. **Default:** SCOPE_SUB **Example:** vlvGroupsScope = SCOPE_SUB
vlvRolesFilter	Search filter, indicating what instances should be returned from the LDAP search for Virtual List View (VLV) API. **Default:** (&(uid=*)(objectclass=inetOrgPerson)) **Example:** vlvRolesFilter = (|(objectclass=groupOfNames) (objectclass=groupOfUniqueNames) (objectclass=groupOfUrls)\(objectclass=accessGroup) (objectclass=accessRole)) usersCreationBase = ou=People,dc=hp, dc=com groupsCreationBase = ou=Groups, dc=hp, dc=com rolesCreationBase = ou=People,dc=hp, dc=com
uumUserCreationAnd DeletionAllowed **uumUserEditingAllowed** **uumGroupCreationAnd DeletionAllowed** **uumGroupEditingAllowed** **uumRoleCreationAnd DeletionAllowed** **uumRoleEditingAllowed**	UUM Metadata **Default:** uumUserCreationAndDeletionAllowed = **true** uumUserEditingAllowed = **true** uumGroupCreationAndDletionAllowed = **true** uumGroupEditingAllowed = **true** uumRoleCreationAndDeletionAllowed = **true** uumRoleEditingAllowed = **true**
usersPasswordAttribute	The user password attribute. **Example:** usersPasswordAttribute = userPassword

Parameter	Description
ldapUseCache	**true** - LDAP must use a cache. **false** - LDAP should not use a cache. **Default:** true **Example:** ldapUseCache=true
ldapCacheSize	The LDAP connection cache size in bytes. It represents an in-memory cache that can be used to reduce the number of search requests sent to the LDAP server. **Default:** 1000000 **Example:** ldapCacheSize=1000000
ldapCacheTTL	The LDAP connection cache life-time in seconds. **Default:** 3600 **Example:** ldapCacheTTL=3600

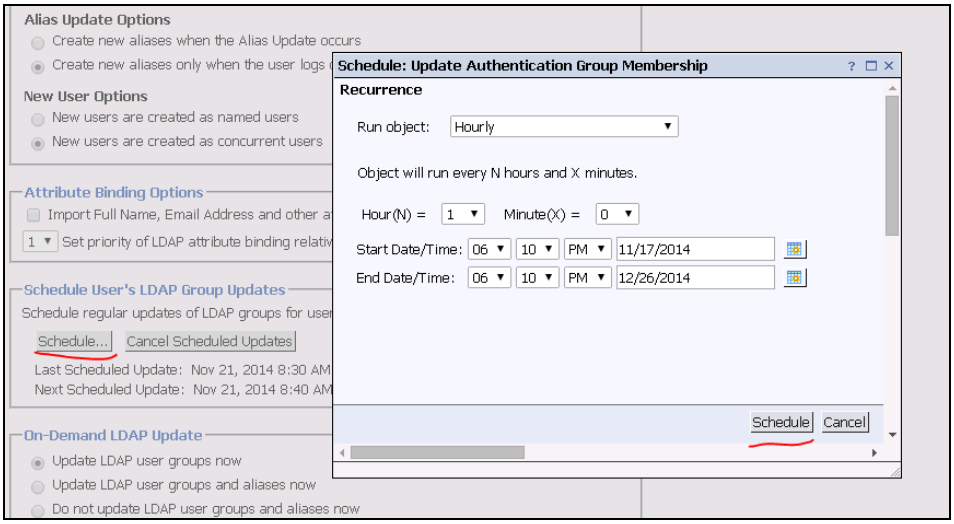
3. **bsf.properties.** In the **%HPBA_Home%/glassfish/glassfish/domains/BTOA/config/conf/bsf.properties** file, change:

From:	To:
personalization.provider=EXTERNAL	personalization.provider=SHARED
users.provider=EXTERNAL	users.provider=SHARED
groups.provider=EXTERNAL	groups.provider=SHARED

4. **User synchronization.** To improve the synchronization of users, perform the following:
   a. The synchronization of LDAP users, and Business Analytics and SAP BusinessObjects users is performed by default every **60 minutes** (this is the recommended value).
   To change the periodicity, click **Admin > Scorecard > BA Settings**, and enter a new value in the **Users Info Reload Rate (minutes)** in the Studio update area. Because each synchronization lasts a few minutes, it is recommended to set the default synchronization period so there is no overlap with the synchronization itself. For details, see "BA Settings" on page 124.
   b. To make sure that the synchronization is only performed on the relevant users (for performance purposes). Make sure to add to the **external-ldap.properties** file located at **%HPBA_Home%/glassfish/glassfish/domains/BTOA/config/conf**, the **(groupfilter=(&(objectClass=group)(cn=g-s-rbap-t-hpxs*))** so that only the users needed for Business Analytics are synchronized.
   c. Synchronize the LDAP users with SAP BusinessObjects, using one of the options below:

i. Option 1:
   A. Log on to SAP 'BusinessObjects BI platform Central Management Console', and select **Authentication**> **LDAP**.
   B. Check **Update LDAP user groups and aliases now**.
   C. Click the **Update** button.

ii. Option2: create a schedule to schedule regular updates of LDAP groups for users:
   A. Log on to SAP 'BusinessObjects BI platform Central Management Console'', and select **Authentication**> **LDAP**.
   B. Click the **Schedule...** button.
   C. Input the schedule information.



   D. Click the **Schedule...** button.

UI Description

LDAP Management Page

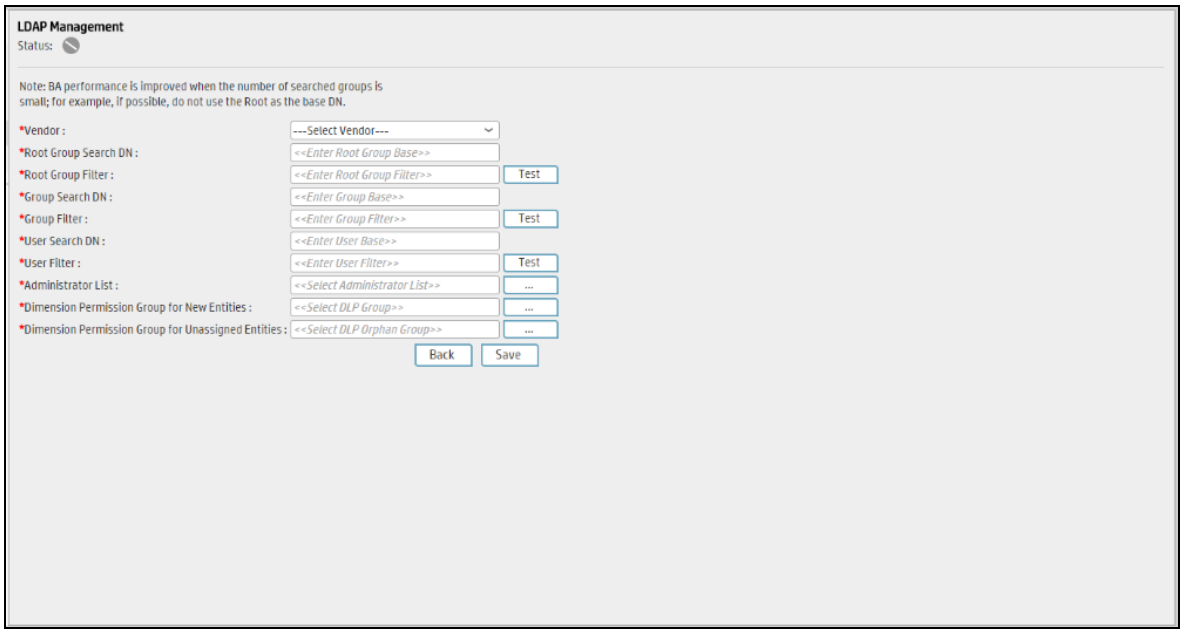
Note: You can combine using the LDAP Management user interface and the external-ldap.properties file to specify the parameters you need in order to work with LDAP.

Click  to refresh the page.

User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Status	The configuration is **Enabled**. The configuration is **Disabled**.
Host Address	The name of the machine running the LDAP server. **Default:** localhost **Example:** ldap.hp.com
Port	The port number of the machine running the LDAP server. **Default:** 389 **Example:** 636
LDAP Account	The Administrator logon name used for creating the initial LDAP connection. If the field is left empty, LDAP is access by anonymous user. There is no default Administrator user. **Defaut:** CN=Administrator **Example:** CN=Administrator
LDAP Password	The Administrator logon password used for creating initial LDAPConnection. If the field is left empty, LDAP is access without a password. There is no default Administrator user password.

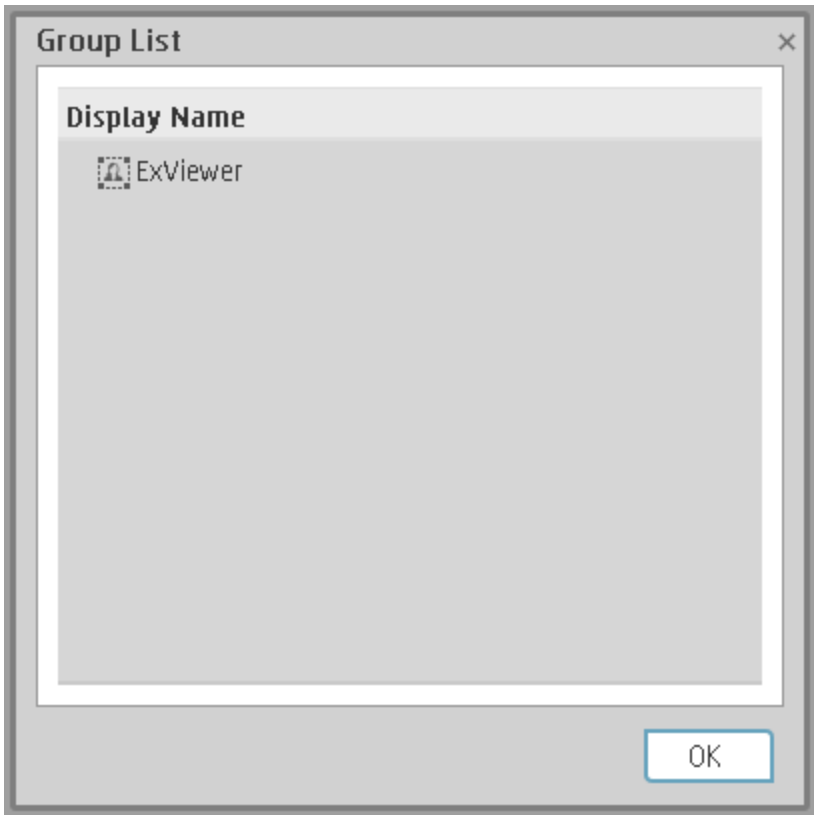
UI Element	Description
	Default: <empty_value>
SSL	Select if the customer requires the SSL connection to LDAP. The SSL connection to the port defined in ldapPort property is attempted. If the server cannot perform the connection, the following error message is issued: **The BA server cannot connect to the LDAP server.** **Make sure all the relevant certificates are imported.** **After the relevant certificates are imported, restart the BA server.** In such a case, make sure that the relevant certificates are imported. After the import of the relevant certificates completes, restart the server. **Defaut:** unselected

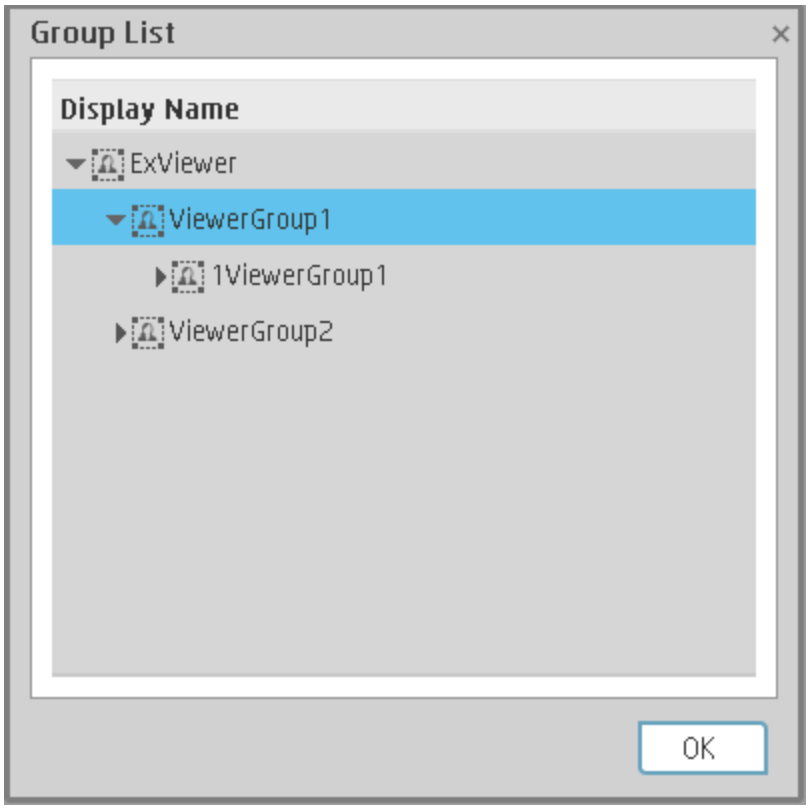


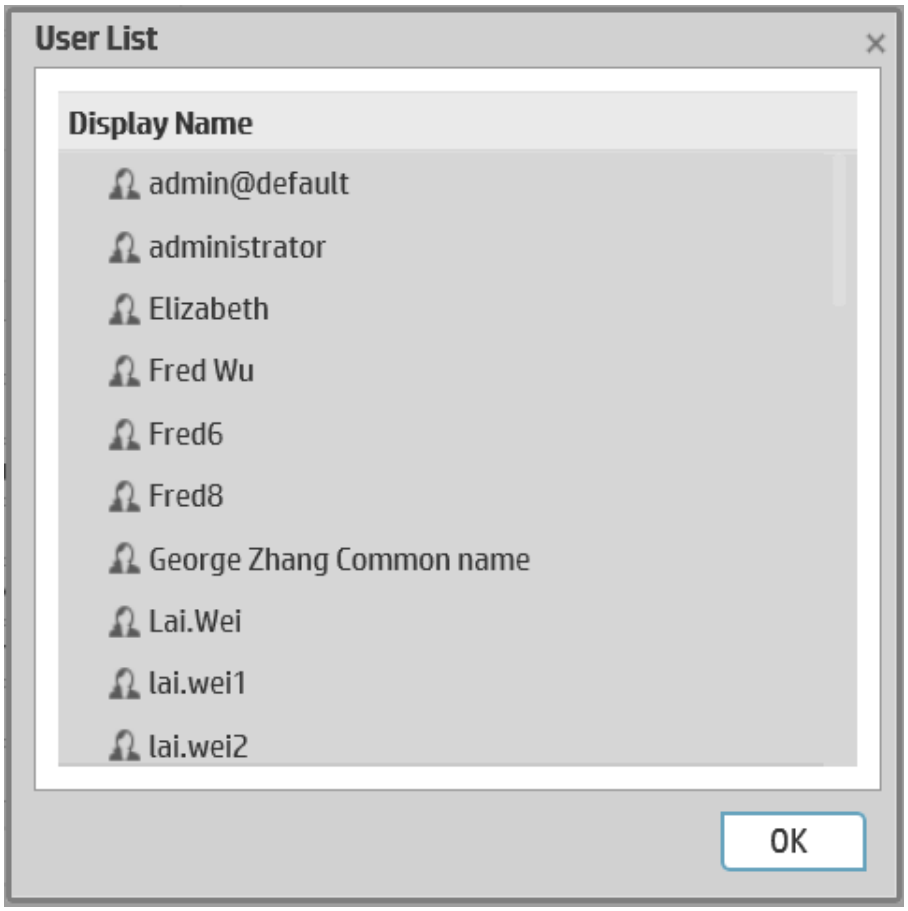
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

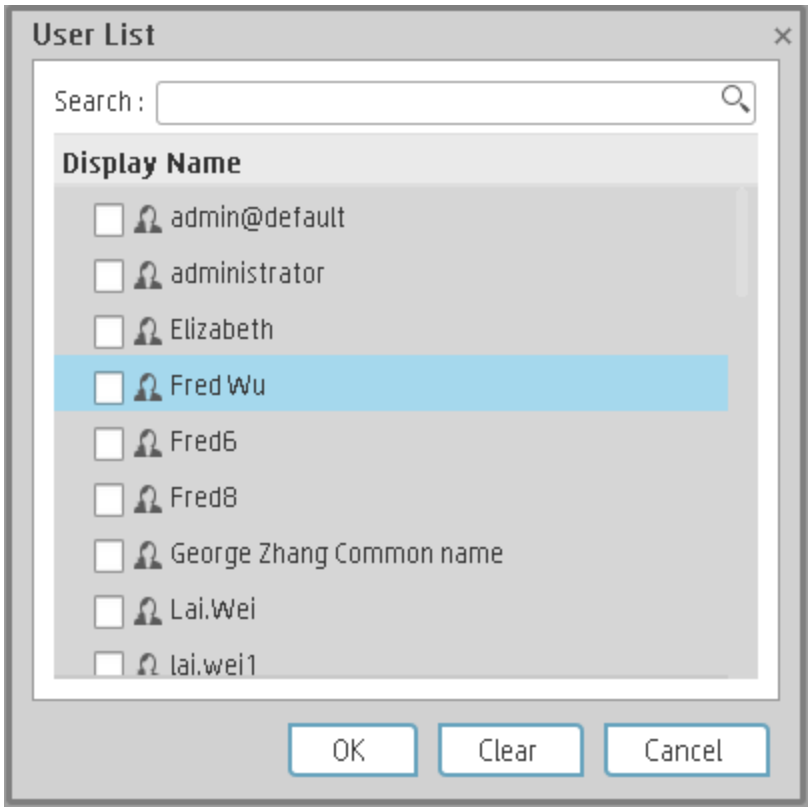
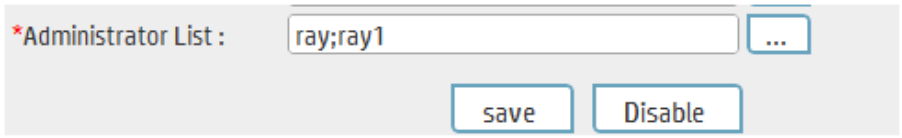
UI Element	Description
Vendor	Select the relevant vendor: • OpenLDAP Directory • Microsoft Active Directory • Sun One Directory • Netscape • Novell • Other

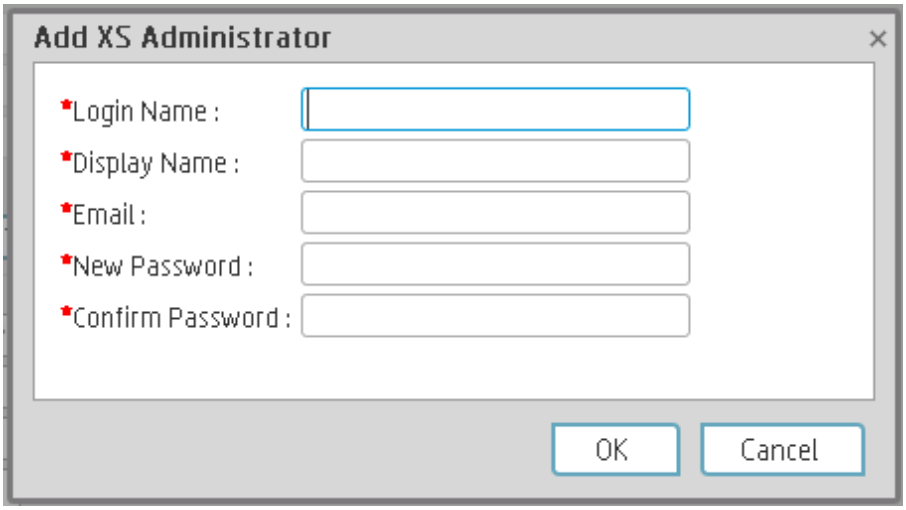
UI Element	Description
	Only the above vendors are supported.
Root Group Search DN	The base dn (distinguished name) for root groups search. For details on how to set this parameter, see "Searches for LDAP user groups" on page 59. **Default:** <usersBasevalue> **Example:** rootGroupsBase = ou=People,dc=hp, dc=com
Root Group Filter	The search filter, indicating what instances should be returned from the LDAP search. For details on how to set this parameter, see "Searches for LDAP user groups" on page 59. Default: (|(objectclass=groupOfNames)(objecclass=groupOfUniqueNames)(objectclass=groupOfUrls)(objectclass=accessGroup)(objectclass=accessRole)) **Example:** rootGroupsFilter = (|(objectclass=groupOfNames)(objectclass=groupOfUniqueNames)(objectclass=groupOfUrls)\(objectclass=accessGroup)(objectclass=accessRole)) Click **Test** to search for groups using the values you entered in the **Root Group Filter** and **Root Group Search DN** fields. After you click **Test** for the**Root Group Filter**, the group filter is automatically filled. You can then modify it.

UI Element	Description
	
Group Search DN	The base dn (distinguished name) for groups search. For details on how to set this parameter, see "Searches for LDAP user groups" on page 59. **Default:** <userBase value> **Example:** groupsBase = ou=Groups,dc=hp, dc=com
Group Filter	The search filter, indicating what instances should be returned from the LDAP search. For details on how to set this parameter, see "Searches for LDAP user groups" on page 59. **Default:** (|(objectclass=groupOfNames)(objecclass=groupOfUniqueNames) (objectclass=groupOfUrls)(objectclass=accessGroup)(objectclass=accessRole)) **Example:** groupsFilter = (|(objectclass=groupOfNames)(objectclass=groupOfUniqueNames) (objectclass=groupOfUrls)\ (objectclass=accessGroup) (objectclass=accessRole)) Click **Test** to search for groups using the values you entered in the **Group Filter** and **Group Search DN** fields.

UI Element	Description
	
User Search DN	The base DN (distinguished name) for users search. **Default:** dc=example, dc=com **Example:** usersBase = ou=People,dc=hp, dc=com
User Filter	The search filter, indicating what instances should be returned from the LDAP search. **Default:** (&(uid=*)(objectclass=inetOrgPerson)) **Example:** usersFilter = (&(uid=*)(objectclass=inetOrgPerson)) Click **Test** to search for users using the values you entered in the **User Filter** and **User Search DN** fields.

UI Element	Description
	
Administrator List	After you transfer BA transfer to LDAP mode by clicking the **Save** button, BA fetches user information from the LDAP server. The first time, none of the LDAP users have BA Administrator permissions. So you must select at least one LDAP user to become the BA Administrator and to be able to manage users in BA. Click **...** to select the users you want to be assigned BA Administrator permissions:

UI Element	Description
	 You can select more than one user. Their names are separated by semi-colons (;): 
Dimension Permission Group for New Entities	Click ... and select the name of the default user group for new dimension entities. For details, see "Dimension Permissions" on page 97. During the activation of LDAP, the default user group you selected is automatically entered in the corresponding Foundation settings. For details, see "Foundation" on page 108.
Dimension Permission Group for Unassigned Entities	Click ... and select the name of the default user group for unassigned dimension entities after they have been unassigned. For details, see "Dimension Permissions" on page 97. During the activation of LDAP, the default user group you selected is automatically entered in the corresponding Foundation settings. For details, see "Foundation" on page 108.
Save	Click **Save** to save your selection. The following warning is issued: **Once the**

UI Element	Description
	changes to the LDAP configuration are saved, restart the server.
Disable	Click **Disable** to disable the LDAP configuration. Enter information about the BA Administrator in the dialog box that opens:  After the LDAP Admin disables the LDAP mode: • The users and groups used by BA are loaded from the **BA** local database and not from the LDAP server anymore. • The LDAP Admin must create a new BA Admin user. If the BA Administrator name is the same as the BOE Administrator name (BOE Administrator was created during the installation of BA), then the BOE Administrator password is the same as the BA Admin password.

LDAP in BusinessObjects

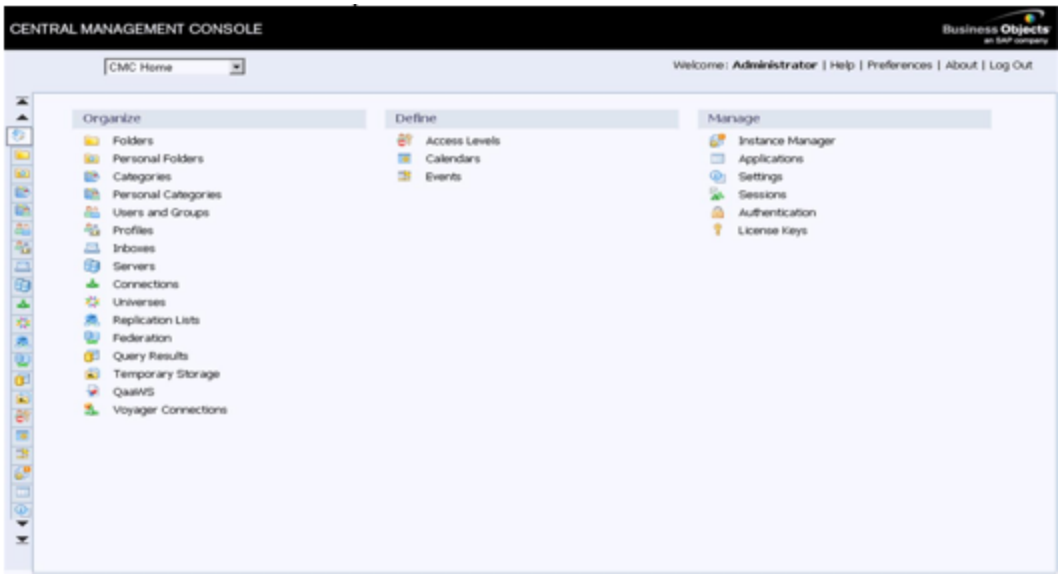
This section describes how to configure SAP BusinessObjects Enterprise internal LDAP.

Tasks

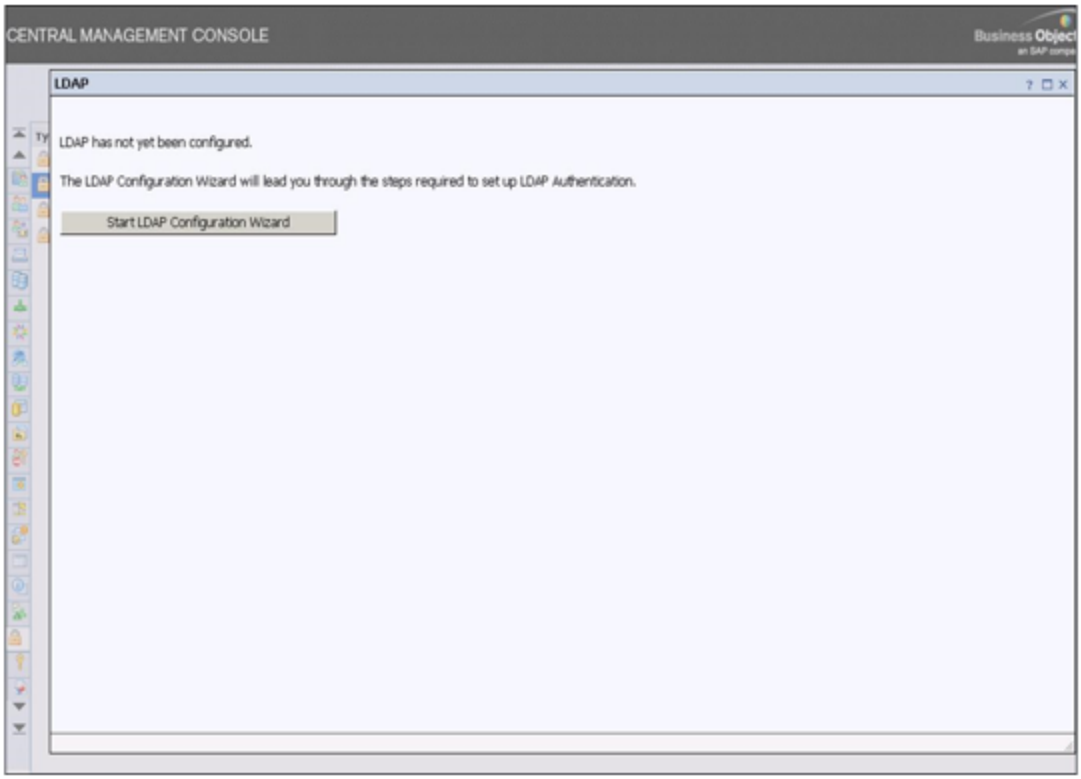
Setting Up LDAP Authentication in BusinessObjects

To configure the LDAP Server settings in BusinessObjects:

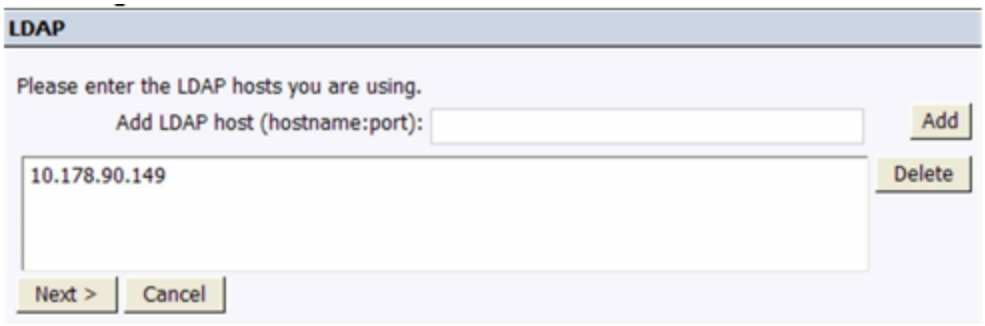
1. Log on to BusinessObjects Central Management Console using the administrator name and password.



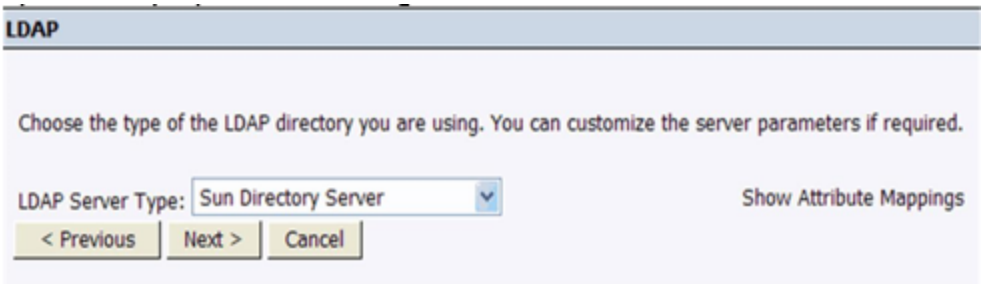
2. Click **Authentication** to access the authentication options in BusinessObjects.
3. Double-click **LDAP**.



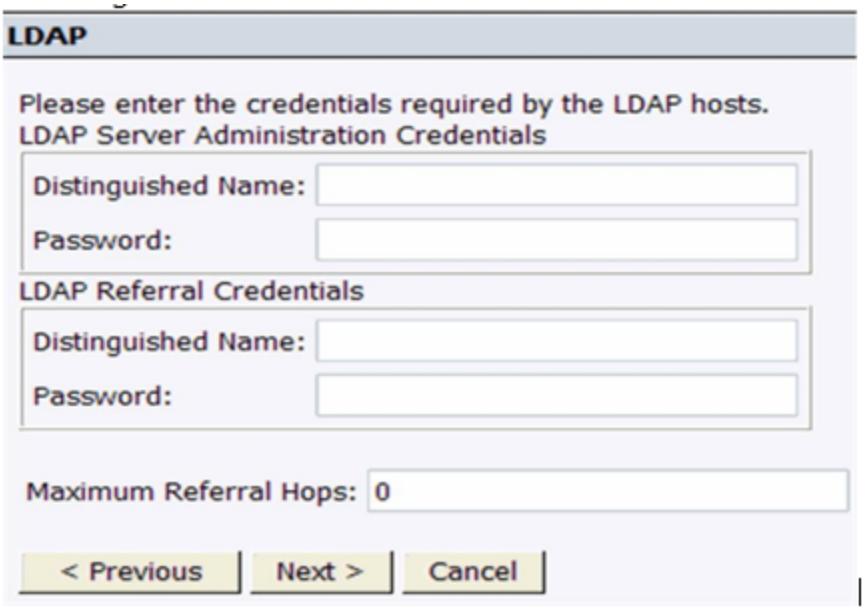
4. Click **Start LDAP Configuration Wizard**. The system displays the following screen:



5. Add the IP address and port number for the LDAP server. Click **Next**. The system displays the following screen:



6. Click **Next**.
7. Enter a name for the base LDAP and click **Next**. The system displays the following screen:



8. In the **LDAP Server Type** drop-down list, select your LDAP server, and click **Next**. This is where you select the type of server you are using: **Sun One** or **Active Directory**.

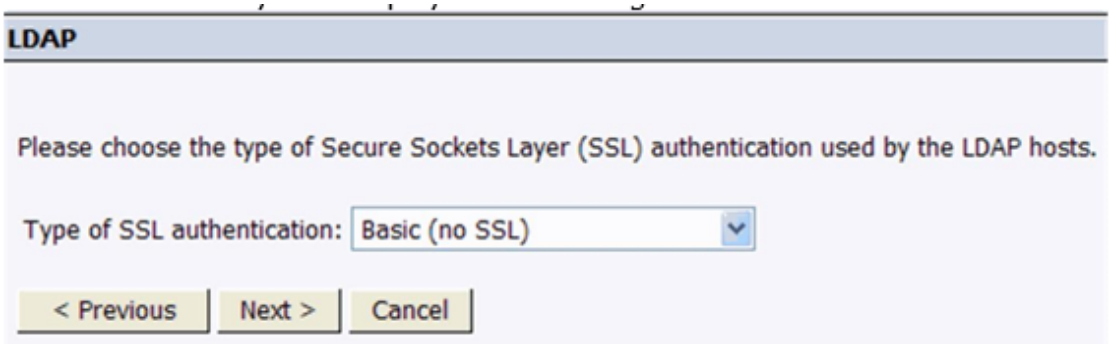
   If you select **Active Directory**:

   a. Click **Show Attribute Mappings**.

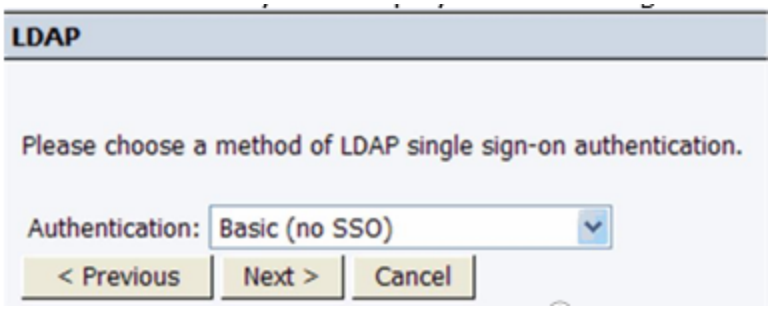
   b. In the **Default User Search Attribute** field, change the value from **cn** to **sAMAccountName**.

   c. In the **User Name** field, change the value from **cn** to **sAMAccountName**.

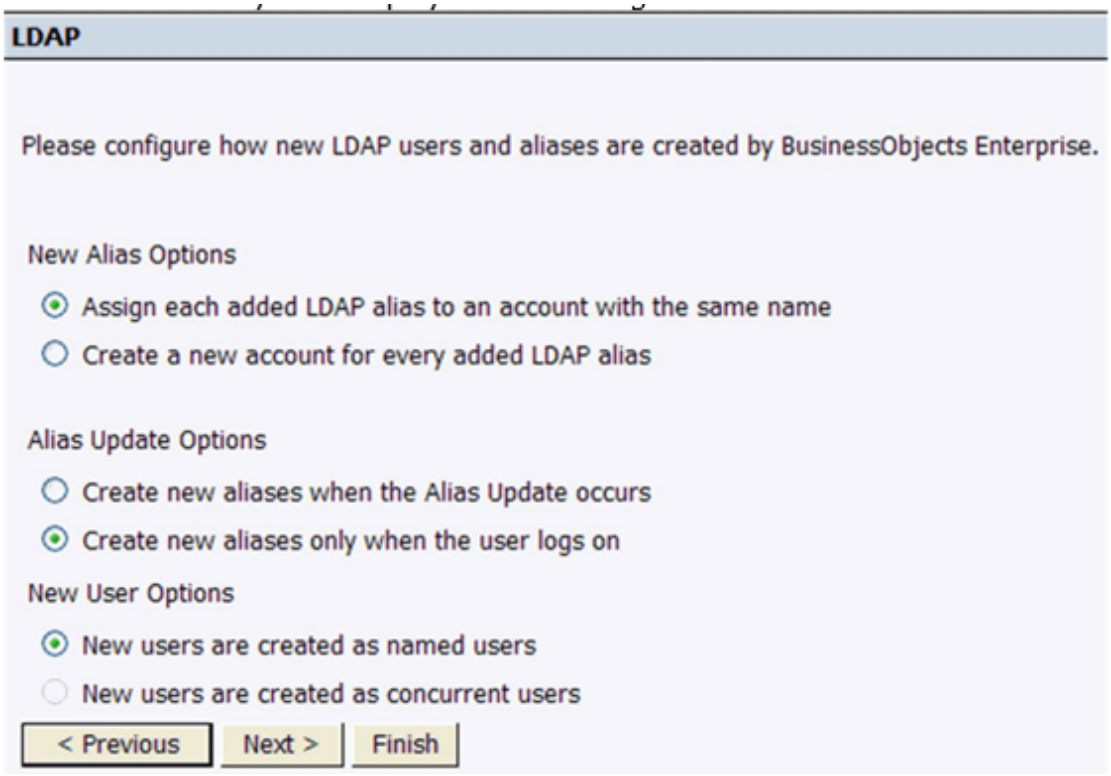
9. Click **Next**.



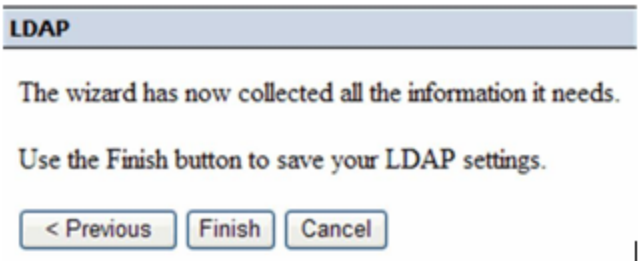
10. Click **Next**.



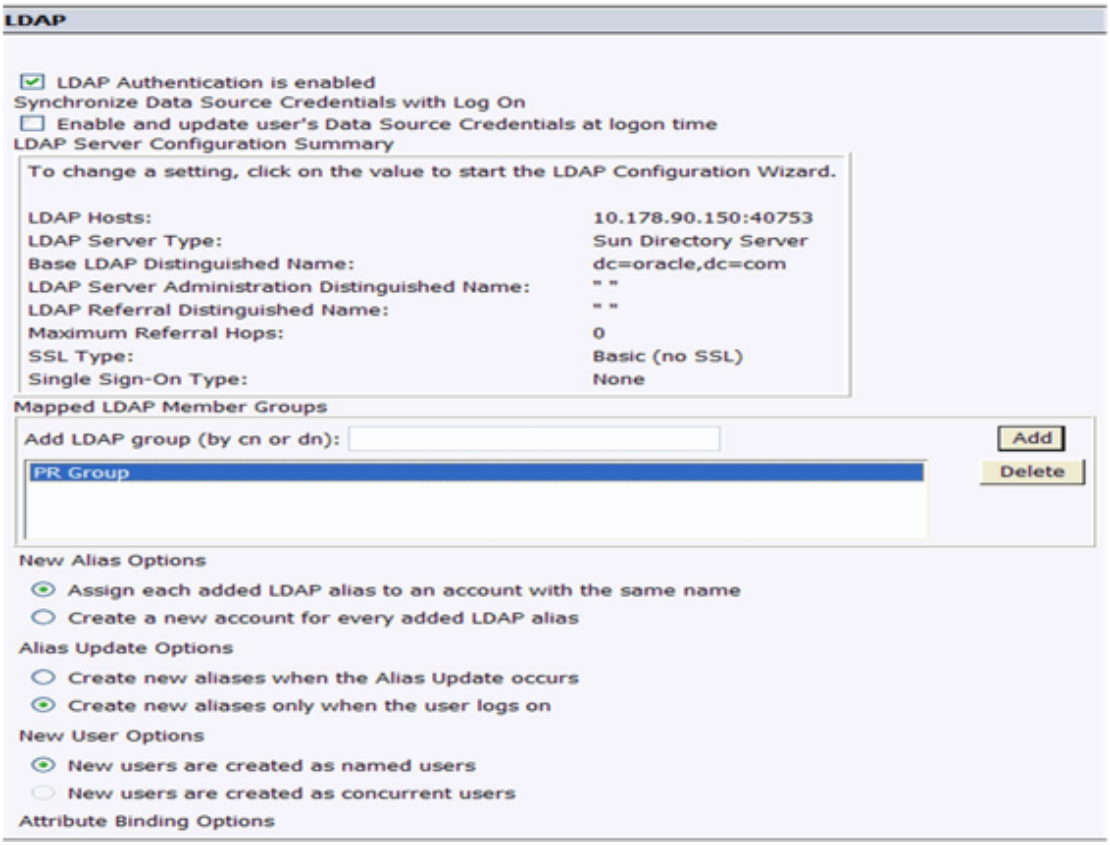
11. Click **Next**.



12. Select the relevant New User Options:
    - **New users are created as named users**
    - **New users are created as concurrent users**
13. Click **Next**. The wizard reports when it has collected all the required information.

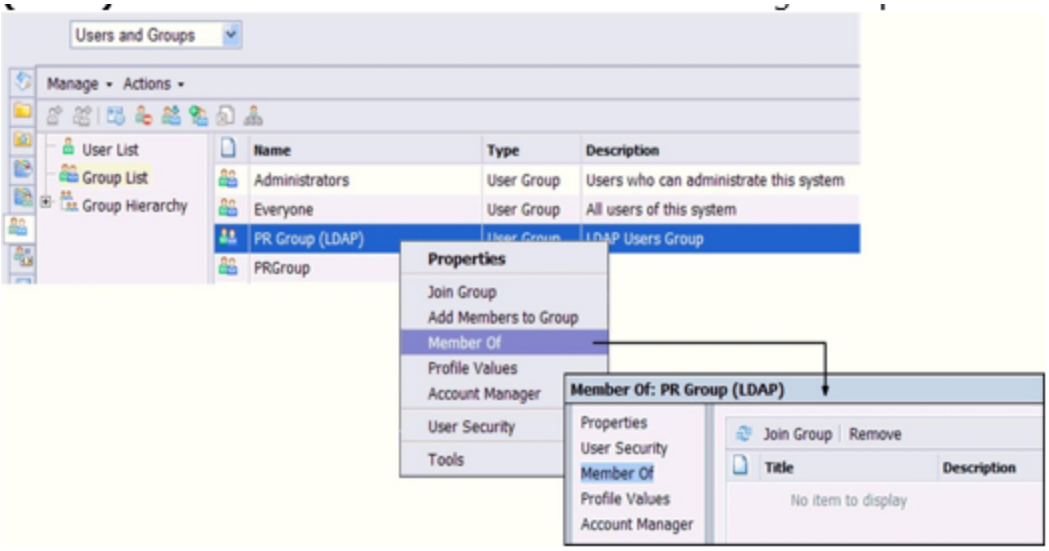


14. Click **Finish**.
15. Wait until the system displays the LDAP screen.
16. Locate the **Add LDAP group (by cn or dn)** field in the LDAP screen. Type the Group Name configured in LDAP Server, and click **Add**.

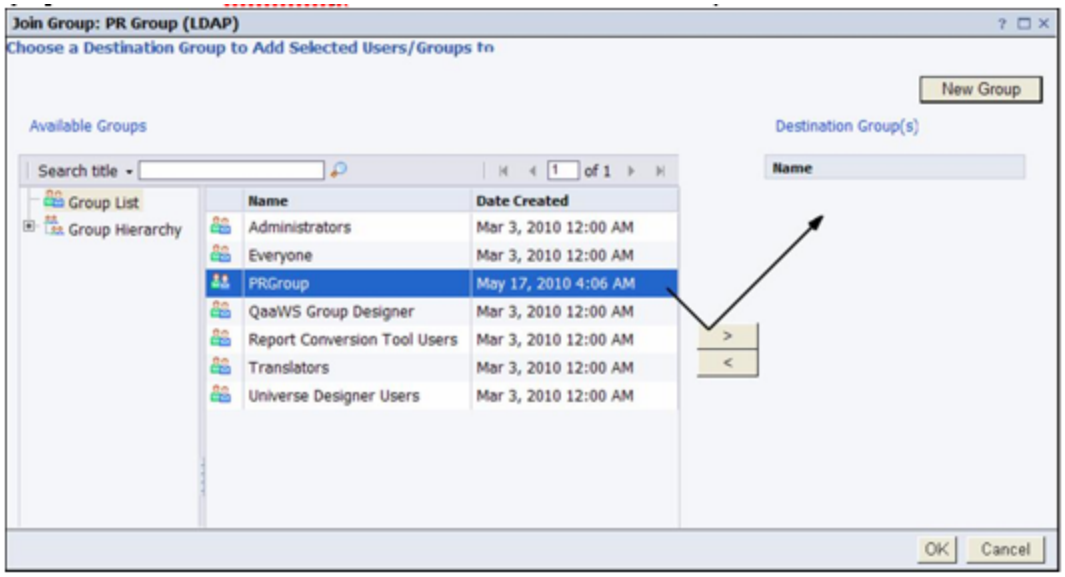


17. Scroll downwards and click **Update**.
18. Map the LDAP member group whose users you want to authenticate through LDAP.

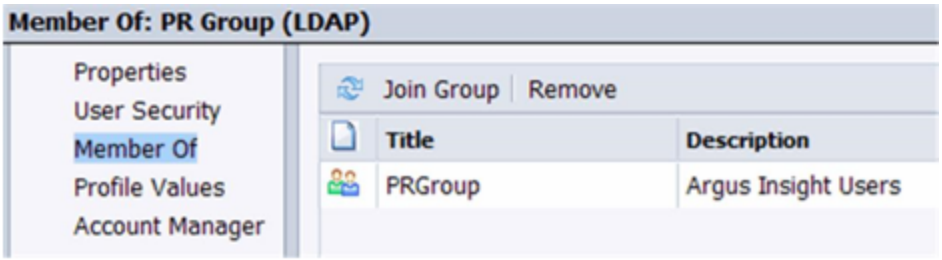
    For example, PR Group is the member group whose users are part of Argus Insight and use LDAP authentication for access to BusinessObjects.
19. Select **Create a new account for every added LDAP alias** under the New Alias Options on the LDAP window.
20. Close the window.
21. Navigate to **Home**, **Group List**, and then right-click PR Group (LDAP) and select **Member Of**. The Member Of dialog box opens.



22. Click **Join Group**.
23. Navigate to **Group List**, select **PRGroup**, and then click the right arrow (>) to add the PRGroup into the Destination Group.



24. Click **OK**. Note that PR Group (LDAP) is now a member of the PRGroup.



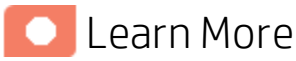
Dimension Permissions

In addition to permissions at the level of a Scorecard or a Page, the administrator can provide permissions at the level of a dimension and its entities (Breakdown and its values). An end-user with such a permission can view data in the Dashboard and Explorer only at the level of the specific Breakdown.

For example: an end-user should be able to view only the results of KPI\Metric Breakdowns for the EMEA location and not from other locations. That end-user should not even have the option to select other locations. In the Dashboard page, after the end-user selects to view the results by Location: EMEA, the entire page is refreshed filtered for the Location:EMEA entity.

To access:

Select **ADMIN** > **Users and Roles** >**Dimension Permissions**.



Adding an entity to a context.

When you add an entity to a context, it is automatically assigned the **Everyone** permission if you do not use LDAP.

If you are using LDAP, all dimension entities are assigned to the group that is specified while configuring LDAP.

The **Everyone** permission is customizable. You can change the name of the permission in **Admin > Settings > Foundation > Dimension Permission Group for New Entities**. For details, see "Foundation" on page 108.

Controlling Permissions.

By default, all users have permission to view the corresponding KPI or Metric Breakdown in the Studio and Dashboard pages. To control the permission of the Breakdown, any user with the DLP or Administrator permission must click **Admin > Users and Roles > Dimension Permission**and grant the permission to the dimension:entity (Breakdown value) only for relevant end-users or groups.

After a specific end-user, with a permission for a specific entity, logs into BA and opens the permitted Dashboard page, the entire page is filtered with that Breakdown entity results. In addition, if the page includes a Page Filter component, only the dimension:entities (Breakdown values) permitted to the end-user are listed.

The permission is at the level of the dimension:entity, meaning, it doesn't matter under which KPI or Metric the breakdown was created, every KPI or Metric Breakdown with the permitted value can be viewed by the end-user (as long as, of course, the end-user has permissions to view the KPI under the permitted scorecard).

Term/Abbreviation	Description
Dimension	Level of breakdown (for example: Service Name, Defect Severity, Defect Status)
Dimension entity	The actual breakdowns available under each dimension (for example: Defect Status : Open, Defect Status : Closed). Dimension entity and Dimension value are the same.

Selecting or de-selecting a group.

Note: If you select or de-select a group and click **Apply**, the whole group and its users are assigned or unassigned the selected dimension entity. If you select a group and click **Apply**, the group is unassigned/assigned the selected dimension:entity. Users in a group inherit the permissions from the parent group.

If you select a group and specific users in the group and click **Apply**, both the group and the specific users are unassigned/assigned. This means that if one of the users is moved to another group, the user keeps the permission to the dimension:entity.

Deleting an assignment.

- **Working without LDAP.** If you assign a dimension:entity to a specific user or group and then later on remove all the assignments of that dimension:entity, the dimension:entity is automatically assigned to the Administrator group. Users in this group can then assign the dimension:entity to another group or user.
- **Working with LDAP.** If you assign a dimension:entity to a specific user or group and then later on remove all the assignments of that dimension:entity, the dimension:entity is automatically assigned to the group you specified while configuring LDAP. Users in this group can then assign the dimension:entity to another group or user.

The **Administrators** permission is customizable. You can change the name of the permission in **Admin > Settings > Foundation > Dimension Permission Group for Unassigned Entities**. For details, see "Foundation" on page 108.

Deleting user or group in User Management

- **Working without LDAP.** If you delete a user or a group in User Management, and the user or group is assigned a dimension:entity,the assignments are deleted. If as a result of the operation, the dimension:entity has no assigned user or group, is automatically assigned to the default **Dimension Permission Group for the Unassigned Entities**.
- **Working with LDAP.** If you delete a user or a group in LDAP, and the user or group is assigned a dimension:entity, the dimension:entity assignments are not removed (since the users and groups are managed in different databases). If as a result of the operation, the dimension:entity has no assigned user or group, it will not be automatically assigned to the default Dimension Permission Group for the Unassigned Entities, and the administrator must make sure to assign the permission manually in BA.

Tasks

This section includes:

Use Case - Assign a user to view the KPI results by Organization:Name:Software only

1. The Scorecard Administrator creates a KPI with a Breakdown by Organization Name, and clicks **Save**.

   The results of the Breakdown appear as follows: Software, Hardware, Infra, Finance, and HR. All users have permission to see all organizations (**Everyone**).

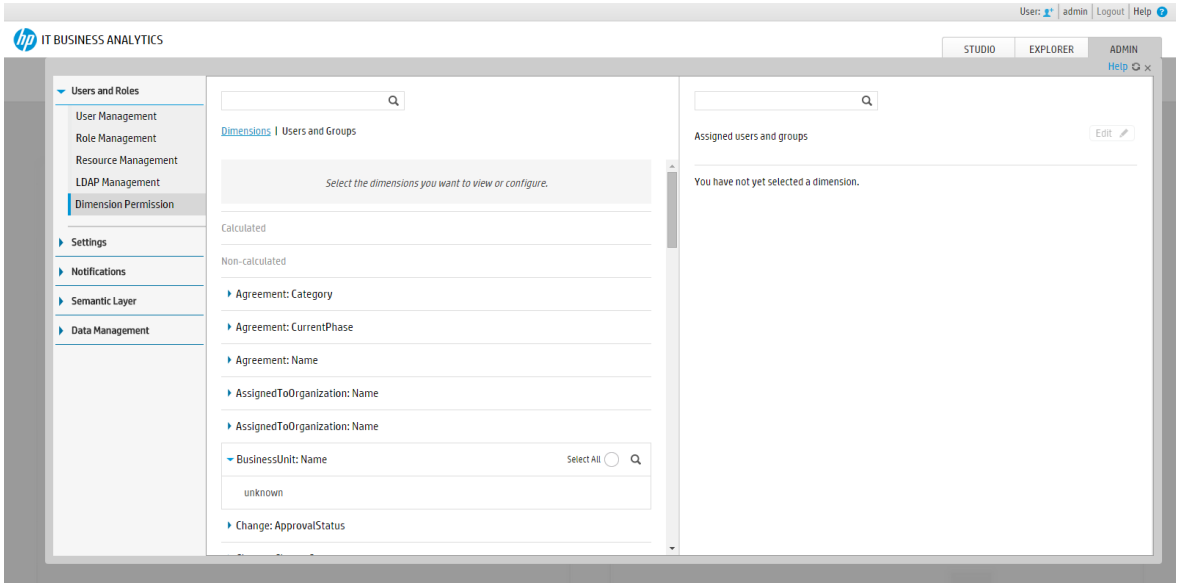
   Specific users must now be able to view only the results of specific organizations. For example, John should only be able to see the results for the Software organization.
2. The Super Admin clicks **Admin > Users and Roles > Dimension Permissions**, selects the **Organization:Name** dimension, clicks **Select All** box, and clicks the **Edit** button. In the list of users and groups, the Super Admin deselects the **Everyone** group (if selected) and clicks **Apply**. The Super Admin then selects the **Software** entity only, and clicks the **Edit** button. In the list of users and groups, the Super Admin selects the relevant user and clicks **Apply**.
3. John logs on to BA, goes to the Dashboard page, and, views it filtered for **Organization: Software**. The page displays only the relevant data.

View results in Explorer only for the permitted entities

1. John logs on to BA, opens Explorer, and clicks the relevant Scorecard.
2. To view the results of specific KPIs for the Software organization, John expands the tree and the relevant KPIs. Under the Organization breakdown, John sees only **Software**. John selects the **Software** entity and the graph on the right pane is updated.
3. John cannot view other Organizations.

UI Description

Dimension Permission page



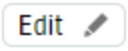
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

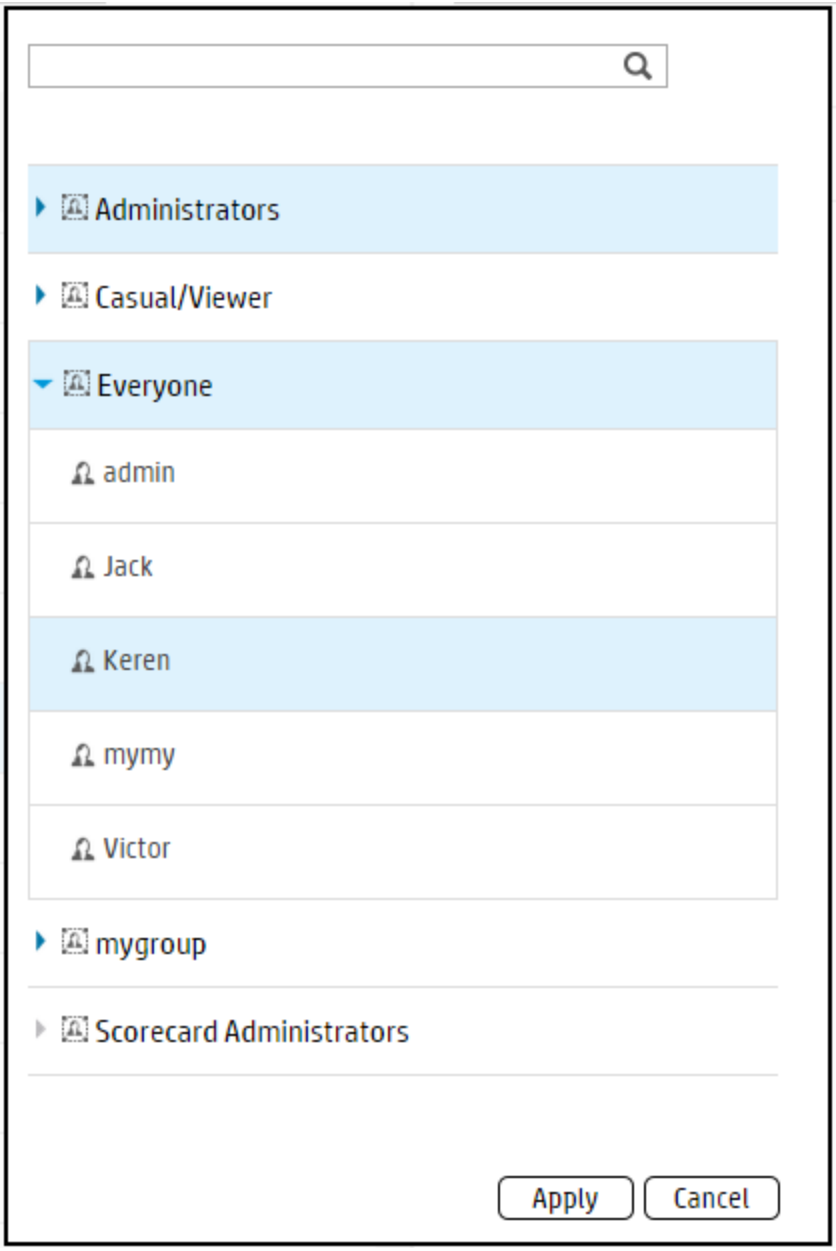
UI Element	Description
	Enter a string to display the dimensions, users or groups whose name includes the string.
Dimensions | Users and Groups	The Dimensions tab lists the dimensions and the dimension entities currently available and their assigned users and groups, if any. The Users and Groups tab lists all the available users and group and the dimension entities assigned to them, if any.

- ### Dimensions tab

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
<Selection>	Lists the currently selected dimensions and entities.
<Dimensions and Entities>	Lists the available dimensions and their entities in the Dimensions pane and the assigned groups and users assigned to the selected dimension:entity in the **Assigned Users and Groups** pane. The dimensions and entities are listed in the

	following groups: • **Calculated.** Lists the dimensions and entities for which the contexts that have been calculated. • **Non-Calculated.** Lists the dimensions and entities for which the contexts that have not been calculated. Click the relevant dimension to list all its entities. • **Select all.** You can select one or more entities or you can click **Select all** to select all the entities of a dimension, at once. **Note:** If you select more than one entity, the users and groups are displayed in the right pane only if all the selected entities have been assigned to the same users or groups. For example, if MONTHLY and DAILY have been assigned to users A, B, and C, you can see these users in the right pane. If MONTHLY has been assigned to users A and B and DAILY to users B and C, the users are not displayed in the right pane. •  To search for entities with names that include a specific string, enter the string and click  .
Assigned users and groups	Lists the group and the users with permission to view the dimension:entity selected in the left pane.
	Select one or more dimension entities and click **Edit** to open a dialog box where you can select the users or groups to which you want to assign or from which you want to un-assign the dimension entities. You can select more than one entity using the SHIFT or CTRL keys. To search for users with names that include a specific string, enter the string and click  .



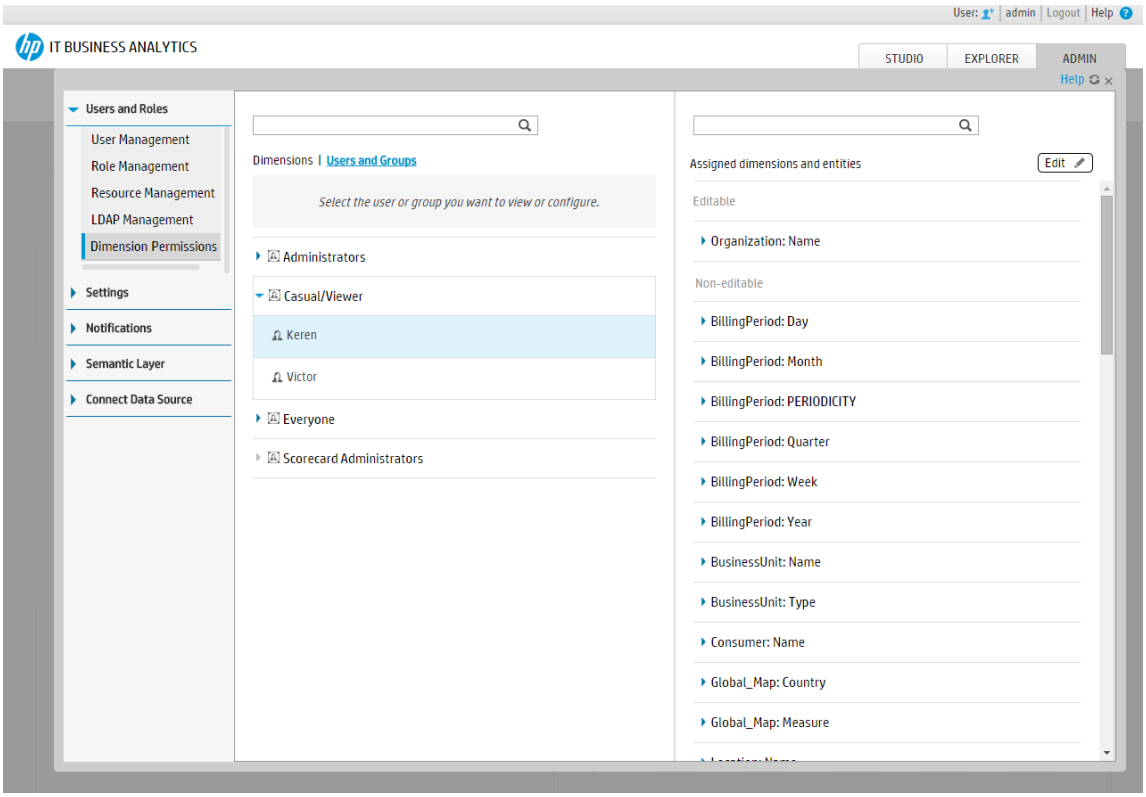
- indicates a group of users or of sub-groups.

- indicates a single user.

You can select more than one entity using the SHIFT or CTRL keys.

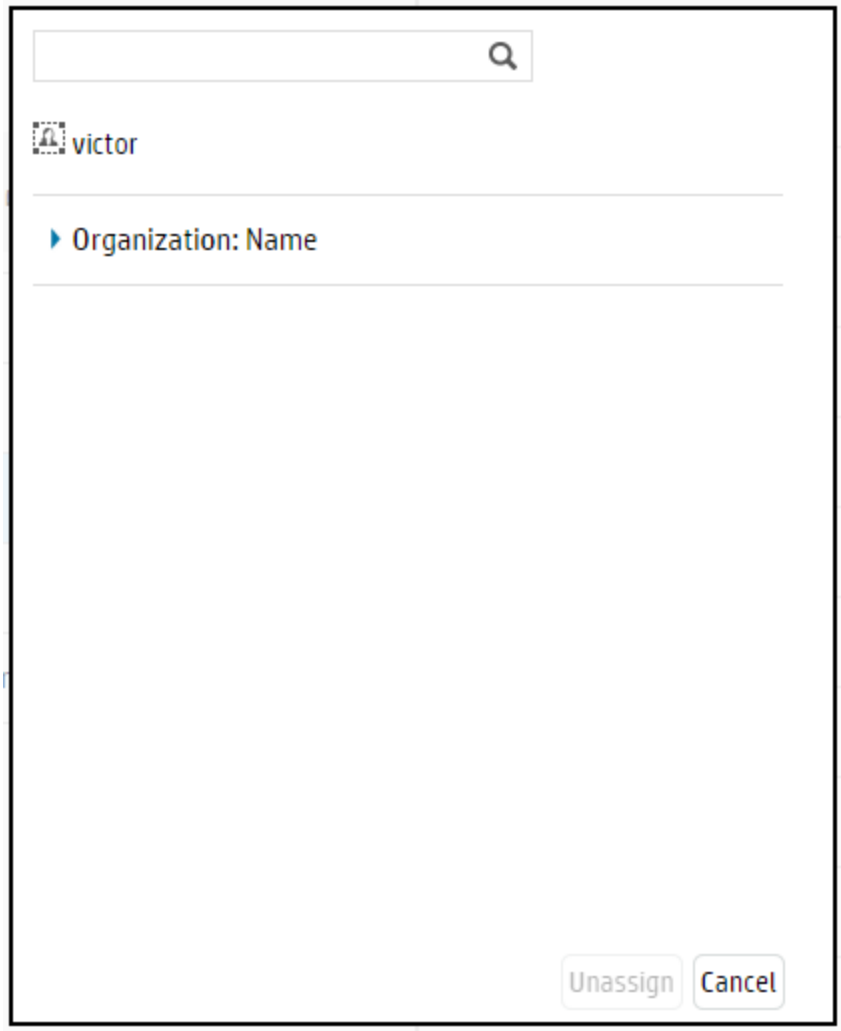
Click **Apply** when you're done. The selected users or groups appear in the list of Users and Groups.

- ## Users and Groups tab



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Users and Groups	Lists the available users and groups in the **Users and Groups** pane and in the **Assigned Dimensions and Entities** pane, the dimension:entities that were assigned to the selected users or groups. To search for the users with names that include a specific string, enter the string and click  .
Assigned dimensions and entities	The dimensions and entities are listed in the following groups: • **Editable.** Lists the dimensions and entities that were assigned directly to the selected user or to the selected group. You can remove the assignment by clicking **Edit**. • **Non-Editable.** Lists the dimensions and entities that were assigned to the selected group to which the selected user belongs. To search for the dimensions with names that include a specific string, enter the string and click  .

Edit	Select one or more dimension entities and click **Edit** to open a dialog box where you can select or deselect the dimension entities you want to assign or un-assign to the selected users or groups. You can select more than one entity using the SHIFT or CTRL keys. To search for the entities with names that include a specific string, enter the string and click .  - indicates that the entity was assigned to the parent of the selected user or group. The parent can be a sub-group or a group. - indicates that the entity was assigned to the selected user or group at the level of the user or group. Select the relevant user or group and click **Unassign** to un-assign it.

Settings

Settings enables you to define various system settings for the administration of the product. The Settings includes the following:

Data Warehouse

Data Warehouse Settings enables you to define settings for various parts of the data warehouse structure.

To access:

Select **ADMIN > Settings > Data Warehouse**.

Tasks | UI Description

Tasks

Define the settings

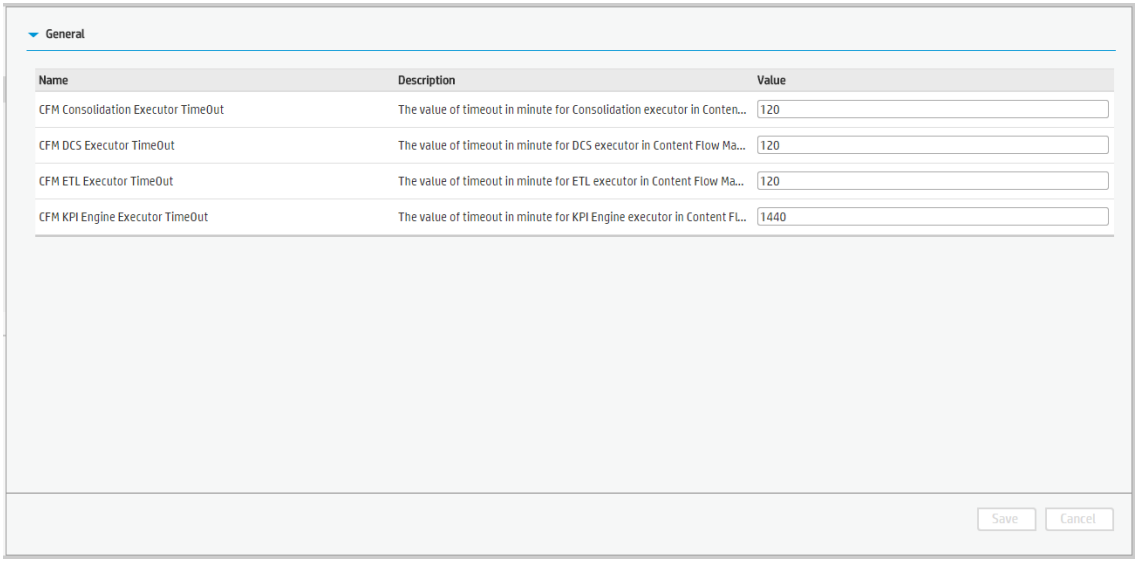
1. Select **ADMIN > Settings > Data Warehouse**.
2. Click the relevant field in the **Value** column and enter the value.
3. Click **Save** to save your settings.

UI Description

Data Warehouse Page

This page enables you to configure the Data Warehouse settings.

- **General Table**



UI Element	Description
CFM Consolidation Executor TimeOut	The value of the timeout in minutes, for the Consolidation Executor in Content Flow Management. Default: 120.
CFM DCS Executor TimeOut	The value of the timeout in minutes, for the DCS Executor in Content Flow Management. Default: 120.
CFM ETL Executor TimeOut	The value of the timeout in minutes, for the ETL Executor in Content Flow Management. Default: 120.
CFM KPI Engine Executor TimeOut	The value of the timeout in minutes, for the KPI Engine Executor in Content Flow Management. Default: 1440.

Foundation

Enables you to configure foundation settings in Business Analytics.

To access:

Select **Admin** >**Settings** > **Foundation**.

Tasks | UI Description

Tasks

Configure the Foundation settings

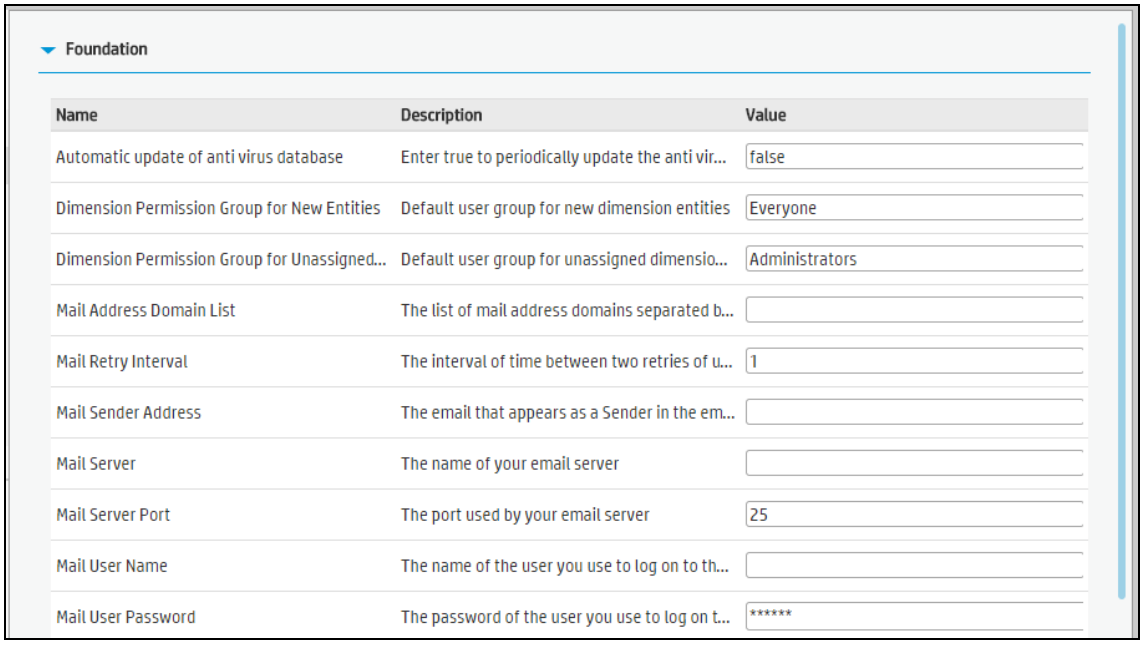
1. Select **Admin** > **Settings** > **Foundation**.
2. Click the relevant row and enter the required setting.
3. Click **Save** to save your settings.

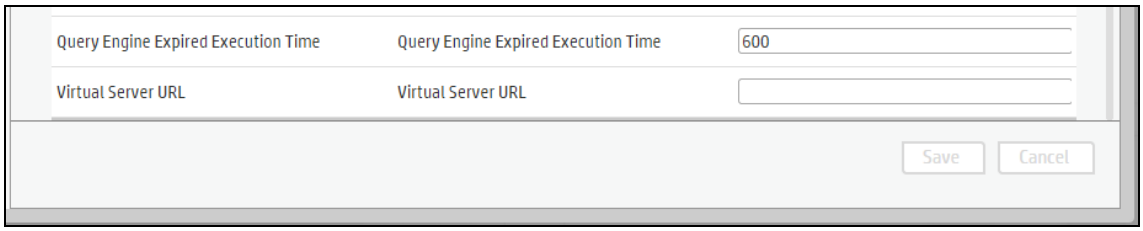
UI Description

Foundation

This page enables you to configure the Pages settings.

Click to refresh the page.





User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Automatic update of anti virus database	Set to **true** to periodically update the anti virus database. The update occurs every Sunday at 12:00 am (midnight). Default: **false**
Dimension Permission Group for New Entities	The name of the default user group for new dimension entities. Default: Everyone. For details, see "Dimension Permissions" on page 97. During the activation of LDAP, the default user group you selected in LDAP is automatically entered in this setting. Before deactivating LDAP, optionally, modify this value as the deactivation of LDAP does not automatically affect the Foundation setting. For details, see "LDAP Management" on page 57.
Dimension Permission Group for Unassigned Entities	The name of the default user group for unassigned dimension entities after they have been unassigned. Default: Administrators. For details, see "Dimension Permissions" on page 97. During the activation of LDAP, the default user group you selected in LDAP is automatically entered in this setting. Before deactivating LDAP, optionally, modify this value as the deactivation of LDAP does not automatically affect the Foundation setting. For details, see "LDAP Management" on page 57.
Mail Address Domain List	The list of mail address domains separated by semi-colons (;).
Mail Retry Interval	The interval of time between two retries of uploading/sending mail in seconds. Default: 10 seconds.
Mail Sender Address	The email that appears as a Sender in the emails sent by the Entity Report. For details, see "Notifications - Entity Report" on page 149.
Mail Server	The name of your email server.
Mail Server Port	The port used by your email server.
Mail User Name	The name of the user you use to log on to the Mail Server. The system uses this user to send the notification emails.

UI Element	Description
Mail User Password	The password of the user you use to log on to the Mail Server. The system uses this user to send the notification emails.
Query Engine Expired Execution Time	If the SQL executing time exceeds the value of the setting, the allocation of ITFM returns an error. You may need to increase the value if your allocations have many stages or if your database includes many cost data. The unit is seconds. Default: **600**.
Virtual Server URL	The URL of the virtual server.

Single Sign-On

HP Lightweight Single Sign-On is a method of access control that enables you to navigate to other HP products that implement LW-SSO without supplying credentials again. A user can log on once and gain access to the resources of HP software systems without being prompted to log on again. The applications inside the configured group of software systems trust the authentication, and there is no need for further authentication when moving from one application to another.

The Single Sign-On page enables you to configure Single Sign-On (SSO) requirements.

To access:

Select **Admin** > **Settings** > **Single Sign-On**.

Learn More

HP Lightweight Single Sign-On is a method of access control that enables you to navigate to other HP products that implement LW-SSO without supplying credentials again. A user can log on once and gain access to the resources of HP software systems without being prompted to log on again. The applications inside the configured group of software systems trust the authentication, and there is no need for further authentication when moving from one application to another.

Tasks

Add or change SSO values

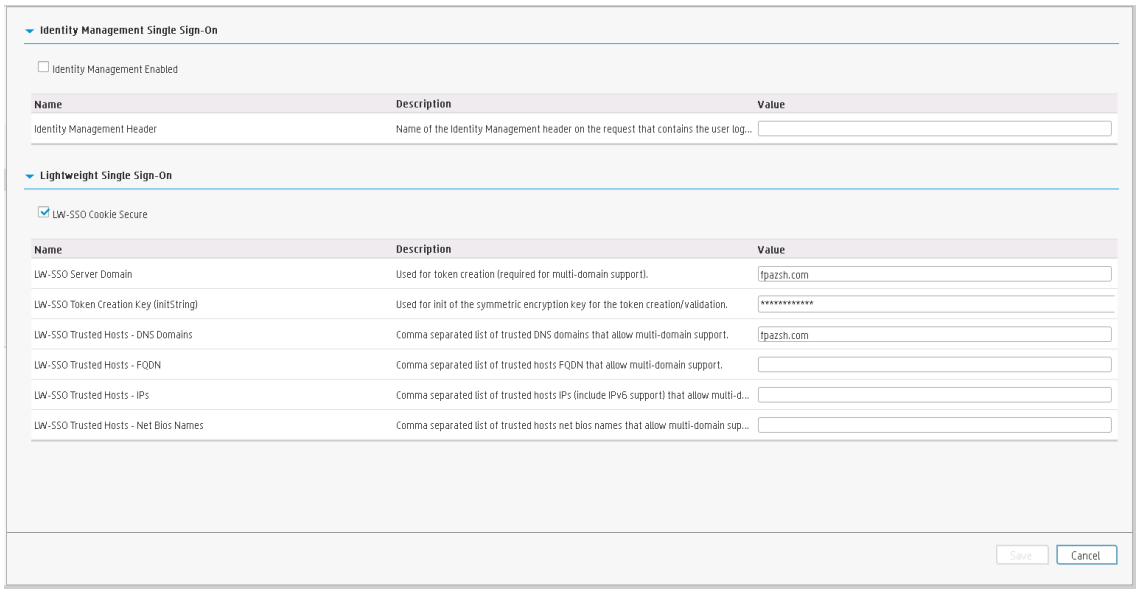
1. Select **Admin** > **Settings** > **Single Sign-On**.
2. Click the relevant field in the **Value** column and enter the value.
3. Click **Save** to save your settings.

UI Description

Single Sign-On Page

This page enables you to configure the SSO settings to log on of all HP products.

Click  to refresh the page.



Identity Management Single Sign-On Table

UI Element	Description
Identity Management Enabled	Select the check box and enter the name of the IDM header (the header that contains the user logon name) in the **Value** field of the **Identity Management Header** setting.
Identity Management Header	The name of the IDM header (the header that contains the user logon name).

Lightweight Single Sign-On Parameters

User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
LW-SSO Cookie Secure	Select to make sure that the cookie is always encrypted when transmitting from client to server.
LW-SSO Server Domain	The domain used for token creation. This value is required in cases of multi-domains.
LW-SSO Token Creation Key (initString)	The string used as the encryption key for token creation and validation.
LW-SSO Trusted Hosts - DNS Domains	The list of trusted DNS domains that allow multi-domain support (must be separated by commas).
LW-SSO Trusted Hosts - FQDN	The list of trusted hosts' FQDN that allow multi-domain support (must be separated by commas).
LW-SSO Trusted Hosts -	The list of trusted hosts' IPs that allow multi-domain support (must be

UI Element	Description
IPs	separated by commas).
LW-SSO Trusted Hosts - Net Bios Names	The list of trusted hosts' net bios names that allow multi-domain support (must be separated by commas).

Pages

Enables you to configure the Dashboard page settings in Business Analytics.

To access:

Select **ADMIN** > **Settings** > **Pages**.

Learn More

For more information about BA pages, see Page Layout and Components in the *BA Business Analyst Guide*.

Tasks

This section includes:

Configure the page settings

1. Select **ADMIN** > **Settings** > **Pages**.
2. Click the relevant row and enter the required setting.
3. Click **Save** to save your settings.

Modify the maximum number of open pages

By default, an unlimited number of pages can be open at the same time. If you have multiple pages open, up to 5 of the most popular pages are immediately available for display when you switch to them. The other pages are least viewed pages, meaning that are silently deactivated in the background. When you select them, it might take a few seconds until they load and display their content.

Note that if you increase these limits, performance may be impaired.

To modify the maximum number of open pages:

1. Select **ADMIN > Settings > Pages**.
2. Modify the **Maximum number of open pages** entry as needed.

For details, see "Settings" on page 105.

Note that if you increase the maximum number of pages, performance may be impaired.

Modify the maximum number of active pages

By default, an unlimited number of pages can be open at the same time. If you have multiple pages open, up to 5 of the most popular pages are immediately available for display when you switch to them. The other pages are least viewed pages, meaning that are silently deactivated in the background. When you select them, it might take a few seconds until they load and display their content.

Note that if you increase these limits, performance may be impaired.

To modify the maximum number of active pages:

1. Select **ADMIN > Settings > Pages**.
2. Modify the **Maximum number of loaded pages** entry as needed.

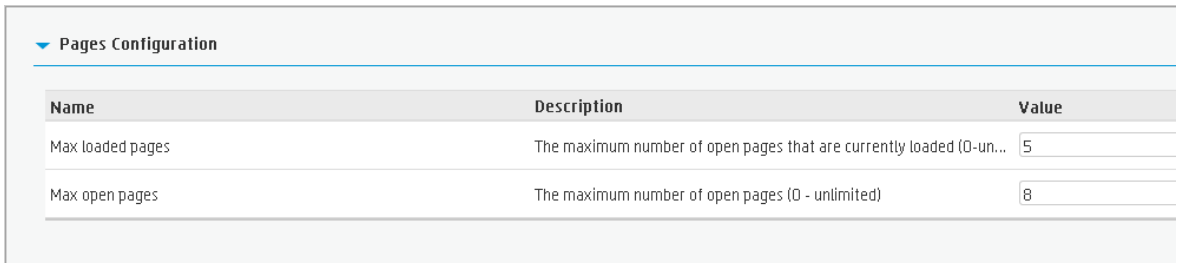
For details, see "Settings" on page 105.

UI Description

Pages Settings

This page enables you to configure the Pages settings.

Click  to refresh the page.



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Max loaded Pages	The maximum number of open pages that are currently loaded in Business Analytics. The options are any valid number or 0 for unlimited.
Max open pages	The maximum number of open pages in Business Analytics. The options are any valid number or 0 for unlimited.

Website

The Website page enables you to configure ping time intervals for refreshing the browser automatically

To access:

Select **Admin > Settings > Website**.

Tasks | UI Description

Tasks

Set the ping interval

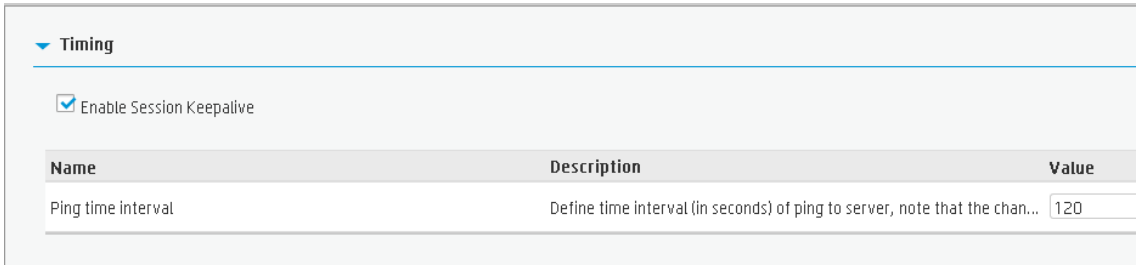
1. Select **Admin > Settings > Website**.
2. Select the check box to enable the ping feature. De-select the check box to disable the ping feature. The browser will then time out.
3. Click the **Ping time interval** row and enter the required time in seconds.
4. Click **Save** to save your settings.

UI Description

Website Page

This page enables you to configure the Website settings.

Click to refresh the page.



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Enable Session Keepalive	Select to enable the ping feature.

UI Element	Description
Ping time interval	The amount of time (in seconds) between browser refresh. This ensures that the application does not time out. **Note:** Changes will only take effect in the next logon.

Dashboard Settings

Enables you to set the settings for the Dashboard, where an executive can view the progress of the required objectives.

To access:

Select **Admin > Settings > Dashboard Settings**.

Learn More | Tasks | UI Description

Learn More

For more BA dashboard information, see "Prepare the Dashboard Display" in the *BA Business Analyst Guide*.

Tasks

Configure the Dashboard Settings

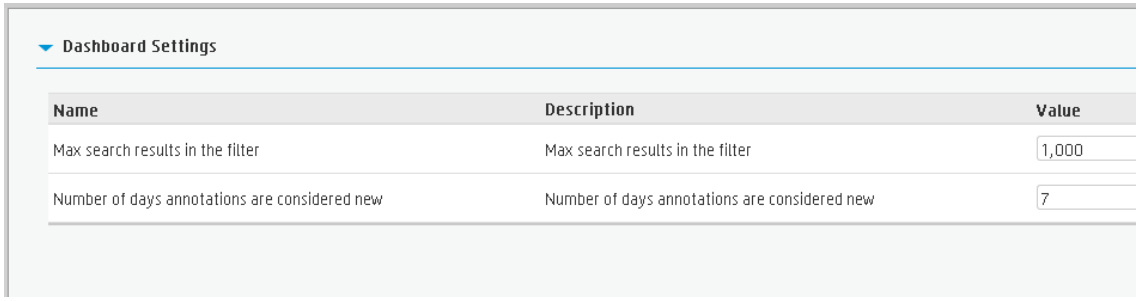
1. Select **Admin** > **Settings** > **Dashboard Settings**.
2. Click the row of the relevant setting and enter the value.
3. Click **Save** to save your settings.

UI Description

Dashboard Settings Page

This page enables you to configure specific dashboard settings.

Click  to refresh the page.



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Max search results in the filter	The maximum number of search results allowed in the filter. The default value is **1000**.
Number of days annotations are considered new	The number of days annotations are considered new. The default value is **7**.

Engine Settings

Enables you to configure settings for the HP IT Business Analytics KPI engine, which performs discovery on data coming from contexts (data sources).

To access:

Select **Admin** > **Settings** > **Engine Settings**.

Tasks | UI Description

Tasks

Configure the Engine Settings

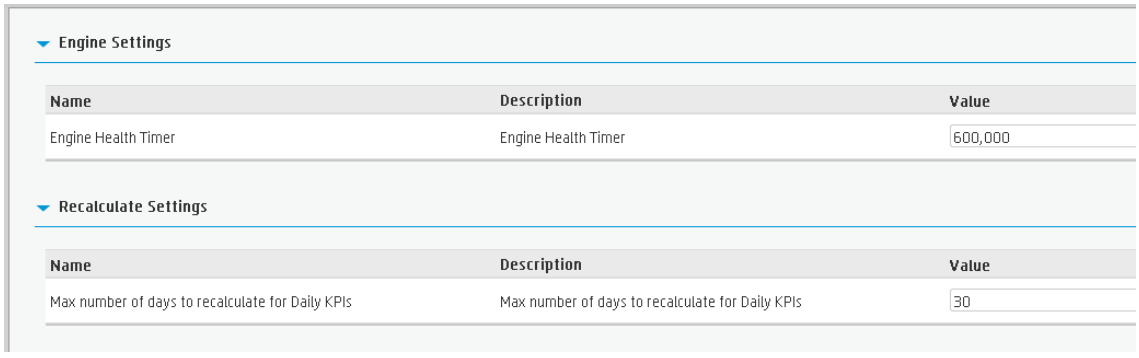
1. Select **Admin** > **Settings** > **Engine Settings**.
2. Click the row of the relevant engine function and enter the value in milliseconds.
3. Click **Save** to save your settings.

UI Description

Engine Settings Page

This page enables you to configure the engine settings for HP IT Business Analytics.

Click to refresh the page.



- **Engine Settings**

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Engine Health Timer	The amount of time in milliseconds, after which, if the calculation result is not received for the KPI, a new calculation attempt is started. The default value is 600,000, which equals 10 minutes.

- **Recalculate Settings**

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Max number of days to recalculate for Daily KPIs	The maximum number of days used in recalculations for KPIs and Metrics with a Calculation Period set to **Daily**. Default: 30. For details, see Recalculation in the *BA Business Analyst Guide*.

Score Thresholds

Enables you to set the score thresholds for the KPIs in the HP IT Business Analytics.

To access:

Select **Admin** > **Settings** > **Score Thresholds**.

Learn More | Tasks | UI Description

Learn More

For more score threshold information, see KPI and Metric Formula and Filter, Status, Threshold, Value, Trend, and Score in the *BA Business Analyst Guide*.

Tasks

Configure the Score Thresholds

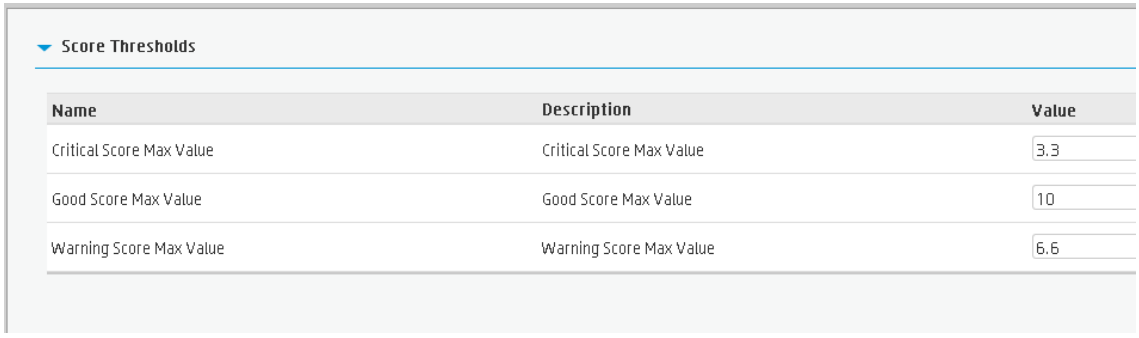
1. Select **Admin** > **Settings** > **Score Thresholds**.
2. Click the row of the relevant score threshold and enter the value.
3. Click **Save** to save your settings.

UI Description

Score Thresholds Page

This page enables you to configure the score threshold settings for the KPIs in HP IT Business Analytics.

Click to refresh the page.



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

Note: Each **Score Max Value** must be greater than 0 and less than the next one (**Error Score Max Value** < **Warning Score Max Value** < **Good Score Max Value**)

UI Element	Description
Critical Score Max Value	The maximum value on the KPI scale, below which the value is scored as an error. KPIs that score values equal to or below this value, receive an error score. **Example** If the maximum error score is 3.3, then a score on the scale from 0 - 3.3 is an error. Default: **3.3**
Good Score Max Value	The maximum value on the KPI scale, below which the value is scored as good. KPIs that score values equal to or below this value, receive a good score. **Example** If the maximum good score is 10, then a score on the scale from 6.6 - 10, is good. Default: **10**
Warning Score Max Value	The maximum value on the KPI scale, below which the value is scored as a warning. KPIs that score values equal to or below this value, receive a warning score. **Example** If the maximum warning score is 6.6, then a score on the scale from 3.3 - 6.6, is a warning. Default: **6.6**

BA Settings

Enables you to set various scorecard settings.The HP IT Business Analytics is a way to map and translate complex business information into something that's understandable to everyone.

To access:

Select **ADMIN** > **Settings** > **BA Settings**.

Tasks | UI Description

Tasks

This section includes:

Configure BA settings

1. Select **ADMIN** > **Settings** > **BA Settings**.
2. Click the row of the relevant setting and enter the value.
3. Click **Save** to save your settings.

Show or hide the Debug Properties

The maintenance of HP IT Business Analytics is performed using the ADMIN tab.

To display or hide the debug properties (ID and Type) displayed in the Configuration details tab for all templates or active nodes, select **ADMIN > Settings > BA Settings > Debug Mode**, and:

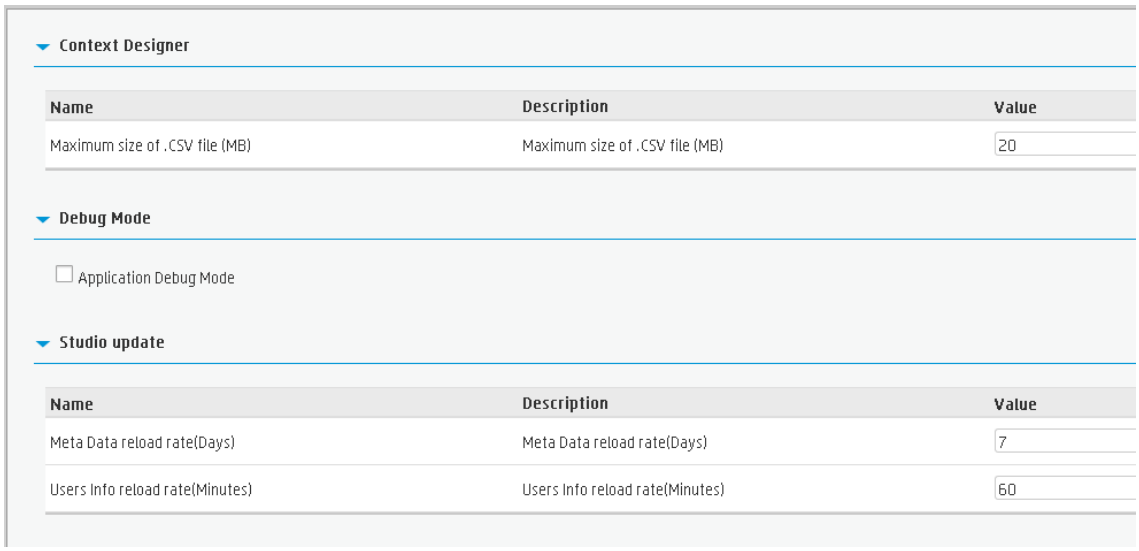
- Select the **Application Debug Mode** option to display the debug information in the Configuration details tabs.
- Clear the **Application Debug Mode** option to hide the debug information in the Configuration details tabs.

UI Description

BA Settings Page

This page enables you to configure specific BA settings.

Click  to refresh the page.



- **Context Designer**

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Maximum size of .CSV file (MB)	The maximum size of a .CSV file that can be imported into the Context Designer. The default value is 20 MB.

- **Debug Mode**

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Application Debug Mode	Select to activate the debug mode.

- **Studio Update**

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Meta Data reload rate (Days)	The number of days after which the meta data is reloaded. If you configure BA to work with the SAP BusinessObjects Enterprise universes, every X days (where X corresponds to what you specified in **Meta Data reload rate (Days)**), BA reloads all the universes metadata from the SAP BusinessObjects Enterprise. The default value is **7** days.
Users Info reload rate	The number of minutes after which user info is reloaded. The default value is **60** minutes.

UI Element	Description
(Minutes)	

Apache Web Server

IT Business Analytics uses the Apache web server for securing the application and caching static content in order to improve client performance. The web server is installed and configured in the deployment procedure and does not require any changes or maintenance.

The default ports are listed in the *BA Support Matrix*. You must enter the application using **https://<Fully Qualified Domain Name>:<port>/ba**.

Note: These ports can be configured to any other ports in the deployment procedure.

Security Recommendations

Immediately following installation or upgrade procedures, perform the following steps.

For User Management

- To improve password policy, use LDAP. For details, see "LDAP Management" on page 57.

LW-SSO

HP Lightweight Single Sign-On is a method of access control that enables you to navigate to other HP products that implement LW-SSO without supplying credentials again. A user can log on once and gain access to the resources of HP software systems without being prompted to log on again. The applications inside the configured group of software systems trust the authentication, and there is no need for further authentication when moving from one application to another.

Cryptography

The encryption properties files are located in **$HPBA_Home/conf**. The path can be determined by setting the **crypt.conf.dir.path** system property to the relevant path. The management database credentials encrypted locally on each server. You must also store all the relevant configuration for decrypting locally.

The following encryption keys are available:

- **Encryption Key:** Single shared key for all servers shared through the database. Stored on each machine locally in the encryption properties files as part of the post-install procedure.
- **Seed Key:** Key that is generated after each post-install procedure. The main encryption key is stored in the seed key.

Set Up Java

This section describes how to set up Java so BA displays properly in Internet Explorer or Chrome.

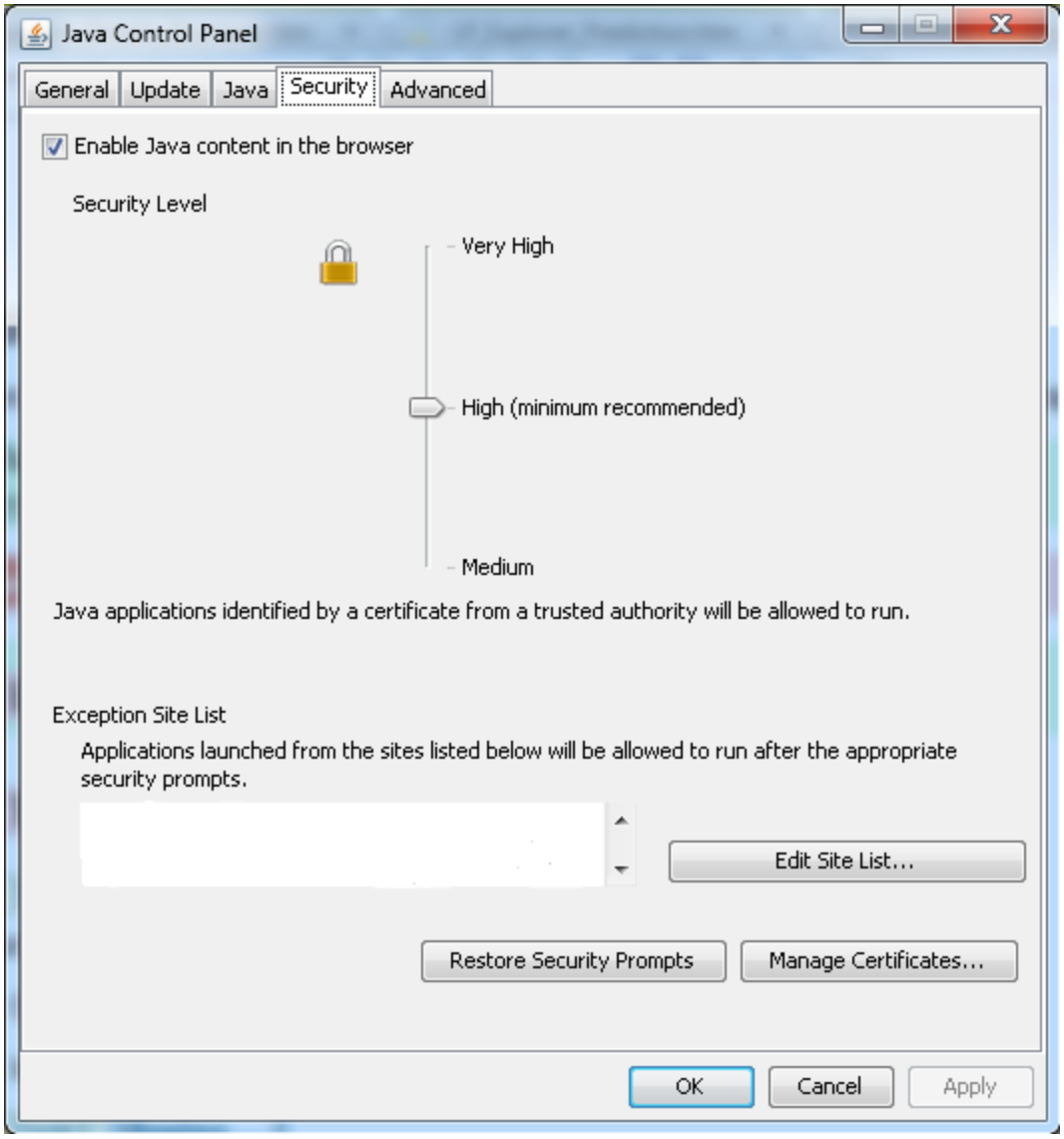
Tasks

Tasks

Set Up Java

To set up Java:

1. Click **Start > All Programs > Java > Configure Java**.
2. In the Java Control Panel, click the **Security** tab.



3. Make sure that the **Enable Java content in the browser** option is selected.
4. Set up the security level to **High**.
5. Enter the **https://<Fully Qualified Domain Name>:<port>** site in the **Exception Site List**.
6. Click **OK**.

Localization and Globalization

You can localize and globalize BA. The user interface of HP BA supports multiple languages.

Tasks

Localize the out-of-the-box KPI Library pane contents

The localized installation adds the language libraries of XML files in specific directories. You copy and then import these files to display the out-of-the-box template Scorecards, Perspectives, Objectives, Folders, and KPIs in the KPI Library in the selected language.

To localize the out-of-the box content of the KPI Library: Scorecards, Perspectives, Objectives, and KPIs, proceed as follows:

1. In the Business Analytics server, locate the **$HPBA_HOME/ContentPacks/KPILIB/INBUILT/BI/KPITEMPLATES/LANGUAGES/<language_code>_<country_code>** directory relevant for the language you want to use in the application. The .xml files in the directory represent both KPIs and KPI directories.

   The language code and country codes are as follows:

Language	Language Code	Country Code
Brazilian Portuguese	pt	BR
French	fr	FR
Spanish	es	ES
German	de	DE
Japanese	ja	JP
English	en	US
Dutch	nl	NL
Italian	it	IT
Simplified Chinese	zh	CN
Korean	ko	KR

Language	Language Code	Country Code
Russian	ru	RU
Turkish	tr	TR

2. Copy these .xml files to the **$HPBA_HOME/glassfish/glassfish/domains/BTOA/config/kpitemplates/import/load** directory.

   Tip:

   If the directory contains other sets of files (for different languages), it is recommended to keep in the directory only the required set of language files and to move the other files outside the directory to prevent the loading of both set of language files and an unknown result.

3. Import the out-of-the-box language files using the **KPILoader** > **importKPIs()** procedure described in "Migrate Trees, Metrics, and Unassigned KPIs" on page 170in the *BA Administrator Guide*.

Localize the out-of-the-box Dashboard content (pages and components)

The localized installation adds the language libraries of XML files in specific directories. You copy and then import these files to display the out-of-the-box template pages and components in the selected language, in the Dashboard.

To localize the out-of-the box pages and components, proceed as follows:

1. **Prerequisite**

   You have performed the installation and post-installation procedures or the upgrade to the current version.

2. **Copy the libraries**

   a. In the BA server, locate the **$HPBA_Home/glassfish/glassfish/domains/BTOA/config/uimashup/import/languages/<language_code>_<country_code>** directory relevant to the language you want to install. These .uim.xml files represent the components and the pages used in the Dashboard.

   b. The language code and country codes are as follows:

   - **Components_<lang>_<country_code>.uim.xml**
   - **Pages_<lang>_<country_code>.uim.xml**,

   where **lang** is the language code and **country_code** is the code of the country:

Language	Language Code	Country Code
Brazilian Portuguese	pt	BR
French	fr	FR

Language	Language Code	Country Code
Spanish	es	ES
German	de	DE
Japanese	ja	JP
English	en	US
Dutch	nl	NL
Italian	it	IT
Simplified Chinese	zh	CN
Korean	ko	KR
Russian	ru	RU
Turkish	tr	TR

c. Copy these files to the **$HPBA_Home/glassfish/glassfish/domains/BTOA/config/uimashup/import/toload** directory.

Tip:

If the directory contains several sets of files (for different languages), it is recommended to keep in the directory only the required set of language files and to move the other files outside the directory to prevent the loading of both set of language files and an unknown result.

d. Import the out-of-the-box language files (**only for the pages and components - events are not localized**) using the relevant procedure described in "Migrate User-defined Pages or Components" on page 173 in the *BA Administrator Guide*.

Reports

This section provides details about how to set up to get reports in the BA Dashboard.

Xcelsius Reports

You can use Xcelsius to display Flash reports or dashboards over BA target schemas.

You can create Xcelsius reports based on SAP BusinessObjects Enterprise Webi reports.

You can then add these reports to Dashboard page using the Xcelsius components. For details, see The SWF Report Viewer Component or The Xcelsius Reports Viewer (Flash) Component in the *BA Business Analyst Guide*.

The Installation Media for Xcelsius as well as the Xcelsius Installation Guide are provided on a separate installation disc that you can download (TB812-15009.ISO). The disc also includes non-core utilities and 3rd party application that enhance BA.

To access:

In the Dashboard, add a Xcelsius report to a Xcelsius Report Viewer component by configuring the component. For details, see Xcelsius Reports Viewer (Flash) - Configure Component Dialog Box in the *BA Business Analyst Guide*.

The report is then displayed in these components in the Dashboard. For details, see Xcelsius Reports Viewer (Flash) Component in the *BA Business Analyst Guide*.

Tasks

Tasks

This section includes:

Add an Xcelsius report to an Xcelsius Report Viewer component

In the Dashboard, add an Xcelsius report to an Xcelsius Report Viewer component by configuring the component. For details, see Xcelsius Reports Viewer (Flash) - Configure Component Dialog Box in the *BA Business Analyst Guide*.

Display a Web Intelligence report or an operational report in a page

After you have added an Xcelsius report to an Xcelsius Report Viewer by configuring the component, these reports are then displayed when these components are added to a page in the Dashboard. For details, see Xcelsius Reports Viewer (Flash) Componentin the *BA Business Analyst Guide*

Chrome and BOE Reports

If you are using the Chrome browser and your Dashboard pages include SAP BusinessObjects Enterprise (BOE) reports, you are presented with a shield icon in the browser address bar each time you start the application. This creates an extra step to tell the browser to run the content.

Tasks

You can decide to allow the running of insecure content per session or by default.

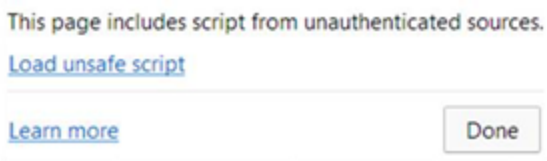
This section includes:

Allow the running of insecure content per session

When you open BA in Chrome and the shield icon appears in the top right corner of your application:

1. Click the shield.

2. In the dialog box that opens, click **Load unsafe script**:



You can now view BOE reports in Dashboard pages.

Allow the running of insecure content by default

To run BOE reports in Dashboard pages in Chrome, you must set Chrome to allow the running of insecure content by default by adding the **--allow-running-insecure-content** parameter to the start up of the shortcut.

1. Create a Chrome shortcut on the desktop by right-clicking and dragging the Chrome browser from the **Windows> Start** menu to the desktop, and select **Create shortcuts here**.

   You now have a Chrome shortcut on the desktop.
2. Right-click the shortcut and select **Properties**.
3. In the **Target** field, add **--allow-running-insecure-content** at the very end of the string that is already there.

4. In your desktop, double-click the shortcut icon to start the Chrome browser. Then click  and select **Settings**.
5. In the **On Startup** section, select **Open a specific page or set of pages** and click **Set pages**.
6. In the URL box enter the URL for Business Analytics, for example: **https://<Fully Qualified Domain Name>:<port>/ba**. Then click **OK** to save the changes.
7. Close the Browser and then restart it to test the changes. You should be presented with a Business Analytics logon screen.
8. Log in and test to make sure that the BOE reports are displayed without the security icon.

Import XLF Crystal Reports into Linux BOE 4.1 SP2

To import XLF Crystal reports into Linux BOE 4.1 SP2, proceed as follows:

1. Open BOE Dashboard.
2. Create an XLF Crystal report or open an existing XSL Crystal report.
3. Click **File > Save To Platform As > Dashboards Object to Replace Flash Object**, input Linux BOE server IP, port, user name, password and Enterprise, and then click **OK**. If the procedure proceeds without error, go to step 13.
4. If the **Transport error: Communication failure.(FWM 00001)** error message is displayed:
   a. Re-input the Windows BOE server IP, port, user name, password and Enterprise, and then click **OK** to import the XLS Crystal report into windows BOE.
   b. Go to the Linux BOE server, and edit **/etc/hosts** with the root user to input the Windows BOE server's full name and IP address.
   c. Go to the Windows BOE server, and open Linux BOE CMC.
   d. Click **Promotion Management**.
   e. Click the **New Job** menu. In the Source dropdown list, click **Login to a New CMS**, and then input the relevant Windows BOE log on information.
   f. In the destination dropdown list, select **Login to a New CMS**, and input the relevant Linux BOE log on information.
   g. Click **Create** to create the relevant job.
   h. In the pop up window, click **Add Objects** from the system page, select the XLF Crystal report to be imported, and then click **Add & Close**.
   i. Select the XLF Crystal report to be imported, and click **Promote** in the toolbar.

13 After the job is done, the XLFCrystal report is imported into Linux BOE.

Maintenance

This section provides details about how to perform the maintenance in BA.

Maintenance Tool

The Maintenance Tool helps you (the Administrator) change the Glassfish password, change the domain name, update the Vertica Connection, link to BOE, update the BA License, and change the IP number.

Once the Administrator has updated the relevant parameters and executed the process, the system updates the relevant parameters in the DB tables (if needed) and performs a restart of BA (if needed).

To access:

Open a Unix console (bash) and go to the following **<HP-BA>/Tools/** directory and input command **./maintenanceTool.sh** to start the BA Maintenance Tool.

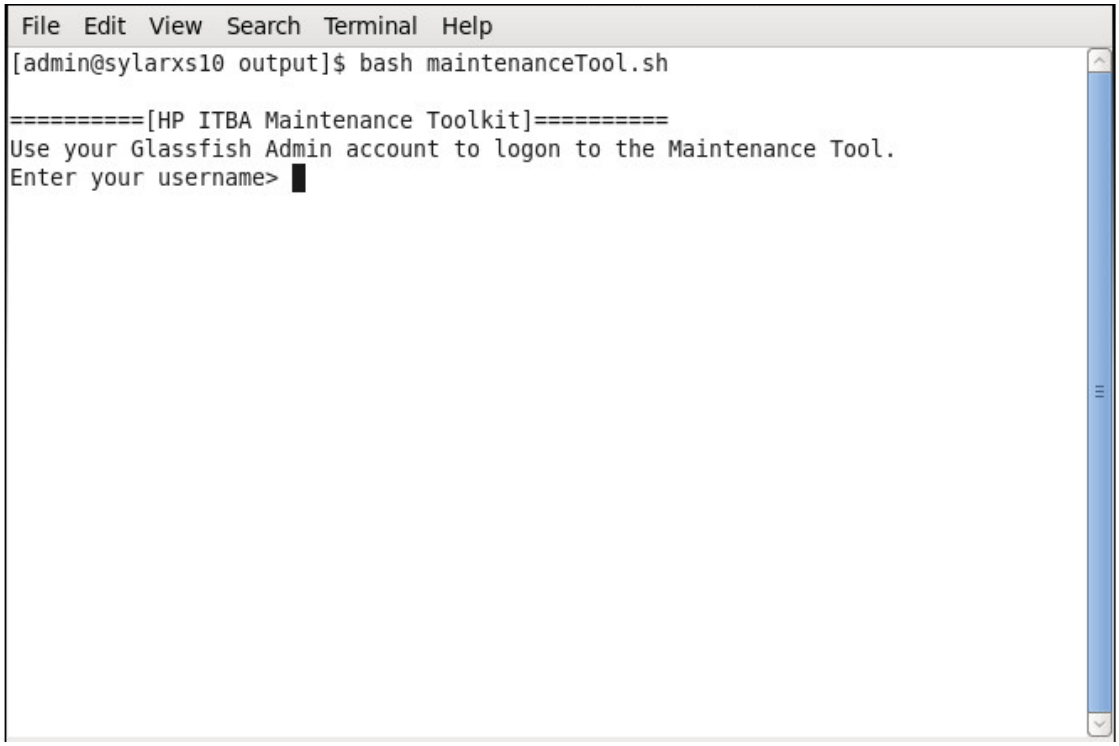
Tasks

This section includes:

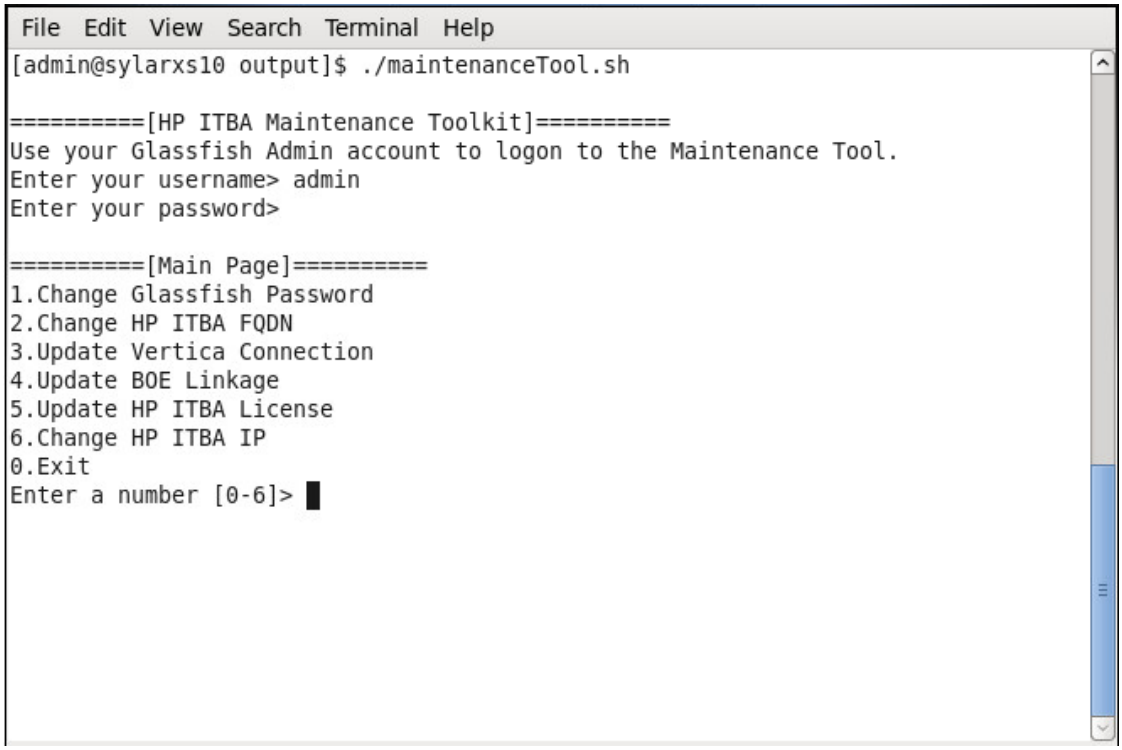
Launch the Maintenance Tool and validate

1. **Prerequisite:** Before running the Maintenance Tool, make sure the glassfish service is started. To check the service status, run **hpba-status.sh** in **<HP-BA>/supervisor/bin**.

   If the glassfish service is down, start it manually using **startGlassfishBA.sh** in **<HP-BA>/bin**.
2. Open a Unix console (bash) and go to the following **<HP-BA>/Tools/** directory and input command **./maintenanceTool.sh** to start the BA Maintenance Tool.
3. The authentication window opens.



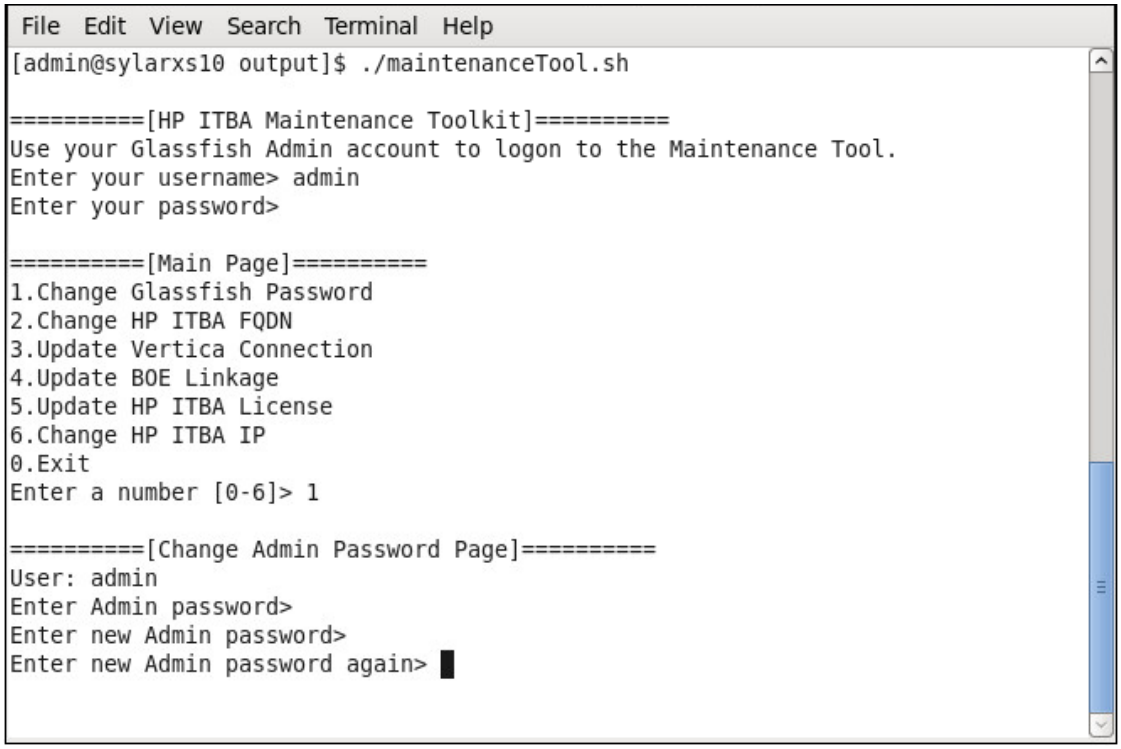
4. Once the authentication is successful, go to the main menu page and perform the required operation.



Update the Glassfish password

You can update the Glassfish (BA Admin password) using the Maintenance Tool.

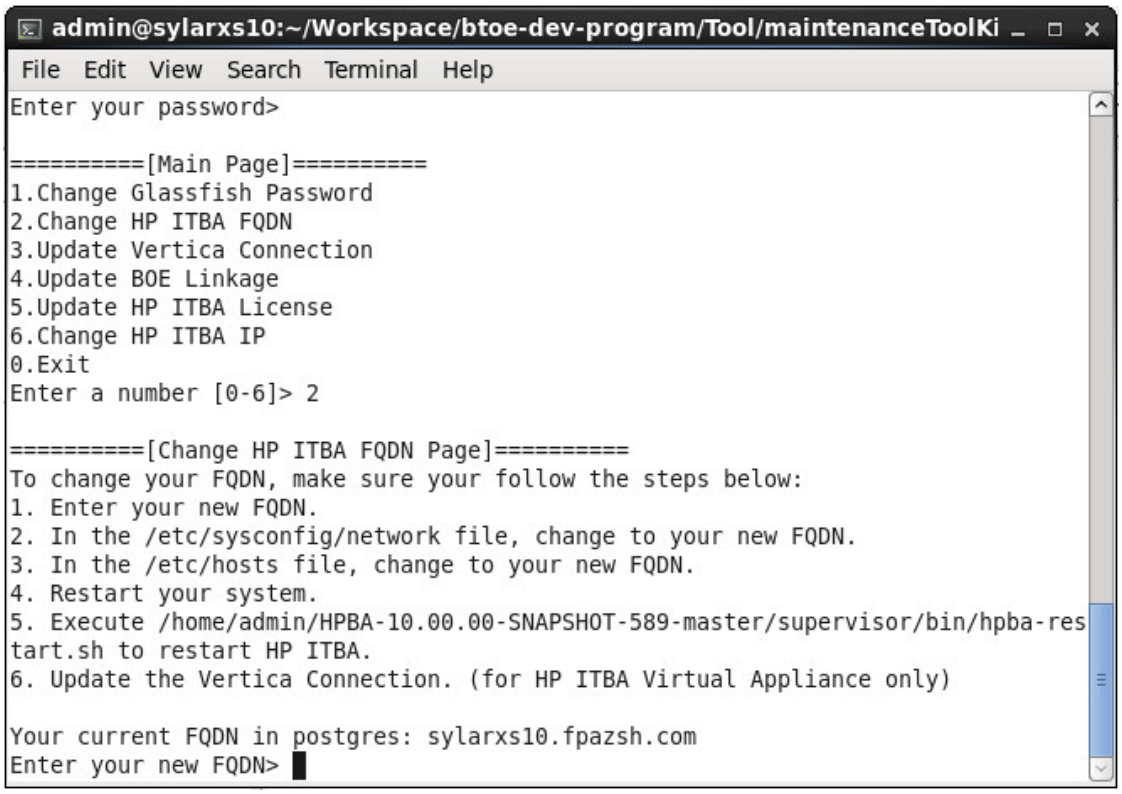
1. Open a Unix console (bash) and go to the following **<HP-BA>/Tools/** directory and input command **./maintenanceTool.sh** to start the BA Maintenance Tool.
2. Enter **1** in **Enter a number (0-6)** to change the Glassfish/Admin Password, and then input the old password and new password to change it.



Change the host name

You can update the BA FQDN using the Maintenance Tool.

1. Make sure you check out the step detailed in the Maintenance Tool.
2. Open a Unix console (bash) and go to the following **<HP-BA>/Tools/** directory and input command **./maintenanceTool.sh** to start the BA Maintenance Tool.
3. Enter **2** in **Enter a number (0-6)** to change the hostname. The current hostname is displayed, and users are asked to input his new hostname.

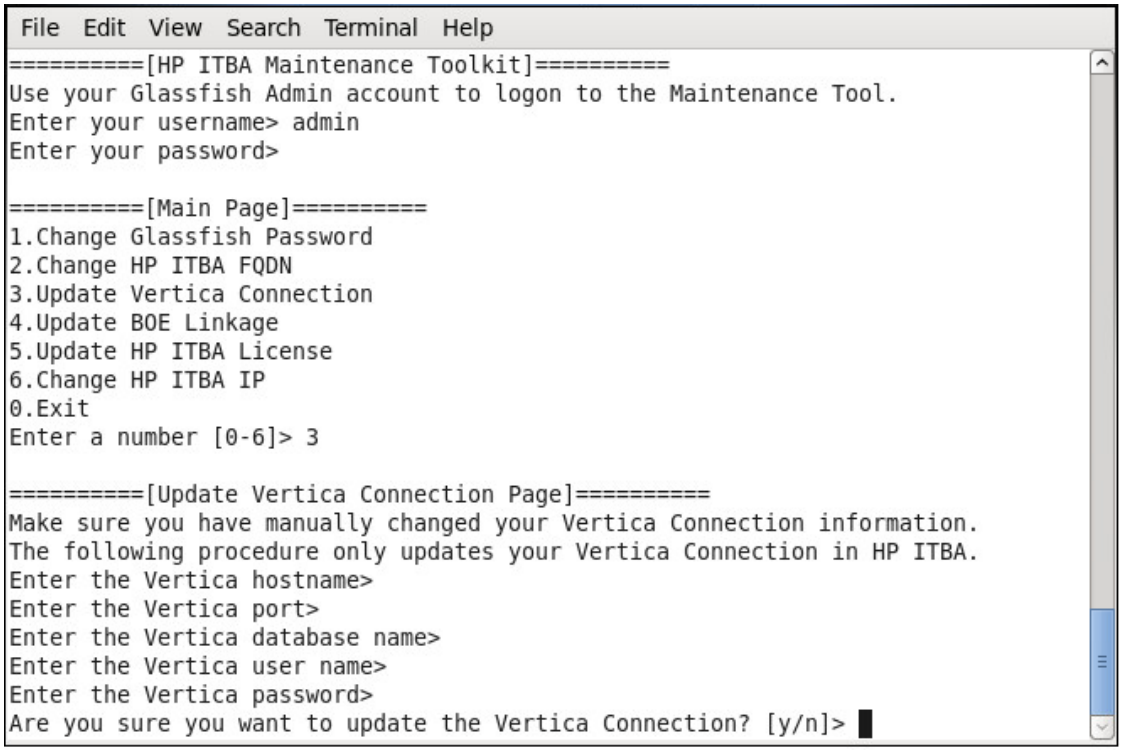


4. After the hostname updates successfully, restart BA manually.

Update the Vertica Connection

You can update the Vertica connection using the Maintenance Tool.

1. Make sure you check out the step detailed in the Maintenance Tool.
2. Open a Unix console (bash) and go to the following **<HP-BA>/Tools/** directory and input command **./maintenanceTool.sh** to start the BA Maintenance Tool.
3. Enter **3** in **Enter a number (0-6)** to update the Vertica Connection.

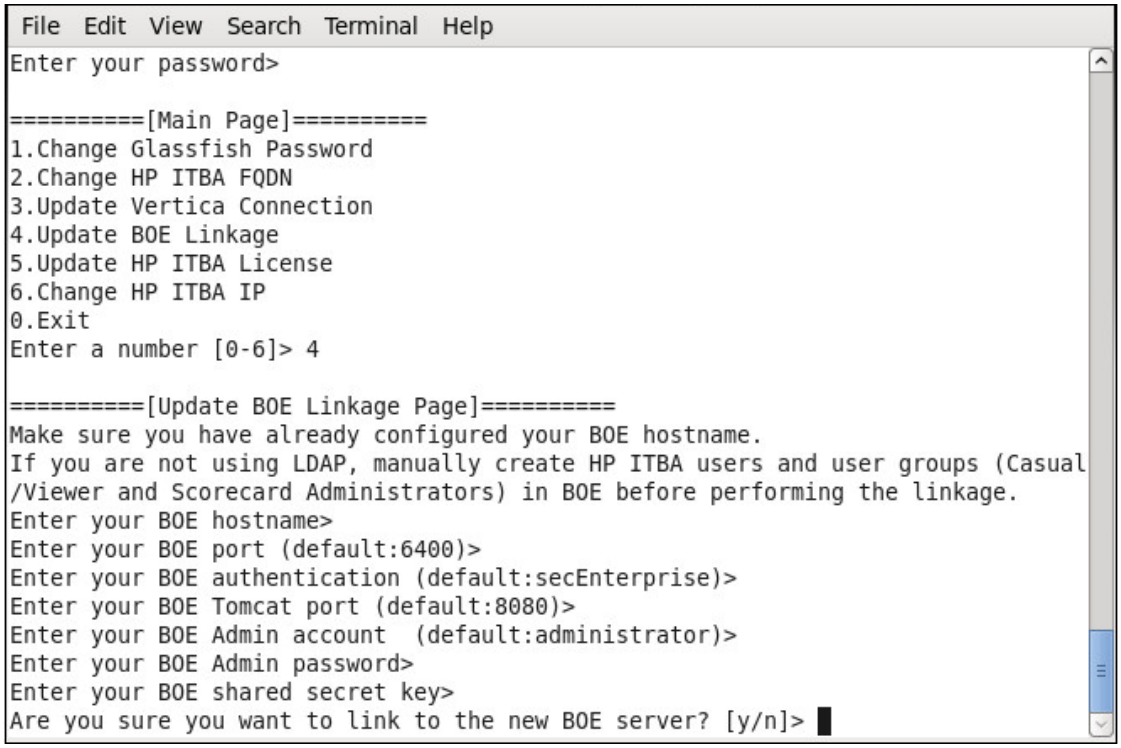


4. Once the Connection is updated successfully, users need to restart BA manually.

Link to BOE

You can update the BOE linkage using the Maintenance Tool.

1. Make sure you check out the step detailed in the Maintenance Tool.
2. Open a Unix console (bash) and go to the following **<HP-BA>/Tools/** directory and input command **./maintenanceTool.sh** to start the BA Maintenance Tool.
3. Enter **4** in **Enter a number (0-6)** to create the BOE linkage. Additional BOE information is required.



4. Once the link is successful, users need to manually create BA users in BOE.

Update Licenses

You can update the BA license using the Maintenance Tool.

1. Open a Unix console (bash) and go to the following **<HP-BA>/Tools/** directory and input command **./maintenanceTool.sh** to start the BA Maintenance Tool.
2. Enter **5** in **Enter a number (0-6)** to update the license.

```
File  Edit  View  Search  Terminal  Help
[admin@sylarxs10 output]$ ./maintenanceTool.sh

==========[HP ITBA Maintenance Toolkit]==========
Use your Glassfish Admin account to logon to the Maintenance Tool.
Enter your username> admin
Enter your password>

==========[Main Page]==========
1.Change Glassfish Password
2.Change HP ITBA FQDN
3.Update Vertica Connection
4.Update BOE Linkage
5.Update HP ITBA License
6.Change HP ITBA IP
0.Exit
Enter a number [0-6]> 5

==========[Update HP ITBA License Page]==========
No valid licenses.
Please install your Power License first.
--------------------------
Enter your license key>
```

3. The user licenses information (license type and capacity) is automatically displayed in the shell.

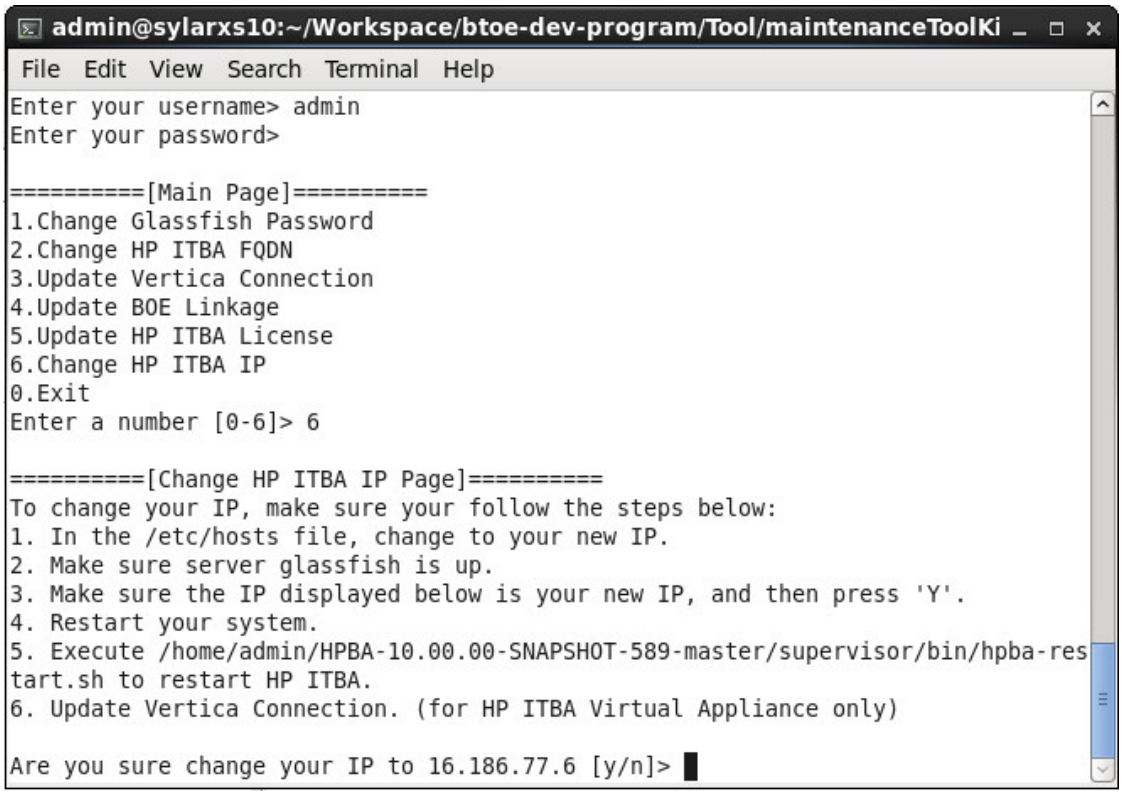
```
File  Edit  View  Search  Terminal  Help
Enter your password>

==========[Main Page]==========
1.Change Glassfish Password
2.Change HP ITBA FQDN
3.Update Vertica Connection
4.Update BOE Linkage
5.Update HP ITBA License
6.Change HP ITBA IP
0.Exit
Enter a number [0-6]> 5

==========[Update HP ITBA License Page]==========
Valid Licenses:
     ---------------------
     License Key: [redacted]
     User Type: Power User
     Product Type: Permanent
     Capacity: 10
--------------------------
Enter your license key>
```

4. Enter the license key.

Update the IP number

You can update the IP number using the Maintenance Tool.

1. Make sure you check out the step detailed in the Maintenance Tool.
2. Open a Unix console (bash) and go to the following **<HP-BA>/Tools** directory and input command **./maintenanceTool.sh** to start the BA Maintenance Tool.
3. Enter **6** in **Enter a number (0-6)** to change the IP number.



Notifications - Entity Report

You use the Entity Report to view the changes to the values or states of the BA entities.

You can schedule to automatically generate the Entity Report for selected Scorecards, Perspectives, Objectives, KPIs, Metrics, KPI Breakdowns, and Metric Breakdowns and to send selected users email notification that include the Entity Report.

To access:

Click **ADMIN > Notifications > Entity Reports**.

Learn More | Tasks | UI Description

Learn More

The Entity report

You can configure a single report for more than one entity.

If you select to display the Scorecards, Perspectives, or Objectives entities in the report, all the children entities under the selected entities are also displayed in the report. If you select KPIs or Metrics, their Breakdowns are also displayed in the report.

The report displays both the current status and the change in status for the last closed period (not since the last time the report was scheduled). For example, you create a daily scheduled report for a monthly KPI. The report shows the KPI current value, the trend that compares the current value and the value for the last closed period (previous month), the status, the last calculation time, and the KPI threshold.

You can schedule to send the report every day, week, or month at a specific time.

The report displays the following information:

Entity Type	Name of Entity	Current Status of Entity	Current Value of Entity	Current Score of Entity	Trend	Last Calculation Date	Entity Children Data
Scorecard	V	-	-	-	-	-	V
Perspective	V	-	-	-	-	-	V
Objective	V	V	-	V	V	V	V
KPI	V	V	V	-	V	V	By choice
KPI Breakdown	V	V	V	-	V	V	By choice
Metric	V	-	V	-	V	V	By choice
Metric Breakdown	V	-	V	-	V	V	By choice

Tasks

This section includes:

Configure the Notification settings

Before you can create and schedule Entity Reports, you must configure the email settings in **ADMIN > Settings > Foundation**. For details, see "Foundation" on page 108.

Create an Entity Report

You want to get a scheduled report on the current status (value, status, trend) of specific entities. Depending on your permissions:

1. Log into BA.
2. Click **ADMIN > Notifications > Entity Reports**.
3. Click **New** to create a new notification.
4. In the New Notification dialog that appears, select **Entity Report**, and enter the notification name, description, select the relevant entities from the entities list, set the scheduling time when the report is to run, select the relevant recipients, select the Active notification status, and test the report or save.

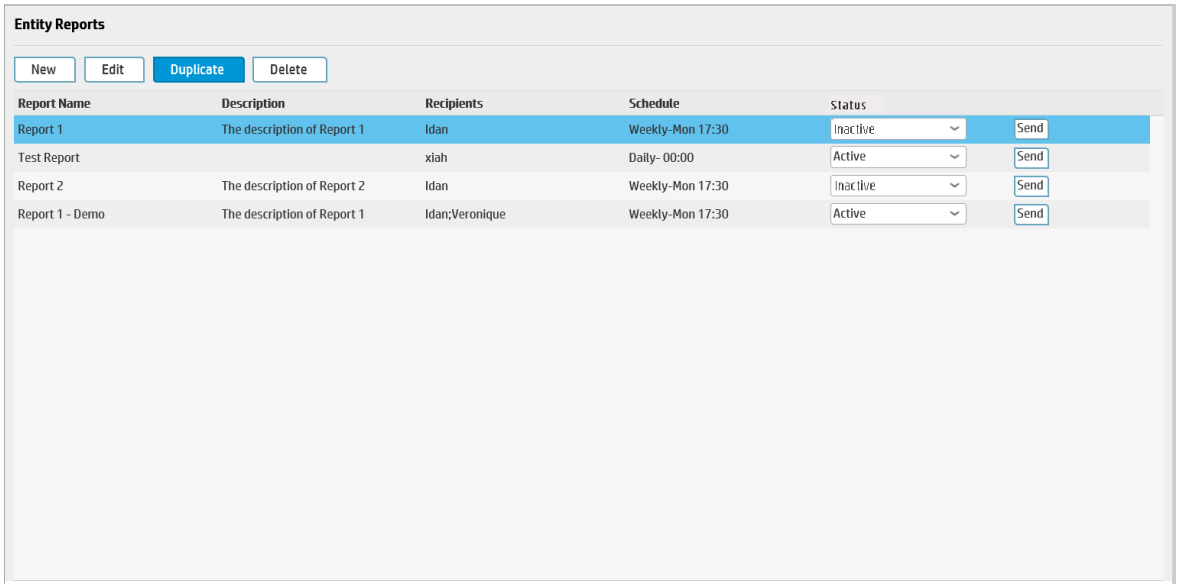
Add recipients to an Entity Report

You have scheduled an entity report and the report is sent according to schedule to a list of specific emails. You want to schedule the same report to be sent to other emails:

1. Click **ADMIN > Notifications > Entity Reports**.
2. Select the relevant entity report, and click **Edit**.
3. In the Edit Notification dialog that appears, select the Recipients, test the report, or save.

UI Description

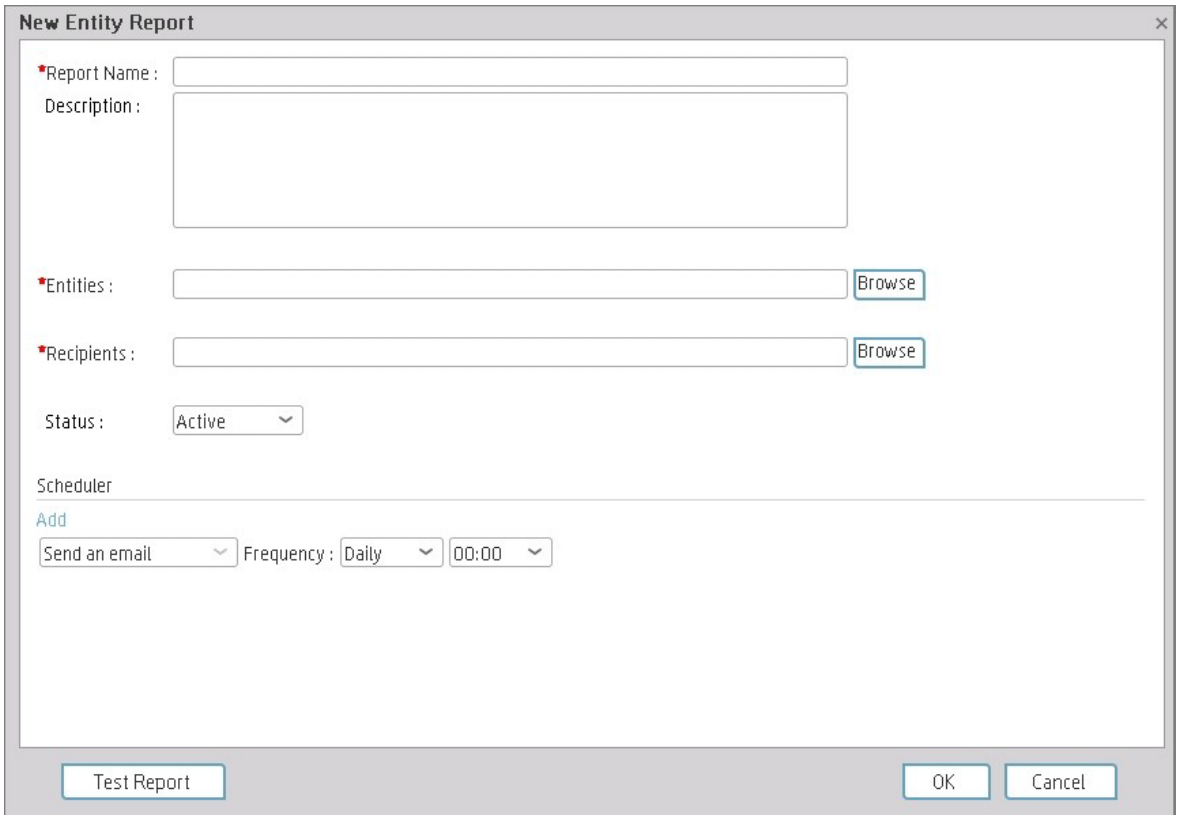
Entity Reports page



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

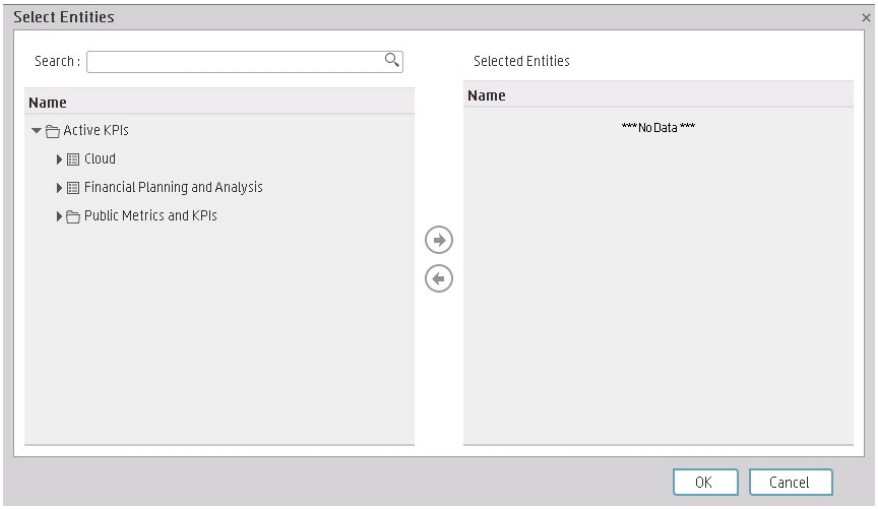
UI Element	Description
New	Click to create a new report. The New Entity Report dialog box opens. For details, see "New/Edit Entity Report dialog box" on the next page.
Edit	Click to edit the selected report. The Edit Entity Report dialog box opens. For details, see "New/Edit Entity Report dialog box" on the next page.
Duplicate	Click to duplicate the selected report. The select report opens in the Edit Entity Report dialog box. Modify the report and save.
Delete	Click to delete the selected report.
Report Name	The name of the report.
Description	The description of the report.
Recipients	The recipients of the scheduled report.
Schedule	The date and time when the report is scheduled to run.
Status	**Active** if the notification is activated or **Inactive** if the notification is deactivated.
Test report	Click to test the report.

New/Edit Entity Report dialog box



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Report Name	The name of the report.
Description	The description of the report.
Entities	The list of selected entities. Click **Browse** to select the relevant entities.

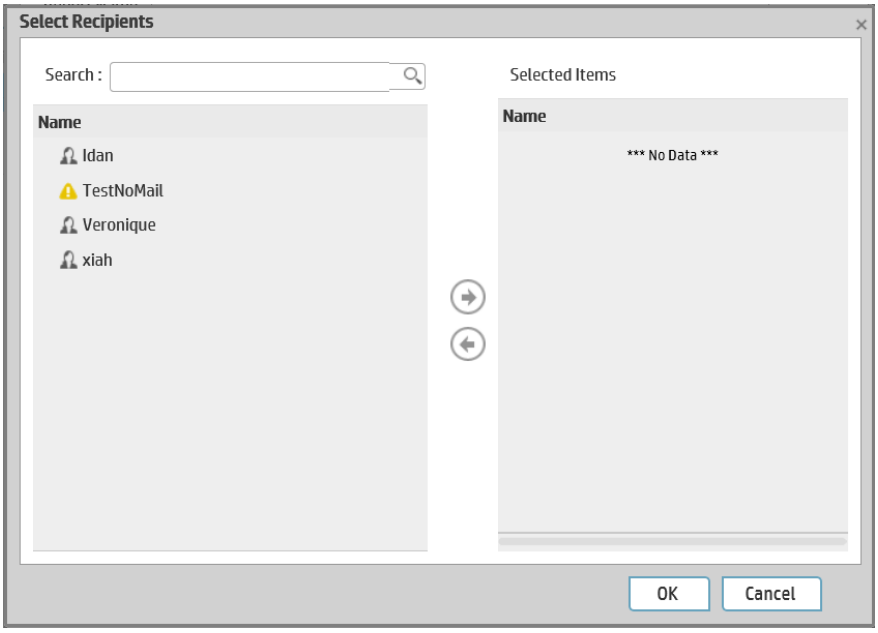


Select the relevant entities in the tree in the left side and use the arrows to move the entities to the **Selected Entities** area.

Note: If you select an Objective, and all its KPIs are moved to the selected panel, you can then remove some of these KPIs by selecting them in the **Selected Entities** area and using the back arrow.

Recipients

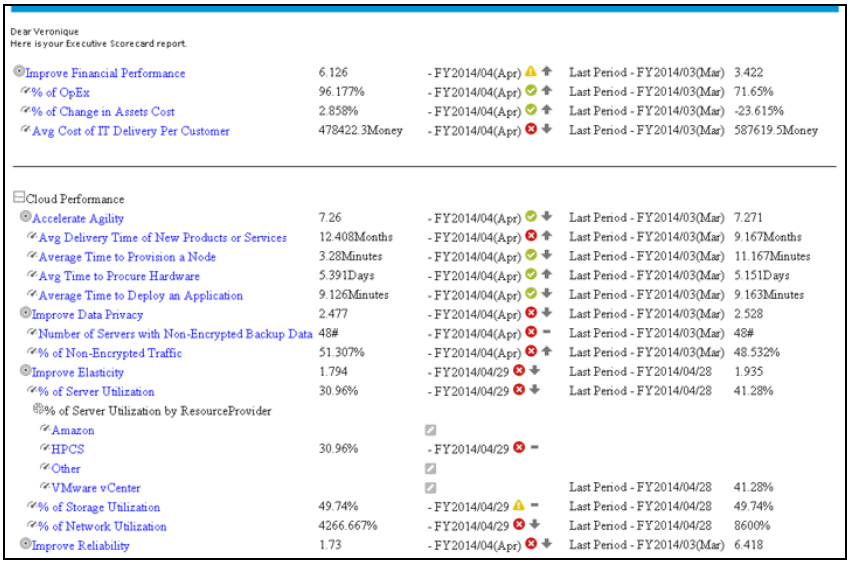
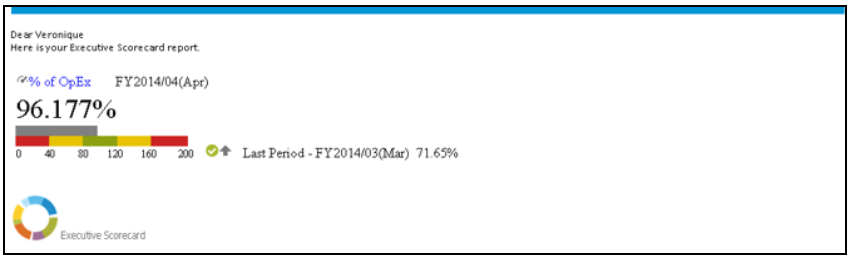
Select the recipients of the scheduled email. You can enter additional emails separated by commas (,) or click **Browse** to select more recipients.



Select the relevant recipients in the left side area and use the arrows to move the recipients to the **Selected Recipients** area.

You can also use the search feature.

You can also deselect recipients by removing them from the **Selected**

	Recipients area using the back arrow.
Schedule	Select to send an email to the selected recipients once a **Daily**, **Weekly**, or **Monthly**, at a specific time (24 hours format). Click **Add** to add more schedules.
Notification status	Select **Active** to activate the notification or **Inactive** to deactivate the notification.
Test report	Click to test the report. • The test report is as follows for Objectives and Scorecards:  The report displays the tree of child items of the selected item. For each item in the tree, you can see the entity type (icon), the name of the entity, the current value, the current period, the current status, the current trend, the last calculation period, and the value during the previous period. • The test report is as follows for a KPI:  The report displays the entity type (icon), the name of the entity, and the current period, the current value, the threshold, the current status, the current trend, the last period, and the value during the last period.

Logs and the LogTool

IT Business Analytics records the procedures and actions performed by the various components in log files. The log files are usually designed to serve HP Software Support when Business Analytics does not perform as expected. The default severity threshold level for log files differs per log, but is generally set to either Warning or Error.

You can view log files with any text editor.

The LogTool enables you to view, manage, and analyze your logs.

To access:

The URL of the LogPortal where you can use the LogTool is: **https://<ba_server_fqdn>:10003/LogPortal**.

Learn More

Common Component Log Files and Their Location

Log Filename	Description	Location:
access.log	Records all requests processed by the web server.	$HPBA_Home/webserver/httpd/logs
error.log	The web server error.log is the most important log file. This is the place where Apache httpd sends diagnostic information and records any errors that it encounters when	$HPBA_Home/webserver/httpd/logs

Log Filename	Description	Location:
	processing requests. It is the first place to look when a problem occurs with starting or operating the Web Server.	
install-<timestamp>.log	Installation log	$HPBA_Home
jk.log	Contains information about communications between the Web Server and the application server (Glassfish).	$HPBA_Home/webserver/httpd/logs
ssl_request.log	Logs records of all secured requests processed by the Web Server.	$HPBA_Home/webserver/httpd/logs
applicationfw.log	Logs application loading and permission enforcement related to the application framework.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
athN.log	Logs requests for authentication and population of user roles and permissions.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs

Log Filename	Description	Location:
aui.log	Logs user management user interface details.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
bo-services.log	Logs the usage of SAP BusinessObjects services, including issues locating the SAP BusinessObjects CMS.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
bsf.log	The BTO Security Framework (BSF) server-side log records authentication information about authn, LW-SSO, and user mng.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
btoe-services.log	Logs the usage of foundation services.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
datalayer.log	Logs SAP BusinessObjects datalayer transactions such as problems with SAP BusinessObject Universes or queries.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
foundation.log	Foundation core components log.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
hibernate.log	Hibernate log.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs

Log Filename	Description	Location:
jvm.log	JVM general log.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
license-services.log	Licensing logs.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
properties.log	Properties table logs.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
server.log	General GlassFish log.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
settings.log	Settings management logs	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
sso.log	Logs authentication details related to IDM and LW SSO.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
uim.log	User Interface mash-up logs.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
userMng.log	User Management actions log, including problems with communication to SAP BusinessObjects.	$HPBA_Home/glassfish/glassfish/domains/BTOA/logs
log.txt	MQ Broker service log.	$HPBA_Home/glassfish/glassfish/domains/domain1/imq/instances/imqbroker_host1/log

Business Analytics Log Files and Their Location

Log filename	Description	Location: $HPBA_Home
dashboard.log	Logs all the dashboard's server side logs.	**/glassfish/glassfish/domains/BTOA/logs**
studio.log	Logs general information for Business Analytics Studio, the client module used	

Log filename	Description	Location: $HPBA_Home
	for tailoring Business Analytics.	
engine.log	Logs general information about the engine, KPIs, and business context calculation details.	
engine_ statistics.log	Provides a summary of calculation cycles, and statistics about KPI engine performance.	

Data Warehouse Log Files and Their Location

Log files can be accessed under:

Log	Description	Location
cfm.log	The Content flow Manager log. It lists the whole process of streams. Detailed logs of each step are covered in related logs.	$HPBA_ Home/glassfish/glassfish/domains/BTOA/logs
data_ consolidation.log	The consolidation configuration log.	$HPBA_ Home/glassfish/glassfish/domains/BTOA/logs
dcs.extractor.log	Describes the activity of all the extractors that were triggered by Content Flow Manager.	$HPBA_ Home/glassfish/glassfish/domains/BTOA/logs
dcs.log	Logs the source extraction information.	$HPBA_ Home/glassfish/glassfish/domains/BTOA/logs
dsm.ui.log	Logs Datasource Management UI management activities.	
dwh.log	Logs the DWH management activities.	
dwhETLService.log	The runtime log of the ETL steps in a stream.	$HPBA_ Home/glassfish/glassfish/domains/BTOA/logs
dwhSchemaGen.log	The log of the generated staging and target schema during the deployment of a Content Pack.	$HPBA_ Home/glassfish/glassfish/domains/BTOA/logs

Tasks

This section includes:

Access the LogTool in the LogPortal

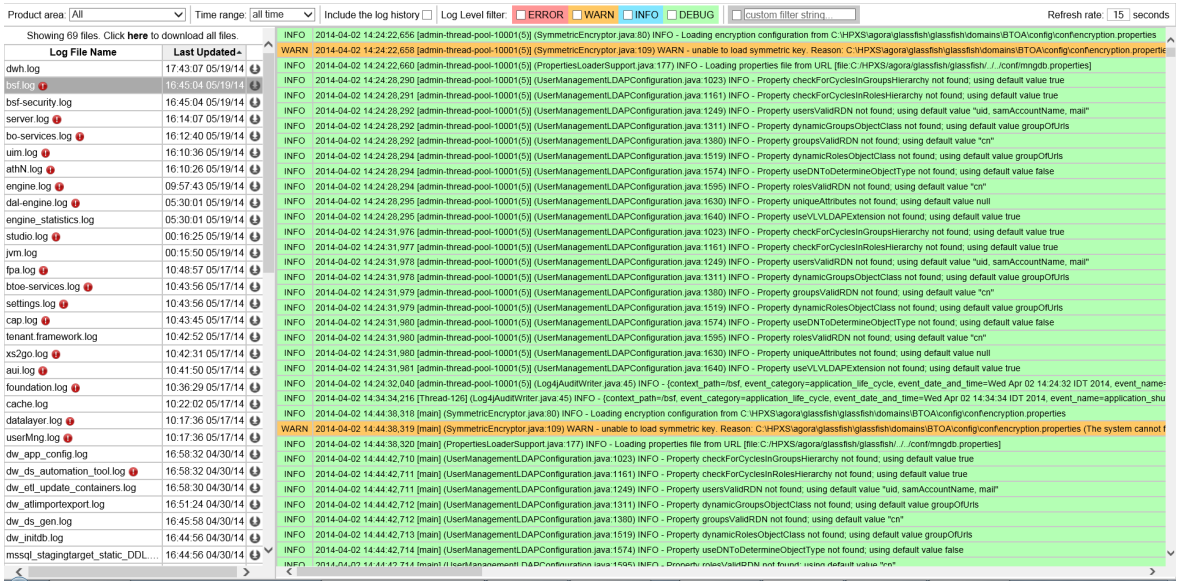
1. Access the LogPortal at: **https://<ba_server_fqdn>:10003/LogPortal**. In a Production environment, you should checks the logs in each server.
2. Enter your user/password:
   - If the installation was successful, the username/password for LogPortal is same as the glassfish admin console (locahost:10001) user/password that you entered during the post-install procedure.
   - If an error occurred during installation:
     - **Option 1:** Try try to access the LogPortal (for credentials, use admin for the username, and an empty password). If it is not accessible, then use Option 2.
     - **Option 2:** Use a text editor to analyze the logs in the file system.
3. You can now select the product area, the time range, to include the log history or not, select the relevant log to display it in the detail area, and then select the filters to display only the lines that include the filter string.
4. You can also set up, in the **Refresh Rate** field, how often you want the log list and the log viewer to check for updates on the server side .

Downloading the log files

- **Option 1:** Click  in the relevant log list row to download the corresponding log file.
- **Option 1:** Click **here** in **Click here to download all files**, creates a zip file with all the logs in the selected product area.

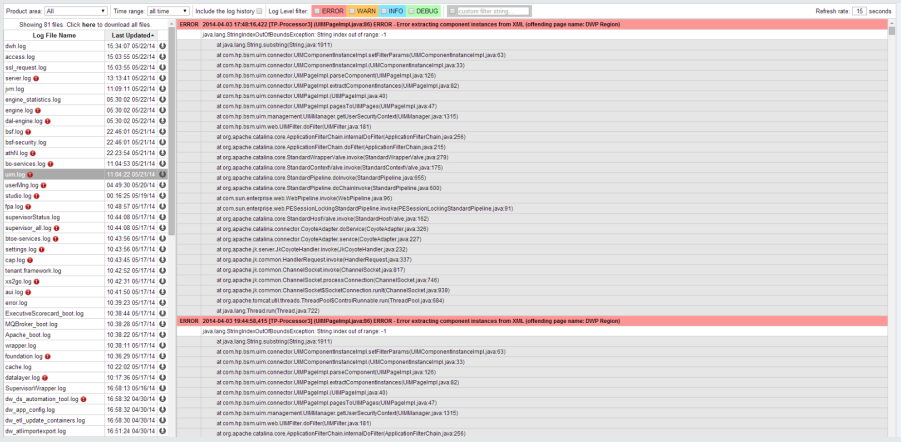
UI Description

LogTool page



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Product area	Filter the logs by their product area: • **CAP** • **DCS,CFM,ETL,DWH UI** • **Dashboard** • **Engine** • **Foundation** • **Server** • **Studio** • **UserMgmt** **Note:** You can edit the product area in the **$HPBA_Home/conf/logGroupsConfig.xml** file.
Time range	Filter the logs that were created in the selected time range: **All**, **1min**, **5 min**, **Last 15 min**, **Last 30 min**, **Last hour**, or **Last day**.
Include the log history	Select to include the log history (the log files that were rotated; for example: <log_name>.log.1, <log_name>.log.2).

Log Level filter	You can filter the log entries to display only the entries that start with the following strings: **ERROR**, **WARN**, **INFO**, **DEBUG**, or your own string. **Note:** The ERROR filter also includes the stack trace of the error.
Refresh rate (in seconds)	The rate of refresh of the log list and the update check interval of the currently opened log file, in seconds. Default: 15
<Message>	**Showing <nn> files.** The message displays the number of logs. **Click here to download all files.** Creates a .ZIP file of all the listed logs.
Log File Name	The log files filtered for the product area and the time range. Click the log name to display its details. indicates that the log includes errors within the selected time range. Click the arrow in the column header to sort the list.
Last Updated	The date and time when the log was last updated. Click the arrow in the column header to sort the list. By default, the table is sorted by the **Last Updated** in descending order.
	Click to download the selected log file (not in ZIP format).
<Log details area>	The contents of the selected log. Select the relevant Log Level filter to display only the log entries that start with the string. Example: When you select ERROR, the log details area displays: 

Migrate from Development or Test Environment to Production

This section lists the tasks involved in moving from a Development or Test environment to a Production environment.

This section includes:

Change Data Sources

If you changed one or more of the data sources (for example moving from one version of a data source to a higher version of the data source in the Development or Testing environment, you must modify the data source settings in the Connect Data Source page in the Production environment. Click **Admin > Data Management > Connect Data Source** and make your changes.

For details, see "Connect the Data Sources" on page 208.

Restore from Backup

To restore your system from backup follow the backup instructions. For details, see "Business Analytics Back Up " on page 190.

Activate the Data Sources

In the BA application , activate the relevant data sources:

1. Select **Admin > Data Management > Connect Data Source**.
2. The Data Sources page opens. Click the **Activate**  button for the relevant data source.

Run the ETLs to Pull Data from the Data Sources

In the Production environment, run the relevant ETLs to pull data from the data sources.

For details, see "Run ETL - Content Flow Management" on page 234.

Migrate contexts

To migrate the contexts, proceed as follows:

1. **Prerequisite:** Make sure your schemas are the same in the Development or Testing environment and in the Production environment.
2. Create a CAP that only includes the contexts you created or modified in the Development or Testing environments. For details, see Create a CAP with the Business Analytics application data in the *Guide to BA Content Acceleration Packs*.

   Note: You can migrate Contexts, trees, KPIs, Metrics, user-defined pages, or components using one CAP per type of item or one CAP for all the items you want to export/import/migrate.

   Note: You can select to perform a recalculation during the CAP activation by specifying a recalculation date when you create the CAP.
   You can also perform the calculation after all the items are migrated. For details, see "Perform the calculation" on page 176.
3. Export the CAP you created. For details, see Download a CAP to the user's local system in the *Guide to BA Content Acceleration Packs*.
4. Copy the CAP you downloaded from the Development or Testing environment to the Production environment or from the user's local system to the system where you want to import the item.
5. Upload the CAP to the Production environment. For details, see Upload a CAP to the Business Analytics application in the *Guide to BA Content Acceleration Packs*.
6. Activate the CAP in **ADMIN > Data Management > Activate CAP**. For details, see Activate a CAP in the *Guide to BA Content Acceleration Packs*.
7. Verify the upload by accessing the contexts in **Admin > Semantic Layer**. For details, see View existing out-of-the-box Contexts (universes) in the *BA Content Reference Guide*.

Note: If the context you import already exists in the Production environment, it is deleted and replaced by the context imported using the CAP.

Migrate Data Imported using .CSV files

To migrate data imported into BA using .CSV files, proceed as follows:

1. Create a CAP that only includes the contexts used to import the .CSV files you created or modified in the Development or Testing environments. For details, see Create a CAP with the Business Analytics application data in the *Guide to BA Content Acceleration Packs*.

   Note: You can migrate Contexts, trees, KPIs, Metrics, user-defined pages, or components using one CAP per type of item or one CAP for all the items you want to export/import/migrate.

   Note: You can select to perform a recalculation during the CAP activation by specifying a recalculation date when you create the CAP.
   You can also perform the calculation after all the items are migrated. For details, see "Perform the calculation" on page 176.
2. Export the CAP you created. For details, see Download a CAP to the user's local system in the *Guide to BA Content Acceleration Packs*.
3. Copy the CAP you downloaded from the Development or Testing environment to the Production environment or from the user's local system to the system where you want to import the item..
4. Upload the CAP to the Production environment. For details, see Upload a CAP to the Business Analytics application in the *Guide to BA Content Acceleration Packs*.
5. Activate the CAP in **ADMIN > Data Management > Activate CAP**. For details, see Activate a CAP in the *Guide to BA Content Acceleration Packs*.
6. Verify the upload by accessing the contexts in **Admin > Semantic Layer**. For details, see View existing Contexts (universes) in the *BA Content Extension Guide*.
7. Reimport the data by accessing the relevant context in **Admin > Semantic Layer**. For details, see Semantic Layer - Context Management in the *BA Content Extension Guide*.
8. Perform the calculation for the relevant contexts in the Studio. For details, see Calculation in the *BA Business Analyst Guide*.

Note: If the context you import already exists in the Production environment, it is deleted and replaced by the context imported using the CAP.

Migrate Trees, Metrics, and Unassigned KPIs

You can export complete trees (with their Scorecards, Perspectives, Objectives, and KPIs) from the Active KPIs pane.

You can import existing template trees or sub-trees, active trees, active sub-trees, Metrics, or Unassigned KPIs into the Active KPIs pane.

The import or export flows are meant to be used when moving from staging to production and not as a way to update system configuration. If you want to use the import or export flows to update the system configuration, you must delete all the nodes in the active KPIs pane, before performing the import operation.

The export and import flows are also meant to be used for localization purposes, when you want to work with other languages than English.

Learn More

About Exporting or Importing Trees

You use the export or import feature when you want to import or export out-of-the-box templates, automatically update existing templates, or import new templates, or active trees into the Executive Studio.

The export and import feature is the process used to move from staging environment to production.

The export feature collects the contents of the Active KPIs tree (Scorecards, Perspectives, Objectives, KPIs, Metrics, and Unassigned KPIs). It converts the contents to a **configuration.xml** file that describes the structure of the active tree or to a **<Scorecard_name>.xml** file for each Scorecard. These files include the UUID, KPI name of the KPIs, and Metrics name of the Metrics included in the trees. In addition, the process creates a **<kpi_or_metric_name>.xml** file per KPI or Metric in the system; that file describes the configuration of the KPI or Metric. The XML files are created in a specific directory on the machine.

The import feature collects the content of a specific directory on the machine. The directory can include **configuration.xml** files, and **<kpi_or_metric_name>.xml** files according to the same format used by the export feature or can include .xml files with other names. The import feature uses these files to upload the information in the specific area in the Active KPIs tree.

The export and import operations work with XML files with a specific structure. Each configuration.xml file includes information about the hierarchy from the lowest node to the tree root. That information is used to add the new node is added to the relevant location in the relevant tree, or the imported node overrides the relevant node. Each **<KPI_or_Metric_name>.xml** file includes information about the KPI or Metric configuration. That information is used so that the relevant configuration and calculation details are added to the relevant KPI or Metric.

The export operation uses the KPI or Metric UUID to identify the KPI or the Metric.

In addition, you can import KPIs from Excel files. You can use this capability to import KPIs without consideration about their location in the tree. You can also create an .xml file that provides information about a tree structure and that refers to KPIs that are imported from the Excel file. The import feature uses these files to upload the information in the specific area in the Active KPIs tree.

Note: When the server on which the Executive Studio is located starts, if the system detects files in the **$HPBA_Home/glassfish/glassfish/domains/BTOA/config/kpitemplates/import** directory, it automatically uploads that information. This feature is used when you log on to the Executive Studio for the first time, to upload the out-of-the-box templates.

Tasks

This section includes:

Migrate Scorecards, Perspectives, Objectives, Metrics, and KPIs

Export complete trees (with their Scorecards, Perspectives, Objectives, and KPIs), Metrics, or Unassigned KPIs from the Active KPIs pane of the Development/Test environment. For details, see "Export nodes using CAPs" below.

Import these template trees or sub-trees, active trees, active sub-trees, Metrics or Unassigned KPIs into the Active KPIs pane of the Production environment. For details, see "Import nodes using CAPs" on the next page.

Export nodes using CAPs

To export nodes and hierarchical structure (trees and their Scorecards, Perspectives, Objectives, and KPIs, Unassigned KPIs or Metrics), proceed as follows:

1. Create a CAP that only includes the items you want to export. For details, see Create a CAP with the Business Analytics application data in the *Guide to BA Content Acceleration Packs*.

   Note: You can migrate Contexts, trees, KPIs, Metrics, user-defined pages, or components using one CAP per type of item or one CAP for all the items you want to export/import/migrate.

   Note: You can select to perform a recalculation during the CAP activation by specifying a recalculation date when you create the CAP.
   You can also perform the calculation after all the items are migrated. For details, see "Perform the calculation" on page 176.

2. Export the CAP you created to the user local system. For details, see Download a CAP to the user's local system in the *Guide to BA Content Acceleration Packs*.

You can now copy the CAP to the another server (for example to the Production server) and then import it into the application. For details, see "Import nodes using CAPs" below.

Import nodes using CAPs

To import nodes, proceed as follows:

1. Copy the relevant CAP from the Development or Testing environment to the Production server or from the user's local system to the system where you want to import the item.
2. Upload the CAP to the application. For details, see Upload a CAP to the Business Analytics application in the *Guide to BA Content Acceleration Packs*.
3. Activate the CAP in **Admin > Semantic Layer**. For details, see Activate a CAP in the *Guide to BA Content Acceleration Packs*.
4. Verify the upload by accessing Studio and checking that all the items you wanted to import appear in the Active KPIs.

Migrate User-defined Pages or Components

You can export or import user-defined pages and components from or into the Dashboard page.

You use the import or export flows for localization purposes (when you want to work with other languages than English) or when moving from staging to production and not as a way to update system configuration.

Learn More | Tasks

Learn More

About importing or exporting user-defined Pages and Components

Pages are available or created in the Dashboard. Pages can include components. Components in a page can be wired and can interact with each other using events. For details, about the Dashboard, see Dashboard Display in the *BA Business Analyst Guide*.

The export operation collects the contents of user-defined pages and components. It converts the contents to **components.uim.xml** and **pages.uim.xml** files that describes the structure and content of the pages and components . These files include the universally unique identifier (UUID) of the pages and components.

The export operation uses the page and component UUID to identify the page or component .

The import operation collects the contents of a specific directory on the machine. The directory can include **components.uim.xml** and **pages.uim.xml** files according to the same format used by the export feature. The import feature uses these files to upload the information into the database. After the import operation, the file is moved to the **Loaded** directory if the import operation succeeds, or to the **Errors** directory if the import operation fails.

Note: When the server on which the Dashboard is located starts and detects files in the **<$HPBA_Home/glassfish/glassfish/domains/BTOA/uimashup/import/toload** directory, it automatically uploads that information.

Tasks

This section includes:

Migrate user-defined Dashboard pages and components, and events

1. Export user-defined pages and components from the Dashboard page of the Development/Test environment. For details, see "Export user-defined pages and components and events using CAPs" below.
2. Import these user-defined pages and components into the Dashboard page of the Production environment. For details, see "Import user-defined pages and components and events using CAPs" below.

Export user-defined pages and components and events using CAPs

To export user-defined pages and components , proceed as follows:

1. Create a CAP that only includes the user-defined pages and components you want to export. For details, see Create a CAP with the Business Analytics application data in the *Guide to BA Content Acceleration Packs*.

   Note: You can migrate Contexts, trees, KPIs, Metrics, user-defined pages, or components using one CAP per type of item or one CAP for all the items you want to export/import/migrate.

   Note: You can select to perform a recalculation during the CAP activation by specifying a recalculation date when you create the CAP.
   You can also perform the calculation after all the items are migrated. For details, see "Perform the calculation" on page 176.

2. Export the CAP you created to the user local system or to the Production environment. For details, see Download a CAP to the user's local system in the *Guide to BA Content Acceleration Packs*.

   You can now copy the CAP to the another server (for example to the Production environment) and then import it into the application. For details, see Import user-defined pages and components and events using CAPs in the *Guide to BA Content Acceleration Packs*.

Import user-defined pages and components and events using CAPs

To import user-defined pages and components , proceed as follows:

1. Copy the relevant CAP from the Development or Test environment to the Production environment or from the user local system to the server where you want to import the items.
2. Upload the CAP to the application. For details, see Upload a CAP to the Business Analytics application in the *Guide to BA Content Acceleration Packs*.
3. Activate the CAP in **Admin > Semantic Layer**. For details, see in the *Guide to BA Content Acceleration Packs*.

4. Verify the upload by accessing the Dashboard and checking that all the user-defined pages and components that you wanted to import appear in the Dashboard.

Perform the calculation

In the Production environment, perform the calculation to populate the KPIs, Objectives, Perspectives, Scorecards, and Dashboard pages with data.

Note: You can select to perform a recalculation during the CAP activation by specifying a recalculation date when you create the CAP.
You can also perform the calculation after all the items are migrated. For details, see "Perform the calculation" above.

Tasks

Calculate for the current period

When you change the definition of a KPI (formula or threshold), the change impacts the KPI's value and impacts the Objectives related to the KPI. You may want to perform the calculation for each KPI in the selected business context for the period specified in the KPI configuration, so the impact of the change is felt immediately in the results displayed in the Dashboard.

To calculate the current data:

1. In the Active KPIs pane, click the **Calculation options** button in the Active KPIs toolbar, and select the Calculate now option.
2. In the Calculate Now dialog box that opens:
   - In **Universe/context for recalculation**, select the relevant context (data source) you want to use for the recalculation.
   - Select the **I understand the implications of this process and would like to proceed with the calculation** option to proceed with the calculation.

   Limitations: You perform the calculation for the current period of each KPI within the selected business context.
3. Click **Calculate**.

   The calculation is performed for all KPIs and Objectives with the selected context (universe).

Note:

- The calculation deletes the data that was available for the same period as the period selected for the calculation.
- No backup is available.

For details, see Calculation in the *BA Business Analyst Guide*.

Migrate Customized SAP BusinessObjects Enterprise Reports and BIAR Files

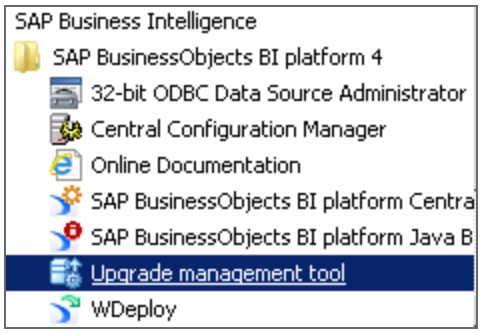
You export the relevant BIAR files from the Development/Test environment, and then import it in the Production environment.

Tasks

This section includes:

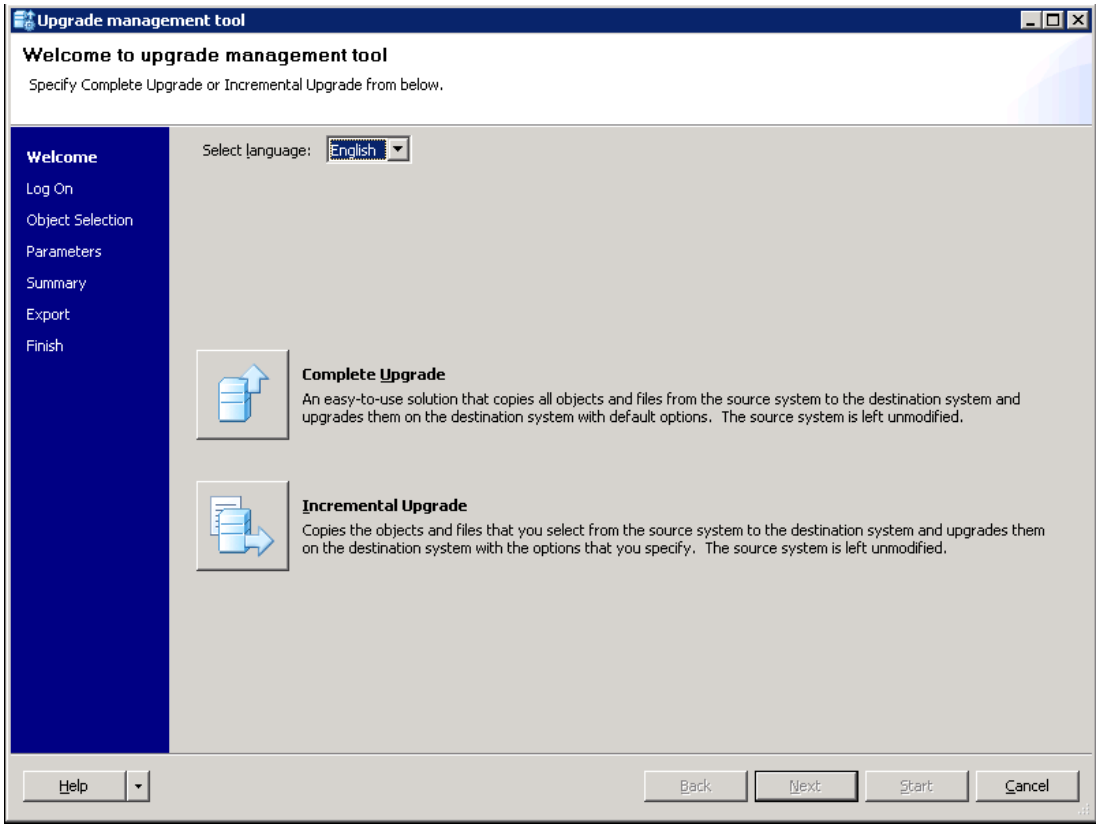
Migrate Customized SAP BusinessObjects Enterprise Reports and Objects from 10.00 to 10.00

- **Export all objects and reports to .biar files from source system from 10.00 to 10.00**
  a. **Prerequisite:** Make sure to delete reports and objects you want to migrate before the migration to prevent failure of the migration due to duplicated names.
  b. In the source system, select the **Upgrade management tool** option under **SAP BusinessObjects BI platform 4.1 SP2.**

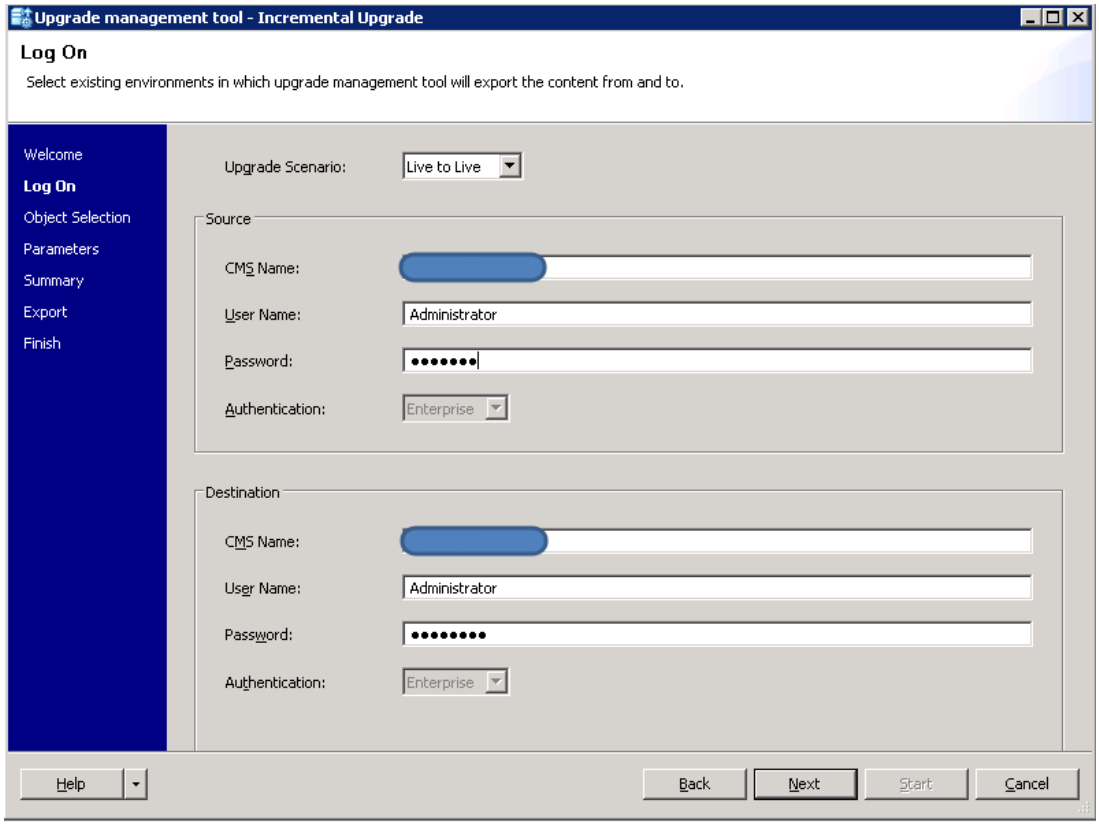


c. Select **Incremental Upgrade** and click **Next**.

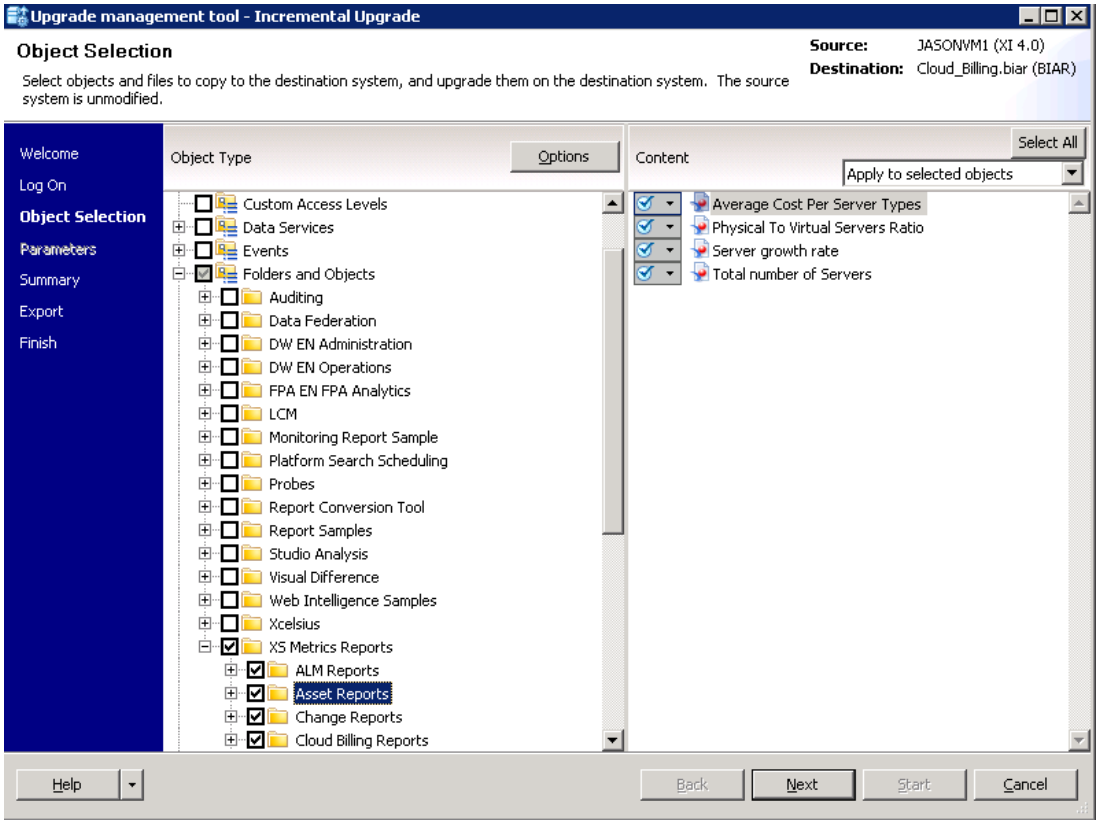
If you select **Complete Upgrade**, all objects and files from source system will be migrated to the destination.



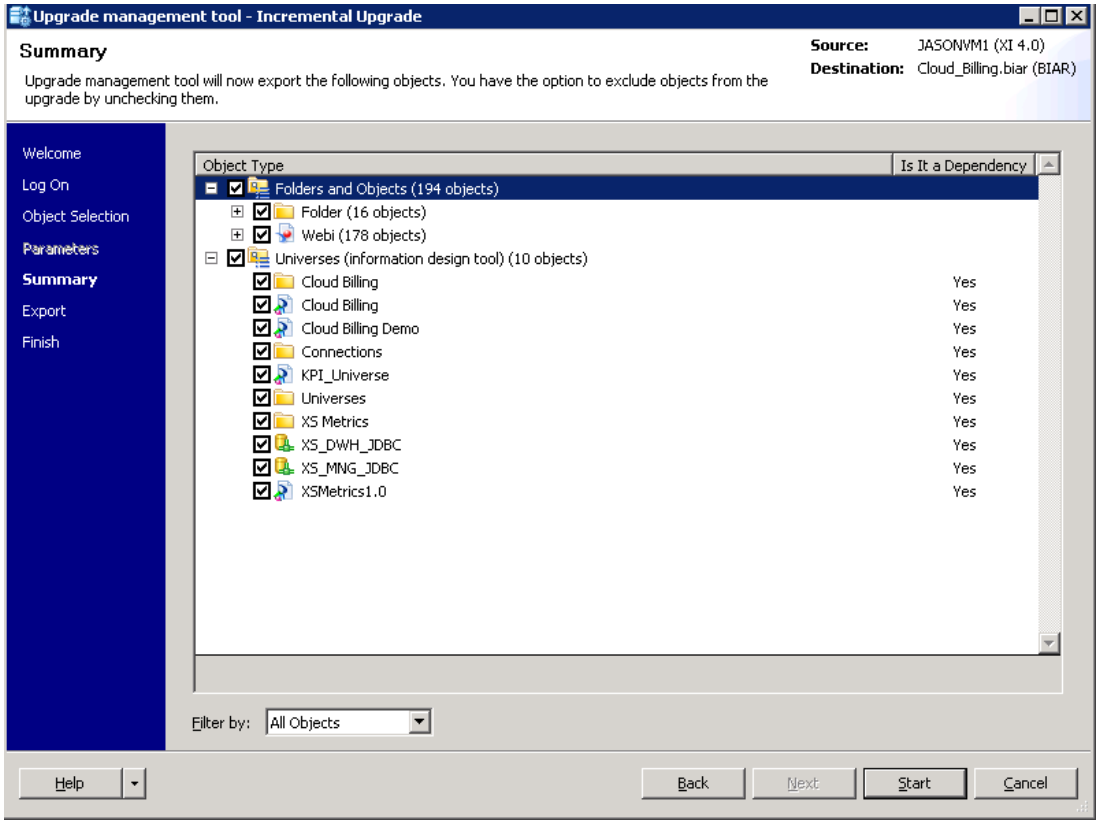
d. Select the **Live to BIAR** option in **Upgrade Scenario**, and input the CMS name, and the user and password of the source and destination. The password is not necessary for the Destination.



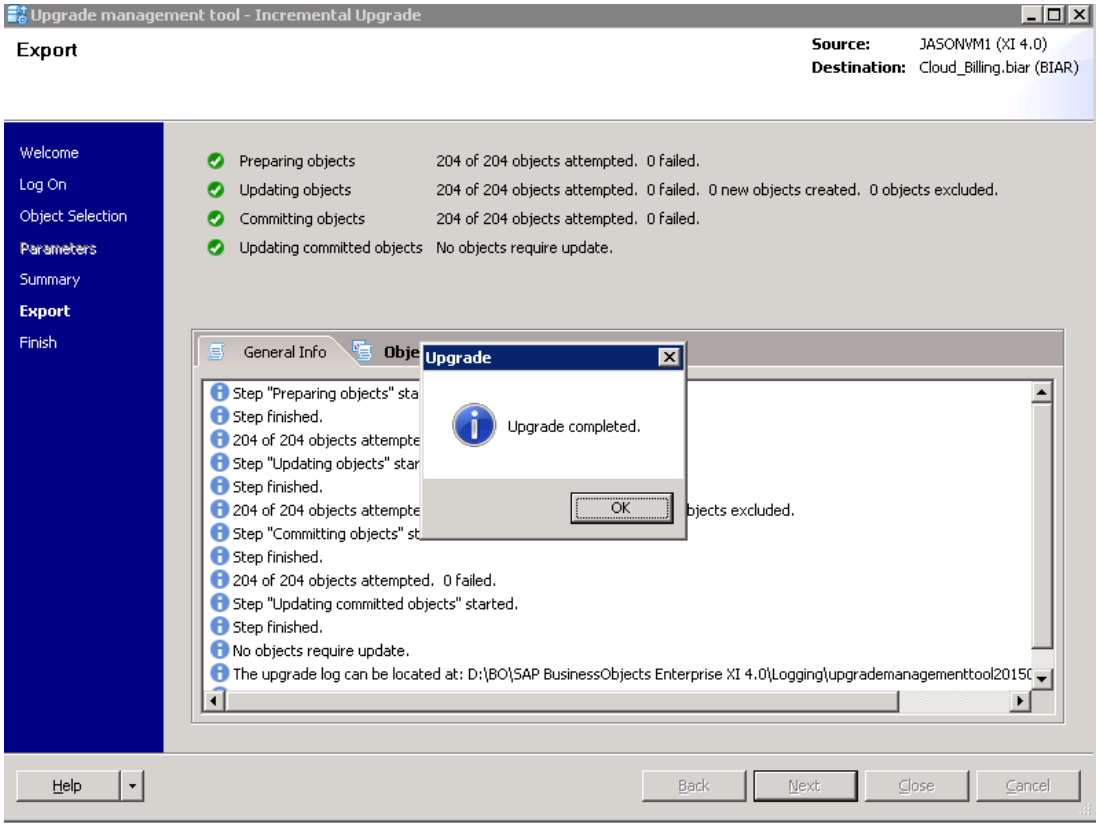
e. Select the relevant folders or reports, and click **Next**.



f. Click **Start** to migrate the reports and the files.



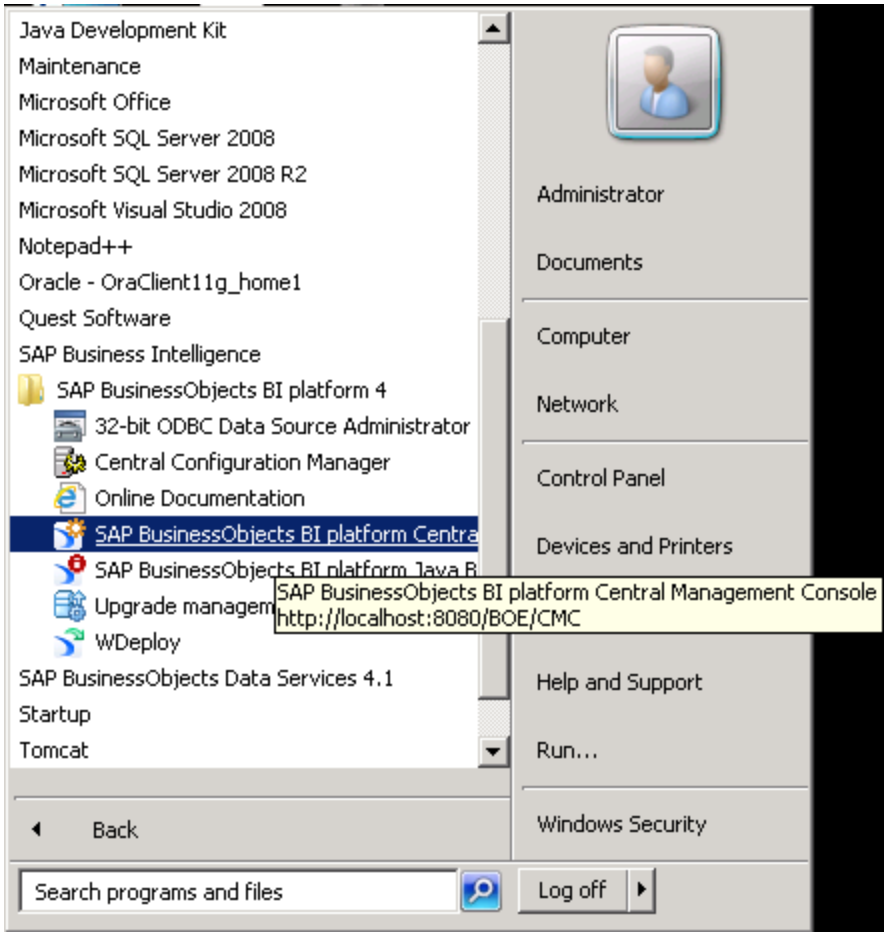
g. Wait until the procedure completes.



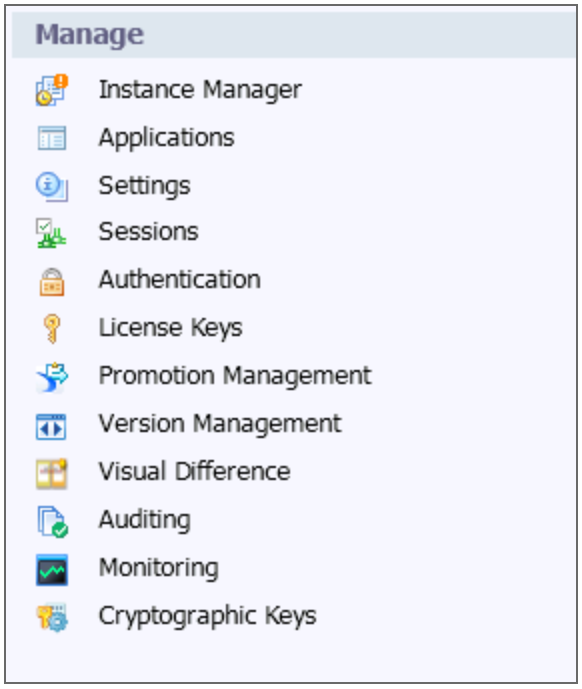
- **Import the .biar files into the destination**

a. Copy the output file to destination. The destination is the existing BOE installation.

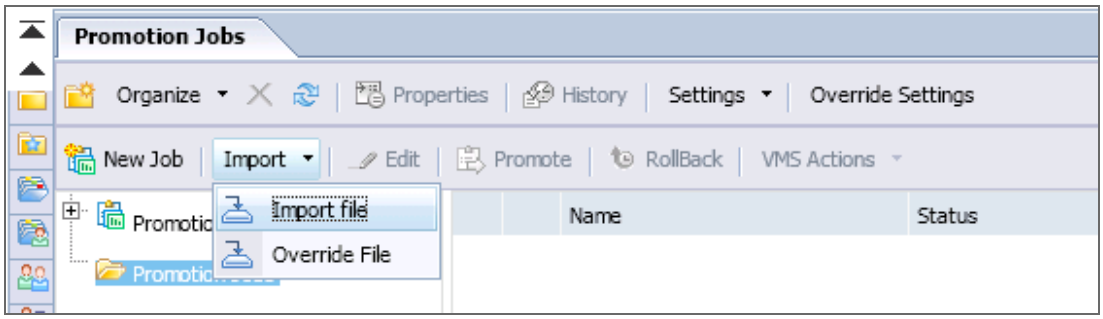
b. Log on to the CMC of the target system.



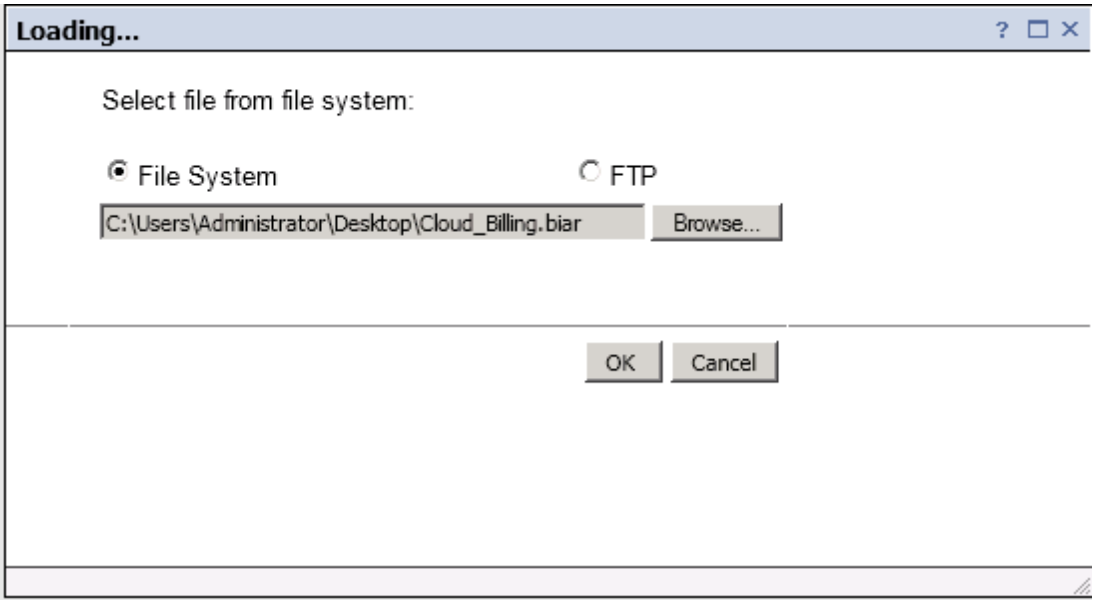
c. Select **Promotion Management** under **CMC Home**.



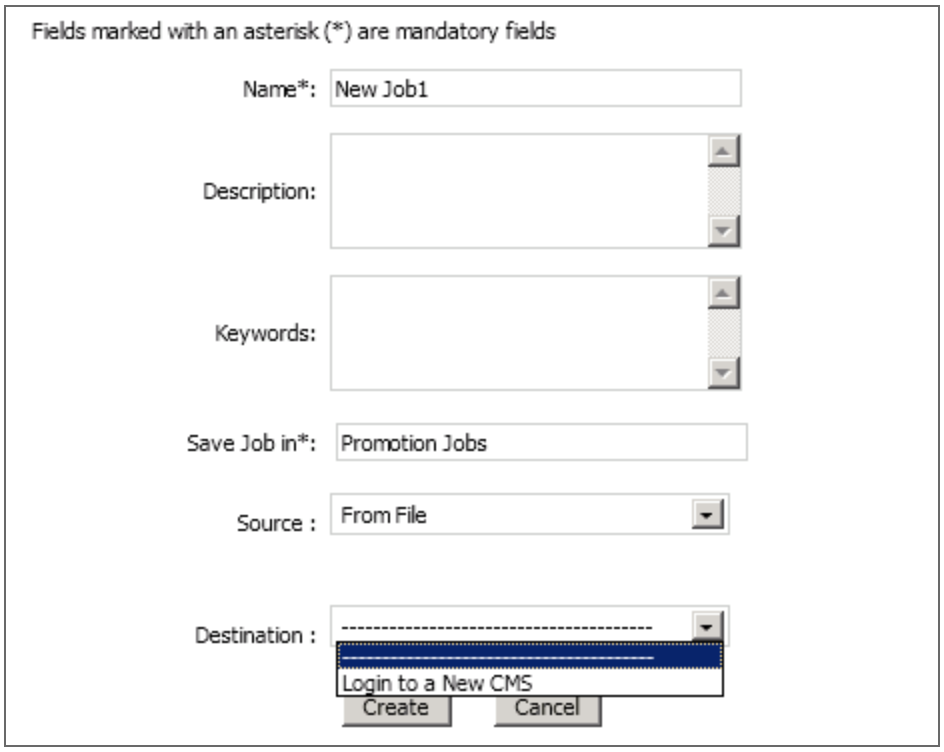
d. Click **Import file** under **Import**.



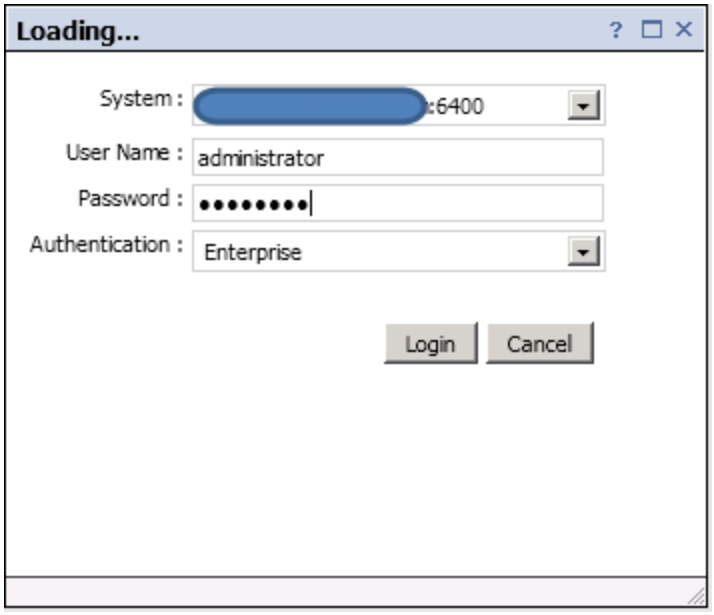
e. Select the relevant .BIAR file, then click **OK**.



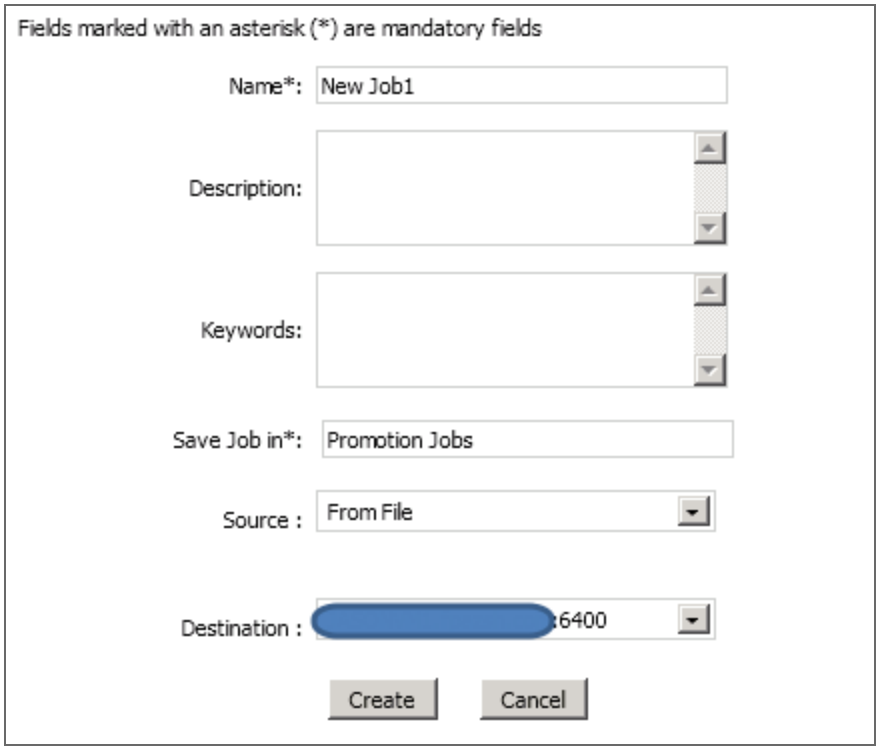
f. Select **Login to a New CMS** in **Destination**.



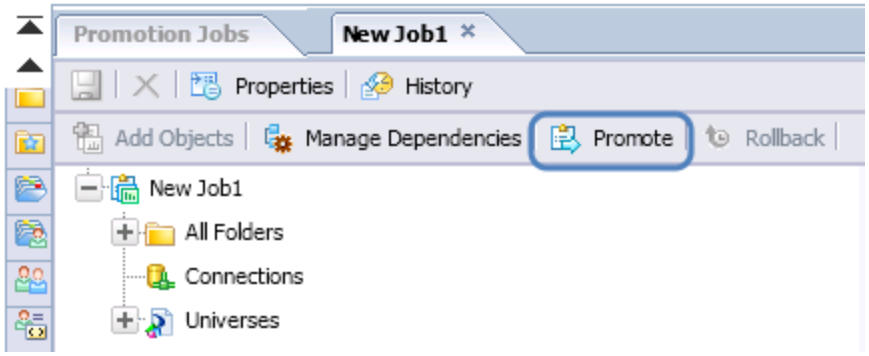
g. Input the system, name and password of the destination system.



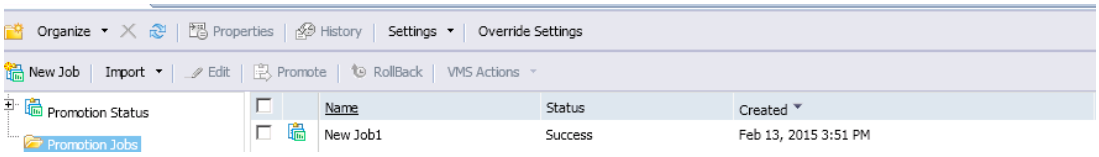
h. Click **Create**.



i. Select **Promote**.



j. Wait until the procedure is successful.



Back up and Recovery

This section provides details about how to perform back up and recovery in BA.

Vertica Back Up

It is critical that you backup databases so that you can rebuild your infrastructure and content in disaster scenarios such as the following:

- In a total disaster recovery scenario.
- The Vertica database server failed but all Business Analytics component servers are fully functioning.
- When the Vertica database is corrupt.
- When an ETL is deleted.
- When an ETL job fails.

This section includes:

What to Back Up

It is strongly recommended that you back up the following resources that may be used if one of the above scenarios occurs.

Vertica database:

1. Log on to the Vertica database server and make sure the Vertica database is running
2. Create a backup configuration file by running the following command:
   /opt/vertica/bin/vbr.py --setupconfig

   Example:

   [dbadmin@xs10 tmp]$ /opt/vertica/bin/vbr.py --setupconfig

   The resulting parameters are:

   Snapshot name (backup_snapshot): backup

   Number of restore points (1):

   Specify objects (no default):

   Vertica user name (dbadmin): dbadmin

```
Save password to avoid runtime prompt? (n) [y/n]: y
Database user password to save in vbr password config file (no default):
Node v_xsdb_node0001
Backup host name (no default): localhost #enter all hostname for cluster
Backup directory (no default): /tmp/vertica_backup #need to create the folder in advance
Config file name (backup.ini):
Password file name (no default value) (no default): /tmp/pw.ini
Change advanced settings? (n) [y/n]:
Saved vbr configuration to backup.ini.
Saved vbr configuration to /tmp/pw.ini.
```

3. Backup the Vertica database by running **/opt/vertica/bin/vbr.py --task backup --config-file <file name created at previous step>**

   For details on backing up a Vertica database, seehttp://my.vertica.com/docs/7.1.x/PDF/HP_Vertica_7.1.x_AdministratorsGuide.pdf

General Backup Guidelines

It is recommended that you use the following backup and restore guidelines:

- A best practice for data warehouse administrators is to back up critical data on a regular basis.
- Database backups should consist of a weekly full database backups, and daily differential backups.
- Backups should be periodically verified by restoring a copy onto a test system.
- Start scheduled backups before running the daily ETLs.
- Perform full backups in off-peak times.

Business Analytics Back Up

It is critical that you backup your postgreSQL database, Content Packs, configuration files, logs and configuration settings so that you can rebuild your IT Business Analytics solution and content in circumstances such as the following:

- When you need to recover from a total disaster recovery scenario.
- Business Analytics server failed but the Vertica Database server is fully functioning

The section includes the following topics:

What to Back Up

HP recommends that you back up the following resources that may be used when one of the above scenarios occurs.

PostgreSQL database:

1. Log on to the BA server with the user name you used to setup BA
2. Go to **$HPBA_HOME/pgsql/bin**
3. Run the command **./pg_dump -d xs_mng -U xsadmin > [backup filename, such as /tmp/xs_mng.bak]**

Content Packs

1. Back up the Content Pack folder **$HPBA_HOME/ContentPacks**.

General Backup Guidelines

It is recommended that you use the following backup and restore guidelines:

- Your database administrator should back up critical data and Content Packs on a regular basis.
- Database backups should consist of a weekly full database backups, and daily differential backups.
- Backups should be periodically verified by restoring a copy onto a test system.
- Start scheduled backups before running the daily ETLs.
- Perform full backups in off-peak times.

Disaster and Recovery

The BA, SAP BusinessObjects Enterprise, or Vertica servers have become unusable, for example the hard disk has crashed. The following procedure describes how to recover the BA, BOE, and Vertica servers.

When you start the recovery process, you must have complete backups of the relevant databases, configuration files, and settings that are readily available. It is possible that you will lose history data. For details about the backups, see "Business Analytics Back Up " on the previous page.

The following scenarios are independent from the external data sources and entities. Recovering from a scenario means that the component returns to a stable state.


Tasks

This section includes:

About the recovery procedure

This section is a reference for the BA recovery process. The recovery process for your environment may vary according to your business needs and may require customization. Verify that the following processes are consistent with your architecture and environment before you proceed with real data.

Recovery from a BA and Postgresql server failure

The following procedure describes how to recover from a BA and Postgresql server failure.

1. Back up the external sources directory contents and the external sources archive directory from the server machine where disaster has occurred.
2. On a clean machine where you want to install BA, run the BA installer, and restore the external sources directory contents and the external sources archive directory.
3. Store the Postgresql database as follows:
   a. Stop BA and Start Postgresql

```
[ba@ba10 bin]$ cd $HPBA_HOME/supervisor/bin
[ba@ba10 bin]$ ./hpba-stop.sh
[ba@ba10 bin]$ cd $HPBA_HOME/bin
[ba@ba10 bin]$ ./startpgsql.sh
```

   b. Drop the Postgresql database **xs_mng** and restore **xs_mng** from the backup dump.

```
[ba@ba10 bin]$ cd $HPBA_HOME/pgsql/bin
[ba@ba10 bin]$ ./dropdb --host=<server_ip> --port=5432 --username=xsadmin
xs_mng
[ba@ba10 bin]$ ./psql --host=<server_ip>  --port=5432 --username=xsadmin --
set
     ON_ERROR_STOP=on postgres < xs_mng.dump
[ba@ba10 bin]$ echo '\x \\ ALTER DATABASE xs_mng SET search_path = fnd,
dwabc,
     dwmetadata, app, dcs, cfm, dbo;' | ./psql --host==<server_ip>   --
port=5432
     --username=xsadmin --dbname=xs_mng
```

c. Start BA

```
[ba@ba10 bin]$ cd $HPBA_HOME/bin
[ba@ba10 bin]$ ./stoppgsql.sh
[ba@ba10 bin]$ cd $HPBA_HOME/supervisor/bin
[ba@ba10 bin]$ ./hpba-start.sh
```

4. Run the BA Maintenance Tool to change the IP, host name and domain name of the new BA and Postgresql servers. For details, see "Maintenance Tool " on page 141.

Recovery from a BOE server failure

The following procedure describes how to recover from a BOE server failure.

After the new BOE server is up, run the Maintenance Tool to change the relevant information (IP, host name and domain name) to the new server. For details, see "Maintenance Tool " on page 141.

Recovery from a Vertica server failure

The following procedure describes how to recover from a Vertica server failure.

1. On a clean machine where you want to install BA, run the Vertica installation.
2. Create a new database with the same database name and authentication.
3. Stop the new Vertica database.
4. In the vertica server, run the command **opt/vertica/bin/vbr.py --task restore --config-file <configuration file name created during backup action>**.
5. Start up the Vertica database.

For details on restoring a Vertica database, see http://my.vertica.com/docs/7.1.x/PDF/HP_Vertica_7.1.x_AdministratorsGuide.pdf.

Vertica Database Administrator

This section provides details on how the Vertica DBA can maintain the Vertica database.

Improve Vertica Database Performance

You can improve the performance of the Vertica database by creating projections.

Improve the Vertica database performance

To improve the Vertica database performance, see http://my.vertica.com/docs/7.1.x/PDF/HP_Vertica_7.1.x_AdministratorsGuide.pdf.

Vertica Load Balancing

To configure Vertica load balancing, see the section “Connection Load Balancing” in the Vertica Administrator’s guide at https://my.vertica.com/docs/7.1.x/PDF/HP_Vertica_7.1.x_AdministratorsGuide.pdf.

Connecting to Vertica

You can connect to Vertica using one of the following procedures.

Using vsql

vsql is a character-based, interactive, front-end utility that lets you type SQL statements and see the results. It also provides a number of meta-commands and various shell-like features that facilitate writing scripts and automating a variety of tasks.

You can launch vsql with the command **/opt/vertica/vsql** in the Vertica server.

Using a Third Party Application with Vertica Client Libraries

Vertica provide three separate client drivers:

- Open Database Connectivity (ODBC)
- Java Database Connectivity (JDBC)
- ActiveX Data Objects for .NET (ADO.NET)

You can connect to the Vertica database with any third party tools supporting the above drivers, such as DBeaver at http://dbeaver.jkiss.org/.

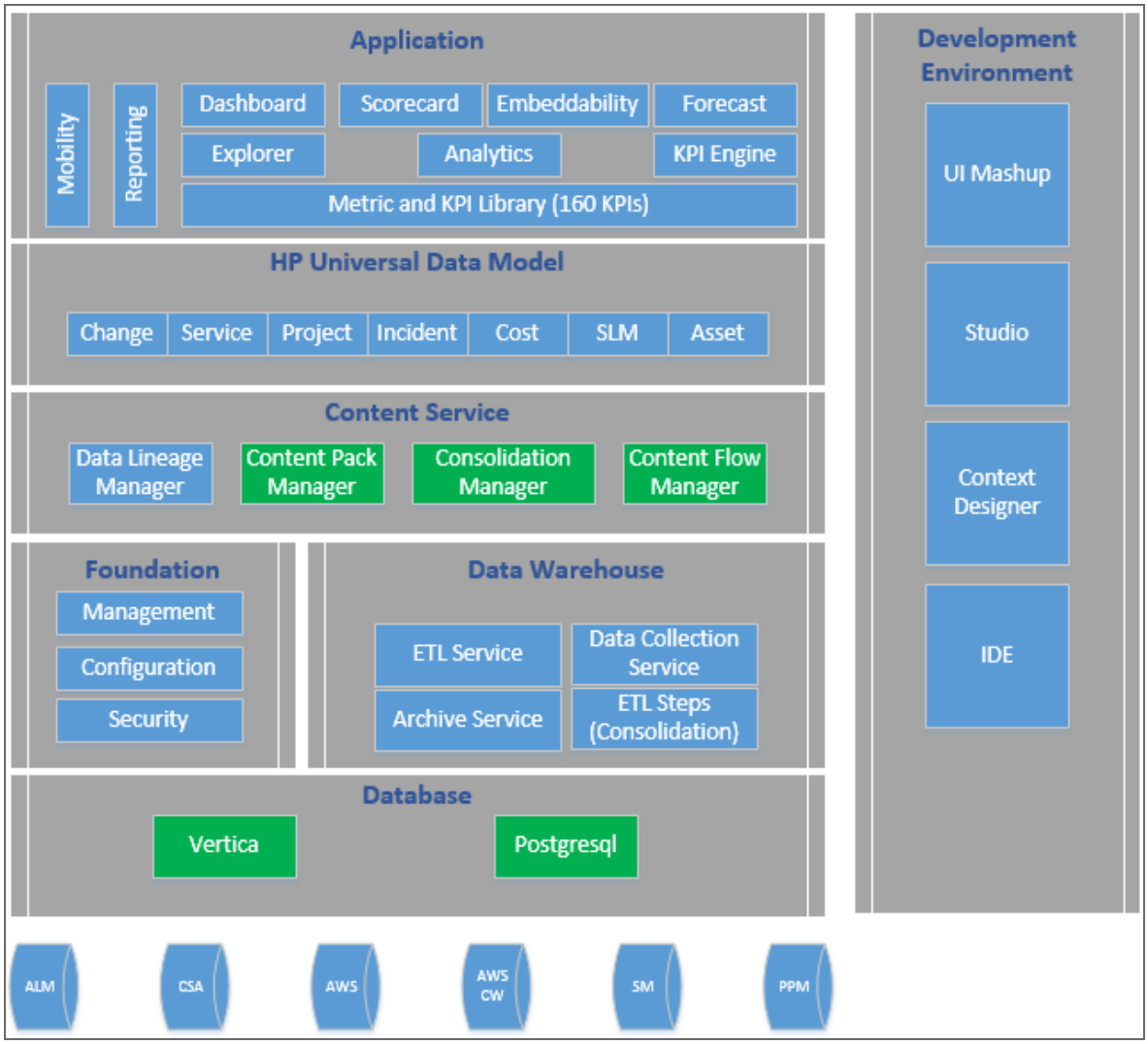
For details on connecting to the Vertica database, see https://my.vertica.com/docs/7.1.x/PDF/HP_Vertica_7.1.x_ConnectingToHPVertica.pdf.

DWH Administrator

This section provides details on how the Data Warehouse (DWH)Administrator can bring data to the Dashboard.

Business Analytics components

The components of Business Analytics are as follows:



The installation process creates the KPI Library. The KPI Library is a collection of out-of-the-box KPIs and Metrics.

The steps to follow are:

- Activate the data sources using **Connect Data Source**. For details, see "Connect the Data Sources" on page 208.

  In the Data Warehouse, the Data Collection Service (DCS) extracts data from source systems to a local file on the Data Warehouse server.
- Run the ETL using **Content Flow Management**. Content Flow Management is responsible for managing all ETL steps as parallel streams. For details, see "Run ETL - Content Flow Management"

on page 234.

- If needed, you can upload and activate a Content Acceleration Pack (CAP). CAPs include out-of-the-box KPIs and Metrics, Contexts, and Dashboard pages that are build to analyze a specific aspect of the business (PPM, CSA, ALM, and SM). A demo version of the CAP provides data from a .CSV file and can be used for demos or Proof-of-Concepts (POCs). A regular version of the CAP works with data from the relevant data source. You can also create your own CAP. For details, see Content Acceleration Pack (CAP) Management in the *Guide to BA Content Acceleration Packs*.

The Content Pack Manager is a utility for the deployment, re-deployment, activation, and deactivation of content.

The Consolidated Entities page enables you to consolidate an entity that appears in different data sources, to prioritize the data sources, to select the relevant entity dimensions (columns), and to select when to use the consolidation. For details, see "Configure Consolidation" on page 220.

Data Management

This section includes:

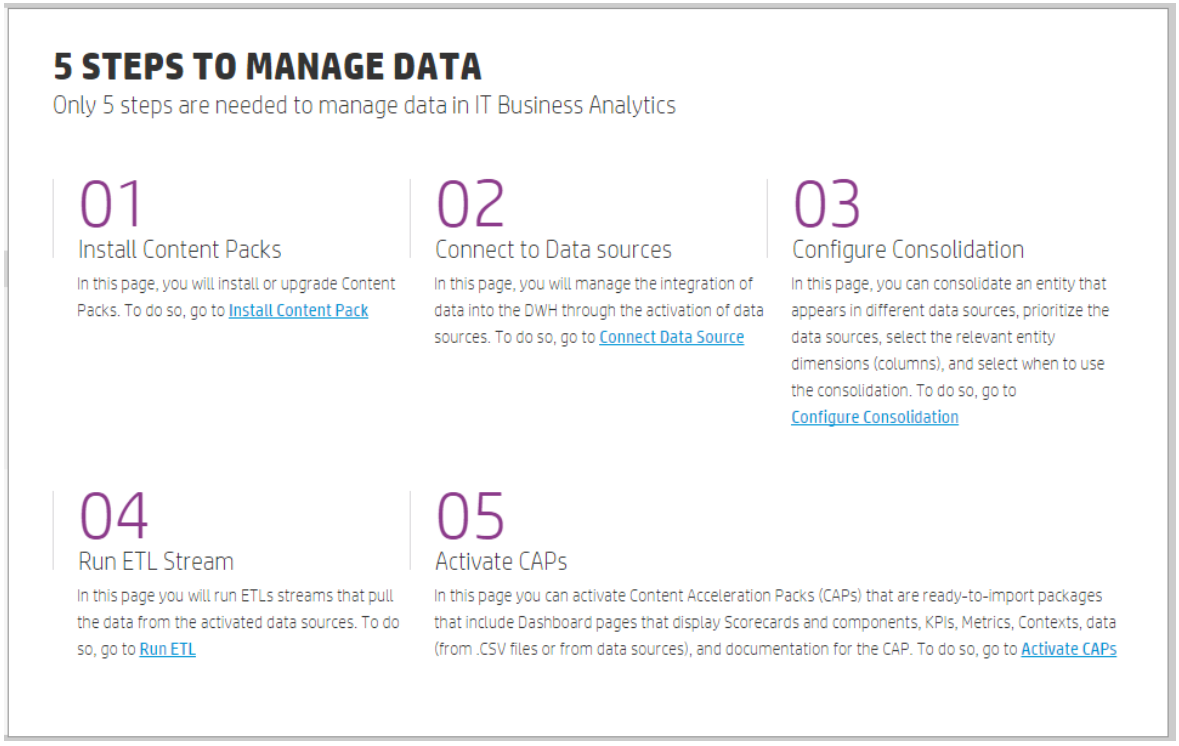
Data Management Guide

This section describes the Data Management Guide page.

To access:

Select **ADMIN > Data Management > Data Management Guide**.

The page provides a short list of the steps you perform to import data into BA. Each step includes a short description and a link to the relevant page in ADMIN. The links correspond to the menu in **ADMIN > Data Management**. Some of the steps are optional.



Install Content Pack

A Content Pack is a set a files which defines the execution of an ETL along with all its parameters.

The Content Pack Manager page enables you to install or upgrade Content Packs.

To access:

Select **ADMIN > Data Management > Install Content Pack**.

Learn More | Tasks | UI Description

Learn More

Content Packs

Content packs include:

- The definition of the data model used for the connection.
- The type of data gathered from the data source.
- The ETL definitions.
- The definition files.
- The configuration files.
- The scripts that help build and define the Data Warehouse.

The Data Warehouse can connect to other products (data sources) and gather data about these products. An integration is available for each product (data source).

The connection from the data source to the DWH is called an integration content pack (iCP). A Content Pack is a set a files which defines the execution of an ETL along with all its parameters. Each content pack uses an extractor in order to extract the data from the specific data source and contains all the artifacts needed to connect to the relevant data source and to gather data from that data source.

The mapping between the raw data from the data source and the target database in the Data Warehouse is included in the ETL. Business Analytics runs the KPI engine that reads the data from the target database, creates the relevant KPIs from that data, calculates the value, and status of the KPI and displays the relevant information in the Dashboard.

The structure is as follows:

├──**CORE**	Includes ETL artifacts for data consolidation and data model for integration and target layer.
│ ├──**cp_manifest.properties**	Includes CP name, CP type, CP version, dependency version (platform version, Core version, data source types, extractor class name, extractor library paths).
│ ├──**dw_app.properties**	includes the name of the relevant Content

	Pack.
├──── **dw_app.xml**	legacy file.
├──── **INBUILT**	Includes all out of box content artifacts.
├──── **<iCP>**	Out of the box content packs for the integration with CSA, PPM, or SM
├──── **CONF**	
├──── **cp_manifest.properties**	Includes CP name, CP type, CP version, dependency version (platform version, Core version, data source types, extractor class name, extractor library paths).
├──── **dw_app.properties**	
├──── **dw_app.xml**	
├──── **EXTERNAL**	Includes External file (optional). Not for SM.
├──── **EXTRACTOR**	Includes the CP Extractor (optional).
├──── **INBUILT**	Includes all out of box content artifacts.
├──── **DEMO_CONTENT**	
├──── **cp_manifest.properties**	Includes CP name, CP type, CP version, dependency version (platform version, Core version, data source types, extractor class name, extractor library paths).
├──── **dw_app.properties**	
├──── **dw_app.xml**	
├──── **INBUILT**	Includes all out of box content artifacts.
├──── **KPILIB**	
├──── **cp_manifest.properties**	Includes CP name, CP type, CP version, dependency version (platform version, Core version, data source types, extractor class name, extractor library paths).
├──── **dw_app.properties**	
├──── **dw_app.xml**	
├──── **INBUILT**	Includes all out of box content artifacts.
├──── **README.md**	

You must run the Connect Data Source wizard to configure and activate the content packs, depending on the products you want to integrate with.

If you have created a Content Pack using IDE, make sure to add it to the **$HPBA_HOME/ContentPacks** directory. Content Packs located in the directory appear in the Content Pack Management page where you can install or upgrade them. For details on IDE, see *BA Content Extension Guide*.

The out-of-the-box content packs are:

- CORE content pack. This is the central content pack that is automatically installed during the post-installation process. It takes consolidated data to the target schema. It includes all the dimensions, and entities of the Data Warehouse. It also provides the organization of definitions and hierarchies. All the other integrations depend on the CORE content pack.
- ALM
- AWS
- AWSCW
- CSA
- PPM
- SM

Context

A context is the result of a semantic layer of metadata that creates a business oriented view of the data. The context contains a schema of the tables that make up the dimension and measurement objects. The context is an interface between the data warehouse and the analytics that display the data. It then corresponds to the business contexts used in BA.

Extractors

The supported extractors for the OOTB Content Packs are as follows:

Content Pack	Extractor Type
PPM(Oracle)	DB
SM(MSSQL, Oracle, DB2)	DB
ALM	REST API
CSA	REST API
AWS	SDK
AWSCW	SDK

Multiple Integration Content Pack Instances

Multiple Integration Content Packs (M-iCP) provide multiple instances of the same data source or product type. This allows for data source configuration per instance, as opposed to a single activation for the data source. Each instance has its own version and product type. The M-iCP source extraction is based on the DCS extractor technology, and consolidation is enabled between instances.

You can add an instance using the Connect Data Source page. For details, see "Connect the Data Sources" on page 208.

Tasks

This section includes:

Install a Content Pack

To install a Content Pack:

1. Select **ADMIN> Data Management > Install Content Pack**.
2. Click **Install** for the relevant Content Pack.

   The status is changed to **Upgrade** and the date of the installation is set in the **Update Date** column.

Upgrade an installed Content Pack

To upgrade a Content Pack:

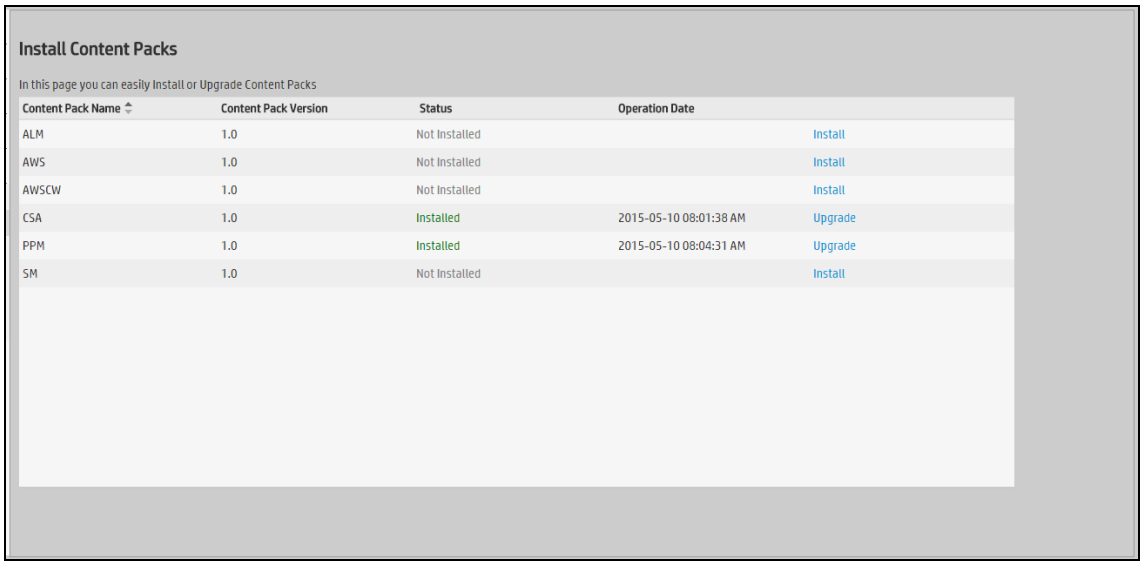
1. Select **ADMIN > Data Management > Install Content Pack**.
2. Click **Upgrade** for the relevant Content Pack.

   The status is changed to **Upgrade** and the date of the installation is set in the **Update Date** column.

UI Description

Content Pack Manager Page

This page enables you to install or upgrade Content Packs.



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Content Pack Name	The name of the Content Pack that corresponds to a specific data source. • CORE content pack. This is the central content pack that is automatically installed during the post-installation process. It takes consolidated data to the target schema. It includes all the dimensions, and entities of the Data Warehouse. It also provides the organization of definitions and hierarchies. All the other integrations depend on the CORE content pack. • ALM • AWS • AWSCW • CSA • PPM • SM If you have created a Content Pack using IDE, make sure to add it to the **$HPBA_HOME/ContentPacks** directory. Content Packs located in the directory appear in the Content Pack Management page where you can install or upgrade them. For details on IDE, see *BA Content Extension Guide*.
Status	• **Installed.** The Content Pack has been installed. • **Not installed.** The Content pack has not yet been installed. • **Error.** A problem occurred when you installed the Content Pack.
Content Pack Version	The version of the Content Pack.

UI Element	Description
Operation Date	The date when the Content Pack was last installed.
	Install. Click to install. **Upgrade.** Click to upgrade.

Customize an Existing Content Pack

A Content Pack is a set a files which defines the execution of an ETL along with all its parameters. For details, see "Install Content Pack" on page 200.

This section provides information about customizing an existing Content Pack.

Customization is performed in the IDE. For details, see *BA Content Extension Guide*.

Tasks | UI Description


Tasks

This section includes:

Customize a Content Pack

You can customize an existing Content Pack with the following limitations:

- Add new entity to the existing content pack
- Add new column to the existing entity
- If the column is not Null, then the default value will be set as below:

Column format	Default value
NUMERIC	-1
FLOAT	-1
INT	-1
VARCHAR	**"unknown"** – if length > 6
VARCHAR	"<blank string>" - if length <=6
DATETIME	9999-12-31 00:00:00
TIME	00:00:00

- Enlarge the existing column length (for example from varchar(10) to varchar(100)).
- Change existing column from **not null** to **Nullable**.

Customization does **not** support the following cases:

- Any existing column type change.
- Any removal of an existing column.
- Any removal of an existing entity.
- Any reduction of an existing column length.

- Any existing column changed from **Nullable** to **not null**.
- Any existing column name change.

Connect the Data Sources

The Data Warehouse can connect to other products (data sources) and gather data about these products. An integration is available for each product (data source). The connection from the data source to the DWH is called a content pack. DCS extracts the data from the specific data source. Content packs contain all the artifacts needed to connect to the relevant data source and gather data from that data source.

The Data Source page enables you to manage the integration of data into the data warehouse through the activation of data sources. The available data source content packs are registered in the deployment process and can then be activated in the Connect Data Source page.

To access:

Select **ADMIN > Data Management > Connect Data Source** then click **Add data source**. Select the data source type to activate the integration processes.

Note: For details on activating Content Packs created in the IDE, see Activate New Content in the *BA Content Extension Guide*.

Learn More | Tasks | UI Description

Learn More

Learn more about each data source integration

BA integrates with the following data sources:

- Integration with ALM
- Integration with AWS
- Integration with AWSCW
- Integration with CSA
- Integration with PPM
- Integration with SM

All these documents are available in the *BA Content Reference Guide*.

The UI elements of the wizard differ according to the selected data source.

For each source, enter the relevant information and click **Next** to proceed to the validation page.

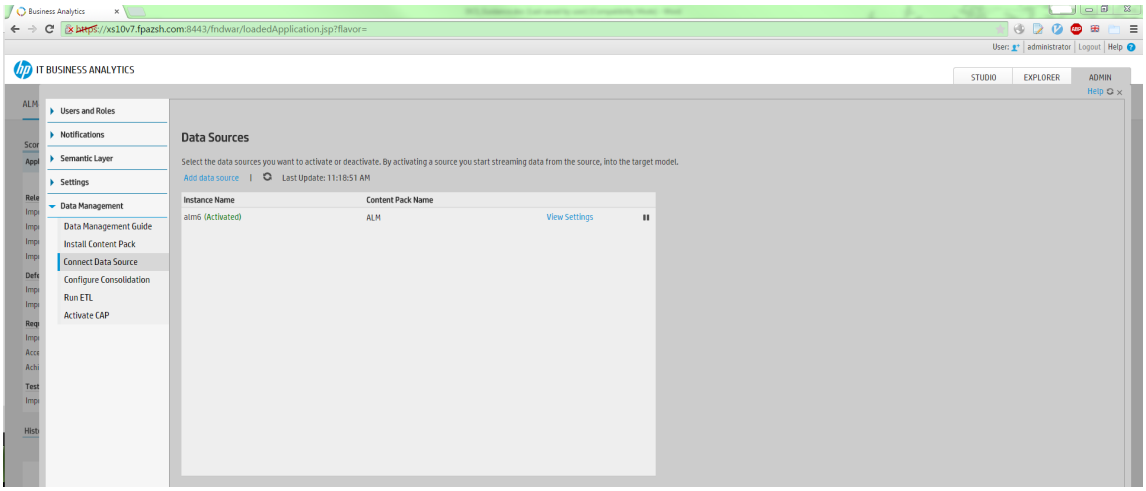
Note: If the activation process is taking more than one hour, you can change the status of the CP in the CONTENT_PACK table to “ERROR” and then activate the CP again.

Data Collection Service (DCS)

DCS enables you to extract data from a specific data source according to the relevant extraction and

source model that is generated by the IDE. It consists of a plugable extractor framework for each data source. The extractor gathers data according to the request it receives from the Content Flow Manager, placing it into a set of relevant .TXT files. Each supported data source has a corresponding extractor (or multiple extractors) that is capable of extracting the relevant data out of the data source. All available extractors for Content Packs use the DCS framework.

- **Extraction Mechanism.** The extraction is a self-managed web service. The data source connection information is registered to the framework when adding a new data source in **ITBA > Admin > Data Management > Connect Data Source**.

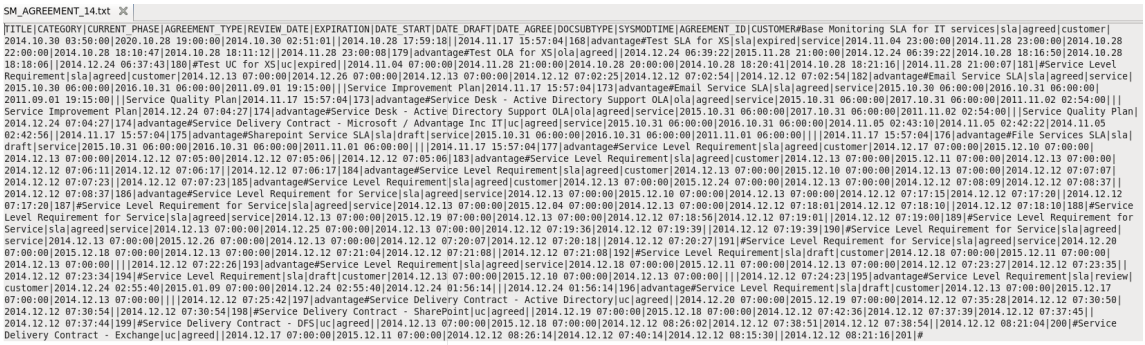


- **Extraction Methodology.** The extraction is done using extractors running on the application container of the Data Warehouse. The extractors use various technologies (for example, JDBC, Web Services, data files, and other kinds of HTTP requests) to extract the data from the data source. Each extraction is an isolated job that cannot be affected by other extraction jobs. Each extraction has a unique batch ID. The batch ID is incremental and cannot duplicated even for different Content Pack instances.
- **ETL Source Extract.** The first stage of the ETL is the Source Extract. In this phase, the Content Flow Manager performs an HTTP request that activates the relevant extractor.

  The DCS extractor extracts the data from the data source into flat files. All Content Packs integrate using DCS, where data is extracted from the data source into >TXT files with a well-defined standard structure.
- **Format of flat files.** The first line of a flat file should be the headers of all columns, separated with “|” symbol. The data follows with the columns values separated with a “|” symbol and the lines separated with a “#” symbol.

  If a column value includes special characters like “|”, “#” and “\”, it should be escaped by adding a “\” symbol before the special character. The DCS framework has a FlatFileWriter will handle the details of writing the headers and values.

Flat file example:


SM_AGREEMENT_14.txt

```
TITLE|CATEGORY|CURRENT_PHASE|AGREEMENT_TYPE|REVIEW_DATE|EXPIRATION|DATE_START|DATE_DRAFT|DATE_AGREE|DOCSUBTYPE|SYSMODTIME|AGREEMENT_ID|CUSTOMER#Base Monitoring SLA for IT services|sla|agreed|customer|
2014.10.30 03:50:00|2020.10.28 19:00:00|2014.10.30 02:51:01||2014.10.28 17:59:18||2014.11.17 15:57:04|168|advantage#Test SLA for XS|sla|expired|service|2014.11.04 23:00:00|2014.11.28 23:00:00|2014.10.28
22:00:00|2014.10.28 18:10:47|2014.10.28 18:11:12||2014.11.28 23:00:08|179|advantage#Test OLA for XS|ola|agreed||2014.12.24 06:39:22|2015.11.28 21:00:00|2014.12.24 06:39:22|2014.10.28 18:16:50|2014.10.28
18:18:06||2014.12.24 06:37:43|180|#Test UC for XS|uc|expired||2014.11.04 07:00:00|2014.11.28 21:00:00|2014.10.28 20:00:00|2014.10.28 18:20:41|2014.10.28 18:21:16||2014.11.28 21:00:07|181|#Service Level
Requirement|sla|agreed|customer|2014.12.13 07:00:00|2014.12.26 07:00:00|2014.12.13 07:00:00|2014.12.12 07:02:25|2014.12.12 07:02:54||2014.12.12 07:02:54|182|advantage#Email Service SLA|sla|agreed|service|
2015.10.30 06:00:00|2016.10.31 06:00:00|2011.09.01 19:15:00|||Service Improvement Plan|2014.11.17 15:57:04|173|advantage#Email Service SLA|sla|agreed|service|2015.10.30 06:00:00|2016.10.31 06:00:00|
2011.09.01 19:15:00|||Service Quality Plan|2014.11.17 15:57:04|173|advantage#Service Desk - Active Directory Support OLA|ola|agreed|service|2015.10.31 06:00:00|2017.10.31 06:00:00|2011.11.02 02:54:00|||
Service Improvement Plan|2014.12.24 07:04:27|174|advantage#Service Desk - Active Directory Support OLA|ola|agreed|service|2015.10.31 06:00:00|2017.10.31 06:00:00|2011.11.02 02:54:00|||Service Quality Plan|
2014.12.24 07:04:27|174|advantage#Service Delivery Contract - Microsoft / Advantage Inc IT|uc|agreed|service|2015.10.31 06:00:00|2016.10.31 06:00:00|2014.11.05 02:43:10|2014.11.05 02:42:22|2014.11.05
02:42:56||2014.11.17 15:57:04|175|advantage#Sharepoint Service SLA|sla|draft|service|2015.10.31 06:00:00|2016.10.31 06:00:00|2011.11.01 06:00:00|||2014.11.17 15:57:04|176|advantage#File Services SLA|sla|
draft|service|2015.10.31 06:00:00|2016.10.31 06:00:00|2011.11.01 06:00:00|||2014.11.17 15:57:04|177|advantage#Service Level Requirement|sla|agreed|customer|2014.12.17 07:00:00|2015.12.10 07:00:00|
2014.12.13 07:00:00|2014.12.12 07:05:00|2014.12.12 07:05:06||2014.12.12 07:05:06|183|advantage#Service Level Requirement|sla|agreed|customer|2014.12.13 07:00:00|2015.12.11 07:00:00|2014.12.13 07:00:00|
2014.12.12 07:06:11|2014.12.12 07:06:17||2014.12.12 07:06:17|184|advantage#Service Level Requirement|sla|agreed|customer|2014.12.13 07:00:00|2015.12.10 07:00:00|2014.12.13 07:00:00|2014.12.12 07:07:07|
2014.12.12 07:07:23||2014.12.12 07:07:23|185|advantage#Service Level Requirement|sla|agreed|customer|2014.12.13 07:00:00|2015.12.24 07:00:00|2014.12.13 07:00:00|2014.12.12 07:08:09|2014.12.12 07:08:37||
2014.12.12 07:08:37|186|advantage#Service Level Requirement for Service|sla|agreed|service|2014.12.13 07:00:00|2015.12.10 07:00:00|2014.12.13 07:00:00|2014.12.12 07:17:15|2014.12.12 07:17:20||2014.12.12
07:17:20|187|#Service Level Requirement for Service|sla|agreed|service|2014.12.13 07:00:00|2015.12.04 07:00:00|2014.12.13 07:00:00|2014.12.12 07:18:01|2014.12.12 07:18:10||2014.12.12 07:18:10|188|#Service
Level Requirement for Service|sla|agreed|service|2014.12.13 07:00:00|2015.12.19 07:00:00|2014.12.13 07:00:00|2014.12.12 07:18:56|2014.12.12 07:19:01||2014.12.12 07:19:00|189|#Service Level Requirement for
Service|sla|agreed|service|2014.12.13 07:00:00|2014.12.25 07:00:00|2014.12.13 07:00:00|2014.12.12 07:19:36|2014.12.12 07:19:39||2014.12.12 07:19:39|190|#Service Level Requirement for Service|sla|agreed|
service|2014.12.13 07:00:00|2015.12.26 07:00:00|2014.12.13 07:00:00|2014.12.12 07:20:07|2014.12.12 07:20:18||2014.12.12 07:20:27|191|#Service Level Requirement for Service|sla|agreed|service|2014.12.20
07:00:00|2015.12.18 07:00:00|2014.12.13 07:00:00|2014.12.12 07:21:04|2014.12.12 07:21:08||2014.12.12 07:21:08|192|#Service Level Requirement|sla|draft|customer|2014.12.18 07:00:00|2015.12.11 07:00:00|
2014.12.13 07:00:00||||2014.12.12 07:22:26|193|advantage#Service Level Requirement|sla|agreed|service|2014.12.18 07:00:00|2015.12.11 07:00:00|2014.12.13 07:00:00|2014.12.12 07:23:27|2014.12.12 07:23:35||
2014.12.12 07:23:34|194|#Service Level Requirement|sla|draft|customer|2014.12.13 07:00:00|2015.12.10 07:00:00|2014.12.13 07:00:00|||2014.12.12 07:24:23|195|advantage#Service Level Requirement|sla|review|
customer|2014.12.24 02:55:40|2015.01.09 07:00:00|2014.12.24 02:55:40|2014.12.24 01:56:14|||2014.12.24 01:56:14|196|advantage#Service Level Requirement|sla|draft|customer|2014.12.13 07:00:00|2015.12.17
07:00:00|2014.12.13 07:00:00|||2014.12.12 07:25:42|197|advantage#Service Delivery Contract - Active Directory|uc|agreed||2014.12.20 07:00:00|2015.12.19 07:00:00|2014.12.12 07:35:28|2014.12.12 07:30:50|
2014.12.12 07:30:54||2014.12.12 07:30:54|198|#Service Delivery Contract - SharePoint|uc|agreed||2014.12.19 07:00:00|2015.12.18 07:00:00|2014.12.12 07:42:36|2014.12.12 07:37:39|2014.12.12 07:37:45||
2014.12.12 07:37:44|199|#Service Delivery Contract - DFS|uc|agreed||2014.12.13 07:00:00|2015.12.18 07:00:00|2014.12.12 08:26:02|2014.12.12 07:38:51|2014.12.12 07:38:54||2014.12.12 08:21:04|200|#Service
Delivery Contract - Exchange|uc|agreed||2014.12.17 07:00:00|2015.12.11 07:00:00|2014.12.12 08:26:14|2014.12.12 07:40:14|2014.12.12 08:15:30||2014.12.12 08:21:16|201|#
```

- **Data sources and Content Packs.**

  The following data source types are available for each Content Pack:

Content Pack	Data source type
ALM	ALM11, ALM11.5/12
AWS	aws_s3
AWSCW	AWSCW
CSA	CSA
PPM	Oracle
SM	MSSQL, Oracle, DB2

- **Troubleshooting Logs.**
  - **$HPBA_Home/glassfish/glassfish/domains/BTOA/logs/dcs.log**: This log describes all of the current activity of the DCS framework as well as the activity of the common utilities and general extractors.
  - **$HPBA_Home/glassfish/glassfish/domains/BTOA/logs/dcs.extractor.log**: This log describes the activity of all the extractors.

Tasks

This section includes:

Add and activate a new data source instance

The process of integrating a data source into the Data Warehouse is done through activation of the source instance.

1. Select **ADMIN > Data Management > Connect Data Source**.
2. Click the **Add data source** to open the Data source wizard. The Add Data Source page opens.
3. Select the data source type and click **Next**.

   The relevant data source page opens.
4. Enter and select the configuration parameters.
5. Complete the wizard.

   The data source instance is activated.

   Note: If the first time activation of a data source instance fails, the instance is displayed in the source list with an **Error** status. You can then activate the data source by clicking **Edit Settings** and completing the configuration and activation.

Reactivate an existing data source instance

1. Select **ADMIN > Data Management > Connect Data Source**.
2. Click  next to the specific source and the source is activated.

Deactivate a data source instance

You can deactivate the source and stop the integration process, in order to change configuration details.

1. Select **ADMIN > Data Management > Connect Data Source**.
2. Click  and the deactivation warning opens.
3. Click **OK**.

View data source configuration settings

1. Select **ADMIN > Data Management > Connect Data Source**.
2. Click **View Settings** and the relevant data source page opens.

Edit data source settings and test the connection

1. Select **ADMIN > Data Management > Connect Data Source**.
2. If necessary, deactivate the data source by clicking  .

3. Click **Edit Settings** and edit the configuration parameters.
4. Click **Next** to validate your changes and test the connection to the data source.

Add a new data source to the integration mechanism

For details, see Add Additional Data Sources.

Configure DCS Properties

In data source activation, each source that is extracted with DCS must have the following properties configured:

Data Source	Location of the properties	Properties

PPM	<HP-BA>/ContentPacks/PPM/EXTRACTOR/extractor-ppm/settings.properties	• **max_retries=3** Defines the maximum retry times when error occurs during the test connection and extraction.
		• **retry_interval=3000**Defines the interval between the retries.
		• **paging_enable=false**
		  • **true.** use the paging functionality for data extraction.
		  • **false.** do not use the paging functionality for data extraction.
		• **paging_bulk=10000** Defines the size of bulk when the paging is enabled.
		• **parallel_entity_tasks=10** Defines the number of threads for data extraction. Increasing this value enhances the extraction performance but work load of BA server and DB server are also increased.
		• **fetch_size=1000** Defines the rows of data that fetch from DB server for each request.

SM	<HP-BA> /ContentPacks/SM/EXTRACTOR/extractor-sm/settings.properties	• **max_retries=3** Defines the maximum retry times when error occurs during the test connection and extraction. • **retry_interval=3000**Defines the interval between the retries. • **paging_enable=false** • **true.** use the paging functionality for data extraction.

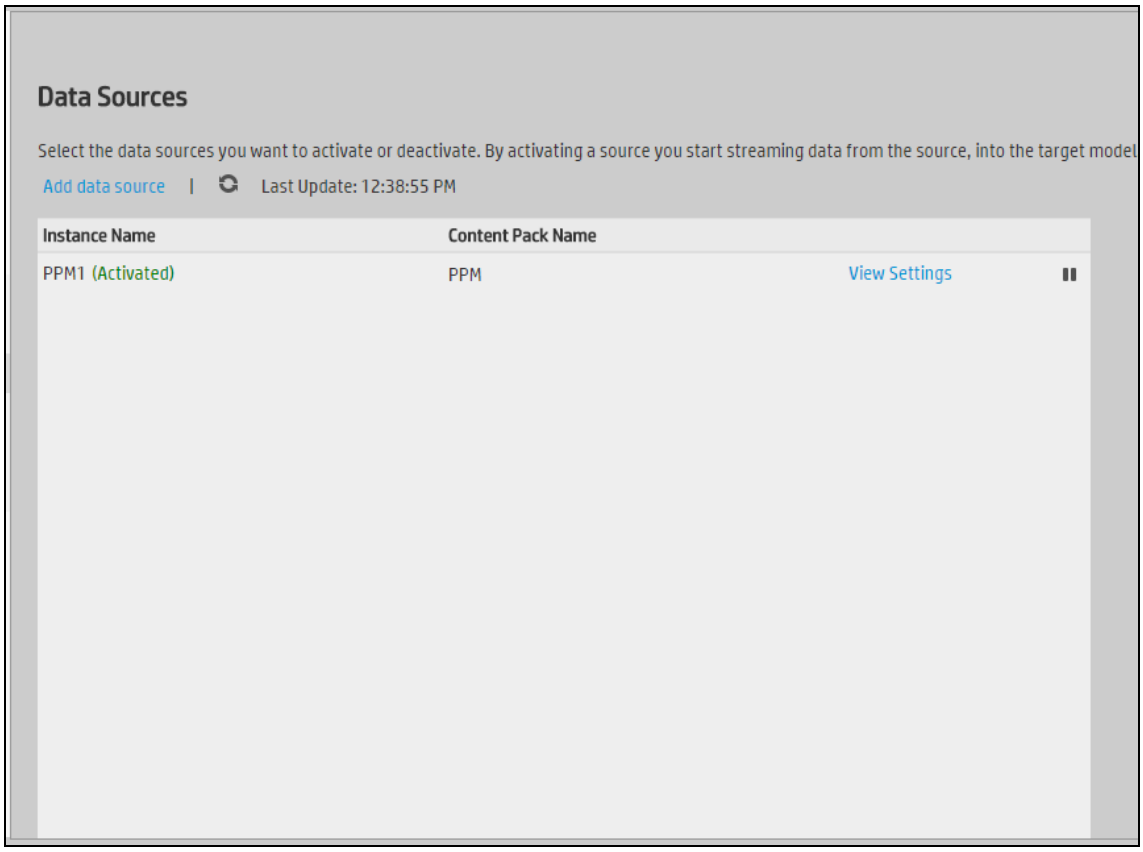
Data Source	Location of the properties	Properties
		• **false.** do not use the paging functionality for data extraction. • **paging_bulk=10000** Defines the size of bulk when the paging is enabled. • **parallel_entity_tasks=10** Defines the number of threads for data extraction. Increasing this value enhances the extraction performance but work load of BA server and DB server are also increased. • **fetch_size=1000** Defines the rows of data that fetch from DB server for each request.
ALM	<HP-BA> /ContentPacks/ALM/EXTRACTOR/extractor-alm/settings.properties	• **max_retry_count=3** The maximum retry count when error occurs during the test connection and data extraction. • **thread_pool_size=5** Defines the thread pool size for data extraction, in which the tasks are executed in parallel. • **alm_page_size=1000** Defines the number of records the extracted for each REST call to ALM server. • **max_cache_size_in_MB=2048** Defines the upper limit of the memory in MB that used by ALM extractor cache.
CSA	<HP-BA> /ContentPacks/CSA/EXTRACTOR/extractor-csa/settings.properties	• **timeout = 10** Defines the timeout value for one REST request. The unit is minute. • **threadPool = 5** Defines the thread pool size of the data extractor, in which the tasks are executed in parallel. • invalidUsers = cdaInboundUser,csaReportingUser,ooInboundUser,admin • **proxyHost=** Defines the proxy host to connect to CSA server. • **proxyPort=** Defines the proxy port to connect to CSA server.
AWS AWSCW	<HP-BA>/ContentPacks/ AWSCW/EXTRACTOR/extractor-aws/settings.properties	• **awsEndpoint = https://s3.amazonaws.com** Defines the endpoint for the AWS service. • **dimensionDelimiter = ;** Defines the delimiter for output the dimensions describing qualities of the

Data Source	Location of the properties	Properties
		metric. • **valueDelimiter = =** Defines the delimiter for output dimension values. • **period = 3600** Defines the granularity, in seconds, of the returned data points. • **minimumScope = 3600** Defines the minimum scope in seconds for requesting the metric statistics.

UI Description

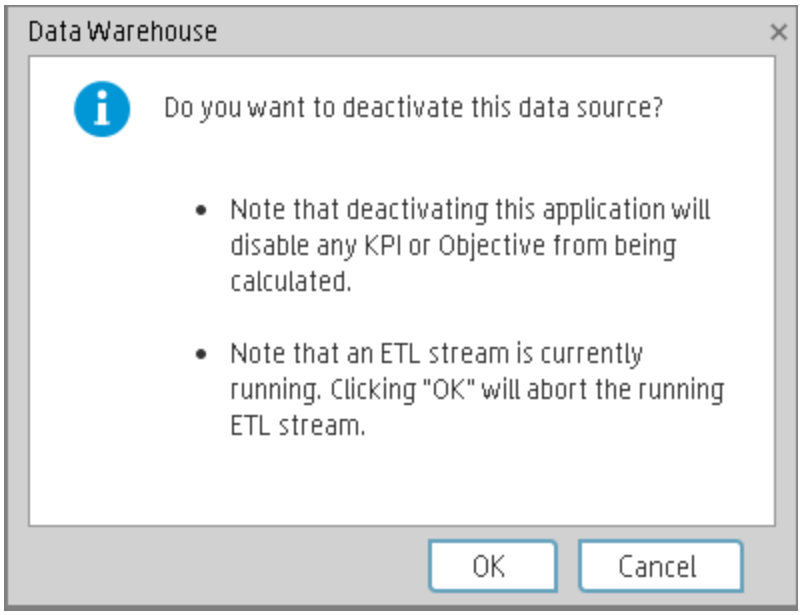
Connect Data Source Page

The Connect Data Source page enables you to select from a list of Integration Content Packs recognized by the data warehouse. Additionally, it enables you to activate the integration of the data sources, as well as deactivate and make configuration changes.



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Add data source	Click to open the Data Source wizard. For details, see "Data Source Wizard" on the next page.
<Data Sources>	A list of sources, by **Instance Name** (instance name) and **Content Pack Name** (data source product), that have been added to the data warehouse. The current status of the data source is displayed next to the instance name: • Activated • Deactivated • Error • Initializing: Data source is currently being activated. Relevant only for first time activation.
View Settings	Available when the data source has been activated. Displays the read-only configuration of all connection parameters. **Note:** All connection settings are run-time related. You must deactivate the connection to the data source in order to change the settings.
Edit Settings	Available when the data source has been deactivated. Displays the configuration of all connection parameters and enables you to test the connection to the data source. The parameters can be edited. If the first time activation of a data source instance fails, the instance is displayed in the source list with an **Error** status. You can then activate the data source by clicking **Edit Settings** and completing the configuration and activation.
	Activates the relevant data source. • Once the content pack is activated, the ETL is ready to run. For details on how to monitor and manage the ETL, see "Run ETL - Content Flow Management" on page 234. • Do not activate a content pack while the ETL is running.
	Deactivates the relevant data source.

UI Element	Description
	 Do not deactivate a content pack while ETL is running.

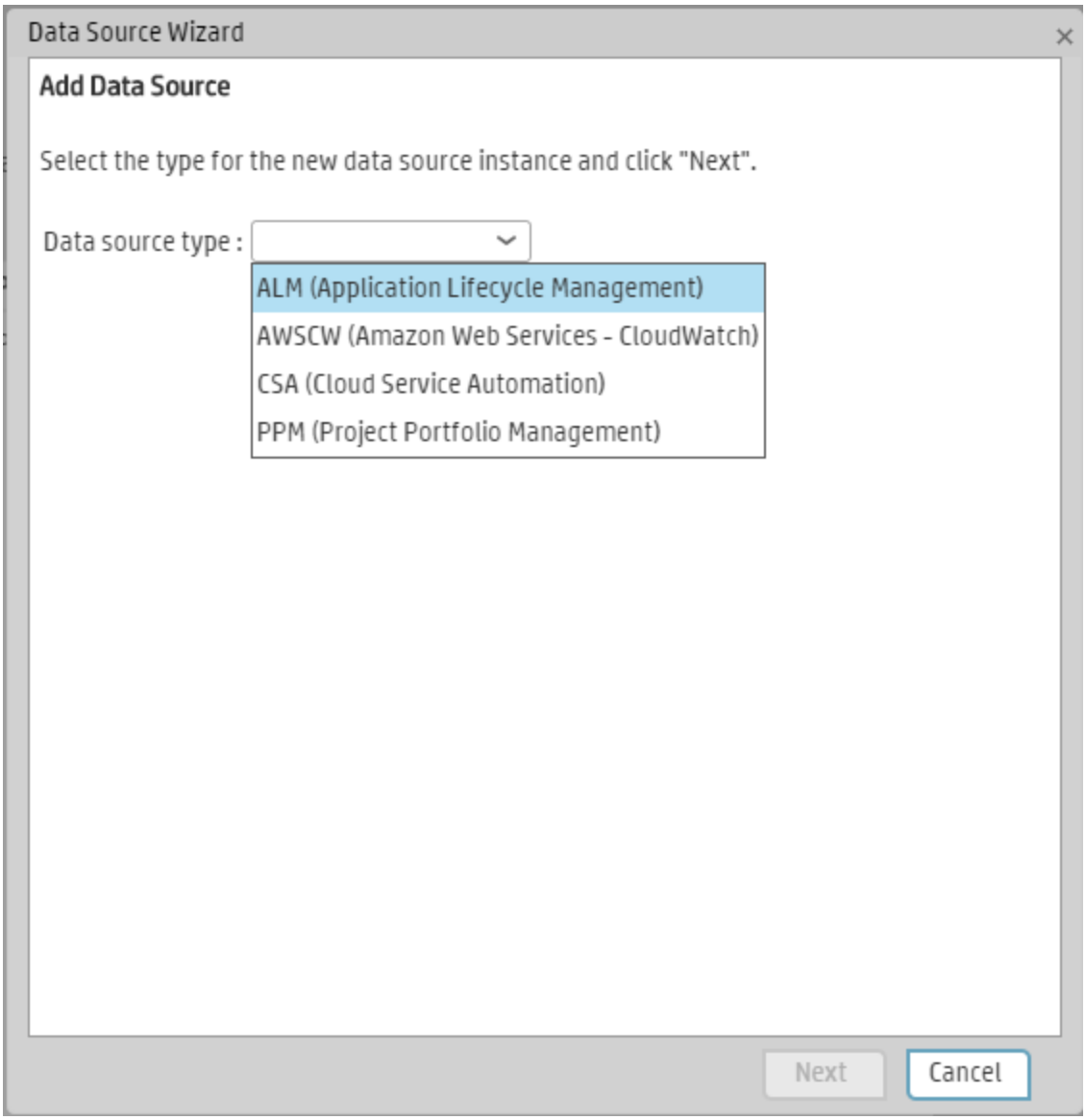
Data Source Wizard

The Data Source wizard enables you to add and activate a selected data source instance.

The Data Source wizard contains:

"Add Data Source Page " on the next page > "Configuration Parameters Page" on the next page>"Validation Page" on page 218

- **Add Data Source Page**



Click **Next** to move to the next page of the wizard..

User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

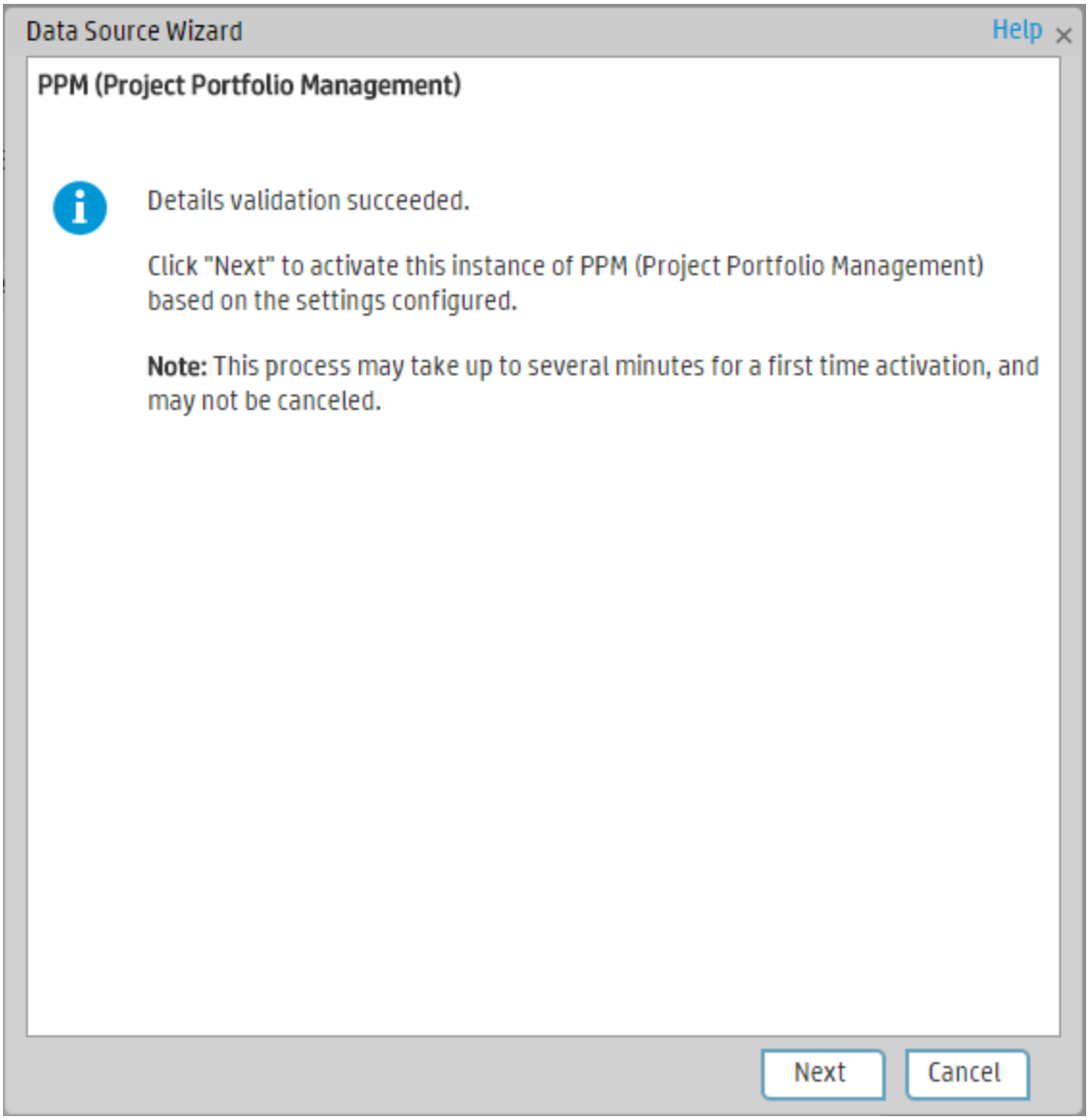
UI Element	Description
Data source type	Select the data source type you want to activate.

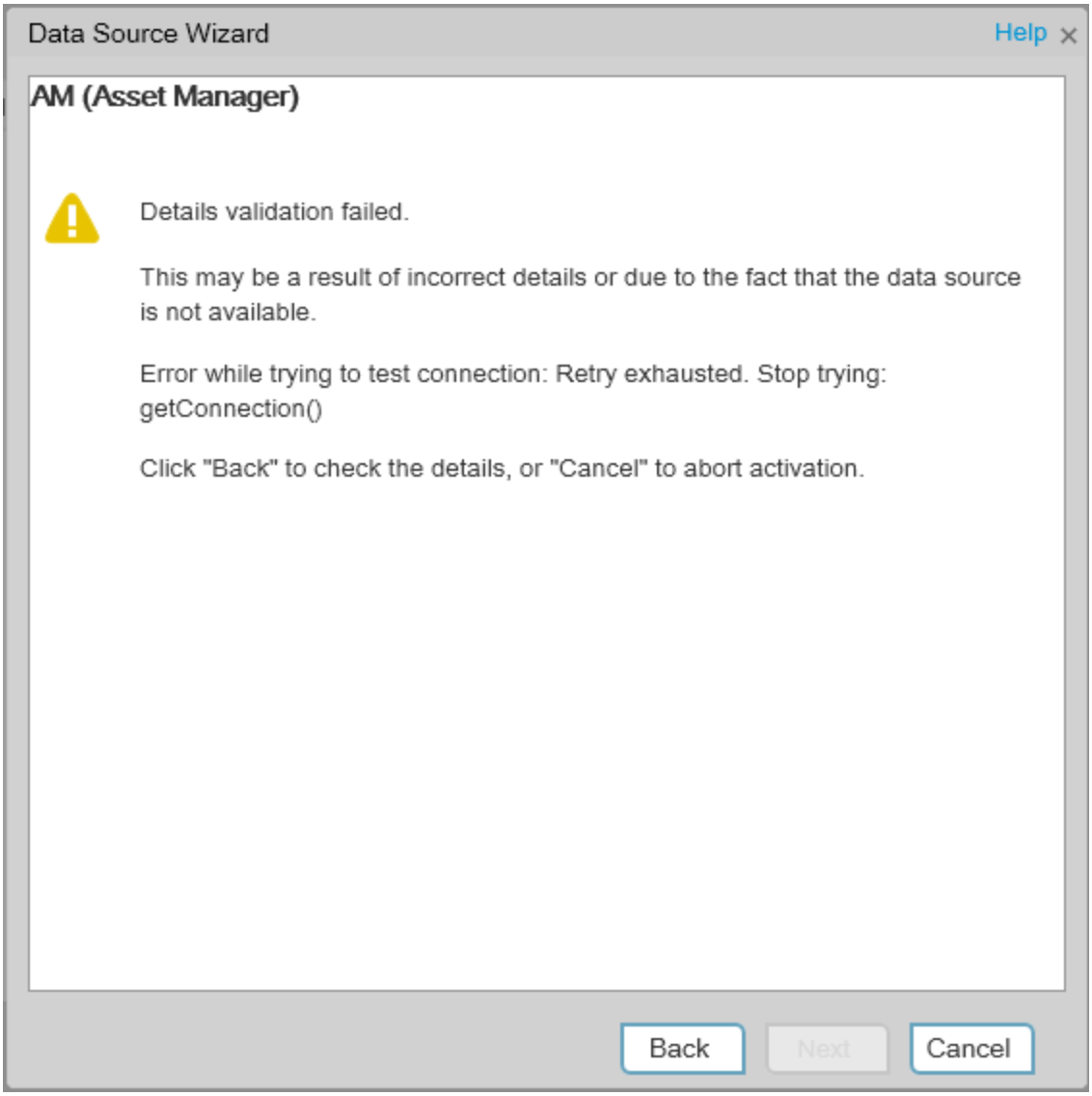
- **Configuration Parameters Page**

Each Configuration Parameters page displays parameters specific for the data source. For details, see the *BA Content Reference Guide* relevant to your data source.

- **Validation Page**

  This validation page displays activation status information pertaining to the selected data source.





A message displays the data source status information.

Click **Finish** to complete the wizard activation process.

Configure Consolidation

The Consolidated Entities page enables you to consolidate an entity that appears in different data sources, to prioritize the data sources, to select the relevant entity dimensions (columns), and to select when to use the consolidation.

This section includes:

Manage your Data Consolidations

The Consolidated Entities page enables you to consolidate an entity that appears in different data sources, to prioritize the data sources, to select the relevant entity dimensions (columns), and to select when to use the consolidation.

To access:

Click **Admin > Data Management > Configure Consolidation**

Learn More | Tasks | UI Description

Learn More

About consolidation

When BA integrates with several data sources, overlapping information might appear, for the same entity (for example: Customer,) in different data sources (S1, S2, and S3). If the information is not consolidated, this might cause the import of additional and confusing data for the entity. For example you might get for the same Customer: the Customer Name, Customer ID, Address, ZIP code, and Country provided by S1, the Customer Name, Customer ID, and Domain provided by S2, and the Customer Name, Customer ID, and the Billing information from S3.

To consolidate the information, you first select the entity that you want to consolidate (for example Customer) and you then select the priority order of the data sources (S1, S3, and then S2) in the **Entity and Priorities** page of the Consolidation wizard. This means that BA checks if the entity (Customer) in the first data source (S1) includes data. If there is data, it is imported into BA. If there is no data, BA checks the entity for data in the second data source (S3). If there is data, it is imported into BA. If not, the procedure continues until data is found in one of the data sources in the priority order list or no data has been found at all.

Each entity has dimensions (table columns). To construct a unique key for the consolidation you select the dimensions that will be used as keys (for example Customer ID), in the **Consolidation Rule** page in the Consolidation wizard.

For details on the Consolidation wizard, see "Configure your Data Consolidations" on page 224.

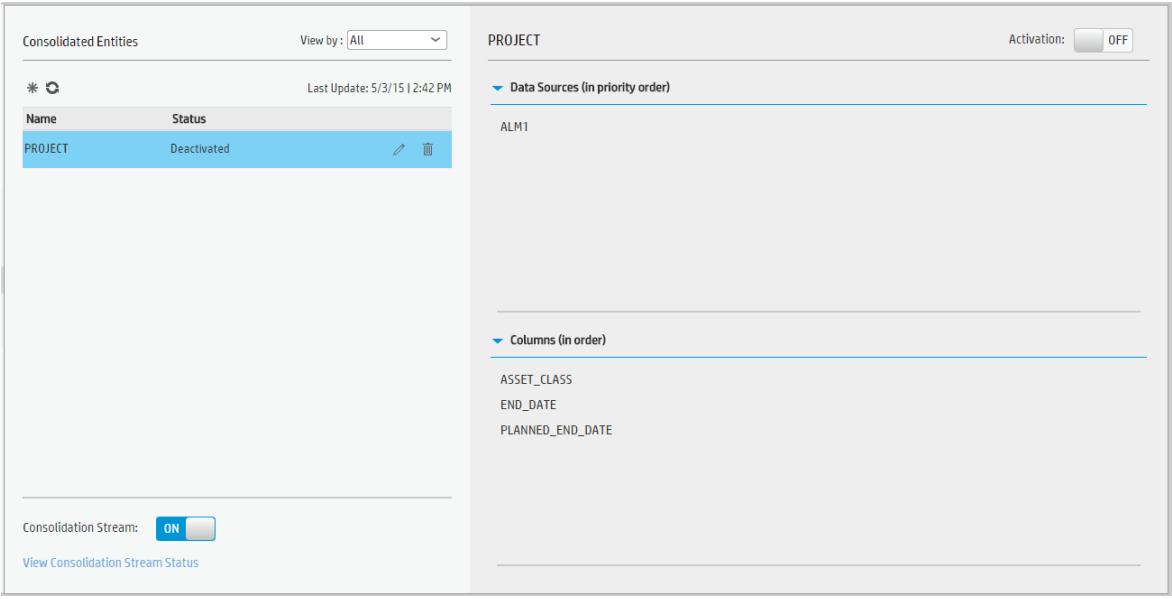
Tasks

Activate/Deactivate a Consolidation Entity

1. Click **Admin > Data Management > Configure Consolidation**.
2. Select the relevant entity, and click the **Activate/Deactivate** toggle button. The entity consolidation is activated/deactivated.

UI Description

Data Consolidation Management Page



- **Consolidated Entities**

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
	**Add new configuration entity.** Click to open the Consolidation wizard. For details, see "Configure your Data Consolidations" on page 224.
	**Refresh.** Click to refresh the list of consolidation entities.
Last Update <timestamp>	Displays the date and time when the last update to the list of consolidation entities was performed.
Name	The name of the entity with a consolidation configuration.
Status	**Activated.** The consolidation entity is activated. This means that the consolidation occurs when the conditions are fulfilled. **Deactivated.** The consolidation entity is deactivated. This means that the consolidation does not occur.
	**Edit Settings.** The button is enabled only when the consolidation of the entity is deactivated. Click to open the Consolidation wizard. For details, see "Edit your Data Consolidations" on page 229.

	**Delete.** Click to delete the relevant consolidated entity.

- **<entity_name> area**

  User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Activation	Click **ON** or **OFF** to activate or deactivate the consolidation of the selected entity.
Data Sources (in priority order)	The list of data sources for the consolidated entity in the selected priority order.
Columns (in order)	The list of selected columns for the consolidated entity. The columns are listed in their order in the consolidation rule.
Consolidation Stream	Click **ON** or **OFF** to activate or deactivate the consolidation stream. When you select **OFF**, you deactivate the Consolidation Stream in the Run ETL page.
View Consolidation Stream Status	Click to view the status of the consolidation stream. It opens the Run ETL page that displays the Consolidation Stream and its status.

Configure your Data Consolidations

The Consolidated Entities page enables you to consolidate an entity that appears in different data sources, to prioritize the data sources, to select the relevant entity dimensions (columns), and to select when to use the consolidation.

Note: Do not modify the consolidation entity configuration when ETL is running or when the KPI engine is running.

To access:

Click **Admin > Data Management> Configure Consolidation** and click  (**Add new configuration entity**).

Learn More | Tasks | UI Description

Learn More

About consolidation

When BA integrates with several data sources, overlapping information might appear, for the same entity (for example: Customer,) in different data sources (S1, S2, and S3). If the information is not consolidated, this might cause the import of additional and confusing data for the entity. For example you might get for the same Customer: the Customer Name, Customer ID, Address, ZIP code, and Country provided by S1, the Customer Name, Customer ID, and Domain provided by S2, and the Customer Name, Customer ID, and the Billing information from S3.

To consolidate the information, you first select the entity that you want to consolidate (for example Customer) and you then select the priority order of the data sources (S1, S3, and then S2) in the **Entity and Priorities** page of the Consolidation wizard. This means that BA checks if the entity (Customer) in the first data source (S1) includes data. If there is data, it is imported into BA. If there is no data, BA checks the entity for data in the second data source (S3). If there is data, it is imported into BA. If not, the procedure continues until data is found in one of the data sources in the priority order list or no data has been found at all.

Each entity has dimensions (table columns). To construct a unique key for the consolidation you select the dimensions that will be used as keys (for example Customer ID), in the **Consolidation Rule** page in the Consolidation wizard.

Tasks

Add an entity as a consolidated entity

1. Click **Admin > Data Management > Configure Consolidation** and click  (**Add new configuration entity**).
2. In the **Configure a new Consolidation Entity** wizard:

a. In the **Entity Name** list, select the entity you want to consolidate.
b. In the **Data Sources** page, prioritize the data sources.
c. In the **Consolidation Rules** page, select the relevant dimensions (columns) and prioritize them.
d. In the **Summary** page, check that the consolidation is configured properly and click **Create**.

   The consolidated entity is created, added to the list in the Consolidation Management page, and its status is set to **Deactivate**. You can now activate the consolidated entity.

See also Use Case – Add Service Entity as a Consolidation Entity in the *Getting Started with BA*.

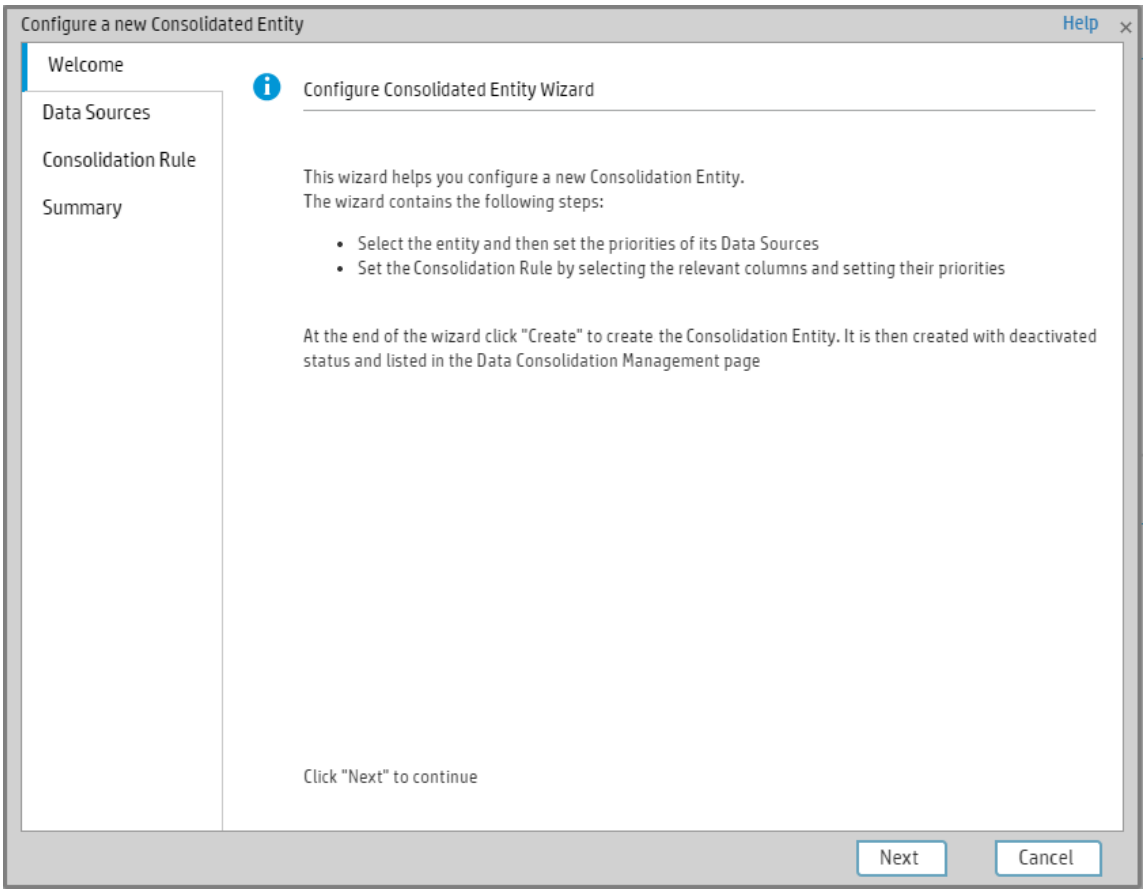
UI Description

Configure a new Consolidated Entity

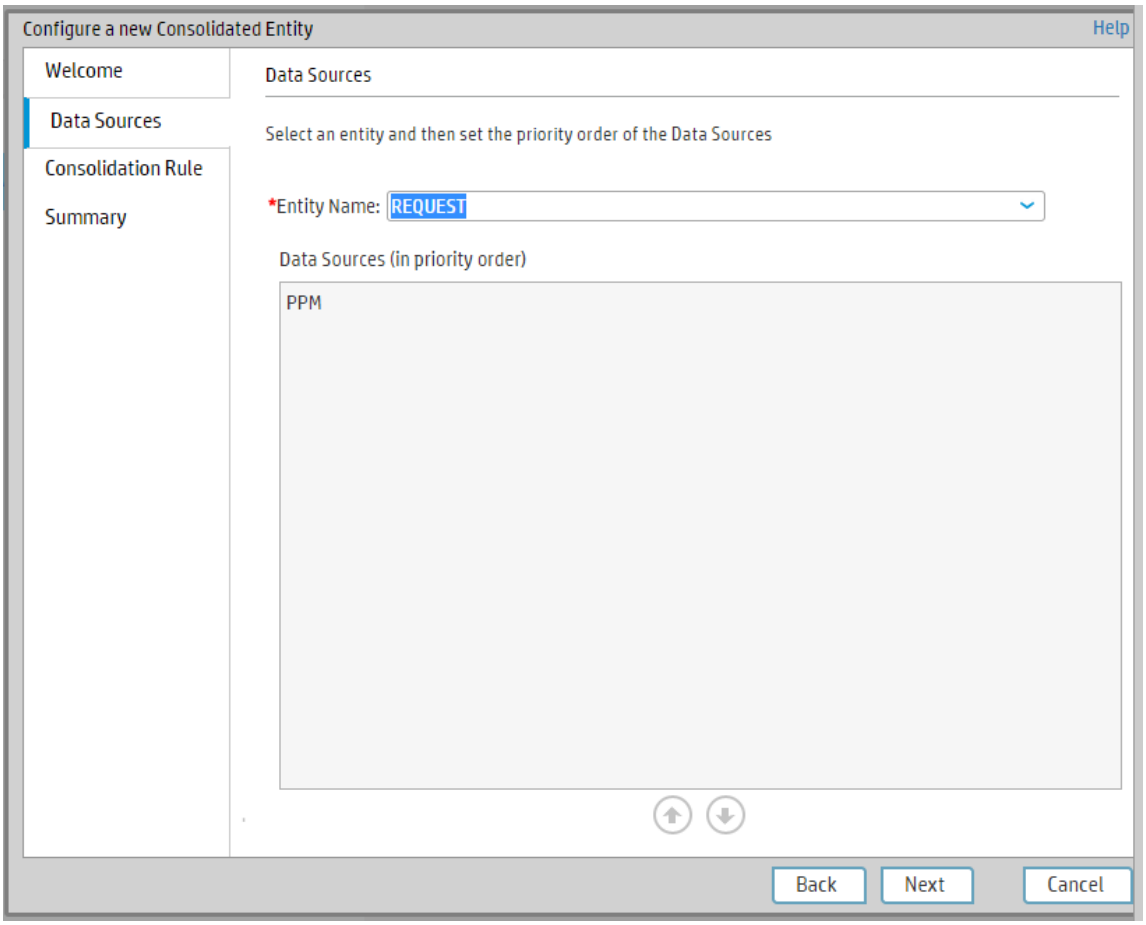
The wizard pages are as follows:

"Welcome Page" below > "Data Sources Page" on the next page > "Consolidation Rule page" on page 227 > "Summary page" on page 228

- **Welcome Page**



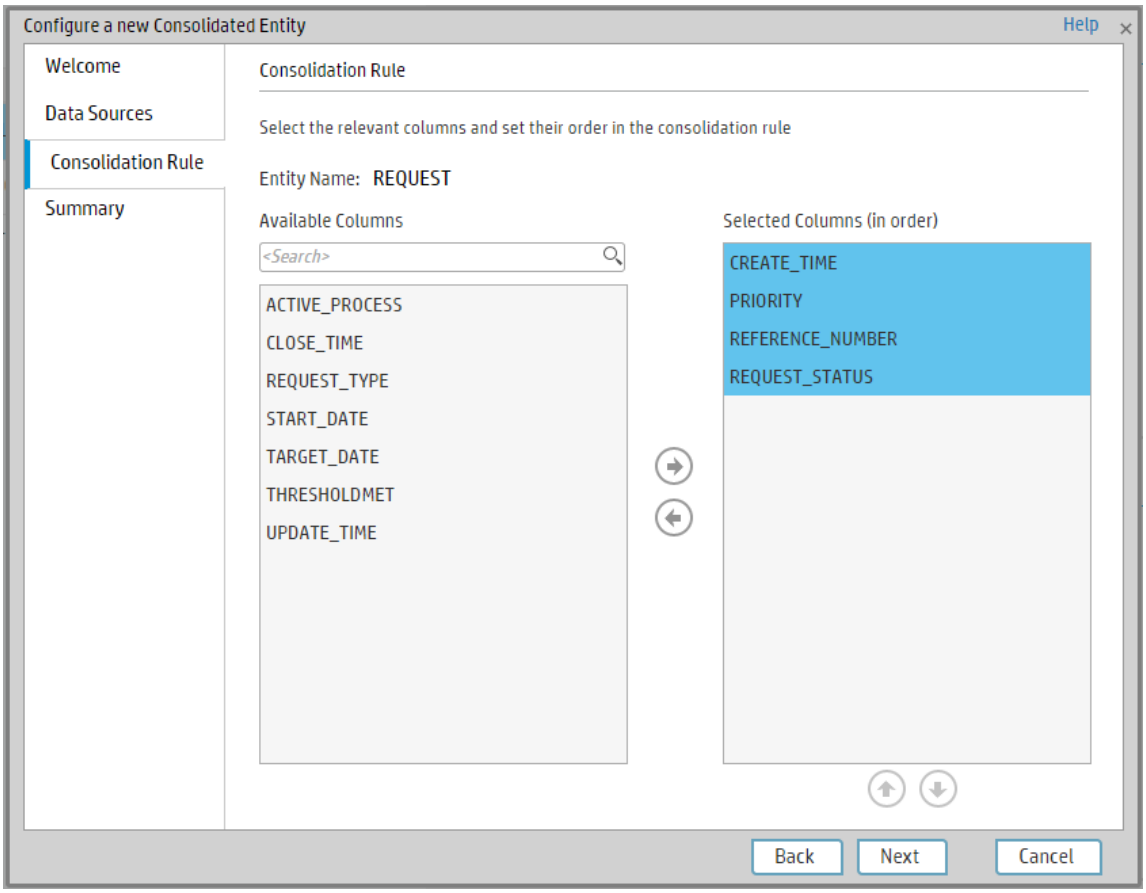
- **Data Sources Page**



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Entity Name	Click **V** to select the entity that you want to consolidate and select the relevant entity in the list that opens.
Data Sources (in priority order)	Move the data sources in the relevant priority order using the arrows. You can also drag and drop the data sources to set their priority order.

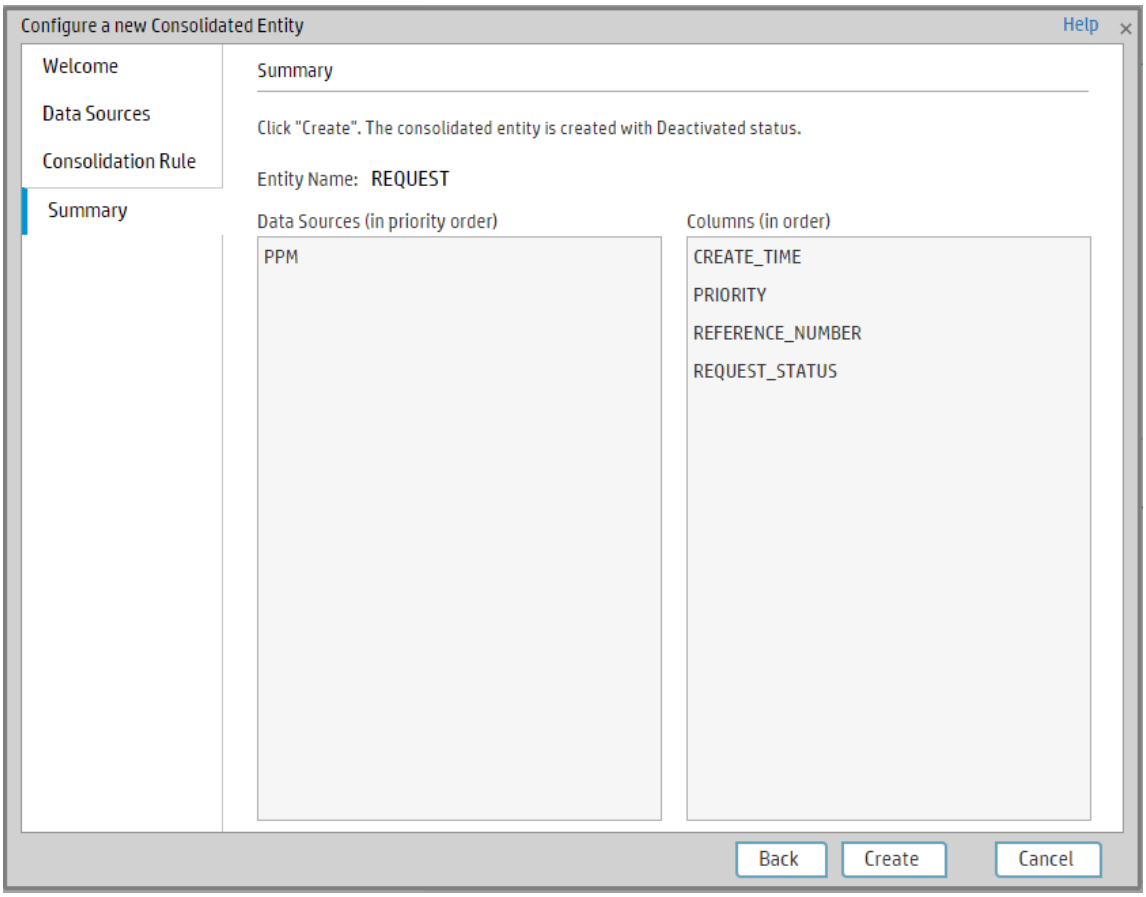
- ## Consolidation Rule page



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Entity Name	The name of the entity you are currently consolidating.
Available Columns	The list of columns of the entity you are currently consolidating.
<Search>	Enter a string and click the icon to search for entities with names that include the string.
Selected Columns (in order)	The list of columns you have selected to be included in the consolidation. Use the arrows to order the columns. You can also drag and drop the columns to set their order in the consolidation rule.

- **Summary page**



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Entity Name	The name of the entity you are currently consolidating.
Data Sources (in priority order)	The list of data sources in the relevant priority order.
Columns (in order)	The list of columns in their order in the consolidation rule.
Create	Click to create the entity consolidation. The consolidated entity is then placed in the list of entities in the Configuration Management page and the entity status is set to **Deactivated**.

Edit your Data Consolidations

You can edit your consolidated entities by changing their data sources, the priority of their data sources, or the columns you want to use in the consolidation rules.

To access:

Click **Admin > Data Management > Configure Consolidation**, select an entity, and click  .

Learn More | Tasks | UI Description

Learn More

About consolidation

When BA integrates with several data sources, overlapping information might appear, for the same entity (for example: Customer,) in different data sources (S1, S2, and S3). If the information is not consolidated, this might cause the import of additional and confusing data for the entity. For example you might get for the same Customer: the Customer Name, Customer ID, Address, ZIP code, and Country provided by S1, the Customer Name, Customer ID, and Domain provided by S2, and the Customer Name, Customer ID, and the Billing information from S3.

To consolidate the information, you first select the entity that you want to consolidate (for example Customer) and you then select the priority order of the data sources (S1, S3, and then S2) in the **Entity and Priorities** page of the Consolidation wizard. This means that BA checks if the entity (Customer) in the first data source (S1) includes data. If there is data, it is imported into BA. If there is no data, BA checks the entity for data in the second data source (S3). If there is data, it is imported into BA. If not, the procedure continues until data is found in one of the data sources in the priority order list or no data has been found at all.

Each entity has dimensions (table columns). To construct a unique key for the consolidation you select the dimensions that will be used as keys (for example Customer ID), in the **Consolidation Rule** page in the Consolidation wizard.

For details on the Consolidation wizard, see Configure your Consolidations in the *Getting Started with BA*.

Tasks

Edit a consolidated entity

To edit a consolidated entity:

1. Click **Admin > Data Management > Configure Consolidation**, select an entity, and click  .
   The Edit Consolidated Entity wizard opens.
2. Edit the data sources and their priority in the **Data Sources** page, and click **Next**.

3. Edit the entity columns and their priority in the **Consolidation Rule** page, and click **Next**.
4. Click **Next**.

   The entity is updated and listed in the Consolidation Management page. Its status is **Deactivated**.

For details, see Use Case – Add Service Entity as a Consolidation Entity in the *Getting Started with BA*.

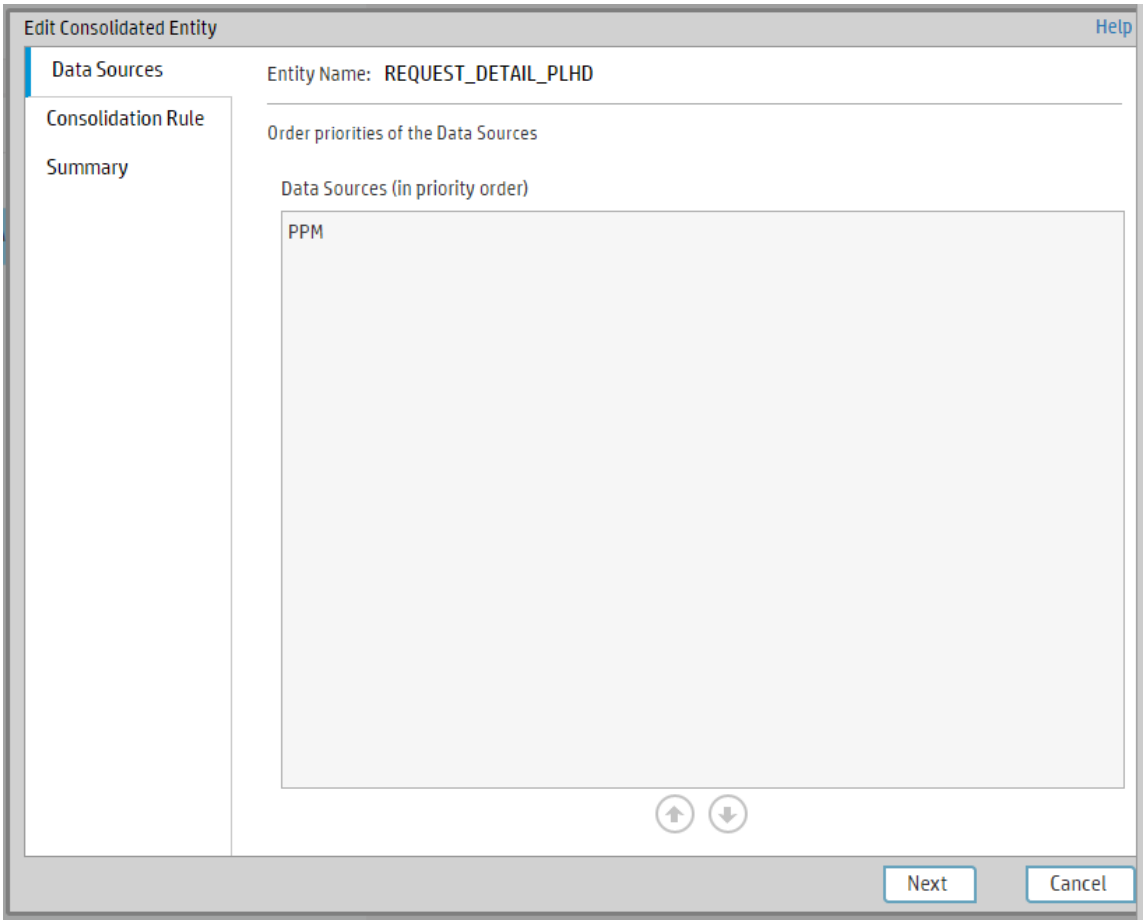
UI Description

Edit consolidated entities

The wizard pages are as follows:

"Data Sources Page" below > "Consolidation Rule Page" on the next page > "Summary page" on page 232

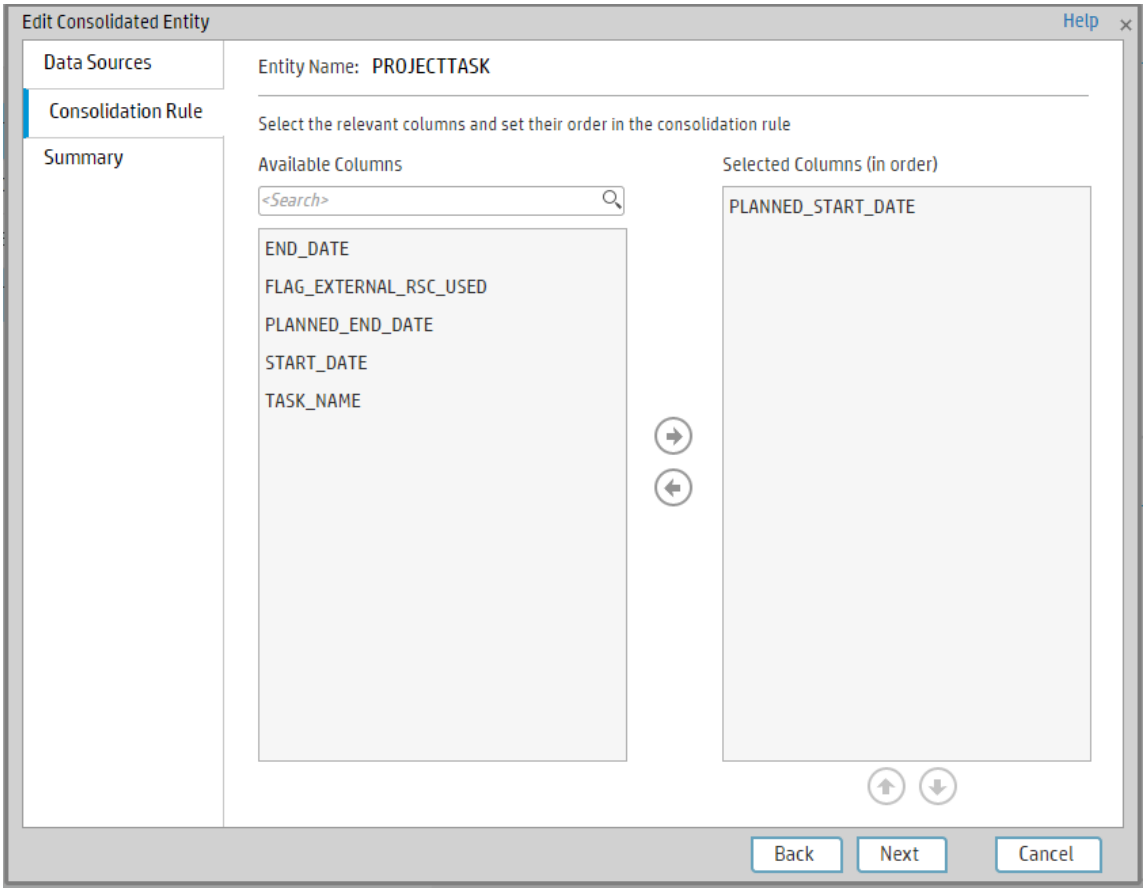
- **Data Sources Page**



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Data Sources (in priority order)	Move the data sources into the relevant priority order using the  arrows. You can also drag and drop the data sources to set their priority order.

- ## Consolidation Rule Page

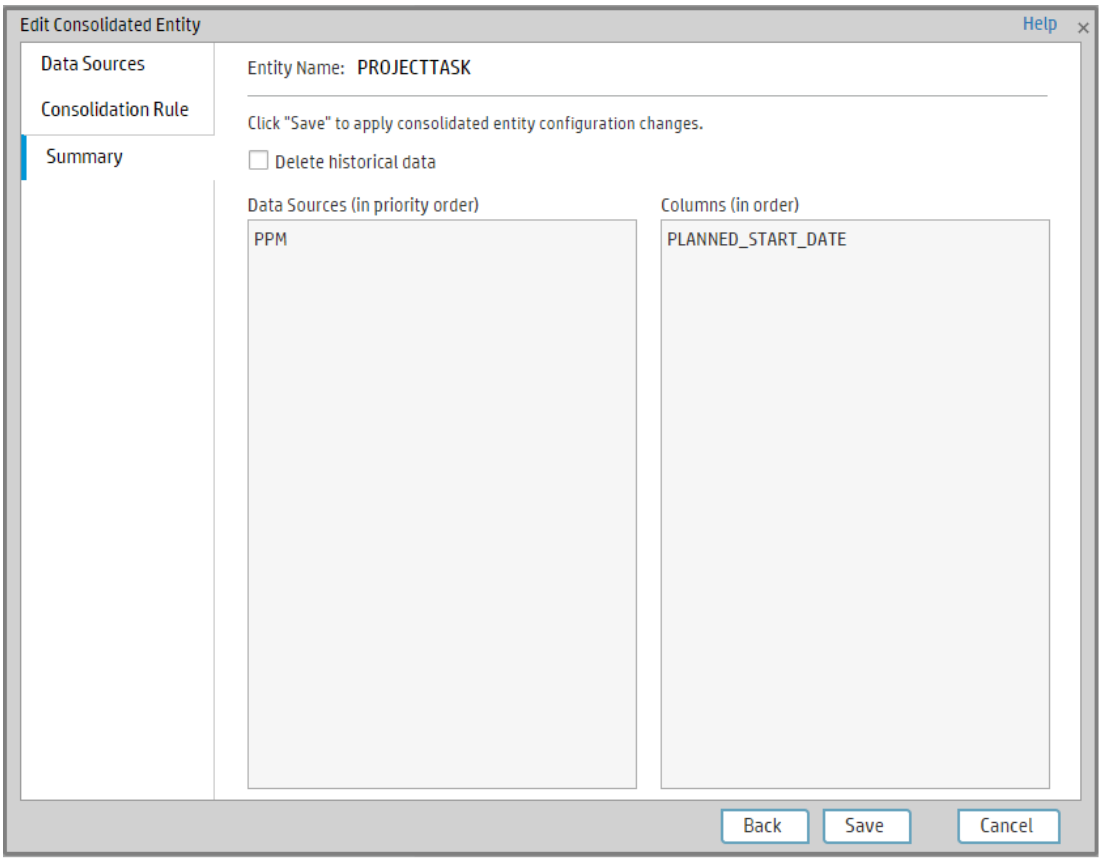


User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Entity Name	The name of the entity you are currently editing.
Available Columns	The list of columns (dimensions) of the entity. Select or unselect the columns using the horizontal arrows.

UI Element	Description
Selected Columns (in order)	The list of columns you have selected in the relevant priority order. Select or unselect the columns using the horizontal arrows. Change the priority order using the vertical arrows. You can also drag and drop the columns to change their order in the consolidation rule.

- **Summary page**



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Entity Name	The name of the entity you are currently consolidating.
Delete historical data	Select to delete the historical data of the consolidated entity you are editing when you click **Save**. Do not select if you want to keep the historical data of the consolidated entity you are editing.
Data Sources	The list of data sources in the relevant priority order.

UI Element	Description
(in priority order)	
Columns (in order)	The list of entity columns in the relevant order in the consolidation rule.
Save	Click to save the changes. The consolidated entity is then placed in the list of entities in the Configuration Management page and the entity status is set to **Deactivated**.

Run ETL - Content Flow Management

After a Content Pack (CP) is activated, the Content Pack Manager notifies the Content Flow Manager to create a job stream for this CP instance. The job stream includes a series of predefined steps. Each step is an individual job such as an extractor job or an ETL job. The job executes the backend process to pull the data from the data source to the Data Warehouse.

Each CP instance has an individual job and each job can run in parallel.

Note: Do not modify the consolidation entity configuration when ETL is running or when the KPI engine is running.

To access:

Click **ADMIN > Data Management > Run ETL**.

Learn More

Tip: If you integrate with both CSA and AWS/AWSCW, you must run the AWS/AWSCW ETL before the CSA ETL. If you do not run the ETL as recommended, you must wait for the end of the CSA ETL run to view the correct data.

Types of Job Streams

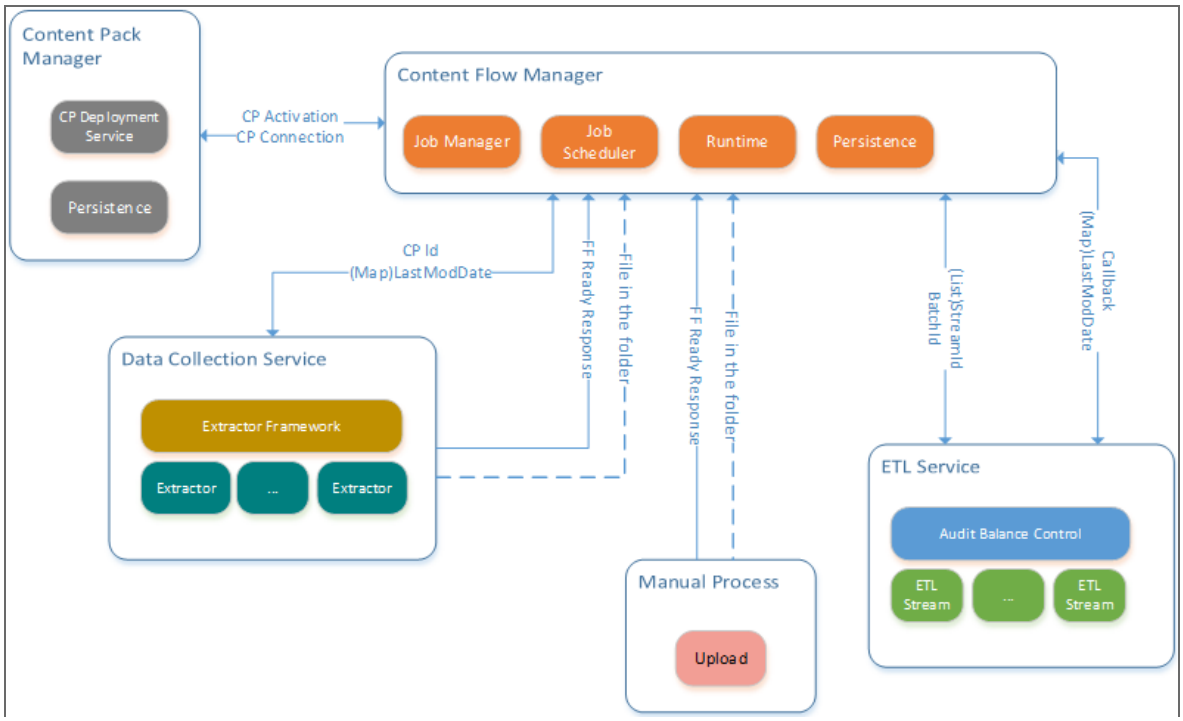
The Content Flow Manager supports 2 types of job streams:

- **CP instance job stream** - The Content Flow Manager executes the CP extractor job, the CP ETL job, and the archive job one by one, pulling data from the data source and loading it into non-consolidation tables. You can schedule this job stream using the Content Flow Management page. For details, see "Run ETL - Content Flow Management" above.
- **Consolidation job stream** - This job stream is created by default. It executes the consolidation job, moving all data from the non-consolidation tables to the consolidation tables. You can schedule the consolidation job stream using the Consolidation Management.

Content Flow Management - High Level Diagram

The diagram below shows how each individual component works with the Content Flow Manager which acts like a coordinator of all other components.

The Content Flow Manager communicates with the Content Pack Manager to get activated content information (CP connection, credential). It also calls the Data Collection Service to start the extractor job for generating the flat file. After that, it calls the ETL service to start the ETL job.



After the CP instance activates, the Content Pack Manager notifies the Content Flow Manager to create a job stream for this CP instance in the back-end. The job stream is composed of a series of predefined steps, each step is an individual job such as an extractor job or an ETL job. The job executes the back-end process to pull the data from the data source to the Data Warehouse.

For details, see "Configure Consolidation" on page 220.

The DCS (Data Collection Service) provides the Content Flow Manager with an API that is used to kick off the Extractor job.

The ETL Service provide the Content Flow Manager with API that is used to kick off the ETL run time Job.

- Each ETL run time job is a job instance that contains all related ETL streams under 1 CP instance. The ETL run time job can be for a consolidation or a non-consolidation job.
- Each ETL stream is an instance that maps to 1 specific entity under 1 CP instance. The CP instance contains all related ETL steps under 1 entity.
- Each ETL step is an instance that maps to a specific ETL script (such as EXT, SSI, MSI ….).

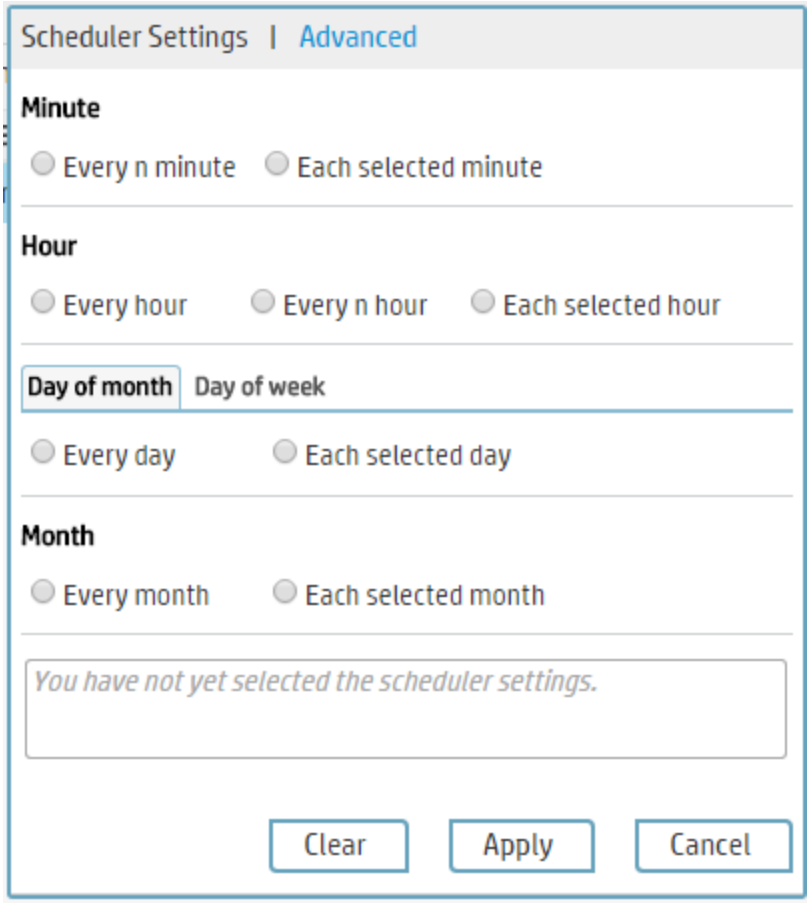
Tasks

This section includes:

Run a job instance using the Content Flow Manager

In the BA application:

1. Click **ADMIN > Data Management > Run ETL**.
2. Click **Add Scheduler Set** for the relevant instance.
3. Enter the relevant time stamp for scheduling the job instance run. The CronExpression is build in the box below the options. Click **Apply**.



For details, see " UI Description" on page 239.

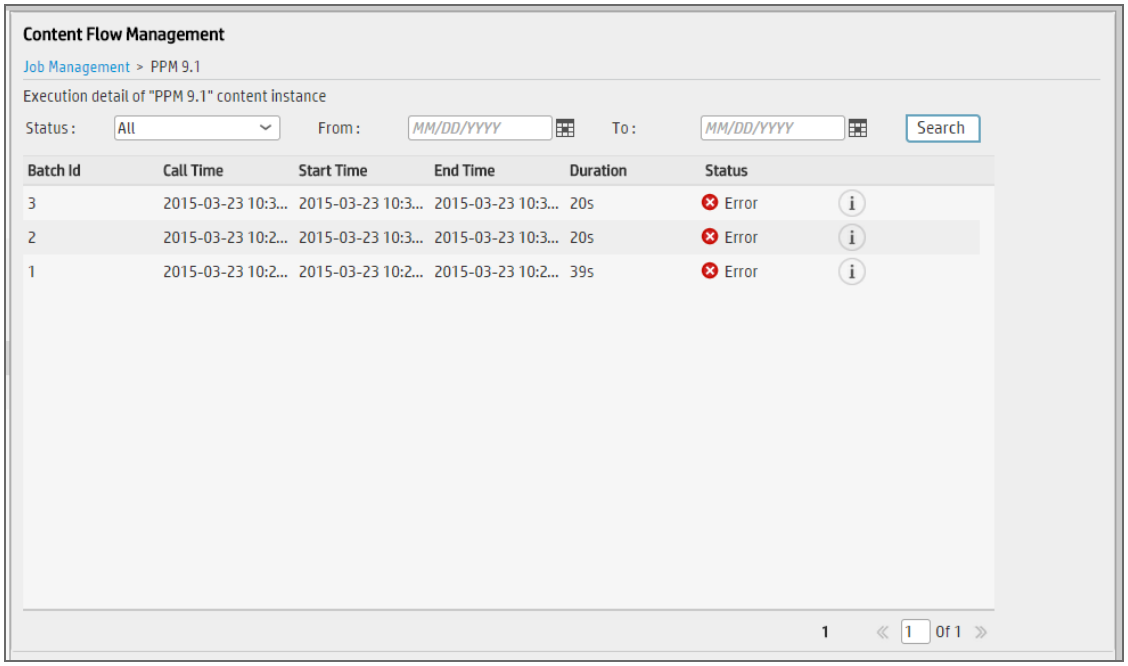
4. In the Content Flow Management page, verify that the job instance run is scheduled properly.

View the details of the job instance run

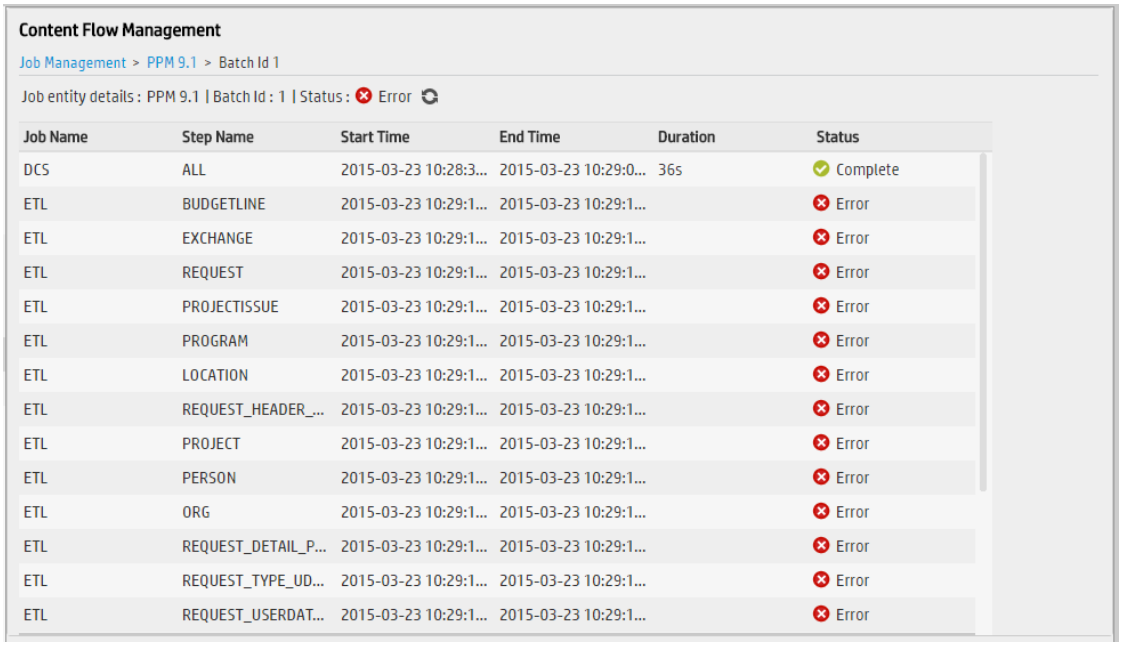
In the BA application:

1. Click **ADMIN > Data Management > Run ETL**.
2. Click the  button for the relevant job instance run (you might have to use the scroll bar to see the button). The list of the job instance runs of the instance is displayed. Use the filter to select the

runs you want to display. For details, see "<Execution Details> Page" on page 246.



3. Click the  button for the relevant job instance run. The list of the job instance run steps is displayed. For details, see "<Step Details> page" on page 248.



Use-Case - Trigger Business Context calculation from Content Flow Manager

The Administrator wants to trigger the Service Manager Business Context calculation after the ETL

stream of the SM instance completes successfully.

1. The Administrator clicks **ADMIN > Semantic Layer > Data Loader Scheduler**, selects one data load task and in the **Set Calculation** column, clicks **Set** (If no existing data load task, click **Add Schedule** button to create a new data load task).
2. The Administrator clicks **ADMIN > Data Management > Run ETL**, selects the SM instance and in the **Set Calculation** column clicks **Set**.
3. In the **Automatic Engine Calculation Settings** dialog box, he selects **Trigger the engine to calculate automatically business contexts once stream completes successfully.**. The list of available Business Contexts become available.
4. The Administrator selects the **Service Manager** Business Context and clicks the arrow to move it to the **Selected Business Contexts** area.
5. The Admin clicks **Apply**.

   In the Content Flow Management page, **Service Manager** appears in the table in the **Set Calculation** column.

   Once the stream completes successfully, the engine automatically starts to calculate the Service Manager Business Context.

Use-Case – Trigger Business Context calculation from Data Loader Scheduler

The Administrator wants to trigger the **MyBusinessContext** Business Context calculation after the automatic data loader loading data from an Excel file completes successfully.

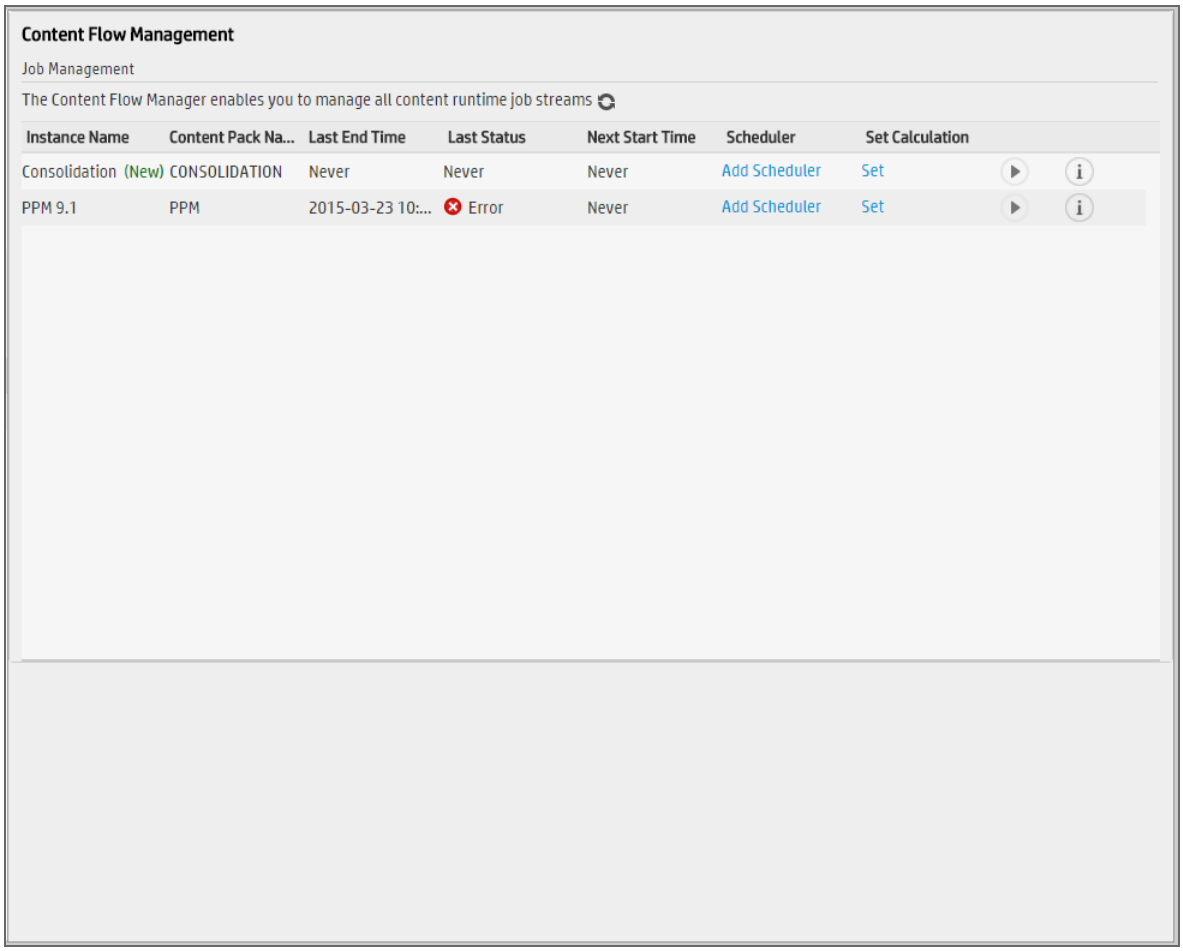
1. The Administrator clicks **ADMIN > Data Management > Run ETL**, selects the relevant instance that imports the data from the Excel file, and in the Engine Calculation column clicks **Set**.
2. In the **Automatic Engine Calculation Settings** dialog box, he selects **Trigger the engine to calculate automatically business contexts once stream completes successfully.**. The list of available Business Contexts become available.
3. The Administrator selects the **MyBusinessContext** Business Context and clicks **Apply**.

   The **MyBusinessContext** string appears in the table in the **Engine Calculation** column.

   Once the data load completes successfully, the engine automatically starts to calculate the MyBusinessContext Business Context.

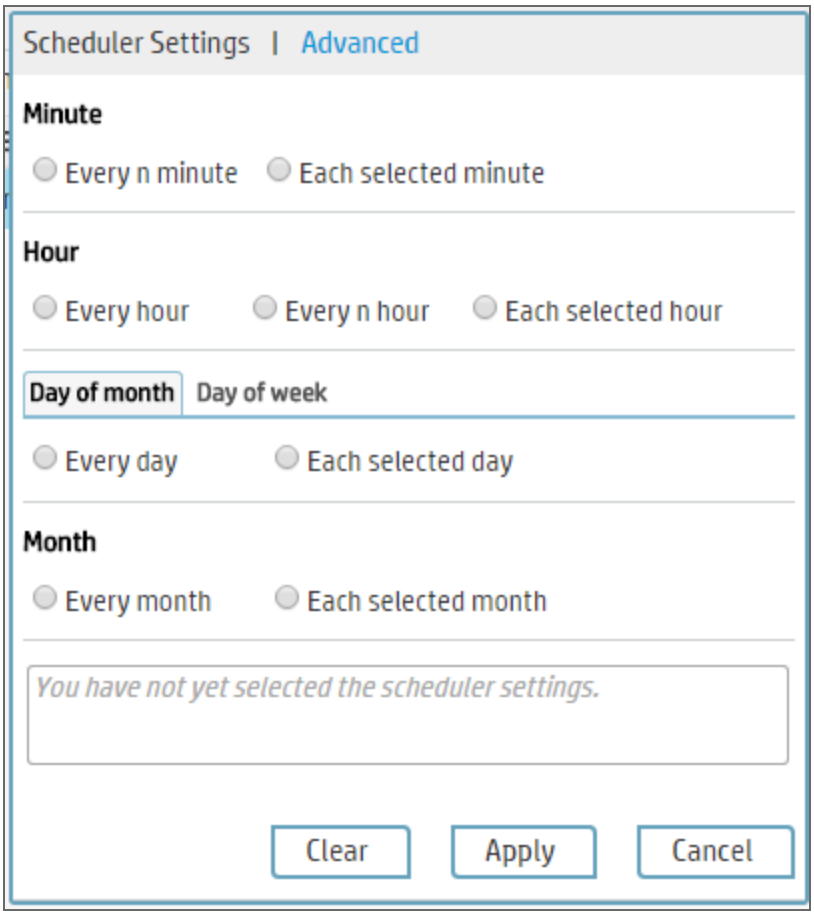
UI Description

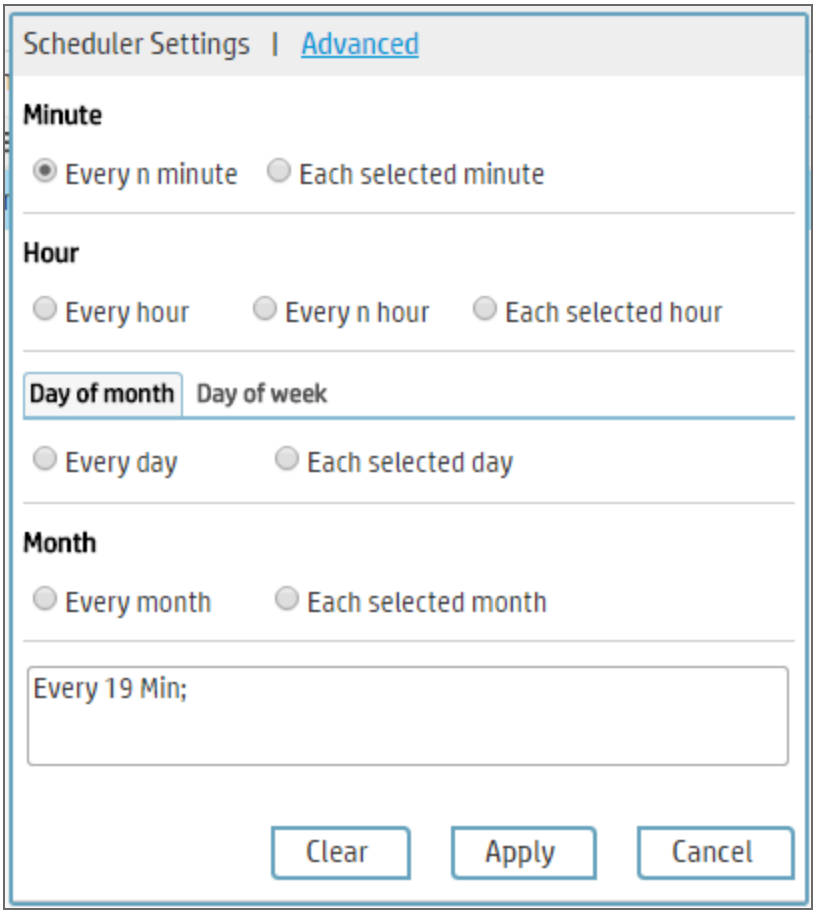
Content Flow Management page



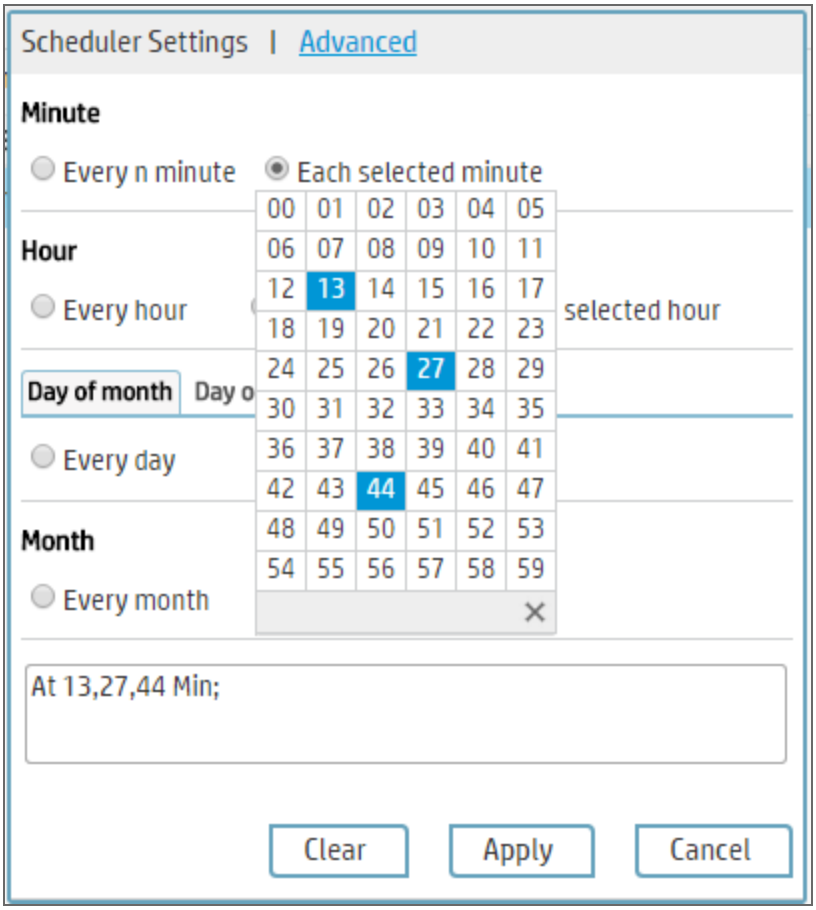
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Instance Name	The name of the Content Pack instance.
Content Pack Name	The name of the Content Pack.
Last End Time	**<timestamp>.** The timestamp of when the last run ended. **Never.** The job instance has never run.

Last Status	**Error.** Indicates that an error occurred in the last job instance run. **Aborted.** Indicates that the job instance run did not take place because no schedule was specified or because the run was aborted manually. **Complete.** Indicates that the job instance has completed. **Timeout.** Indicates that the job instance has timed out. **Never.** The job instance has never run.
Next Sart Time	**<timestamp>.** Indicates when the next run will take place. **Never.** Indicates that the job instance does not have a schedule.
Add Scheduler	Click **Add Scheduler** or **Cron Expression** to add a schedule or to edit an existing schedule. The following dialog box opens. Select the **Schedule Settings** or **Advanced** tab. 
• **Schedule Settings**	Use the dialog box to build the CronExpression that specifies the triggering schedule of the job. When you select: • **Every n minute** - use the slider to specify the number of minutes:

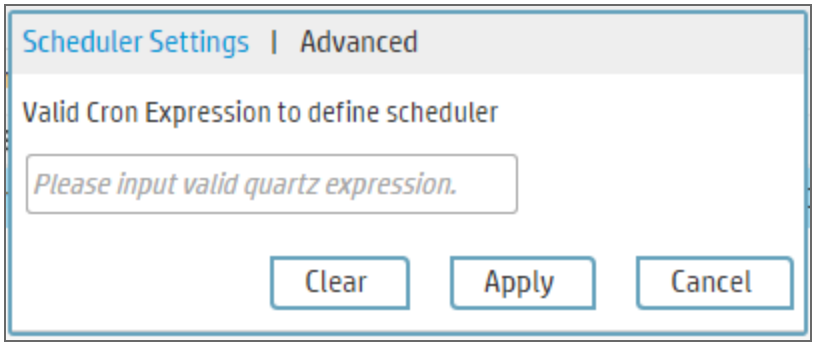


- **Each selected minute:** Select the exact minutes in the table.



In the same way you can select the hours, days of the month, days of the week, or month for the CronExpression. If the required schedule is more complex, click **Advanced**.

- **Advanced**



Specify the Cron Expression you want to use to define the schedule. The CronExpression consists of seven sub-expressions that describe individual details of the schedule, when to trigger it, and when to stop.

Syntax: <seconds> <minutes> <hours> <day-of-month> <month> <day-of-week> <year>

- **<seconds> -** Use a number from 0 to 59 to specify the seconds of the scheduling time stamp.

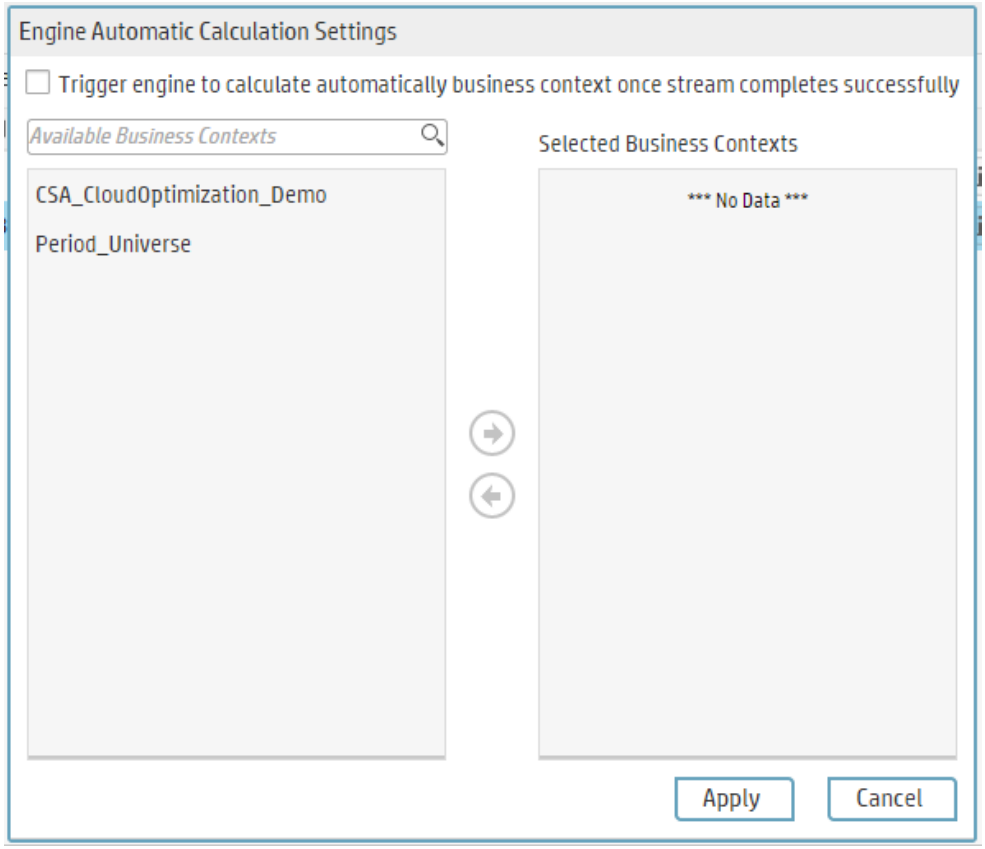
- **<minutes> -** Use a number from 0 to 59 to specify the minutes of the scheduling time stamp.
  - **wildcard / -** Use it to specify increments to values. For example, if you put '0/15' in the Minutes field, it means 'every 15th minute of the hour, starting at minute zero', it is the same as specifying '0,15,30' in the Minutes field. Note that "/35" does *not mean "every 35 minutes" - it mean "every 35th minute of the hour, starting at minute zero" - or in other words the same as specifying '0,35'.
- **<hours> -** Use a number from 0 to 23 to specify the hours of the scheduling time stamp.
- **<day-of-week> -** Use a number between 1 and 7 (1=Sunday) or the string: SUN, MON, TUE, WED, THU, FRI and SAT to specify the days of the week of the scheduling time stamp.

  You can also use ranges (MON-FRI), or lists of days of the week (MON,WED,FRI), or combinations (MON-WED,SAT).
  - **wildcard ? -** Use it to specify no specific value in the <day-of-month> and <day-of-week> fields. This is useful when you need to specify something in one of the two fields, but not the other.
  - **wildcard * -** Use it to specify all values. For example, * in the <day-of-week> field means every day of the week.
  - **wildcard L -** Use it for last day of the week; it simply means **7** or **SAT**.

    Use it after another value to specify the last day of the month. For example: **6L** or **FRIL** both mean "the last friday of the month".
  - **wildcard # -** Use it to specify "the nth" XXX weekday of the month. For example, **6#3** or **FRI#3** means "the third Friday of the month".
- **<day-of-month> -** Use a number from 1 to 31 to specify the days of the month of the scheduling time stamp.
  - **wildcard ? -** Use it to specify no specific value in the <day-of-month> and <day-of-week> fields. This is useful when you need to specify something in one of the two fields, but not the other.
  - **wildcard L -** Use it to specify the last day of the month. For example, for the month of August, L means day 31 and for the month of February in a leap year, it means day 28.

    Use it to specify an offset from the last day of the month. For example, **L-3** means the third-to-last day of the calendar month. When using the 'L' option, it is important not to specify lists, or ranges of values, as you'll get confusing/unexpected results.
  - **wildcard W -**To specify the nearest weekday (Monday to Friday) nearest the given day. For example, **15W** means "the nearest weekday to the 15th of the month".
- **<month> -** Use a number from 1 to 12, or the strings: JAN, FEB, MAR, APR, MAY, JUN,

	JUL, AUG, SEP, OCT, NOV, or DEC to specify the month of the scheduling time stamp. • **wildcard " -** is used to specify "every" possible value of this field. For example: 0 0 12 ? * WED " , in the <month> field means every month. **Examples:** • Every 5 minutes: **0 0/5 * * * ?** • Every 5 minutes, at 10 seconds after the minute (i.e. 10:00:10 am, 10:05:10 am, etc.): **10 0/5 * * * ?** • 10:30, 11:30, 12:30, and 13:30, on every Wednesday and Friday: **0 30 10-13 ? * WED,FRI** • Every half hour between the hours of 8 am and 10 am on the 5th and 20th of every month. Note that the trigger will NOT fire at 10:00 am, just at 8:00, 8:30, 9:00 and 9:30: **0 0/30 8-9 5,20 * ?** **Note:** Some scheduling requirements are too complicated to express with a single trigger - such as "every 5 minutes between 9:00 am and 10:00 am, and every 20 minutes between 1:00 pm and 10:00 pm". The solution in this scenario is to simply create two triggers, and register both of them to run the same job.
Set Calculation	The Engine and the ETL mechanism are working as a separate modules under the same application. They work separately. You can schedule the automatic engine calculations for the approximate time the ETL finishes running. But when the ETL fails to complete the calculation runs anyway based on older data instead of fresh data brought in by the ETL run. The Engine Automatic Calculation Settings dialog box enables you to trigger the engine to calculate automatically the selected Business Contexts as soon as the stream completes successfully.



Trigger the engine to calculate automatically business contexts once stream completes successfully. Click to calculate automatically the selected Business Contexts as soon as the stream completes successfully.

Enter the relevant string to search for specific Business Contexts.

Use the arrows to move the Business Contexts to the **Selected Business Contexts** area.

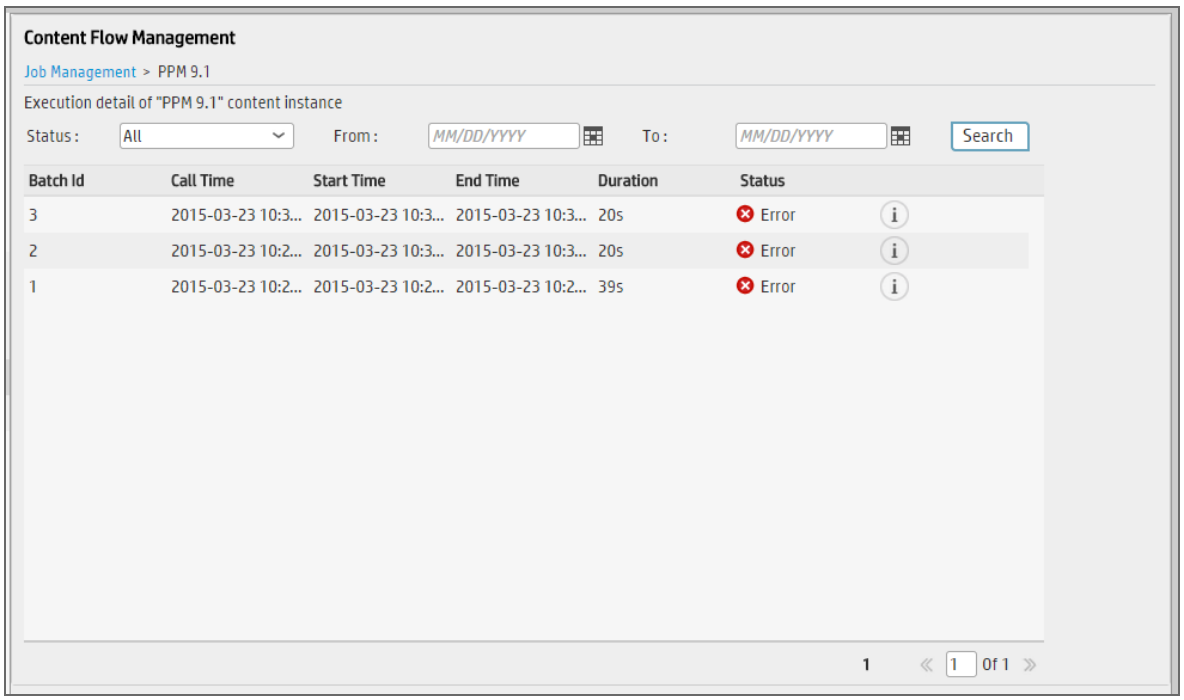
Note:

If you configure the triggering of the same Business Context from the calculation scheduler in the STUDIO, or in the Engine Automatic Calculation Settings dialog box in Content Flow Management, there could be a situation when the engine tries to calculate the same Business Context at the same time. When the triggering is manual, the system notifies you that the calculation of this business context is running and to try again later. When the scheduling is automatically triggered, the engine runs the calculation of the Business Context only after the previous was run ended.

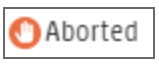
For details on scheduling the calculation in the STUDIO, see **Calculation Scheduling** in the ***BA Business Analyst Guide***.

	Click to run the Scheduler.
	This button is displayed when the Scheduler is running. Click the button to abort the run.
	Click to display the details of the run. For details, see below.

<Execution Details> Page

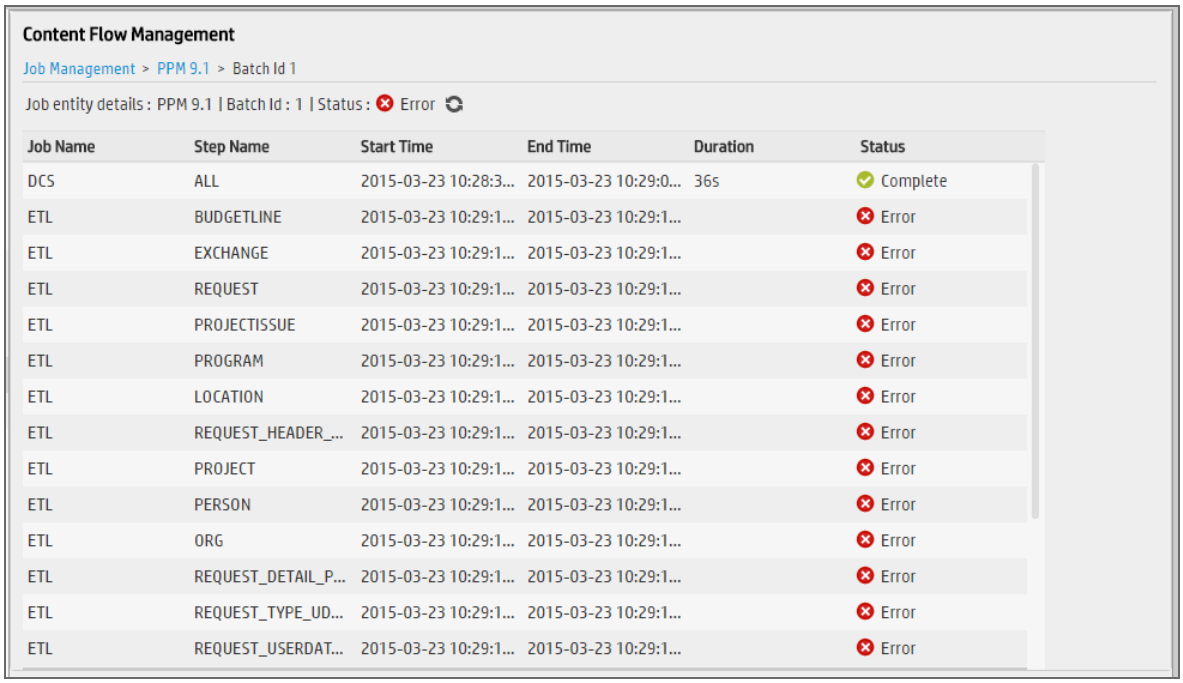


User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
<breadcrumbs	The breadcrumbs display the name of the job instance that was run. Click Job Management to return to the Content Flow Management page.
Status	Select the status for which you want to filter the list of the job instance runs: • **All.** Displays all entries •  Displays only the aborted runs. •  Displays only the completed runs. •  Displays only the runs with errors.

	•  Displays only the runs that are currently processing. •  Displays only the runs with timeout. • Waiting. Displays while the run is waiting.
From	Click  to select the starting date of the search.
To	Click  to select the end date of the search.
Search	Click to filter the list of job instance runs.
Batch Id	The ID of the batch job instance run.
Call Time	The time when the job instance run has been created.
Start Time	The time when the job instance run executed. It the run is aborted before it starts, the column is empty.
End Time	The time when the job instance run completed or was aborted.
Duration	The time it took to run the job instance.
Status	 **Error.** Indicates that an error occurred in the job instance run.  **Aborted.** Indicates that the job instance run was aborted.  **Complete.** Indicates that the job instance has completed. **Processing.** Indicates that the job instance is processing. **Timeout.** Indicates that the job instance is in timeout. **Waiting.** Indicates that the job instance is waiting.
	Click to display the steps of the job instance run. For details, see below.

<Step Details> page



User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
<breadcrumbs	The breadcrumbs display the name of the job instance that was run and the batch ID of the step. The batch ID is the execution ID. It is incremented each time the step is run. Click **Job Management** to return to the Content Flow Management page or click the instance name to return to the Content Flow Management job run details page.
<Summary>	The summary line shows: the name of the run, the batch ID of the step, the status.
	Click to refresh the display.
Job Name	The name of the job can be: • **DCS.** This Data Collection Service (DCS) job extracts all entities data. The corresponding entity name is **ALL**. • **ETL.** This Extract Transform Load (ETL) job executes specific entities. The corresponding entity name is listed in the Entity Name column. • **ENG.** This job represents the KPI engine. The job does not affect any entity, so the corresponding entity name is **ALL**.
Step Name	The name of the step. The entity name is relevant only for ETL jobs in CP job instances.

	The entity name is not relevant for Consolidation jobs, so for this type of job, the value of Entity name is **NA**.
Start Time	The time when the job step run was started.
End Time	The time when the job step run completed.
Duration	The time it took to run the job step.
Status	**Error.** Indicates that an error occurred in the job step run. **Aborted.** Indicates that the job step run was aborted. **Complete.** The job step has completed successfully. • Processing Displays only the job step runs that are currently processing. • Timeout Displays only the job step runs with timeout. • Waiting. Displays while the job step run is waiting.

About Activate CAP

Content Acceleration Packs (CAPs) are ready-to-import packages that include Dashboard pages that display Scorecards and components, KPIs, Metrics, Contexts (universes), data (from .CSV files or from data sources), and documentation for the CAP.

CAPs describe typical stories that show how the correct implementation of Business Analytics drives Performance Improvement and Cost Reduction for the IT organization.

CAPs demonstrate Business Analytics capabilities, and helps you add basic elements that can be used to customize your Dashboard.

For details about the Content Acceleration Packs (CAPs), see Content Acceleration Pack (CAP) Management in the *Guide to BA Content Acceleration Packs*.

Business Analyst

This section provides details on how the Business Analyst can display the data in the Dashboard.

About the Business Analyst Tasks

The Business Analyst uses out-of-the-box or creates customized Scorecards, Perspectives, Objectives, KPIs, and Metrics in the Studio. The Business Analyst also uses out-of-the-box or creates customized components and pages in the Dashboard to display the data relevant to the end-user. For details, see Getting Started with the Business Analysis User Guide in the *BA Administrator Guide*.

The Business Analyst also uses out-of-the-box or creates the relevant contexts to bring data from the data sources to KPIs and Metrics. For details, see Getting Started with the Content Reference Guide in the *BA Content Reference Guide*.

About the Semantic Layer - Contexts and Universes

BA semantic layer includes Contexts and universes.

The Context Designer feature enables you to create and manage Contexts (universes). The Contexts can be based on your target schema tables or on Excel (or .CSV) files that can be uploaded to the target schema using the Data Loader.

Context Designer can be used to upload data and create contexts based on the data, when you want to work with the Business Analytics application without using Data Warehouse and SAP BusinessObjects Enterprise. It is a direct way to upload data into the Business Analytics Studio using files without performing integrations to external sources or to other HP products. It can be used, to integrate third party data, testing, or for Proof of Concept (POC) sessions. It can also be used as a component of Business Analytics to integrate third party data.

Context Designer provides KPI results based on your real data.

For general information about the Semantic Layer (contexts and universes), see the *BA Content Reference Guide*.

For details about the contexts, KPIs, Metrics, and integration with a specific data source, see see the *BA Content Reference Guide* relevant to the data source.

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