HP IT Executive Scorecard

For the Windows ® operating system

Software Version: 9.31

Administrator Guide

Document Release Date: December 2012

Software Release Date: December 2012

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Getting Started with administrative tasks:

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- **Understand the LW-SSO, Identity management SSO, logs, Web server, cryptography, Supervisor, and working with Xcelsius.** For details, see "General Information" on page 18.
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Login

You access the IT Executive Scorecard application using a supported Web browser, from any computer with a network connection (intranet or Internet) to the servers. Currently Microsoft Internet Explorer 9 is supported. 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 "Manage Users" on page 32.

You can initially access the Admin tab through the IT Executive Scorecard login page, using your administrator username and password, created during installation.

Access the login page as follows:

- **http://<full resolution host>:<port>/xs**. If you are using a non-default port you must update it in the URL. For details, see "Web Server" on page 24.
- If you are using a default http port, the port can remain empty.

The Admin tab is configured by default with Lightweight Single Sign-On (LW-SSO). LW-SSO enables you to log in and automatically have access to LW HP applications, without needing to log into those applications. For details, see "LW-SSO " on page 18.

Access Tabs

You access the following tabs from the main login page:

- IT Executive Scorecard Dashboard
- Finance
- Admin
- Explorer
- Studio

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.

To access the IT Executive Scorecard login page and all tabs:

1. In a Web browser, enter the **http://<server_name>.<domain_name>/XS** URL for the fully qualified machine where XS is installed.
2. Enter the login parameters (login name and password) of a user, and click **Log In**. After a successful login, the user name appears at the top right of the page of the application.
3. Close the original login window once the application has loaded.

4. Click the Admin tab to navigate the admin pages. Only users with the required permissions can view the Admin tab.

Note: To log in 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 or without SAP BusinessObjects and LDAP" on page 33.

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 "Manage Users" on page 32.

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 or without SAP BusinessObjects and LDAP" on page 33.

A password must contain the following:

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

Note:

- Login 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 Distributed Environment

When you log in to the IT Executive Scorecard application using the **http** or **https** format in a distributed environment, the following scenarios can occur:

1. When you use the **http** format to access the Executive Scorecard application, the authentication transfers you to the Data Warehouse application. A message states that a security certificate is issued. Click the **Continue to this website** link. In the Data Warehouse page, 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 Executive Scorecard

application.

2. When you use the **http** format to access directly the Data Warehouse application, a message states that a security certificate is issued. Click the **Continue to this website** link. In the Data Warehouse page, 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 opens.
3. When you use the **https** format to access the Executive Scorecard 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 log in operation, you can add the Executive Scorecard certificate in the successfully launched Executive Scorecard 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.
4. When you use the **https** format to access directly the Data Warehouse application, a message states that a security certificate is issued. 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**. This warning message is not displayed again. The Data Warehouse application opens in SSL mode. 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.

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

Logout

To logout:

You can log out using one of the following:

- Click **Logout** (in the top right corner of the application). The session closes. To log in again, you must provide the user and password.
- Click **X** (in the top right corner of the application). The session stays alive for one hour. To log in again, you do not have to provide the user and password.

Shared Secret Key

Executive Scorecard 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 post-install wizard and enter the new shared secret key. For details, see the *IT Executive Scorecard Installation and Configuration Guide*.

Glossary

A

ABC

Audit, Balance, and Control (ABC) is an application that triggers the ETL processes. Audit ensures consistency during ETL processing. It measures the number of records in and the number of records out for each step and displays these runtime statistics in a collection of audit reports. Balance verifies that data in the data warehouse matches data in the source system. For example, if the data warehouse stores project dollar amounts then the balance process verifies that the aggregate project dollars in the data warehouse matches the aggregate project dollars in the source application data. Control governs ETL processes. Control makes sure that there is a proper restart and recovery when a system error occurs. Control also manages job dependencies at runtime.

Activity Based Costing (ABC)

The ABC methodology assigns an organization's resource costs through activities to the products and services provided to its customers.

D

Dimension

An entity that describes, qualifies, or otherwise adds meaning to the measurements (facts) that business users want to analyze.

E

ETL (Extract Transform Load)

E - The extract process extracts delta data from the source systems and writes it to delimited flat files on the file system. The data warehouse uses the Change Data Capture (CDC) technique for extracting data from the source tables. T - During the transformation process, FPA transforms data into the format of the target tables and populates the load-ready target staging tables. The Transformation layer contains load-ready tables that match the internal structure of the data warehouse target tables. L - The load process adds new records, updates existing records, and flags deleted records in the data warehouse target layer fact and dimension tables.

M

Measure

A value collected by the executable during execution, such as the number of rows processed during an ETL job, or an amount extracted from a table that describes expenses in a source application. The ABC application does not make any assumptions about the business tasks performed by the executable or impose any semantic requirements on computed measure values. The ABC application provides an interface for the executable to store measures. The ABC reports provide drill down capabilities into the stored measures.

Metadata

Agreed-upon definitions and business rules stored in a centralized repository to ensure that business users use common terminology for key business terms.

Metric

A framework to establish and collect measurements of success or failure on a regulated, timed basis that can be audited and verified.

Multi-Dimensional

The aggregation of data by the dimensions of the business. For example, sales by region by product by time.

General Information

The following sections contain general information pertaining to the administration of Executive Scorecard , IT Financial Management, and the Data Warehouse.

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.

Use the Identity Management Single Sign-On

Identity Management Single Sign-On (IDM-SSO) is a method of access control that enables you to navigate to other HP products 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.

Learn about Identity Management

You implement Identity Management Single Sign-On (IDM-SSO) if you want a more secure connection than that offered by LW-SSO, or if the applications configured outside of Executive Scorecard do not support LW-SSO. The IDM server is monitored by a single center Policy Server, and consists of a User Repository, a Policy Store (both could reside over the same server as the Policy Server), and a Web Server Agent installed over each of the application's web servers communicating with the Policy Server. The IDM server controls users' access to various organizational resources, protecting confidential personal and business information from unauthorized users. For details, see your IDM vendor's documentation.

Executive Scorecard requires the IDM vendor to store user information to render it available as a header on http requests.

Before configuring IDM-SSO in Executive Scorecard, make sure you see your IDM login dialog before the BSM login screen.

If you do not see it, work with your IDM administrator. If the same LDAP was defined in Executive Scorecard as used by IDM, you should be able to authenticate through both the IDM and Executive Scorecard login screens using the same credentials. If not, verify that LDAP settings in Executive Scorecard match those used by IDM. Now you are ready to configure IDM-SSO in Executive Scorecard. If you need help dumping headers in order to determine the correct IDM header to use in configuration, you can return to the Executive Scorecard login screen without closing the session and append **/DumpSession.jsp** to the login URL. Look for your user login ID in the resulting list. Before it should be the header name supplied by IDM. You can verify it using **http://<HPBSM**

server>/topaz/verifyIDM.jsp in the same user session. Once it is verified as correct, you should be able to use it in the Authentication Management wizard.

Configure to use IDM-SSO

To use IDM-SSO to authenticate the users of the Executive Scorecard application, proceed as follows:

1. Make sure that IDM is linked to the user repository (LDAP) and that these users are users of SAP BusinessObjects Enterprise.
2. Make sure that at least one user in IDM has an Admin role in Executive Scorecard for troubleshooting purposes.
3. Install the IDM SSO Agent on both the Executive Scorecard Web Server and the Data Warehouse Web Server. You do not need to install it on the SAP BusinessObjects Enterprise Web server.
4. On the IDM server, configure the security by setting the following Uniform Resource Identifiers (URIs) as protected or unprotected resources as indicated below.
   - If you have single server configuration, do the following:

Resource	Protected	Unprotected
fndwar	Yes	
bsf	Yes	
uim	Yes	
engine	Yes	
studio-client	Yes	
dashboard-webapp	Yes	
fndwar/rs		Yes
bsf/rest		Yes
dw	Yes	
dw-web	Yes	
integrations	Yes	

   - If you have a distributed server configuration, do the following:

Server	Resource	Protected	Unprotected
On the Executive Scorecard server	fndwar	Yes	
	bsf	Yes	
	uim	Yes	

Server	Resource	Protected	Unprotected
	engine	Yes	
	studio-client	Yes	
	dashboard-webapp	Yes	
	fndwar/rs		Yes
	bsf/rest		Yes
On the Data Warehouse server	fndwar	Yes	
	bsf	Yes	
	uim	Yes	
	dw	Yes	
	dw-web	Yes	
	integrations	Yes	
	fndwar/rs		Yes
	bsf/rest		Yes

5. For Logoff use the /fndwar/logout.jsp URI on the IDM server.
6. Open the Executive Scorecard application. You will need to provide your credentials twice at this stage: once in the IDM login page and once in the Executive Scorecard login page.
7. In the Executive Scorecard application, click **Admin** > **Foundation** > **Single Sign-On**.
8. Select **ID Management Enabled**.
9. Enter the name of the IDM header (the header that contains the user login name) in the **Value** field of the **ID Management Header** setting.
10. Click **Save**.
11. Log out of the Executive Scorecard application and of the IDM application. Log in again with the proper user and check that you need to provide your credentials only once.

Logs

IT Executive Scorecard 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 Executive Scorecard 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.

Log File Locations

The following tables list the log files created in an Executive Scorecard implementation by component.

Common Component Log Files

Description	Log Filename	Location
Records all requests processed by the server.	**access.log**	**<Installationdirectory> \agora\webserver\logs**
The 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 processing requests. It is the first place to look when a problem occurs with starting or operating the Web Server.	**error.log**	**<Installationdirectory> \agora\webserver\logs**
	install.log	**<Installationdirectory> \agora\webserver\logs**
Contains information about communications between the Web Server and the application server (Glassfish).	**jk.log**	**<Installationdirectory> \agora\webserver\logs**
Log records of all secured requests processed by the Web Server.	**ssl_request.log**	**<Installationdirectory> \agora\webserver\logs**

Description	Log Filename	Location
Logs the post-install flow. Is useful when the post-install configuration wizard fails.	**ConfigWizard.log**	**<Installationdirectory> \agora\confwizard\log**
Logs file parsing tasks during post-install configuration wizard.	**FileParser.log**	**<Installationdirectory> \agora\confwizard\log**
Logs application loading and permission enforcement related to the application framework.	**applicationfw.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Logs requests for authentication and population of user roles and permissions.	**athN.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Logs user management user interface details.	**aui.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Logs the usage of SAP BusinessObjects services, including issues locating the SAP BusinessObjects CMS.	**bo-services.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
BTO Security Framework (BSF) server side logs authentication information about authn, LW-SSO, and user mng.	**bsf.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Logs the usage of foundation services.	**btoe-services.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**

Description	Log Filename	Location
Logs SAP BusinessObjects datalayer transactions such as problems with SAP BusinessObject Universes or queries.	**datalayer.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Foundation core components log.	**foundation.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Hibernate log .	**hibernate.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
JVM general log.	**jvm.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Licensing logs.	**license-services.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Properties table logs.	**properties.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
General GlassFish log.	**server .log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Settings management logs	**settings.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Logs authentication details related to IDM and LW SSO.	**sso.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
User Interface mash-up logs.	**uim.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
User Management actions log, including problems with communication to SAP BusinessObjects.	**userMng.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
MQ Broker service log.	**log.txt**	**<Installationdirectory> \agora\glassfish\glassfish\domains\domain1 \imq\instances\imqbroker_host1\log**

Executive Scorecard Log Files

Description	Log filename	Location
Logs all the dashboard's server side logs.	**dashboard.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Logs general information for Executive Scorecard Studio, the client module used for tailoring Executive Scorecard.	**studio.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Logs general information about the engine, and KPIs.	**engine.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**
Provides a summary of calculation cycles, and statistics about KPI engine performance.	**engine_ statistics.log**	**<Installationdirectory> \agora\glassfish\glassfish\domains\BTOA\logs**

Data Warehouse Log Files

Log files can be accessed under:

- **datawarehouse\logs**
- **C:\<Installationdirectory>\agora\glassfish\glassfish\domains\btoa\logs\server.log**

All information in the Data Warehouse log files is automatically sent to the Windows Event Viewer Application log.

To access Data Warehouse log information:

1. On the Windows taskbar, click **Start** > **Administrative Tasks** > **Event Viewer**.
2. Expand **Windows Logs**, right-click **Application**, and then click **Filter Current Log**.
3. Select the relevant **Event Levels**, select the relevant **Event Sources**, and then click **OK**.

   All the Data Warehouse Event Sources begin with the DWH string.

Web Server

IT Executive Scorecard 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 *IT Executive Scorecard Support Matrix*. If you use a non default port for the URL, you must enter the application using **http://<host>:<port number>/xs** or **http://<host>:<port number>/dwh**.

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

Cryptography

The encryption properties files are located in **<Installationdirectory>\agora\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.

IT Executive Scorecard Supervisor

The HP IT Executive Scorecard Supervisor monitors whether the Executive Scorecard server processes are up and running.

The Supervisor consists of two elements:

- The management element manages (starts/stops/monitors) the Web Server, MQ Broker, and Glassfish components that are services. The Supervisor manages them in the following order:
  a. Web Server
  b. MQ Broker
  c. Glassfish
- The watchdog element monitors processes. If a process is down, the Supervisor Watchdog tries to start it automatically.

The Supervisor is a service that works on Windows.

Contact HP Software Support Online web site (**http://www.hp.com/go/hpsoftwaresupport)** if the monitor cannot start the Supervisor process.

Xcelsius

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

You can create Xcelsius reports based on SAP BusinessObjects Enterprise Webi reports. For details on the pre-defined Webi reports provided with Executive Scorecard, see Reference: Web Intelligence Reports and Operational Reports in the *Content Reference Guide*.

You can then add these reports to Dashboard page using the Xcelsius components. For details, see Add a SWF Report Viewer Component to a Page or Add Xcelsius Reports Viewer Component to a Page in the *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 Executive Scorecard.

Start Menu

During the installation, a start menu is added to the settings of the machine on which Executive Scorecard was installed.

You can use the Start menu to perform the following tasks:

Launch Executive Scorecard Using the Start Menu

During the installation, a start menu is added to the settings of the machine on which Executive Scorecard was installed. You can lainch Executive Scorecard using the Start menu.

Tasks

Launch Executive Scorecard

1. To access the IT Executive Scorecard start menu that is added to each machine, select **Start** > **Programs** > **HP Executive Scorecard**.
2. Select **HP Executive Scorecard**.

   This launches IT Executive Scorecard.

Renew your License Using the Start Menu

During the installation, a start menu is added to the settings of the machine on which Executive Scorecard was installed. You can renew your license using the Start menu.

Tasks

Renew your license

1. To access the IT Executive Scorecard start menu that is added to each machine, select **Start** > **Programs** > **HP Executive Scorecard**.
2. In the Administration folder, select **License Renewal**.

   The License Renewal wizard opens.

a. Click **Next** on the License Management page.

b. Select **Load a permanent or temporary license** and click the **Load** button to browse to the location of the license file.

c. A validation check runs. After the validation passes, click **Next** to complete the renewal.

3. Disable HP Executive Scorecard and then enable HP Executive Scorecard on all servers so the new license can take effect.

Movie: To display the movie, open the XS application in Internet Explorer 9 or Chrome, click **Help** in the top right corner of the application main page and select the **Movies** option. Select the relevant movie. For details, see Movies.

Start the Post-Install Wizard Using the Start Menu

During the installation, a start menu is added to the settings of the machine on which Executive Scorecard was installed. You can start the post-install wizard using the Start menu.

Tasks

Start the Post-Install wizard

1. To access the IT Executive Scorecard start menu that is added to each machine, select **Start** > **Programs** > **HP Executive Scorecard**.
2. Select **Configuration Wizard**.

   Follow the steps in the Configuration Wizard that opens.

Enable or Disable the Glassfish Web Server using the Start Menu

During the installation, a start menu is added to the settings of the machine on which Executive Scorecard was installed. You can enable or disable the Glassfish Web Server using the Start menu.

Tasks

Enable the Glassfish Web Server Using the Start Menu

1. To access the IT Executive Scorecard start menu that is added to each machine, select **Start** > **Programs** > **HP Executive Scorecard**.
2. Select **Enable HP Executive Scorecard**.

   This enables the Glassfish Web Server. Users can access IT Executive Scorecard.

Disable the Glassfish Web Server Using the Start Menu

1. To access the IT Executive Scorecard start menu that is added to each machine, select **Start** > **Programs** > **HP Executive Scorecard**.
2. Select **Disable HP Executive Scorecard**.

This disables the Glassfish Web Server. Users cannot access IT Executive Scorecard.

Uninstall HP IT Executive Scorecard Using the Start Menu

During the installation, a start menu is added to the settings of the machine on which Executive Scorecard was installed. You can use the Start menu to uninstall IT Executive Scorecard.

Tasks

Uninstall HP IT Executive Scorecard Using the Start Menu

1. To access the IT Executive Scorecard start menu that is added to each machine, select **Start** > **Programs** > **HP Executive Scorecard**.
2. Select **Uninstall HP Executive Scorecard**.

   This uninstalls the IT Executive Scorecard on the server.

   IT Executive Scorecard is first uninstalled in silent mode and then the uninstall wizard appears.

Access the Documentation Library and the Installation and Configuration documents using the Start Menu

During the installation, a start menu is added to the settings of the machine on which Executive Scorecard was installed. You can use the Start menu to access the *IT Executive Scorecard Installation and Configuration Guide* and the Online Documentation Library Help Center.

Tasks

Access the HP Executive Scorecard Deployment Guide Using the Start Menu

1. To access the IT Executive Scorecard start menu that is added to each machine, select **Start** > **Programs** > **HP Executive Scorecard**.
2. Select **HP Executive Scorecard Deployment Guide**.

   This opens the *IT Executive Scorecard Installation and Configuration Guide*.

Access the Online Documentation Library Using the Start Menu

1. To access the IT Executive Scorecard start menu that is added to each machine, select **Start** > **Programs** > **HP Executive Scorecard**.
2. Select **HP Executive Scorecard Documentation Library**.

   This opens the HP Executive Scorecard Documentation Library Help Center in your Web browser.

Manage Licenses

This section explains how to renew a license using the Start menu and how to check if all your user licenses are valid.

To access:

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

Tasks

This section includes:

"Renew your license using the Start menu" below

"Check users licenses" below

Renew your license using the Start menu

For details, see "Renew your License Using the Start Menu" on page 26.

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 "Users and Authentication when working with or without SAP BusinessObjects and LDAP" on page 33.

2. Get the user license information:

   a. Use an authorized HP user to log into the customer's Executive Scorecard installation.

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

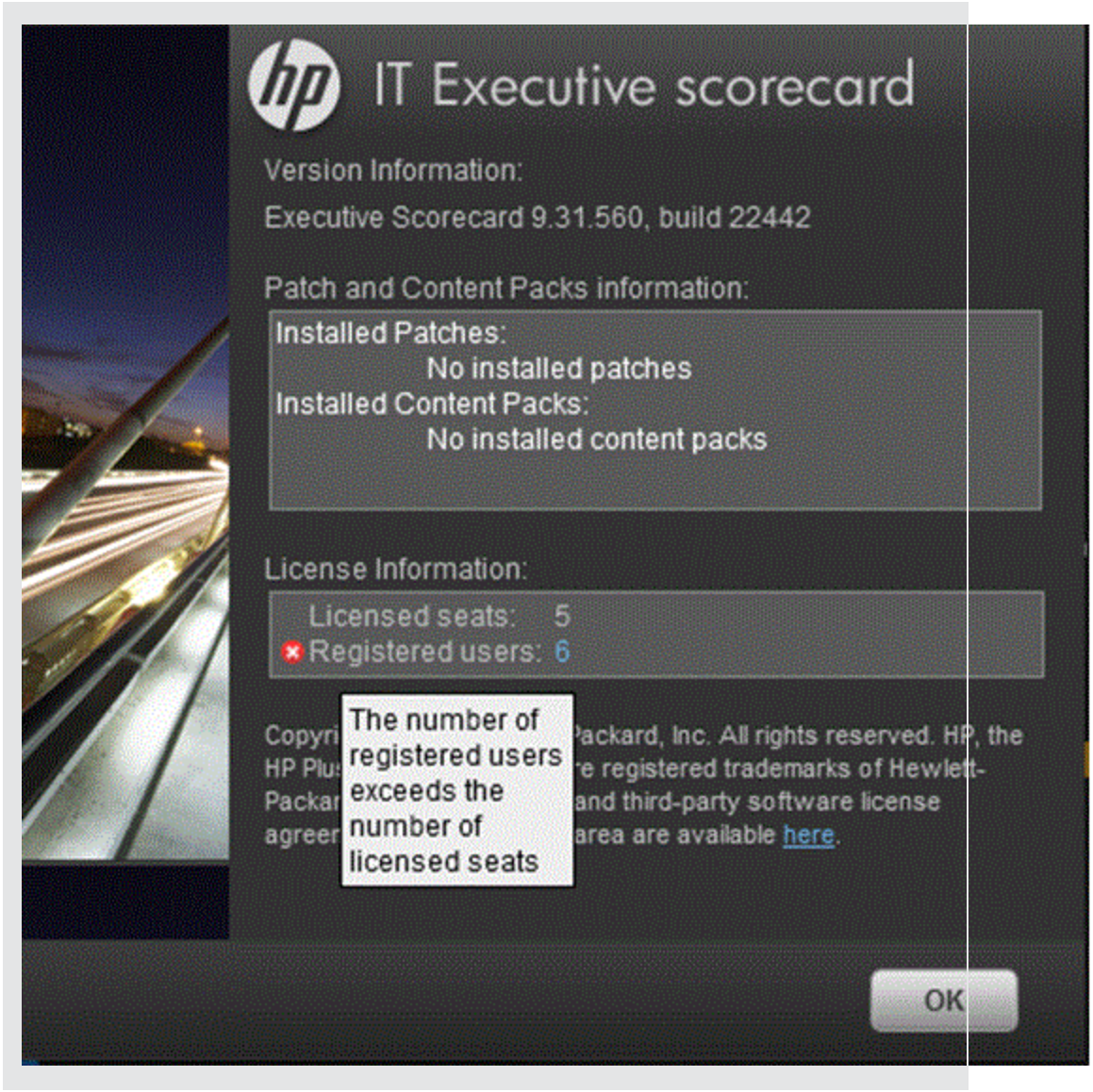
      The type of license (temporary or permanent), the number of registered users and the number of licensed seats are displayed.

c. Click the number of users to view the details of the users.

	A	B	C
1	Unique ID	Login	Fullname
2	1157	admin@default	admin@default

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

Note: An error image to the left of Registered Users and a tooltip indicate if there has been a breach of contract.


IT Executive scorecard
Version Information:
Executive Scorecard 9.31.560, build 22442
Patch and Content Packs information:
Installed Patches:
No installed patches
Installed Content Packs:
No installed content packs
License Information:
Licensed seats: 5
Registered users: 6
The number of registered users exceeds the number of licensed seats
Copyri
ackard, Inc. All rights reserved. HP, the
HP Plu
e registered trademarks of Hewlett-
Packar
and third-party software license
agreer
area are available here.
OK

Perform Administration Tasks for Users and Roles

This section includes the following topics:

Manage Users

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
- In the User Management Page, click  to access the Assign Roles dialog box.

Learn More

Users and Groups

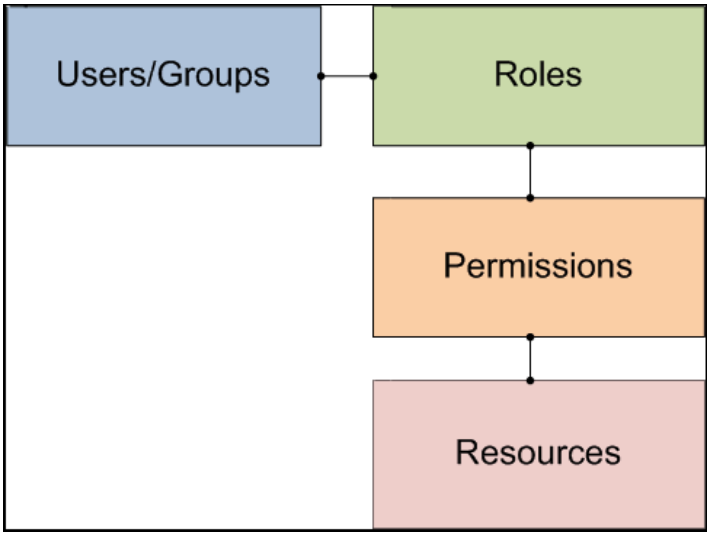
Each user has a list of roles that define their permissions. When you assign a role, that user only has access to specific portions of the program and specific resources that are relevant to their role. You can also define groups of users with the same roles or access rights. When you attach a user or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

Roles and Permissions

Each role is associated with permissions. Permissions define which actions the user with a specific role can perform according to their responsibilities in the organization. For example, you can create a role that enables its users to create pages.

Diagram

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



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

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 Executive Scorecard, in **Admin > Users and Roles**.	Users are created in Executive Scorecard, in **Admin > Users and Roles** Users created in Executive Scorecard are automatically transferred to SAP BusinessObjects. If a user is created in SAP BusinessObjects, it does not appear in the list of users in Executive Scorecard.	Users are created in LDAP. Users created in LDAP are automatically transferred to Executive Scorecard and in SAP BusinessObjects.

Operation	Working without SAP BusinessObjects and without LDAP	Working with SAP BusinessObjects and without LDAP	Working with SAP BusinessObjects and with LDAP
Passwords	Passwords can be changed in the **User Details** pane of the User Management page in Executive Scorecard. Click **Edit Details** to change a user's password.	Passwords can be changed in the **User Details** pane of the User Management page in Executive Scorecard. Click **Edit Details** to change a user's password. Password created in Executive Scorecardis automatically transferred to SAP BusinessObjects for the relevant user.	Passwords are created and stored in LDAP.
Roles, permissions, and groups	In Executive Scorecard, in **Admin > Users and Roles**.	In Executive Scorecard, in **Admin > Users and Roles**.	In Executive Scorecard, 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.
- When a user is added to LDAP, it is displayed in the Users and Groups tree after you log in to HP IT Executive Scorecard.
- When working with LDAP, you must make sure that LDAP is connected to Executive Scorecard and to SAP BusinessObjects. For details, see "To perform the connection between LDAP, Executive Scorecard, and SAP BusinessObjects:" on page 36.

  Note: Executive Scorecard 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. For details, see "To make sure you use the LDAP Authentication Option:" on page 37.

Important Information

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

- **Enterprise Users:** Users are created and managed in Executive Scorecard.
- **LDAP Users:** Users are created and managed on your LDAP server which is connected to Executive Scorecard.

It is recommended to define roles and resources prior to defining users. For details, see "Manage Roles" on page 46.

Tasks

This section includes:

To 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.

To add a user:

Note: When using LDAP for user management, users and groups are read-only from Executive Scorecard. All user management must be done on the LDAP server.

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.

To add a new group under the root:

Note: When using LDAP for user management, users and groups are read-only from Executive Scorecard. All user management must be done on the LDAP server.

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.

To 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.

To 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.

To connect XS Executive Scorecard to an LDAP server:

Note: The format of the LDAP directory must be either Microsoft Active Directory or Sun ONE Directory. It cannot be an arbitrary directory structure.

1. In the Management database, in the SETTINGS_MANAGEMENT table, create a new record with the following information:
   - context: **foundation**
   - name: **fnd.uum.type**
   - value: **ldap**
2. Configure the LDAP connection properties and the structure of the LDAP directory using the properties file located at <installation directory>agora\glassfish\glassfish\domains\BTOA\config\conf\external-ldap.properties.

   Note: Only connection properties (such as host, port, LDAP version, user, and password) and user/group base dn can be modified.
3. If SSL is used to access LDAP, certificates must be imported.

To perform the connection between LDAP, Executive Scorecard, and SAP BusinessObjects:

If your configuration includes LDAP, Executive Scorecard, and SAP BusinessObjects you must connect:

- **LDAP and Executive Scorecard.** The connection procedure is described below.
- **LDAP and SAP BusinessObjects.** The connection procedure is explained in the documentation of these products.

Before you can manage the users using LDAP, perform the connection between LDAP and Executive Scorecard:

1. In the Management database, open the SETTINGS_MANAGEMENT table and make sure that it includes:
   context=foundation, name=fnd.uum.type, value=ldap
2. Provide the location of LDAP to Executive Scorecard. In the external-ldap.properties file located at **<HPXS>\agora\glassfish\glassfish\domains\BTOA\config\conf**, enter information about the server where LDAP is installed (host), the user name, and the password used to access LDAP.
3. Define groups and users in LDAP. In the external-ldap.properties file located at **<HPXS>\agora\glassfish\glassfish\domains\BTOA\config\conf**, use the **groupsBase** and **userBase** keys to set the groups and users DNs.

   Note:

   - Only the connection properties and the user/group base DN can be modified. The structure or attribute name of entries themselves cannot be changed. In addition, the changes must follow Sun One or MS Active directory standards.
   - All the regular Active directory user attributes must be present.
   - All users/Groups must be created in advance in your LDAP server (by the LDAP administrator), as the Executive Scorecard access to LDAP is read-only.

4. After LDAP integration has been configured, you should be able to login to Executive Scorecard with the LDAP user. However, this user does not have roles and permissions in Executive Scorecard. To assign roles and permissions you must run the following script (it adds the admin role “manually”):
   <**HPXS ROOT>\agora\glassfish\glassfish\domains\BTOA\config\population\populate-admin.bat <user_name> <user_login_name> <password>** where **user_name** and **user_login_name** are the same.

   You should now be able to use the user (that now has Admin permissions) to assign all the required permissions to other users.
5. If SSL is used to access LDAP, you must import the relevant certificates.

To make sure you use the LDAP Authentication Option:

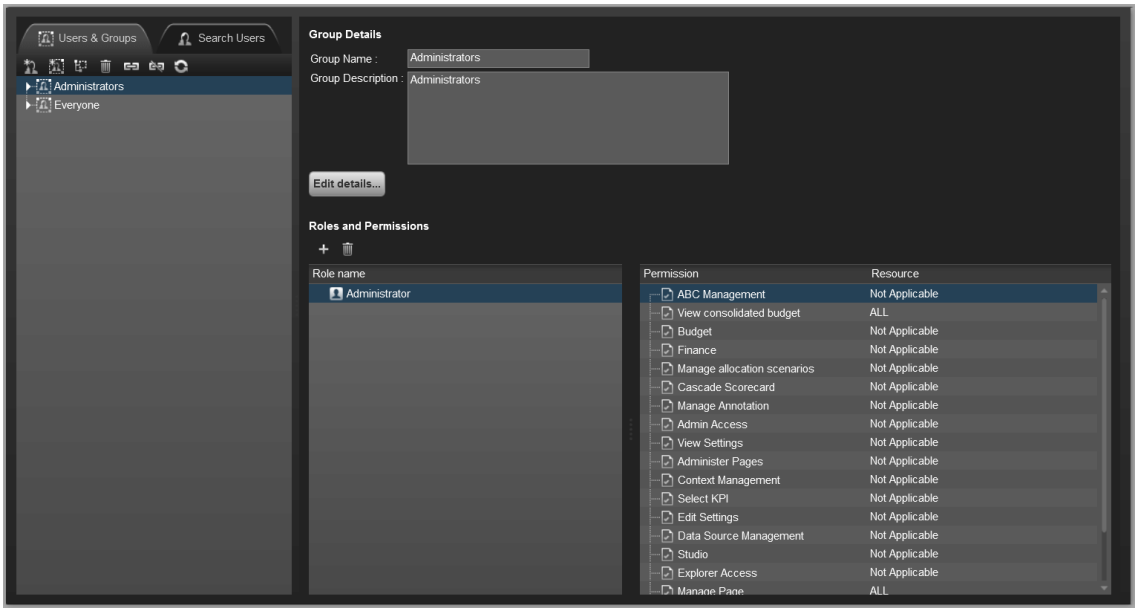
1. From the Windows Start menu, click **Programs > BusinessObjects XI 3.1 > BusinessObject Enterprise > BusinessObjects Enterprise Central Management Console**.
2. Log in to the Central Management Console as an administrator.
3. Click **Authentication**, then click the **LDAP** tab.
4. 4. Click **Start LDAP Configuration Wizard**.
5. In the **Add LDAP Host** (hostname: port) field, type your host and port information.
6. Click **Add**.
7. Click **Next**.

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.
9. In the Base LDAP Distinguished Name field, type the distinguished name, and click **Next**.
10. 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.
11. 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.
12. Click **Next**.
13. From the Type of SSL authentication drop-down list, select **Basic (no SSL)** and click **Next**.
14. From the **Authentication** drop-down list, select **Basic (no SSO)** and click **Next**.
15. Select the following LDAP options:
    a. **Create a new account for every added LDAP alias**
    b. **Create new aliases only when the user logs on**
    c. **New users are created as named users**
16. Click **Next**.
17. Click **Finish**.

UI Description

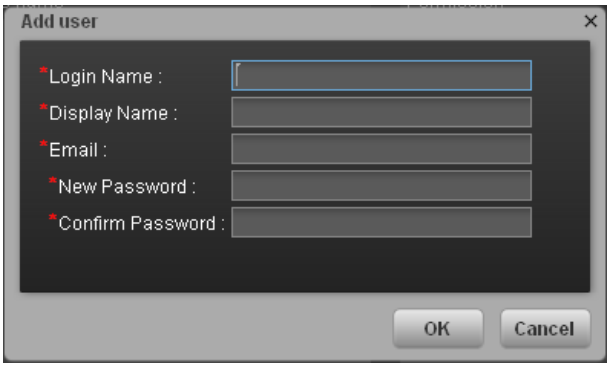
User Management Page

Click  to refresh the page.

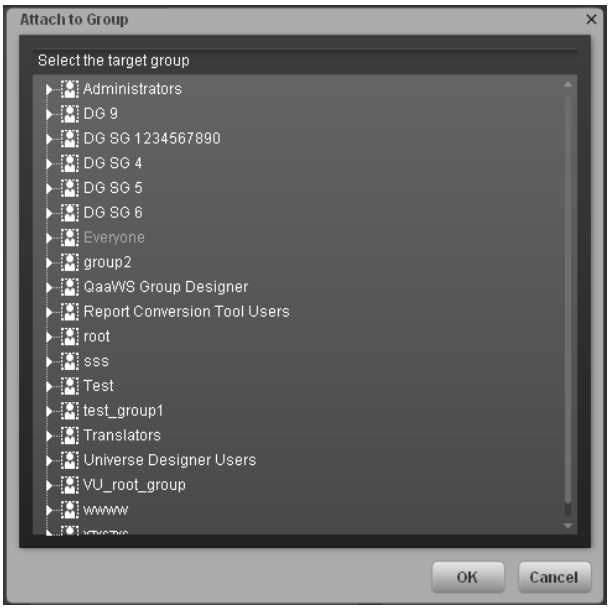


Users & Groups Tab

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 43. When a user is added to LDAP, it is displayed in the Users and Groups tree after you log in to HP IT Executive Scorecard."Search Users Tab" on page 43
	**Create User**. Adds a new user under the selected group. The user inherits the group's roles.  Enter the user's **Login Name**, **Display Name**, **Email**, and **New Password** and click **OK**. When using LDAP for user management, users and groups are read-only from Executive Scorecard. All user management must be done on the LDAP server.

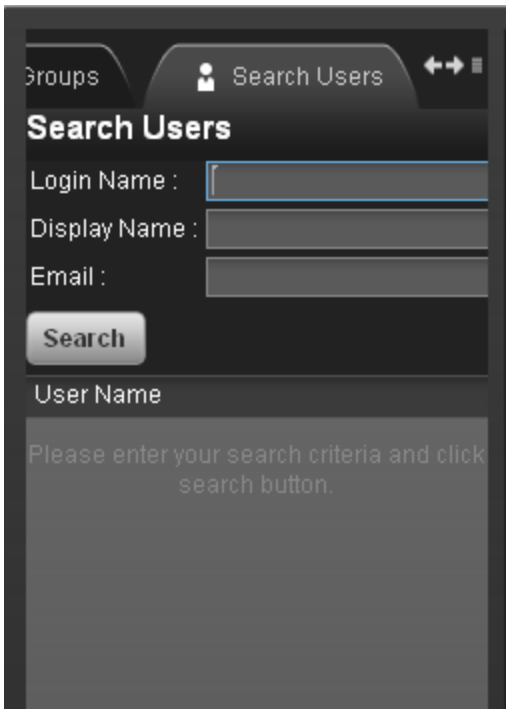
UI Element	Description
	**Create group**. Creates a new group under a selected existing group. The group inherits the existing group's hierarchy.  Enter the **Group Name** and **Group Description** and click **OK**. **Available Groups** • **Administrators.** Users who can administer the system. • **Everyone.** All users of the system. **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 Executive Scorecard application. • QaaWS Group Designer • Report Conversion Group Users • Test Root • Translators • Universe Design Users When using LDAP for user management, users and groups are read-only from Executive Scorecard. All user management must be done on the LDAP server.

UI Element	Description
	**Add group under the root**. Creates a new group under the root.  Enter the **Group Name** and **Group Description** and click **OK**. When using LDAP for user management, users and groups are read-only from Executive Scorecard. All user management must be done on the LDAP server.
	**Attach to group**. Attaches the selected user or group to a group. The users or groups inherit all of the group's roles.  Select the group and click **OK**. When using LDAP for user management, users and groups are read-only from Executive Scorecard. All user management must be done on the LDAP server.

UI Element	Description
	**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. When using LDAP for user management, users and groups are read-only from Executive Scorecard. All user management must be done on the LDAP server.
	**Delete**. Deletes the selected user or group. When a group is deleted, its users still exist under a system group called Everyone. When using LDAP for user management, users and groups are read-only from Executive Scorecard. All user management must be done on the LDAP server.
	**Refresh.** Refreshes the displayed information.

Search Users Tab

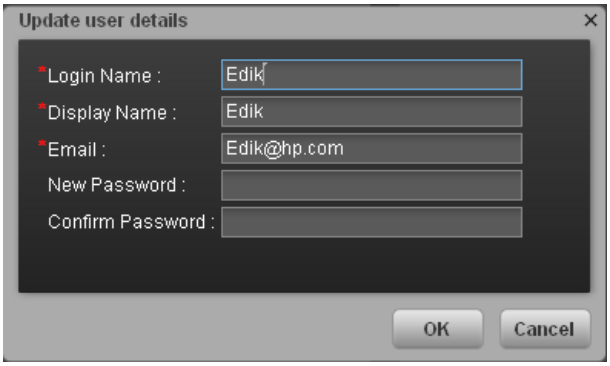
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Search Users	The search criteria.  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.

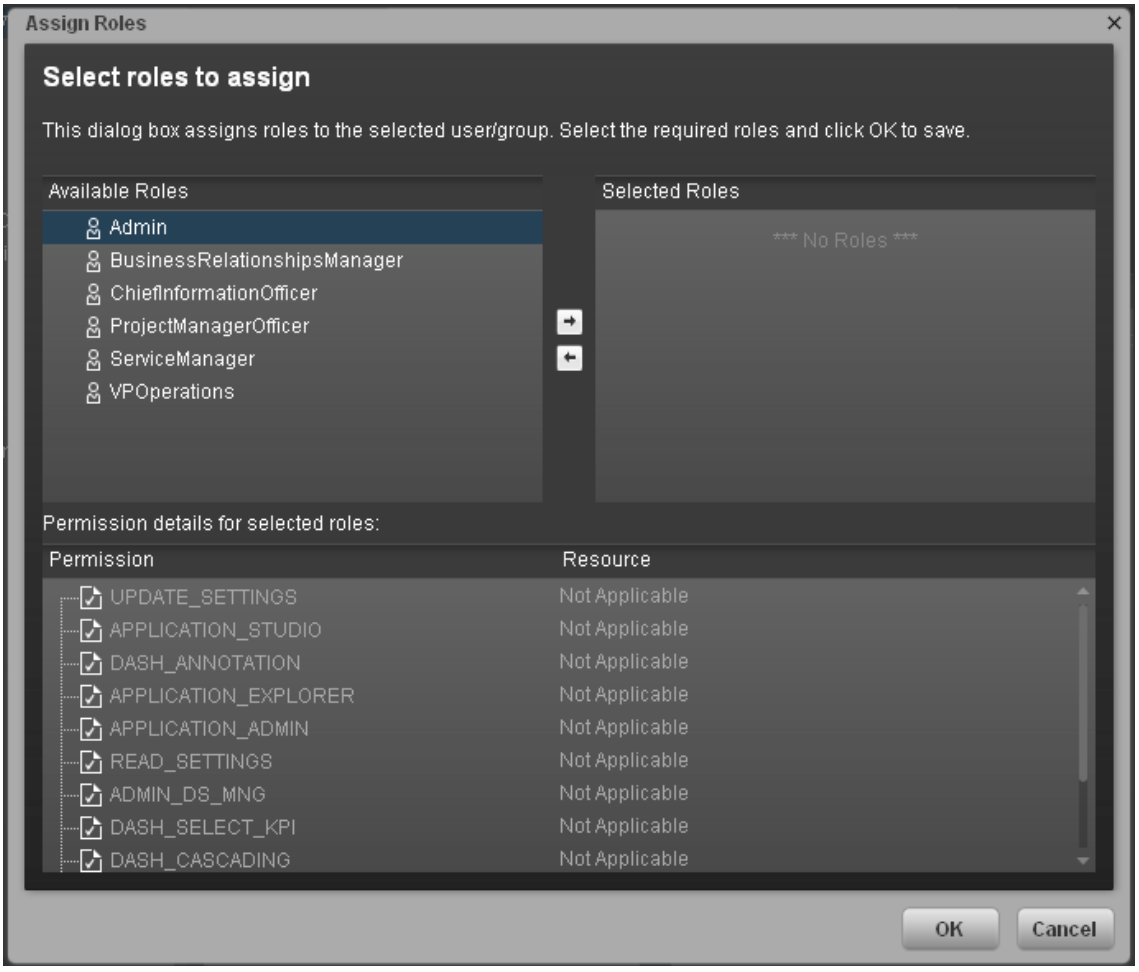
User Details Pane

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.

UI Element	Description
Edit Details	Edits the selected user or group details. Enables you to change a user password. 
Roles and Permissions	The assigned roles and corresponding permissions and environments 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	The permission corresponding to the selected user or group.
Resource	The resource attached to the permission of the selected user or group. **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 "Manage Resources" on page 55.

Assign Roles Dialog Box



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.

UI Element	Description
Resource	The list of resources for each permission: • **Not Applicable.** Used for permissions that do not require a specific resource setting. • **<Resource Name>.** The permission is attached to a specific resource. • **All.** The permission is applicable to all resources.

Manage Roles

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

Roles and Permissions

Each role is associated with permissions. Permissions define which actions can be performed by the user with a specific role. For example, you can create a role that enables its users to create specific pages. 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 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.

Pre-Defined Roles

- **Administrator.** The application administrator.
- **BUDGET_COORDINATOR.** Defines the budget configuration. Notifies the cost center managers to populate the budget line items, follow up with cost center managers for timely update of budgets, and review the input from all included cost centers. Publishes the budget to use in allocation scenarios. This role is related to IT Financial Management.
- **FINANCIAL ANALYST.** Uses published budgets in allocation scenarios**.** This role is related to IT Financial Management.

Pre-Defined Permissions

The following IT Executive Scorecard permissions are available in the Admin tab.

- **ABC Management.** Enables the user to monitor and manage the ETL process for Data Warehouse.
- **Admin Access.** Enables the user to access the Admin tab, but not any further pages.
- **Administer Pages.** Enables the user to view and modify (add components, delete components, and even delete) all the pages in the Dashboard. The user can also create new pages.
- **Cascade Scorecard.** Enables the user to view the small black arrow (near the Scorecard title) that indicates that the Scorecard has Cascading Scorecards. The user can click the arrow to display the Cascading Scorecards for which he has permission.
  If the user does not have this permission, the small arrow is not displayed and the user does not know that Cascading Scorecards are available.
- **Data Source Management.** Enables the user to access the Data Source Management page and activate content packs. The user must have **Admin Access** to view the Admin tab.
- **Edit Settings.** Enables the user to edit the contents of the Scorecard settings, Foundation settings, and Data Warehouse settings accordion tabs. The user must have **Admin Access** to view the Admin tab.
- **Explorer Access.** Enables the user to access the Explorer tab.

  Note: Users with the **Explorer Access** permission should also have the **Select KPI** permission. The user then gets access to all KPIs in the Explorer page by clicking the **Explorer** button.
- **Manage Annotation.** Enables the user to edit or delete an existing annotation. If the user does not have this permission, the user can only view the annotation and the **Edit** and **Delete** buttons of the annotation are hidden.
- **Manage Page.** Enables the user to view and modify (add components, delete components, and even delete) the relevant page in the Dashboard. Note that when an additional page is needed a user with this permission must ask a user with the **Administer Pages** permission to create the new page. Once the page is created and assigned to a user, the user can add components, and modify it.
- **Select KPI.** Enables the user to view the contents of the Active KPIs area in all the components filters. The user can also move KPIs from the Active KPIs area to the Selected KPIs area. If the user does not have this permission, the user can, in all the component filters, view the contents of the Selected KPIs area, cannot modify the selection, and cannot view the contents of the Active KPIs area as the contents are grayed out.
- **Studio.** Enables the user to view the Studio tab and to modify its contents.
- **Users and Roles.** Enables the user to view the Users and Roles accordion tab. To modify the contents of the Users and Roles accordion tab, the user needs the **Edit Settings** permission. The user must have **Admin Access** to view the Admin tab.
- **View Settings.** Enables the user to view the Scorecard settings, Foundation settings, and Data Warehouse settings accordion tabs.
- **View Page.** Enables the user to only view the relevant page in the Dashboard.
- **Context Management.** Enables the user to use the Context Designer feature.

The following IT Financial Management permissions are available in the Admin tab:

- **Budget.** Enables the user to access to Budget Management.
- **Finance.** Enables the user to access the Finance tab, which includes access to Allocation Management, Budget Management, and the Cost Explorer.
- **Manage allocation scenarios.** Enables the user to manage allocation scenarios and view them using the Cost Explorer.
- **Manage consolidated budget.** Enables the user to create and manage the lifecycle of consolidated budgets.
- **Manage cost center budget.** Enables the user to manage the cost center budget This permission must be related to a specific cost center instance.
- **View consolidated budget.** Enables the user to view existing consolidated budgets.

Note:

- Users with the **Administer Pages** permission can add pages and control all pages in the system but they need the **Select KPI** permission to configure components on the page.
- Users with the **Manage Page** permission can change and delete specific pages but cannot create new pages. To create new pages users need the **Administer pages** permission.

Important Information

It is recommended to define resources prior to defining roles. For details, see"Manage Resources" on page 55.

Tasks

This section includes:

To 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.

To 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**.

To attach and manage 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.
6. Complete the wizard procedure to save your assignments.

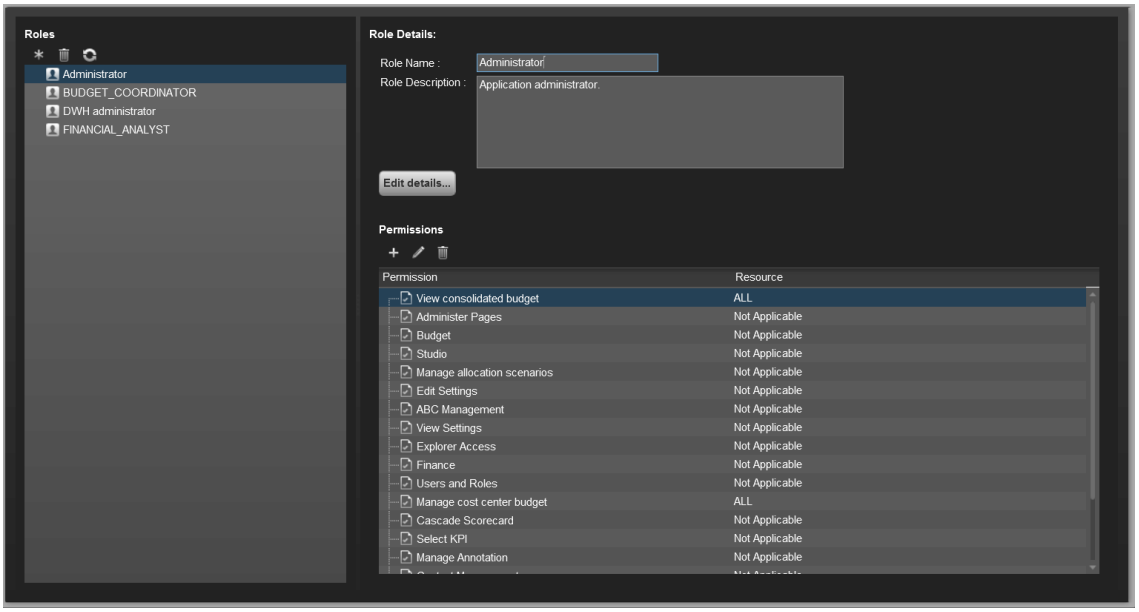
To add a resource to a permission:

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 environments from the Available Resources list to the Selected Resources list.

UI Description

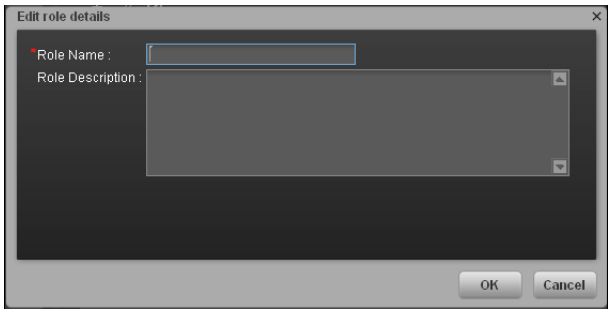
Role Management Page

Click  to refresh the page.



Roles Pane

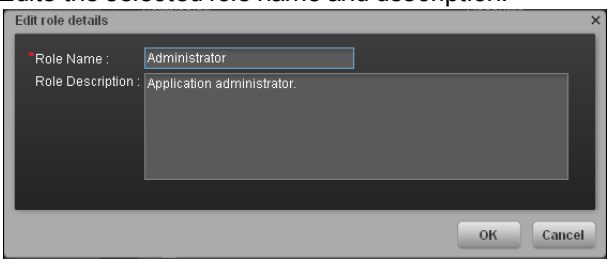
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
	**Create Role.** Creates a new role.  Enter the **Role Name** and **Role Description** and click **OK**.
	**Delete Role.** Deletes the selected role.
	Click **Refresh** to refresh the display. When in Executive Scorecard, 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 "Manage Roles" on page 46.

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.

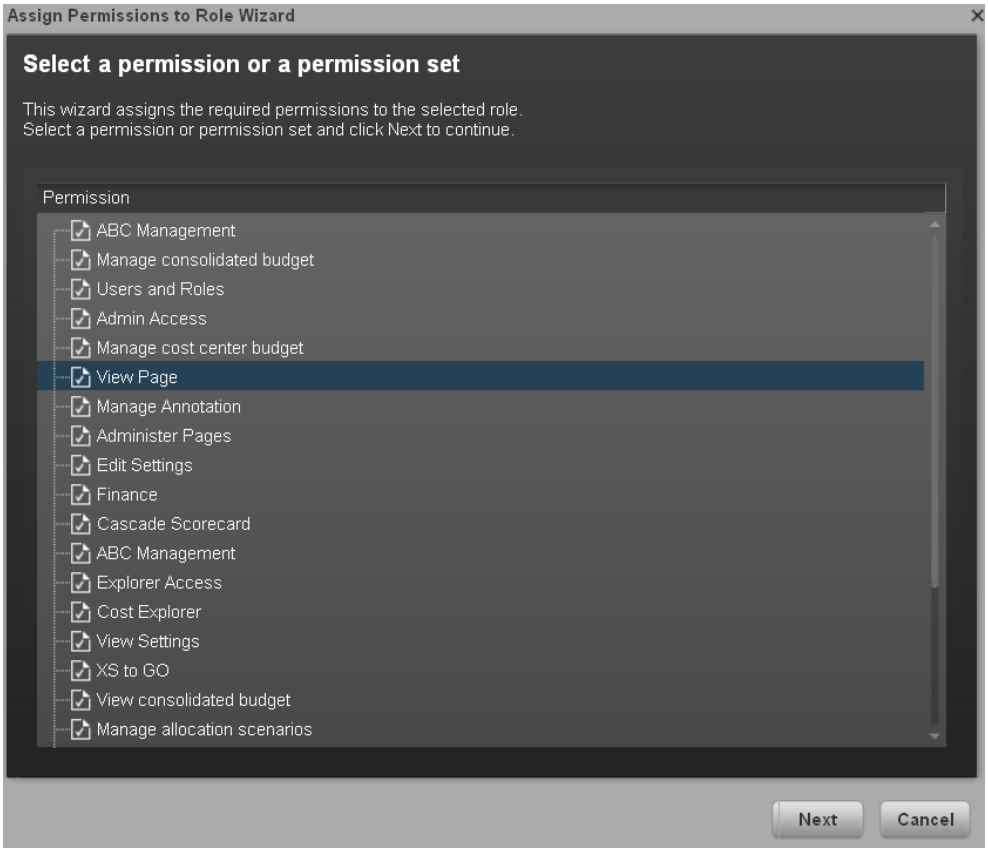
UI Element	Description
Edit Details	Edits the selected role name and description. 
	**Attach permission.** Assigns selected permissions to roles. You select permissions using the Assign Permission to Role wizard. For user interface details, see "Assign Permission to Role Wizard" below.
	**Manage permission.** 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 next page.
	**Detach permission.** Removes the selected permission from the role.
	**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 next page.
Permissions List	The list of permissions and resources for the selected role.
Permission	The permission sets and permissions attached to the selected role.
Resources	The list of resources for each permission. **Not Applicable.** None of the available resources apply to this permission. For details, see "Manage Resources" on page 55. **<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 environments 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.

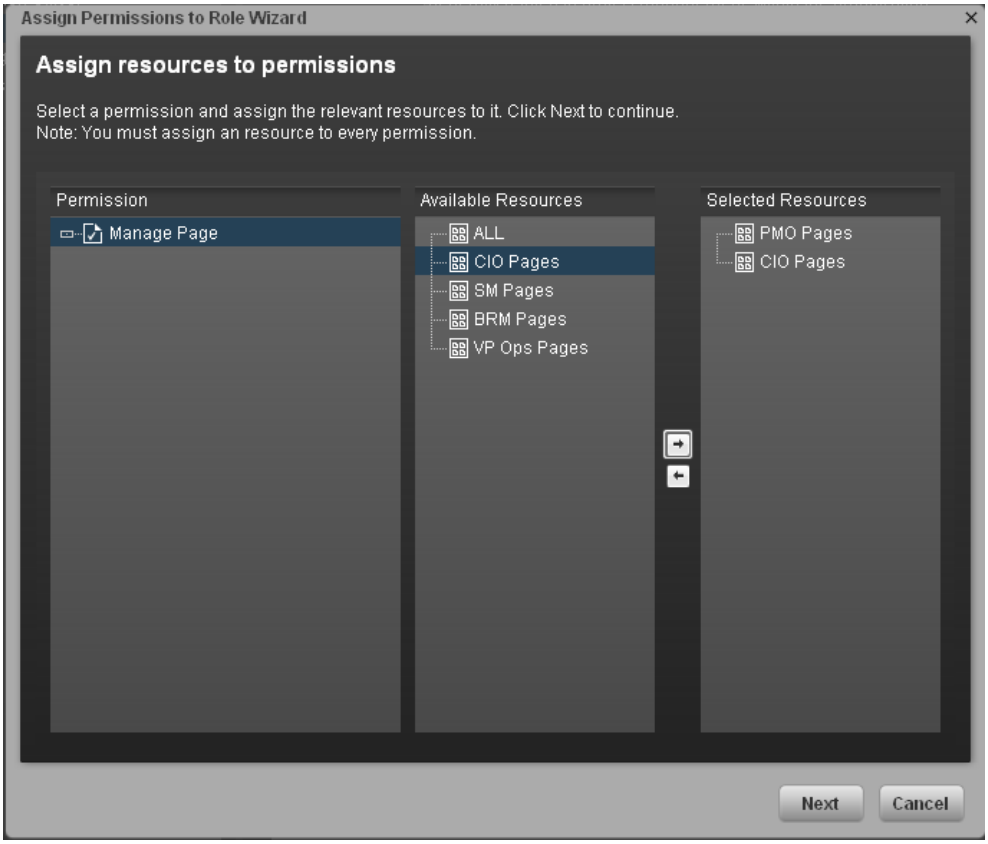
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
<Permissions tree>	Select a permission from the tree. Displays the pre-defined permissions. For details, see "Manage Roles" on page 46.

Assign Resources to Permissions Page

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

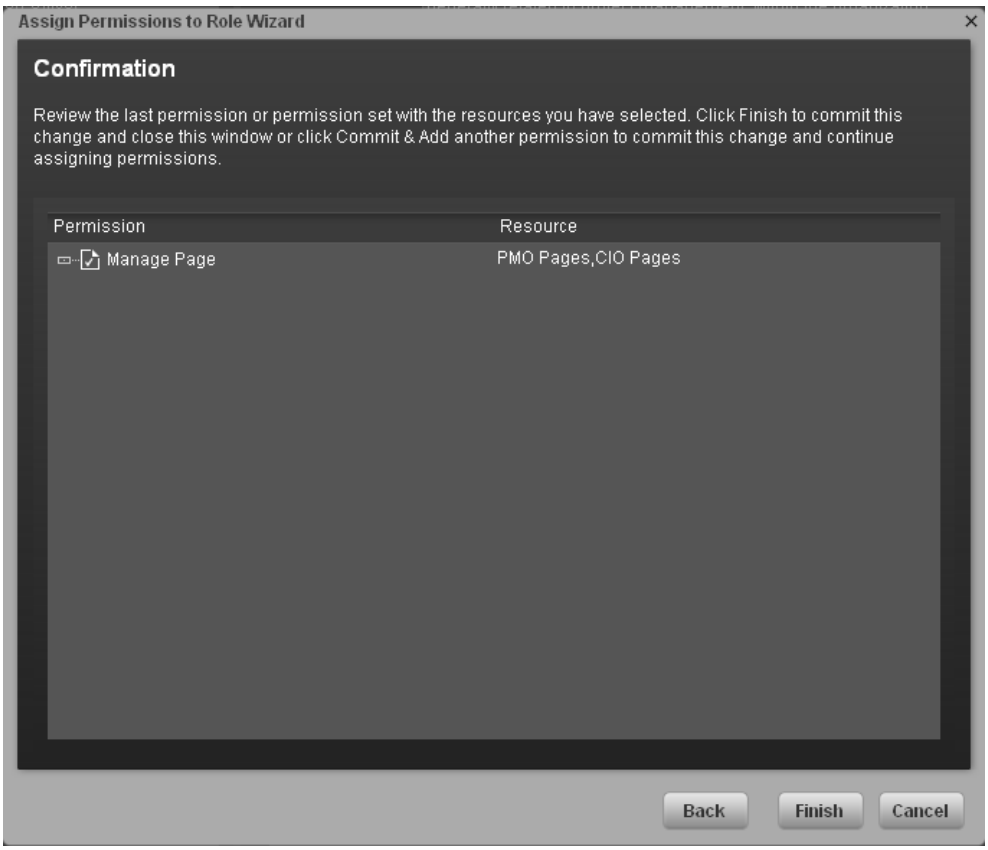
Note: Click  to access this page directly.



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 52 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.

Reference

Role Functions

Executive Scorecard and IT Financial Management roles can be assigned any permissions. Executive Scorecard and IT Financial Management roles are available with the following out-of-the-

box permissions:

Role	Permissions	Module
Administrator	All Permissions	IT Executive Scorecard and IT Financial Management
BUDGET_ COORDINATOR	Budget Finance Manage Consolidated Budget Manage Cost Center Budget View Consolidated Budget	IT Financial Management
FINANCIAL ANALYST	Budget Finance Manage Allocation Scenarios Manage Consolidated Budget Manage Cost Center Budget View Consolidated Budget	IT Financial Management

Manage Resources

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

To access:

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

Learn More

Resources

A resource is a logical group of one or more pages. Once you define resources, you attach the resource to a permission.

Instances

An instance is a page that can be managed by a user according to the user's permissions.

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.

Important Information

- Resources are the basis for user and role management. For each user or group, you assign permissions to perform specific actions on specific resources.
- Actions users can access depend on their roles and permissions.
- Instances are the available pages defined in the system.

Tasks

This section includes:

"To create a resource:" below

"To manage instances:" below

To create a resource:

1. Select **Admin** > **Users and Roles** > **Resource Management**.
2. In the **Resources** area, click **Create resource**  to create a new resource.
3. Enter the **Resource** and **Details**.
4. Click **OK** to save your new resource.

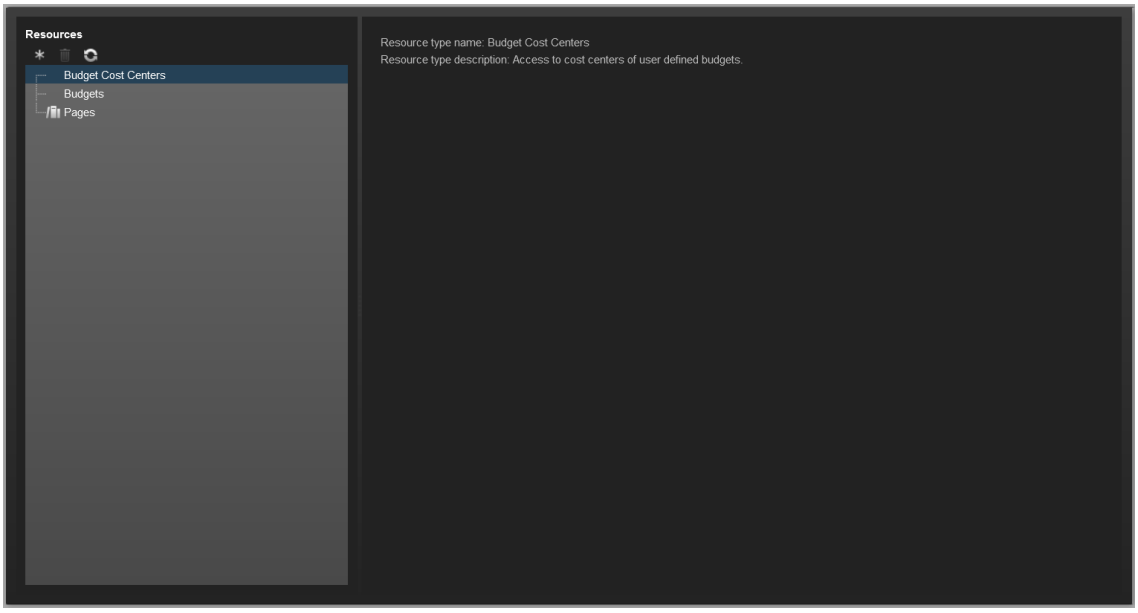
To manage instances:

1. Select **Admin** > **Users and Roles** > **Resource Management**.
2. Select a page 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 pages 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

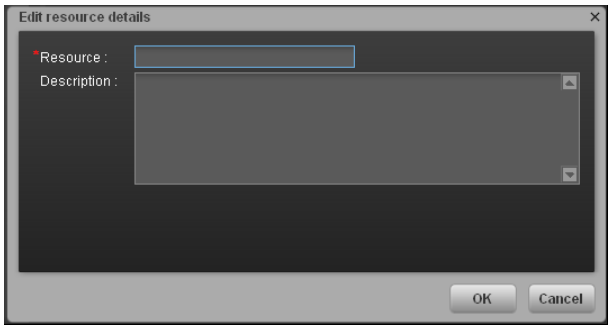
Resource Management Page

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 Edit resource details 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 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.

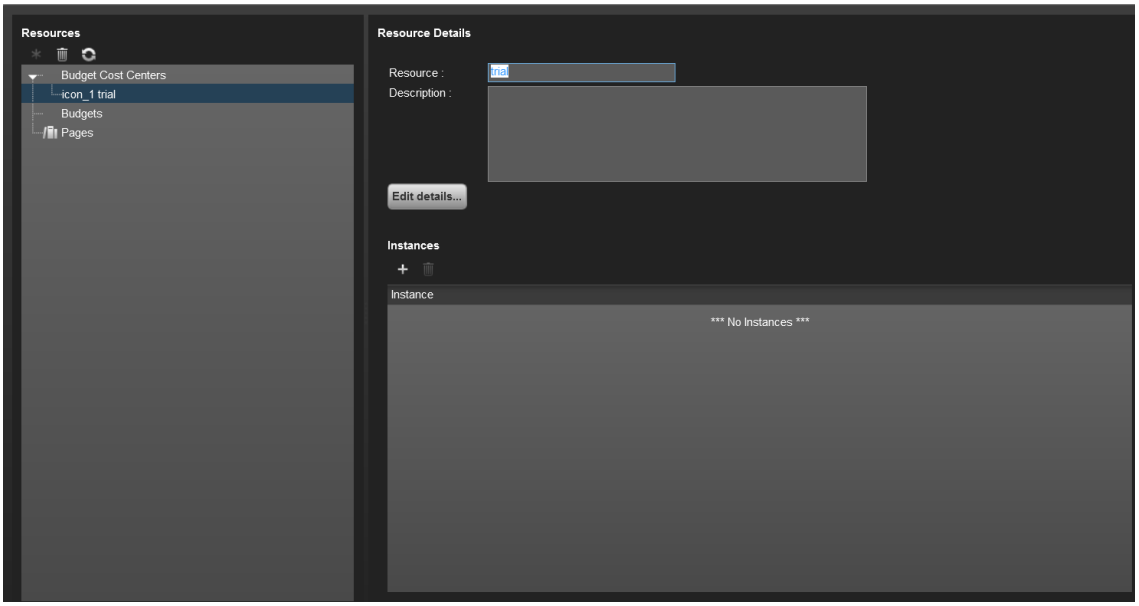
<Right pane>

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.

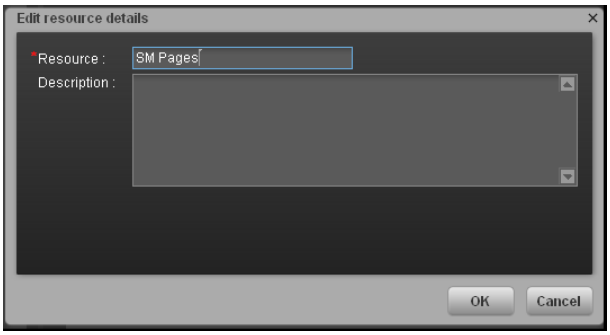
Resource Details Pane

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



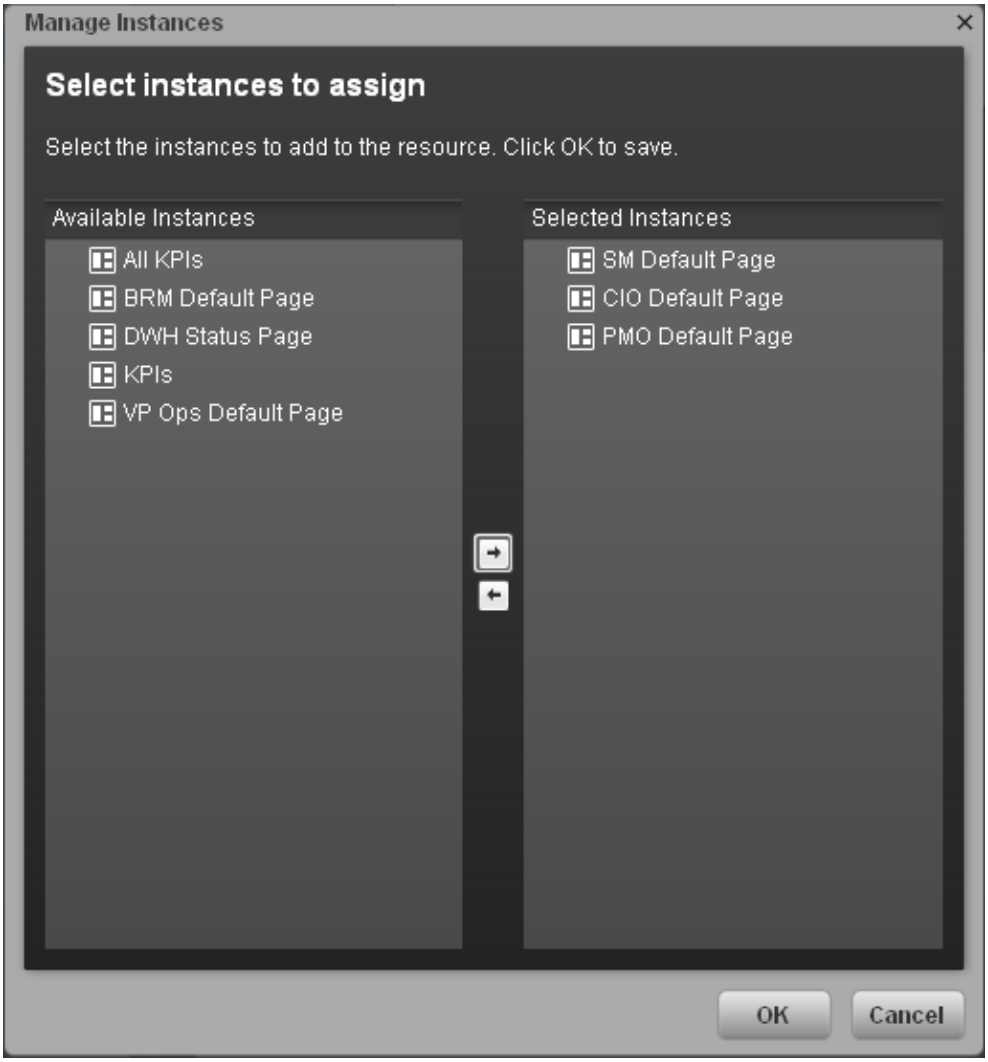
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
	**Add Instances.** Adds pages to the selected resource. Opens the Manage Instances dialog box. Each resource can have one or more assigned page instances. In the Manage Instances dialog box, select a page instance 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 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.

UI Element	Description
Resource	The name of the selected resource.
Edit Details	Edits the selected resource name and description. 
Resource Description	The description of the selected resource.
Resource Name	The name of the selected resource.
Instances	List of page instances for the selected resource.

Manage Instances Dialog Box

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



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.

Perform Administration Tasks for Foundation

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

- "Configure Foundation Settings" below. Enables you to configure virtual server settings.
- "Configure Pages Settings" on page 64. Enables you to configure page settings.
- "Configure Single Sign-On Settings" on next page. Enables you to define SSO parameters.
- "Configure Website Settings" on page 65. Enables you to set the ping time interval.

Configure Foundation Settings

Enables you to configure foundation settings in Executive Scorecard.

To access:

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

Tasks

To configure the page settings:

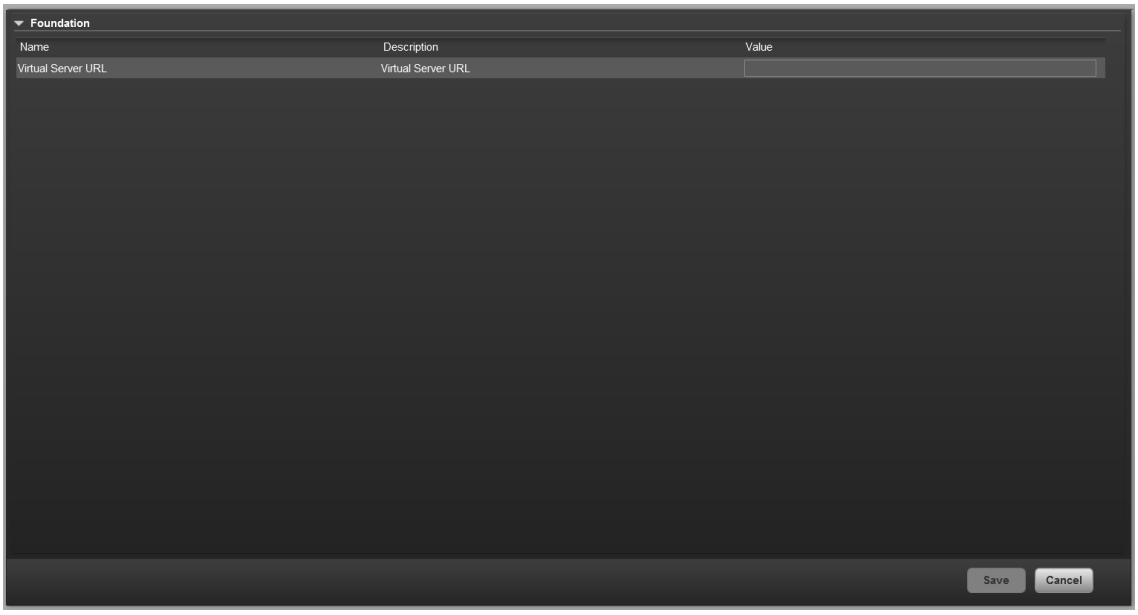
1. Select **Admin** > **Foundation** > **Foundation**.
2. Click the relevant row and enter the required setting.
3. Click **Save** to save your settings.

UI Description

Foundation

This page enables you to configure the Pages settings.

Click  to refresh the page.



Foundation Parameters

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

UI Element	Description
Virtual Server URL	The URL of the virtual server.

Configure Single Sign-On Settings

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

To access:

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

Important Information

For details on SSO and Identity Management, see "Use the Identity Management Single Sign-On" on page 18.

Tasks

To add or change SSO values:

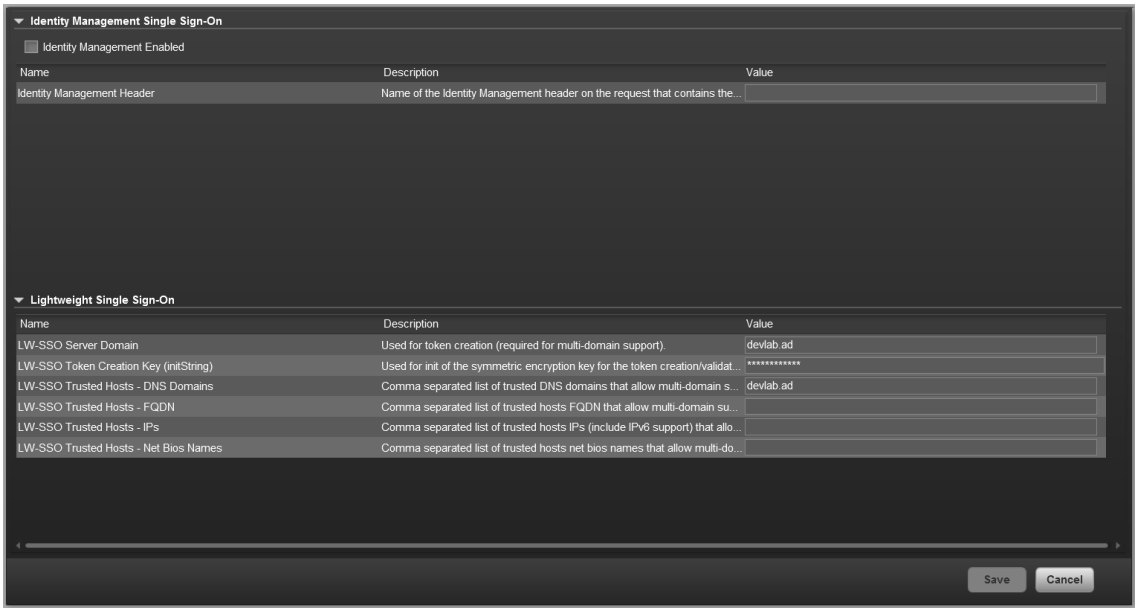
1. Select **Admin** > **Foundation** > **Single Sign-On**.
2. Click the relevant field in the **Value** column and enter the value.
3. Click **Save** to save your settings.

UI Description

Single Sign-On Page

This page enables you to configure the SSO settings for login 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 login name) in the **Value** field of the **Identity Management Header** setting. For details, see "Use the Identity Management Single Sign-On" on page 18 .
Identity Management Header	The name of the IDM header (the header that contains the user login 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 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 - IPs	The list of trusted hosts' IPs (including IPv6) that allow multi-domain support (must be 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).

Configure Pages Settings

Enables you to configure the Dashboard page settings in Executive Scorecard.

To access:

Select **Admin** > **Foundation** > **Pages**.

Learn More

For more information about Executive Scorecard pages, see "Configure a Page Layout" in the *Business Analyst Guide*.

Tasks

To configure the page settings:

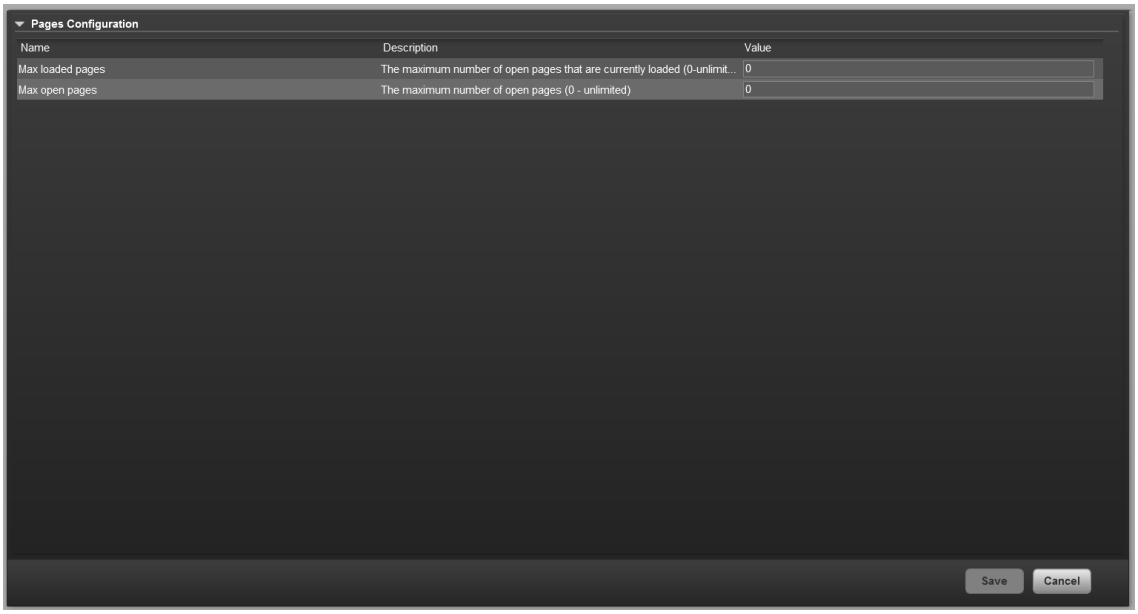
1. Select **Admin** > **Foundation** > **Pages**.
2. Click the relevant row and enter the required setting.
3. Click **Save** to save your settings.

UI Description

Pages Settings

This page enables you to configure the Pages settings.

Click  to refresh the page.



Pages Configuration Parameters

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 Executive Scorecard. The options are any valid number or 0 for unlimited.
Max open pages	The maximum number of open pages in Executive Scorecard. The options are any valid number or 0 for unlimited.

Configure Website Settings

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

To access:

Select **Admin > Foundation > Website**.

Tasks

To set the ping interval:

1. Select **Admin > Foundation > 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.

Timing Parameters

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.
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 login.

Perform Administration Tasks for Scorecard Settings

The Scorecard settings enables you to define various HP IT Executive Scorecard settings and includes the following pages:

- **"Configure Dashboard Settings" below.** Enables you to set the settings for the Dashboard, where an executive can view the progress of the required objectives.
- **"Configure Score Thresholds" on next page.** Enables you to set the score thresholds for the KPIs in the HP IT Executive Scorecard.
- **"Configure XS Settings" on page 70.** Enables you to set various scorecard settings. The HP IT Executive Scorecard is a way to map and translate complex business information into something that is understandable to everyone.
- **"Configure Engine Settings" on page 72.** Enables you to configure settings for the HP IT Executive Scorecard KPI engine, which performs discovery on data coming from Contexts (data sources).

Configure 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 > Scorecard > Dashboard Settings**.

Learn More

For more Executive Scorecard dashboard information, see "Prepare the Dashboard Display".

Tasks

Set Dashboard Settings

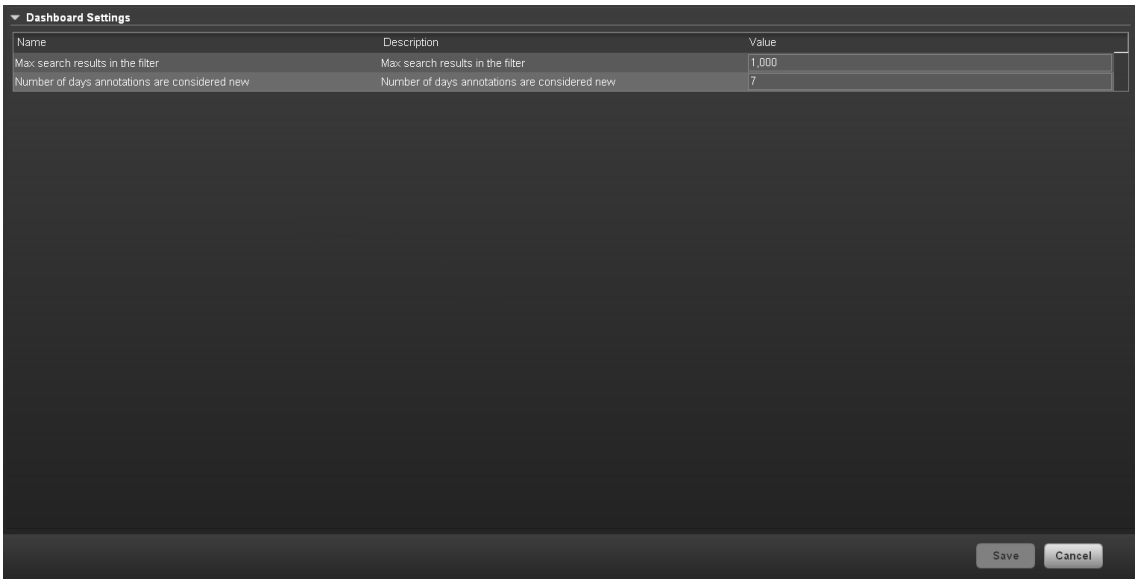
1. Select **Admin** > **Scorecard** > **Dashboard Settings**.
2. Click the row of the relevant setting and enter the value.
3. Click **Save** to save your settings.

UI Description

Dashboard Settings Page

This page enables you to configure specific dashboard settings.

Click  to refresh the page.



Dashboard Settings Parameters

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**.

Configure Score Thresholds

Enables you to set the score thresholds for the KPIs in the HP IT Executive Scorecard.

To access:

Select **Admin** > **Scorecard** > **Score Thresholds**.

Learn More

For more score threshold information, see "Learn About KPI Formula and Filter, Threshold, Value, Trend, and Score" in the *Business Analyst Guide*.

Tasks

Set Score Thresholds

1. Select **Admin** > **Scorecard** > **Score Thresholds**.
2. Click the row of the relevant score threshold and enter the value.

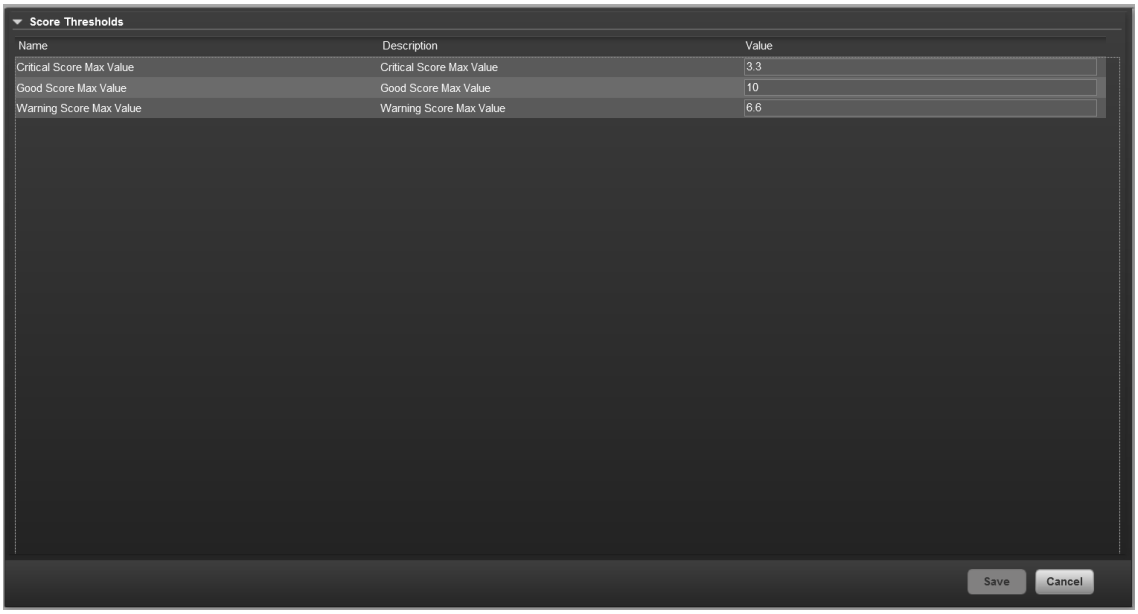
3. Click **Save** to save your settings.

UI Description

Score Thresholds Page

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

Click  to refresh the page.



Score Thresholds Parameters

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**

UI Element	Description
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**

Configure XS Settings

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

To access:

1. Select **Admin** > **Scorecard** > **XS Settings**.

Tasks

To configure XS settings:

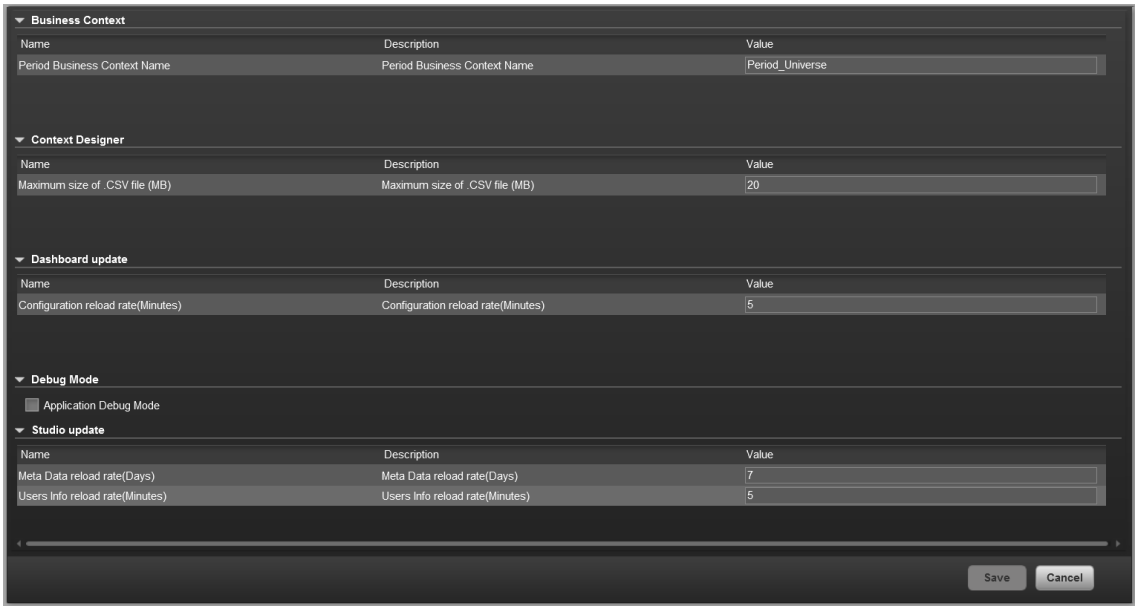
1. Select **Admin** > **Scorecard** > **XS Settings**.
2. Click the row of the relevant setting and enter the value.
3. Click **Save** to save your settings.

UI Description

XS Settings Page

This page enables you to configure specific XS settings.

Click  to refresh the page.



Business Context Parameters

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

UI Element	Description
Period Business Context Name	The business object period context name. The default value is **Period_Universe**.

Context Designer Parameters

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.

Dashboard Update Parameters

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

UI Element	Description
Configuration Reload rate (Minutes)	The configuration reload rate in minutes. Changes made in the Studio will be visible in Dashboard after no more than the value of the **Configuration Reload rate (Minutes)** parameter, in minutes. The default value is **5** minutes.

Debug Mode Parameters

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 Parameters

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 Executive Scorecard to work with the SAP BusinessObjects Enterprise universes, every X days (where X corresponds to what you specified in **Meta Data reload rate (Days)**), Executive Scorecard reloads all the universes metadata from the SAP BusinessObjects Enterprise. The default value is **7** days.
Users Info Reload Rate (Minutes)	The number of minutes after which user info is reloaded. The default value is **5** minutes.

Configure Engine Settings

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

To access:

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

Tasks

Set Engine Values:

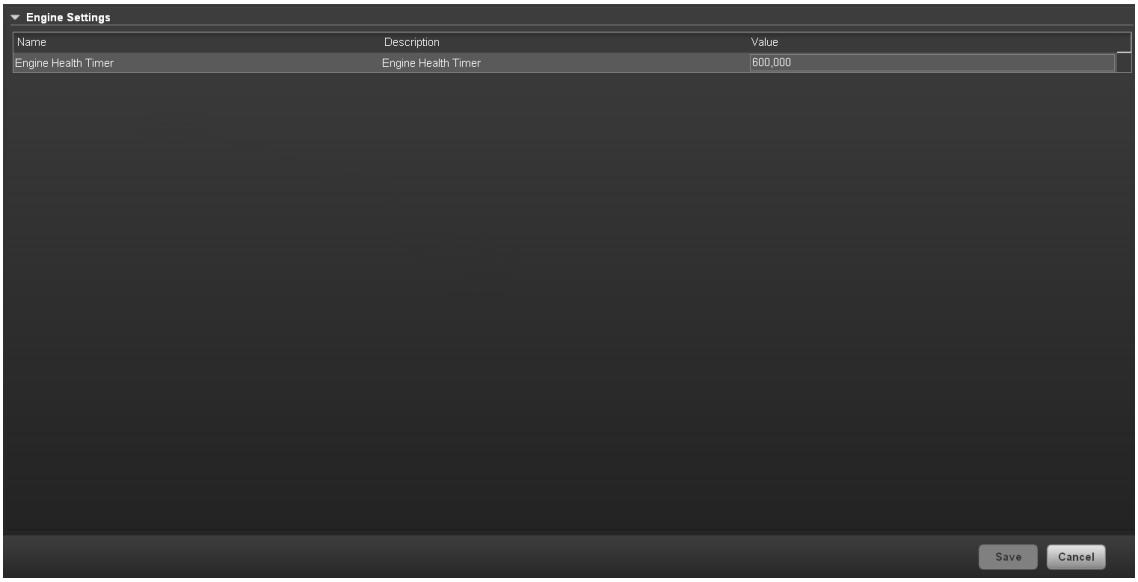
1. Select **Admin** > **Scorecard** > **Engine Settings**.
2. Click the row of the relevant engine function and enter the value in milliseconds.
3. Click **Save** to save your settings.

UI Description

Engine Settings Page

This page enables you to configure the engine settings for HP IT Executive Scorecard.

Click  to refresh the page.



Engine Settings Parameters

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 KPI calculations are sent. The default value is 600,000, which equals 10 minutes.

Perform the Maintenance of the Executive Scorecard Module

This section includes the following topics:

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 Executive Scorecard. For details, see "Manage Users" on page 32.
2. Define the page Instance and Resource. For details, see "Manage Resources" on page 55.
3. Give you (the Business Analyst - Dashboard Designer) the needed permissions to update the page. For details, see "Attach Permissions".
4. Give the relevant user (executive) the needed permissions to view the page. For details, see "Attach Permissions".

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 "Attach Permissions".

- **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).

For details, see "Manage Users" on page 32.

Modify the Maximum Number of Pages Displayed in the Dashboard

The maintenance of HP IT Executive Scorecard is performed using the Admin tab.

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.

This section describes how to modify these limits. Note that if you increase these limits, performance may be impaired.

Modify the maximum number of open pages

To modify the maximum number of open pages:

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

For details, see "Perform Administration Tasks for Foundation" on page 61.

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

Modify the maximum number of active pages

To modify the maximum number of active pages:

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

For details, see "Perform Administration Tasks for Foundation" on page 61.

How to Show or Hide Debug Properties

The maintenance of HP IT Executive Scorecard 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 > Scorecard > XS 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.

Perform the Maintenance of the IT Financial Management Module

Enables you to configure the settings for the IT Financial Management module.

To access:

Select **Admin > ITFM > ITFM**.

Tasks

Configure ITFM Settings

1. Select **Admin** > **ITFM > ITFM**.
2. Click the row of the relevant setting and enter the value or select the option.
3. Click **Save** to save your settings.

Configure ITFM Users, Roles, and Permissions

Roles and permissions for users is managed through the Admin tab, enabling you to specify permissions for each role. Additionally, you can attach instances to a permission, so that the user can only access certain budgets or allocations. This model is based on:

- The permissions of each user, instead of relying on the user's roles. The permissions are final and cannot be modified or deleted, allowing the flexibility to grant users access to different ITFM features, while assigning them to different roles.
- Budget related operations according to each user's scope (instance level permissions).

Two out-of-the-box roles are available: BUDGET_COORDINATOR and FINANCIAL_ANALYST. For details, see "Manage Roles" on page 46.

Change the Currency of the ITFM

The default currency for all IT Financial Management KPIs is $.

During the post-installation process, if you have changed the currency in the **Data Warehouse - Currency Configuration** page of the post-install wizard, you must change the currency in each one of the KPIs to match your selection, as follows:

1. In the application, click **Studio**.
2. In the Active KPIs pane, for each KPI under the **Financial Planning Analysis Scorecard**,

and in the **Configuration details** tab, select the relevant unit in the **Unit** drop down list.

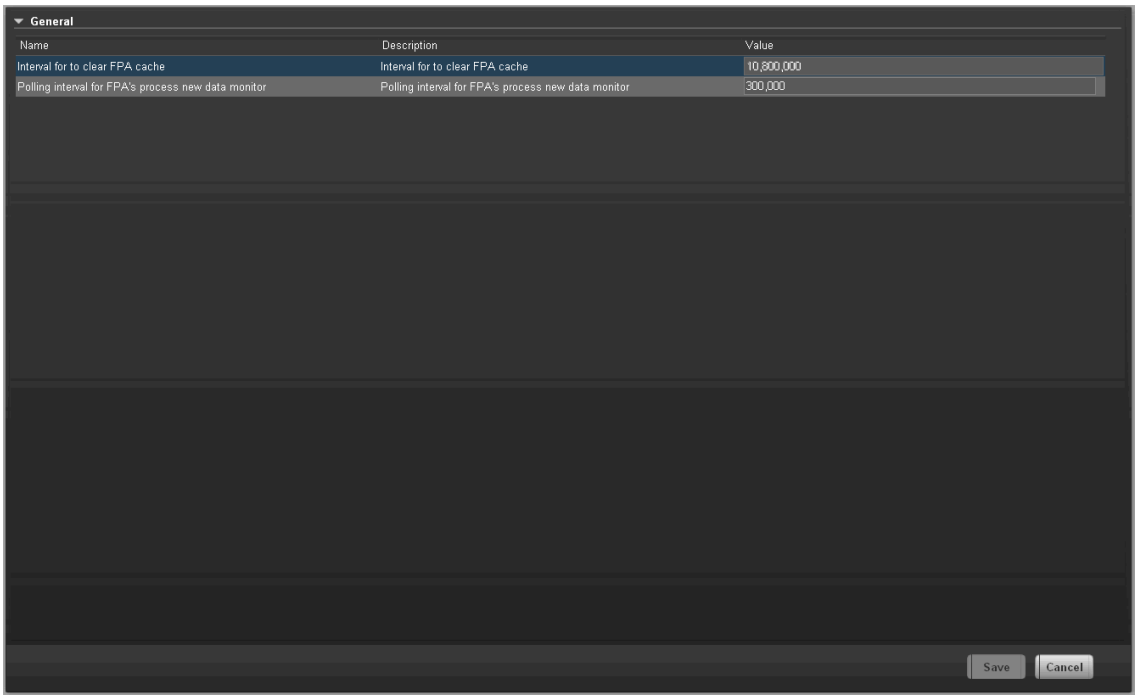
3. Click **Save**.

UI Description

ITFM Page

This page enables you to configure specific IT Financial Management-related settings .

Click  to refresh the page.



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

UI Element	Description
Interval to clear FPA cache	Specifies how long the system should save the objects loaded from the database during the allocation scenario calculations. **Note:** Do not modify this parameter.
Polling interval for FPA's process new data monitor	Specifies the execution interval of the IT Financial Management procedure that checks whether new data was loaded using ETL, and recalculates allocation scenarios accordingly. **Note:** Do not modify this parameter.

Manage the Semantic Layer (Contexts and Universes)

Executive Scorecard semantic layer includes contexts and universes.

The Context Designer feature enables you to create and manage Contexts (universes). The universes can be based on your target schema tables or on .CSV files that can be uploaded to the target schema using the Context Designer.

Context Designer can be used when you want to work with the Executive Scorecard and IT Financial Management applications without using Data Warehouse and SAP BusinessObjects Enterprise. It is a direct way to upload data into the Executive Scorecard 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 Executive Scorecard to integrate third party data.

Context Designer provides KPI results based on your real data.

For details, see Manage the Semantic Layer (Contexts and Universes) in the *Administrator Guide*.

Semantic Layer - Create and Manage Contexts Using Context Designer and Upload Data Using Data Loader

The Context Designer feature enables you to create and manage Contexts (universes). The universes can be based on your target schema tables or on .CSV files that can be uploaded to the target schema using the Context Designer.

Context Designer can be used when you want to work with the Executive Scorecard and IT Financial Management applications without using Data Warehouse and SAP BusinessObjects Enterprise. It is a direct way to upload data into the Executive Scorecard 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 Executive Scorecard to integrate third party data.

Context Designer provides KPI results based on your real data.

To access:

1. In Executive Scorecard, click **Admin > Semantic Layer > Semantic Layer**. The Context Management page opens. If not , click **Data Loader**. For details, see "Context Designer Page" on page 86.
2. In the Context Designer page that opens:
   - To create a new context, click Create a new context.
   - To edit a context, click **Open an existing context**.
   - To import data into Executive Scorecard, click **Add Table**. The **Repository** area opens, and then click **Add** to open the Import Wizard.

Learn More

Semantic Layer (Context and Universe)

A semantic layer is a business representation of corporate data that helps end-users access data autonomously using common business terms. It maps complex data into familiar business terms such as product, customer, or revenue to offer a unified, consolidated view of data across the organization. By using common business terms, rather than data language, to access, manipulate, and organize information, it simplifies the complexity of business data. These business terms are stored as objects in a Business Context (or universe), accessed through business views. Business Contexts enable business users to access and analyze data stored in a relational database and OLAP cubes. This is claimed to be core business intelligence (BI) technology that frees users from IT while ensuring correct results.

Business Views is a multi-tier system that is designed to enable companies to build comprehensive and specific business objects that help report designers and end users access the information they require. Business Views is intended to enable people to add the necessary business context to their data islands and link them into a single organized Business View for their organization.

A Context or universe is a business representation of an organization's data that helps end-users access data using common business terms. A Context is the result of a semantic layer of metadata that creates a business oriented view of the data. A Context contains a schema of the tables that make up the dimension and measurement objects. A Context is an interface between the data warehouse and the analytics that display the data.

Context are made up of objects and classes that are mapped to the source data and are accessed through queries and reports. They correspond to the business contexts used in HP IT Executive Scorecard.

Each Context includes classes (entities), objects with a dimension attribute, and relationships between the entities. The entity's values are used in the calculation of values and statuses of the Key Performance Indicators (KPIs) or Metrics that represent them. The KPIs or Metrics are the building blocks used by the HP IT Executive Scorecard engine and the Studio.

Executive Scorecard Semantic Layer may include:

- Universes created in SAP BusinessObjects. For more details on universes, see the relevant SAP BusinessObjects documentation.
- Out-of-the-box Contexts created using the Context Designer.
- User-defined Contexts created using Context Designer and populated with data uploaded from .CSV files using Context Designer. For details on the Context Designer, see "Semantic Layer - Create and Manage Contexts Using Context Designer and Upload Data Using Data Loader" on previous page.

If you want to change the formula of a KPI or Metric , you must be aware of the relationships in the context (universe) of the KPI or Metric. For details, see KPI and Metric Library in Excel format.

The contexts, entities, and dimensions that are displayed and used in the Studio are part of the universes that are located in the **XS_Studio** library.

Context or Universe Contents

A Context (or Universe) is a set of entities. Each entity is a set of fields. Each field can be a

dimension, measurement, or fact that can provide information about the business.

A formula calculates, for a specified time period, using the values of specific entities, a value that represents a specific aspect of the business. The value is assigned to a Key Performance Indicator (KPI) so that the KPI represents a specific aspect of the business.

Each Context includes some KPIs. The KPIs are the building blocks of the Studio and the KPI engine.

These entities that are used in the calculation of the KPIs are provided by the relevant integrated data source. Each data source corresponds to a specific Content Pack that provides the connection between the data source and Executive Scorecard.

For more information about the KPIs, Contexts, Metrics, and more, see "Getting Started" in the *Content Reference Guide*.

Out-of-the-Box Contexts

You can only add more tables and entities to an out-of-the-box Context, you cannot remove or change the original elements.

Tasks

This section includes:

"View existing out-of-the-box Contexts (universes)" below

"Create a Context and use its contents in the Studio" on page 82

"Semantic Layer - Create and Manage Contexts Using Context Designer and Upload Data Using Data Loader" on page 78

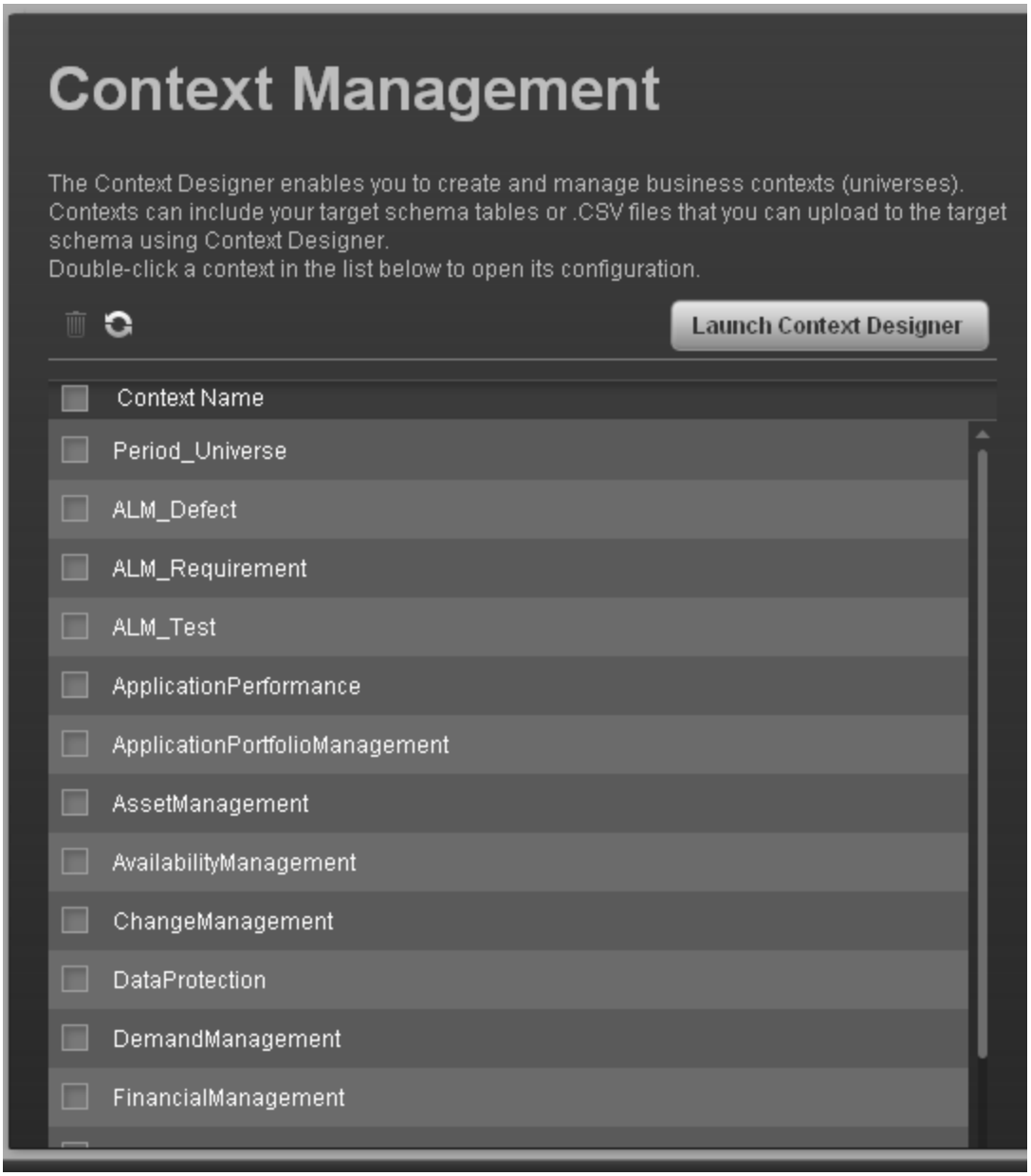
"Load the Context and verify the variables and entities" on page 83

"Export Contexts" on page 85

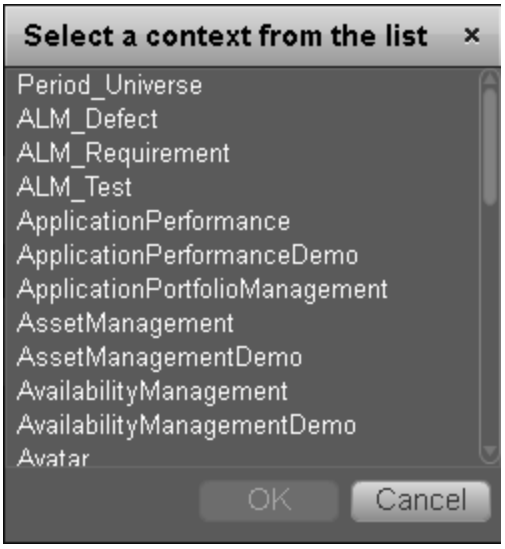
"Import Contexts" on page 86

View existing out-of-the-box Contexts (universes)

1. In Executive Scorecard, click **Admin > Semantic Layer > Semantic Layer**. The Context Management page opens.
2. The list of out-of-the-box Contexts is displayed.



3. Click **Launch Context Designer**.
4. In the Context Designer page that opens, click **Open an existing context**.



5. Select the relevant Context.

   The structure of the Context is displayed.

Create a Context and use its contents in the Studio

1. **Create a new Context**
   a. In Executive Scorecard, click **Admin > Semantic Layer > Semantic Layer**.
   b. In the Context Management page, click **Launch Context Designer**.
   c. Click **New**. The Context Designer page opens.
   d. Enter the name of the Context .

e. Click **Add Table**. The **Repository** area opens. You can use:
   - Tables from the **ExternalTables** list. These tables are created from external tables in CSV format that are uploaded to Executive Scorecard. For details on how to upload a CSV table, see "Semantic Layer - Create and Manage Contexts Using Context Designer and Upload Data Using Data Loader" on page 78. After the table is uploaded, a corresponding table named **ext.<csv_table_name>** is listed in the **ExternalTables** list.
   - Internal tables from the **InternalTables** list.

     If you are working with Enterprise Executive Scorecard, the tables listed in the InternalTables list are the Data Warehouse tables, the Period tables created during the post-install procedure, and the View table.

f. Drag the relevant tables from the **Repository** to the **Scheme** area.

g. Define the relationships between the tables by dragging a specific column from one table and dropping it over the relevant column in another table. A visual link is added to the graph to indicate the relationship.

h. Drag the relevant tables from the **Scheme** area to the **Entities** pane. The tables become variables and the columns become the variable entities that can be used to create KPI or Metric formulas when a KPI or Metric is assigned the Context in the Studio.

i. Save the Context

2. **Load the Context and verify the variables and entities**

   a. In Executive Scorecard, click **Studio**.

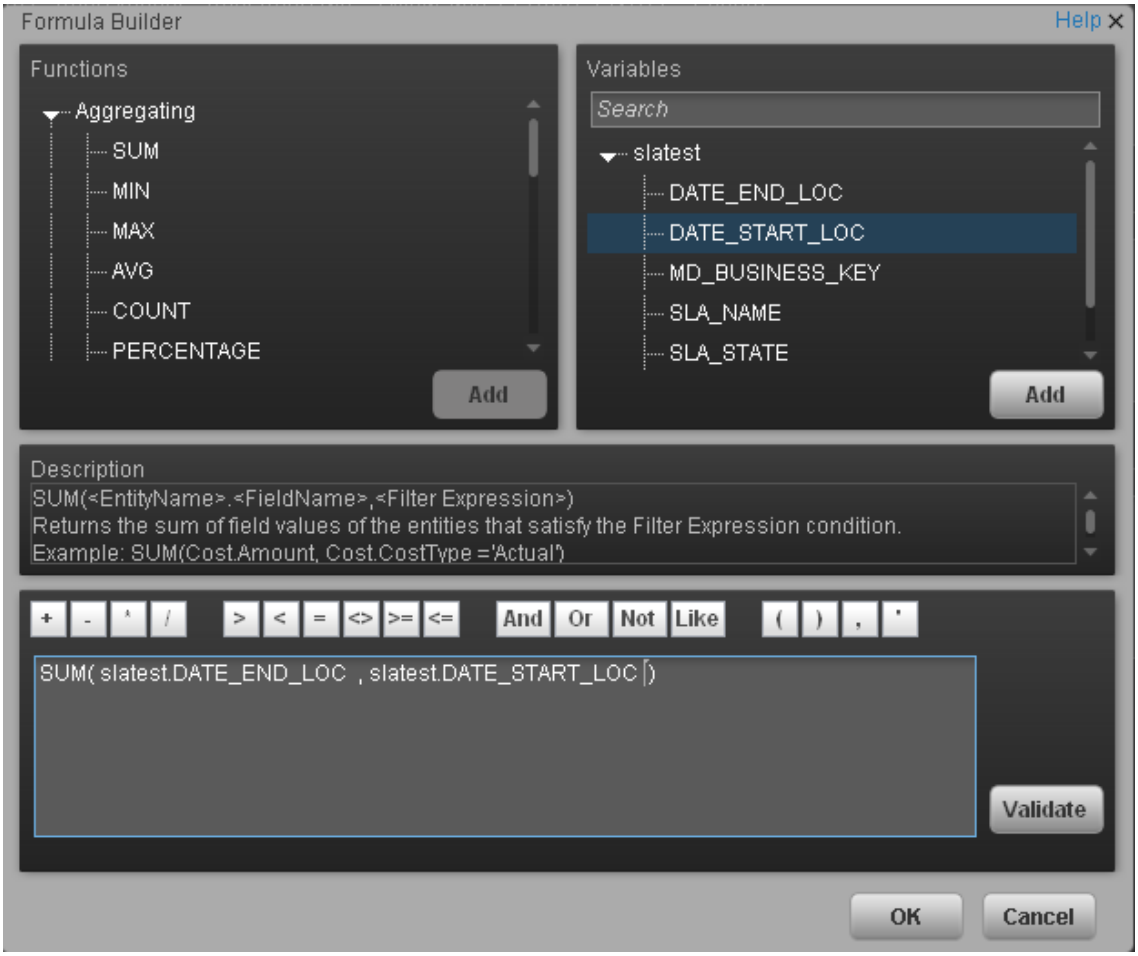
   b. Activate a KPI or a Metric or clone any active KPI or Metric that does not have a KPI Breakdown or Breakdown Metric. For details, see Activate Scorecards, Perspectives, Objectives, Metrics, or KPIs Using Templates or Create Active Scorecards, Perspectives, Objectives, Metrics, or KPIs in the *Business Analyst Guide*.

   c. Click the **Calculation details** tab, and click **Select business context**. For details, see Configure a KPI or a Metric in the *Business Analyst Guide*.

   d. In the Business Context dialog box, change its Context to the new Context (**ext.<csv_table_name>**).

   e. You can then modify the formula that is used to calculate the KPI or Metric status by selecting the variables that correspond to the entities and fields that were defined in the Context Designer. To do that click **Open Formula Builder**.

   f. In the Formula Builder dialog box, verify that the variables correspond to the tables you selected in the Entities area in the Context Designer, and that the entities of the variables correspond to the selected columns of those tables. Click **OK** to save the KPI.



Note: In the same way, you can modify the Filter of the KPI or Metric to use the variables corresponding to the .CSV file-based Context (universe).

Upload Tables in .CSV Format to the Tables Repository

You can upload data into the Studio using .CSV files and without integration to external sources or to other HP products. It can be used to integrate third party data sources, testing, or for Proof of Concept (POC) sessions. You can, in the same way, replace the data in an existing table, or add data to an existing table when the table has been loaded using a .CSV file.

To upload data from the .CSV file into the Studio:

1. Create the .CSV file containing the data you want to use in the Studio (for example: latest.CSV).

   Recommended: CSV tables should have unique names across all active Content Acceleration Packs (CAPs). For details on CAPs, see "Create Content Acceleration Packs" on page 146.

2. In **Executive Scorecard, click the Admin > Semantic Layer > Semantic Layer**.
3. In the **Context Management** page, click **Launch Context Designer**.

4. Click **Add Table**. The **Repository** area opens.
5. Click **Add** to open the Import Wizard (data loader). Follow the steps to upload the .CSV file. For details, see "Semantic Layer - Create and Manage Contexts Using Context Designer and Upload Data Using Data Loader" on page 78.
6. Click the **Upload data file** button.

   The file is uploaded. The upload operation saves the changes you made to the .CSV file. The new table appears in the External Tables area.

Update a Context

1. In Executive Scorecard, click **Admin > Semantic Layer > Semantic Layer**. In the **Context Management** page, click **Launch Context Designer**. The Context Designer page opens. For details, see "Context Designer Page" on next page.
2. Select the relevant Context.
3. Make the relevant changes: delete or add entities, fields, tables, columns, or relationships.
4. Click  to save the Context.
5. Load the Context and verify.

Export Contexts

Each **<universe_name>.xml** file includes the relevant Context information. They are located in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\context\export_<tenant_ID>** folder. If a file with this name already exists in the folder, the name is changed to **<universe_name><n>.xml**.

1. Make sure you have JDK installed.
2. Run **jconsole** in the **<XS_server>\agora\jdk\bin**.
3. In the window that opens, select the **Remote Process** option, enter **<host_name>:<port_number>** and click **Connect**.
4. After the application completes its loading, click the **MBeans** tab.
5. Click **com.hp.btoe.xs2go.jmx**.
6. Click the **ExportForTenant** button. This imports all the Context XML files that were in the load folder. The format is **ExportForTenant (p1,p2)** where **p1** is the universe name and **p2** is the tenant id.
   - If the import operation is successful, the message **Method successfully invoked** is returned, and the imported Contexts are displayed in **Admin> Context Designer > Launch Context Designer**.
   - In addition, the XML file is moved to the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\export\loaded** folder.
   - If the import operation fails, an explanation of the failure is added in the relevant file in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\export\errors** folder.

Note that the message Method successfully invoked might be displayed in some cases in case of failure of the export operation.

Note: If information is missing from the Load directory, part of the export operation might not be performed.

Import Contexts

1. Save the Context XML files to the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\context\import\load** folder.
2. Make sure you have JDK installed.
3. Run **jconsole** in the **<XS_server>\agora\jdk\bin**.
4. In the window that opens, select the **Remote Process** option, enter **<host_name>:<port_number>** and click **Connect**.
5. After the application completes its loading, click the **MBeans** tab.
6. Click **com.hp.btoe.xs2go.jmx**.
7. Click the **ImportForTenant** button. This imports all the Context XML files that were in the load folder.
   - If the import operation is successful, the message **Method successfully invoked** is returned, and the imported Contexts are displayed in **Admin> Context Designer > Launch Context Designer**.
   - In addition, the XML file is moved to the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\context\import\loaded** folder.
   - If the import operation fails, an explanation of the failure is added in the relevant file in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\context\import\errors** folder.

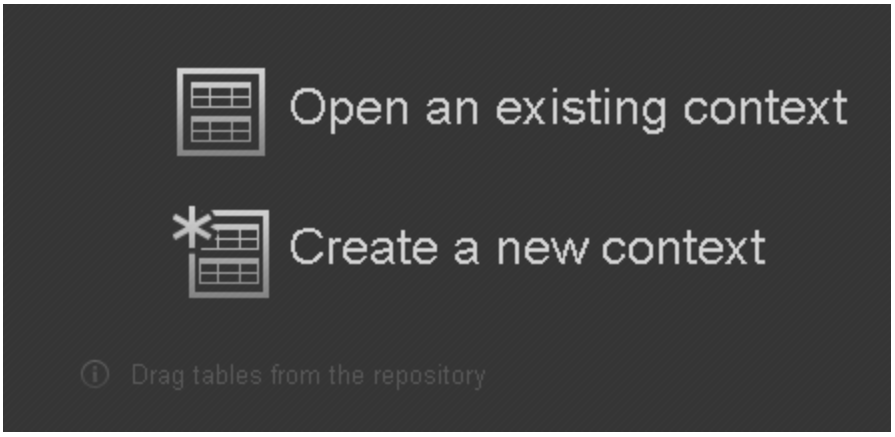
     Note that the message Method successfully invoked might be displayed in some cases in case of failure of the import operation.

Note: If information is missing from the Load directory, part of the import operation might not be performed.

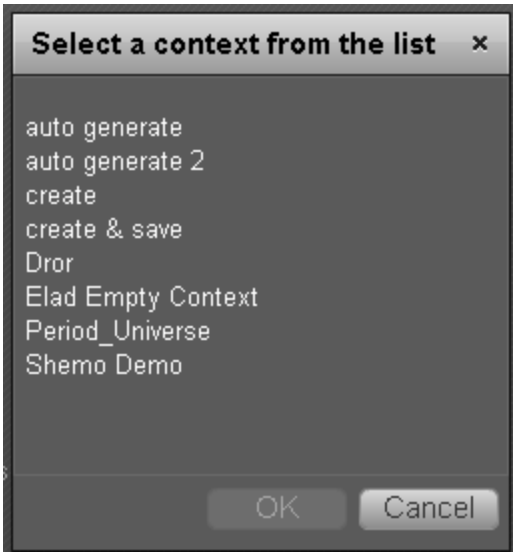
UI Description

Context Designer Page

The Context Designer page enables you to manage the Contexts that you create using the Context Designer feature.



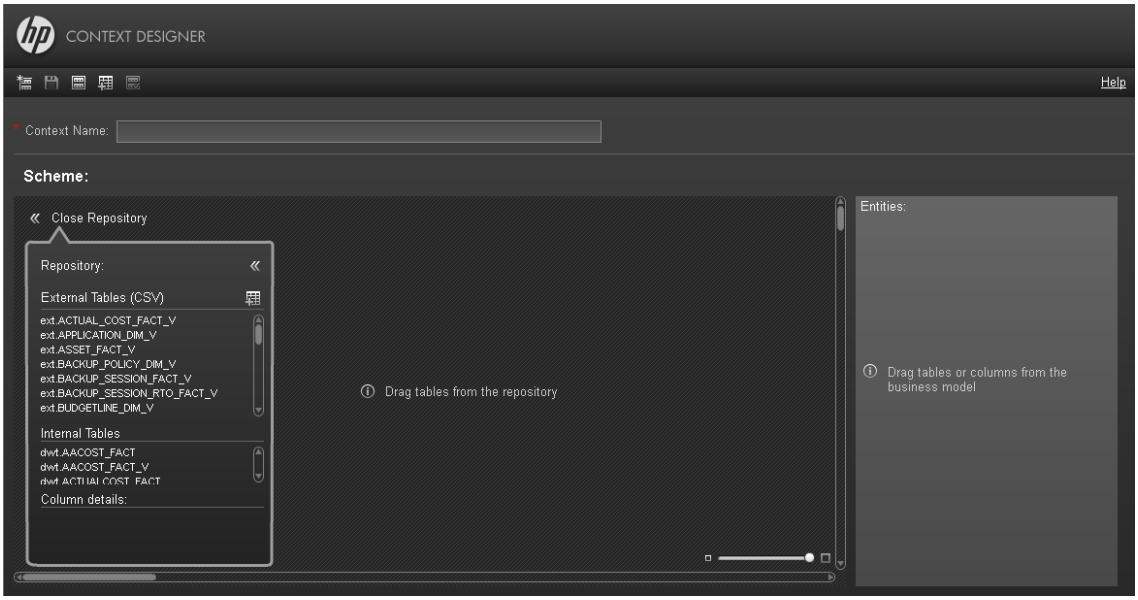
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
	Click to display a list of existing Contexts created in the Context Designer. Select the relevant Context and click **OK**. 
	Click to create a new Context. The Context Designer Wizard opens. For details, see below.

Context Designer Wizard

The Context Designer wizard enables you to create a Context with tables, entities, and relationships. Once you have completed the Context, save it. The Context is then added to the list of Contexts available in the Studio. The tables that compose the universe are added as variables and the table columns as variable entities. The variables and entities can be used to calculate the formulas for the KPIs that are assigned the Context. For details, see Configure a KPI or a Metric in the *Business Analyst Guide*.

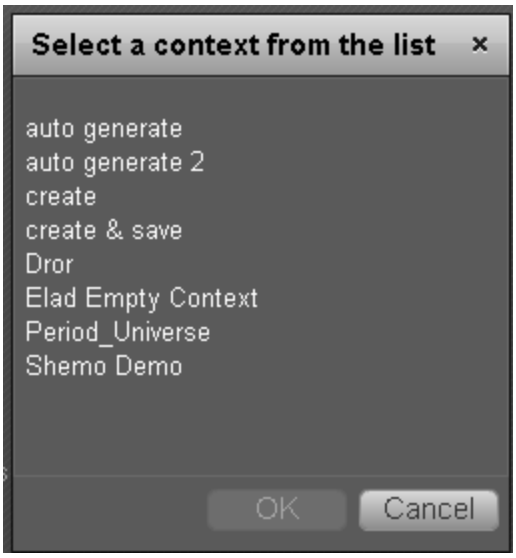
This page enables you to configure a Context.



Context Designer Toolbar

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

UI Element	Description
	**New.** Click to create a new Context.
	**Save.** Click to save the currently opened Context.

	**Open.** Click to display a list of existing Contexts created in the Context Designer. Select the relevant Context and click **OK**. 
	**Add table.** Click to add tables in CSV format to the Repository. The data loader wizard opens. For details, see "Content Loader" on page 93.
	Click to validate the Context. The validation checks if the name of the Context is unique, if all the tables in the Context exist in the Repository, and more. When you click the  Save button, the Context is validated. An invalid Context is not saved.

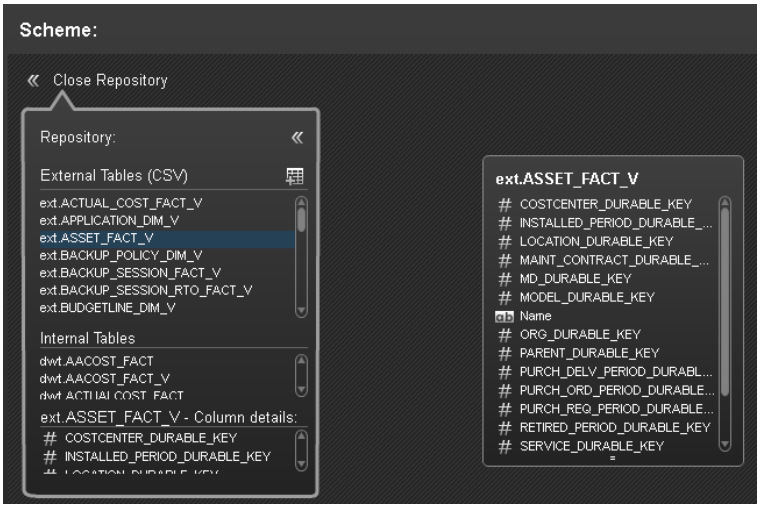
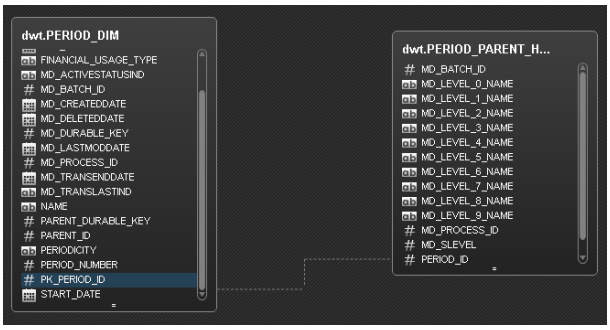
Context Area

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

UI Element	Description
Context name	The name of the Context. **Limitation:** SAP BusinessObjects Enterprise Universe names should not duplicate Context names, and all names of Universes and Contexts should be unique. **Note:** If you have assigned to a KPI a Context created with the Context Designer, and then you modify the Context name in the Context Designer, make sure that you assign the modified Context to the KPI in the Studio otherwise the KPI becomes invalid as it uses a Context that does not exist.

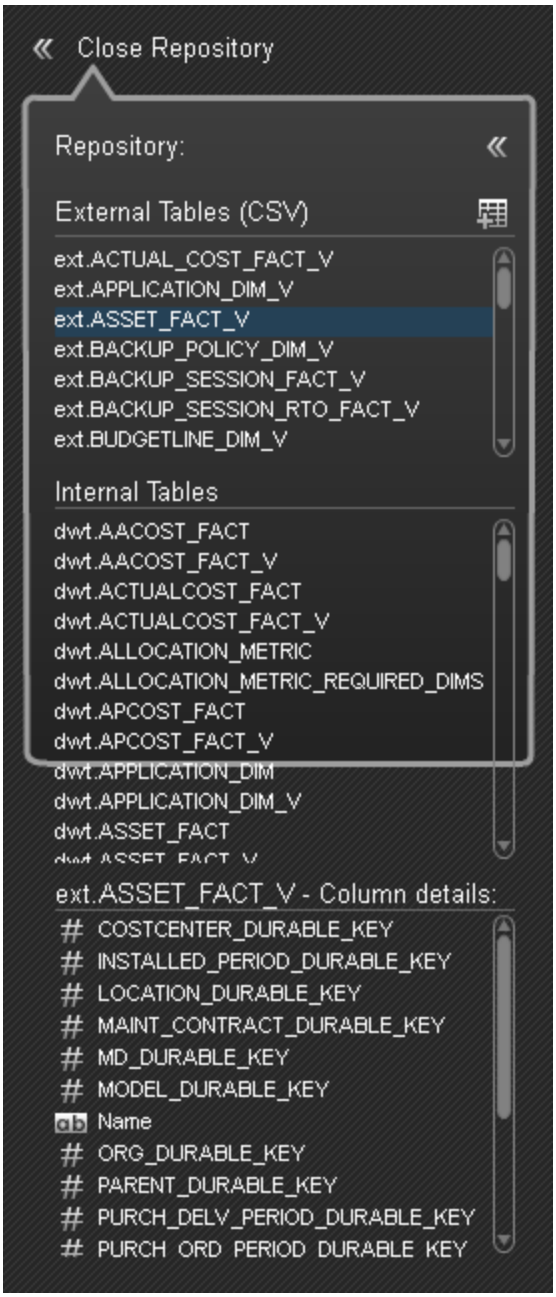
Scheme Area

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

UI Element	Description
Repository	Click the button to open the table repository. For details, see "Repository" on next page.
<Drag and drop>	Select the relevant table in the Repository and drag and drop it in the Scheme area to make the table part of the universe. 
<Create relationships>	Select the relevant entity in a table and drag and drop it on the relevant entity in another table to create the relationship between these two entities.  **Note:** • Double-click a table to shrink it down to its title. Double-click a shrunk table to expand it. • To delete a relationship, click it and press the **Delete** key.
	Use the slider to zoom in or out.

Repository

The Repository area enables you to select external or internal tables to add to the Context you are building.



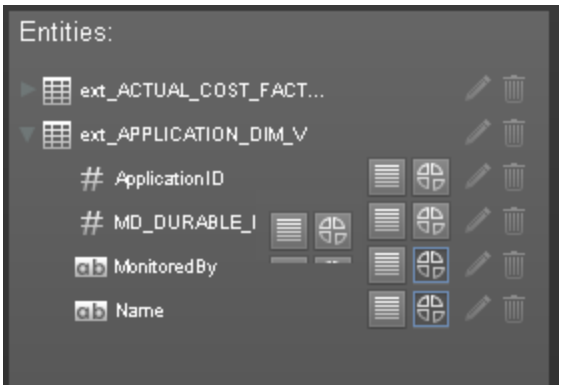
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
«	Click to close the Repository.

UI Element	Description
External Tables (CSV)	Lists the CSV tables that were uploaded using the data loader wizard. Click the relevant table to display its column details.
	Click to add tables in CSV format to the Repository. The data loader wizard opens. For details, see "Content Loader" on next page.
Internal Tables	Lists the tables. Click on the relevant table to display its entities in the Column details section.
Column Details	**L**ists the entities (columns) of the table selected in the **Internal Tables** section. Each entity is preceded by an icon indicating the type of entity: •  - date. •  - string. •  - numeric

Entities Area

You drag tables from the Scheme area to the Entities area to add a variable corresponding to the table to the list of variables available to create the formula for the KPI that is assigned the Context. The table columns become the variable entities.



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

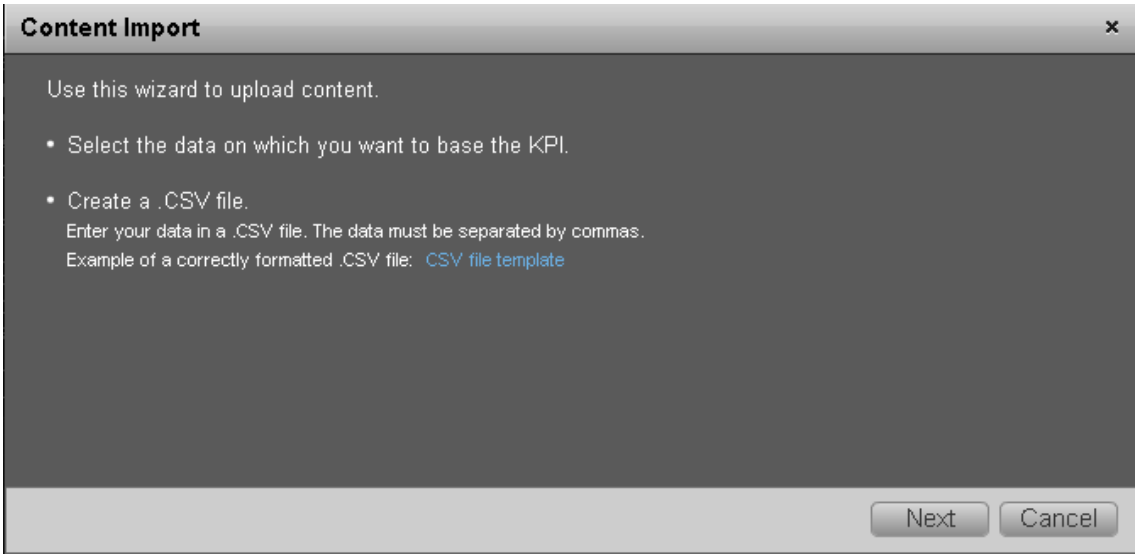
UI Element	Description
<Drag and drop>	Drag and drop a table from the middle pane to the Entities pane to add the table's entities and fields to the list of available entities and fields available to be added to a KPI formula in the Formula Builder. For details, see Modify a KPI or Metric Formula in the *Business Analyst Guide*.

UI Element	Description
<Table and columns>	The table that you dragged from the Scheme area to the Entities area is displayed followed by its columns. Icons indicate the format of the column. • - date. • - string. • - numeric The icons to the right of the column enable you to decide to: • - Enables the auto-completion feature when using this field in a formula, in the Studio. This feature is not supported for a date field. For details, see Variables in Modify a KPI or Metric Filter in the *Business Analyst Guide*. • - Enable the creation of a Breakdown for the KPI using this dimension, in the Studio. For details, see Variables in Manage KPI Breakdowns in the *Business Analyst Guide*.
Remove	Click to remove the selected table or entity.

Content Loader (Import) Wizard

The wizard enables you to upload content.

Content Loader



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

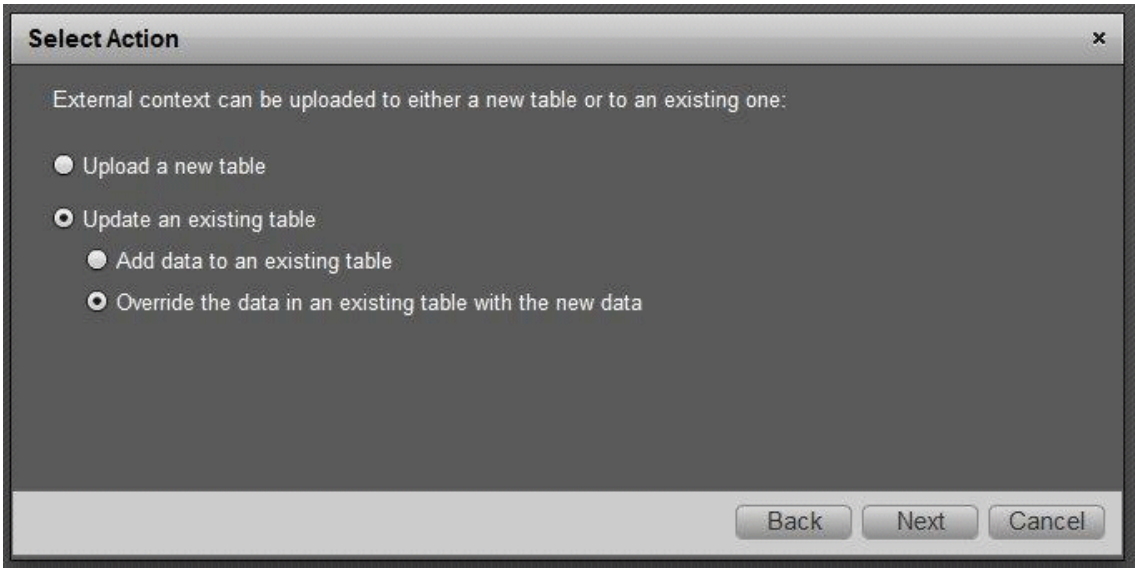
UI Element	Description

Select the data on which you want to base the KPI.	You can use .CSV files as a data source. A .CSV file contains data separated by commas. Each .CSV file that is uploaded corresponds to a universe with only one entity. The name of the Context (universe) that is created is the name of the .CSV file. The names of the columns in the .CSV file (first row of the file) represent the names of the entity fields. These fields become the variables that can be used to create the formula that is used to calculate the value of the KPIs or Metrics associated with the Context.
	
	File Structure
	
	The .CSV file should have a table structure. The following is an example of a .CSV file in CSV format:
	
	`MD_BUSINESS_KEY,SLA_NAME,SLA_STATE,SLA_TYPE,DATE_START,DATE_END`
	`SLA01,SLA01,Passed,Corporate,1/1/2011 13:00:00,2/1/2011 19:00:00`
	`SLA02,SLA02,Passed,Corporate,1/2/2011 13:00:00,2/2/2011 19:00:00`
	`SLA03,SLA03,Passed,Corporate,1/3/2011 13:00:00,2/3/2011 19:00:00`
	`SLA03,SLA03,Passed,Corporate,1/3/2011 13:00:00,2/3/2011 19:00:00`
	`SLA04,SLA04,Passed,Corporate,1/4/2011 13:00:00,2/4/2011 19:00:00`
	`SLA13,SLA13,Passed,Corporate,1/3/2011 13:00:00,2/3/2011 19:00:00`
	`SLA14,SLA14,Passed,Corporate,1/6/2011 13:00:00,2/6/2011 19:00:00`
	
	Limitations
	
	• The maximum size of the .CSV file is 20 MB. This is configurable using the **Maximum Size of .CSV file (MB)** setting in **Admin** tab **> Scorecard > XS Settings**.
	• The maximum number of characters in an entity field name is 30 characters (an entity field name is the string between commas in the first row of the .CSV file).
	• The entity field names should follow the rules of column titles in the database (include only alphanumeric characters, and underscore (_)).
	• The name of the .CSV file should follow the rules of Context names (include only alphanumeric characters, and underscores (_)).
	
	Tip:
	
	• The date data obtained from the data sources is automatically reformatted internally using the **YYYY.MM.dd HH:mm:ss** (based on 24 hours) format.

UI Element	Description
	All internal calculations are performed using this format. • If you are using CSV files, you can select the date format in the <Data upload> wizard. The selected format is automatically reformatted internally using the **YYYY.MM.dd HH:mm:ss** (based on 24 hours) format. • The dates displayed in the application user interface are reformatted according to the browser locale.
Create a .CSV File	Hover above **CSV file template** to display an example of a .CSV file structure in table format that can be uploaded.

	A	B	C	D
1	Field_1_Name	Field_2_Name	Field_3_Name	Field_4_Name
2	Field_1_Value_1	Field_2_Value_1	Field_3_Value_1	Field_4_Value_1
3	Field_1_Value_2	Field_2_Value_2	Field_3_Value_2	Field_4_Value_2
4	Field_1_Value_3	Field_2_Value_3	Field_3_Value_3	Field_4_Value_3
5	Field_1_Value_4	Field_2_Value_4	Field_3_Value_4	Field_4_Value_4
6	Field_1_Value_5	Field_2_Value_5	Field_3_Value_5	Field_4_Value_5
7	Field_1_Value_6	Field_2_Value_6	Field_3_Value_6	Field_4_Value_6
8	Field_1_Value_7	Field_2_Value_7	Field_3_Value_7	Field_4_Value_7

Select Action

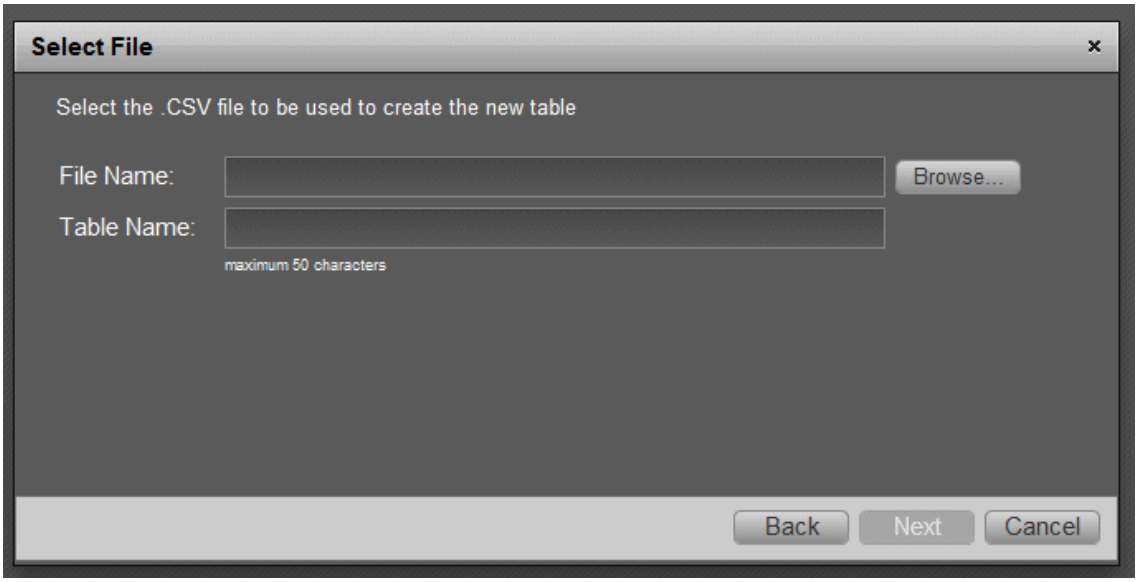


User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

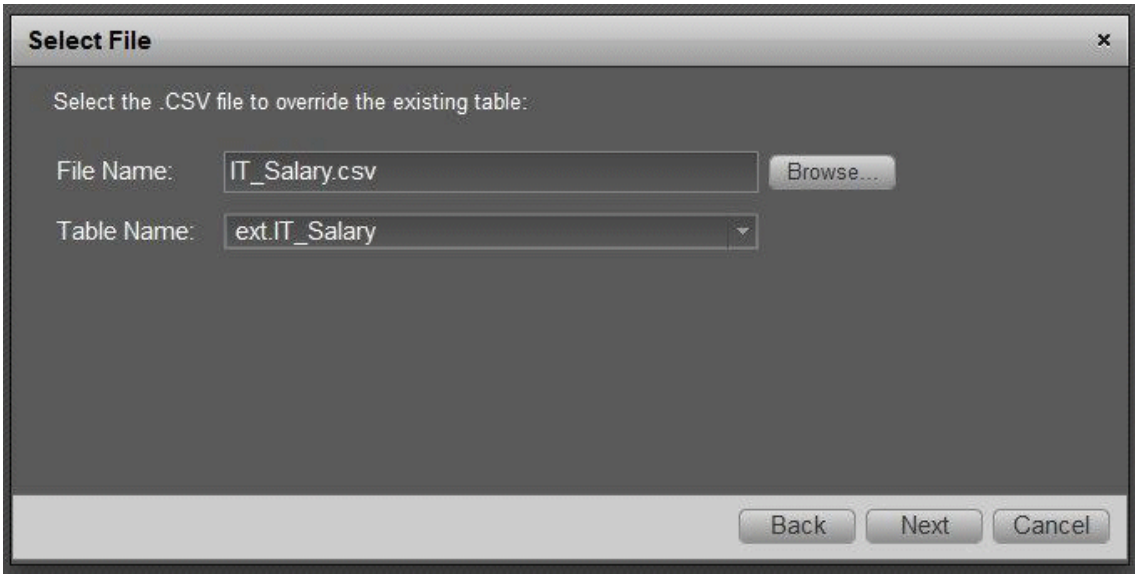
UI Element	Description
Upload a new table	Select this option if you want to create a new table in the Context Designer using the information from the .CSV file.
Update an existing table	Select this option if you want to update an external table that already exists in the Context Designer. When you click this option, the following options are displayed: • **Add data to an existing table.** Select this option when you want to add data to an existing table. The data from the new .CSV file is added at the end of the existing table. The formats of the two .CSV files must be the same. • **Override the data in an existing table with the new data.** Select this option when you want to replace the data of an existing table with the data of the .CSV file you are loading The formats of the two .CSV files must be the same.

Select File

This page is displayed when you selected the **Upload a new table** option:



This page is displayed when you selected the **Update an existing table** option:

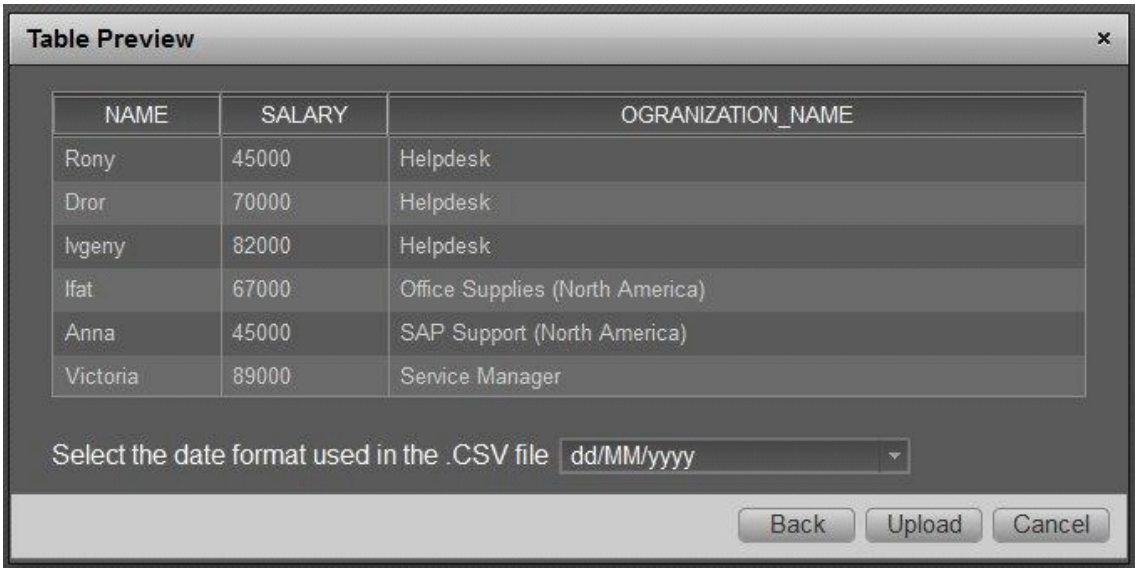


User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
File Name	Select the .CSV file you want to upload.
Table Name	If you are loading a new .CSV file, enter the name of the corresponding table. If you are adding data to an existing external table or if you are replacing the data in an existing external table, select the relevant table name.

Preview

This page displays the table created from the .CSV file.



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

UI Element	Description
<table>	The .CSV file is displayed in the box in table format. If an error message is displayed (for example some of the values include spaces or unsupported characters) you can make the necessary corrections directly in the box:
Select the date format you used in the .CSV file	Select the date format you used in the .CSV file.
Upload	Click to upload the .CSV file into the Studio. For details, see "Semantic Layer - Create and Manage Contexts Using Context Designer and Upload Data Using Data Loader" on page 78.

Add a Context to the Studio

A KPI or Metric Context (universe) represents a global business facet related to the aspect of business the KPI or Metric represents.

For example, the % of Assets in Maintenance KPI represents one aspect of the AssetManagement universe.

You can add a Context to the Studio and the XS engine and attach KPIs or Metrics to the new Context in the Studio.

Tasks

This section includes:

"Add a Context to Executive Studio" below

"Add a Context to Executive Studio using Context Designer" below

Add a Context to Executive Studio

1. Make sure you have modeled the data structure in your database.
2. Add the universe using the BO Designer according to the Universe Creation Guidelines. For details, see "Reference: Universe Creation Guidelines" on next page.
3. Export the universe to the XS_Studio folder in your BO CMS (Central Management Server) using the BO Designer .
4. To load the universe to the Studio library you can do one of the following:
   - Run the JMX reload metadata.
     i. Make sure you have JDK installed.
     ii. Run **jconsole** in the **Start** menu.
     iii. In the window that opens, select the **Remote Process** option, enter **<host_name>:<port_number>** and click **Connect**.
     iv. After the application completes its loading, click the **MBeans** tab.
     v. Click **com.hp.btoa.studio.jmx**.
     vi. Click **loadMetaData**.
   - Note that if you do not click **loadMetaData**, the change will be performed by an automatic update after 24 hours or 7 days depending on your configuration. You can modify the configuration using the **Meta Data reload rate (Days)** parameter in the **XS Settings** section of the Admin Tab. For details, see "Configure XS Settings" on page 70.
5. You can now design active or template entities, create the formulas and filters for the KPIs or Metrics, and more.

Add a Context to Executive Studio using Context Designer

If you do not have Data Warehouse and SAP BusinessObjects Enterprise installed, you can create

new Contexts, using Context Designer. For details, see "Semantic Layer - Create and Manage Contexts Using Context Designer and Upload Data Using Data Loader" on page 78 in the *Administrator Guide*.

Reference: Universe Creation Guidelines

This section explains how you can create Universes that can be used by the HP IT Executive Scorecard Studio and the XS Engine.

Guidelines

1. Folders represent the name of the entity that is presented.
2. Classes in the folder represent the attributes of that entity.
3. Classes should be of type Date, String, or Numeric.
4. Entities (represented by folders) in the same universe must have a relationship between them.
5. Hierarchical relationships should be flattened to attributes (Level1, Level2, …). These relationships can be defined in a joined table.

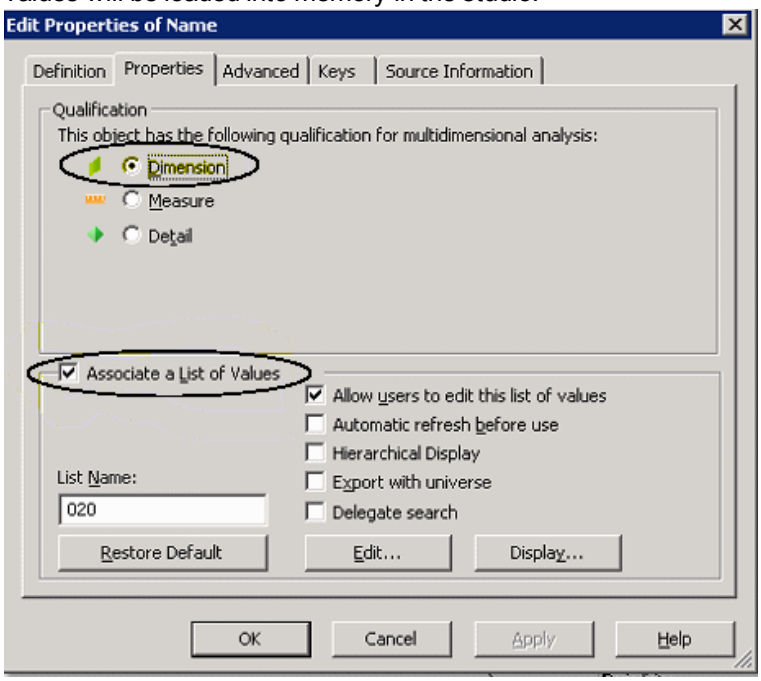
Limitations

1. No current support for folders within folders or other hierarchies.
2. Ensure that there aren't multiple joins between entities represented in the Universe (This is a Universe limitation). Use aliases to copy.
3. Folder names should be unique.
4. Count, in a formula, can only be performed on Numeric and String fields.
5. Conditions on objects not supported.
6. Details on objects not supported.
7. Do not put mappings in the universe – where fields are translated from the value in the database to the value that the universe returns.

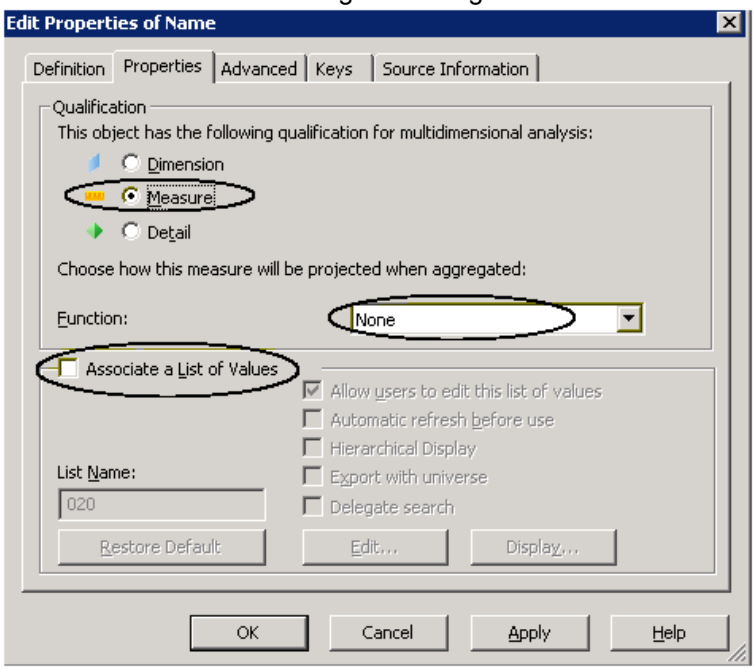
Field Types

- **Dimensions**
  - Fields that can be broken down per KPIs or Metrics should be marked as Dimensions – see the top mark in the figure below.
  - If the field can only have a limited set of values, then turn on the List of Values field below – see the second mark in the figure below. The studio will only show the first 100 values.
  - Warning - this should only be turned on for fields that have a small set of values – all the

values will be loaded into memory in the studio.



- **Measures**
  - Fields that are only used as measures in KPI or Metric formulas should be marked as Measures. Make sure to configure as in figure below.



Manage Contexts and KPIs

You can add components to a page in Dashboard to provide reports about the KPI templates currently in the KPIs Library, Contexts currently in Executive Scorecard, the structure of Contexts,

the list of KPIs included in a Context, and a list of the fields with names include a specific string that are part of a Context, or that are used in a specific KPI formula.

To access:

1. In the Executive Dashboard, click the **New Page**  button in the Dashboard toolbar.
2. If needed, configure the page that opens. For details, see Configure a Page Layout in the *Business Analyst Guide*.
3. Click the **Components**  button.
4. In the Component Gallery page that opens, double-click the Web Intelligence Static Report Viewer component to place it in the layout area, or select the component and drag it to an area on the page, and close the Component Gallery page.

Tasks

This section includes:

Change the Connection to the Target DB

You can change the connection of a Context to a specific Target database.

To change the connection to the Target database:

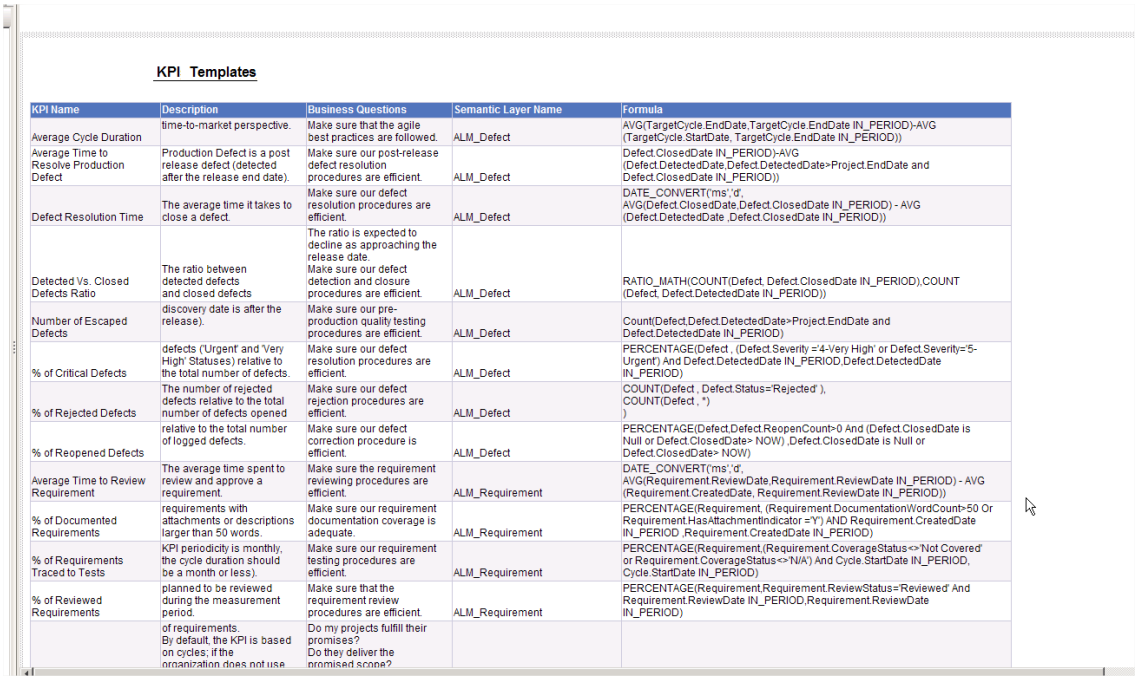
1. Access glassfish using **<XS_server_name>:10001/common/index.jsf**
   a. In Common Tasks, select **Resources > JDBC > JDBC Connections > TargetDbConnectionPool**
   b. Click the **Additional Properties** tab and change the URL of the Target Schema in the **URL** field using the following format: **jdbc:mercury:sqlserver:<XS_server_name>:1433;databaseName=<Target_schema_name>**
   c. Change the name of the Target database in the **databaseName** field.
   d. Click **Save**.
2. In Microsoft SQL Server Management Studio, access XS Manage DB, and open **dbo.TENANT_SCHEMA**, change the **HOST_NAME** and **DB_NAME** of the Target Database, and click **Save**.

View the List of KPI Templates Currently in the KPIs Library

You can view a list of the KPI templates and their Context that are currently in the KPIs Library pane. The Contexts can have been defined either in SAP BusinessObjects or in the Context Designer. You can also view a more detailed list of KPIs (Context, Business Question, Formula, Data Source, Thresholds, and more):

Note: If you delete a KPI in the list of KPI templates, the list of KPIs displayed in the components reflects the deletion.

1. In the Executive Dashboard, click the **New Page** button in the Dashboard toolbar.
2. If needed, configure the page that opens. For details, see Configure a Page Layout in the *Business Analyst Guide*.
3. Click the **Components** button.
4. In the Component Gallery page that opens, double-click the Web Intelligence Dynamic Report Viewer component to place it in the layout area, or select the component and drag it to an area on the page, and close the Component Gallery page.
5. In the component, click the **Configure Component** button:
   a. In the Web Intelligence Dynamic Report Viewer Filter dialog box that opens, select:
      i. The **KPI Templates** report to view the list of the KPI templates that are currently in the KPIs Library pane and basic information about the KPI template.

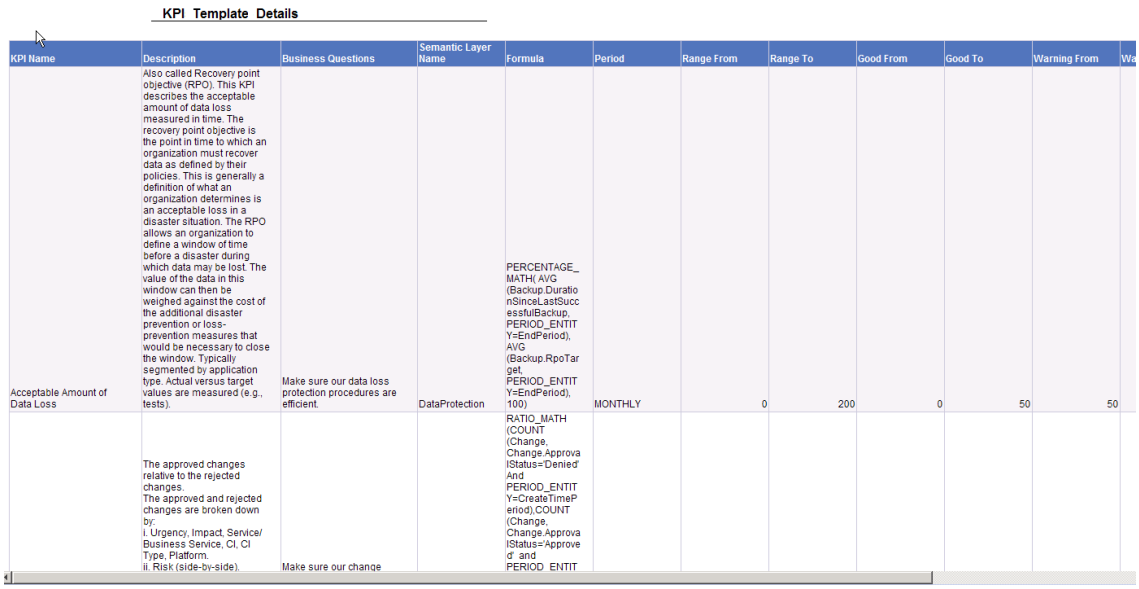


KPI Templates

KPI Name	Description	Business Questions	Semantic Layer Name	Formula
Average Cycle Duration	time-to-market perspective.	Make sure that the agile best practices are followed.	ALM_Defect	AVG(TargetCycle.EndDate,TargetCycle.EndDate IN_PERIOD)-AVG (TargetCycle.StartDate, TargetCycle.EndDate IN_PERIOD))
Average Time to Resolve Production Defect	Production Defect is a post release defect (detected after the release end date).	Make sure our post-release defect resolution procedures are efficient.	ALM_Defect	Defect.ClosedDate IN_PERIOD)-AVG (Defect.DetectedDate,Defect.DetectedDate>Project.EndDate and Defect.ClosedDate IN_PERIOD))
Defect Resolution Time	The average time it takes to close a defect.	Make sure our defect resolution procedures are efficient.	ALM_Defect	DATE_CONVERT('ms','d', AVG(Defect.ClosedDate,Defect.ClosedDate IN_PERIOD) - AVG (Defect.DetectedDate ,Defect.ClosedDate IN_PERIOD))
Detected Vs. Closed Defects Ratio	The ratio between detected defects and closed defects	The ratio is expected to decline as approaching the release date. Make sure our defect detection and closure procedures are efficient.	ALM_Defect	RATIO_MATH(COUNT(Defect, Defect.ClosedDate IN_PERIOD),COUNT (Defect, Defect.DetectedDate IN_PERIOD))
Number of Escaped Defects	discovery date is after the release).	Make sure our pre-production quality testing procedures are efficient.	ALM_Defect	Count(Defect,Defect.DetectedDate>Project.EndDate and Defect.DetectedDate IN_PERIOD)
% of Critical Defects	defects ('Urgent' and 'Very High' Statuses) relative to the total number of defects.	Make sure our defect resolution procedures are efficient.	ALM_Defect	PERCENTAGE(Defect , (Defect.Severity ='4-Very High' or Defect.Severity='5-Urgent') And Defect.DetectedDate IN_PERIOD,Defect.DetectedDate IN_PERIOD)
% of Rejected Defects	The number of rejected defects relative to the total number of defects opened.	Make sure our defect rejection procedures are efficient.	ALM_Defect	COUNT(Defect , Defect.Status='Rejected'), COUNT(Defect , *))
% of Reopened Defects	relative to the total number of logged defects.	Make sure our defect correction procedure is efficient.	ALM_Defect	PERCENTAGE(Defect,Defect.ReopenCount>0 And (Defect.ClosedDate is Null or Defect.ClosedDate> NOW) ,Defect.ClosedDate is Null or Defect.ClosedDate> NOW)
Average Time to Review Requirement	The average time spent to review and approve a requirement.	Make sure the requirement reviewing procedures are efficient.	ALM_Requirement	DATE_CONVERT('ms','d', AVG(Requirement.ReviewDate,Requirement.ReviewDate IN_PERIOD) - AVG (Requirement.CreatedDate, Requirement.ReviewDate IN_PERIOD))
% of Documented Requirements	requirements with attachments or descriptions larger than 50 words.	Make sure our requirement documentation coverage is adequate.	ALM_Requirement	PERCENTAGE(Requirement, (Requirement.DocumentationWordCount>50 Or Requirement.HasAttachmentIndicator ='Y') AND Requirement.CreatedDate IN_PERIOD ,Requirement.CreatedDate IN_PERIOD)
% of Requirements Traced to Tests	KPI periodicity is monthly, the cycle duration should be a month or less).	Make sure our requirement testing procedures are efficient.	ALM_Requirement	PERCENTAGE(Requirement,(Requirement.CoverageStatus<>'Not Covered' or Requirement.CoverageStatus<>'N/A') And Cycle.StartDate IN_PERIOD, Cycle.StartDate IN_PERIOD)
% of Reviewed Requirements	planned to be reviewed during the measurement period.	Make sure that the requirement review procedures are efficient.	ALM_Requirement	PERCENTAGE(Requirement,Requirement.ReviewStatus='Reviewed' And Requirement.ReviewDate IN_PERIOD,Requirement.ReviewDate IN_PERIOD)
	of requirements. By default, the KPI is based on cycles; if the organization does not use	Do my projects fulfill their promises? Do they deliver the promised scope?		

      ii. The **KPI Template Details** report to view the list of the KPI templates that are currently in the KPIs Library pane, and details about their Context, Data Source,

Business Question, Formula, Thresholds, and more.



KPI Template Details

KPI Name	Description	Business Questions	Semantic Layer Name	Formula	Period	Range From	Range To	Good From	Good To	Warning From	Wa
Acceptable Amount of Data Loss	Also called Recovery point objective (RPO). This KPI describes the acceptable amount of data loss measured in time. The recovery point objective is the point in time to which an organization must recover data as defined by their policies. This is generally a definition of what an organization determines is an acceptable loss in a disaster situation. The RPO allows an organization to define a window of time before a disaster during which data may be lost. The value of the data in this window can then be weighed against the cost of the additional disaster prevention or loss-prevention measures that would be necessary to close the window. Typically segmented by application type. Actual versus target values are measured (e.g., tests).	Make sure our data loss protection procedures are efficient.	DataProtection	PERCENTAGE_MATH(AVG (Backup.DurationSinceLastSuccessfulBackup, PERIOD_ENTITY=EndPeriod), AVG (Backup.RpoTarget, PERIOD_ENTITY=EndPeriod), 100)	MONTHLY	0	200	0	50	50	
	The approved changes relative to the rejected changes. The approved and rejected changes are broken down by: i. Urgency, Impact, Service/ Business Service, CI, CI Type, Platform. ii. Risk (side-by-side).	Make sure our change		RATIO_MATH (COUNT (Change, Change.ApprovalStatus='Denied' And PERIOD_ENTITY=CreateTimePeriod),COUNT (Change, Change.ApprovalStatus='Approved' and PERIOD_ENTIT							

b. Click **OK**.

6. To view data in the component in the Dashboard page, click the Refresh button in the report toolbar.

View a list of the Contexts and to view a Context structure

You can view a list of the Contexts currently defined in the Context Designer in Executive Scorecard. The Contexts have been defined in the Context Designer.You can also display the structure of the fields and tables that are included in a selected Context:

Note: If you create your own Context in the Context Designer, the Context appears in the list of Contexts displayed by the component. For details on the Context Designer, see "Semantic Layer - Create and Manage Contexts Using Context Designer and Upload Data Using Data Loader" on page 78.

1. In the Executive Dashboard, click the **New Page** button in the Dashboard toolbar.
2. If needed, configure the page that opens. For details, see Configure a Page Layout in the *Business Analyst Guide*.
3. Click the **Components** button.
4. In the Component Gallery page that opens, double-click the Web Intelligence Dynamic Report Viewer component to place it in the layout area, or select the component and drag it to an area on the page, and close the Component Gallery page.
5. In the component, click the **Configure Component** button:
   a. In the Web Intelligence Dynamic Report Viewer Filter dialog box that opens, select:
      i. The **Context Summary** report to view the list of the Contexts currently defined in the Context Designer in Executive Scorecard.

Context Summary

Context Name	Entity Count	Field Count	Table Count	Alias Count	Join Count
ApplicationPortfolioManagen	1	17	2		1
AvailabilityManagement	7	44	7		8

ii. The **Context Summary Details** report to view the tables and fields that are included in the selected Context. The user running the report is prompted to select a specific Context. The prompt is optional.

Context Summary Details

Context Name	Entity Name	Field Name	Source Table Name	Alias Table Name	DB Column Name	Field Type
ApplicationPortfolio	APM_APPLICATION	ActiveProcess	XS.APM_APPLICATION_DIM_V		ACTIVE_PROCESS	STRING
ApplicationPortfolio	APM_APPLICATION	Approved_Date	XS.APM_APPLICATION_DIM_V		Approved_Date	DATE
ApplicationPortfolio	APM_APPLICATION	Availability	XS.APM_APPLICATION_FACT_V		Availability	NUMERIC
ApplicationPortfolio	APM_APPLICATION	Close_Time	XS.APM_APPLICATION_DIM_V		Close_Time	DATE
ApplicationPortfolio	APM_APPLICATION	Create_Time	XS.APM_APPLICATION_DIM_V		Create_Time	DATE
ApplicationPortfolio	APM_APPLICATION	Disposition	XS.APM_APPLICATION_FACT_V		Disposition	STRING
ApplicationPortfolio	APM_APPLICATION	ExpectedEndOfLifeI	XS.APM_APPLICATION_FACT_V		Expected_End_of_Life_Date	DATE
ApplicationPortfolio	APM_APPLICATION	Maintainability	XS.APM_APPLICATION_FACT_V		Maintainability	NUMERIC
ApplicationPortfolio	APM_APPLICATION	Performance	XS.APM_APPLICATION_FACT_V		Performance	NUMERIC
ApplicationPortfolio	APM_APPLICATION	PlacedInServiceDat	XS.APM_APPLICATION_FACT_V		Placed_in_Service_Date	DATE
ApplicationPortfolio	APM_APPLICATION	Prioruty	XS.APM_APPLICATION_DIM_V		PRIORITY	STRING
ApplicationPortfolio	APM_APPLICATION	REFERENCE_NUI	XS.APM_APPLICATION_DIM_V		REFERENCE_NUMBER	STRING
ApplicationPortfolio	APM_APPLICATION	Start_Date	XS.APM_APPLICATION_DIM_V		Start_Date	DATE
ApplicationPortfolio	APM_APPLICATION	Status	XS.APM_APPLICATION_DIM_V		Status	STRING
ApplicationPortfolio	APM_APPLICATION	Target_Date	XS.APM_APPLICATION_DIM_V		Target_Date	DATE
ApplicationPortfolio	APM_APPLICATION	THRESHOLDMET	XS.APM_APPLICATION_DIM_V		THRESHOLDMET	STRING
ApplicationPortfolio	APM_APPLICATION	Type	XS.APM_APPLICATION_DIM_V		Type	STRING

b. Click **OK**.

6. To view data in the component in the Dashboard page, click the Refresh button in the report toolbar.

View a list of the KPIs of a selected Context

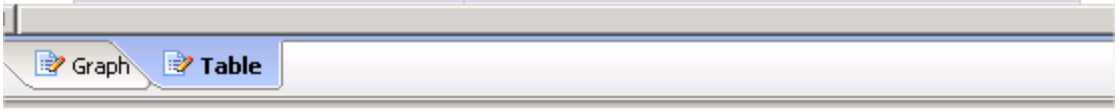
You can view a list of the KPIs of a selected Context. The Contexts can have been defined either in SAP BusinessObjects or in the Context Designer.

1. In the Executive Dashboard, click the **New Page**  button in the Dashboard toolbar.
2. If needed, configure the page that opens. For details, see Configure a Page Layout in the *Business Analyst Guide*.
3. Click the **Components**  button.
4. In the Component Gallery page that opens, double-click the Web Intelligence Dynamic Report Viewer component to place it in the layout area, or select the component and drag it to an area on the page, and close the Component Gallery page.
5. In the component, click the **Configure Component** button.
6. In the Web Intelligence Dynamic Report Viewer Filter dialog box that opens, select the **KPIs per Context** report to view the list of the KPIs of a selected Contexts currently defined in the Context Designer in Executive Scorecard. The user running the report is prompted to select a

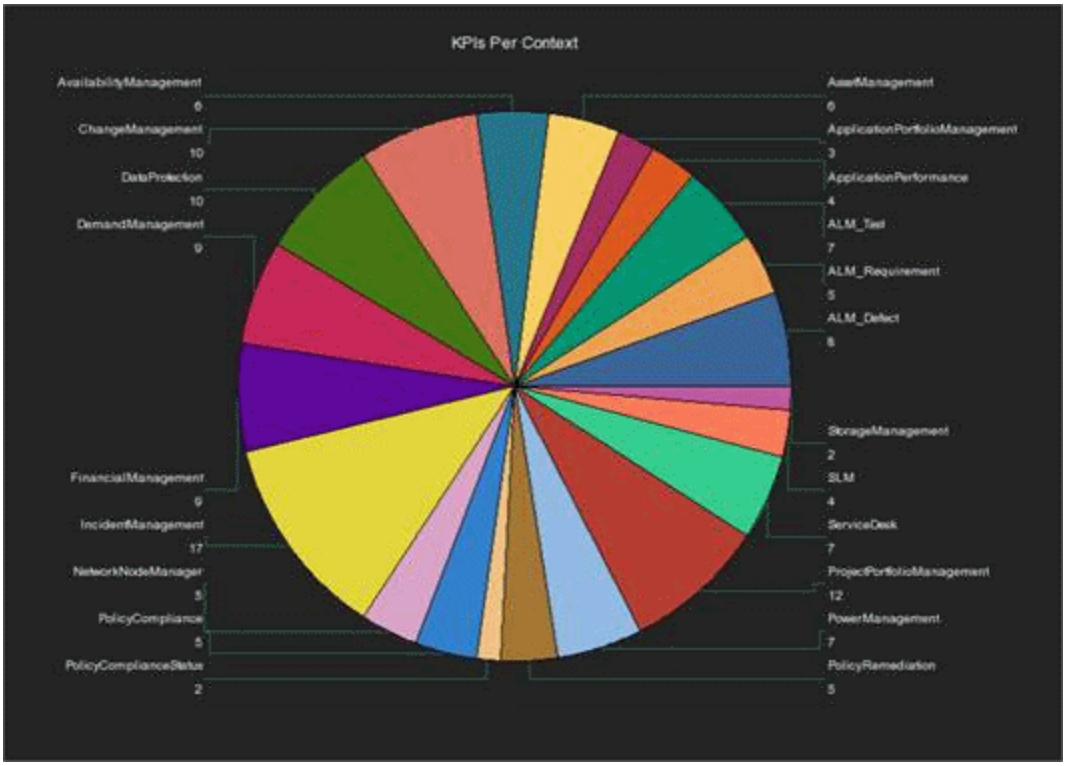
specific Context. The prompt is optional.

In table format:

Context Name	KPI Name
ALM_Defect	Average Cycle Duration
ALM_Defect	Average Time to Resolve Production Defect
ALM_Defect	Defect Resolution Time
ALM_Defect	Detected Vs. Closed Defects Ratio
ALM_Defect	Number of Escaped Defects
ALM_Defect	% of Critical Defects
ALM_Defect	% of Rejected Defects
ALM_Defect	% of Reopened Defects
ALM_Requirement	Average Time to Review Requirement
ALM_Requirement	% of Documented Requirements
ALM_Requirement	% of Requirements Traced to Tests
ALM_Requirement	% of Reviewed Requirements
ALM_Requirement	% of Tested Requirements
ALM_Test	% of Actual vs. Planned Executed Tests
ALM_Test	% of Authorized Tests
ALM_Test	% of Automated Tests
ALM_Test	% of Completed Tests
ALM_Test	% of Failed Tests
ALM_Test	% of Successful Test Runs
ALM_Test	% of Tests Resulting in Defects
ApplicationPerformance	% Monitored Applications
ApplicationPerformance	% of Affected End Users by Application Quality
ApplicationPerformance	% of Failed Business Transactions
ApplicationPerformance	% of Non-Encrypted Traffic
ApplicationPortfolioManagement	Average Availability Rating
ApplicationPortfolioManagement	Average Maintainability Rating
ApplicationPortfolioManagement	Average Performance Rating
AssetManagement	Avg Age of Hardware Assets



In graph format:



7. Click **OK**.
8. To view data in the component in the Dashboard page, click the Refresh button in the report toolbar.

Search for a field in Contexts or in KPI Formulas

You can display a list of fields whose names include the specified string and the Contexts that include these fields. The Contexts can have been defined either in SAP BusinessObjects or in the Context Designer. You can also display a list of fields whose names include the specified string and the KPIs whose formulas include these fields:

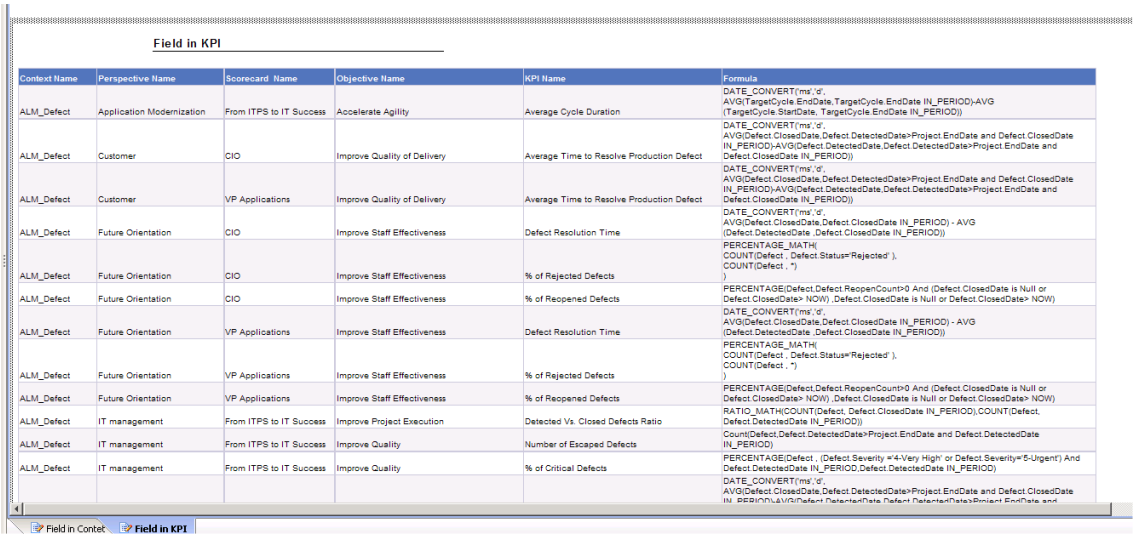
1. In the Executive Dashboard, click the **New Page** button in the Dashboard toolbar.
2. If needed, configure the page that opens. For details, see Configure a Page Layout in the *Business Analyst Guide*.
3. Click the **Components** button.
4. In the Component Gallery page that opens, double-click the Web Intelligence Dynamic Report Viewer component to place it in the layout area, or select the component and drag it to an area on the page, and close the Component Gallery page.
5. In the component, click the **Configure Component** button:
   a. In the Web Intelligence Dynamic Report Viewer Filter dialog box that opens, select:
      i. The **Field in Context** report to display a list of fields whose names include the specified string and the Contexts that include these fields. The user running the report is prompted to select a specific Context. The prompt is optional.

Field in Context

Context Name	Entity Name	Field Name	Source Table Name	Alias Table Name	DB Column Name
ApplicationPortfolioManagement	APM_APPLICATION	PlacedInServiceDate	XS.APM_APPLICATION_FACT_V		Placed_in_Service_Date

Context Name

ii. The **Fields in KPI Name or Formula** report to view a list of fields whose names include the specified string and the KPIs whose formulas include these fields. The user running the report is prompted to select a specific Context. The prompt is optional.



Field in KPI

Context Name	Perspective Name	Scorecard Name	Objective Name	KPI Name	Formula
ALM_Defect	Application Modernization	From ITPS to IT Success	Accelerate Agility	Average Cycle Duration	DATE_CONVERT('ms','d', AVG(TargetCycle.EndDate,TargetCycle.EndDate IN_PERIOD)-AVG (TargetCycle.StartDate, TargetCycle.EndDate IN_PERIOD))
ALM_Defect	Customer	CIO	Improve Quality of Delivery	Average Time to Resolve Production Defect	DATE_CONVERT('ms','d', AVG(Defect.ClosedDate,Defect.DetectedDate>Project.EndDate and Defect.ClosedDate IN_PERIOD)-AVG(Defect.DetectedDate,Defect.DetectedDate>Project.EndDate and Defect.ClosedDate IN_PERIOD))
ALM_Defect	Customer	VP Applications	Improve Quality of Delivery	Average Time to Resolve Production Defect	DATE_CONVERT('ms','d', AVG(Defect.ClosedDate,Defect.DetectedDate>Project.EndDate and Defect.ClosedDate IN_PERIOD)-AVG(Defect.DetectedDate,Defect.DetectedDate>Project.EndDate and Defect.ClosedDate IN_PERIOD))
ALM_Defect	Future Orientation	CIO	Improve Staff Effectiveness	Defect Resolution Time	DATE_CONVERT('ms','d', AVG(Defect.ClosedDate,Defect.ClosedDate IN_PERIOD) - AVG (Defect.DetectedDate ,Defect.ClosedDate IN_PERIOD))
ALM_Defect	Future Orientation	CIO	Improve Staff Effectiveness	% of Rejected Defects	PERCENTAGE_MATH(COUNT(Defect , Defect.Status='Rejected'), COUNT(Defect , *))
ALM_Defect	Future Orientation	CIO	Improve Staff Effectiveness	% of Reopened Defects	PERCENTAGE(Defect,Defect.ReopenCount>0 And (Defect.ClosedDate is Null or Defect.ClosedDate> NOW) ,Defect.ClosedDate is Null or Defect.ClosedDate> NOW)
ALM_Defect	Future Orientation	VP Applications	Improve Staff Effectiveness	Defect Resolution Time	DATE_CONVERT('ms','d', AVG(Defect.ClosedDate,Defect.ClosedDate IN_PERIOD) - AVG (Defect.DetectedDate ,Defect.ClosedDate IN_PERIOD))
ALM_Defect	Future Orientation	VP Applications	Improve Staff Effectiveness	% of Rejected Defects	PERCENTAGE_MATH(COUNT(Defect , Defect.Status='Rejected'), COUNT(Defect , *))
ALM_Defect	Future Orientation	VP Applications	Improve Staff Effectiveness	% of Reopened Defects	PERCENTAGE(Defect,Defect.ReopenCount>0 And (Defect.ClosedDate is Null or Defect.ClosedDate> NOW) ,Defect.ClosedDate is Null or Defect.ClosedDate> NOW)
ALM_Defect	IT management	From ITPS to IT Success	Improve Project Execution	Detected Vs. Closed Defects Ratio	RATIO_MATH(COUNT(Defect, Defect.ClosedDate IN_PERIOD),COUNT(Defect, Defect.DetectedDate IN_PERIOD))
ALM_Defect	IT management	From ITPS to IT Success	Improve Quality	Number of Escaped Defects	Count(Defect,Defect.DetectedDate>Project.EndDate and Defect.DetectedDate IN_PERIOD)
ALM_Defect	IT management	From ITPS to IT Success	Improve Quality	% of Critical Defects	PERCENTAGE(Defect , (Defect.Severity ='4-Very High' or Defect.Severity='5-Urgent') And Defect.DetectedDate IN_PERIOD,Defect.DetectedDate IN_PERIOD)
					DATE_CONVERT('ms','d', AVG(Defect.ClosedDate,Defect.DetectedDate>Project.EndDate and Defect.ClosedDate IN_PERIOD)-AVG(Defect.DetectedDate,Defect.DetectedDate>Project.EndDate and

Field in Contet | Field in KPI

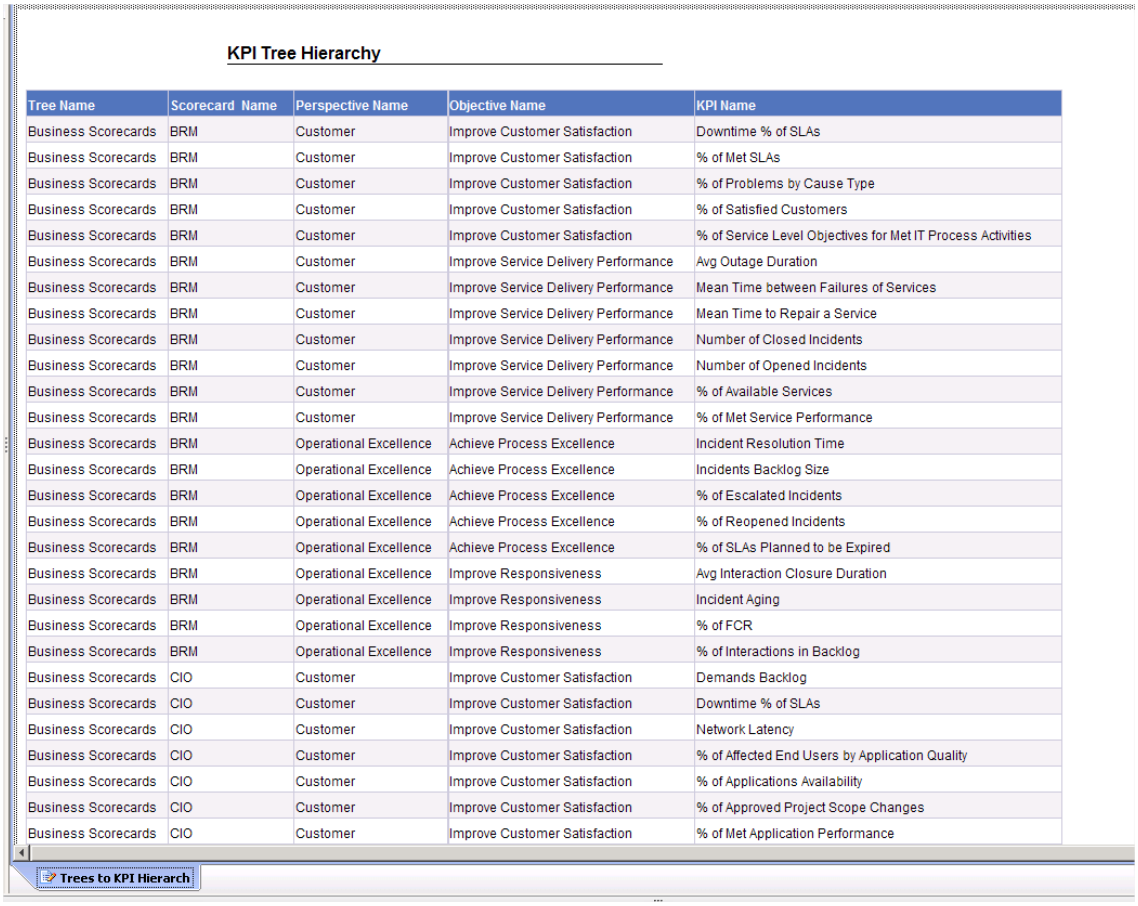
b. Click **OK**.

6. To view data in the component in the Dashboard page, click the Refresh button in the report toolbar.

Display the trees of KPIs in the KPIs Library

You can display the list of hierarchy trees of KPIs (templates) in the KPIs Library, with their Scorecards, Perspectives, Objectives, and KPIs. The KPI Contexts can have been defined either in SAP BusinessObjects or in the Context Designer.

1. In the Executive Dashboard, click the **New Page** button in the Dashboard toolbar.
2. If needed, configure the page that opens. For details, see Configure a Page Layout in the *Business Analyst Guide*.
3. Click the **Components** button.
4. In the Component Gallery page that opens, double-click the Web Intelligence Dynamic Report Viewer component to place it in the layout area, or select the component and drag it to an area on the page, and close the Component Gallery page.
5. In the component, click the **Configure Component** button.
6. In the Web Intelligence Dynamic Report Viewer Filter dialog box that opens, select the **KPI Tree Hierarchy** report to display the list of hierarchy trees of KPIs in the KPIs Library, with their Scorecards, Perspectives, Objectives, and KPIs.



KPI Tree Hierarchy

Tree Name	Scorecard Name	Perspective Name	Objective Name	KPI Name
Business Scorecards	BRM	Customer	Improve Customer Satisfaction	Downtime % of SLAs
Business Scorecards	BRM	Customer	Improve Customer Satisfaction	% of Met SLAs
Business Scorecards	BRM	Customer	Improve Customer Satisfaction	% of Problems by Cause Type
Business Scorecards	BRM	Customer	Improve Customer Satisfaction	% of Satisfied Customers
Business Scorecards	BRM	Customer	Improve Customer Satisfaction	% of Service Level Objectives for Met IT Process Activities
Business Scorecards	BRM	Customer	Improve Service Delivery Performance	Avg Outage Duration
Business Scorecards	BRM	Customer	Improve Service Delivery Performance	Mean Time between Failures of Services
Business Scorecards	BRM	Customer	Improve Service Delivery Performance	Mean Time to Repair a Service
Business Scorecards	BRM	Customer	Improve Service Delivery Performance	Number of Closed Incidents
Business Scorecards	BRM	Customer	Improve Service Delivery Performance	Number of Opened Incidents
Business Scorecards	BRM	Customer	Improve Service Delivery Performance	% of Available Services
Business Scorecards	BRM	Customer	Improve Service Delivery Performance	% of Met Service Performance
Business Scorecards	BRM	Operational Excellence	Achieve Process Excellence	Incident Resolution Time
Business Scorecards	BRM	Operational Excellence	Achieve Process Excellence	Incidents Backlog Size
Business Scorecards	BRM	Operational Excellence	Achieve Process Excellence	% of Escalated Incidents
Business Scorecards	BRM	Operational Excellence	Achieve Process Excellence	% of Reopened Incidents
Business Scorecards	BRM	Operational Excellence	Achieve Process Excellence	% of SLAs Planned to be Expired
Business Scorecards	BRM	Operational Excellence	Improve Responsiveness	Avg Interaction Closure Duration
Business Scorecards	BRM	Operational Excellence	Improve Responsiveness	Incident Aging
Business Scorecards	BRM	Operational Excellence	Improve Responsiveness	% of FCR
Business Scorecards	BRM	Operational Excellence	Improve Responsiveness	% of Interactions in Backlog
Business Scorecards	CIO	Customer	Improve Customer Satisfaction	Demands Backlog
Business Scorecards	CIO	Customer	Improve Customer Satisfaction	Downtime % of SLAs
Business Scorecards	CIO	Customer	Improve Customer Satisfaction	Network Latency
Business Scorecards	CIO	Customer	Improve Customer Satisfaction	% of Affected End Users by Application Quality
Business Scorecards	CIO	Customer	Improve Customer Satisfaction	% of Applications Availability
Business Scorecards	CIO	Customer	Improve Customer Satisfaction	% of Approved Project Scope Changes
Business Scorecards	CIO	Customer	Improve Customer Satisfaction	% of Met Application Performance

Trees to KPI Hierarch

7. Click **OK**.
8. To view data in the component in the Dashboard page, click the Refresh button in the report toolbar.

Setting the report so it displays data in the Web Intelligence Dynamic or Static Report Viewer component

Note: Use the Web Intelligence Dynamic Report Viewer component when you want the report to display the report in table format and in graphic format (where the report can be displayed in graphic format). If you want the report to display only in graphic format you can also use a Web Intelligence Static Report Viewer component, but in this case you must make sure that the report is scheduled as explained below).

To configure the Web Intelligence Dynamic or Static Report Viewer components so they display information when the component is part of a Dashboard page, select one of the following options:

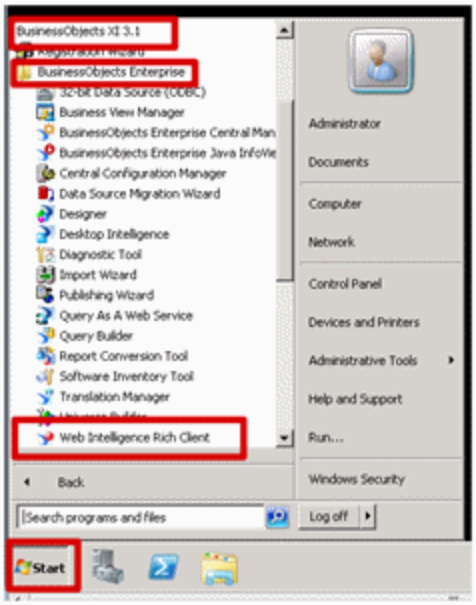
- "Manage Contexts and KPIs" on page 102
- " Press the refresh button when importing the report to the page" on page 112
- "Schedule the report" on page 112

Set the report properties to be 'Refresh on open'

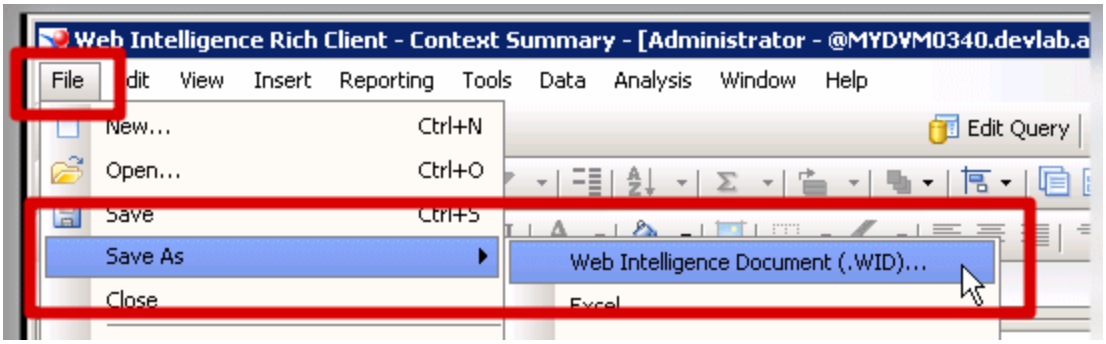
This option works with a Web Intelligence Dynamic Report Viewer component or with a Web

Intelligence Static Report Viewer component. When the Dashboard page where the component is included, is displayed, the component is automatically refreshed.

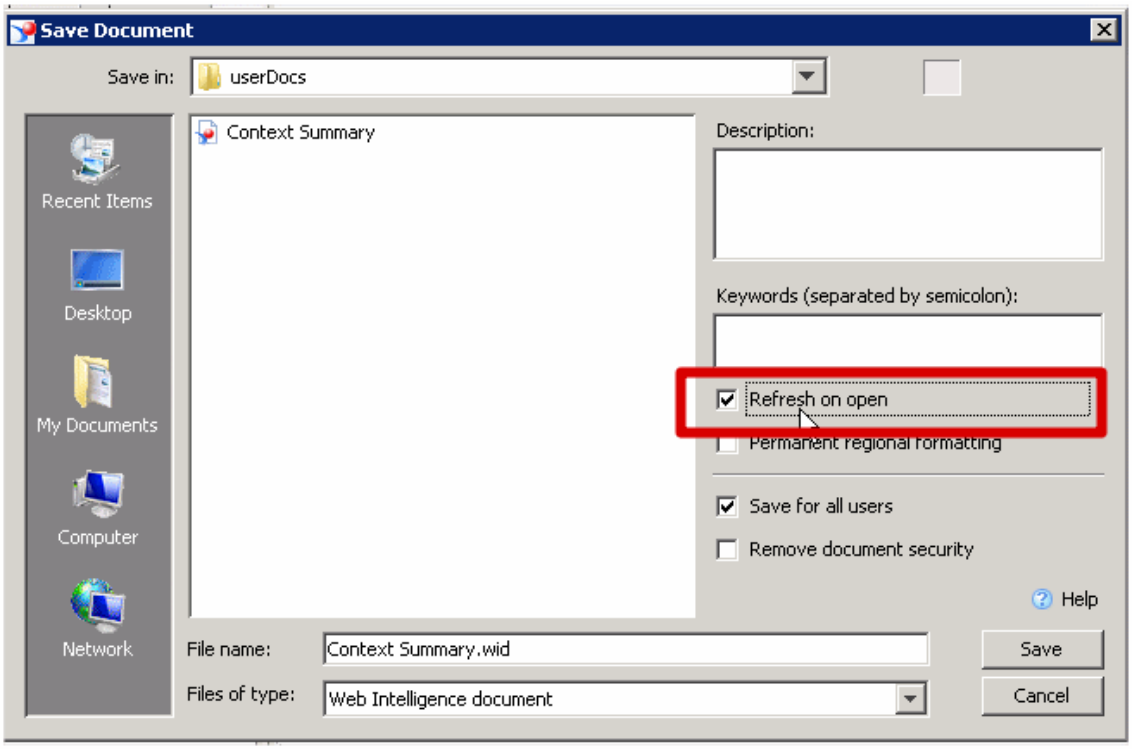
1. Click the Start menu and select **All Programs > BusinessObjects XI 3.1 > BusinessObjects Enterprise > Web Intelligence Rich Client**.



2. Log in to the server, import the report from the CMS, and save it.



3. Select the **Refresh on open** option.



4. Click **Save** and export the report to back to the CMS (**public folder > Studio Analysis**).

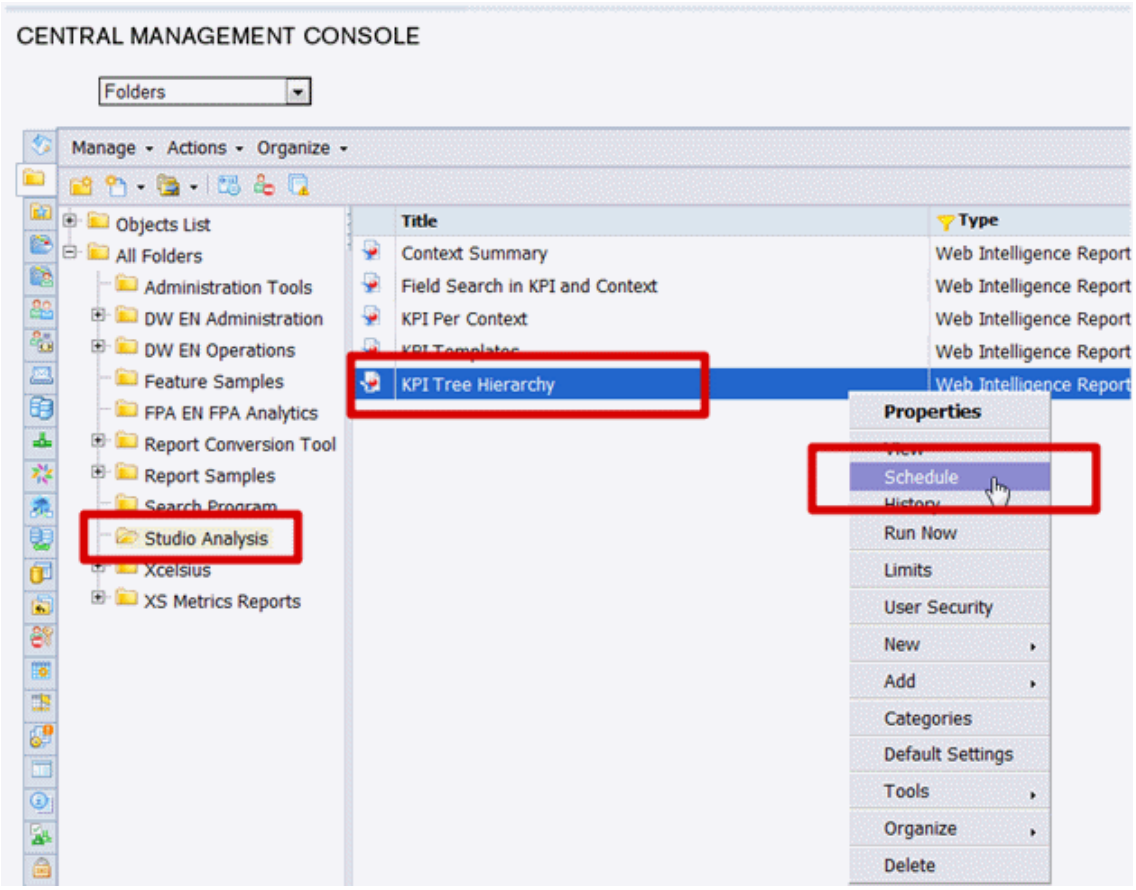
Press the refresh button when importing the report to the page

This option works with a Web Intelligence Dynamic Report Viewer component. When the Dashboard page where the component is included, is displayed, the component is not automatically refreshed and does not display data. You must click the Refresh button in the report toolbar to refresh the display and display data.

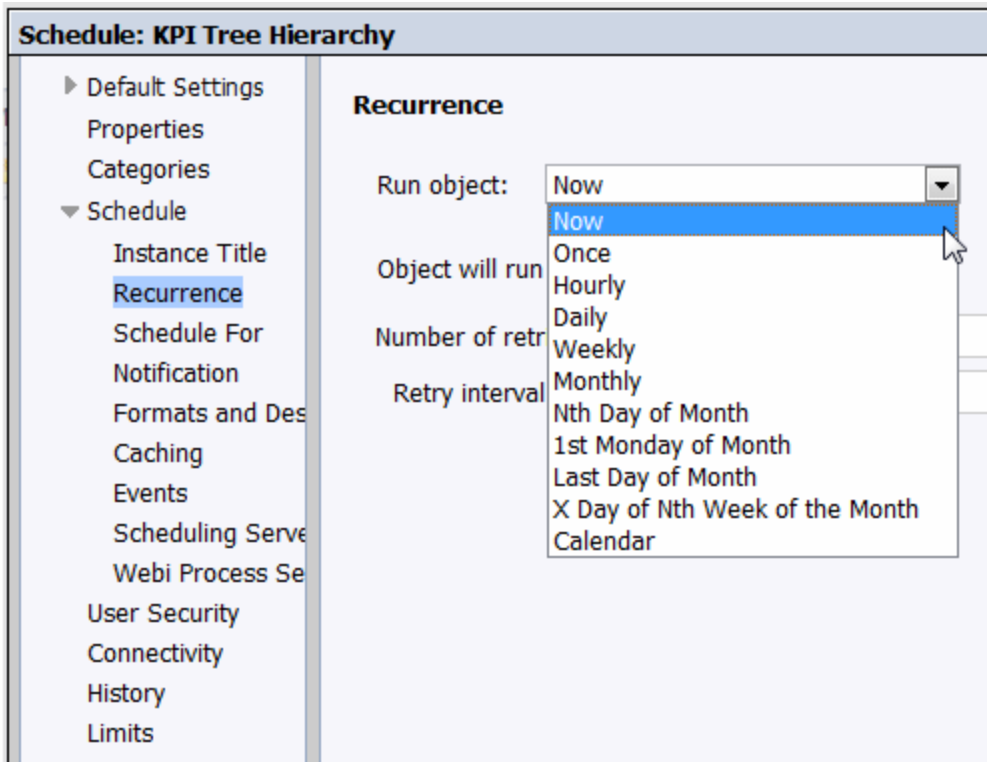
Schedule the report

This option works with a Web Intelligence Dynamic Report Viewer component or with a Web Intelligence Static Report Viewer component. When the Dashboard page where the component is included, is displayed, the component automatically displays the latest scheduled data.

1. Click the Start menu and select **All Programs > BusinessObjects XI 3.1 > BusinessObjects Enterprise > Web Intelligence Rich Client**.
2. Log in to the Central Management Console.



3. Choose the **Recurrence** type from the list and click **Schedule**.



Once you have a single instance of the report, you can then review the data in the report.

Export and Import KPIs, Pages, Components, Events, and Trees

This section includes the following topics:

Export or Import Trees and KPIs

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

You can import existing template trees or sub-trees, active trees, active sub-trees, or orphan KPIs into the KPI Library or 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, and Orphan KPIs) or of the KPI Library trees (Scorecard, Perspective, Objective, and KPI templates, Folders, and Orphan KPIs). It converts the contents to a configuration.xml file that describes the structure of the active tree or to a <tree_name>.xml file for each tree in the KPI Library. These files include the UUID and KPI name of the KPIs included in the trees. In addition, the process creates a <kpi_name>.xml file per KPI in the system; that file describes the configuration of the KPI. The XML files are created in a specific directory on the machine. For details about the directory, see "Template Locations" on next page

The import feature collects the content of a specific directory on the machine. The directory can include configuration.xml files, and <kpi_name>.xml files according to the same format used by the export feature or can include .xml files (the structure of these files should follow the XSD legal model; for details, see "XML Files Used in Import and Export Operations" on page 118) with other names. The import feature uses these files to upload the information in the specific area in the Active KPIs tree or in the KPI Library trees. For details about the directory, see "Template Locations" on next page.

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_name>. xml file includes information about the KPI configuration. That information is used so that the relevant configuration and calculation details are added to the relevant KPI. For details about the XML file structure, see "XML Files Used in Import and Export Operations" on page 118.

The export operation uses the KPI's UUID to identify the KPI.

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 or in the KPI Library trees. For details about the directory, see "Template Locations" on next page

Note: When the server on which the Executive Studio is located starts, if the system detects files in the **<XS_server>\agora\glassfish\glassfish\domains\Config\KPI Template\ Import** directory, it automatically uploads that information. This feature is used when you logon to the Executive Studio for the first time, to upload the out-of-the-box templates.

Template Locations

When working with XML files, the files are located in the following directories:

- **<XS_server>\agora\glassfish\glassfish\domains\Config\KPIConfiguration\Export** or **Import** for files corresponding to nodes in the Active KPI pane.
- **<XS_server>\agora\glassfish\glassfish\domains\Config\KPITemplate\ Export** or **Import** for files corresponding to template nodes in the KPI Library.

The Import directory includes the **Error**, **Load**, and **Loaded** directories.

Before you import a tree, the relevant XML files or the KPI Excel files must be located in the **Load** directory. After the import operation, the file is moved to:

- The **Loaded** directory if the import operation succeeds.
- The **Error** directory if the import operation fails. In this case, an error file explaining the problem is added to the Error directory.

Tasks

This section includes:

"To export a node:" below

"To import a node:" on next page

To export a node:

1. Make sure you have JDK installed.
2. Run **jconsole** in **<XS_server>\agora\jdk\bin**.
3. In the window that opens, select the **Remote Process** option, enter **<host_name>:<port_number>** and click **Connect**.
4. After the application completes its loading, click the **MBeans** tab.
5. Click **com.hp.btoe.studio.jmx**.
6. You can now:
   - **Export active KPIs from the Active KPIs pane.** Expand **KPIExport**, select the **Operations** branch, and click **exportKPIs**. In the Operation invocation area, enter **0** in the text field, and click the **exportKPIs** button. If the export operation is successful, the message **Method successfully invoked** is returned, and the result is XML files in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\kpiconfiguration\export** folder.
   - **Export KPITemplate from the KPI Library pane.** Expand **KPITemplateExport**, select the **Operations** branch, and click **exportKPITemplates**. In the Operation invocation area, enter **0** in the text field, and click the **exportKPITemplates** button. If the export operation is successful, the message **Method successfully invoked** is returned, and the result is XML files in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\kpitemplates\export** folder.

To import a node:

1. Before importing any entity, you can create a XML file with appropriate structure or you can take an XML file you exported previously and that you want to import now. For details, see "About Exporting or Importing Trees" on page 115.
2. Save the XML file to:
   - **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\kpitemplates\import\load** folder for importing to the KPI Library pane.
   - **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\kpiconfiguration\import\load** folder for importing to the Active KPIs pane.
3. Make sure you have JDK installed.
4. Run **jconsole** in the **<XS_server>\agora\jdk\bin**.
5. In the window that opens, select the **Remote Process** option, enter **<host_name>:<port_number>** and click **Connect**.
6. After the application completes its loading, click the **MBeans** tab.
7. Click **com.hp.btoe.studio.jmx**.
8. You can now:
   - **Import the tree structure or the Orphan KPIs to the Active KPIs pane.** Expand **KPILoader**, select the **Operations** branch, and click **importKPIsAllTenants** (to import all the KPIs of all the tenants) or **importKPIsByTenant** (to import all the KPIs of a specific tenant).

     If the import operation is successful, the message **Method successfully invoked** is returned, and the imported entity is displayed in the Active KPIs pane in the Studio.

     In addition, the XML file is moved to the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\kpiconfiguration\import\loaded** folder.

     If the import operation fails, an explanation of the failure is added in the relevant file in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\kpitemplates\import\errors** folder.

     Note that the message Method successfully invoked might be displayed in some cases in case of failure of the import operation.
   - **Import the template tree or Orphan KPI Templates to the KPI Library.** Expand **KPITemplateLoader**, select the **Operations** branch, and click **importKPITemplatesAllTenants** (to import all the KPI templates of all the tenants) or **importKPITemplatesByTenant** (to import all the KPI templates of a specific tenant).

     If the import operation is successful, the message **Method successfully invoked** is returned, and the imported entity is displayed in the KPI Library pane in the Studio.

     In addition, the XML file is moved to **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\kpitemplates\import\loaded** folder.

If the import operation fails, an explanation of the failure is added in the relevant file in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\kpitemplates\import\errors** folder.

Note that the message **Method successfully invoked** might be displayed in some cases in case of failure of the import operation.

Note: If information is missing from the Load directory, part of the import operation might not be performed.

Example:

- If one or more of the KPI XML files are missing from the **<XS_server>\agora\glassfish\glassfish\domains\Config\KPITemplate\Import\Load** directory, the trees that include the missing KPIs (represented by the configuration.xml or by the <tree_name>.xml files) are not imported. In addition, the relevant error files are entered in the **<XS_server>\agora\glassfish\glassfish\domains\Config\KPITemplate\Import\Error**s directory.
- If one or more of the mandatory properties of a KPI (for example, the formula) are missing from the **<XS_server>\agora\glassfish\glassfish\domains\Config\KPITemplate\Import\Load** directory, the KPI is not imported. In addition, the relevant error files are entered in the **<XS_server>\agora\glassfish\glassfish\domains\Config\KPITemplate\Import\Errors** directory.

For details about the structure of the XML files, see "XML Files Used in Import and Export Operations" below.

Reference

XML Files Used in Import and Export Operations

Import and export work with XML files. The XML files have the following structures:

Example of a KPI XML File:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<KPI tenantId="0">
    <name>% Actual vs Planned Costs</name>
    <description>The actual costs relative to the budgeted costs of
an activity.
    </description>
    <type>LEAF</type>
    <period>MONTHLY</period>
```

```
    <dimension></dimension>
    <formula>PERCENTAGE_MATH(
SUM(Cost.Amount,Cost.CostType='Actual' and PERIOD_ENTITY=Period),
SUM(Cost.Amount,Cost.CostType='Planned' and PERIOD_ENTITY=Period)
)
    </formula>

    <thresholdType type="MINIMIZE">
        <rangeFrom>0.0</rangeFrom>
        <rangeTo>4.0</rangeTo>
        <goodFrom>0.0</goodFrom>
        <goodTo>2.0</goodTo>
        <warningFrom>2.0</warningFrom>
        <warningTo>3.0</warningTo>
    </thresholdType>
    <unit>%</unit>
    <filter></filter>
    <dataSource>test</dataSource>
    <uuid>3c7a1c22-5c10-4703-a22b-4a1eac317a5c</uuid>
</KPI>
```

Where:

Tag	Explanation	Example
<name>	The name of the KPI. **Limit:** • The name can be up to 265 characters or symbols. • The forward slash (/) symbol is not supported.	<name>% Actual vs Planned Costs</name>

<description>	The description of the KPI **Limit:** • The name can be up to 1000 characters or symbols. • The forward slash (/) symbol is not supported.	<description> The actual costs relative to the budgeted costs of an activity.</description>
<type>	This is type of the entity. It can be: • **LEAF** • **PARENT** • **BREAK-DOWN** • **BD_PARENT** The entry must be in uppercase.	<type>LEAF</type>
<period>	The period of the KPI. It can be: • **WEEKLY** • **MONTHLY** • **QUARTERLY** • **YEARLY** The entry must be in uppercase. For details, see "Configure a KPI or a Metric" in the *Business Analyst Guide*.	<period>MONTHLY</period>

<**busi-nessQuestions**>	The Business motivation displayed in the Metadata area in the KPI's **Configuration details** tab. For details, see "Configure a KPI or a Metric" in the *Business Analyst Guide*. **Limit:** • The name can be up to 1000 characters or symbols. • The forward slash (/) symbol is not supported.	<businessQuestions>What are the actual cost and planned cost values? What is the percentage of actual versus planned spending? How do the actual versus planned costs measure against the thresholds? Is actual versus planned spending on target or in the minimum or maximum</businessQuestions>
<**comments**>	The comments displayed in the Comments area in the KPI's **Calculation details** tab. For details, see "Configure a KPI or a Metric" in the *Business Analyst Guide*.	<comments>My comments</comments>
<**formula**>	The formula used to calculate the value of the KPI.	<formula>PERCENTAGE_MATH(SUM (Cost.Amount,Cost.CostType='Actual' and PERIOD_ENTITY=Period),100000)</formula>

<thresholdType type=" ">	The direction of the Result threshold. It can be: • **MAXIMIZE** • **CENTRALIZE** • **MINIMIZE** The entry must be in uppercase. For details, see "Configure a KPI or a Metric" in the *Business Analyst Guide*.	<thresholdType type="MAXIMIZE"> % and 10% (green), and a bad rate is between 10% and 100% (red).
<rangeFrom>	Lower value of the error range.	<rangeFrom>0.0</rangeFrom>
<rangeTo>	Higher value of the error range.	<rangeTo>100.0</rangeTo>
<goodFrom>	Lower value of the good range.	<goodFrom>90.0</goodFrom>
<goodTo>	Higher value of the good range.	<goodTo>100.0</goodTo>
<warningFrom>	Lower value of the warning range.	<warningFrom>80.5</warningFrom>
<warningTo>	Higher value of the warning range.	<warningTo>90.0</warningTo>
<unit>	The KPI's unit. It can be: • **%** • **$US** (The entry must be in uppercase.) • **Days** (The entry must be init cap.)	<unit>%</unit> <unit>$US</unit> <unit>Days</unit>

<filter>	The formula used to calculate the KPI's value.	<filter>Budget.Name = 1</filter>
<dataSource>	The Context. The Context's entities are the basis of the calculation and provide the entities used in the formula.	<data-Source>FinancialManagement</dataSource>
<uuid>	Set UUID to identify the KPI. You can set your own UUID for the KPI. For example **<uuid>This is MY KPI</uuid>**	<uuid>1c9eab96-5013-412c-a428-17a1ae39317b</uuid>

Example of a Folder tree XML File:

```
<?xml version="1.0" encoding="UTF-8"?>
<tree xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:noNamespaceSchemaLocation="../xsd/templates/Template_
tree.xsd" name="Industry Standard" tenantId="0">
    <folder name="ITIL" description="ITIL">
        <folder name="Asset Management" description="Asset
Management">
            <template name="Average Age of Hardware Assets"/>
        </folder>
        <folder name="Change Management" description="Change
Management">
            <template name="Change Risk"/>
        </folder>
        <folder name="Financial Management" description="Financial
Management">
            <template name="% of budget deviation relative to total
budget"/>
            <template name="% Project Budget over or under"/>
            <template name="Actual vs. budgeted costs"/>
        </folder>
        <folder name="Incident Management" description="Financial
Management">
            <template name="% of escalated incidents"/>
```

```
            <template name="% incidents solved within SLA time"/>
        </folder>
        <folder name="Problem Management" description="Financial
Management">
            <template name="% of problems resolved on time"/>
        </folder>
    </folder>
    <folder name="All working KPI's" description="just a copy of
all tempaltes">
        <template name="% of Reopened Incidents"/>
        <template name="% of critical and high incidents"/>
    </folder>
</tree>
```

Example of a Scorecard tree XML File:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<tree xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:noNamespaceSchemaLocation="../xsd/templates/Template_
tree.xsd" name="Industry Standard" tenantId="0">
    <scorecard name="CIO Scorecard" description="Business Value">
        <perspective name="Customer" description="?">
            <objective name="Reduce incident/problem management
related customer complaints by 30% in 2011"
                       rule="BEST_CHILD" period="MONTHLY">
                <template name="% of Reopened Incidents"/>
                <template name="% of escalated incidents"/>
            </objective>
            <objective name="Improve Service Delivery by 30%"
rule="BEST_CHILD" period="MONTHLY">
                <template name="% of Service Level Objectives for
Met IT Process Activities"/>
                <template name="Service request avg response
time"/>
                <template name="Service request backlog"/>
            </objective>
            <objective name="Increase Customer Satisfaction by 20%
in 2011" rule="BEST_CHILD" period="MONTHLY">
                <template name="Reported exceptions to SLA"/>
                <template name="Customer Satisfaction"/>
                <template name="Critical time outage"/>
            </objective>
        </perspective>
        <perspective name="Internal Business Process"
description="?">
            <objective name="Improve Project Delivery by increasing
```

```
throughput by 15%" rule="BEST_CHILD"
                        period="MONTHLY">
                <template name="Employee Utilization Rate"/>
                <template name="% of projects on time"/>
                <template name="Deviation % of Planned Work
Hours"/>
                <template name="TTM"/>
            </objective>
        </perspective>
        <perspective name="Financial" description="?">
            <objective name="Reduce unhealthy projects budget risk
by 10% in 2011" rule="BEST_CHILD" period="MONTHLY">
                <template name="Unhealthy projects"/>
                <template name="% of Capital Exposure at Risk"/>
                <template name="Unhealthy projects budget risk"/>
            </objective>
            <objective name="Increase Employee Utilization by 3% in
1st Qtr 2011" rule="BEST_CHILD" period="MONTHLY">
                <template name="Employee Utilization Rate"/>
                <template name="FCR"/>
            </objective>
            <objective name="Reduce IT budget by 20% in 2011"
rule="BEST_CHILD" period="MONTHLY">
                <template name="% FTE"/>
                <template name="Service Actual to Plan"/>
                <template name="% Outages/Total SLA uptime"/>
                <template name="Business Service Cost Reduction"/>
            </objective>
        </perspective>
        <perspective name="Learning and Growth" description="?">
            <objective name="Increase Manager skills against the
competency model by  15% in 2011 above 2010"
                        rule="BEST_CHILD" period="MONTHLY">
                <template name="Percentage of managers meeting or
exceeding leadership competency model"/>
            </objective>
            <objective name="Increase Employee Satisfaction by 10%
in 2011" rule="BEST_CHILD" period="MONTHLY">
                <template name="Employee Attrition"/>
                <template name="Job Satisfaction"/>
                <template name="Employee Satisfaction"/>
            </objective>
            <objective name="Increase employee productivity by 10%"
rule="BEST_CHILD" period="MONTHLY">
                <template name="Employee Utilization Rate"/>
            </objective>
        </perspective>
```

```
    </scorecard>
</tree>
```

Example of a KPI Excel File:

The Excel table must include the following columns in the following order:

- ID
- KPI
- Description
- Business Questions
- Context
- Formula
- Unit Type
- Time Period
- Direction
- Range From
- Range To
- Good From
- Good To
- Warning From
- Warning To

For details about the above column contents, see "Configure a KPI or a Metric" in the *Business Analyst Guide*.

Import or Export Out-of-the-box Pages, Components, and Events

You can import existing out-of-the-box pages, components and events into the Dashboard page.

The import or export flows are meant to be used 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

About Importing or Exporting OOTB Pages, Components, and Events

Out-of-the-box pages are available 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 "Prepare the Dashboard Display" (on page 1) in the *Business Analyst Guide*.

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

The export feature collects the contents of the pages, components, and events. It converts the contents to **components.uim.xml**, **pages.uim.xml**, and **events.uim.xml** files that describes the structure and content of the pages, components, and events. These files include the UUID of the pages and components.

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

The import feature collects the contents of a specific directory on the machine. The directory can include **components.uim.xml**, **pages.uim.xml**, and **events.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.
- The **Errors** directory if the import operation fails.

Note: When the server on which the Dashboard is located starts, if the system detects files in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\uimashup\import\toload** directory, it automatically uploads that information.

Tasks

This section includes:

To import pages, components, or events:

1. Make sure you have JDK installed.
2. Run **jconsole** in the **Start** menu.
3. In the window that opens, select the **Remote Process** option, enter **<host_name>:<port_number>** and click **Connect**.
4. After the application completes its loading, click the **MBeans** tab.
5. To import all the pages, components, and events at once, expand **UIM**, select **Operations** and in the Operation invocation area, click the **importData** button.
   Or, you can also import pages, components and events separately as follows:
   - **Import the pages.** Expand **UIM**, and select **Operations**. In the Operation invocation area, click the **loadPagesData** button.

If the import operation is successful, the message **Method successfully invoked** is returned, and the imported entities are displayed in the Page Gallery.

In addition, the XML file is moved to the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\uimashup\import\loaded** folder.

If the import operation fails, an explanation of the failure is added in the relevant file in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\uimashup\import\errors** folder.

Note that the message **Method successfully invoked** might be displayed in some cases in case of failure of the import operation.

Note: If you want to import pages in another language, the existing (English) categories are not removed, so both translated and non-translated categories appear in the list of categories. To select the categories you want to delete, expand **UIM**, and select **Operations**. In the Operation invocation area, click the **displayAllCachedGalleryCategories** button to view the current categories to display a table that lists all the out-of-the-box categories. Once you know which categories you want to delete, expand **UIM**, and select **Operations**. In the Operation invocation area, click the **deletePageCategoryByName** button and specify the relevant page category you want to delete.

- **Import the components.** Expand **UIM** and select **Operations**. In the Operation invocation area, click the **loadComponentsGallery** button. If successful, the message **Method successfully invoked** is returned, and the imported entities are displayed in the Component Gallery..

  In addition, the XML file is moved to the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\uimashup\import\loaded** folder.

  If the import operation fails, an explanation of the failure is added in the relevant file in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\uimashup\import\errors** folder.

  Note that the message **Method successfully invoked** might be displayed in some cases in case of failure of the import operation.

  Note: If you want to import components in another language, the existing (English) categories are not removed, so both translated and non-translated categories appear in the list of categories. To select the categories you want to delete, expand **UIM**, and select **Operations**. In the Operation invocation area, click the **displayAllCachedGalleryCategories** button to view the current categories. Once you know which categories you want to delete, expand **UIM**, and select **Operations**. In the Operation invocation area, click the **deleteComponentCategoryByName** button and specify the relevant component category you want to delete.

- **Import the events.** Expand **UIM**, and select **Operations**. In the Operation invocation area, click the **loadEvents** button.

If the import operation is successful, the message **Method successfully invoked** is returned.

In addition, the XML file is moved to **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\uimashup\import\loaded** folder.

If the import operation fails, an explanation of the failure is added in the relevant file in the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\uimashup\import\errors** folder.

Note that the message **Method successfully invoked** might be displayed in some cases in case of failure of the import operation.

Note:

- If information is missing from the Load directory, part of the import operation might not be performed.
- When a file is copied to the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\uimashup\import\loaded** folder during the import process, a timestamp (Milliseconds since midnight, January 1, 1970 UTC) is added to its name, for example: **Components_pt_BR_130810232011.xml**. This way, you can see which file is currently assigned to the database.

To export pages, components, or events:

1. Make sure you have JDK installed.
2. Run **jconsole** in the **Start** menu.
3. In the window that opens, select the **Remote Process** option, enter **<host_name>:<port_number>** and click **Connect**.
4. After the application completes its loading, click the **MBeans** tab.
5. You can now:
   - **Export pages.** Expand **UIM** and select **Operations**. In the Operation invocation area, click the **exportPages** button and specify the **pathToExportLocation**. If the export operation is successful, the message **Method successfully invoked** is returned, and the result is XML files in the folder you specified.
   - **Export components and events.** Expand **UIM** and select **Operations**. In the Operation invocation area, click the **exportMetaData** button and specify the **pathToExportLocation**. If the export operation is successful, the message **Method successfully invoked** is returned, and the result is XML files in the folder you specified.

Localize and Globalize Executive Scorecard

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

Tasks

Out-of-the-box KPI Library Pane Contents

The localized installation adds the language libraries of XML files in specific folders. 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 Executive Scorecard server, locate the **<XS_installation_directory>\agora\glassfish\glassfish\domains\BTOA\config\kpitemplates\import\languages\<language_code>_<country_code>** folder relevant for the language you want to use in the application. The .xml files in the folder 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
Russian	ru	RU

2. Copy these .xml files to the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\kpitemplates\import\load** folder.

   Tip:

   If the folder contains other sets of files (for different languages), it is recommended to keep in the folder only the required set of language files and to move the other files outside the folder 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 "Export or Import Trees and KPIs" on page 114in the *Administrator Guide*.

Out-of-the-box Dashboard Content (Pages and Components)

The localized installation adds the language libraries of XML files in specific folders. 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:

Prerequisite

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

Copy the libraries

1. In the Executive Scorecard server, locate the **<XS server>\agora\glassfish\glassfish\domains\BTOA\config\uimashup\import\languages\<language_code>_<country_code>** folder relevant to the language you want to install. These .uim.xml files represent the components and the pages used in the Dashboard.
2. 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
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

3. Copy these files to the **<XS_server>\agora\glassfish\glassfish\domains\BTOA\config\uimashup\import\toload** folder.

Tip:

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

4. Import the out-of-the-box language files (**only for the pages and components - events are not localized**) using the relevant procedure described in "Import or Export Out-of-the-box Pages, Components, and Events" on page 126 in the *Administrator Guide*.

Content Acceleration Packs (CAPs)

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

CAPs describe typical stories that show how correct implementation of Executive Scorecard drives Performance Improvement and Cost Reduction for the IT organization. CAPs demonstrate Executive Scorecard capabilities, and helps you add basic elements that can be used to customize your Dashboard.

This section includes the following topics:

Manage Content Acceleration Packs Using CAP Management

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

CAPs describe typical stories that show how correct implementation of Executive Scorecard drives Performance Improvement and Cost Reduction for the IT organization. CAPs demonstrate Executive Scorecard capabilities, and helps you add basic elements that can be used to customize your Dashboard.

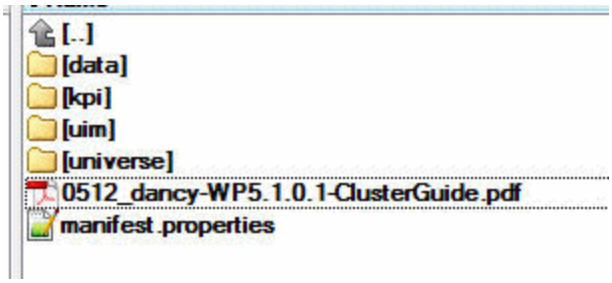
To access:

Click **Admin > Content Acceleration Pack > Content Acceleration Pack**

Learn More

Content Acceleration Pack Contents

The Content Acceleration Pack ZIP file includes the following folders:



- **data** - contains the .CSV files. The name of the .CSV files to be uploaded provide data for the Content Acceleration Pack KPIs and Metrics. For details, see "Upload Tables in .CSV Format to the Tables Repository" on page 84.
- **kpi** - contains the .XML files that correspond to KPIs and Scorecards. The KPIs and Scorecards are imported into the Studio Active KPIs pane. The Scorecards and relevant KPIs are also displayed in the Dashboard pages after the calculation completes and the relevant page is loaded. For details, see "Manage Content Acceleration Packs Using CAP Management" on previous page.
- **uim**- contains:
  - **Components** folder - contains the .XML files that correspond to the components that you can add to a page.
  - **Pages** folder - contains the .XML files that describe the pages that are included in the CAP.

    You import the components, events, and pages into the Dashboard where they are used to build the Dashboard pages. For details, see "Manage Content Acceleration Packs Using CAP Management" on previous page.
- **universe** folder- contains the .XML files that correspond to the Business Contexts (universes). The Content Acceleration Pack installation automatically installs the Business Contexts.
- **<CAP_documentation>** - the PDF or Microsoft Word document that describes the CAP.
- **manifest.properties** file - includes information about the following items:
  - **UUID.** A unique ID for the Content Acceleration Pack.
  - **Name.** The name of the Content Acceleration Pack. Mandatory.
  - **BCs.** The names of the Business Contexts to be calculated (comma separated).
  - **Description.** The description of the Content Acceleration Pack. Optional
  - **recalculate.date.** The start date of the recalculation. Recalculation is started automatically when you activate the CAP.
  - **bo.in.use.**
    - **false** - The Content Acceleration Pack contents do not include SAP BusinessObjects Enterprise reports.
    - **true** - The Content Acceleration Pack contents include SAP BusinessObjects Enterprise reports.
  - **version.** The version of the Content Acceleration Pack.
  - **publisher.** The name of the creator of the CAP. It can be a single user, an HP partner, or a group in your organization.
  - **xs.version.** The version of Executive Scorecard

Out-of-the-box Content Acceleration Packs

VP of Operations Content Acceleration Pack in the *Content Reference Guide*

VP of Applications Content Acceleration Pack in the *Content Reference Guide*

Security Enterprise Architecture Content Acceleration Pack in the *Content Reference Guide*

Cloud Content Acceleration Pack in the *Content Reference Guide*

Tasks

This section includes:

View the available CAPs

To view a list of all the CAPs available in the system:

1. In Executive Scorecard, click **Admin > Content Acceleration Pack**.

   The page displays the list of available CAPs. For details, see "CAP Management Page" on page 139.

2. You can now manage (create, upload, delete, download, activate, and deactivate) the CAPs.

Upload a CAP from the user's local system to the Executive Scorecard application

To upload a CAP from the local system to the Executive Scorecard application:

1. Prerequisites:
   - The .ZIP file of the CAP you want to upload is copied to your file system.
   - A corresponding CAP (with the same UUID) does not already exist in the Executive Scorecard application.
2. In Executive Scorecard, click **Admin > Content Acceleration Pack.**.

   The page displays the list of available CAPs.

3. Click  to open a browser dialog box where you can select the relevant .ZIP file corresponding to CAP you want to upload .
4. Check the **Activate CAP after upload** checkbox if you want to activate the CAP automatically when the upload is completed.

You can now activate the CAP. For details, see "Activate a CAP" on next page.

Upload a localized CAP

To upload localized CAPs:

1. Delete the pre-imported out-of-the-box CAPs in the English language.
2. Upload the localized CAPS:
   - **Localized out-of-the-box CAP**. To upload a localized out-of-the-box CAP, proceed as described in "Upload a CAP from the user's local system to the Executive Scorecard application" on previous page and specify the location of the out-of-the-box CAP.

     Note: Localized out-of-the-box CAPs .ZIP files are placed in the relevant language folder during installation:
     ..\HPXS\agora\glassfish\glassfish\domains\BTOA\config\cap\import\languages

     For example, the VPOPS CAP in German is located at:
     ..\HPXS\agora\-glassfish\glassfish\domains\btoa\config\cap\import\languages\de_DE\VPOPS_de_DE.zip
   - **Localized user-defined CAP.** To upload a localized user-defined CAP proceed as described in "Upload a CAP from the user's local system to the Executive Scorecard application" on previous page and specify the location of the localized CAP you have created.

Activate a CAP

When you activate a CAP, all the content of the CAP is added to current data (Contexts, KPIs, Pages, etc.) and a recalculation is performed according to the CAP definitions.

To activate a CAP:

1. Prerequisites:

   The CAP is in the list of available CAPs and is not activated.
2. In Executive Scorecard, click **Admin > Content Acceleration Pack.**.

   The page displays the list of available CAPs.
3. Select the relevant CAP and click **Activate**.

   You get a notification that the CAP is being activated. Click **Yes** to complete the Activation. It takes a few minutes.

   If a CAP that shares the same content was already activated, an alert warns you that activating the new CAP will override the overlapping instances.

   Once the activation is complete, an indication  is added to the CAP.
4. You can now:
   - View the Business Context details in Context Designer. For details, see "Semantic Layer - Create and Manage Contexts Using Context Designer and Upload Data Using Data Loader" on page 78.
   - View and expand the Scorecard tree in the Active KPIs pane. For details, see Activate Scorecards, Perspectives, Objectives, Metrics, or KPIs Using Templates in the *Business*

Analyst Guide.

- View the Scorecard, and KPIs configuration in the Configuration Details, and Calculation Details tabs. For details, see Configure a Scorecard or Configure a KPI or a Metric in the *Business Analyst Guide*.
- View the Content Acceleration Pack page in Dashboard. For details, see Manage Page Categoriesin the *Business Analyst Guide*.
- View information in Explorer. For details, see View and Analyze Results in the Explorer Pagein the *Business Analyst Guide*.

Deactivate a CAP

When you deactivate a CAP, all the content of the CAP is deleted.

To deactivate a CAP:

1. Prerequisites:

   The CAP is in the list of available CAPs and is activated.

2. In Executive Scorecard, click **Admin > Content Acceleration Pack.**.

   The page displays the list of available CAPs.

3. Select the relevant CAP and click **Deactivate**.

   If the CAP is activated a message is issued to task you to deactivate the CAP before you can delete it.

   You get a notification that the CAP is being deactivated.

   Once the deactivation is complete, an indication  is added to the CAP.

   Note: You are notified that the deactivation of a CAP may cause errors in pages and KPIs using this CAP content. All the CAP entities will be deleted if you acknowledge the warning.

Delete a CAP from the Executive Scorecard application

When you delete a CAP, the CAP is deleted from the Executive Scorecard server and is not listed in the list of CAPs any more.

To delete a CAP:

1. Prerequisites: The CAP is in the list of available CAPs and is not activated.
2. In Executive Scorecard, click **Admin > Content Acceleration Pack.**
3. Select **Content Acceleration**.

   The page displays the list of available CAPs.

4. Select the relevant CAP and click  .

   Once the deletion is complete, the CAP is removed from the list of available CAPs.

Download a CAP to the user's local system

To download a CAP and save it to the local system ato be used in other environments:

1. In Executive Scorecard, click **Admin > Content Acceleration Pack** tab.
2. Select **Content Acceleration**.

   The page displays the list of available CAPs.
3. Click  to open a browser dialog box where you can select where you want to download the CAP.

   The CAP .ZIP file is saved at that location.

Create a CAP from the Executive Scorecard application data

You can create a new CAP that includes existing Contexts, Scorecards, KPIs and Metrics, and Dashboard pages.

1. Before creating the CAP, make sure you have already created all the relevant Scorecards, KPIs, Metrics, Pages and Contexts that you wish to include in the CAP and that they have been calculated with the expected results. If you find that some content is missing, go back and create it. Once this is done, you can start creating the CAP.
2. In Executive Scorecard, click **Admin > Content Acceleration Pack**.

   The page displays the list of available CAPs.
3. Click  to open a wizard where you can create the CAP. For details, see "Create Content Acceleration Packs" on page 146.

Modify a CAP

To modify an existing CAP, it is recommended to create a new CAP with the relevant content and then to delete the existing CAP.

1. In Executive Scorecard, click **Admin > Content Acceleration Pack**.

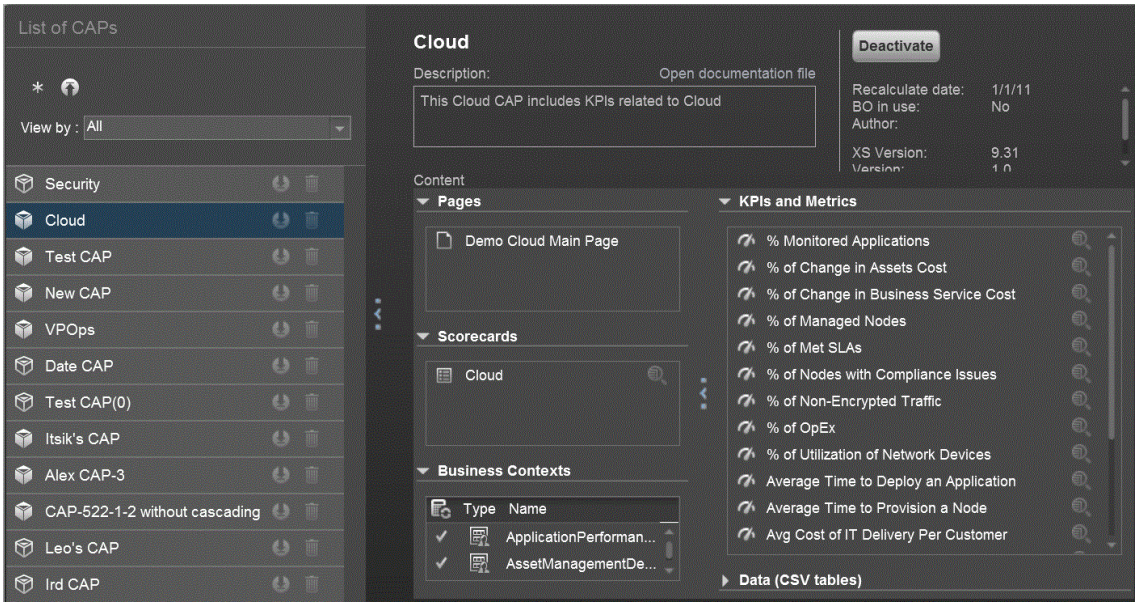
   The page displays the list of available CAPs.
2. Click  to open a wizard where you can create the CAP. For details, see "Create Content Acceleration Packs" on page 146.
3. After you have created the new CAP, remove the old CAP.

Upgrade a CAP

For details, see Upgrading the 9.30 Content Acceleration Packs (CAPs) in the *Upgrade Guide*.

UI Description

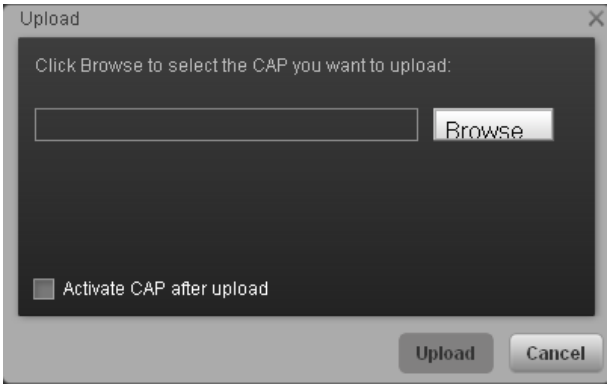
CAP Management Page



List of CAPs area

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

UI Element	Description
*	Click to create a new Content Acceleration Pack. The Create CAPs wizard opens. For details, see "Create Content Acceleration Packs" on page 146.

	Click to upload a .ZIP file from the file system to the Executive Scorecard application. A dialog box opens to enables you to browse to locate the .ZIP file. Before clicking the button make sure that: • The .ZIP file of the CAP you want to upload is copied to your file system. • A corresponding CAP (with the same UUID) does not already exist in the Executive Scorecard application. **Select Activate CAP after upload** to automatically activate the CAP after it completes its upload. 
	Click to download the .ZIP file corresponding to the selected Content Acceleration Pack to the file system. During the creation of a CAP using the wizard, all the contents of the CAP are automatically saved in a .ZIP file.
	Click to delete the corresponding Content Acceleration Pack. Before your click the button, make sure that: The CAP is in the list of available CAPs and is not activated.
View by	Filter the available Content Packs by their status: • **All.** All statuses. • **Activated.** Displays the activated Content Packs. Activated Content Packs are indicated by . • **Deactivated.** Displays the deactivated Content Packs. Deactivated Content Packs are indicated by . • **Activating.** Displays the Content Packs that are in the process of being activated. Activating Content Packs are indicated by . • **Deactivating.** Displays the Content Packs that are in the process of being deactivated. Deactivating Content Packs are indicated by .
<List of CAPs>	The list of available CAPs within the Executive Scorecard server.

CAP Description area

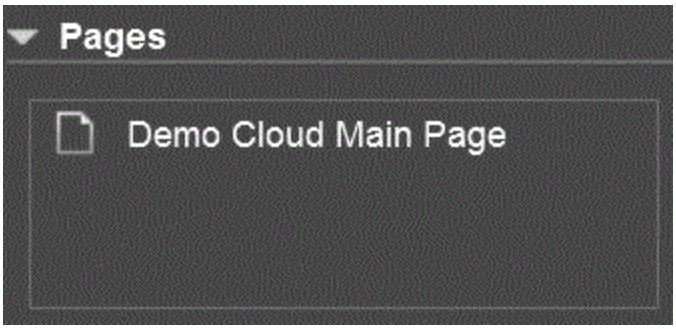
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

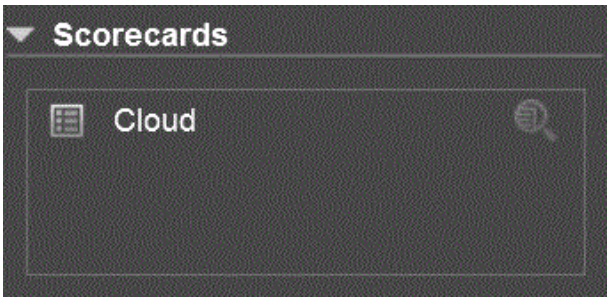
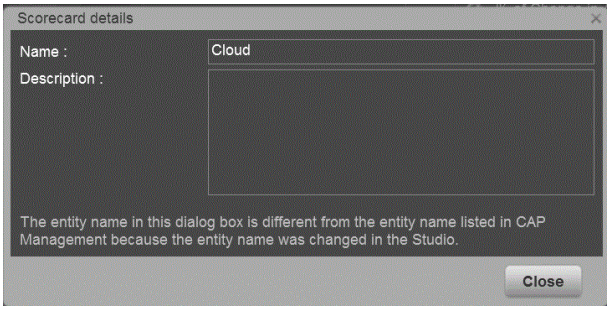
UI Element	Description
<CAP name>	The name of the Content Acceleration Pack. The standard characters are supported: a-z,A-Z,and 0-9.
Description	The description of the Content Acceleration Pack. The standard characters are supported: a-z,A-Z,and 0-9. **Note:** Only the beginning of the description in displayed in this field (1000 chararacters). To view the complete description of the CAP, click the **Open documentation file** link.
Activate Deactivate	Click to activate or deactivate the Content Acceleration Pack. **Note:** If the Content Acceleration Pack is already activated the **Deactivate** button is displayed and vice-versa. • When you click Activate, the system scans the CAP entities (Pages, Scorecards, KPIs, Metrics, Contexts, and data (in .CSV table format)). If such entities already exist in the system because they are part of an activated CAP, a warning is issued so the user can select to continue the activation or not. Note that when the CAP is activated, its entities override the entities already activated in the application (not the templates). • When you click Deactivate, the system removes the CAP entities (Pages, Scorecards, KPIs, Metrics, user-defined Contexts, and data (in .CSV table format)) except for the Contexts that are out-of-the-box.
Open documentation file	Click to display a detailed description of the Content Acceleration Pack.
Recalculate date	The date from when the CAP's Business Contexts are recalculated when the CAP is activated.
BO in use	**Yes.** The CAP comprises a page or a KPI that includes SAP BusinessObjects Enterprise elements. **No.** The CAP does not comprise a page or a KPI that includes SAP BusinessObjects Enterprise elements.

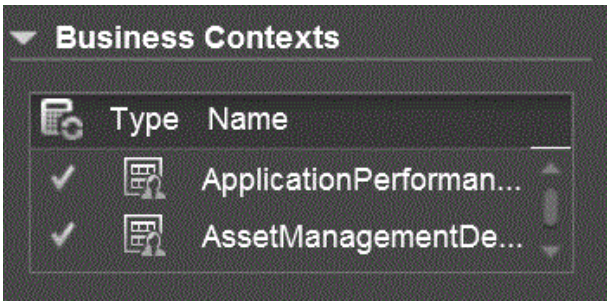
Author	The user, partner, or company that created the CAP.
XS Version	The version of HP IT Executive Scorecard used when the CAP was created.
Version	The version of the CAP.
Activation date **Deactivation date**	The date when the CAP was activated, deactivated, or created.

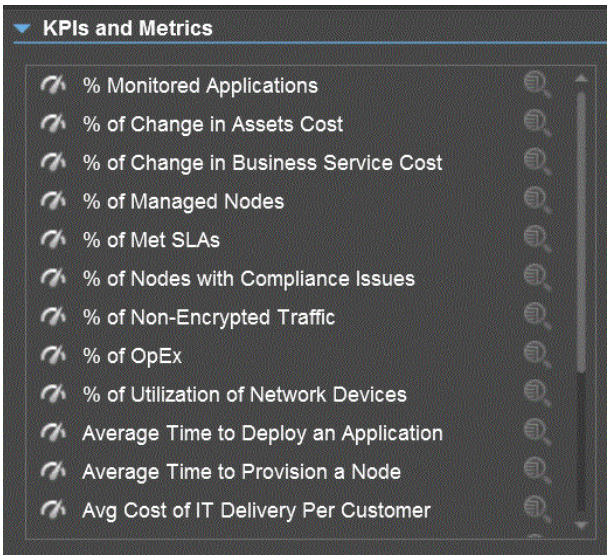
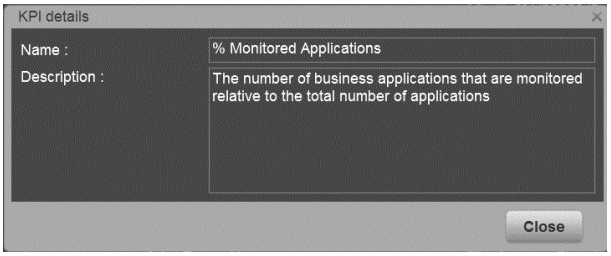
CAP Description area

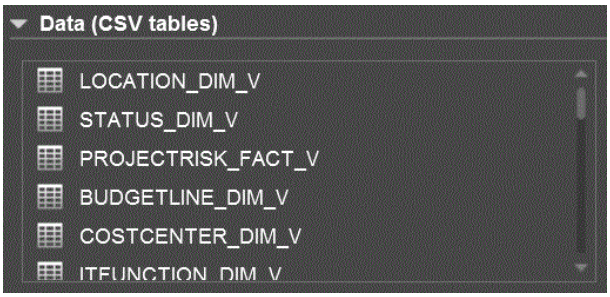
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Pages	The list of pages included in the Content Acceleration Pack. 

Scorecards	The list of Scorecards included in the Content Acceleration Pack.   Select a Scorecard and click the button to display the Name and Description of the selected Scorecard in the XS Active Configuration tree.  **Note:** The name of the entity in the dialog box might be different from the name in the CAP Management list if the entity name was modified in the Studio or if duplicate entity names were discovered during the CAP activation.

Business Contexts	The list of Business Contexts included in the Content Acceleration Pack.
	 
	The area displays the following information:
	• - In the recalculation status column, ☑ indicates that the corresponding Business Context needs to be recalculated.
	• **Type.** In this column, the icon indicates that:
	  ▪ The CAP's Business Context is user-defined.
	  ▪ The CAP's Business Context is out-of-the-box (it is provided with the application).
	• **Name.** The name of the Business Context.

KPIs and Metrics	The list of KPIs and Metrics included in the CAP.   Select a KPI or Metric and click the button to display the current Name, and Description of the selected KPI or Metric (as specified in the current definition in the Studio). The button is activated only for the KPIs that are included in activated CAPs.  **Note:** The name of the entity in the dialog box might be different from the name in the CAP Management list if the entity name was modified in the Studio or if duplicate entity names were discovered during the CAP activation.

Data (CSV Tables) dat	Click to display the list of all the CSV tables that compose all the Business Context in the Data (CSV Tables). 

Create Content Acceleration Packs

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

CAPs describe typical stories that show how correct implementation of Executive Scorecard drives Performance Improvement and Cost Reduction for the IT organization. CAPs demonstrate Executive Scorecard capabilities, and helps you add basic elements that can be used to customize your Dashboard.

To access:

Click **Admin > Content Acceleration Pack**, and then click  to open a wizard where you can create the CAP.

Learn More

For details about the Content Accelerations (CAPs) contents, see "Content Acceleration Pack Contents" on page 133.

Tasks

Create a CAP from the Executive Scorecard application data

You can create a new CAP that includes existing Contexts, Scorecards, KPIs and Metrics, Data (via .CSV files), and Dashboard pages.

1. **Prerequisite**: Before creating the CAP, make sure you have already created all the relevant Scorecards, KPIs , Metrics, Pages and Contexts that you wish to include in the CAP and that they have been calculated with the expected results. If you find that some content is missing, go back and create it. Once this is done. you can start creating the CAP.
2. In Executive Scorecard, click **Admin > Content Acceleration Pack**.

   The page displays the list of available CAPs.
3. Click the **Create a new CAP**  button to open the Create Content Acceleration Pack wizard where you can create the CAP.

Click **Next** and specify the CAP name, author, version, description, recalculation date and link to any relevant document.

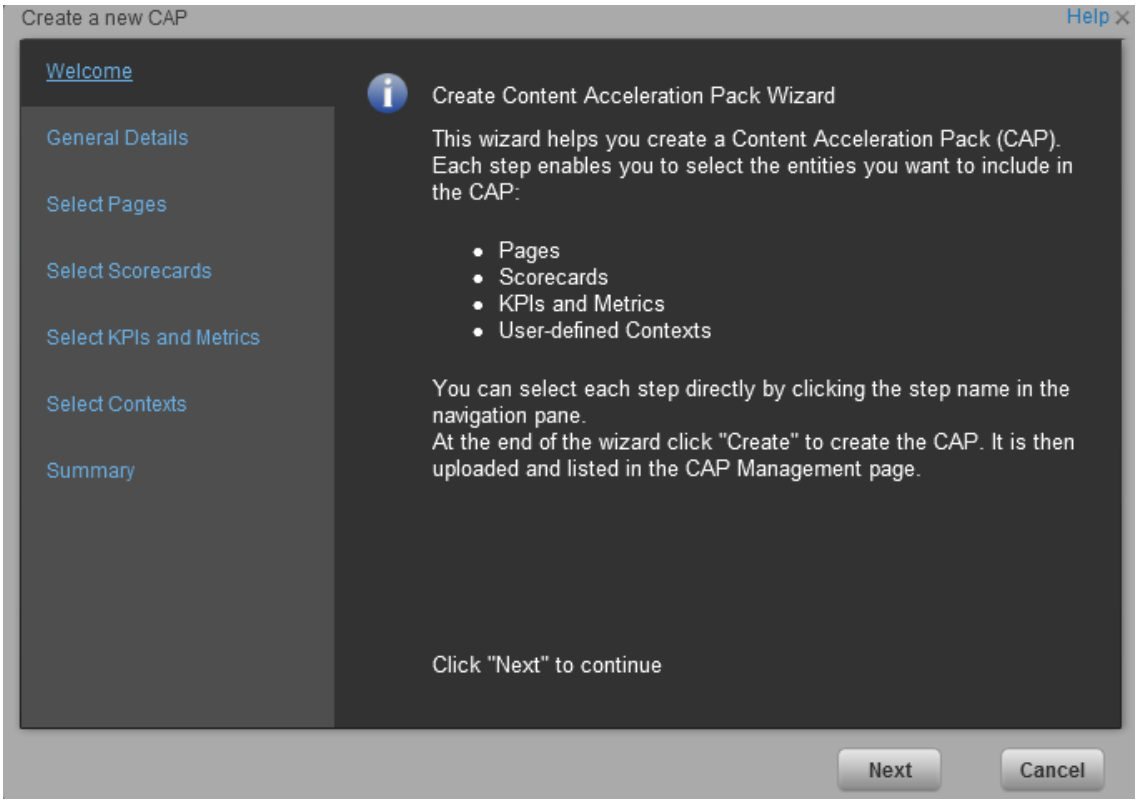
Click **Next** and in the **Select Pages** wizard page, select the pages you want to include in this CAP.

Note: Once you have selected a Page, the Scorecards, KPIs, and Metrics that are included in that page and the Contexts that are assigned to the KPIs included in the page, are automatically selected. If you want to add to the CAP additional elements like Scorecards, KPIs, and more, click the **Next** button and modify your selection in the other pages of the wizard. Otherwise you can jump directly to the Summary wizard page.

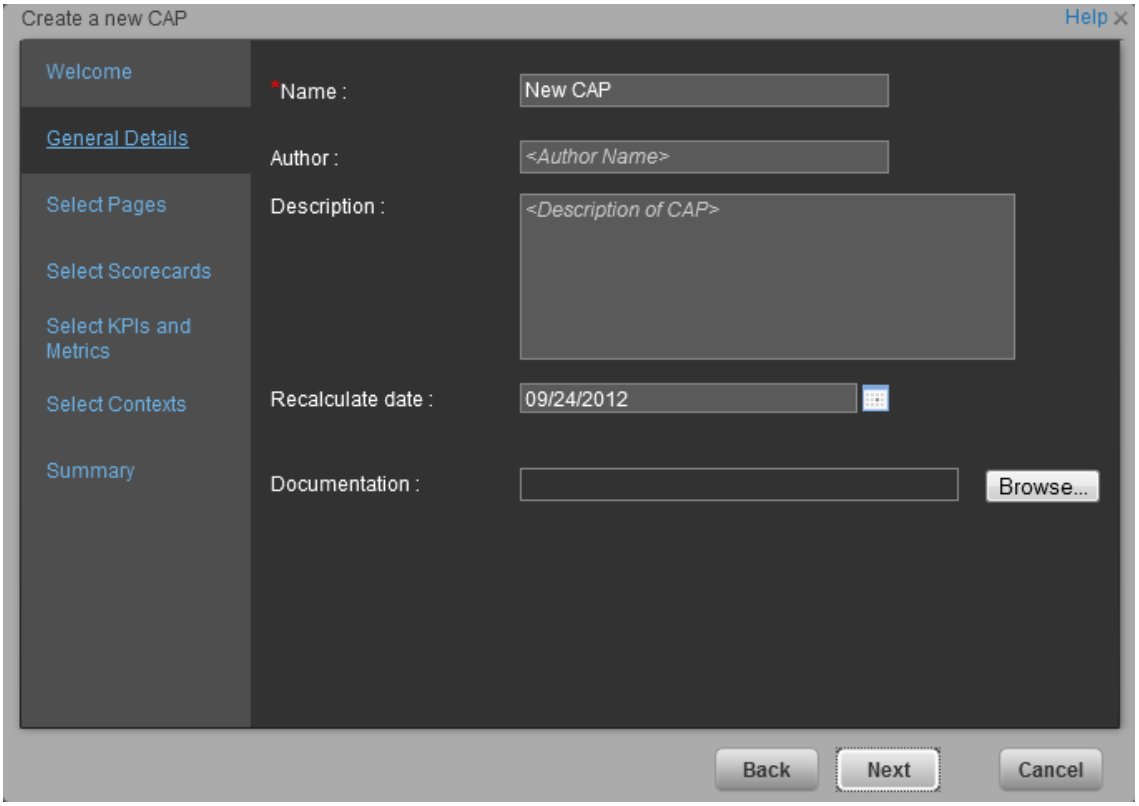
4. Click **Create** to create the CAP. Once the CAP is created you cannot modify it. The new CAP is displayed in the list of CAPs in the CAP Management page. In the right pane you can see the contents of the CAP you have just created. For details, see "Manage Content Acceleration Packs Using CAP Management" on page 133.

UI Description

Create CAP Wizard - Welcome Wizard Page



Create CAP Wizard - General Details Wizard Page



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

UI Element	Description
Name	The name you want to give to the CAP. The name should be unique. The standard characters are supported: a-z,A-Z, and 0-9. The size of the name is limited to 256 characters.
Author	The name of the creator of the CAP. It can be a single user, an HP partner, or a group in your organization.
Description	The description of the CAP. The size of the description is limited to 1000 characters.
Recalculate date	The date used to recalculate all the Contexts included in the CAP during the CAP activation. Default value is one year back from the CAP upload date. You can delete the default value. If you do not specify a recalculation date, the recalculation is not performed during CAP activation.

Documentation	Click **Browse** to access the location of the CAP documentation or enter the path to the document. The document can be a Microsoft Word file or a .PDF. When the CAP .ZIP file is created, the document you selected is automatically added to the .ZIP file at the level of the **manifest.properties** file.

Create CAP Wizard - Select Pages Wizard Page

Select the pages you want to include in the CAP from the **Available** area and click the relevant arrows to move these pages to the **Selected** area. The pages listed in the **Available** area are the pages that already exist in the application.

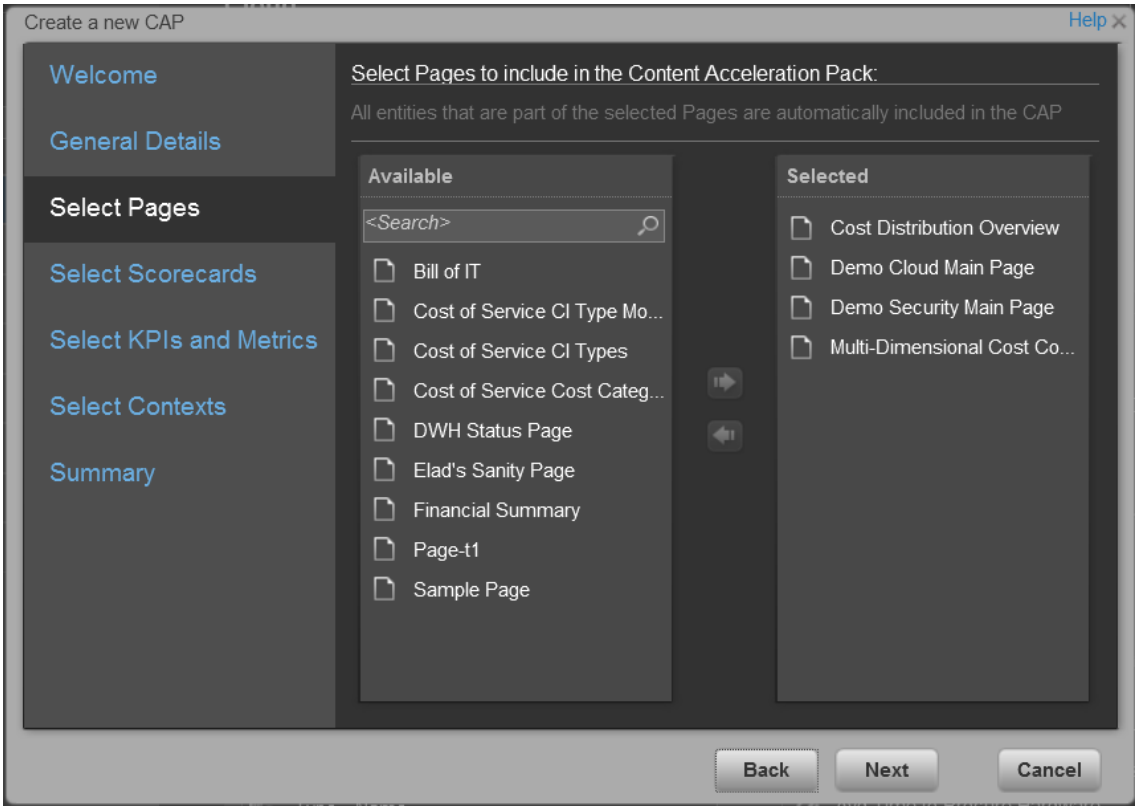
You can select more than one page using the `Shift` button.

To unselect pages, select them in the **Selected** area and click the relevant arrows to move the selected pages back to the **Available** area.

Click the relevant link in the navigation pane to access the corresponding page or click **Next** to open the next page of the wizard.

Limitation:

- "Shared KPIs" are KPIs that are reused in different Scorecards. If you share KPIs between CAPs by including pages that include these Scorecards, then after uploading these CAPs to another XS machine, and after activating the first CAP, and while activating the second CAP, the shared KPIs are removed from the Active KPIs hierarchies and from the Scorecard of the CAP that is activated first.
  It is recommended to add all the Scorecards with shared KPIs to each CAP to prevent the removal of the shared KPIs during the activation of the second CAP.
  The same issue may occur during the backup of a CAP with shared KPIs.
- Pages from an activated CAP are listed in the Settings menu of the XS Mini App installed on your tablet or smartphone, only after they are opened in the XS Dashboard.



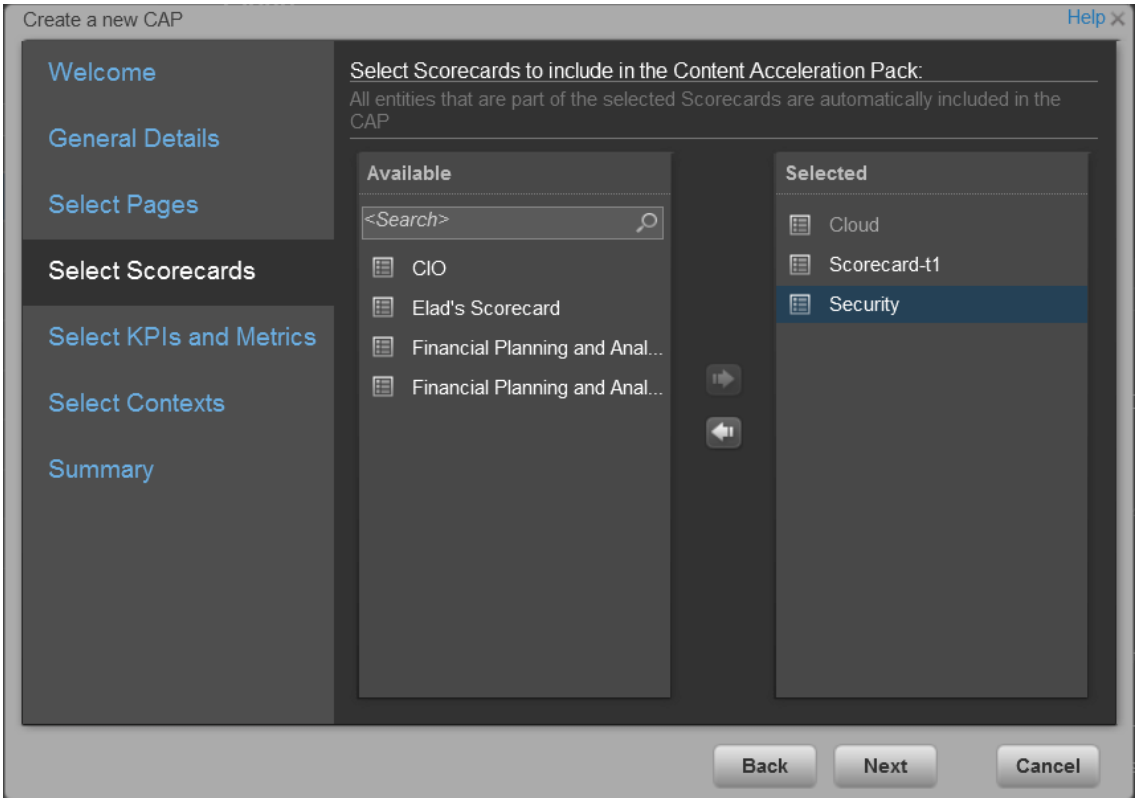
Create CAP Wizard - Select Scorecards Wizard Page

Select the Scorecards you want to include in the CAP from the **Available** area and click the relevant arrows to move these Scorecards to the **Selected** area. The Scorecards listed in the **Available** area are the Scorecards that already exist in the application.

You can select more than one Scorecard using the `Shift` button.

To unselect Scorecards, select them in the **Selected** area and click the relevant arrows to move the selected Scorecards back to the **Available** area.

Click the relevant link in the navigation pane to access the corresponding page or click **Next** to open the next page of the wizard.

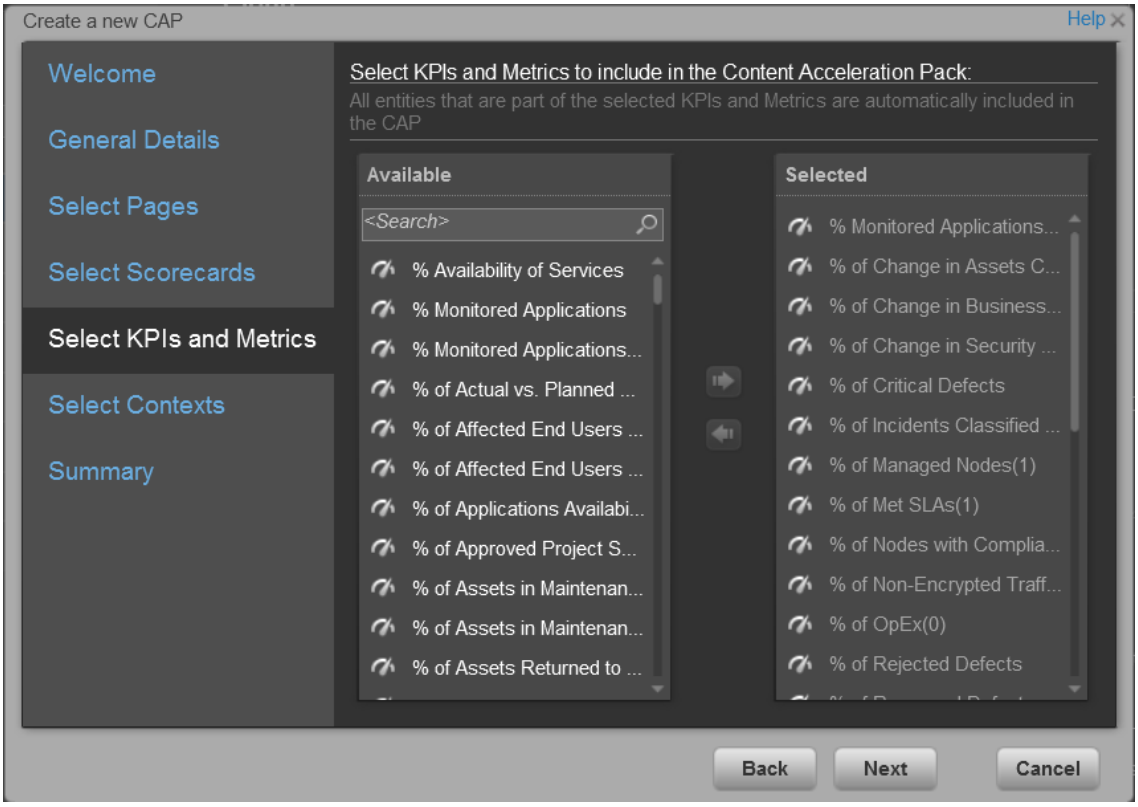


User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Available Scorecards	The list of Scorecards that are already active in the application, that the user has permissions to view, and that have not already been manually selected, or that were not automatically selected as part of the pages that were selected in the **Create CAP Wizard - Select Pages** page. You can select more than one Scorecard using the `Shift` button.

Selected Scorecards	The list of Scorecards that you want to include in the CAP. **Note:** • Some Scorecards (that appear as dimmed) are read-only because they are automatically included in the list of Selected Scorecards. These Scorecards were automatically selected because in the **Create CAP Wizard - Select Pages** wizard page you selected pages that include these Scorecards. You cannot deselect these Scorecards. A tooltip indicates why the Scorecard cannot be selected, dragged and dropped, or unselected. • If you add to the CAP, a Dashboard page that includes a Scorecard, and the Dashboard page already belongs to a CAP that has just been activated, the Scorecard is automatically added to the list of Selected only when the Dashboard page is opened once. You can select more than one Scorecard using the `Shift` button.
	Select the Scorecards you want to include in the CAP from the **Available** area and click the relevant arrows to move these Scorecards to the **Selected** area. The Scorecards listed in the **Available** area are the active Scorecards that already exist in the application. To unselect Scorecards, select them in the **Selected** area and click the relevant arrows to move the selected Scorecards back to the **Available** area. You can also drag and drop Scorecards from the **Available** area to the **Selected** area and vice-versa.
Search	Enter a string to list all the active Scorecards with names that include the string.

Create CAP Wizard - Select KPIs and Metrics Wizard Page

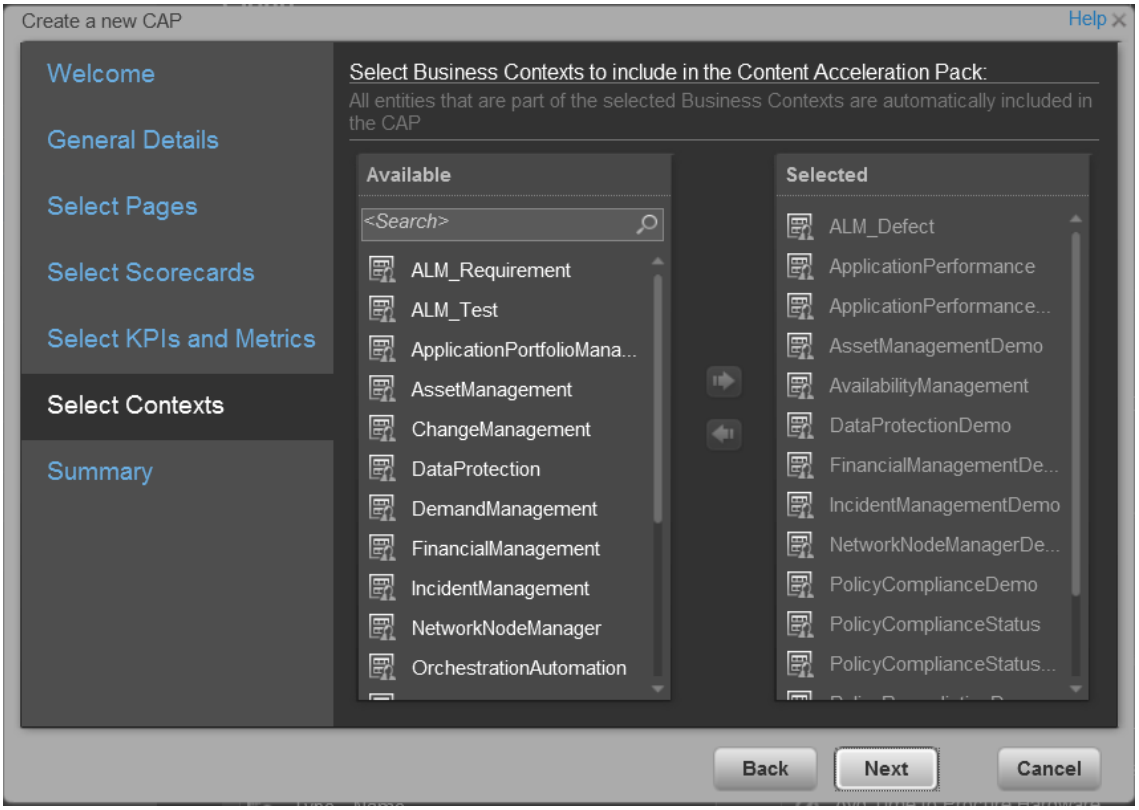


User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Available	The list of KPIs and Metrics that already exist in the application. You can select more than one KPI or Metric using the `Shift` button.
Selected	The list of KPIs and Metrics that you want to include in the CAP. KPIs or Metrics that are included in the Scorecards selected in the **Create CAP Wizard - Select Scorecards** page appear as read-only. They are already listed in the **Selected** area and you cannot deselect them. A tooltip indicates why the Metric or KPI cannot be selected, dragged and dropped, or unselected. You can select more than one KPI or Metric using the `Shift` button.

	Select the KPIs and Metrics you want to include in the CAP from the **Available** area and click the relevant arrows to move these KPIs and Metrics to the **Selected** area. The KPIs and Metrics listed in the **Available** area are the active KPIs and Metrics that already exist in the application. To unselect KPIs and Metrics, select them in the **Selected** area and click the relevant arrows to move the selected KPIs and Metrics back to the **Available** area. You can also drag and drop KPIs or Metrics from the **Available** area to the **Selected** area and vice-versa.
Search	Enter a string to list all the active KPIs or Metrics with names that include the string.

Create CAP Wizard - Select Contexts Wizard Page



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

UI Element	Description

Available	The list of available user-defined Contexts that already exist in the application and that are not already selected. You can select more than one Context using the `Shift` button. **Recommended:** CSV tables used in Contexts should have unique names across all active Content Acceleration Packs (CAPs). For details on CAPs, see "Manage Content Acceleration Packs Using CAP Management" on page 133.
Selected	The list of Contexts that you want to include in the CAP. User-defined contexts that are related to KPIs or Metrics selected in the Create CAP Wizard - Select KPIs and Metrics Page are already pre-selected and cannot be deselected. You can select more than one Context using the `Shift` button.
	Select the Contexts you want to include in the CAP from the **Available** area and click the relevant arrows to move these Contexts to the **Selected** area. The Contexts listed in the **Available** area are the Contexts that already exist in the application. To unselect Contexts, select them in the **Selected** area and click the relevant arrows to move the selected Contexts back to the **Available** area. You can also drag and drop Contexts from the **Available** area to the **Selected** area and vice-versa.
Search	Enter a string to list all the active Contexts with names that include the string.

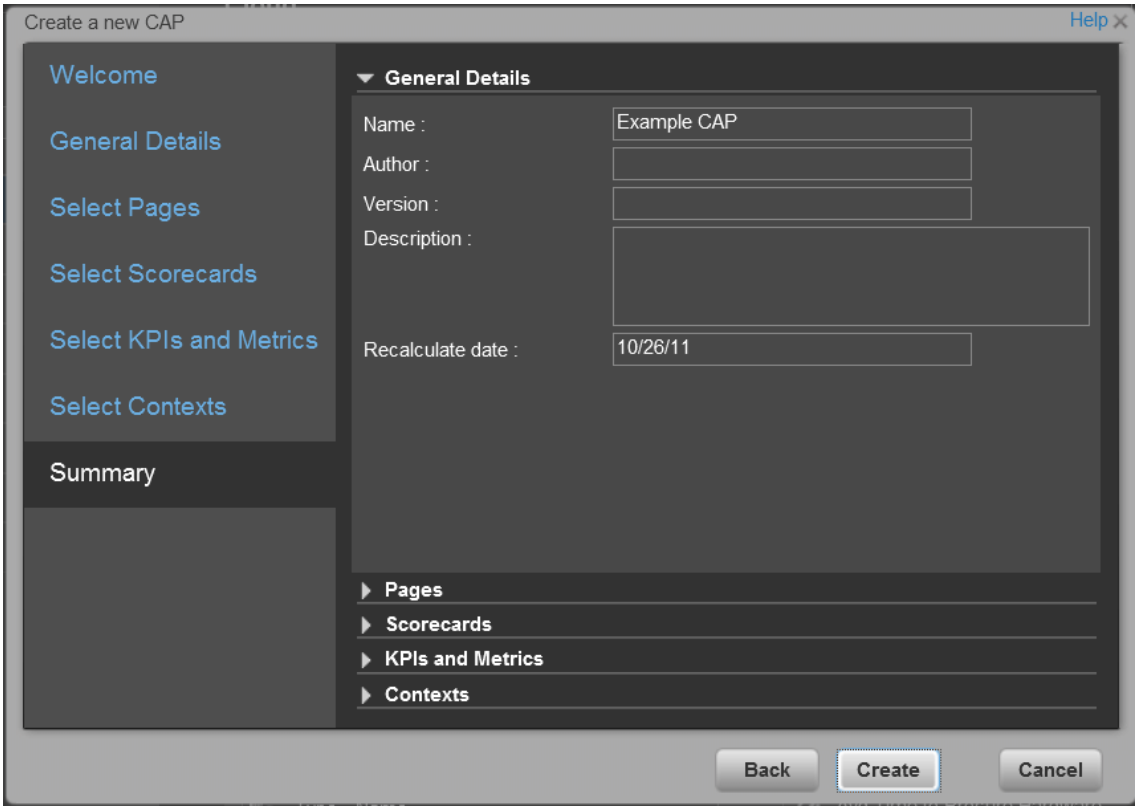
Create CAP Wizard - Summary Wizard Page

The Summary page of the wizard displays all the details of the CAP you just configured.

Expand the areas to display the details of each area.

Click **Back** to change the configuration.

Click **Create** to create the CAP. Once the CAP is created you cannot modify it. The new CAP is displayed in the list of CAPs in the CAP Management page. For details, see "Manage Content Acceleration Packs Using CAP Management" on page 133.


Create a new CAP
Help
Welcome
General Details
Select Pages
Select Scorecards
Select KPIs and Metrics
Select Contexts
Summary
General Details
Name :
Example CAP
Author :
Version :
Description :
Recalculate date :
10/26/11
Pages
Scorecards
KPIs and Metrics
Contexts
Back
Create
Cancel

Create Categories for the Webi Reports

In the Context Management Console (CMC) application you can manage Categories. A Category flag provides the option to assign each metric to the relevant categories. The categories are useful to classify the different Webi reports in the list of reports to be added to a component in Dashboard. For example, you can add a category per business context, ALM, Asset, and more.

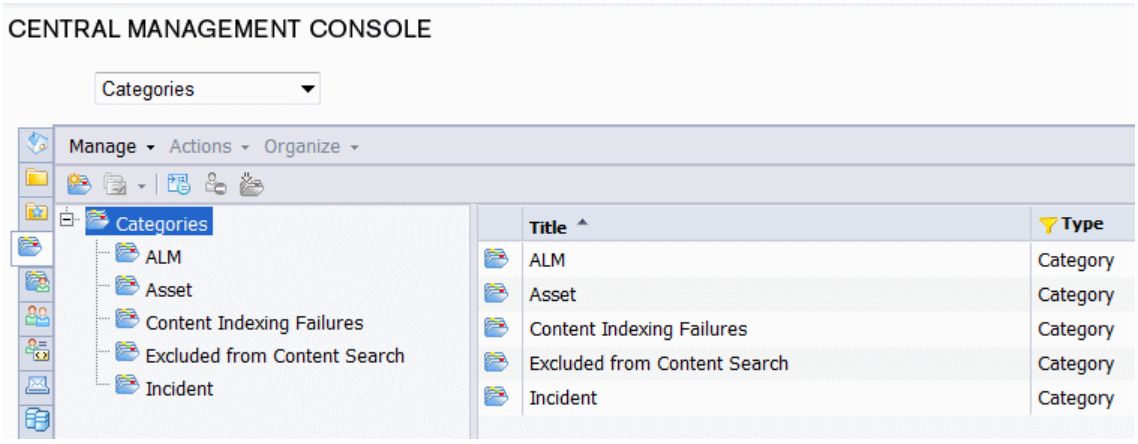
To access:

Access the CMC console.

Tasks

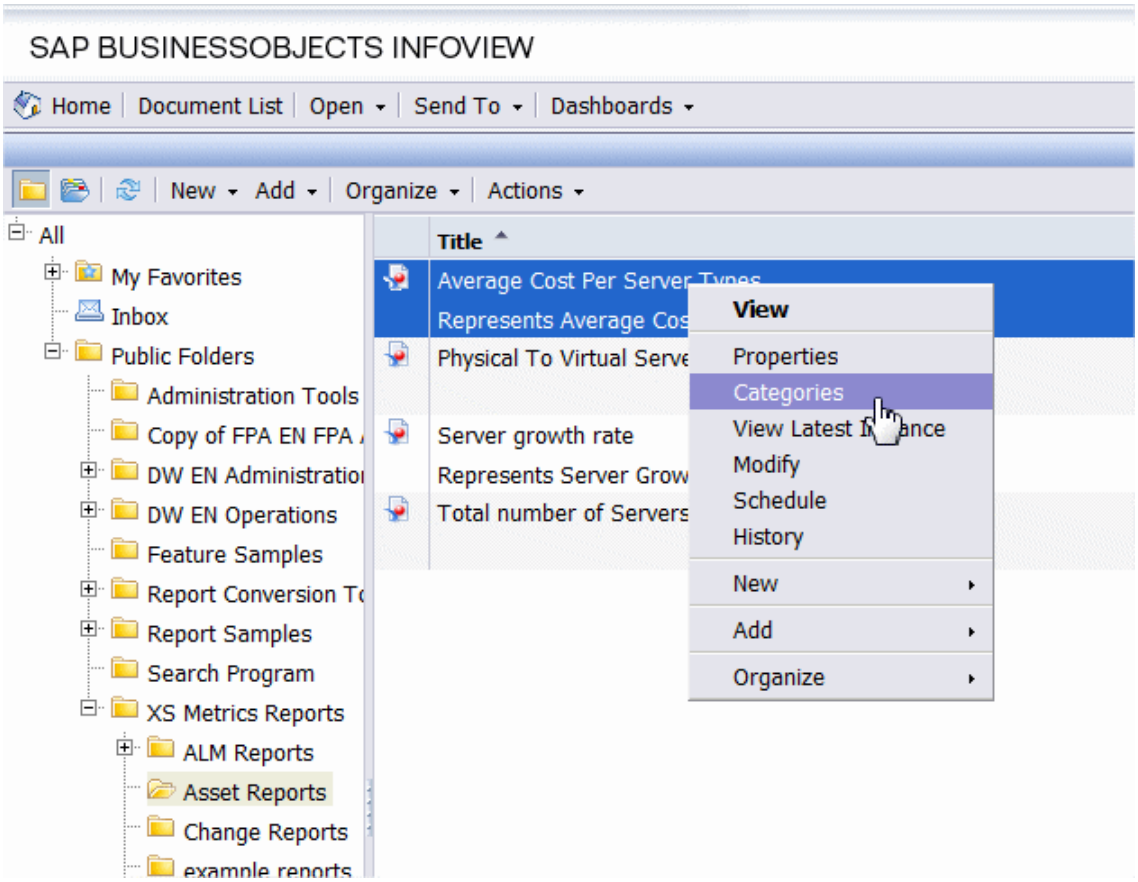
Create categories

1. Access the CMC console.
2. Create the categories:

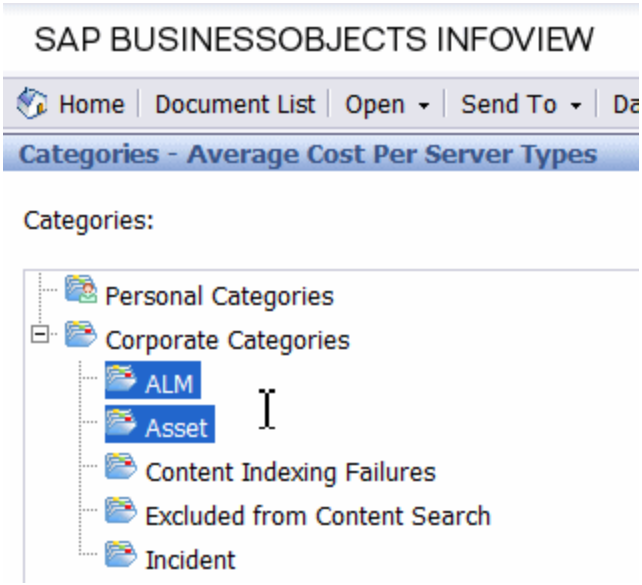


3. You can now associated metrics (reports) and categories. You can assign more than one category to a report.

a. Right-click the relevant Webi report.



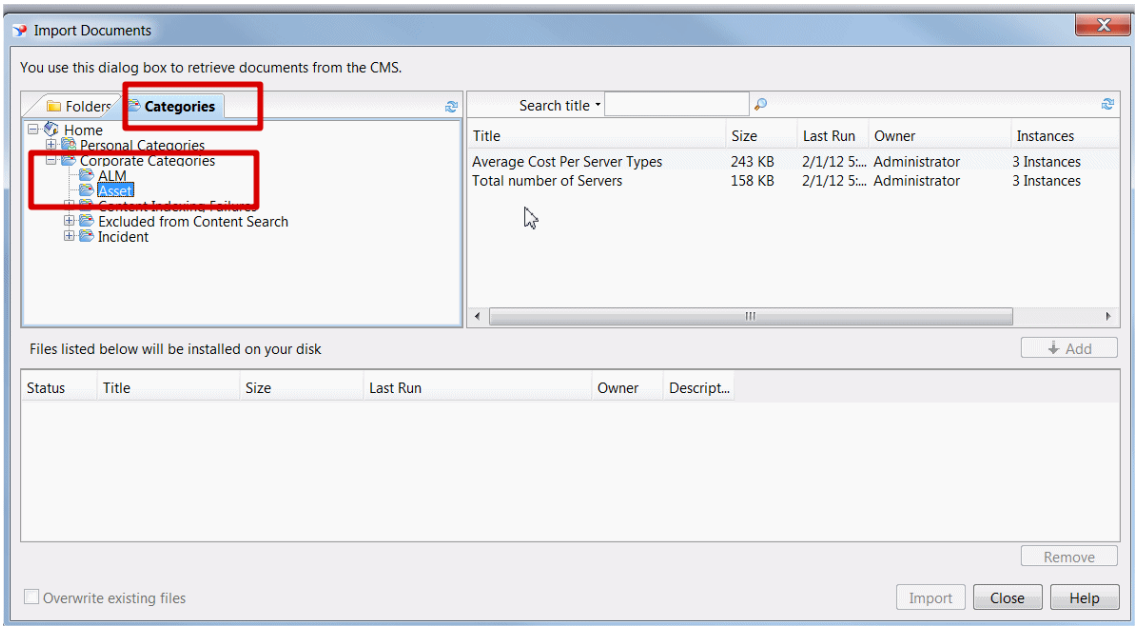
b. Select the relevant categories for the selected report, and click **OK**



c. Click **File**> **Import from CMS**.

d. When you open the “Web Intelligence Rich Client” you can see all the Webi reports that are

relevant to the specific category.



Configure Data Warehouse Settings

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

To access:

Select **Admin** > **Data Warehouse**.

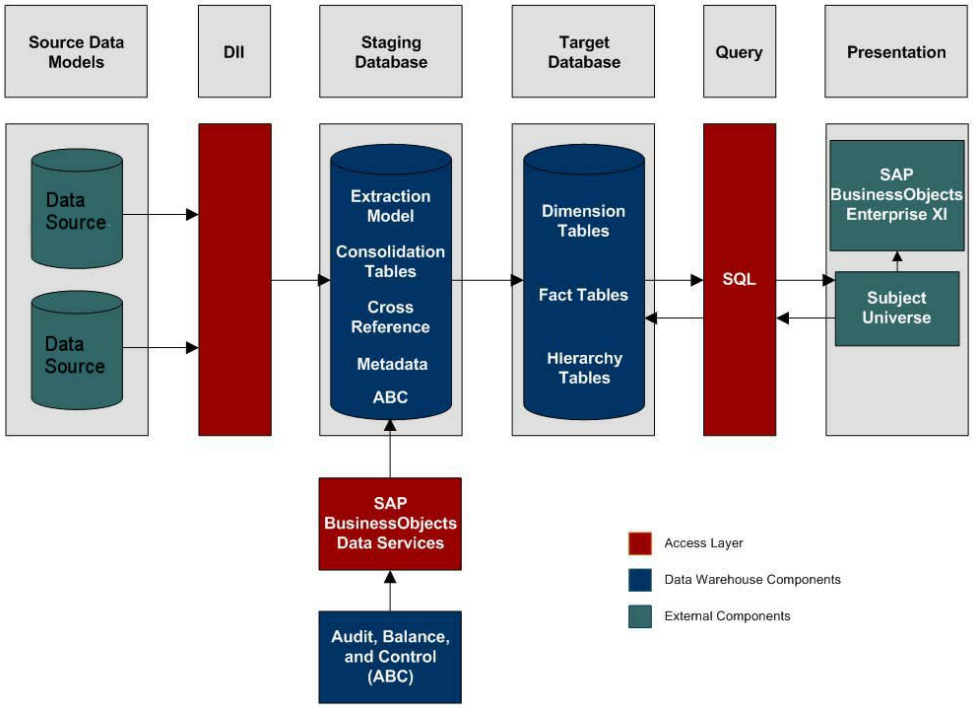
Learn More

Model

The data warehouse model is an end-to-end solution for extracting source data and consolidating disparate source data models into a consolidated data model. The data organized to reflect this model resides in target tables that become the source for Executive Scorecard.

The data warehouse relies on an external RDBMS to provide daily maintenance and backup support, SAP BusinessObjects Data Services to assist with ETL, an ABC infrastructure of utilities and processes to govern regularly scheduled ETL jobs, and internal data warehouse utilities to create the data warehouse and maintain data integrity.

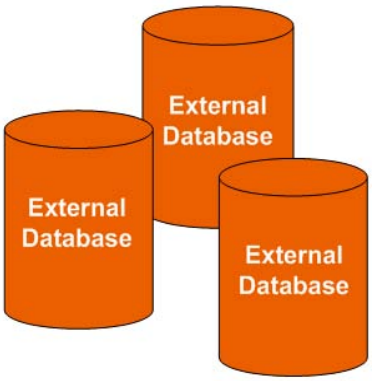
The figure below shows the principal data warehouse components and how they interact. Read the following sections for more information about each component, its role, and responsibilities.



Source Data Models

Source data originates in external application repositories. Data generated by an external application can be rich in business information, but unless you can integrate it with equally important business information generated by other applications, it is difficult to get a complete view of operational information.

The source data models describe the source and extraction format so that the data warehouse can consume this data and integrate it into a common view that you can use to populate comprehensive business intelligence reports and dashboards.



Data Integration Interface

The data integration interface (DII) is the access layer that stands between the source database models and the extraction models in the staging database. The DII uses a mapping model that transforms the source data to fit into extraction work tables. The DII can accommodate minor variations in the source model schemas from one version to another.

Note: This interface requires access to the source systems.

SAP BusinessObjects Data Services

SAP BusinessObjects Data Services is the access mechanism that performs the physical data extraction from the source repository to the staging database. Each stage of the ETL is embodied in a Data Services job, from the extraction of source data to the target database.

Audit, Balance, and Control

Audit, Balance, and Control (ABC) processes ensure that source data is not corrupted in the extraction process, and that the integrity of the extracted data is maintained as it progresses from the initial source extraction through the logical and physical transformation into target tables. SAP BusinessObjects Data Services can move the data but does not evaluate whether the final result is correct. ABC establishes checkpoints and provides feedback on each step to guarantee that each step is valid before the next step begins.

The Audit component ensures consistency during ETL processing. It measures the number of records in and the number of records out for each step and displays these runtime statistics in a collection of audit reports.

Balance verifies that data in the data warehouse matches data in the source system. For example, if the data warehouse stores project dollar amounts then the balance process verifies that the

aggregate project dollars in the data warehouse matches the aggregate project dollars in the source application data.

Control governs the order of execution of ETL processes. Control makes sure that there is a proper restart and recovery when a system error occurs. Control also manages job dependencies at runtime.

ABC utilities are applications that you can invoke automatically or manually to run ETL, solve problems, and perform ETL-related tasks.

Staging Database

The staging database contains tables and snapshots that are critical to the ETL process. Metadata describes these tables. Executive Scorecard processes data in the staging database before loading it into the final target tables in the target database.

- Extraction (EXT) tables contain the initial version of source data. EXT tables are used during the stage of ETL when Executive Scorecard loads data from the extract flat files into the staging database.
- Validation failure (VALF) tables are used during the data validation process that ensures all of the data is usable. VALF tables store source data that is rejected by the ETL process due to validation failure. Data validation is part of the process to load the EXT tables.
- Identification (SSI and MSI) tables restructure the diverse source system data into a conformed structure. Executive Scorecard uses SSI and MSI tables to standardize the data and add an enterprise key.
- Consolidation (MSC) tables integrate disparate source data into a consolidated entity. The MSC tables contain the uniform structure that Executive Scorecard uses to load the data into the target tables.
- Transformation (XFR) tables are load-ready tables that match the internal structure of the target tables. Executive Scorecard uses XFR tables while preparing the data to be loaded into the target tables in the target database.
- Lookup (LOOKUP) tables store durable keys and surrogate keys. Executive Scorecard uses these tables to establish dimension-to-dimension references in dimension tables and foreign key references in fact tables.
- Snapshot (TSNP, SSNP, and CSNP) tables are the persistent storage for ETL staging data. These snapshot tables capture the changed data and support the data warehouse recovery process. The data warehouse uses TSNP tables for source extraction staging, SSNP tables for single source integration staging, and CSNP tables for multiple source consolidation staging. The final ETL stage captures the snapshot data.
- Cross Reference (XREF) tables support the data integration processes that combine records from multiple sources into a single record in the consolidation model.
- Cross Reference Generator (XREFGEN) tables support data matching and cross reference inputs for the consolidation models.
- Metadata tables contain a logical model and describe how to translate that model into the physical implementation of tables and views.

ABC tables support the ETL workflow and enable job control and sequencing. They also host audit information to ensure data quality.

Target Database

The target data models describe the format of the data that produces business intelligence analytics. The instantiated data models are dimension, fact, and hierarchy tables populated with data obtained through ETL processes.

Dimension tables contain the data model to be queried and presented by Executive Scorecard in a variety of reports and analytics.

Fact tables contain data that describes events, transactions, or other granular information.

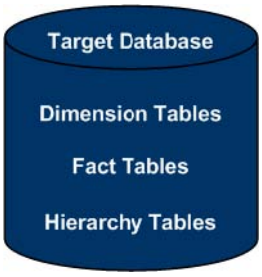
Fact snapshots tables are fact tables that describe the state of things in a particular instance of time, and usually includes more semi-additive and non-additive facts.

- **Semi-Additive:** Semi-additive facts are facts that can be summed up for some of the dimensions in the fact table, but not the others.
- **Non-Additive:** Non-additive facts are facts that cannot be summed up for any of the dimensions present in the fact table.

Hierarchy tables capture hierarchical relationships among levels of data.

Queries

You can use structured query language (SQL) to create a primary abstraction layer of data from the target tables and use that data to populate reports, dashboards, or resolve business questions. The SAP BusinessObjects Enterprise XI 3.1 suite of business tools simplify accessing this information and storing it in business-oriented views.



Presentation

SAP BusinessObjects Enterprise XI 3.1 uses a universe abstraction layer to organize data for presentation in out-of-box or user-designed analytics. The universe provides a business oriented view of the data that resides in the data warehouse target tables.

Tasks

To define the Data Warehouse Settings:

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

UI Description

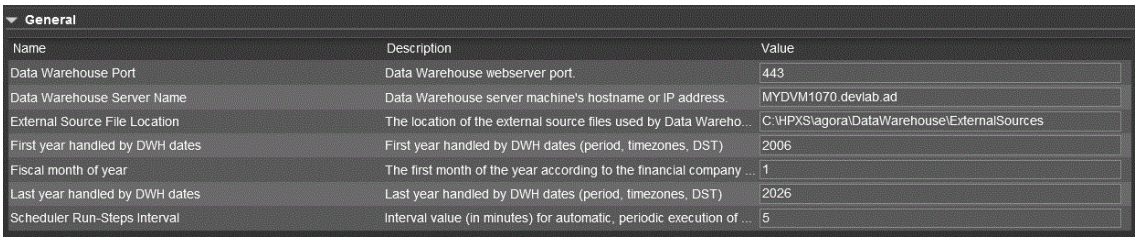
Data Warehouse Page

This page enables you to configure the Data Warehouse settings.

Data Warehouse Table

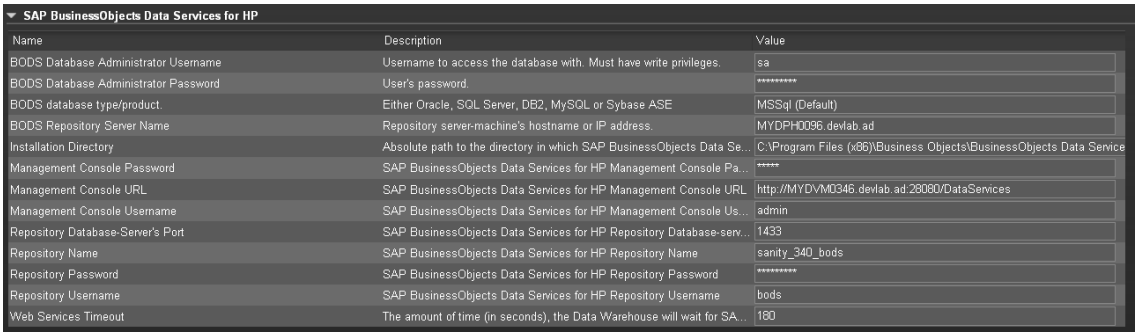
Name	The name of the Data Warehouse field.
Description	The description of the Data Warehouse field.
Value	The current Data Warehouse field value. Click the relevant row and enter a value.

General Table



UI Element	Description
Data Warehouse Port	The Data Warehouse web server port. This field is read-only.
Data Warehouse Server Name	The Data Warehouse server machine hostname or IP address. This field is read-only.
External Source File Location	The directory where the external source files used by the Data Warehouse are stored.
Fiscal month of year	The first month of the fiscal year. This field is read-only.
First year handled by DWH dates	The first available year for Data Warehouse dates. This includes period, time zones or DST.
Last year handled by DWH dates	The last available year for Data Warehouse dates. This includes period, time zones or DST.
Scheduler Run-steps Interval	The interval value in minutes that you want the run_steps command to automatically execute. This is the default value for initial execution. All changes in interval should be made in the DW ABC Streams Management UI. For details, see "Perform Tasks for ETL Management " on page 175. A run-steps schedule configured in Data Warehouse Settings does not affect the existing running batch schedule. It is recommended to only change the run-steps interval schedule in the ETL Management tab DW ABC Streams Management UI. To enable a new run-steps schedule configured in Data Warehouse Settings on existing defined streams you can: • Restart the XS server. • Reload the dw-abc-services application: **Glassfish Admin Console** > **Applications**, and click **Reload** for the dw-abc-services application. • Redeploy the application In these cases you would have now two scheduled intervals. Delete one in the DW ABC Streams Management UI.

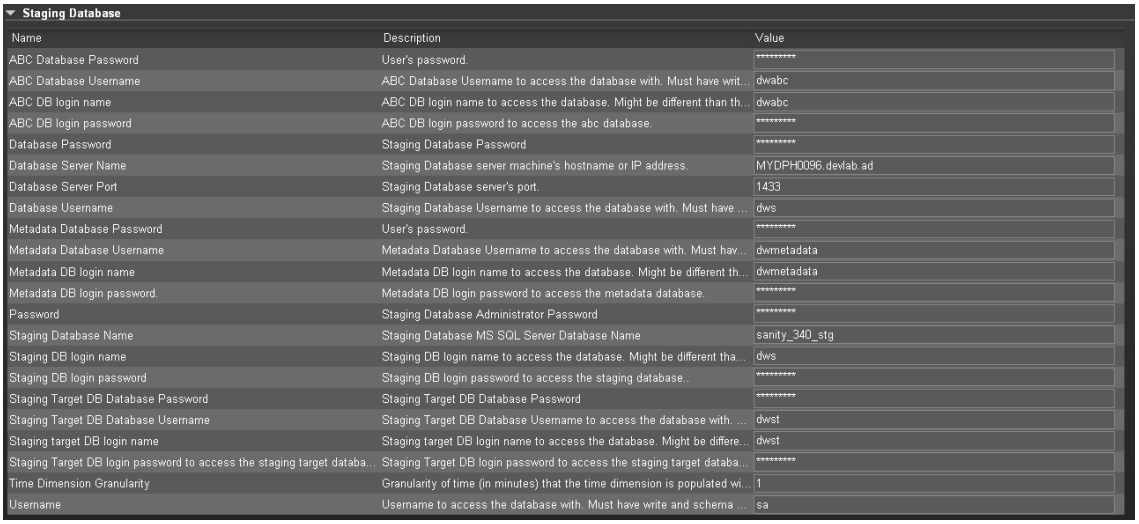
SAP BusinessObjects Data Services for HP XS Table



UI Element (in alphabetical order)	Description
BODS Database Administrator Username	The username to access the SAP BusinessObjects Data Services database. Must have write permissions.
BODS Database Administrator Password	The user's password to access the SAP BusinessObjects Data Services database.
BODS database type/product	The database type: Oracle, SQL Server, DB2, MS SQL, or Sybase ASE. This field is read-only. **Note:** Currently only MS SQL is supported.
BODS Repository Server Name	The SAP BusinessObjects Data Services repository server machine's host name or IP address.
Installation Directory	The absolute path to the SAP BusinessObjects Data Services and HP XS installation directory. This field is read-only.
Management Console Password	The SAP BusinessObjects Data Services management console password.
Management Console URL	The SAP BusinessObjects Data Services management console URL. This field is read-only.
Management Console Username	The SAP BusinessObjects Data Services management console username.

UI Element (in alphabetical order)	Description
Repository Database-Server's Port	The SAP BusinessObjects Data Services repository database server's port. This field is read-only.
Repository Name	The SAP BusinessObjects Data Services repository name. This field is read-only.
Repository Password	The SAP BusinessObjects Data Services repository password.
Repository Username	The SAP BusinessObjects Data Services repository username. This field is read-only.
Web Services Timeout	The amount of time, in seconds, that Data Warehouse waits for a SAP BusinessObjects Data Services to respond to a web services request before a timeout.

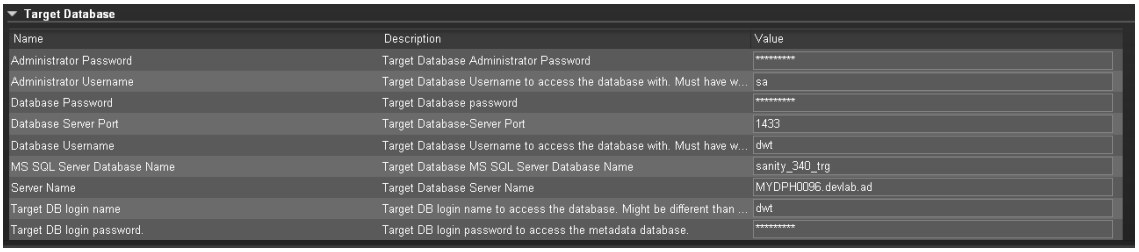
Staging Database Table



UI Element (in alphabetical order)	Description
ABC Database Password	The ABC database password.
ABC Database Username	The ABC database username. This field is read-only.
ABC DB login name	ABC login name used to access the database.

UI Element (in alphabetical order)	Description
ABC DB login password	ABC login password used to access the database.
Database Password	The staging database password.
Database Server Name	The staging database server machine hostname or IP address.
Database Server Port	The staging database server port.
Database Username	The staging database username. This field is read-only.
Metadata Database Password	The metadata database password.
Metadata Database Username	The metadata database username. This field is read-only.
Metadata DB login name	Metadata login name used to access the database.
Metadata DB login password	Metadata login password used to access the database.
Password	The staging database administrator password.
Staging Database Name	The name of the staging database on the MS SQL server. This field is read-only.
Staging DB login name	Staging database login name used to access the database.
Staging DB login password	Staging database login password used to access the database.
Staging Target DB Database Password	The staging target database password.
Staging Target DB Database Username	The staging target database username. This field is read-only.
Staging Target DB login name	Staging Target database login name used to access the database.
Staging Target DB login password	Staging Target database login password used to access the database.
Time Dimension Granularity	The granularity of time, in minutes, of the time dimension. This field is read-only.
Username	The staging database administrator username. This user must have write permissions. This field is read-only.

Target Database Table



UI Element (in alphabetical order)	Description
Administrator Password	The target database administrator password.
Administrator Username	The username used to access the target database. This user must have write privileges. This field is read-only.
Database Password	The target database password.
Database Server Port	The target database server port. This field is read-only.
Database Username	The target database username. This user must have write permissions. This field is read-only.
MS SQL Server Database Name	The target database MS SQL server name. This field is read-only.
Server Name	The target database server name. This field is read-only.
Target DB login name	The login name for the target database. May be different than the fixed user and schema name.
Target DB login password	The target database login password used to access target database metadata.

Integrate 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. FBI 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.

Learn More

To learn about Content Packs and their functionality, see "Perform Tasks for Data Source Management" on page 197.

For more detailed information about each data source's integration, seeIntegrate the Data Sources in the *Content Reference Guide*.

Tasks

Integrate with the ALM (and QC) Data Source in the *Content Reference Guide*.

Integrate with the AM Data Source in the *Content Reference Guide*.

Integrate with the BSM Data Source in the *Content Reference Guide*.

Integrate with the DP Data Source in the *Content Reference Guide*.

Integrate with the IC Data Source in the *Content Reference Guide*.

Integrate with the NA Data Source in the *Content Reference Guide*.

Integrate with the NNM Data Source in the *Content Reference Guide*.

Integrate with the OO Data Source in the *Content Reference Guide*.

Integrate with the PPM Data Source in the *Content Reference Guide*.

Integrate with the SA Data Source in the *Content Reference Guide*.

Integrate with the SM Data Source in the *Content Reference Guide*.

Integrate with the UCMDB Data Source in the *Content Reference Guide*.

"Sample Integration Activation Using the UI" below

"Sample Integration Activation Using the Automation Tool" on page 172

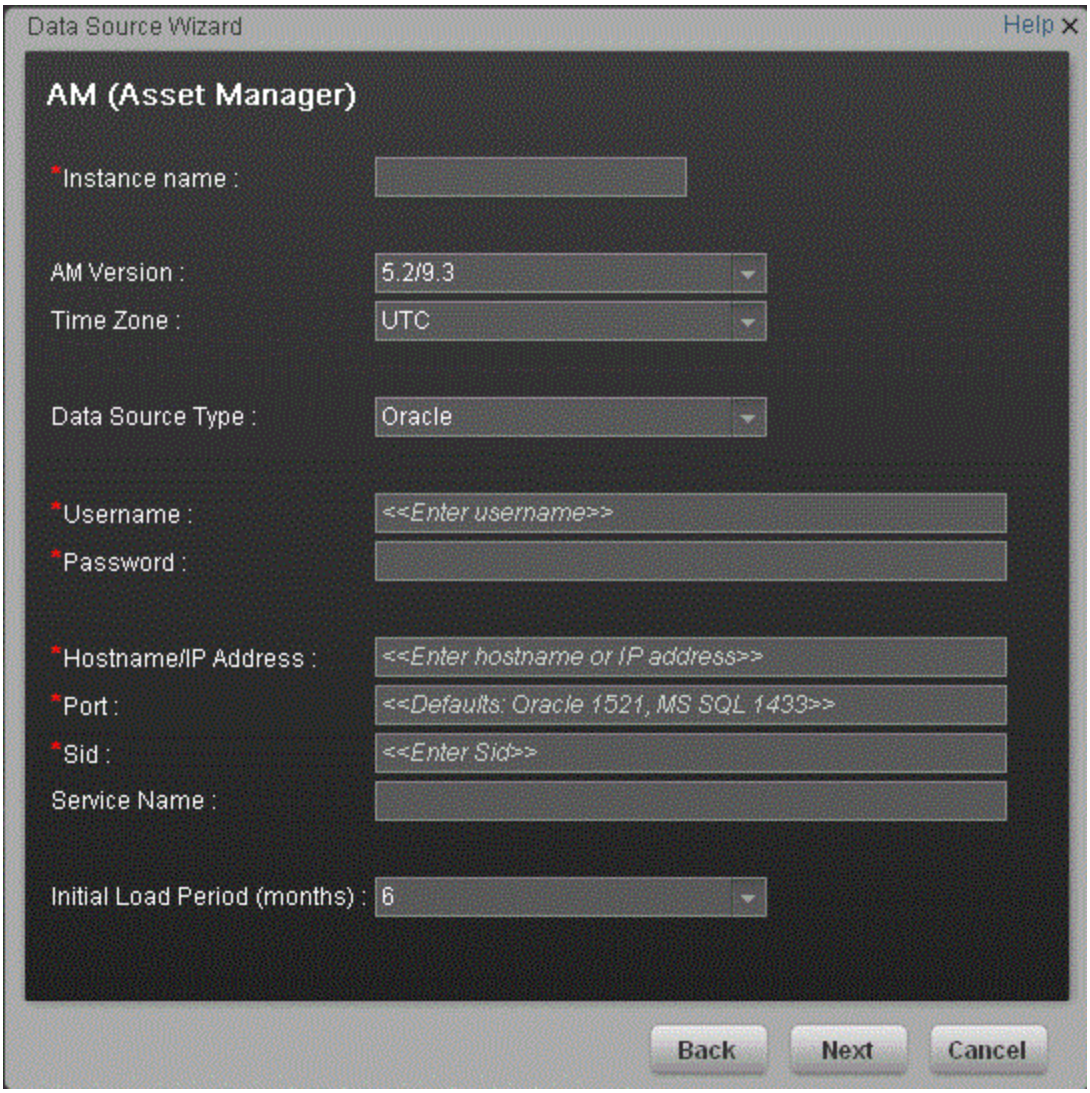
Sample Integration Activation Using the UI

Activate the Integration (Sample)

1. **Prerequisites:** Make sure all of the required prerequisites have been met.

2. Select **Admin** > **Data Source Management** then click **Add data source**.
3. Select the data source type.
4. Select or enter the configuration parameters.
5. Click **Next** to proceed to the validation page.

UI Description (Sample-AM Oracle server)



User interface elements are described below:

UI Element	Description
Instance name	Enter a name for the data source instance you are activating.
AM Version	Select the relevant AM version. For details, see the *IT Executive Scorecard Support Matrix*.

UI Element	Description
Time Zone	Select the time zone for the data source.
Data Source Type	AM should be configured to run on an Oracle server.
Server	Enter the Oracle server.
Username	Enter your username used for login to the AM database.
Password	Enter your password used for login to the AM database.
Hostname/IP Address	Enter the Oracle server hostname or IP address.
Port	Enter the port for database connections.
SID	Enter the unique name of the database.
Service Name	Enter the alias used when connecting.
Initial Load Period (months)	Select the number of months from which you want the initial data loaded.

Sample Integration Activation Using the Automation Tool

If you experience errors or problems with the data Source Management UI, you can activate the sources using DWH back-end tools.

Activate the Integration (Sample-AM Oracle server)

1. **Prerequisites:** Make sure all of the required prerequisites have been met.
2. Enter the product name, product version, time zone, and product type of the data source, and the configuration parameters in the datasource.xml file as follows:
    - **server.** The data source server.
    - **user.** The user required for authenticating to the data source server.
    - **password.** The password required for authenticating to the data source server.
    - **host.** The remote server on which the data source server resides.
    - **port.** The port in the data server. By default, the port number is 1521 for Oracle database and 1433 for SQL Server database.
    - **sid.** The unique name of the database.
    - **servicename.** The alias used when connecting.
    - **initial load period.** The number of months from which you want the data loaded.

Note: Each Content Pack contains a sample xml file for example: <Installation Directory>\agora\ContentPacks\SA\conf\dataSources.xml.

Sample xml configuration (Advanced configuration)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<dw:DataSourceConnections version="1.0"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://schemas.hp.com/bto/dwh/v1/dw_
dataSources ..\xmlSchemas\dw_dataSources.xsd"
       xmlns:dw="http://schemas.hp.com/bto/dwh/v1/dw_
dataSources">
<dw:DataSourceConnection productName="AM"
productVersion="5.2" timeZone="Asia/Shanghai"
productType="oracle">
       <dw:GenericProperty propertyName="server"
propertyValue="" propertyType="string"/>
       <dw:GenericProperty propertyName="user"
propertyValue="" propertyType="string"/>
       <dw:GenericProperty propertyName="password"
propertyValue="" propertyType="password"/>
       <dw:GenericProperty propertyName="port"
propertyValue="1521" propertyType="string"/>
       <dw:GenericProperty propertyName="sid"
propertyValue="" propertyType="string"/>
       <dw:GenericProperty propertyName="servicename"
propertyValue="" propertyType="string"/>
       <dw:GenericProperty
propertyName="dwh.etl.initialloadmonths" propertyValue="6"
propertyType="string"/>
</dw:DataSourceConnection>
</dw:DataSourceConnections>
```

Note: In order to verify that the connection details added in the datasources.xml file are correct, it is recommended to test the connection to the data source before running the configuration. For details, see "The Automation Tool" on page 265.

3. **Register Instance:**

   To add an additional data source instance enter: **dw_cp_register.bat -addInstance –name <CP_NAME>**

   The Data Warehouse then looks for the CP in the Content Packs Folder. The instance ID is displayed in the output.“Instance ID: XX has been added to Content Pack: <CP_NAME>”

   It is also added to the CONTENT_PACK table.

4. **Configuration:**

For first time activation, enter the following: **dw_ds_automation.bat -task ConfigureInitial -cp <content pack name> -instance <INSTANCE_ID> -xmlFilePath** [Path to datasources.xml file].

For all subsequent activations, enter the following: **dw_ds_automation.bat -task Configure -cp <content pack name>-instance <INSTANCE_ID> -xmlFilePath** [Path to datasources.xml file].

Note: After you have configured dw_ds_automation.bat -task ConfigureInitial or dw_ds_automation.bat -task Configure, delete the value in the propertyValue field of the password from the dataSources.xml file, as follows:
<dw:GenericProperty propertyName="password" propertyValue="" propertyType="password" />

For details, see "The Automation Tool" on page 265.

5. **Deployment:**

   Enter the following: **dw_ds_automation.bat -task Deploy -cp <content pack name>-instance <INSTANCE_ID>**.The content pack is initialized.

6. **Activate the data source:**

   Enter the following: **dw_ds_automation.bat -task Activate -cp <content pack name> -instance <INSTANCE_ID>**.

Perform Tasks for ETL Management

The ETL Management tab displays the DW ABC Streams Management UI which enables you to perform the essential tasks related to ETL and stream functionality. It displays the state of active streams, and enables you to schedule and control stream activity. It also allows you to view the historical data and the archived stream definitions. All ETL management and functionality is accessed and performed through this UI.

To access:

Select Admin > **ETL Management**.

Learn More

ETL

The Extract, Transform, and Load (ETL) process is an end-to-end transfer of external source data through several staging layers and into the target layer of the data warehouse. The source data can reside in a single database or multiple databases. The data warehouse uses the ETL process to extract, consolidate, and transform the source data into a meaningful target model that populates relevant business analytics.

The ETL process comprises eight primary stages. The stages of this process depend on metadata and the nature of the sources.

The ETL is monitored and managed through the DW ABC Streams Management User Interface.

ETL Stream Management and Monitoring

The Audit Balance and Control Management user interface performs all of the back-end configuration and supports full ABC functionality in the ETL. The UI enables you to view the active stream and all of the nodes containing the stream steps. This allows you to pinpoint exactly which steps have failed when the stream has been stopped. You can also view the history of the stream as well as inactive streams.

Stream

A stream represents the definition of what should run in the ETL, for example, Upstream. It is a set of a flow of ETL steps. The DW ABC Streams Management UI displays any stream that is defined, along with the historical data and archived stream information for that stream.

Batch

A batch is a particular run-time instance of the stream. There is a new batch ID for each run of the batch. Each time you load a batch, you are creating a run-time instance of the current stream definition.

Step

Any type of execution that you want to run in the ETL. The step is defined in a stream.

Node

A group of steps that run in parallel and are independent of each other. A node is meant to simplify the display of the stream and to indicate whether a stream is blocked. The node indicates whether the batch can progress to the next node. If one step has failed, even if all other steps in the node are successful, the execution of the ETL will not progress to the next node.

The ABC Streams Management UI provides visibility and management of:

- Multiple streams
- Stream progress
- Stream execution history
- Archiving
- Batch scheduling

Audit, Balance, and Control

Audit, Balance, and Control (ABC) is a set of functions based on data warehousing best practices. Although SAP BusinessObjects Data Services manages the ETL workflow, ABC ensures work flow integrity. It controls the overall ETL execution, provides error handling, and collects job progress statistics. ABC's ETL streams and functions can be viewed and managed through the DW ABC Streams Management User Interface, as well as the CLI. Other ABC features are:

- Job stream management
- Command line administration tools
- Generated ABC operational system reports
- Generated ABC historical system reports

  For report details, see "ABC Operational Reports " on page 207 and " Data Model Reports" on page 223.

Tasks

This section includes:

"To view active streams" on next page

"To display hidden streams" on next page

"To verify or schedule the run_steps command" on next page

"To view stream attributes" on next page

"To schedule a batch job" on page 178

"To load or resume a batch job" on page 178

"To suspend a stream" on page 178

"To abort a stream" on page 178

"To view node information" on page 178

"To view step attributes" on page 178

"To refresh stream data" on page 178

"To view historical data" on next page

"To view archived data" on next page

"To automatically retry steps" on page 179

"To manually retry steps" on page 179

To view active streams

1. Select **Admin** > **ETL Management**.
2. In the DW ABC Streams Management UI page the stream information is displayed.

To display hidden streams

The DW ABC Streams Management UI enables you to view streams that are hidden and used only for back-end maintenance.

1. Select **Admin** > **ETL Management** and select **Show Hidden Streams**.
2. The hidden ETL streams are displayed.
3. You can then schedule the run-steps command and load the batches, as needed.
4. Click  to load and run the batch.
5. Click  to refresh and check the running status of the ETL.

For details, see "Use Enterprise Readiness (ER) Tools" on page 191.

To verify or schedule the run_steps command

Run_steps is automatically scheduled after deployment in the post-install. It schedules steps for each defined stream. The run_steps Scheduler dialog box enables you to verify or change the settings. The ABC Web Services server automatically creates a schedule for each active stream (Upstream). Run_steps executes every five minutes, or whatever interval you have set in the DWH settings for the value run_steps scheduler interval. For details see "Configure Data Warehouse Settings" on page 160. The stream will only run once you have loaded a batch.

Note: If you add a new stream definition, you must manually define a run_steps schedule.

1. Select **Admin** > **ETL Management** and click  in the Stream Information area.
2. The Stream Scheduler dialog box opens.
3. Select the **Run-Steps Scheduler** tab.
4. Click **Add New** to create a new schedule for a specific stream.
5. Click **Save**.
6. Click **Delete** to delete a displayed schedule. You can then add a new one to replace it.

To view stream attributes

1. Select **Admin** > **ETL Management** and click **More Info** in the Stream Information area.
2. The Stream Attributes dialog box opens, displaying the various read-only stream details.

To schedule a batch job

1. Select **Admin** > **ETL Management** and click  in the Stream Information area.
2. The Stream Scheduler dialog box opens.
3. Select the **Load -Batch Scheduler** tab.
4. Select the relevant **Schedule Type** and times and click **Save**.

To load or resume a batch job

1. Select **Admin** > **ETL Management** .
2. When there is no running batch (stream state is **None**) or the running batch is in a suspended state (stream state is **Suspended**), click  to load or resume a batch.

To suspend a stream

When the stream is running and the state is Active, you can suspend the stream to allow no action to happen.

- Select **Admin** > **ETL Management** and click  in the Stream Information area.

To abort a stream

When you abort, the batch cannot be run again, when you load, it will start a new batch.

- Select **Admin** > **ETL Management** and click  in the Stream Information area.

To view node information

1. Select **Admin** > **ETL Management** and click a node in the Stream Information area.
2. The Node Step list opens with the step information displayed.

To view step attributes

1. Select **Admin** > **ETL Management** and click **More Info** in a specific node.
2. The Step Attributes dialog box opens, displaying the various read-only step details.

To refresh stream data

- Select **Admin** > **ETL Management** and click  in the Stream Information area.

To view historical data

The most recent batch history of the stream is displayed first. You can navigate through the pages of the various batches. You can view up to five batches at a time.

1. Select **Admin** > **ETL Management** and click Historical Data in the Stream Information area.
2. The Historical Data page opens.
3. Select **Next** to view the other batches in the stream's history. All fields are read only.

To view archived data

You can view previous stream definitions and the historical data for each. The historical data is the batch history for that particular definition. When you add a data source it changes the stream definition. The new definition has no historical data, you can only view the archived stream and see

the historical data of the previous definitions. All fields are read only.

1. Select **Admin** > **ETL Management** and click **Archived Streams** in the Stream Information area.
2. The Archived Stream Definition page opens.

To automatically retry steps

There is an automatic retry for attempting to fix step errors. A step that has an error it will not necessarily remain and can resolve itself.

There is a configurable automatic retry mechanism which is set by default to four times. For details on changing the amount of automatic retries, see "Change the Number of Retries for a Failed ETL Step" on page 269.

To manually retry steps

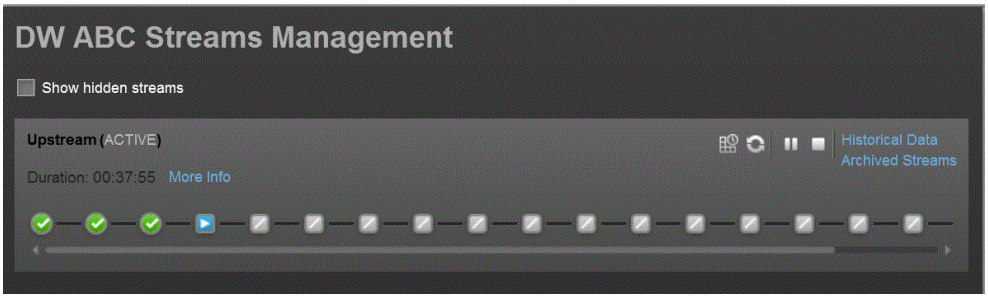
The retry image appears when there has been a failure on a step.

1. Select **Admin** > **ETL Management** and click an error node in the Stream Information area.
2. The Node Step list opens with the step information displayed.
3. If all of the retries have been exhausted, and the Retry icon appears.
4. Click in the Stream Information area to suspend the stream.
5. Fix the problem, and manually retry by clicking .
6. Once the error is resolved, click to resume the stream.

UI Description

DW ABC Streams Management Page

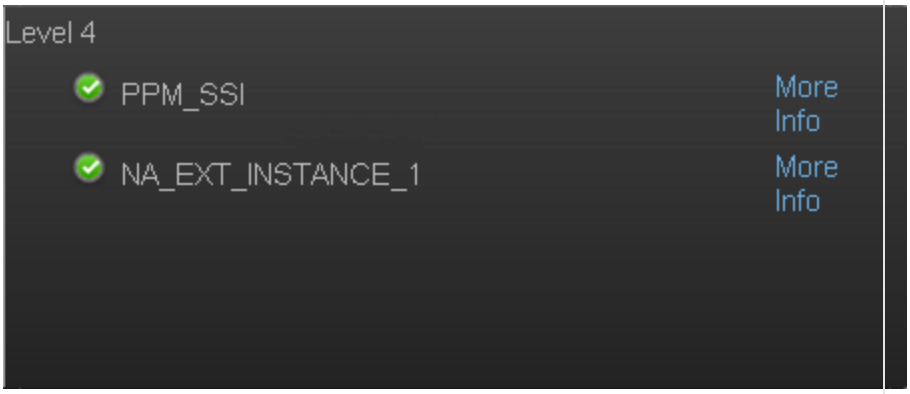
You can view and manage ETL stream functions and run-time information through the DW ABC Streams Management UI. The active stream and details are displayed as well as the node and step details.



<Stream Display>

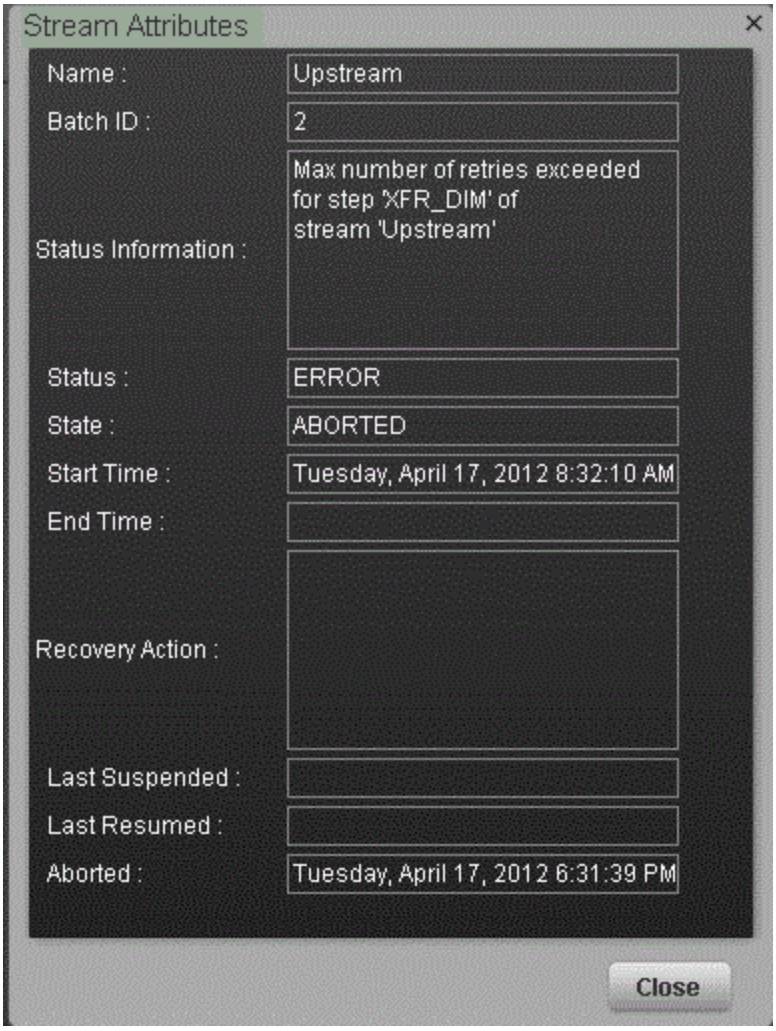
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
<Stream Information>	Displays the following stream details: • Stream Name • Status: Active or Suspended or None • Duration • Date
Show Hidden Streams	Click to display the hidden ETL streams.
	Refreshes the stream information. There is an automatic refresh of the stream information every two minutes.
More Info	Opens the Stream Attributes dialog box. For details, see "Stream Attributes Dialog Box" on next page
	**Load Batch/Resume.** Starts or resumes the running of the specific batch of ETL stream.
	Opens the Stream Scheduler dialog box. Enables you to schedule the load batch and run_steps commands. For details, see "Stream Scheduler Dialog Box" on page 185.
	**Suspend Stream.** Temporarily suspends the stream.
	**Abort Stream.** Stops the stream that is running.

UI Element	Description
<Node Display>	Displays the nodes representing the groups of steps within one level of execution of an ETL run, the steps that can run in parallel. A node is a collection of steps that all run in parallel. The icon for each node represents the worst status of all of the steps in the node. Indicates that the particular step or all steps in the node have finished successfully in the execution. Indicates that a step or a step in the node is currently running Indicates an error in one of the steps. The step is automatically retried four times by default. Click the Error node to display the Node Step List in order to retry steps. Click to retry the step. Indicates a warning in one of the steps. Click a node to open the Node Step list.  If there is an error in any of the steps, then all steps in the execution of the stream are stopped. In order to move to the next node, the error must be resolved. Click **More Info** to display the Step Details dialog box pertaining to the particular step. For details, see "Step Attributes Dialog Box" on page 183.
Historical Data	Opens the Historical Data page where you can view stream history, including the active stream. For details, see "Historical Data Page" on page 187
Archived Streams	Opens the Archive Data page where you can view streams that were previously active with a different definition. for details, see "Archived Streams Page" on page 189.

Stream Attributes Dialog Box

This dialog box enables you to view the attributes of the displayed stream.



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

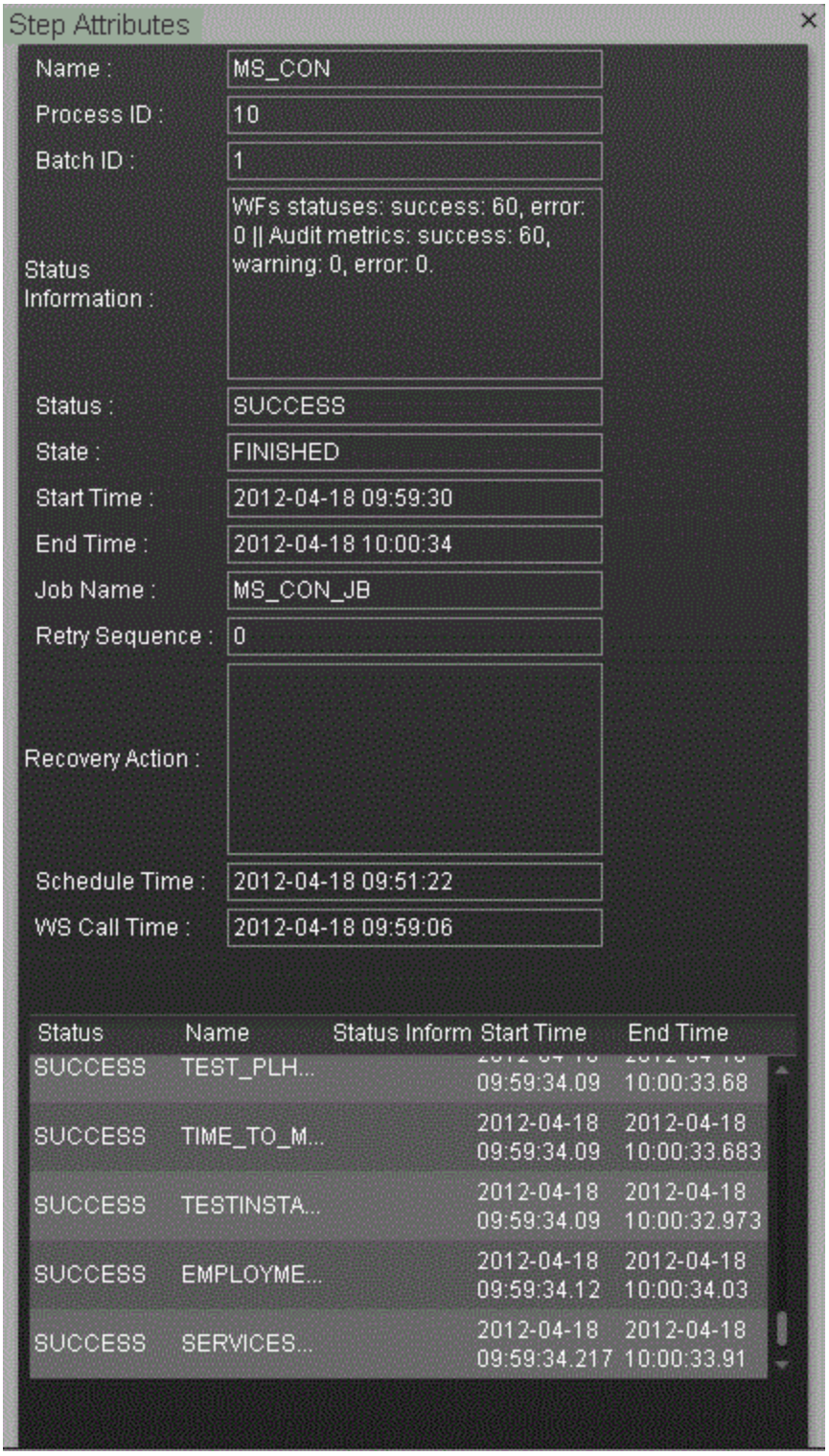
All fields are read-only.

UI Element	Description
Name	Stream name.
Batch ID	The ID of the specific batch job of the stream.
Status Information	Provides details about the status of the stream.
Status	Displays the status of the batch: • **OK** • **Warning** • **Error**

UI Element	Description
State	Displays the state of the batch: • **Active** • **Suspended** • **Finished** • **Aborted**
Start Time	The date and time of the start of the batch job.
End Time	The date and time of the end of the stream batch job.
Recovery Action	Displays any information about recovery actions if the stream was suspended or stopped.
Last Suspended	The date and time the stream was suspended.
Last Resumed	The date and time the stream was resumed.
Aborted	The date and time the stream was aborted.

Step Attributes Dialog Box

This dialog box enables you to view the attributes of the displayed step.



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

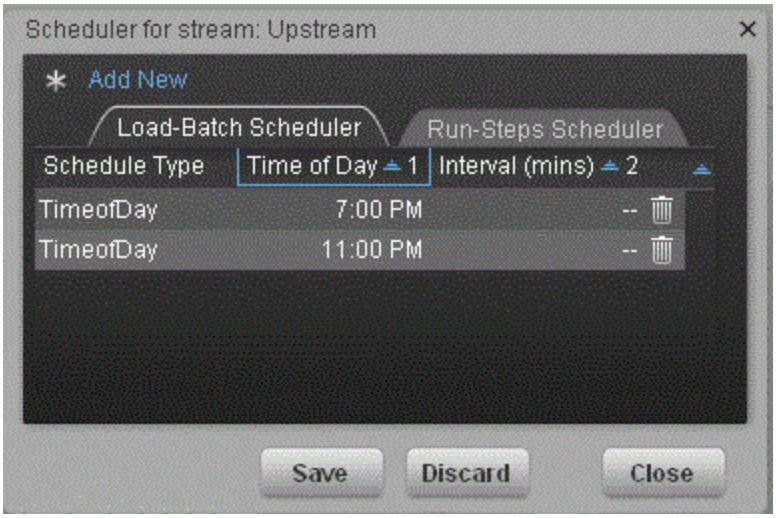
All fields are read-only.

UI Element	Description
Name	Step name.
Process ID	The ID of the specific run of the step.
Batch ID	The ID of the specific batch job of the stream.
Status Information	Provides details about the status of the step.
Status	Displays the status of the step: • **NA** • **SUCCESS** • **WARNING** • **ERROR** • **MAX_EXECUTION_TIME_EXCEEDED**
State	Displays the state of the step: • **WAITING** • **RUNNING** • **STARTING** • **FINISHED**
Start Time	The date and time of the start of the run.
End Time	The date and time of the end of the run.
Job Name	The BODS job name.
Retry Sequence	The number of automatic retries.
Recovery Action	Displays any information about recovery actions if the step failed.
Schedule Time	The date and time the batch was loaded.
WS Call Time	The date and time that ABC makes the call to execute. Indicates if there is a problem in the execution.
Step Details	BODS Jobs: The workflows for the BODS jobs associated with each step. Other executables: Sub-processes of the step.

Stream Scheduler Dialog Box

This dialog box enables you to schedule a specific batch job and schedule a run_steps command.

Load Batch Scheduler Tab



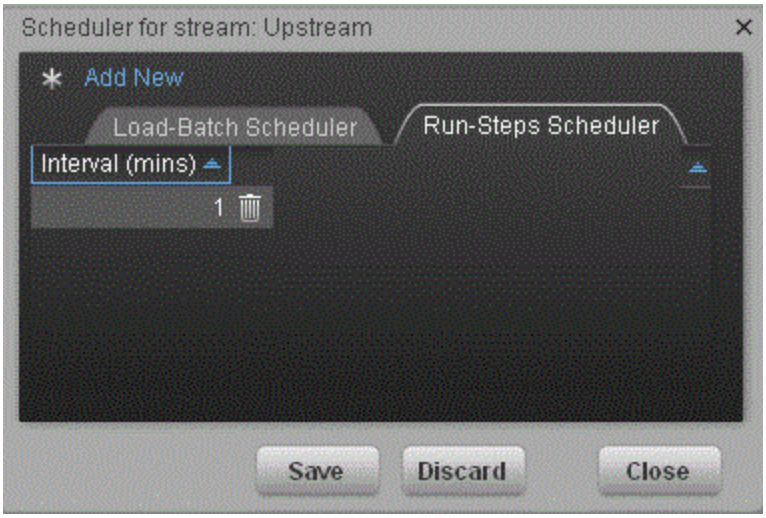
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Schedule Type	Select either: • **Interval:** Timeframe in minutes. • **Time of day:** Time according to 24 hour clock. Enter the required schedule time in the relevant row.
	**Delete.** Deletes the adjacent schedule time.
Add New	Creates a new schedule. The new schedule is displayed in blue. When the schedule is saved to the server, the schedule is displayed in black.
Save	Saves all changes to the server.
Discard	Discards all changes without saving them to the server.
Close	Closes the Load Batch Scheduler dialog box.

Note: Click the down arrow in each column to filter your scheduling information.

Run_Steps Scheduler Tab

This sets the frequency that the ETL Management runs all of the executables for the stream.This includes steps that are loaded as well as the batches created.



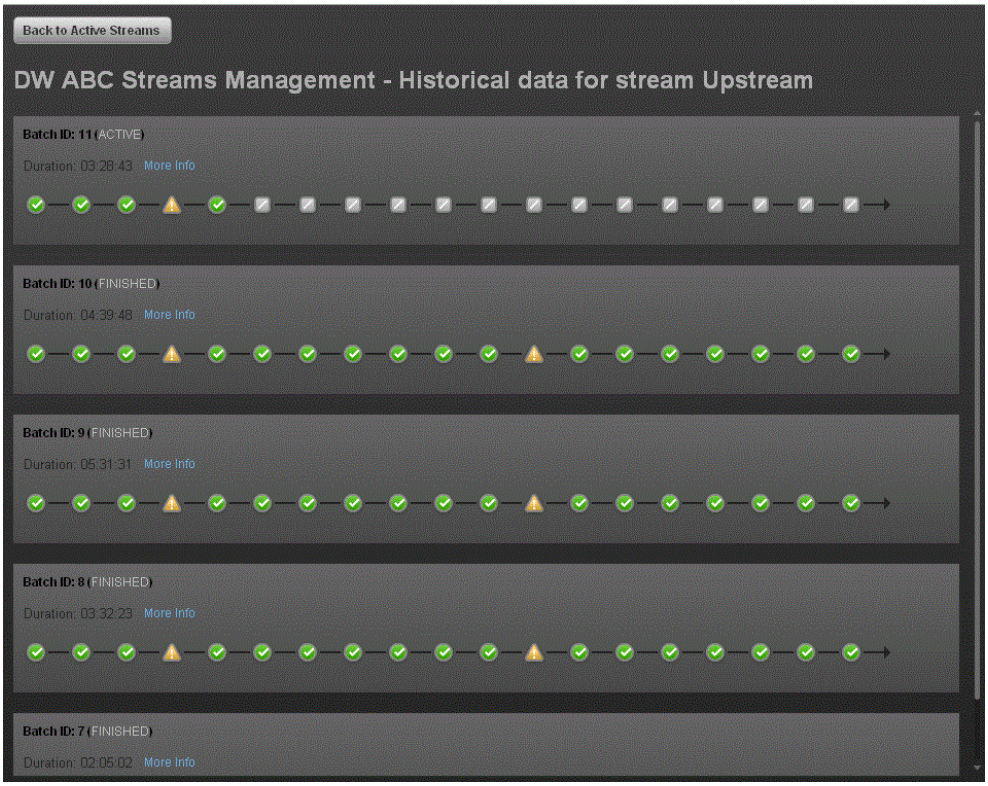
User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Interval (mins)	Enter the interval at which you want to schedule the run_steps command. The default run_steps interval is initially set at 5 minutes in the Data Warehouse page of the Admin tab, but it is recommended to only make changes to the run_steps interval in this scheduler.
Add New	Enables you to add a new schedule for the run_steps command.
Save	Saves all changes to the server.
Discard	Discards all changes without saving them to the server.
Close	Closes the run-steps Scheduler dialog box.

Note: Click the down arrow in each column to filter your scheduling information.

Historical Data Page

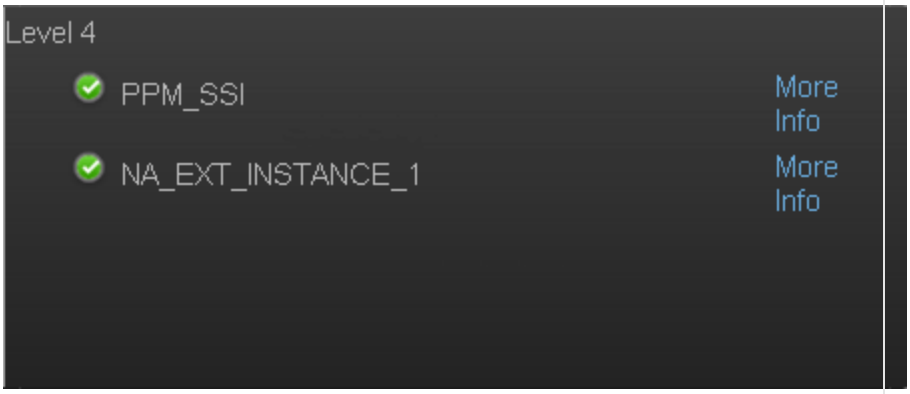
You can view a stream's job history on the Historical Data page..



<Stream Display>

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

UI Element	Description
Back to Active Streams	Opens the DW ABC Streams Management UI main page.
<Stream Information>	Displays the following stream details: • Batch ID Number • Status: Active, Suspended or Aborted • Duration • Date
More Info	Opens the Stream Details dialog box. For details, see "Stream Attributes Dialog Box" on page 181.

UI Element	Description
<Node Display>	Displays the nodes representing the groups of steps within the execution of an ETL run. A node is a collection of steps that all run in parallel. Indicates that all steps are running in the execution. Indicates an error in one of the steps. The step is automatically retried four times by default. Indicates a warning in one of the steps. Click a node to open the Node Step list. 
Previous	Navigates to the previous job history data for the stream.
Next	Navigates to the next job history data for the stream.
<<	Navigates to the earliest job history data for the stream.

Archived Streams Page

This page enables you to view stream definitions that have been changed and archived..

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

All fields are read-only.

UI Element	Description
Back to Active Streams	Opens the DW ABC Streams Management UI main page.
<Stream Information>	Displays the following stream details: • Stream Name • Status: Active or Suspended • Duration • Date
More Info	Opens the Stream Details dialog box. For details, see "Stream Attributes Dialog Box" on page 181.
Historical Data	Opens the Historical Data Page where you can view the archived stream history. For details, see "Historical Data Page" on page 187.
Back to Active Streams	Opens the DW ABC Streams Management UI main page.
<Node Display>	Displays the nodes representing the groups of steps within the execution of an ETL run. A node is a collection of steps that all run in parallel.

Use Enterprise Readiness (ER) Tools

The ER tools provide better manageability and awareness of processes in the system, and enable you to clean problematic entities or all data, as well as re-stream existing data with problematic logic according to batch or specific date. The Restream and CleanData streams are hidden by default. However, they can be managed, as any other stream, in the ETL Management tab.

When you have specific KPI and data problems in Executive Scorecard, or after you run the ETL, check the Target tables for any issues. If you find a problem with specific entities, note the specific batch id or the specific load date in the Target tables. Depending on the issue, you will need to either clean or restream the data to fix the issues.

To access the CleanData and Restream streams:

Admin > **ETL Management** and select the **Show Hidden Streams** checkbox.

For ETL stream details, see "Perform Tasks for ETL Management " on page 175.

CleanData

Note: The CleanData stream is an advanced ETL tool. Running the CleanData stream erases all existing data in the Staging tables.

CleanData does not clean historical data in the Target tables.

The DW ABC Streams Management User Interface enables you to clean corrupted data by specific criteria and then reload data from the source by running the Upstream ETL stream.

CleanData is used to enable the data in DWH to be restored to a specific version, as follows:

- CleanData by batch, entity or all entities.
- CleanData by date, entity or all entities.

Note: Running the CleanData stream may not recover all existing data.

Restream

The DW ABC Streams Management User Interface enables you to manage re-streaming the entire ETL loading process. This functionality allows you to re-stream the entire ETL stream from a previous batch to the latest batch, as well as revise incorrect data in the DWH Target.

Restream is used to re-stream the entire ETL loading from a specific batch point to the latest point, as follows:

- Re-stream by batch, entity or all entities.

Command Line Interface Tool

To run the ER tools in ETL Management you must first use command line batch files to set the stream parameters. The two batch files are found in the DWH/bin folder.

The log information is in **DWH/log/dw_abc.log**.

The log level can be modified in **DWH/conf/abc-log4j.xml**.

Note: The arguments are populated into an ABC table called CONTROL_ARGS. If there are unexecuted commands in CONTROL_ARGS, the batch files cannot insert new records into the CONTROL_ARGS table.

CleanData Command

dw_abc_cleandata

[-batch <batch_id>] [-entity <entity_name>] [-inputdate <input_date_of_batch>] [-display] [-delete] [-help]

Options:

- -batch: The batch ID of the point in DWH from which you want the data to be cleaned.

  For example, if the DWH system has 5 batches, and the problem is with batch 2, then it will delete batch numbers 2, 3, 4, and 5.
- -entity: The model name of the entity that you want cleaned.
- -inputdate: The date of the restore point in DWH from which you want data cleaned.
- -display: Display all existing commands.
- -delete: Delete the unexecuted commands.
- -help: Print the help message.

Example:

```
dw_abc_cleandata -batch 1 -entity LOCATION
dw_abc_cleandata -batch 1 -entity LOCATION,SERVICE,ORG
dw_abc_cleandata -batch 1 -entity ALL
dw_abc_cleandata -inputdate 2012-09-30 -entity LOCATION,SERVICE,ORG
dw_abc_cleandata -inputdate 2012-09-30 -entity ALL
dw_abc_cleandata -help
dw_abc_cleandata -display
dw_abc_cleandata -delete
```

Returns:

- **0** success
- **1** success with warnings
- **>1** errors present

Restream Command:

dw_abc_restream

restream. bat [–batch <batch_id>] [-entity <entity_name>] [-full <full_restream>] [-display] [-delete] [-help]

Options:

- -batch: The batch ID of the point in DWH from which you want the batch re-streamed.

  For example, if the DWH system has 5 batches, and the problem is with batch 2, then it will re-stream batch numbers 2, 3, 4, and 5.
- -help: Print the help message.
- -entity: The model name of the entity you want re-streamed.
- -full: The flag of the re-stream indicator that allows only re-streaming the error data from the VALF table when it is equal to N, otherwise it re-streams all data.
- -display: Display all existing commands.
- -delete: Delete the unexecuted commands.
- -help: Print the help message.

Example:

```
dw_abc_restream -batch 1 -entity LOCATION -full Y
dw_abc_restream -batch 1 -entity LOCATION,SERVICE,ORG -full Y
dw_abc_restream -batch 1 -entity ALL -full Y
dw_abc_restream -batch 1 -entity LOCATION -full N
dw_abc_restream -batch 1 -entity LOCATION,SERVICE,ORG -full N
dw_abc_restream -batch 1 -entity ALL -full N
dw_abc_restream -help
dw_abc_restream -display
dw_abc_restream –delete
```

Returns:

- **0** success
- **1** success with warnings
- **>1** errors present

Tasks

This section includes:

"To utilize the Restream or CleanData streams:" below

"To display hidden streams:" on next page

To utilize the Restream or CleanData streams:

1. Run the following command line batch files found in the DWH/bin folder to set the stream parameters.

   dw_abc_cleandata

dw_abc_restream

2. After you run the command line batch files, access the ER tools and run the Restream or CleanData streams.

To display hidden streams:

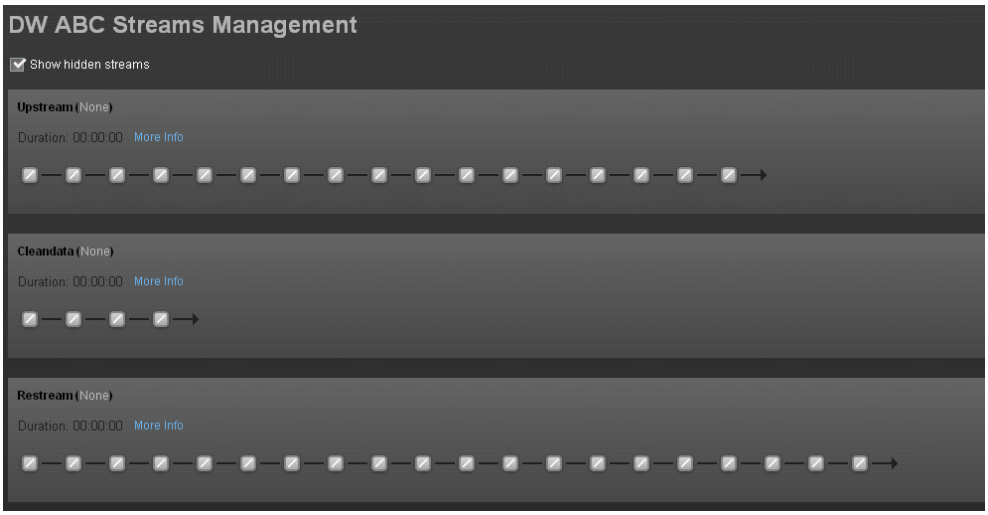
1. Select **Admin** > **ETL Management** and select **Show Hidden Streams**.
2. The hidden ETL streams are displayed.
3. You can then schedule the batches, as needed.
4. Click  to load and run the batch.
5. Click  to refresh and check the running status of the ETL.
6. Once the ETL is running successfully, re-run the Upstream stream.

   For ETL Management details, see "Perform Tasks for ETL Management " on page 175.

UI Description

To access the CleanData and Restream streams:

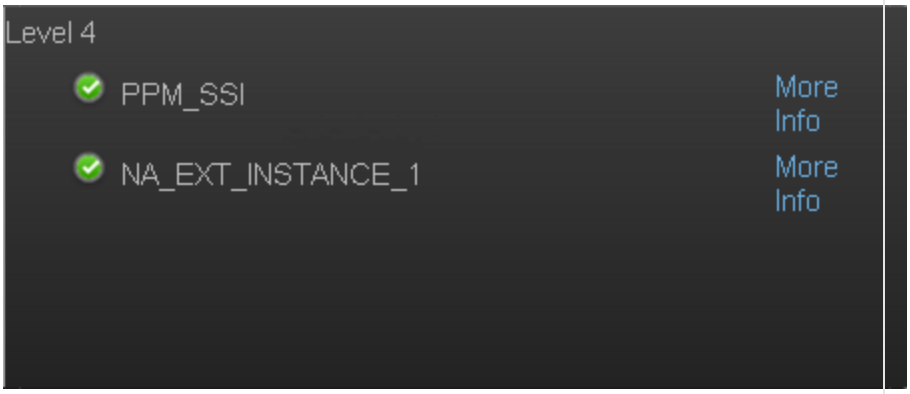
Admin > **ETL Management** and select the **Show Hidden Streams** checkbox.



<Stream Display>

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

UI Element	Description
<Stream Information>	Displays the following stream details: • Stream Name • Status: Active or Suspended or None • Duration • Date
Show Hidden Streams	Click to display the hidden ETL streams.
	Refreshes the stream information. There is an automatic refresh of the stream information every two minutes.
More Info	Opens the Stream Details dialog box. For details, see "Use Enterprise Readiness (ER) Tools" on page 191
	**Load Batch/Resume.** Starts or resumes the running of the specific batch of ETL stream.
	Opens the Stream Scheduler dialog box. Enables you to schedule the load batch and run_steps commands. For details, see "Use Enterprise Readiness (ER) Tools" on page 191.
	**Suspend Stream.** Temporarily suspends the stream.
	**Abort Stream.** Stops the stream that is running.

UI Element	Description
<Node Display>	Displays the nodes representing the groups of steps within one level of execution of an ETL run, the steps that can run in parallel. A node is a collection of steps that all run in parallel. The icon for each node represents the worst status of all of the steps in the node. Indicates that the particular step or all steps in the node have finished successfully in the execution. Indicates that a step or a step in the node is currently running Indicates an error in one of the steps. The step is automatically retried four times by default. Click the Error node to display the Node Step List in order to retry steps. Click to retry the step. Indicates a warning in one of the steps. Click a node to open the Node Step list.  If there is an error in any of the steps, then all steps in the execution of the stream are stopped. In order to move to the next node, the error must be resolved. Click **More Info** to display the Step Details dialog box pertaining to the particular step. For details, see "Use Enterprise Readiness (ER) Tools" on page 191.

For more details on managing ETL streams, see "Perform Tasks for ETL Management " on page 175.

Perform Tasks for Data Source Management

Data Source Management 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 Data Source Management page.

To Access: Select **Admin** > **Data Source Management** then click **Add data source** .

Learn More

Learn about Content Packs

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

The connection from the data source to the DWH is called an integration content pack (iCP). Each content pack uses an extractor in order to extract the data from the specific data source and contain all the artifacts needed to connect to the relevant data source and gather data from that data source. 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 mapping between the raw data from the data source and the target database in the Data Warehouse is included in the ETL. The Executive Scorecard 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.

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

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
- AM
- BSM

- DP
- IC
- NA
- NNM
- OO
- PPM
- SA
- SE
- SM
- UCMDB

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 HP IT Executive Scorecard.

Learn About 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 FBI extractor technology, and consolidation is enabled between instances.

You can add an instance using the Data Source Management page or using the Automation tool. For back-end tool details, see "The Automation Tool" on page 265.

Learn About File Based Integration

File Based Integration (FBI) enables you to extract data from a specific data source according to a set of instructions.It consists of a plug-able extractor framework for each data source. The extractor gathers data according to the specific instructions it receives, placing it into a relevant txt file. Each supported data source has a corresponding extractor (or multiple extractors) capable of extracting data out of it according to specified instructions. All available Content Packs use FBI.

Extraction Mechanism

The extraction is based on a set of parameters kept in the dwabc.INSTRUCTION table in the staging database. The instruction parameters are set by the BODS workflow during the Source Extract.

Extraction Methodology

The extraction is done using Enterprise JavaBeans (EJBs) running on the application container of the Data Warehouse. The EJBs use various technologies (for example, JDBC, Web Services, Remote EJB objects, data files, and other kinds of http requests) to extract the data from the data source.

ETL Source Extract

The first stage of the ETL is the Source Extract. In this phase, the BODS workflow inserts an instruction to the INSTRUCTION table and then invokes a batch file with the instruction ID as a parameter. The batch file calls a JAVA program which performs an http request that activates the relevant extractor. Using the instruction ID, the extractor fetches the relevant parameters from the INSTRUCTION table.

External adapters running inside the BODS tomcat JVM, extract the data from the data source into BODS data stores. In all Content Packs that integrate using FBI, data is extracted using a new framework which runs on a separate JVM from the data source into txt files with well defined standard structure. FBI runs the source extract in a JVM outside BODS. Additionally, when running outside of BODS, it is not required to comply to BODS interfaces.

Content Packs that use FBI Extractors

- ALM
- AM
- BSM
- DP
- IC
- NA
- NNM
- PPM
- SA
- SE
- SM
- UCMDB
- APM (divided into uCMDB, BSM KPI dashboard, GDE)

Troubleshooting Logs

- **<agora>\glassfish\glassfish\domains\BTOA\logs\fbi.log**: This log describes all of the current activity of the file based framework as well as the activity of the extractors themselves.
- **<installation directory>\agora\DataWarehouse\log\dw_fbi_client.log**: This log describes the activity of calling the FBI url from a batch file (which is invoked by a BODS workflow during the ETL source extract).

Tasks

This section includes:

"Add and activate a new data source instance:" on next page

"Reactivate an existing data source instance:" on next page

"Deactivate a data source instance:" on next page

"View data source configuration settings" on page 201

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 Source Management**.
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 Source Management**.
2. Click  next to the specific source and the source is activated.

> **Note:** Before reactivating the BSM data source, click **Edit Settings** and enter the **RTSM Username** and **RTSM Password**.
>
> Before reactivating the UCMDB data source, click **Edit Settings** and enter the **Username** and **Password**.

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 Source Management**.
2. Click  and the deactivation warning opens.
3. Click **OK**.

View data source configuration settings

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

Edit data source settings and test the connection:

1. Select **Admin** > **Data Source Management**.
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" on page 240.

Configure admin tasks using the command line

For details, see "Data Warehouse Command Reference" on page 249

Use the FBI Verification Extractor

FBI also supplies an extractor within the FBI framework that can verify and validate the flat file output you have.

To utilize the extractor:

1. Place the Flat File (FF) in a specific folder with a specific name in the RESULT_FILE_NAME column in the Instruction table. The name and folder are defined by the ETL developer.
2. The delimiters in FF should be the same as the ones defined in the delimiters columns (FIELD_DELIMITER and ROW_DELIMITER).The FF must contain the list of fields in the first line with all the relevant delimiters.
3. Make sure the order and the name of the fields in the FF are the same as the ones defined in the SourceModelMetadata.

To activate the extractor:

1. Define the productType attribute in the datasource.xml as file (productType="file").
2. You can also override the defined extractor by adding a new entry into the connection detail (in the datasource.xml), as follows: <dw:GenericProperty propertyName="overrideextractor" propertyValue="file" propertyType="string"/>

Configure FBI Properties

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

Navigate to: **<installation directory>\DataWarehouse\conf\fbi.properties**

If multiple extractors are running simultaneously, you may need to configure the following:

fbi.max.number.of.threads =5

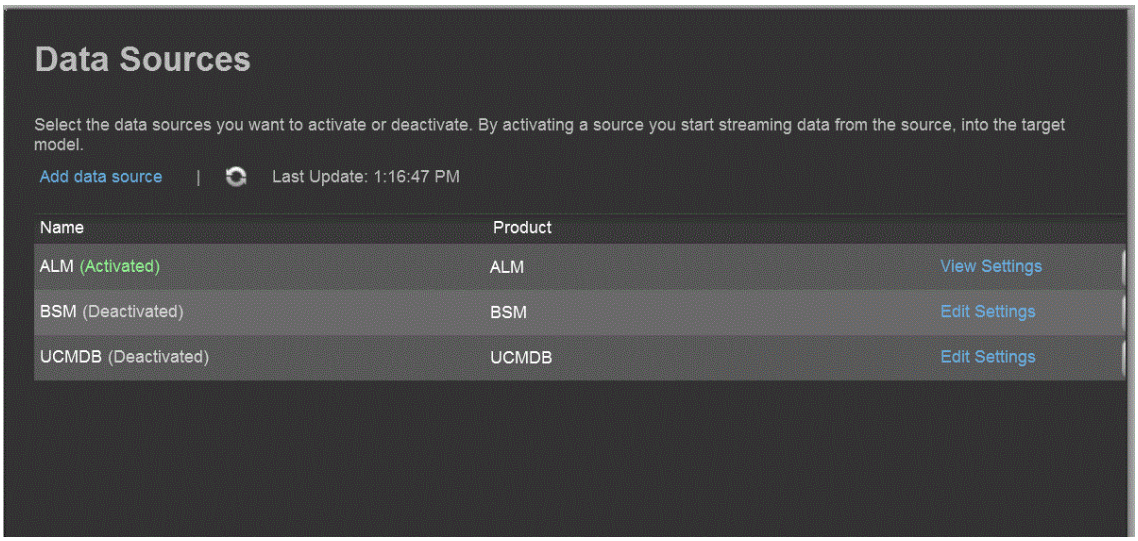
If you experience problems with languages that do not work with UTF 16 you can change the following:

fbi.flat.file.encoding =UTF-16

UI Description

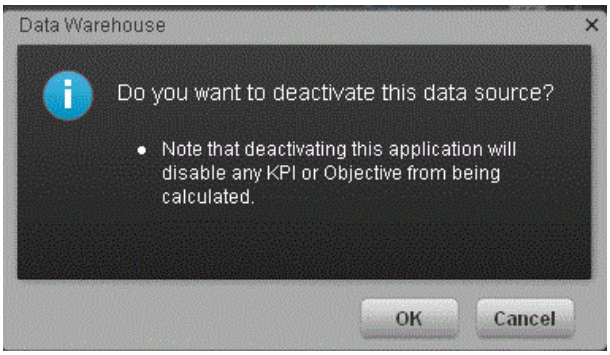
Data Source Management Page

The Data Source Management 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 next page.
<Data Sources>	A list of sources, by **Name** (instance name) and **Product** (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.

UI Element	Description
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 "Perform Tasks for ETL Management " on page 175. • Do not activate a content pack while the ETL is running.
	Deactivates the relevant data source.  Do not deactivate a content pack while ETL is running.

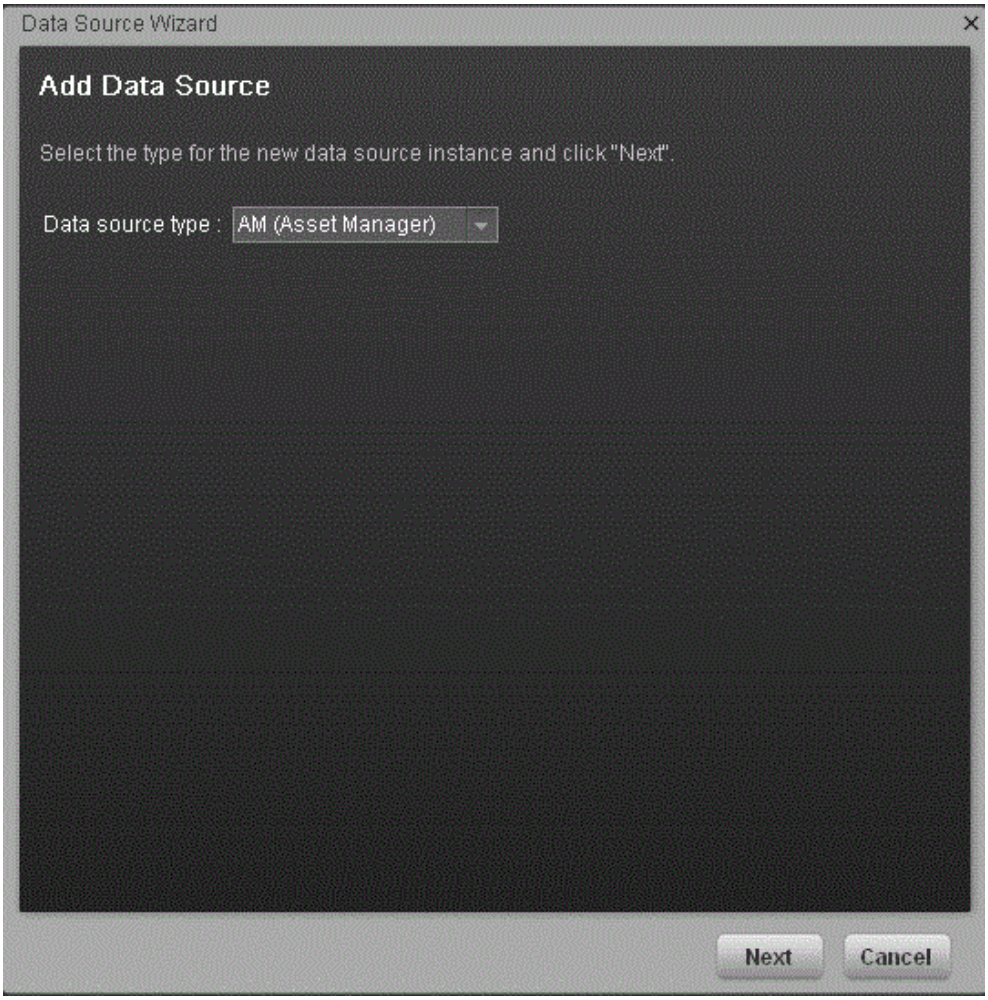
Data Source Wizard

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

To access	Select **Admin** > **Data Source Management** and then click **Add data source**. Select the data source type to activate the integration processes.

Important Information	The UI elements of the wizard differ according to the selected data source, as follows. • ALM • AM • BSM • DP • IC • NA • NNM • OO • PPM • SA • SM • UCMDB • **Additional Sources:** Additional data sources can be added . For details see "Add Additional Data Sources" on page 240. For configuration parameter details, see "Integrate the Data Sources" on page 1 in the *Content Reference Guide*. 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.
Wizard Map	The Data Source wizard contains: **Add Data Source Page** > **Configuration Parameters Page** > **Validation Page**

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.

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.

Perform the Back-End Maintenance of the Data Warehouse

You can monitor and the ETL and other functions of the Data Warehouseusing the back-end tools. This section includes the following topics:

Clean Up the Staging and Target Databases

You clean up the databases when you want to run the initial load anew.

The tables that are cleaned are:

- All the data in the **dwt** tables in the target database.
- All the data in the **dws**, **dwst**, and **xrefgen** schemas in the staging database.

Note:

- The clean up tool cleans all data.
- The clean up tool cannot be activated during an ETL run.
- There is no possibility of rollback after the clean up.

To clean up the staging and target databases:

1. Backup the staging and target databases (so they are synchronized at the time of the backup) using the tools of the relevant database servers.
2. Clean up the databases using the **dw_clean_data** tool. For details, see "DWH Command Reference" on page 257

ABC Operational Reports

ABC operational reports report different aspects of ABC governance of ETL job streams. The objectives of these reports are to display:

- ETL stream definitions, such as catalogs, stream, and stream step information.
- Operational information about ETL batch jobs and processes.

Operational reports include:

"Audit Reports" below

"Control Reports" on page 213

Audit Reports

ABC Audit reports display ETL audit measure and metric information. You can define the length of time included in the audit history by specifying the number of days in the **Batch run history** field. The typical user is the data warehouse administrator or an HP Support engineer. Run the reports after multiple ETL runs produce historical results.

The following Audit reports are available:

"ABC Reports - Consolidation Tables Activity " on next page

"ABC Reports - Source Extraction Tables Activity " on page 210

"ABC Reports - Dimension Tables Activity " on page 212

ABC Reports - Consolidation Tables Activity

The Job Streams Consolidations Activity report displays volume information ETL consolidation.

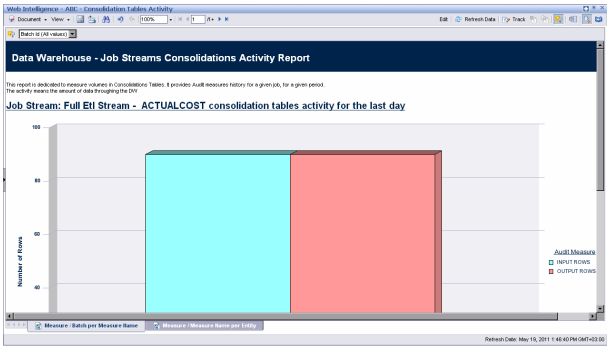
Tasks

Display the volume information ETL consolidation

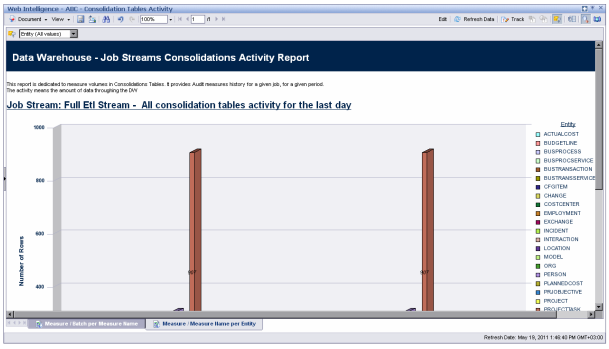
1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Audit Reports > ABC - Consolidation Tables Activity**.
2. In the Prompts dialog box, select or enter the number of days of history to appear in the report in the **Batch run history** field. The default value is **1** day.
3. Click **Run Query**.

> **Note:** You can navigate between the tabs and select a view of the data by entity if you click the drop-down list box at the top of the report and select **All values**, or a single entity.

The **Measure / Batch per Measure Name** tab displays a bar chart view of the number of input rows and output rows for each affected consolidation table by batch ID and start time over the specified duration.



The **Measure / Measure Name per Entity** tab measures job stream activity for the amount of days selected.



ABC Reports - Source Extraction Tables Activity

This report shows the ETL activity on the source data tables.

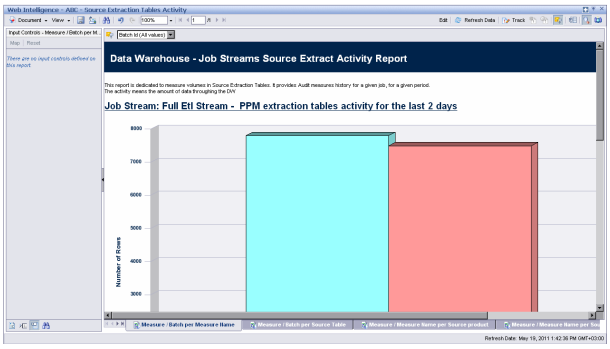
Tasks

Display the source data tables

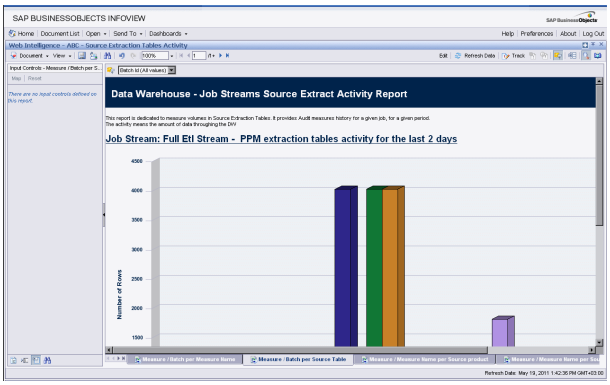
1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Audit Reports > ABC - Source Extraction Tables Activity**.
2. In the Prompts dialog box, select or enter the number of days of history to appear in the report in the **Batch run history** field. The default value is **2** days.
3. Click **Run Query**.

> **Note:** You can navigate between the tabs and select a view of the data by the number of sources. Click the drop-down list box at the top of the report and select **All values**, or a specific number of sources.

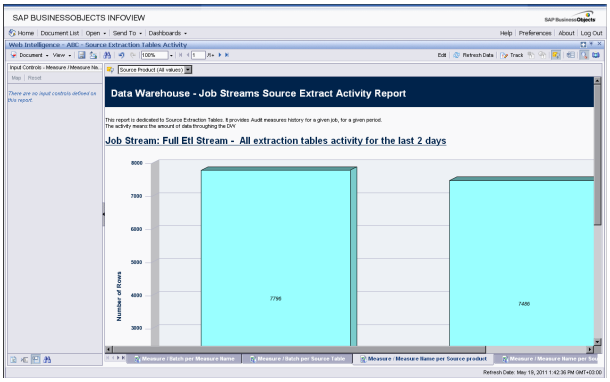
The **Measure / Batch per Measure Name** tab displays a bar chart view of the measures processed from source tables over the specified duration.



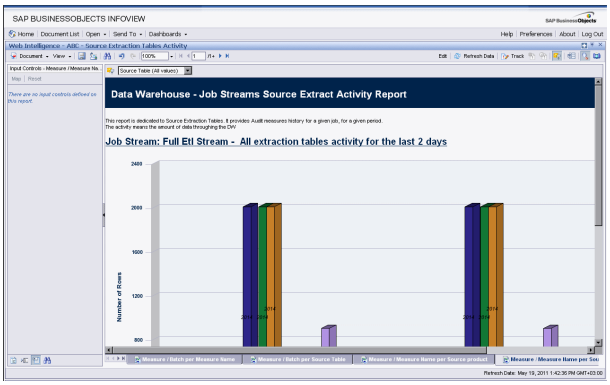
The **Measure / Batch per Source Table** tab displays a bar chart view of the number of data rows in source tables processed over the specified duration.



The **Measure / Measure Name per Source Product** tab displays a bar chart view of the extraction activity by source over the specified duration.



The **Measure / Measure Name per Source Table** tab da bar chart view of the extraction activity by source over the specified duration.



ABC Reports - Dimension Tables Activity

This report measures the volume of data processed by the data warehouse.

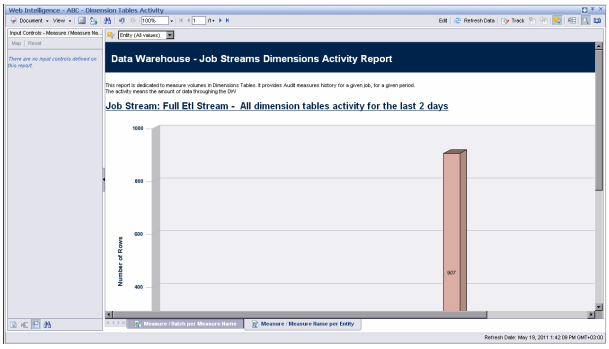
Tasks

Display the volume of data processed by the Data Warehouse

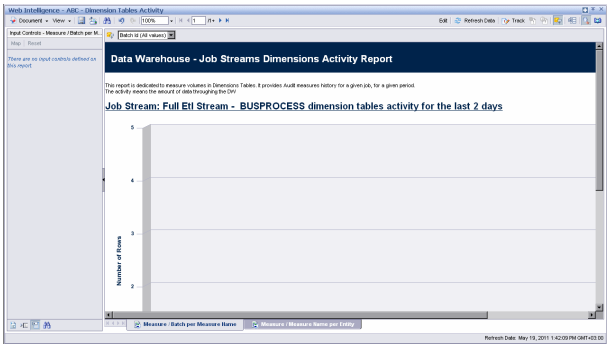
1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Audit Reports > ABC - Dimension Tables Activity**.
2. In the Prompts dialog box, select or enter the number of days of history to appear in the report in the **Batch run history** field. The default value is **1** day.
3. Click **Run Query**.

> **Note:** You can navigate between the tabs and select a view of the data by the number of sources or the entity. Click the drop-down list box at the top of the report and select **All values**, or a specific entity.

The **Measure / Batch per Measure Name** tab displays a bar chart view of the number of rows processed for each dimension table by batch ID and start time over the specified duration.



The **Measure / Measure Name per Entity** tab displays a bar chart view of the number of rows processed by entity over the specified duration.



Control Reports

Control reports describe historic or operational aspects of the data warehouse. Historic reports contain status information gathered over time for analysis and performance improvements. Operational reports contain snapshot information about current jobs and other data warehouse activity. You can edit, save, or export the following ABC Control reports.

Note: If the ABC database runs on a different system than SAP Business Objects Data Services, and these two systems run in different timezones, you may see a discrepancy in the Duration column on the Control reports. For example, if you check a Control report while a step is processing, the report might show that the step has been processing for several hours even though the step has actually been running for only minutes. Once the step terminates, however, the duration becomes accurate.

The following Control reports are available:

"ABC - Operational Status Report" on next page

"ABC - Operational Status History Report" on page 216

"ABC - Operational Duration History Report" on page 218

"ABC - Model Definitions Report" on page 220

"ABC - Job Details Report" on page 221

"ABC - Batch Details Report" on page 222

ABC - Operational Status Report

The ABC Operational Status report displays the runtime information about the out-of-box Upstream.xml file, which contains all the job stream steps for a complete ETL run.

Tasks

Display the volume of data processed by the Data Warehouse

1. In the DWH Status page, click the **Select page** arrow and select **DWH Status Page** > **ABC-Op. Status**.

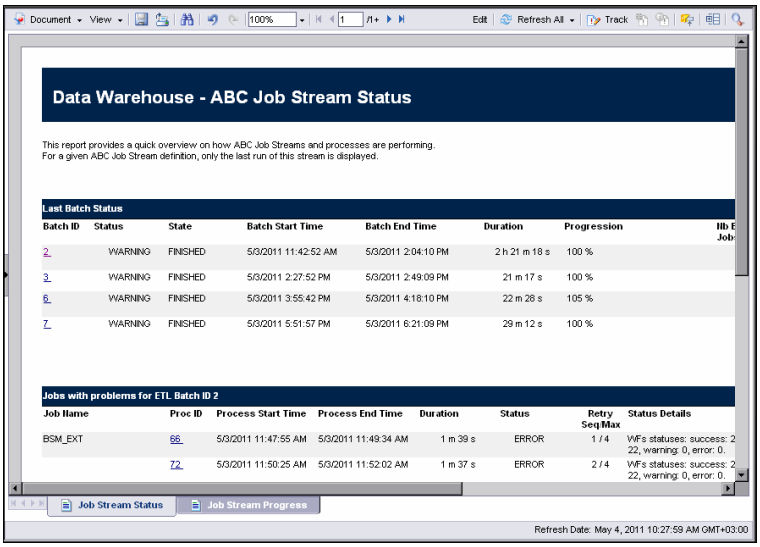
   The ABC Operational Status report is one of the three reports displayed in the DWH main page. It includes two tabs (Job Stream Status and Job Stream Progress).

2. Click the relevant tab.

UI Description

Job Stream Status Tab

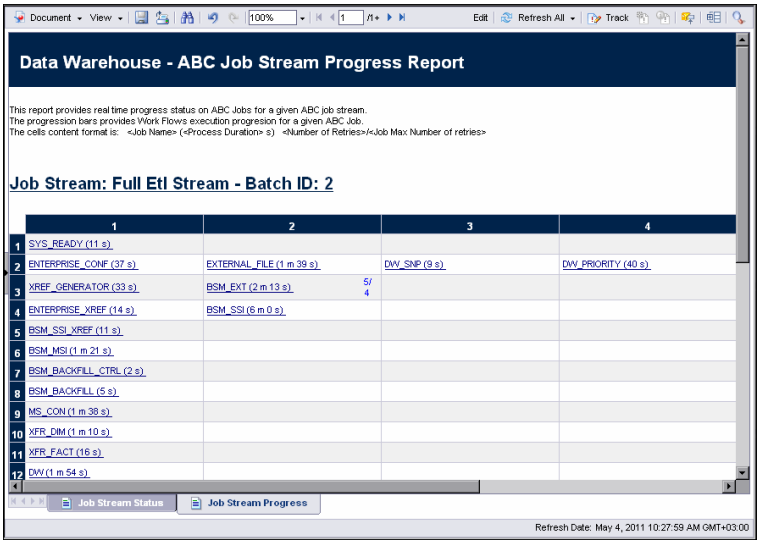
Displays the performance of ABC job streams and process, as follows:



UI Element	Description
Last Batch Status	The status details of the last batch run.
Batch ID .	Click the **Batch ID** value in the first column. A dialog box opens, enabling you to access the ABC Batch Control report. For details, see"ABC - Batch Details Report" on page 222.
Jobs With Problems for ETL Batch ID	The job details for each specific batch listed in the **Batch ID** column.

Job Stream Progress Tab

Displays the runtime status of each job stream step , as follows:



UI Element	Description
<Job Name> (<Process Durations>)	The job name and the length of the job in seconds. Click any ETL job name to display the ETL Job Process Audit report, which shows all audit measures and metrics associated with that Process ID. For details, see "ABC - Job Details Report" on page 221.

ABC - Operational Status History Report

This report displays a batch run history for ABC ETL job streams during a specified period. The report shows run-time duration, status, and error frequency.

Tasks

Display the batch run history for ABC ETL job streams during a specified period

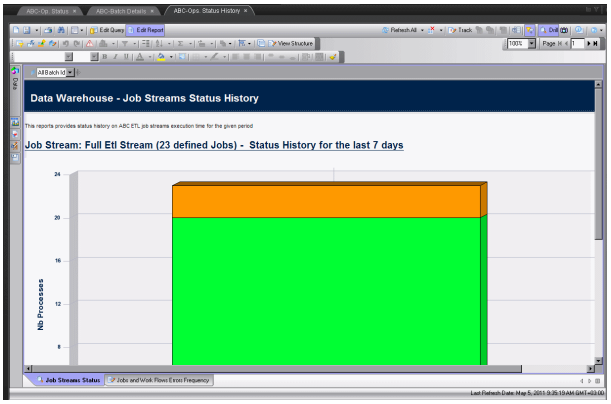
1. In the DWH Status page, click the **Select page** arrow and select **DWH Status Page** > **ABC-Op. Status History**.
2. In the Prompts dialog box, enter the number of days for the batch history.
3. Click **Run Query**.

   The ABC - Operational Status History report is one of three reports displayed in the DWH main page.
4. Click the relevant tab (**Job Stream Status History** tab or **Job and Work flows Errors Frequency** tab).

UI Description

Job Stream Status History tab

Displays the status history of ABC job streams and process.

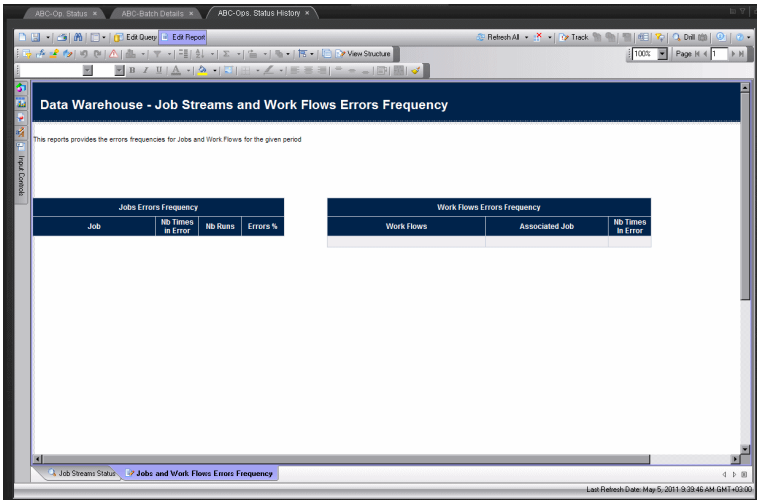


Status Values:

- **Success (Green):** The number of jobs with no error condition or inconsistency detected.
- **Warning (Orange):** The number of jobs where a minor error condition exists, although there are no data inconsistencies or corruption detected, and, there is no loss of data.
- **Error (Red):** The number of jobs with a critical error status.
- **Max Time Exceeded (Pink):** Number of jobs that exceed max execution time.
- **Remaining:** Number of jobs that are waiting to be started.

Job and Work flows Errors Frequency tab

Displays the job and workflow errors frequency, (in descending order). The reports lists only jobs and workflows that produce error conditions.



ABC - Operational Duration History Report

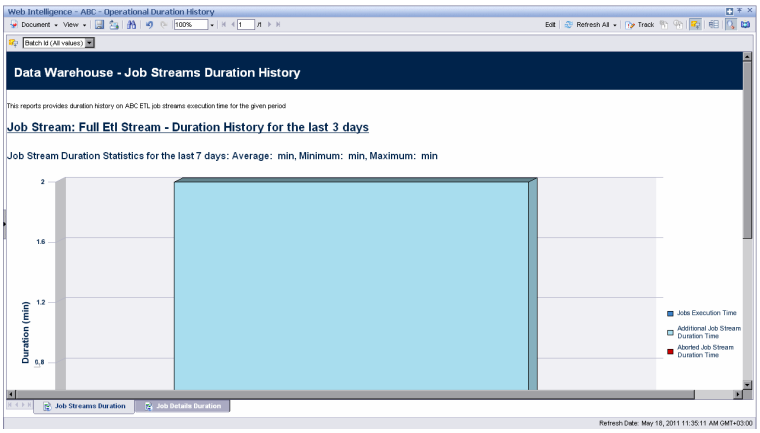
This report describes the duration history of job stream batches during a specified period.

Tasks

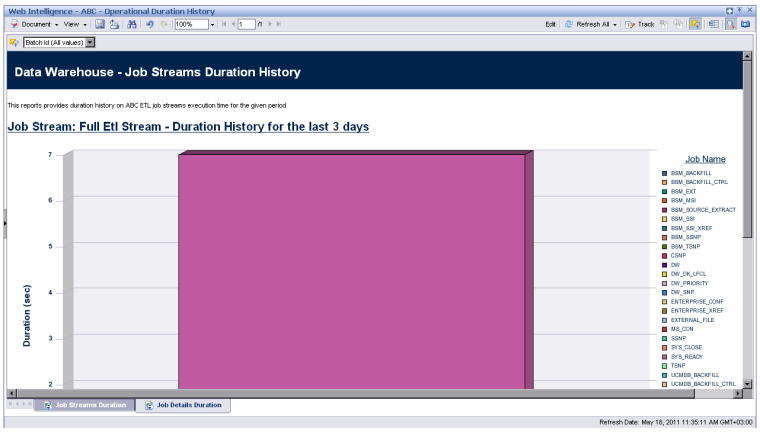
Display the duration history of job stream batches during a specified period

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Operations** > **Control Reports** > **ABC - Operational Duration History**.
2. In the Prompts dialog box, enter the relevant X and Y values in the following fields:
   - **Batch run history for last X days (Enter X):**
   - **Batch Statistics for last Y days (Enter Y):**
3. Click **Run Query**.
4. Click the relevant tab (**Job Streams Duration** tab or **Job Details Duration** tab).

   The **Job Streams Duration** tab displays historical job stream information. The aborted job streams are red.



   The **Job Details Duration** tab displays the amount of time consumed by individual jobs within the job stream.


Web Intelligence - ABC - Operational Duration History
Data Warehouse - Job Streams Duration History
This reports provides duration history on ABC ETL job streams execution time for the given period
Job Stream: Full Etl Stream - Duration History for the last 3 days
Job Name
Duration (sec)
Job Streams Duration
Job Details Duration

ABC - Model Definitions Report

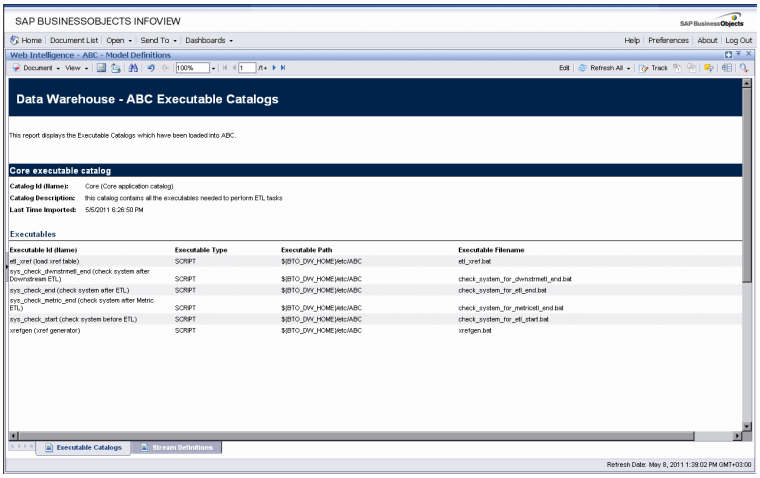
The ABC Model Definitions report displays the executable catalogs to be processed by ABC.

Tasks

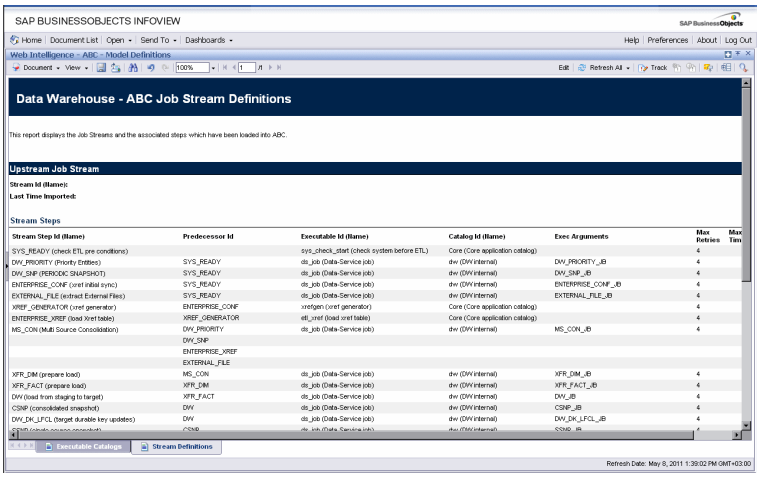
Display the executable catalogs to be processed by ABC

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Operations** > **Control Reports** > **ABC - Model Definitions.**.
2. Click the relevant tab (**Executable Catalogs** tab or **Stream Definitions** tab).

   The **Executable Catalogs** tab displays the executable catalogs that have been loaded into ABC.



   The **Stream Definitions** tab displays the Job Streams and the associated steps that have been loaded into ABC.



ABC - Job Details Report

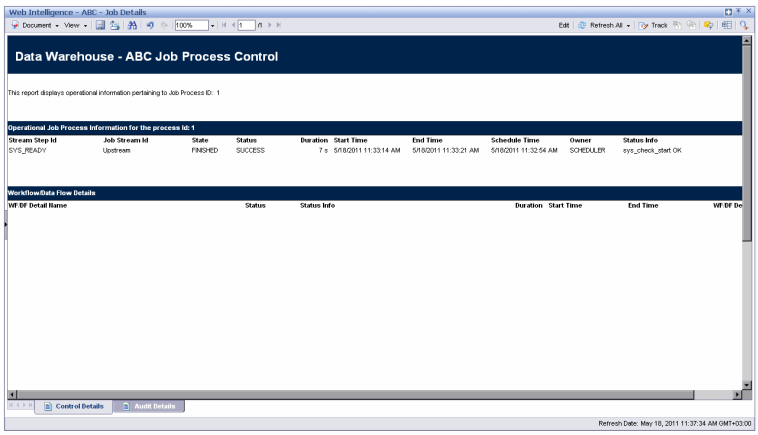
The ABC Job Details report displays operation information, such as the Stream Step ID and workflow information.

Tasks

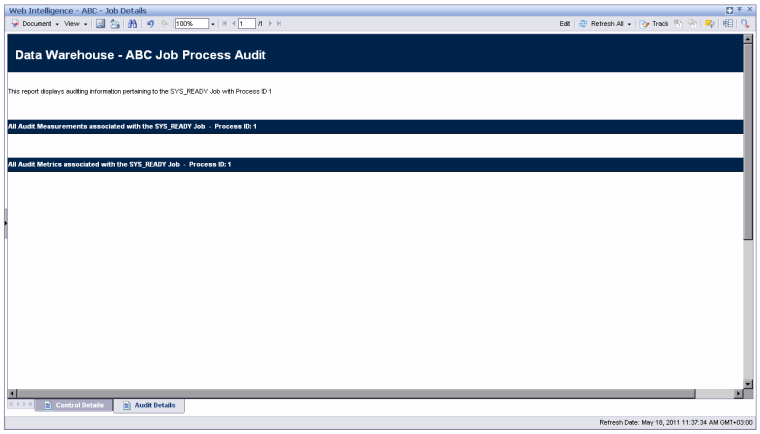
Display the executable catalogs to be processed by ABC

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Operations** > **Control Reports** > **ABC - Job Details**.
2. In the Prompts dialog box, select one or more **Process Ids** from the left list box or enter a **Process Id** value and click **Search**. Click the **Right arrow** to move it into the **Enter the Process ID** list.
3. Click the relevant tab (**Control Details** tab or **Audit Details** tab).

   The **Control Details** tab displays operational information related to job process IDs.



The **Stream Definitions** tab displays audit information related to specific jobs. For details, see "ABC - Batch Details Report" on next page.



ABC - Batch Details Report

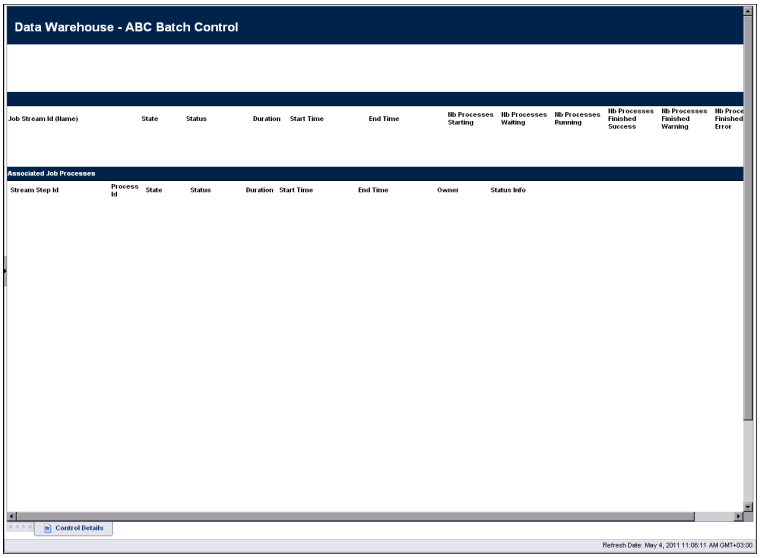
This report displays control information for a batch job. It reports the defined Upstream and allocationmetric (for FPA) job streams.

Tasks

Display the control information for a batch job

1. In the DWH Status page, click the **Select page** arrow and select **DWH Status Page**>**ABC-Batch Details**.
2. In the Prompts dialog box, select one or more **Batch Ids** from the left list box or enter an **Batch Id** value and click **Search**. Click the **Right arrow** to move it into the **Select Batch Id** list.
3. Click **Run Query**.

   The ABC - Batch Details Report is one of three reports displayed in the DWH main page.
4. The **ABC Batch Control** tab displays the various batch jobs.



5. Click the relevant value in the **Process ID** column and the ABC Job Process Audit opens to display all audit measures and metrics associated with that Process ID.

   For details, see "ABC - Job Details Report" on previous page.

Data Model Reports

DWH Data Model reports provide:

- An overview of the current status of the DWH configuration.
- Detailed model definition descriptions.
- Generated schema descriptions.

The typical user of the Data Model reports is the DWH administrator, developer, or anyone interested in gathering information about the current state of the data warehouse.

The following Data Model reports are available:

"View the Fact and Dimension Data Model" below

"Extraction Model Details " on page 225

"Consolidation Model Details " on page 226

"Dimension Model Details " on page 227

"Fact Model Report " on page 228

"Source Model Details " on page 229

"Aggregation Model Details " on page 230

"Platform Physical Schemas " on page 231

View the Fact and Dimension Data Model

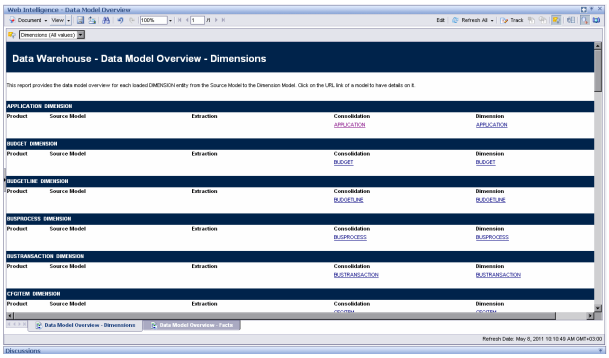
This query produces a complete view of extraction path for every fact and dimension entity. Run this report after you deploy a new application. It is the entry point for all data model reports. The links in the report enable you to link to reports that provide more detail.

Tasks

Display the dimension data model for the specific entities

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Data Model Reports** > **Data Model Overview**.
2. Select the **Data Model Overview - Dimensions** tab.

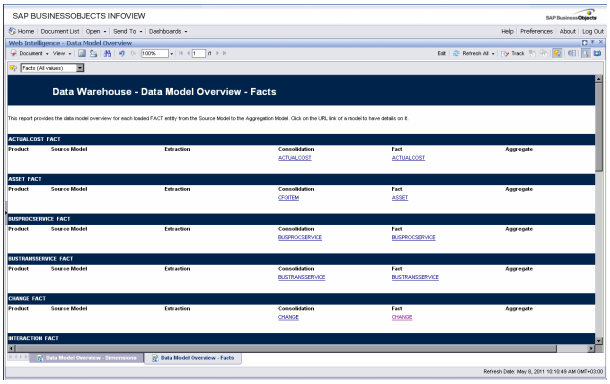
   The **Data Model Overview - Dimensions** tab displays the dimension data model for the specific entities when extracted from multiple sources and consolidated into a target dimension.



Display the data model for overview for each loaded FACT entity

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Data Model Reports** > **Data Model Overview**.
2. Select the **Data Model Overview - Facts** tab.

   The **Data Model Overview - Facts** tab displays the data model overview for each loaded FACT entity from the Source Model to the Aggregation Model.



Extraction Model Details

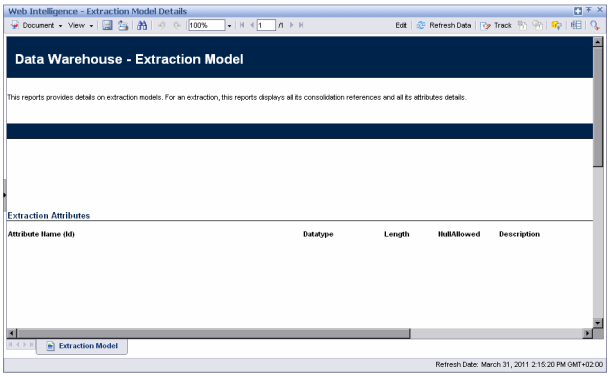
The report shows the details for a selected extraction model.

Tasks

Display the details for a selected extraction model

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Data Model Reports** > **Extraction Model Details**.
2. In the Prompts dialog box, select one or more **Extraction Ids** from the left list box or enter an **Extraction Id** value and click **Search**. Click the **Right arrow** to move it into the **Select Extraction Model** list.
3. Click **Run Query**.

   The Extraction Model tab displays details about the aggregated measures.



Consolidation Model Details

This report provides details on consolidation models.

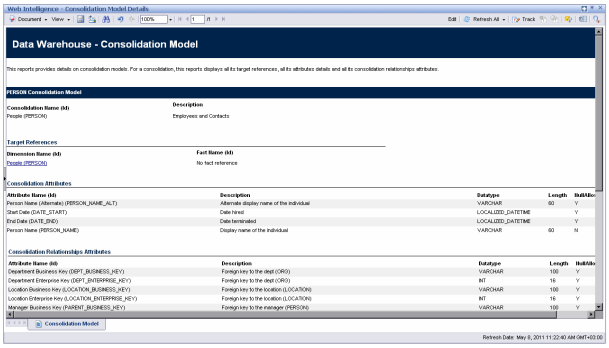
Consolidation Model Details shows the final attributes for the selected entity, including the data type, length, and whether null values are permitted.

Tasks

Display the consolidation model details:

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Data Model Reports** > **Consolidation Model Details**.
2. In the Prompts dialog box, select one or more **Consolidation Ids** from the left list box or enter a **Consolidation Id** value and click **Search**.Click the **Right arrow** to move it into the **Select Consolidation Model** list. For example, select **PERSON**.
3. Click **Run Query**.

   The Consolidation Model tab displays all its target references, attributes details, and consolidation relationship attributes.



Dimension Model Details

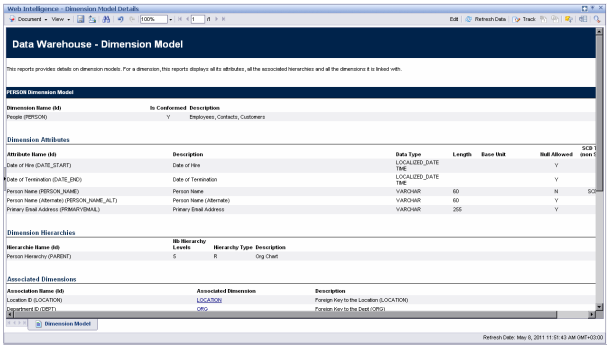
When you select a dimension, the Dimension Model Details report displays the dimension attributes, hierarchies, and associated dimensions.

Tasks

Display the dimension model details:

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Data Model Reports** > **Dimension Model Details**.
2. In the Prompts dialog box, select one or more **Dimension Ids** from the left list box or enter an **Dimension Id** value and click **Search**. Click the **Right arrow** to move it into the **Select Dimension Model** list. For example, select **PERSON**.
3. Click **Run Query**.

   The Data Model Overview - Dimensions tab provides details on dimension models. Displays all its attributes, associated hierarchies, and all of the dimensions it is linked with.



Fact Model Report

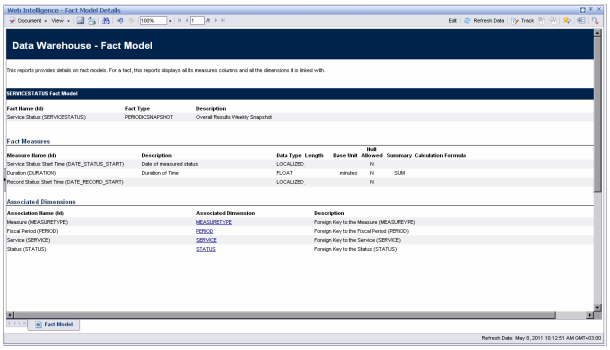
The report shows the details for a selected fact model.

Tasks

Display the fact model details:

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Data Model Reports** > **Fact Model Details.**
2. In the Prompts dialog box, select one or more **Fact Ids** from the left list box or enter an **Fact Id** value and click  **Search**.Click the **Right arrow** to move it into the **Select Fact Model** list. For example, select **SERVICESTATUS**.
3. Click **Run Query**.

   The Fact Model tab displays fact measures and the dimensions they are linked to.



Source Model Details

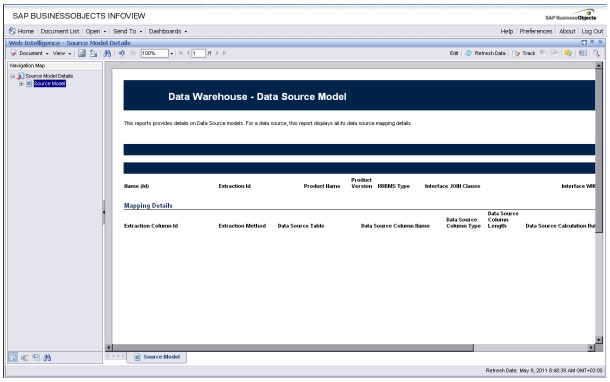
This report provides details on Data Source models as well as Data Source mapping details.

Tasks

Display the source model details:

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Data Model Reports** > **Source Model Details.**
2. In the Prompts dialog box, select one or more **Source Model Ids** from the left list box or enter an **Source Model Id** value and click **Search**.Click the **Right arrow** to move it into the **Select Source Model** list.
3. Click **Run Query**.

   The Source Model tab displays the data source model details.



Aggregation Model Details

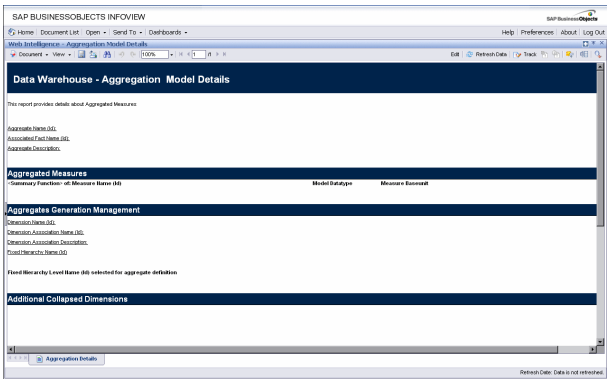
This report shows aggregation model details in a summary format that is organized by aggregate details.

Tasks

Display the aggregation model details

1. In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Data Model Reports** > **Aggregation Model Details**.
2. In the Prompts dialog box, select one or more **Aggregate Ids** from the left list box or enter an **Aggregate Id** value and click **Search**. Click the **Right arrow** to move it into the **Select Aggregation Model** list.
3. Click **Run Query**.

   The Aggregation Details tab displays details about the aggregated measures.



Platform Physical Schemas

This report enables you to diagnose whether the ETL staging or target models are aligned with the metadata.

To access:

In the SAP BusinessObjects InfoView, select **Public Folders** > **DW EN Administration** > **Data Model Reports** > **Platform Physical Schemas**.

The Platform Physical Schemas report has five information tabs:

- **Data Integration Interface (DII).** Shows connection information for the data sources and status of the generated views.
- **Staging Source - Extract Identity.** For each data source, shows the status of the extraction process, including the number of extraction tables created and defined.
- **Staging Source - Consolidation.** Shows the status of the consolidation tables by application.
- **Staging Target.** Shows the status of the data warehouse target staging tables organized by application.
- **DW Target.** Shows the status of the target data warehouse tables and views.

Learn More

This report may take some time to load.

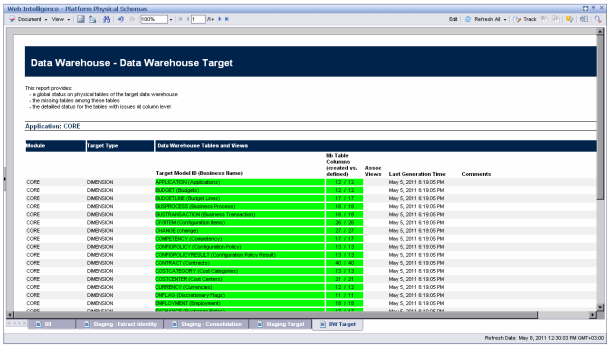
In the tabs, red and green color cues help you locate problems and issues quickly. Run this report after you deploy a new application. An HP Support engineer can diagnose the platform state after a model customization.

UI Description

DII tab

This report displays:

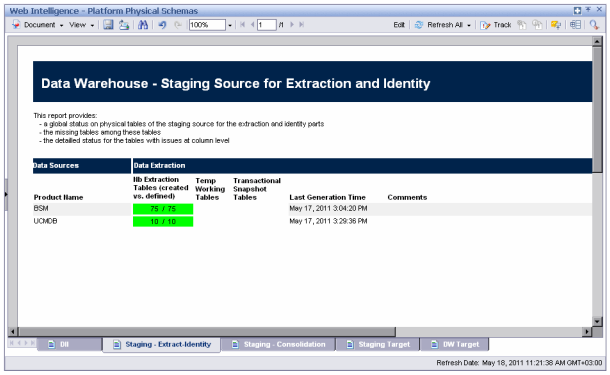
- Global status of the SQL script generation process for DII database views.
- Detailed information about any error condition that might have been detected during the generation process.



Note: This tab is not relevant for non database data sources, for example, BSM and uCMDB.

Staging Extract Identity- tab

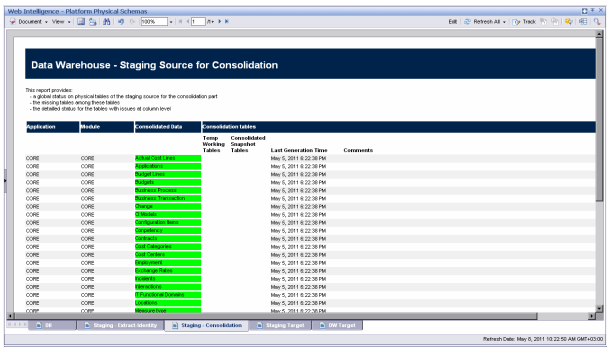
Displays the number of extraction tables created and defined for each data source and whether table errors occurred during the ETL process.



Staging - Consolidation tab

This report displays:

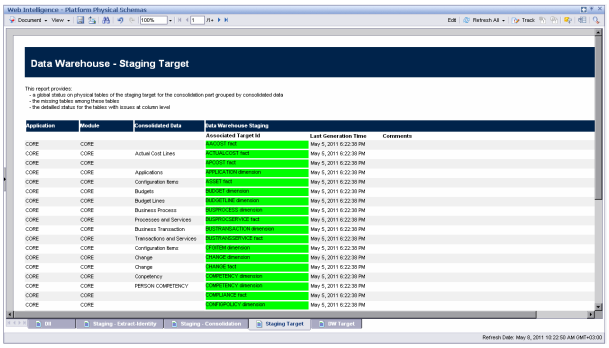
- Global status on physical tables of the staging source for the consolidation part.
- The missing tables among these.
- The number of extraction tables created and defined for each data source and whether table errors occurred during the ETL process.



Staging - Target tab

This report displays

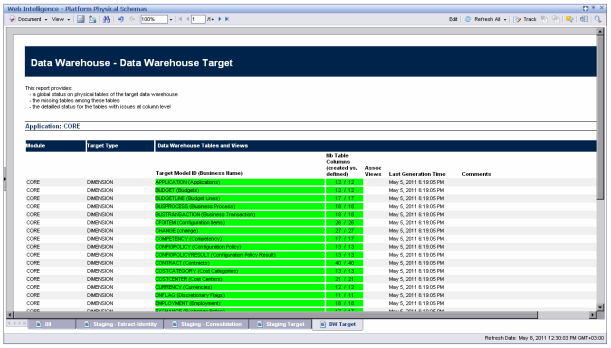
- Status of the ETL staging tables.
- The missing tables among these.
- The detailed status for the tables with issues at column level.



DW Target tab

This report displays:

- Global status on physical tables of the target data warehouse.
- The missing tables among these.
- The detailed status of the tables with issues at column level.



Additional Maintenance

This section includes the following topics:

Time Zone Configuration

The data warehouse contains data extracted from external sources. The original data sources can be repositories in disparate locations. It is important that the data warehouse maintain accurate date and time stamps that normalize the differences between the source time zones and the current time of the data warehouse location. These differences include both Coordinated Universal Time (UTC) offset and daylight savings time (DST) variations.

The data warehouse foundation has transparent internal functions that convert a source time zone value to a UTC value, and convert the UTC value to the data warehouse local time zone during the ETL process.

To access:

At a Windows command prompt, switch to the **<Installation directory>\Agora\Data Warehouse\bin** directory.

Learn More

Data Warehouse DST Time Zone Information

The administrator must make sure that time zone information is current on the server hosting the Data Warehouse. Although the definition of time zones and DST rules are fairly static, changes can occur, for example, when moving the DST conversion date on a country-wide basis.

You can synchronize these changes to the Olson Timezone Database by obtaining and running the Java TZUpdater Tool that is available on the Sun Developer Network (SDN). For more information, visit the Java SE Timezone Updater Tool home page.

Change the Data Warehouse Period Dimensions

This procedure should be followed when expanding the Data Warehouse First and Last Year period dimension range.

It is highly recommended that once you enter First and Last Year period dimensions in the Executive Scorecard Configuration wizard, any future changes should take the following into account:

1. The First Year period dimension should only be changed downwards, thereby including the current First Year period dimension. For example if the First Year dimension is currently set to 2005, any change should be a year lower than 2005. Entering a year higher than 2005 can cause some data inconsistencies.
2. The Last Year period dimension should only be changed upwards, thereby including the current Last Year period dimension. For example if the First year dimension is currently set to 2025, any change should be a year higher than 2025. Entering a year lower than 2025 can cause some data inconsistencies.

Time Zone Update

The dw_tz_update_dst utility updates the Data Warehouse DST time zone information.

Tasks

"To update the Data Warehouse DST time zone" below

"To change Data Warehouse period dimensions" below

"To run the dw_tz_update_dst utility" on next page

To update the Data Warehouse DST time zone

1. Download and run the TZUpdater tool.
2. To update Data Warehouse Server tables, run the dw_tz_update_dst as described in "Time Zone Configuration" on previous page.

To change data source Time Zone settings:

1. In the Executive Scorecard application, click **Admin** > **Data Source Management**, and for the relevant Content Pack, click **Activate** to open the relevant activation page.

   Note: If the content pack is already activated, you must deactivate, and then reactivate the content pack .

2. Change the Time Zone for the relevant data source, and click **Next**.

   The TimeZoneInfo table which is part of the Staging database is automatically updated.

   Note: There is a discrepancy in the status time display between ETL runs when BSM has a different time zone than the BSM server.

To change Data Warehouse period dimensions

1. In the Executive Scorecard application, click **Admin** > **Data Warehouse**, under **General**, make the required changes in the **First year handled by DWH dates** and **Last Year handled by DWH dates** settings, and click **Save**.
2. From a command prompt, navigate to

<Installation Directory\Agora\DataWarehouse\Bin

Run **dw_period_dim_generator**.

To run the dw_tz_update_dst utility

1. At a Windows command prompt, switch to the **<Installation directory>\Agora\Data Warehouse\bin** directory.
2. Run this command:
   dw_tz_update_dst
   a. Load or update the time zone information for a data source and the data warehouse.
   b. Run this utility whenever you deploy new source data or when you manually change the time zone.
   c. Time zone is expressed in GMT format: GMT +\-nn:nn.

Syntax

```
dw_tz_update_dst.bat
                  [-help]
                  [-verbose]
```

Options

Option	Required?	Description
-help	N	Display command syntax.
-verbose	N	Produce more detailed output.

Return codes:

0 – Success

1 – Success with warnings

>1 – Errors

Example

dw_tz_update_dst -verbose

a. Load or update the time zone information for a data source and the data warehouse.
b. Run this utility whenever you deploy new source data or when you manually change the time zone.
c. Time zone is expressed in GMT format: GMT +\-nn:nn.

Tracing and Logging

This section describes the Data Warehouse logging and tracing mechanism. Data warehouse scripts have different types of output log files:

One log file for each data warehouse batch utility, using the Java application Log4J.

One log file for each SQL command.

Learn More

The Java Logging Mechanism

The data warehouse generates one log file for each batch utility, and stores it in the following directories:
<installation directory>\agora\DataWarehouse\logs and
<installation directory>\agora\glassfish\glassfish\domains\BTOA\logs

For example:

- **dw_initdb.log**
- **dw_generateschemas.log**

The logging mechanism allows each new block of log information to be appended to the existing log until it reaches the maximum size of 1 MB. At that point, new logging information is stored in a backup file. There can be a maximum of five log files for a single script. You can change the log file name, size, and maximum number of backup files.

SQL Command Logging Mechanism

All the SQL commands that are executed at the direction of the data warehouse software are redirected to simple log file. You can view the log file to trace the execution of all SQL commands. All log files are in the following directory:
<installation directory>\agora\Datawarehouse\conf

- **mssql_TablesAndSeqsResult.log**
- **mssql_create_dw_schema_LastRun.log**

The prefix of the log file name is the RDBMS type: mssql. The suffix of the log file name is _ LastRun. This suffix indicates that the file contains the last run output of the SQL command.

To simplify interpreting SQL errors, the data warehouse applications parse the SQL server log files to report the most critical SQL error to the user. For more information, you can review the entire log file. Because the data warehouse appends log information in a history format in certain log files, you can review prior errors. Other log files retain only the history of the most recent execution. These files always have the _LastRun suffix. For example:

- **mssql_check_db_options_LastRun.log**
- **mssql_create_dw_schema_date_time_dim_LastRun.log**

These history log files contain the date and time the SQL command runs, the date and time it completes, and the returned status of the SQL command. For example:

```
------------------------------------------------------------------------
Start of command: sqlcmd -S localhost -d BTODW -U dwmetadata -P **** -
i
"C:\...\\foundation\etc\sql\mssql\create_dw_staging_resources.sql" -o
"C:\...\\foundation\log\mssql_create_dw_staging_resources_LastRun.log"
At: Wed Jul 02 13:35:59 PDT 2009
------------------------------------------------------------------------
1:
```

```
2: ********** Creating staging resources **********
------------------------------------------------------------------------
End of command: sqlcmd -S localhost -d BTODW -U dwmetadata -P **** -i
"C:\...\\foundation\etc\sql\mssql\create_dw_staging_resources.sql" -o
"C:\...\\foundation\log\mssql_create_dw_staging_resources_LastRun.log"
At: Wed Jul 02 13:35:59 PDT 2009
Returned code is: 0
```

SAP BusinessObjects Enterprise Logs

SAP BusinessObjects Data Services produces many run-time logs. You can locate these logs in the relevant directory
structure:
C:\<installation directory>\BO\bods\BusinessObjects Data Services\log

The **\log** folder has sub-directories to further organize the SAP BusinessObjects Data Services logs.

Data Warehouse Log Files

You can access the Data Warehouse Log files in:

- **datawarehouse\logs**
- **C:\<Installationdirectory>\agora\glassfish\glassfish\domains\btoa\logs\server.log**

All information in the Data Warehouse log files is automatically sent to the Windows Event Viewer Application log.

Tasks

"To configure the Logs" below

"To access Data Warehouse log information" on next page

To configure the Logs

For data warehouse utilities, you can customize logging behavior by editing a related log configuration file with this naming convention: **xxx-log4j.xml**. For example, importdefs-log4j.xml. The log configuration files are in this directory:
<installation directory>\agora\DataWarehouse\conf

Open the related **xxx-log4j.xml** file with a text editor to choose the trace levels and to change other parameter values. If you make changes, save the file before you close it.

For ABC utilities, (abc-xxxx) there is a single log configuration file: abc-log4j.xml. The values that you specify in this file apply to all log files generated by any ABC utility.

Trace Levels

You can choose one of the following trace levels to control the amount of information stored in the logs:

- **trace**
- **debug**
- **info**

- **warn**
- **error**
- **fatal**

The default value is **info**. You can experiment with different levels to see how much information that you want to display or suppress.

To access Data Warehouse log information

1. On the Windows taskbar, click **Start > Administrative Tools > Event Viewer**.
2. Expand Windows Logs, right-click **Application**, and then click **Filter Current Log**.
3. Select the relevant Event Levels, select the relevant **Event Sources**, and then click **OK**.

Note: All the Data Warehouse Event Sources begin with DWH.

Sample Log Information

The following examples show the type of information you can find in these log files. The first example shows that a fatal error has occurred.

```
2008-07-02 13:33:10,652 INFO [com.hp.bto.dw.sqlbatch.SqlBatch] -
Checking database options...
2008-07-02 13:33:10,949 FATAL
[com.hp.bto.dw.dbcreate.DbCreateCommandLine] - Problem during DB
options check:
An error that can be corrected by the user has been found. Check the
log file to correct the problem.
Check the error log file
'C:\...\\foundation\log\mssql_check_db_options_LastRun.log', line
number 2
008-07-02 13:33:10,949 FATAL
[com.hp.bto.dw.dbcreate.DbCreateCommandLine] - Exit code: 6
```

The second example shows successful execution.

```
2008-07-02 13:36:27,136 INFO
[com.hp.bto.dw.dbmetadatatool.DbMetadatatool]
Creating Date and Time stored procedures and populating the dimension
tables...
2008-07-02 13:36:30,511 INFO
[com.hp.bto.dw.commons.dblogparser.LogParserStatus] - Command
successfully executed.
```

It is possible to change the format of the reported information by changing the corresponding configuration files.

Add Additional Data Sources

You can add additional Content Packs to the data warehouse that can then be activated or deactivated.

To add additional data sources:

1. Copy the Content Pack file into the CP directory: **<Installation Directory>\agora\Content Packs**.
2. Run the following batch file: **dw_cp_register.bat -name <new CP>**. The name entered must match the Content Pack file name.
3. Activate the data source using the Data Source Management page. For details, see "Perform Tasks for Data Source Management" on page 197.

Change the Configuration Definition

You can change data source configuration information only after you deactivate and then re-activate the specific data source.

Change the data source configuration:

1. Select **Admin** > **Data Source Management**.
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.
5. Click  next to the specific source and the source is activated.

For details, see "Perform Tasks for Data Source Management" on page 197.

Change the Data Warehouse Period Dimensions

This procedure should be followed when expanding the Data Warehouse First and Last Year period dimension range.

It is highly recommended that once you enter First and Last Year period dimensions in the Executive Scorecard Configuration wizard, any future changes should take the following into account:

1. The First Year period dimension should only be changed downwards, thereby including the current First Year period dimension. For example if the First Year dimension is currently set to 2005, any change should be a year lower than 2005. Entering a year higher than 2005 can cause some data inconsistencies.
2. The Last Year period dimension should only be changed upwards, thereby including the current Last Year period dimension. For example if the First year dimension is currently set to 2025, any change should be a year higher than 2025. Entering a year lower than 2025 can cause some data inconsistencies.

To change Data Warehouse period dimensions:

1. In the Executive Scorecard application, click **Admin** > **Data Warehouse**, under **General**, make the required changes in the **First year handled by DWH dates** and **Last Year handled by DWH dates** settings, and click **Save**.
2. From a command prompt, navigate to **<Installation Directory>\agora\DataWarehouse\Bin**

   Run **dw_period_dim_generator**.

Data Warehouse Naming Conventions

The following describes table and field naming conventions.

Type	_Value	Description
Table Name Suffixes	_DIM	Dimension or bridge table.
	_FACT	Fact table.
	_MS	Monthly snapshot table that shows the last known value for the data at the end of a month.
	_HIER	Hierarchy table.
	_ AGG	Aggregate roll up table.
Field Name Prefixes	MD_	Metadata.
	SRC_	Used for all fields that exist just for data warehouse internal processes. Source. Used for all field drawn from the source for ETL purposes only (not pushed to the target).
	PK_	Primary key.
	FLAG_	A binary field: Y/N.
	DATE_	A date type.
	DURATION_	A measure representing a length of time.
	COUNT_	A measure representing a raw count.
	AVG_	A measure representing an average roll up.
	MAX_	A measure representing a maximum roll up.
	MIN_	A measure representing a minimum roll up.
	PCT_	A measure representing a percentage.
Field Name Suffixes	_ID	A surrogate key field that is primary or foreign.
	_BASE	A financial amount, currency, or exchange rate in the default currency of the data warehouse.
	_ UTC	A date expressed in the UTC time zone. For dates: a date expressed in the default display time zone for the data warehouse. For money: a financial amount, currency, or exchange rate in the original currency of the source data.
	_LOC	A date expressed in the local time zone.

Target and Staging Databases Naming Conventions

The first character of the Target and Staging databases name must begin with an alpha character. The init_db utility fails if you use database names that begin with numbers.

SAP BusinessObjects Data Services Naming Conventions

This section describes the naming conventions used by tables that are part of the SAP BusinessObjects Data Services ETL process.

This section includes the following topics:

Datastore

Description	Naming Convention and Examples
Connection to database with source application views	Datastore names have a prefix with the datastore name and a suffix of _DS. **Format:** <SOURCE APP>_DS **Examples:** • AMVIEW_DS • PPMVIEW_DS • SMVIEW_DS

Connection to transactional entity staging database	SRCSTAGING_DS
Connection to target entity staging database	DWSTAGING_DS
Connection to data warehouse database	DW_DS

Datastore Alias

Description	Naming Convention and Examples
Name of Datastore for the specific source in SAP BusinessObjects Data Services	Alias names have a prefix with the source application name and a suffix of _ALIAS. **Format:** <SOURCE APP>_ALIAS **Examples:** AMVIEW_ALIAS
Alias user for transactional entity staging database	SRCSTAGING_ALIAS
Alias user for target entity staging database	DWSTAGING_ALIAS
Alias user for data warehouse database	DW_ALIAS

Project

Description	Naming Convention and Examples
Allows you to group jobs that have dependent schedule or belong to the same application	Project names have a prefix with the source application name or purpose of the project and a suffix of _PJ. **Format:** <DESCRIPTION>_PJ **Examples:** FPA_PJ

Job Names

Description	Naming Convention and Examples

SAP BusinessObjects Data Services job which is a group of objects that you can schedule and execute together	Job names have a prefix with the name of the source application. An internal segment can describe the job purpose. There is a suffix of _JB. **Format:** <SOURCE APP>_<PURPOSE>_JB or <PURPOSE>_JB **Examples:** • AM_SOURCE_EXTRACT_JB • DW_JB

Workflows

Description	Naming Convention and Examples
Defines a decision making process to execute a dataflow	Workflow names have a prefix with the source or target name. A SUB-CATEGORY segment describes the ETL phase. There is suffix of _WF. **Format:** <SRC NAME/TARGET NAME>_<SUB-CATEGORY>_WF **Examples:** • AM_AMRIGHTSUSESCOUNT_EXT_WF • AM_MSI_CONTAINER_WF

Dataflows

Description	Naming Convention and Examples
Data flows extract, transform and load data	Dataflow names have a prefix with the source or target name. A SUB-CATEGORY segment describes the ETL phase. There is a suffix of _ DF. **Format:** <SRC NAME/TARGET NAME><SUB_CATEGORY>_<ACTION>_DF **Examples:** AM_AMRIGHTSUSESCOUNT_EXT_DF AM_SWAUDITDETAIL_MSI_DF

Variables - Global - Local Variables - Parameters

Description	Naming Convention and Examples

Variables defined in a job Variables defined in a job/ workflow Parameters in a workflow/ dataflow	Variable names have a dollar sign ($) and prefix to identify the type of variable (G for global, L for local, or P for parameter). The suffix identifies the purpose or identifying parameter name. **Format:** $G_<PURPOSE> or $L_<PURPOSE> or $P_<PURPOSE> **Examples:** • $G_BATCH_ID • $L_STARTDATE • $P_STATUS

Custom Functions

Description	Naming Convention and Examples
Script functions in Data Integrator scripting language	Custom function names have a prefix that describes the purpose of the function. The suffix is _FN. **Format:** <PURPOSE>_FN **Example:** STARTJB_FN

Scripts

Description	Naming Convention and Examples
Scripts created in jobs or work flows. Description can refer to function the script is performing or the name of the table the script is loading	Script names have a prefix that describes the data source or target name. A SUB-CATEGORY segment describes the ETL phase. The suffix is _SC. **Format:** <SRC NAME/TARGET NAME> or <SUB_CATEGORY>_SC. **Example:** : AM_ AMRIGHTSUSESCOUNT_ EXT_FAIL_SC

Try/Catch

Description	Naming Convention and Examples
Specify alternative workflows if errors occur while executing a job	Try/catch names have a prefix that describes the data source or target name. A SUB-CATEGORY segment describes the ETL phase. The suffix is _TRY or _CATCH. **Format:** <SRC NAME/TARGET NAME><SUB_ CATEGORY>_TRY or <SRC NAME/TARGET NAME><SUB_ CATEGORY>_CATCH **Examples:** • AM_AMRIGHTSUSESCOUNT_EXT_TRY • AM_AMRIGHTSUSESCOUNT_EXT_CATCH

Conditionals

Description	Naming Convention and Examples
Conditionals are single-use objects used to implement if-then-else logic in a work flow	Conditional names have a prefix that describes the data source or target name. A SUB-CATEGORY segment describes the ETL phase. The suffix is _COND. **Format:** <SRC NAME/TARGET NAME><SUB_ CATEGORY>_COND **Example:** AM_AMRIGHTSUSESCOUNT_EXT_ COND

Flat File Targets

Description	Naming Convention and Examples

Flat file extracts of source view	Flat file target names have a prefix that describes the datastore name. Segments describe the source table name, batch ID, and A SUB-CATEGORY segment describes the ETL phase. The suffix is .txt. **Format:** <DATASTORENAME (without _DS)>_<SOURCETABLENAME_BATCHID>_<SUB-CATEGORY>.txt **Example:** AMVIEW_AMRIGHTSUSESCOUNT_' ||$G_Batch_ID\|\|'_EXTRACT_FF.TXT AMVIEW_AMRIGHTSUSESCOUNT_' \|\|$G_Batch_ID||'_EXTRACT_DELETE_FF.TXT

Data Warehouse Command Reference

This section is a syntax reference for the out-of-box scripts that are available to ETL designers and developers.

The data warehouse contains out-of-box .xml files in this directory:
<DWH_home_directory>\DataWarehouse\conf

The table in the Command Summary section lists the out-of-box scripts that you can use to accomplish command line tasks. These scripts produce specific results. Changing them may produce unpredictable results when they run. For details, see "DWH Command Reference" on page 257.

This section includes the following topics:

ABC Command Reference

This section describes all of the out-of-box ABC command files that are available to administer the ABC functions. The table in the Command Summary section lists the out-of-box files that you can use to accomplish ABC tasks.

Although SAP BusinessObjects Data Services runs the jobs that extract, transform, and load data, ABC manages the actual launch, execution, and sequencing of the steps in these jobs. If you run jobs using SAP BusinessObjects Data Services only, there can be conflicts, sequence errors, and data corruption, and run-time statistics can be lost.

The data warehouse provides the out-of-box file (upstream.xml) that contains the required job steps. The primary ABC tasks are to launch ETL batch jobs at regularly scheduled intervals and ensure that the individual job steps run as soon as they are ready. In addition, the ABC Audit and Control reports enable you to view information pertaining to the utilities.

Syntax Conventions

Command options in square brackets ([ ]) are optional.

Italicized lowercase expressions are variable values.

If a command option argument is a text string that contains blank spaces, you must enclose it in quotation marks. Otherwise, the text before the blank space is considered the entire argument and the remaining text becomes an undefined option.

Command Summary

The following command script files are available in this directory:
<Installation Directory>\agora\DataWarehouse\bin

Name	Purpose	Primary User
"dw_abc_batch_ control " below	Start and stop batch job streams.	Administrator
"dw_abc_load_batch " on next page	Load a batch job stream or register it as a scheduled task.	Administrator
"dw_abc_run_steps " on page 253	Run job stream steps (the ABC engine) or register it as a scheduled task.	Administrator
"dw_abc_retry_step " on page 254	Restart a job stream step.	Administrator
"dw_abc_job_launcher " on page 255	Start or stop job steps within a job stream.	Administrator or ETL developer
"dw_abc_set_status " on page 256	Capture the status of job stream steps that are implemented as batch scripts.	Administrator or ETL developer

dw_abc_batch_control

Use this script to start and stop batch job streams. The dw_abc_batch_control utility enables you to:

- Suspend an active batch job stream
- Resume a suspended batch job stream
- Abort a running batch job stream

User

Administrator

Syntax

DWH_Admin

```
dw_abc_batch_control (-abort | -resume | -suspend)
                     (streamID <streamid> | -all)
                     [-help]
```

Options

Option	Required?	Description
Choose one of the following options:		
-commandName all	No	Complete the named command action on all loaded job streams.
-abort	No	Terminate -all or a specific streamID where the streamID value is the catalog parameter value for dwid="xxxx".
-abortAndKillJobs	No	Abort the specified stream and kill all currently running SAP BusinessObjects Data Services jobs (if any currently running).
-resume	No	Re-start -all or a specific streamID where the streamID value is the catalog parameter value for dwid="xxxx".
-suspend	No	Temporarily stop -all or a specific streamID where the streamID value is the catalog parameter value for dwid="xxxx"
Choose one of the following options:		
• -streamId *streamId*	No	The streamID value is the catalog parameter value for dwid="xxxx" found in the xml file that describes the stream: <Installation Directory>\agora\Content Packs\Core\ABC\upstream.xml
• -all	No	All streams currently executing.
-help	No	Display command syntax

Examples

- **dw_abc_batch_control -suspend -streamid Stream1**
- **dw_abc_batch_control -resume -all**

dw_abc_load_batch

Use this script to load a batch job stream or register it as a scheduled task.

The **dw_abc_load_batch** utility is responsible for starting an ABC ETL track. You can run this utility manually at the command line, or scheduled it to run at scheduled intervals.

Batch job streams can run concurrently if each job stream is independent of other job streams; however, if two concurrent batch jobs invoke the same job stream, they cannot run successfully. If the **dw_abc_load_batch** utility successfully loads a batch job, as long as that batch job is running, any attempt to load a second instance of the same batch job will fail. Running the out-of-box upstream.xml job stream in overlapping batches produces errors.

The **dw_abc_load_batch** utility initializes the ABC stream and prepares the stream steps for execution.

The **dw_run_steps** utility looks for these steps that are ready and starts each one individually. The batch job manages the details of extracting entities from source databases.

All the job steps in the batch job reference the same batch ID. The initial state of the batch is Active. The initial state of all of the pending processes (job steps) is Waiting.

User

Administrator

Syntax

```
dw_abc_load_batch -streamId <string>
[-register (-every <string> |-starttime <string>)]
                [-unregister]
                [-list]
                [-help]
```

Options

Option	Required?	Description
Choose one of the following options:		
-list	No	List tasks scheduled to run.
-list _streamId <streamId>	Yes	Identify the stream ID value that is specified in the stream file parameter dwid="xxxx".
-register	No	Create a scheduled task to run dw_abc_load_batch at regular intervals.
-unregister _streamId <streamId>	No	Unregister all the events for the specified streamId stream.
-starttime *hh:mm*	No	Start the task to load the batch where the value for hh is 00–24 and the value for mm is 00–59.

-streamid *stream_id*	Yes	Identify the stream ID value that is specified in the stream file parameter dwid="xxxx".
-help	No	Display command syntax.

Examples

- **dw_abc_load_batch -streamId streamId**
- **dw_abc_load_batch -streamId streamId -register -every 720**
- **dw_abc_load_batch -streamId streamId -register -starttime 22:30**
- **dw_abc_load_batch -unregister -streamId streamId**
- **dw_abc_load_batch -list -streamId streamId**
- **dw_abc_load_batch -unregister**
- **dw_abc_load_batch -list**

dw_abc_run_steps

Use this script to run job stream steps or register the action as a scheduled task.

The command verifies the successful execution of each step before a dependent step begins. It also compiles a list of parallel and sequential execution steps that are ready to run, then launches each step that is ready for execution.

The command:

- Determines which steps are ready to run and starts them.
- Creates processes for each step in a batch job stream.
- Reports execution state for each process, then updates a final execution status for the batch.
- Sets a status of Max_Execution_Time_Exceeded if a step exceeds its maximum execution time.
- If Max_Execution_Time_Exceeded occurs, stops job step execution.
- Finds all steps that are blocking the execution of a job stream and reports them.
- Retries any step that terminates with an error and has not exceeded the specified maximum number of retries.

You can specify a maximum number of retries when an error occurs, and a maximum execution time for each step in the job stream definition file. Because they are optional parameters, they have default values of no retries and unlimited execution time. For details see "Change the Number of Retries for a Failed ETL Step" on page 269.

User

Administrator

Syntax

```
dw_abc_run_steps [-streamId <string>]
```

```
[-every <interval>]
[-register]
[-unregister]
[-list]
[-help]
```

Options

Option	Required?	Description
-every *nnn*	No	Start the batch load task every nnn minutes.
-list	No	Display a list of the registered events for all the stream Ids.
-list _streamId <streamId>	No	Display a list of the registered events for the specified streamId.
-register	No	Create a scheduled task to run **dw_abc_run_steps** at regular intervals.
-unregister _streamId <streamId>	No	Unregister all the events for the specified streamId stream.
-streamId *stream_id*	No	Stream ID value for the step to restart.
-help	No	Display command syntax for this command.

Examples

- To run all possible steps with a ready status:
  dw_abc_run_steps -streamId Upstream
- To create a scheduled task that executes the **dw_abc_run_steps** command every 60 minutes:
  dw_abc_run_steps -register -every 60 -streamId Upstream
- To remove a scheduled task that starts the dw_abc_run_steps:
  dw_abc_run_steps -unregister -streamId Upstream
- To list a scheduled task that starts the dw_abc_run_steps:
  dw_abc_run_steps -list -streamId Upstream
- To remove all scheduled tasks that starts the dw_abc_run_steps:
  dw_abc_run_steps -unregister
- To list all scheduled tasks that starts the dw_abc_run_steps:
  dw_abc_run_steps -list

dw_abc_retry_step

Use this script to restart a job stream step.

The **dw_abc_retry_step** utility re-starts a job step. When you specify a maximum number of retries, the ABC engine blocks the job stream when that number is exceeded.

User

Administrator

Syntax

```
dw_abc_load_batch -streamId <string>
                  -stepId <string>
                   [-help]
```

Options

Option	Required?	Description
-stepId *step_id*	Y	Step ID value for the step to restart.
-streamId *stream_id*	Y	Stream ID value for the step to restart.
-help	N	Display command syntax.

Example

dw_abc_retry_step -streamId Upstream -stepId step_id

dw_abc_job_launcher

Use this script to start or stop specific SAP BusinessObjects Data Services jobs.

User

Administrator or ETL developer

Syntax

```
dw_abc_job_launcher -jobname <string>
                    [-stop]
                    [-help]
```

Options

Option	Required?	Description
-jobname *job_name*	Y	Name of the job that you want to run.
-stop *job_name*	N	Stop job execution.
-help	N	Display command syntax.

If you omit the -process option, you must set an environment variable %DW_PROCESS_ID% that contains the value of the process ID.

Example

- **dw_abc_job_launcher -jobname DW_JB**
- **dw_abc_job_launcher -stop -jobname DW_JB**

dw_abc_set_status

Use this script to set the status of job stream steps that are implemented as batch scripts.

User

Administrator or ETL developer

Syntax

```
dw_abc_set_status (-error | -final | running | -success | -warning)
                  [-info <string>]
                  [-help]
```

Options

Option	Required?	Description
Choose one of the following status parameters:		
• -error	N	If an error occurs, update the data warehouse with the error status.
• -final	N	If an error occurs, update the data warehouse with the most severe status.
• -running	N	If an error occurs, update the data warehouse with the run status.
• -success	N	If successful, update the data warehouse with the success status.
• -warning	N	If a warning status occurs, update the data warehouse with the warning status.
-help	N	Display command syntax.

The -info "message_text" is optional free text that you can display.

This script requires the DW_PROCESS_ID environment variable to be set with the value of the process ID before you run this script.

Example

dw_abc_set_status -error -info "Job failed"

DWH Command Reference

The following command script files are available in this directory:
<DWH_home_directory>\DataWarehouse\bin

Data Warehouse Script Files

Name	Purpose	Primary User
"dw_bods_xml_import" on next page	Import ETL from XML files to the SAP BusinessObjects Data Services repository.	Administrator
"dw_clean_data" on next page	Clean data from staging and target databases to imitate initial load. For details, see "Clean Up the Staging and Target Databases" on page 207.	Administrator
"dw_ds_gen" on page 259	Generate the metadata repository.	ETL developer
"dw_ds_import" on page 260	Import source files into the metadata repository	ETL developer
"dw_etl_export" on page 260	Export the SAP BusinessObjects Data Services jobs, workflows, and other ETL components.	ETL developer
"dw_etl_import" on page 261	Import the SAP BusinessObjects Data Services jobs, workflows, and other ETL components.	ETL developer
"dw_etl_update_containers" on page 261	Build an ETL workflow container.	ETL developer
"dw_foundation_setup" on page 262	Build the data warehouse foundation	Installer

"dw_generateschemas" on page 263	Generate schemas and tables.	ETL developer
"dw_initdb" on page 264	Initialize the data warehouse database schema	Administrator
"dw_tz_update_dst" on page 264	Update time zone information	Administrator
dw_ds_automation.bat	Data Source Configuration using the Automation Tool. For details, see "The Automation Tool" on page 265.	Administrator

dw_bods_xml_import

Use this script to import ETL from XML files to the SAP BusinessObjects Data Services repository.

The input XML files are located in the indicated directory, or its subdirectories.

User

Administrator

Syntax

```
dw_bods_xml_import [-help] [-fromfile "<xmlfile>" | -fromdir
"<directory>"]
```

Options

Option	Required?	Description
-fromdir <fromdir>	N	The directory, in the data source repository, that contains the ETL XML files to import .
-fromfile <fromfile>	N	The XML file, in the data source repository, from which the ETL is imported .
-help	N	Display command syntax.

Examples

dw_ds_gen -datastore all -outputdir c:\datastores dw_ds_gen -datastore PPM -outputdir c:\datastores\PPM

dw_clean_data

Use this script to clean data from the staging and target databases to imitate an initial load..

User

Administrator

Syntax

```
dw_clean_data [-help]
```

Options

Option	Required?	Description
-help	N	Display command syntax.

Examples

dw_clean_data.bat

dw_ds_gen

Use this script to generate one or more datastores. SAP BusinessObjects Data Services imports these datastores to enable SAP BusinessObjects Data Services jobs to connect to the database.

User

ETL developer

Syntax

```
dw_ds_gen -datastore <dws|dwst|dwt|dwabc|PPM|AM|SM|all>
          -outputdir <directory>
          [-verbose]
          [-help]
```

Options

Option	Required?	Description
-datastore	Y	Generate the specified data source (dws, dwst, dwt, dwabc, PPM or AM). Specify all to generate all sources.
-outputdir *directory_name*	Y	Path and name of the target directory where the data source files are to be generated.
-verbose	N	Produce more detailed output.
-help	N	Display command syntax.

Examples

dw_ds_gen -datastore all -outputdir c:\datastores dw_ds_gen -datastore PPM -outputdir c:\datastores\PPM

dw_ds_import

Use this script to import source files from a named directory into the metadata repository. For example, to import a collection of files into the datastore directory.

User

ETL developer

Syntax

```
dw_ds_import -inputdir directory
             [-help]
```

Options

Option	Required?	Description
-inputdir *directory_name*	Y	Path and name of the directory where the data source files are to be imported.
-help	N	Display command syntax.

Example

dw_ds_import -inputdir "c:\datastore\Source Files"

dw_etl_export

Use this script to export Data Services jobs, workflows, data flows, and functions to a zip file.

User

ETL developer

Syntax

```
dw_etl_export -zip <zipfile>
                  [-help]
```

Options

Option	Required?	Description
-zip *zip_file_name*	Y	Export to the specified archive file.
-help	N	Display command syntax.

Example

dw_etl_export -zip c:\etlFiles.zip

dw_etl_import

Use this script to import Data Services jobs, workflows, data flows, and functions to a zip file.

User

ETL developer

Syntax

```
dw_etl_import [-atl <atlFile>]
               -topdir <directory>
              [-zip <zipfile>]
              [-help]
```

Options

Option	Required?	Description
-atl *atl_file_name*	N	Import the specified .atl file.
-topdir *directory_name*	Y	Import all .atl files under a specified directory and subdirectory.
-zip *zip_file_name*	N	Import the contents of the archive file.
-help	N	Display command syntax.

Examples

dw_etl_import -topdir c:\etlFiles

dw_etl_import -topdir "c:\ETL Files"

dw_etl_import -zip c:\etlFiles.zip

dw_etl_import -atl c:\functions.atl

dw_etl_update_containers

This script loads .atl files during the installation process.

User

ETL developer

Syntax

```
dw_etl_update_containers -topdir <directory>
                         [-verbose]
                         [-help]
```

Options

Option	Required?	Description
-topdir *directory_name*	Y	Name of the directory that contains all application-specific .atl files.
-verbose	N	Produce more detailed output.
-help	N	Display command syntax.

Return codes

0 – Success
1 – Success with warnings
>1 – Errors

Examples

dw_etl_update_containers -topdir "c:\My Application"

dw_etl_update_containers -topdir c:\MyApplication

dw_foundation_setup

Use this script to call the scripts that initialize the data warehouse, or load the metadata for data source connections into the database.

Syntax

```
dw_foundation_setup [-args <taskArguments>]
                     -taskName <taskName>
                    [-verbose]
                    [-help]
```

Options

Option	Required?	Description
-args *task_argument*	N	Name of the task argument.
-taskName *task_name*	Y	Name of the requested task.
-verbose	N	Produce more detailed output.
-help	N	Display command syntax.

You can see the individual tasks and associated arguments called by dw_foundation_setup if you open this file with a text or xml editor:
<DWH_home_directory>\DataWarehouse\etc\xml\dw_foundation_setup.xml

Return codes

0 – Success
1 – Success with warnings
>1 – Errors

dw_generateschemas

Use this script to generate schemas and tables.

Syntax

```
dw_generateschemas [-aggregates]
                   [-application <application>|all]
                   [-autoloadingmode true|false]
                   [-interface]
                   [-noninteractive]
                   [-product <product>|all]
                   [-staging]
                   [-target]
                   [-verbose]
                   [-help]
```

Options

Option	Required?	Description
-aggregates	N	Generate or update the aggregation tables.
-application *application_name* | all	N	Load the named application or load all applications. All is the default if you are in non-interactive mode.
-autoloadingmode	N	Specify true or false. True is the default value.
-interface	N	Generate the SQL script files to create the interface.
-noninteractive	N	Run this script without prompting for user input. Use all default values.
-product *product_name* | all	N	Load the specified product. All is the default value.
-staging	N	Generate or update the staging tables.
-target	N	Generate or update the target tables.
-verbose	N	Produce more detailed output.
-help	N	Display command syntax.

Interfaces will always be written to a file, whether autoloadingmode is on or not. Each interface for a Data Source Connection is written to a separate file. If you do not specify a specific phase, all phases execute.

Example

dw_generateschemas -application myApp -autoloadingmode true -target

dw_initdb

Use this script to initialize data warehouse foundation database schemas.

Syntax

```
dw_init.bat [-confdir <directory>]
            [-schema <schemaname>]
             -sqldir <directory>
            [-help]
```

Options

Option	Required?	Description
-confdir *directory*	N	Name of the directory that contains the .properties file for the designated **schemaname.**
-schema *schemaname*	N	Name of the schema, such as **dwmetadata**, **dws**, **dwst**, or **dwt**.
-sqldir *directory*	Y	Name of the directory that contains the schema and .properties file.
-help	N	Display command syntax.

Examples

dw_init.bat -sqldir c:\myDbDirectory
dw_init.bat -sqldir c:\myDbDirectory -schema dwmetadata -confdir "c:\my Config Directory"

dw_tz_update_dst

Load or update the time zone information for a data source and the data warehouse.

Run this utility whenever you deploy new source data or when you manually change the time zone.

Time zone is expressed in GMT format: GMT +\-nn:nn.

Syntax

```
dw_tz_update_dst.bat
                 [-help]
                 [-verbose]
```

Options

Option	Required?	Description
-help	N	Display command syntax.
-verbose	N	Produce more detailed output.

Return codes:

0 – Success

1 – Success with warnings

>1 – Errors

Example

dw_tz_update_dst -verbose

The Automation Tool

The automation tool is built and designed to simplify the different tasks of Data Source Management.

It contains Data Source Management back-end tools that simplify the usage, add some necessary validations, and set the different statuses. The functions are used by the Data Source Management user interface but also provides a command line interface so it can be used outside the application server.

The following Command Line Interface (CLI) is available for Data Source Management functionality outside the UI. The command script files are found in this directory:
<DWH_home_directory>\DataWarehouse\bin

TestConnection

Usage: dw_ds_automation.bat -task TestConnection -cp xxx -xmlFilePath [Path to datasources.xml file]

Description: Test the connection to the data source. Should be used before running the configuration task in order to validate correct connection details.

Register Instance

Usage: dw_cp_register.bat -addInstance –name <CP_NAME>

Description:

- Use to add an additional instance of the data source.
- The Data Warehouse then looks for the CP in the Content Packs Folder.
- The instance ID is displayed in the output.“Instance ID: XX has been added to Content Pack: <CP_NAME>”
- It is also added to the CONTENT_PACK table.

ConfigureInitial

Usage: dw_ds_automation.bat -task ConfigureInitial -cp <content pack name>-instance <INSTANCE_ID>-xmlFilePath [Path to datasources.xml file]

Description:

- Configure the CP connection settings before the CP has been initialized.
- Use prior to CP initialization (Deploy).

Note: To successfully run this command, the ALM password must be encrypted before saving it in the Staging database.

Configure

Usage: dw_ds_automation.bat -task Configure -cp <content pack name>-instance <INSTANCE_ID> -xmlFilePath [Path to datasources.xml file]

Description: Configure the CP connection settings and regenerate the datastore of the product. Can be used only after the CP has been successfully initialized.

Note: If any the following sources HP Application Lifecycle Management, HP Business Service Management, or HP Universal Configuration Management Database are configured via a back-end too, the relevant URL listed below should be run before the ETL is run:

- **HP Application Lifecycle Management:** http://localhost:10002/dw/integrations/generic/reset/ALM
- **HP Business Service Management**: http://localhost:10002/dw/integrations/bsm/reset/connection
- **HP Universal Configuration Management Database:** http://localhost:10002/dw/integrations/ucmdb/ucmdb/reset/connection

Deploy

Usage: dw_ds_automation.bat -task Deploy -cp <content pack name>-instance <INSTANCE_ID>

Description: Initialize the CP and set the CP status as **Initialized**.

Activate

Usage: dw_ds_automation.bat -task Activate -cp <content pack name>-instance <INSTANCE_ID>

Description: Activate the CP using the stream Assembler and set the CP status as Activated. Activating the CP causes its ABC stream to be merged with the Main (Core) CP stream. Activated CP stream steps will be executed during the execution of the Main (Core) ABC Stream.

Deactivate

Usage: dw_ds_automation.bat -task DeActivate -cp <content pack name>-instance <INSTANCE_ID>

Description: Deactivate the CP using the stream assembler and set the CP status as **Non-Activated**. Deactivate performs the opposite action from Activate. Deactivate subtracts the deactivated CP ABC Steps from the Main ABC Stream Steps.

AutoActivate

Usage: dw_ds_automation.bat -task AutoActivate

Description: Deploy and activate all CPs with "autostart" flag according to the order set by "autostartpriority" in the manifest
used by the post- install tool. The manifest found in cp_manifest.properties, is a list of attributes located in the root folder of the Content Pack.

Advanced Data Warehouse Administration

This section describes some of the advanced commands for DWH processes. DWH also provides a set of reports that provide the administrator with awareness and insight into the DWH processes.

This section includes the following topics:

Advanced Utilities

The Data Warehouse enables you to run advanced ABC utilities.

dw_abc_job_launcher

Use this script to start or stop specific SAP BusinessObjects Data Services jobs.

User

Administrator or ETL developer

Syntax

```
dw_abc_job_launcher -jobname <string>
                    [-stop]
                    [-help]
```

Options

Option	Required?	Description
-jobname *job_name*	Y	Name of the job that you want to run.
-stop *job_name*	N	Stop job execution.
-help	N	Display command syntax.

If you omit the -process option, you must set an environment variable %DW_PROCESS_ID% that contains the value of the process ID.

Example

- **dw_abc_job_launcher -jobname DW_JB**
- **dw_abc_job_launcher -stop -jobname DW_JB**

dw_abc_set_status

Use this script to set the status of job stream steps that are implemented as batch scripts.

User

Administrator or ETL developer

Syntax

```
dw_abc_set_status (-error | -final | running | -success | -warning)
                  [-info <string>]
                  [-help]
```

Options

Option	Required?	Description
Choose one of the following status parameters:		
-error	N	If an error occurs, update the data warehouse with the error status.
-final	N	If an error occurs, update the data warehouse with the most severe status.
-running	N	If an error occurs, update the data warehouse with the run status.
-success	N	If successful, update the data warehouse with the success status.

-warning	N	If a warning status occurs, update the data warehouse with the warning status.
-help	N	Display command syntax.

The -info "message_text" is optional free text that you can display.

This script requires the DW_PROCESS_ID environment variable to be set with the value of the process ID before you run this script.

Example

dw_abc_set_status -error -info "Job failed"

Validate Catalog and Stream Definitions

ABC utilities automatically validate xml syntax and perform more sophisticated validation, such as loop detection in a job stream and valid catalog references to the job stream (dwid=`Upstream`).

If an error occurs, you can view the DW ABC Streams Management UI for stream information. Fore details, see "Perform Tasks for ETL Management " on page 175.

Additionally you can review the ABC Operational Status report to see where the process failed. For details, see "ABC - Operational Status Report" on page 214

Change the Number of Retries for a Failed ETL Step

The job stream batch file has a job stream step for each required task in the end-to-end ETL process and for each data source. Each job stream step has a parameter value that specifies the number of retries allowable before the job step terminates with an error. You can manually edit this value to increase or decrease the number of retries.

To change the number of retries:

1. Navigate to the installation directory structure to locate the following file: **<Installation Directory>\agora\contentpacks\{$CP}\ABC\${stream name}.xml**, (depending on the ${CP})
2. Save a backup copy of the file before you proceed.
3. Open upstream.xml with a text editor. There is a sequential list of job stream steps that manage the entire ETL process.

```
<ns1:JobStreamSteps>
<ns1:JobStreamStep dwid="SYS_READY" businessname="check ETL pre
conditions" ... maxretries="4"/>
<ns1:JobStreamStep dwid="EXTERNAL_FILE" businessname="extract
External
Files" ... maxretries="4"/>
<ns1:JobStreamStep dwid="PPM_SOURCE_EXTRACT" businessname="extract
PPM
to FF"... " maxretries="4"/>
<ns1:JobStreamStep dwid="AM_SOURCE_EXTRACT" businessname="extract
```

```
AM to
FF" ... maxretries="4"/>
<ns1:JobStreamStep dwid="ENTERPRISE_XREF" businessname="load Xref
table" ... maxretries="4"/>
<ns1:JobStreamStep dwid="PPM_EXT" businessname="load PPM FF" ...
maxretries="4"/>
<ns1:JobStreamStep dwid="AM_EXT" businessname="load AM FF" ...
maxretries="4"/>
<ns1:JobStreamStep dwid="PPM_SSI" businessname="PPM Single Source
Identity" ... maxretries="4"/>
```

4. Locate the job stream step that you want to modify and change **maxretries="4"** to **maxretries="nn"** where **nn** is the number of retries before the job step terminates.
5. Save and close the file.
6. In order to activate the new ABC definitions, you must activate the changed CP ABC definitions.
   a. If the ABC definitions were modified in the CORE content pack, any change to the content packs state would update the change.
   b. If the ABC definitions were modified in any of the Integration Content packs, you must re-activate the content pack to import the new definitions.
7. Open the Data Source Management user interface, and re-activate the modified CP of which definitions you modified. For details, see "Perform Tasks for Data Source Management" on page 197.

Change Data Warehouse Passwords

The installation and configuration process gathers all data warehouse and SAP BusinesObjects passwords, encrypts them, and stores them in the Data Warehouse platform settings management.

Note: In order for the ETL to successfully run after you have changed a password, you must change the Database Password and the Database Login Password in Data Warehouse Settings UI. For details, see "Configure Data Warehouse Settings" on page 160.

To change a password:

1. Stop any ETLs that are running, or abort a job stream if it is running.
2. On the RDBMS server, change the password for a specific Login Name.
3. Click **Admin > Data Warehouse**, and update the relevant Login with the new password from step 2.

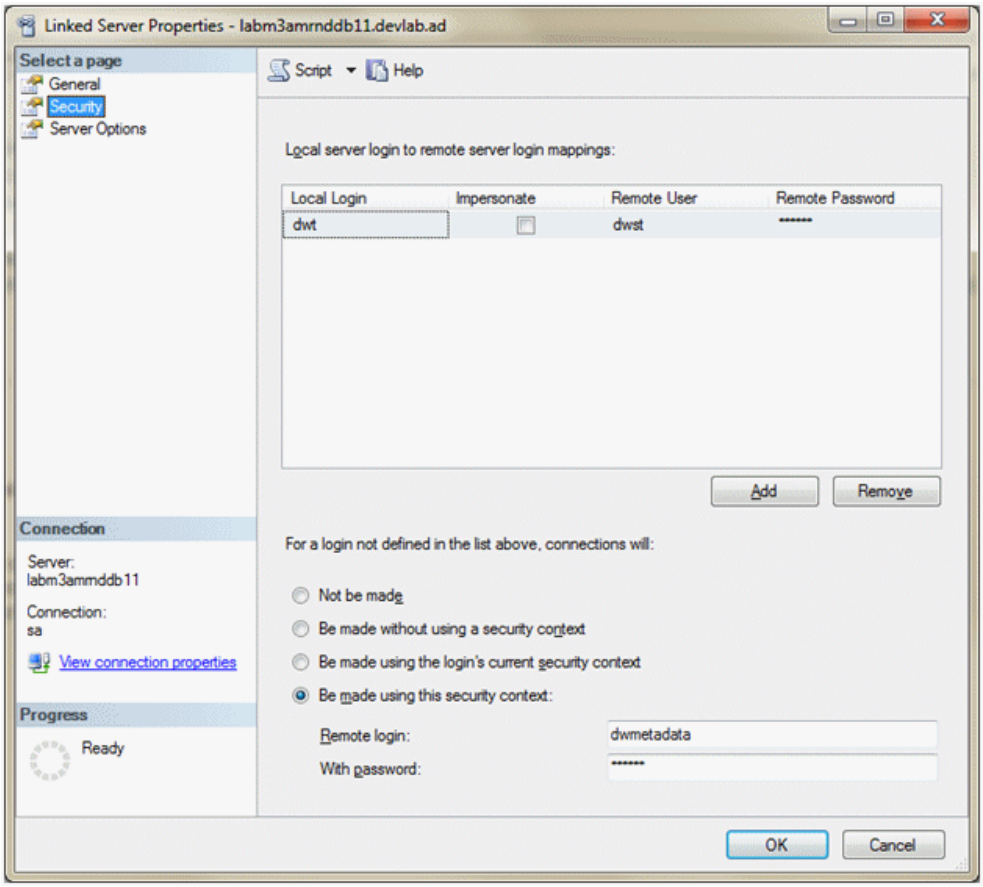
   Note: Changing the password in the Data Warehouse user interface does not modify the password in the database servers. It is preferable to rely on the user performing the password update manually.
4. The Data Warehouse creates a database link which then uses the Data Warehouse and SAP

BusinessObjects Enterprise passwords. The Linked Server is created in the following situations:

5. a. The staging and target databases are installed on different servers.

   b. The populated database server name in the post-install is different than the database host name on the system server for server id_0.

   In these situations, if you reset DWH user passwords (for dwabc, dwmetadata, dws, dwst, or, dwt), go to **Linked Servers** in the Microsoft SQL Server Management Studio, and change the relevant passwords in the **Security** tab of the **Linked Server Properties**, as follows.



6. When you change the passwords in the Data Warehouse user interface as well as the database server you must run the following:
   - **<DWH root dir>\bin\dw_ds_gen.bat -outputdir \tmp\datastores -datastore all**
   - **<DWH root dir>\bin\dw_ds_import -inputdir \tmp\datastores**
7. Reload the batch using **dw_abc_load_batch.bat**.
8. Run ETL.
9. Note that a reboot is recommended after passwords change.

Note: It is recommended to avoid using localhost as the server database name.

Improve Performance

Normal procedures require database administrators to set up aggregation, indices, and partitions that can enhance performance.

Enhancing and tuning overall database performance also improve the data warehouse performance.

Because the end-to-end ETL process involves accessing remote source databases and network connections, you may want to evaluate where performance degradation occurs and apply tuning strategies to these external connections.

Check the Runtime Status of Batch Jobs

You can check the status of batch jobs and step status using the DW ABC Streams Management UI.

Additionally, the data warehouse produces operational and administrative reports that contain information about job status and other critical data warehouse activities.

When you view the ABC Operational Status report, you can see the global status and state of each ETL job stream and a snapshot of the runtime status of each job stream step.

For details, see "Perform Tasks for ETL Management " on page 175

To view reports, see ABC - Operational Status in "Control Reports" on page 213"Control Reports" on page 213.

Resolve an ETL Error

ETL jobs contain stream steps that you can restart.Using the DW ABC Streams Management UI, you can view relevant step information.

If the stream step is ready for processing, the next scheduled execution of abc_run_steps.bat will restart the stream step automatically.

If there is another impediment, such as source database or connection issues, you must resolve that issue before the step can complete successfully.

In the DW ABC Streams Management UI you can view step status, manually retry steps, as well as schedule run_steps command.

For details on viewing errors and step information, see "Perform Tasks for ETL Management " on page 175.

For back-end details, see "ABC Command Reference" on page 249.

Monitor and Tune the Data Warehouse

The overall health of the data warehouse depends on the administrative skill of the RDBMS administrator.

The Microsoft SQL Server 2008 database administrator uses standard operating procedures for daily database operations.

The data warehouse is governed by these same processes and procedures.

For monitoring and tuning details, see the Microsoft SQL Server 2008 documentation.

Purge Validation Tables

There is no automated process to purge these tables on a regular schedule.

Because organizations require audit and validation information to be retained for varying amounts of time, you should verify what the appropriate retention period is in your organization.

Use the following SQL script to delete all records in each of the validation tables that are older than the defined retention period.

```
CREATE OR REPLACE PROCEDURE sp_del_valf_info AS
--declare variables
BEGIN
--Delete All Required records in selection
DELETE FROM *.VALF
WHERE --trunc(Date) &lt; '09-FEB-06'
);
COMMIT;
END sp_del_valf_info &gt;
```

Upgrade Content Packs

In a case where you have a newer Content Pack folder that contains updates or fixes for the OOTB CP you can perform the following.

To upgrade Content Packs: dw_ds_automation.bat -task Upgrade -cp [cp name] -newContentPackPath [path of the new cp]

The following steps are automatically included in the upgrade tool:

1. Deactivate all Integration Content Packs that are activated. It is recommended to stop ETL running and cancel all scheduling.
2. Zip the original Content Pack directory.
3. Copy the Content Pack to a new folder and run the upgrade command for that path.

   This overwrites the existing Content Pack folder.
4. Activate the Core Content Pack as well as the remaining Content Packs.
5. Update the content_pack table according to the new manifest, cp_manifest.properties, a list of attributes located in the root folder of the Content Pack being upgraded.

For activation and deactivation details, see "Perform Tasks for Data Source Management" on page 197.

Note the following usage limitations:

- ETL Stream should not be in a running mode - all streams must be aborted.
- The new CP folder must be a valid CP folder.

- CP should not be in **Installed** state, Integration Content Packs should be activated at least once before upgrade.
- If Core is being upgraded, it must be in the **Activated** state.

Note: In order to avoid upgrade failure, do not change the executables in the ABC catalog.

Consolidate Entities using the XREF Mechanism

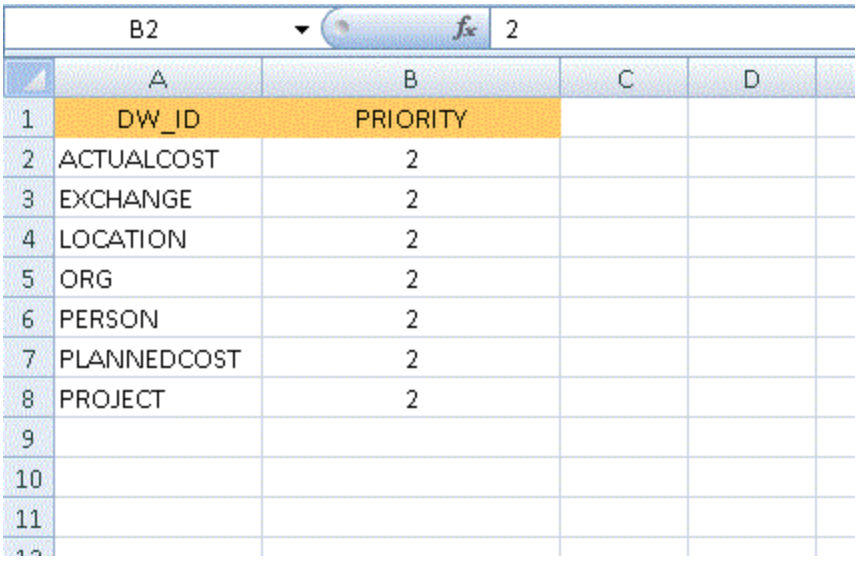
The consolidation process for data sources enables you to take information from the various sources and consolidate it into a single entity. Information from two or three sources is incorporated in the data warehouse in order to create a new entity. The XREF mechanism enables you to give priorities to a specific source when the same entity is extracted from different sources. Additionally you can give priority to instances of the same source.

Set Consolidation Priorities

You can change the specific consolidation priority at the entity level using an Excel spreadsheet. Each source has an Excel which contains a list of the entities that can be consolidated, which you can prioritize according to number, starting with 1. If you do not want an entity from a particular source to be consolidated, enter a priority of -1.

To change the entity priority:

1. Using Windows Explorer, navigate to **C:\<Installation Directory>\agora\ContentPacks\<name of CP>\ETL\flatfiles**. For XREF consolidation following deployment, navigate to **C:\<Installation Directory>\agora\DataWarehouse\ExternalSources**.
2. Open the specific consolidation file, for example: CONSOLIDATION_PRIORITIES_PPM.



3. Enter the priority you want to assign to each entity (**DW_ID**).
4. Save and close the file.

Note:

- Consolidation priorities for multiple instances of the same data source are given according to the order of deployment.
- If in the same instance several records have the same priority qualifier, there is consolidation between those entities (the process does not fail), and the latest priority is utilized.

To cancel consolidation of a specific entity:

1. In the database, open **[dwmetadata].[ConsolidationPriorities]**.
2. Change the priority number to -1 for the specific entity.
3. Save the changes.

Note: It is not permitted to manually change the -1 priority for OOTB entities that cannot be consolidated.

SA Password Change

The procedure for changing this password is complex, therefore it is recommended not to be done often.

To change the SA password

- **On BOE server:**
  a. Change the password in BOE ODBC connection to the new password and restart the BOE.
  b. Perform the following only if you created your own universes and you are using your own connections (not one of the following: XS_APP_JDBC, XS_DWH_JDBC, ita_admin, ita_operations).
     i. Import all of your universes into the BOE designer.
     ii. In the Tools menu, select **Connections**.
     iii. Change the SA password for all of your connections.
     iv. Save and export the Universes.
     v. Make sure that Period_Universe appears under the XS_Studio folder.
- **On the DWH server:**
  a. Stop running Executive Scorecard.
  b. Copy the run_postinstall.bat file from **\<Installation Directory>\installation\HPXS903\backup\agora\confwizard** to **\HPXS\agora\confwizard** and execute this file.
  c. In the MNG DB page of the wizard, change the password for the SA user.
  d. Before the final wizard step, select **Skip Data Warehouse configuration** and continue completing the post-install wizard.

e. Open the Data Warehouse UI, using the following url: **http://<DWH Server name (FQDN>/dwh**

f. Log in to the application using the same credentials you used to login to the XS application.

g. Navigate to **Admin** > **Data Warehouse** and change the passwords for all SA users.

h. Restart the DWH server.

i. If you used the SA user as a BODS user (not recommended configuration), perform the following from the CMD dir <<Installation Directory>\agora\DataWarehouse\bin>:

   i. dw_ds_import.bat -inputdir \tmp\datastores

   ii. dw_etl_update_containers.bat –topdir \tmp\datastores -upgrade

j. If you are not sure which user was used for BODS repository configurations, navigate to **Admin** > **Data Warehouse** and check the **Repository Username** parameter in the SAP BusinessObjects Data Services for HP FPA area.

- **On the XS server:**

a. Stop running Executive Scorecard.

b. Remove biar XS_SP2.biar from \<Installation Directory>\agora\confwizard\conf\scripts and renamed XS_SP3.biar to XS_SP2.biar.

c. Remove **dwh_target_sp2_views** from \<Installation Directory>\agora\confwizard\conf\scripts\database\mssql and rename **dwh_target_sp3_views** to **dwh_target_sp2_views**.

d. Copy the run_postinstall.bat file from **\<Installation Directory>\installation\HPXS903\backup\agora\confwizard** to **\HPXS\agora\confwizard** and execute this file.

e. In the ManagementDatabase page of the wizard, change the password for the SA user.

f. In the Result Database page of the wizard, change the password for the SA user.

Make sure that you always connect to the existing DB when running configurations.

Back Up Data Warehouse

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

- In a total disaster recovery scenario
- The RDBMS server failed but all Executive Scorecard component servers are fully functioning.
- When the Data Warehouse server failed, but the RDBMS server and its databases are intact.
- When a Data Warehouse database is corrupt.
- When an ETL is deleted.
- When an ETL job fails.

This section includes the following topics:

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.

1. Microsoft SQL Server 2008 enterprise SP2 databases
   a. Target database
   b. SAP BusinessObjects Data Services database
   c. SAP BusinessObjects CMS database, and if necessary the Audit database.
   d. Management database
   e. Executive Scorecard database

   > **Note:** The host and database names can be found in the Management database configured in the Executive Scorecard Configuration wizard.
2. Staging database
3. It is highly recommended that you keep the passwords for the Staging, Target and SAP BusinessObjects Data Services database login users in a safe place for usage in disaster recovery situations.
4. External source files that can be found in the external source file location configured in the Executive Scorecard Configuration wizard.
   a. If the default external source file location was configured in the wizard, the Content Pack flat files created during the ETL process can be found in: **<Installation Directory>\agora\DataWarehouse\ExternalSources\<Content pack name>**

   > For example: The BSM content pack flat file would therefore located in the following directory:
   > **<Installation Directory>\agora\DataWarehouse\ExternalSources\BSM**
5. Data Warehouse Configuration files.

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.
- External source files and Data Warehouse configuration files should be backed up as required.
- Although out of scope for this document, regular backups should be taken of all source databases.
- Start scheduled backups before running the daily ETLs.
- Use backup compression.
- Perform full backups in off-peak times.

Maintain the External Source Directory

In the <ExternalSource> directory , there are folders that contain extracted data from each data source.

This data is infinitely accumulated and is never cleaned by the Data Warehouse. You are required to periodically backup and remove old files from those folders in order to free disk space if available disk space is low on the Data Warehouse platform machine.

Reference

Files to Back Up

The contents of the following directories and their sub-directories should be included in the backup schedules:

Directory Name	Backup Frequency	Description of files
<Installation Directory>\Agora\DataWarehouse\<ExternalSourceslocation>	Daily	.xls, and the ETL flat files
<Installation Directory>\Agora\DataWarehouse\Conf	When configuration changes are made	Configuration files

<Installation Directory>\Agora\DataWarehouse\etc	After the installation, and when configuration changes are made. When you recover from a Data Warehouse server failure, it is important that this directory and it's sub-directories are restored.	Configuration files
<Installation Directory>\Agora\DataWarehouse\log	Daily	Log files
<Installation Directory>\Agora\ContentPacks	Before activating or deactivating a content pack in the Executive Scorecard Admin application, or when changes are made to content packs	Content pack configuration files
<Installation Directory>\Agora\DataWarehouse\etc\ABC		

Back Up Executive Scorecard

It is critical that you backup your databases, configuration files, logs and configuration settings so that you can rebuild your IT Executive Scorecard solution and content in circumstances such as the following:

- When you need to recover from a total disaster recovery scenario.
- The RDBMS server failed but all HP Executive Scorecard component servers are fully functioning.
- When a database is corrupted.
- When a component server fails, but the RDBMS server and it's databases are intact.

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.

1. Microsoft SQL Server 2008 enterprise SP2 databases
   a. Staging database
   b. Target database
   c. SAP BusinessObjects Data Services database
   d. SAP BusinessObjects CMS database, and if necessary the Audit database.
   e. Management database
   f. Executive Scorecard database

   Note: The host and database names can be found in the Management database configured in the Executive Scorecard Configuration wizard.
2. Data Warehouse Configuration files. For more information, see "Back Up Data Warehouse " on page 276.
3. SAP BusinessObject Enterprise configuration. This can be backed up with the BusinessObjects Enterprise XI 3.1 Import Wizard. For more information, see Chapter 7 of the BusinessObjects Enterprise XI 3.1 Import Wizard Guide at http://help.sap.com/businessobject/product_guides/boexir31/en/xi3-1_bip_importwiz_en.pdf.
4. It is highly recommended that you keep the passwords for the Staging, Target and SAP BusinessObjects Data Services databases in a safe place for usage in disaster recovery situations.

General Backup Guidelines

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

- Your database administrator should back up critical data and configuration settings 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.
- External source files and Data Warehouse configuration files should be backed up as required.
- Although out of scope for this document, regular backups should be taken of all source file databases.
- Start scheduled backups before running the daily ETLs.
- Use backup compression.
- Perform full backups in off-peak times.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