

HP Business Availability Center

for the Windows and Solaris operating systems

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Platform Administration

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Table of Contents

Welcome to This Guide

This guide provides detailed instructions on how to configure and administer the HP Business Availability Center platform.

This chapter includes:

- ▶ How This Guide Is Organized on page 11
- ▶ Who Should Read This Guide on page 12
- ▶ Getting More Information on page 12

How This Guide Is Organized

The guide contains the following parts:

Part I Accessing and Navigating HP Business Availability Center

Describes the various options for logging into and accessing HP Business Availability Center and how to navigate among its applications and administration options.

Part II Setup and Maintenance

Describes how to download components, manage licenses, administrate the profile and management databases, enable data purging, configure the infrastructure settings, view the audit log, and monitor report schedules.

Part III Data Collection

Describes how to configure the settings and resources related to data collection, including upgrading and removing data collectors; scheduling downtime and events; filtering and removing transactions, locations, and groups; setting the order for transactions to run; adding and updating definitions of user-defined samples; and setting filters for report data.

Part IV Managing Users

Describes how to create and manage users and user groups, the permissions that apply to them across the platform's resources, and the customizations to set per user, including refresh interval, time zone, menus, and default pages. Also describes how to configure HP Business Availability Center to work with authentication strategies.

Who Should Read This Guide

This guide is intended for the following users of HP Business Availability Center:

- ▶ HP Business Availability Center administrators
- ▶ HP Business Availability Center platform administrators

Readers of this guide should be knowledgeable about enterprise system administration and highly knowledgeable about HP Business Availability Center.

Getting More Information

For a complete list of all online documentation included with HP Business Availability Center, additional online resources, information on acquiring documentation updates, and typographical conventions used in this guide, see the the *HP Business Availability Center Deployment Guide* PDF.

Part I

Accessing and Navigating HP Business Availability Center

1

Logging Into HP Business Availability Center

This chapter provides details on how to log into HP Business Availability Center.

This chapter includes:

Concepts

- ▶ Logging In and Out - Overview on page 16
- ▶ Logging Into HP Business Availability Center with Lightweight Single Sign-On (LW-SSO) on page 17
- ▶ Advanced Login Options on page 18
- ▶ Linking to a Specific Page on page 18
- ▶ Using the JMX Console on page 19
- ▶ HP Business Availability Center Login Flow on page 21

Tasks

- ▶ Log In and Out on page 23
- ▶ Use Advanced Login Options on page 24
- ▶ Change the JMX Password on page 28
- ▶ Create a Keystore Certificate on page 29

Reference

- ▶ Security Notes and Precautions on page 30
- ▶ Logging Into HP Business Availability Center User Interface on page 31

Troubleshooting and Limitations on page 33

Logging In and Out - Overview

You access HP Business Availability Center using a supported Web browser, from any computer with a network connection (intranet or Internet) to the HP Business Availability Center servers. The level of access granted to a user depends on the user's permissions. For details on granting user permissions, see "Assign Permissions" on page 384.

HP Business Availability Center is by default configured with Lightweight Single Sign-On (LW-SSO). LW-SSO enables you to login to HP Business Availability Center and automatically have access to other configured applications, without needing to login to those applications. For details on how LW-SSO affects logging into HP Business Availability Center, see "Logging Into HP Business Availability Center with Lightweight Single Sign-On (LW-SSO)" on page 17.

For details on Web browser requirements, as well as minimum requirements to successfully view HP Business Availability Center, see "Reviewing System Requirements" in the *HP Business Availability Center Deployment Guide* PDF.

Note to HP Software-as-a-Service customers: You access HP Business Availability Center via the HP Software-as-a-Service support Web site (mms.mercury.com).

Logging Into HP Business Availability Center with Lightweight Single Sign-On (LW-SSO)

When Lightweight Single Sign-On Authentication Support (LW-SSO) is enabled, you must ensure that the other applications in the Single Sign-On environment have LW-SSO enabled and are working with the same `initString`.

If you do not require Single Sign-On for HP Business Availability Center, it is recommended that you disable LW-SSO. You can disable LW-SSO using one of the following utilities:

- ▶ **The Authentication Strategy Wizard.** For details on using the Authentication Strategy Wizard, see “Authentication Wizard - Introduction Page” on page 492.
- ▶ **The JMX console.** For details on disabling LW-SSO through the JMX console, see “Resetting LDAP/SSO Settings via the JMX Console” on page 38.

Once LW-SSO is disabled, the default HP Business Availability Center authentication service is automatically enabled. When either LW-SSO is disabled, or the Identity Management Single Sign-On (IDM-SSO) or Lightweight Directory Access Protocol (LDAP) authentication strategies are enabled, you do not need to enter the syntax `.<domain_name>` in the HP Business Availability Center login URL (`http://<server_name>.<domain_name>/<HP Business Availability Center root directory>`).

For details on implementing either an IDM-SSO or LDAP authentication strategy, see “Authentication Wizard - Introduction Page” on page 492.

For details on the requirements for logging into HP Business Availability Center, see “Log In and Out” on page 23.

Advanced Login Options

Advanced login options enable you to automate login, provide direct login capabilities, limit login access, and link to a specific page in HP Business Availability Center.

Advanced login options include:

- ▶ **Automatic login.** You can configure HP Business Availability Center so that after the initial login, you do not have to enter a login name and password, but instead, the default page that is set to open for the user opens automatically. For details, see “Use the Automatic Login URL Mechanism” on page 26.
- ▶ **Direct login capabilities.** You can guide another user to a specific target page in HP Business Availability Center. For details, see “Use the Link to This Page Option to Open a Specific Page” on page 27.
- ▶ **Limiting login access.** You can limit the number of machines accessing HP Business Availability Center using the same login name. For details, see “Limit Access by Different Machines Using the Same Login Name” on page 27.
- ▶ **Linking to specific pages.** You can guide another user to a specific target page in HP Business Availability Center by creating a URL with a user name, password, and information about the target page. For details, see “Linking to a Specific Page” on page 18.

Linking to a Specific Page

You can guide another user to a specific target page in HP Business Availability Center by creating a URL with a user name, password, and information about the target page.

Depending on how you use the **Link to This Page** option, the receiver accesses the page using one of the following:

- ▶ His own user name and password.
- ▶ A URL encrypted with your user name and password.
- ▶ A URL encrypted with another user’s user name and password.

If using an encrypted URL, the receiver bypasses the HP Business Availability Center login page because the URL supplies the user name and password information.

The user name sent in the URL must be an account with sufficient privileges to access the target page. If the account does not have sufficient privileges, the receiver is sent to the page above the target page.

For example, you want to direct the receiver to the Infrastructure Settings page, but you configure the **Link to This Page** option selecting **Use Credentials** of a regular user (who is not authorized to view Infrastructure Settings). When the receiver uses this URL, he is sent to the Setup and Maintenance page and is unable to access Infrastructure Settings.

The Link to This Page option does not verify the user name and password sent in the URL. Verification is done only when the receiver tries to access the target page. If the user name and password are not correct, or the user account has been deleted, the receiver is sent to the HP Business Availability Center login page to log in normally. Once logged in, the receiver does not proceed to the target page. There is no informational message about the reason for the login failure.

For details on the user interface for the Link to This Page option, see “Link to This Page Window” on page 32.

Using the JMX Console

The JMX console comes embedded in HP Business Availability Center, and enables you to perform management operations, view performance of processes, and troubleshoot problematic areas of HP Business Availability Center.

To access the JMX console, you must first enter the relevant URL (<http://<Gateway or Data Processing server name>:8080/jmx-console/>), where **Gateway or Data Processing server name** is the name of the machine on which HP Business Availability Center is running), and enter the JMX console authentication credentials, which by default are:

Login name = **admin**

Password = **admin**

It is recommended that you change the JMX password to prevent unauthorized entry. For details on changing the JMX password, see “Change the JMX Password” on page 28.

Note: The login name cannot be changed.

You can monitor the availability of your HP Business Availability Center system by accessing the following file, located on either the Gateway or Data Processing server:

**<HP Business Availability Center root
directory>\AppServer\webapps\myStatus.war\myStatus.html**

On a Windows operating system, this file is also accessible through the following Start Menu path:

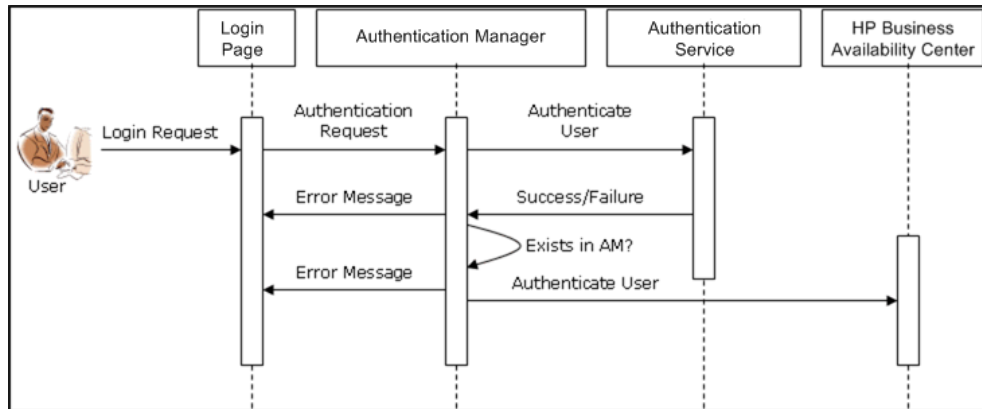
**Start > Programs > HP Business Availability Center > Administration >
HP Business Availability Center Server Status**

You must enter your JMX username and password to access this page.

You can configure the JMX console to work with SSL, to encrypt JMX data for added security. For details, see “Configuring the Application Server JMX Console to Work With SSL” of the *HP Business Availability Center Hardening Guide* PDF.

HP Business Availability Center Login Flow

This section describes the general authentication flow in HP Business Availability Center:



- A user accesses the login page and enters a principal (login name) and credentials (password) and submits the login request (in this case, clicks **Log In**).
- The request is transferred to the HP Business Availability Center Authentication Manager together with the strategy name, principal, and credentials. You configure an authentication strategy in the Authentication Strategy wizard. For details, see “Authentication Wizard - Introduction Page” on page 492.
- The Authentication Manager reads the strategy name and dispatches the request to the relevant authentication strategy to validate the user.
- The relevant authentication strategy accepts the request and tries to authenticate the user against the authentication service in question.
- If authentication is approved, HP Business Availability Center verifies the user according to the selected strategy.

Note: When creating users in HP Business Availability Center, make sure that user names match the user names in the relevant strategy database. A user can not login to HP Business Availability Center if the name does not match.

- If the user passes the previous steps, they are considered an authenticated user. The HP Business Availability Center Site Map page is displayed in the Web browser (or whichever page has been defined as the default page).

If any of the steps fail, the user is notified (a page and error message are sent back to the Web browser). The page and error message depend on which strategy you are implementing.

Log In and Out

You log into HP Business Availability Center from the login page.

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

To access the HP Business Availability Center login page and log in:

- 1** In a Web browser, enter the URL **http://<server_name>.<domain_name>/<HP Business Availability Center root directory>**, where **server_name** is the name or IP address of the HP Business Availability Center Gateway server, and **domain_name** is the name of the user's domain according to his network configuration. If there are multiple servers, or if HP Business Availability Center is deployed in a distributed architecture, specify the load balancer or Gateway Server URL, as required.
- 2** Enter the login parameters (login name and password) of a user defined in the HP Business Availability Center system, and click **Log In**. After logging in, the user name appears at the top right of the page, under the top menu bar.

Initial access can be gained using the default superuser login parameters:
Login Name=**admin**, Password=**admin**.

Important:

- It is recommended that the system superuser change this password immediately to prevent unauthorized entry. For details on changing the password, see “General Tab” on page 456.
- The login name cannot be changed.

For details on the user interface for creating users in the HP Business Availability Center system, see “Create User Dialog Box” on page 469.

For details on login authentication strategies that can be used in HP Business Availability Center, see “Authentication Strategies” on page 487.

For login troubleshooting information, see “Troubleshooting and Limitations” on page 33.

Note: For details on accessing HP Business Availability Center securely, see the *HP Business Availability Center Hardening Guide* PDF.

To log out of HP Business Availability Center:

Click **Logout** at the top of the page.

Note: Clicking **Logout** cancels the Automatic Login option. If a user has logged out, the next time the user logs in, the Login page opens and the user must enter a login name and password. This can be useful if another user must log in on the same machine using a different user name and password.

Use Advanced Login Options

You can choose to enable advanced login options for HP Business Availability Center. For details, see “Advanced Login Options” on page 18.

This section includes the following topics:

- “Enable Automatic Login in the Login Page” on page 25
- “Use the Automatic Login URL Mechanism” on page 26
- “Use the Link to This Page Option to Open a Specific Page” on page 27
- “Limit Access by Different Machines Using the Same Login Name” on page 27
- “Open an Application Page Using a URL” on page 27

1 Enable Automatic Login in the Login Page

To enable automatic login:

- a On the HP Business Availability Center login page, select the option to **Remember my login name and password for 14 days**.
-

Important: This could be considered a security risk and should be used with caution.

- b When completing your session, do not click **Logout** at the top of the page, but simply close the browser window.

Clicking **Logout** disables the automatic login option and requires the login name and password to be entered when again accessing HP Business Availability Center.

To modify automatic login settings:

- a Navigate to **Admin > Platform > Setup and Maintenance > Infrastructure Settings**.
- b Choose **Foundations**, and select **Security**. In this context, you can:
 - ▶ Customize the number of days to enable the option by editing the **Days to remember login** value to the desired number of days (the default value is **14**).
 - ▶ Completely remove this option from appearing on the login page by setting the **Enable automatic login** value to **false** (the default value is **true**).
 - ▶ Configure the number of machines that can simultaneously access HP Business Availability Center using the same login name by configuring the **Maximum machines per login name** value (the default value is **0**). A value of 0 means that the number of logins is unlimited.

For details on using the Infrastructure Settings page, see “Infrastructure Settings Manager Page” on page 137.

When automatic login is enabled from the login page and the user enters the URL to access HP Business Availability Center,

- ▶ the login page does not open
- ▶ the login name and password do not have to be entered
- ▶ the default page that is set to open for the user opens automatically

2 Use the Automatic Login URL Mechanism

You can use a special URL, containing several parameters (including login name and password), to access HP Business Availability Center and automatically log in.

Important: Though convenient, this method is not secure since the password is not encrypted in the URL.

To access HP Business Availability Center and log in using the automatic login mechanism:

In a Web browser, enter the URL

http://<server_name>.<domain_name>/<HP Business Availability Center root directory>/TopazSiteServlet?autologin=yes&strategy Name=Topaz&requestType=login&userlogin=<loginname>&userpassword=<password>&createSession=true, where:

- ▶ **server_name** represents the name of the HP Business Availability Center server
- ▶ **domain_name** represents the name of the user's domain according to his network configuration
- ▶ **loginname** and **userpassword** represent the login name and password of a user defined in HP Business Availability Center

To enable direct entry to HP Business Availability Center, bookmark this URL.

3 Use the Link to This Page Option to Open a Specific Page

Use the Link to This Page option to guide another user to a specific target page in HP Business Availability Center. Link to This Page creates a URL with a user name, password, and information about the target page.

Depending on how you configure the parameters in the Link to This Page dialog box, the receiver accesses the target page using his own user name and password, or through a URL encrypted with either your user name and password or another user's user name and password. You can send this URL by email or SMS to another user. If accessing the page through an encrypted URL, the receiver bypasses the HP Business Availability Center login page because the URL supplies the user name and password information. For details, see "Link to This Page Window" on page 32.

4 Limit Access by Different Machines Using the Same Login Name

HP Business Availability Center can be accessed using the same login name from different machines. The number of machines accessing HP Business Availability Center using the same login name can be limited using the Infrastructure Settings page.

To modify the Maximum machines per login name value in Infrastructure Settings, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Foundations**, select **Security**, and locate the **Maximum machines per login name** entry. Modify the value to the number of machines you want to enable to access HP Business Availability Center using the same login name. The default value is zero (0), which enables limitless logins.

If the maximum value has been reached when a user tries to log into HP Business Availability Center, the user receives a login error message and is unable to log in.

For a limitation of this feature, see "Limiting Access by Different Machines Using the Same Login Name Limitation" on page 38.

5 Open an Application Page Using a URL

You can open a specific HP Business Availability Center page directly in your browser by using a URL. For details, see "Direct Links to an Application Page" on page 41.

Change the JMX Password

This task describes how to change the JMX password.

To change the JMX password:

- 1** Stop the HP Business Availability Center Gateway or Data Processing server.
- 2** Run the appropriate file, depending on the operating system in use, on either the Gateway or Data Processing server:

Operating System	File Name
Windows	<HP Business Availability Center root directory>\tools\jmx\changeCredentials.bat
Solaris	<HP Business Availability Center root directory>\tools\jmx\changeCredentials.sh

The Change Password dialog box opens, where you enter and confirm your new password. The password change is registered and encrypted in the following files, located on either the Gateway or Data Processing server:

- ▶ \<HP Business Availability Center root directory>\EJBContainer\server\mercury\conf\props\jmx-console-users.properties
The syntax in this file appears as **username=password**.
- ▶ \<HP Business Availability Center root directory>\conf\jmxsecurity.txt
The syntax in this file appears as **username password**.

- 3** Restart HP Business Availability Center.

Note: The login name cannot be changed.

Create a Keystore Certificate

This task describes how to create a keystore certificate if you do not already have one.

To create a keystore parameter:

- 1** Open a `cmd.exe` window.
- 2** Run the following command to generate the keystore file:

```
keytool -genkey -dname  
"CN=YourName,OU=yourDepartment,O=yourCompanyName,L=yourLocation,S  
=yourState,C=yourCountryCode" -alias <youralias> -keypass changeit -keystore  
"<keystore location>" -storepass changeit -keyalg "RSA" -validity 360
```

For example:

```
keytool -genkey -dname "CN=John Smith, OU=FND, O=HP, L=Los Angeles,  
ST=Unknown, C=USA" -alias john -keypass mypassword -keystore  
"D:\HPBAC\JRE\lib\security\cacerts" -storepass changeit -keyalg "RSA" -validity  
360
```

- 3** The keystore certificate is generated in the location you specified in the -keystore parameter.
- 4** Restart HP Business Availability Center.

Security Notes and Precautions

This section describes security notes and precautions to be aware of when using Direct Login to log into HP Business Availability Center:

- ▶ The user name and password in the URL are encrypted so that no login information is ever revealed.
- ▶ Sending encrypted information by email still entails a security risk, since the mail system can be breached. If the email is intercepted, access to HP Business Availability Center is given to an unknown party.
- ▶ Do not use the URL from Direct Login as a link in any Web page.
- ▶ The receiver has all privileges of the user name he was given in the URL. Once the receiver accesses the target page, he can perform all actions permitted to that user name anywhere in HP Business Availability Center.

Logging Into HP Business Availability Center User Interface

This section describes:

- HP Business Availability Center Login Page on page 31
- Link to This Page Window on page 32

HP Business Availability Center Login Page

Description	Enables you to log in to HP Business Availability Center. To access: In a Web browser, enter the URL http://<server_name>.<domain_name>/<HP Business Availability Center root directory> , where server_name is the name or IP address of the HP Business Availability Center server, and domain_name is the name of the user's domain according to his network configuration.
Important Information	If Lightweight Single Sign-On (LW-SSO) is disabled, you do not need to add the .<domain_name> syntax in the login URL.
Included in Tasks	"Log In and Out" on page 23
Useful Links	"Logging Into HP Business Availability Center with Lightweight Single Sign-On (LW-SSO)" on page 17

The following elements are included:

GUI Element (A-Z)	Description
Login Name	Enter the relevant login name to access HP Business Availability Center.

GUI Element (A-Z)	Description
Password	Enter the relevant password to access HP Business Availability Center.
Remember my login name and password for 14 days	Select to enable HP Business Availability Center remember your login name and password for 14 days. Login credentials are automatically entered in future login sessions when this option is selected.

Link to This Page Window

Description	Enables you to guide another user to a specific target page in HP Business Availability Center. To Access: Select Admin > Link to this page.
Included in Tasks	“Use Advanced Login Options” on page 24
Useful Links	“Advanced Login Options” on page 18 “Direct Links to an Application Page” in <i>Model Management</i> .

The following elements are included (listed alphabetically):

GUI Element	Description
Cancel	Click to cancel the Link to this page operation.
Create Link	Click to create a URL for the user to enter into their browser and view the specified HP Business Availability Center page. Note: If you select this option after selecting No Credentials , and you want to invoke the login URL on the same local machine you created it on, you must log out of HP Business Availability Center.
Confirm password	Re-enter the password entered in the Password field.
Copy to Clipboard	Click to copy the content of the Link field to the clipboard.

GUI Element	Description
Generate HTML	Click to generate an HTML page for the specified HP Business Availability Center page. Note: If you select this option after selecting No Credentials , and you want to invoke the login URL on the same local machine you created it on, you must log out of HP Business Availability Center.
Link	The URL that the receiver uses to access the specified HP Business Availability Center page.
Login name	The login name to be encrypted in the URL the receiver uses to access the specified page. This must be the login name of an actual user.
My credentials	Select if the link is to be encrypted with your login name and password.
No credentials	Select if the receiver uses his own login name and password to access the page specified in the link.
Password	The password to be encrypted in the URL the receiver uses to access the specified page. This must be the password of an actual user.
Use credentials	Select if the link is to be encrypted with the login name and password of another user.

Troubleshooting and Limitations

Use the information below for troubleshooting information and limitations relating to logging into HP Business Availability Center.

This section contains the following topics:

- ▶ “Login Troubleshooting” on page 34
- ▶ “Limiting Access by Different Machines Using the Same Login Name Limitation” on page 38
- ▶ “Configuring the JMX Console to Work with SSL Limitations” on page 38
- ▶ “Resetting LDAP/SSO Settings via the JMX Console” on page 38

Login Troubleshooting

Reference the possible login failure causes using the error number shown in the error alert dialog box. For additional troubleshooting information, refer to the HP Software Self-solve knowledge base.

Error No.	Problem/Possible Cause(s)	Solution(s)
LI001	<p>HP Business Availability Center failed to connect to the jboss application server running on the Gateway Server. This may be due to:</p> <ul style="list-style-type: none"> ▶ the jboss server being down ▶ problems with the HP Business Availability Center service ▶ the port required by the application server being used by another application 	<p>Solution 1: Close all applications on the Gateway Server machine and restart the machine.</p> <p>Solution 2: Ensure that there are no other running applications on the Gateway Server machine that use this port (for example, applications that run from the Startup directory, another instance of jboss, an MSDE or Microsoft SQL Server, or any other process).</p>
LI002	The jboss application server running on the Gateway Server is not responding or is not installed correctly.	Restart the HP Business Availability Center application.
LI003	The management database is corrupted (for example, if a user record was accidentally deleted from the database).	Try logging in as a different user, or ask the HP Business Availability Center administrator to create a new user for you.
LI004	The connection between the Tomcat servlet engine and the jboss application server failed due to an RMI exception. This may be due to problems in RMI calls to jboss.	<p>Ensure that none of the jboss ports are in use by another process. Also, ensure that the RMI ports are bound.</p> <p>For details on ports, see “Bus Communication and Port Usage” in the <i>HP Business Availability Center Deployment Guide</i> PDF.</p>

Error No.	Problem/Possible Cause(s)	Solution(s)
LI005	<p>The HP Business Availability Center login fails or hangs. This may be due to:</p> <ul style="list-style-type: none"> ▶ an incorrect login name/password combination ▶ inability to connect to the management database ▶ current user does not have access rights to any profile ▶ authentication strategy has not been set/configured correctly 	<p>Solution 1: Ensure that you or the user enters a correct login name/password combination.</p> <p>Solution 2: Ensure that the connection to the management database is healthy. To do so:</p> <ol style="list-style-type: none"> 1. In the Web browser, type http://<Gateway or Data Processing server name>:8080/jmx-console/index.html to connect to the JMX management console. 2. Click the link System > JMX MBeans > Topaz > Topaz:service=Connection Pool Information. 3. Locate java.lang.String showConfigurationSummary() and click the Invoke button. 4. In Active configurations in the Connection Factory, find the appropriate row for the management database. 5. Verify that columns Active Connection and/or Idle Connection have a value greater than 0 for the management database. 6. If there is a problem with the connection to the database, verify that the database machine is up and running; if required, rerun the Server and Database Configuration utility. <p><i>...cont'd</i></p>

Error No.	Problem/Possible Cause(s)	Solution(s)
LI005 (cont'd)	The HP Business Availability Center login fails or hangs.	<p>Solution 3: Ensure that the user has appropriate permissions to access HP Business Availability Center. For details on user permissions, see “Permissions Overview” on page 363.</p> <p>Solution 4: Verify that an authentication strategy has been configured correctly. For details on authentication strategies, see “Authentication Strategies” on page 487.</p>
LI006	<p>The HP Business Availability Center login fails. This may be due to:</p> <ul style="list-style-type: none"> ▶ incorrect cookie settings in the Web browser ▶ an unsupported character in the names of the machines running the HP Business Availability Center servers 	<p>Solution 1: Ensure that the client Web browser is set to accept cookies from HP Business Availability Center servers.</p> <p>Solution 2: Ensure that there are no underscore characters (_) in the names of the machines running the HP Business Availability Center servers. If there are, either rename the server or use the server's IP address when accessing the machine. For example, to access HP Business Availability Center, use <a href="http://111.222.33.44/<HP Business Availability Center root directory>">http://111.222.33.44/<HP Business Availability Center root directory> instead of <a href="http://my_server/<HP Business Availability Center root directory>">http://my_server/<HP Business Availability Center root directory></p>

Error No.	Problem/Possible Cause(s)	Solution(s)
LI007	<p>The HP Business Availability Center login fails. This is because the maximum number has been reached of concurrent logins from different machines that access HP Business Availability Center using the same login name.</p>	<p>Solution 1: Log out of the instances of HP Business Availability Center that have logged in using the same login name from different machines. You can then retry logging in, if the maximum number has not been reached.</p> <p>Solution 2: Log in using a different login name, if available.</p> <p>Solution 3: The administrator can edit the Infrastructure Settings to remove the limitation or increase the maximum number of concurrent logins using the same login name from different machines. To edit this setting, select Admin > Platform > Setup and Maintenance > Infrastructure Settings, choose Foundations, select Security and locate the Maximum machines per login name entry in the Security - Login table. Modify the value as required. The default value is 0, which enables limitless logins.</p>

Limiting Access by Different Machines Using the Same Login Name Limitation

In certain network configurations where multiple clients are funneled through a default gateway or proxy server, the IP resolved to HP Business Availability Center is that of the gateway or proxy server and not the IP of the client. As a result, HP Business Availability Center treats each client as coming from the same IP. Since the number of logins from the same machine (IP) is not limited, all of the clients can login to HP Business Availability Center, even though they originate from different IPs.

Configuring the JMX Console to Work with SSL Limitations

After configuring the JMX Console to work with SSL, it is not possible to access the `\<HP Business Availability Center root directory>\AppServer\webapps\myStatus.war\myStatus.html` page to view the availability of HP Business Availability Center.

Resetting LDAP/SSO Settings via the JMX Console

If your LDAP or SSO settings have not been configured properly, you may be prevented from accessing HP Business Availability Center. If this happens, you must reset your LDAP or SSO settings remotely via the JMX console in the application server that comes with HP Business Availability Center:

To reset LDAP/SSO settings via the JMX console:

- 1** Enter the URL of the JMX console (`http://<Gateway or Data Processing server name>:8080/jmx-console/`) in a web browser.
- 2** Enter your JMX console authentication credentials. If you do not know your authentication credentials, contact your system administrator.
- 3** Modify the appropriate settings, depending on the authentication method you are resetting:
 - To reset LDAP settings, modify the JMX settings as follows:
 - Domain name: **Foundations**
 - Service: **users-remote-repository**
 - Method: **setRemoteUserRepositoryMode = Disabled**

- To reset SSO settings, modify the JMX settings as follows:
 - Domain name: **Topaz**
 - Service: **SSO**
 - Method: **setIbmSsoConfigurationEnable = False**

When accessing the JMX console, you must enter the JMX authentication credentials, which by default are:

Username: **admin**

Password: **admin**

You can change the authentication credentials by accessing the relevant properties files. For details on the files, see “Using the JMX Console” on page 19.

2

Direct Links to an Application Page

This chapter provides information on how to create a URL that either opens a specific HP Business Availability Centerpage directly in your browser, or directly embeds a UCMDB applet into external applications.

This chapter includes:

Concepts

- ▶ Direct Links Overview on page 42

Tasks

- ▶ Work with Direct Links — Scenario on page 43

Reference

- ▶ Direct Links User Interface on page 44

Direct Links Overview

Direct Links enable you to create a URL that:

- ▶ Opens a specific HP Business Availability Center view, or CI, directly in HP Business Availability Center. This enables users to retrieve information from HP Business Availability Center without being located in the HP Business Availability Center context.

Note: To open a specific view or CI directly in HP Business Availability Center, use the Open in context link option. For details, see “Select Command Page” on page 45.

- ▶ Enables integration with HP Business Availability Center:
 - ▶ If you create a URL using the Embedded links option, the URL takes you first to the HP Business Availability Center login page. After you enter your login name and password, the target page opens in your browser.

Note: To open the target page in your browser, use the Embedded links option. For details, see “Select Command Page” on page 45.

- ▶ (Intended for integration developers only) You can directly embed a UCMDB applet into external applications.

For details on how to embed UCMDB applets directly into an external application using direct links, see “Embedding UCMDB Applets Using Direct Links” in *Solutions and Integrations*.

You can create a URL in Topology View (select **Applications > Universal CMDB > Topology View**) and all the TQL editors in **Admin > Universal CMDB > Modeling**.

For details on the user interface for the Direct Links option, see “Direct Links User Interface” on page 44.

When you create a URL, you can:

- Send the URL to an email recipient
- Copy the URL to the clipboard
- Test the URL to ensure that the target application page can be found

The user to whom you are sending the URL must have an account with sufficient privileges to open the target page. You must apply the appropriate viewing and editing permissions to the users and user groups that want to access the target view. You set permissions in **Admin > Platform > Users and Permissions**, select a user or a group and select **Permissions**. For details, see “Assign Permissions” in *Platform Administration*.

Note: You can use **Link to this Page** function to open a target HP Business Availability Center page in your browser. While the **Link to this Page** function enables you to access another application page in HP Business Availability Center, it does not enable you to access a specific CI or view. For details, see “Linking to a Specific Page” in *Platform Administration*.

Work with Direct Links — Scenario

This scenario describes how to use Direct Links to email the URL of a specific CI to another person.

Jane Harrison is a senior engineer in the ABC Software company. She has encountered a problematic CI in a view she has created. She wants to inform Henry Jones, who is working with the same view through HP ServiceCenter, about the problematic CI. Since the view Jane has created contains many hundreds of CIs, she decides to email Henry the URL of the CI so that he does not have to spend a lot of time searching for that specific CI.

In IT Universe, Jane selects **Direct Links Wizard** from the **Edit** menu. In the Select Command page of the Direct Links Wizard, she selects the **Show View** option and clicks **Next**.

In the Direct Link Parameters — Show View page, she selects the view she created, the problematic CI, and IT Universe as the mode in which Henry opens the CI. When the URL is created, she emails Henry the link to the problematic CI.

For details on the Direct Links Wizard, see “Direct Links Wizard” on page 45.

Direct Links User Interface

This section describes:

- Direct Link Dialog Box on page 44
- Direct Links Wizard on page 45
- Select CIs Dialog Box on page 59

Direct Link Dialog Box

Description	<p>The URL that is created by the Direct Links wizard to either access a specified application page in HP Business Availability Center or embed a UCMDB applet into an external application.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard.</p> <p>Note: You can also create a URL in Topology View (select Applications > Universal CMDB > Topology View).</p>
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The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
Copy URL	Copies the URL to the clipboard.
Description	Describes the mode used in the Select Command page to create the URL.

GUI Element (A-Z)	Description
Mail URL	Opens an email containing the URL of the link.
Test URL	Checks the URL to ensure that the specified application page can be found.
Link URL	The URL that was created by the Direct Links Wizard to access the specified HP Business Availability Center function.

Direct Links Wizard

Description	<p>Creates a URL that guides another user to a specific target view or CI in HP Business Availability Center, or embeds a UCMDB applet into an external application.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard.</p> <p>Note: You can also create a URL in Topology View (select Applications > Universal CMDB > Topology View).</p>
Included in Tasks	“Work with Direct Links — Scenario” on page 43

Select Command Page

Description	<p>Enables you to select the required Direct Link commands.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command.</p>
Important Information	For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45.

The following elements are included (unlabeled GUI elements are shown in angle brackets):





GUI Element (A-Z)	Description
<Left pane>	A graphic illustration of the selected command.
Description	A description of the selected command.
CI type selector	<p>Enables you create a URL that embeds the CI type selector into external applications. For details, see the Direct Link Parameters — Show CI Type Selector page.</p> <p>Note: Appears when you select the Embedded links option.</p>
Embedded links	Creates a URL that enables you to embed a UCMDB applet into external applications.
Open in context links	Creates a URL that guides another user to a specified application page without having to be in the HP Business Availability Center context.
Start in mode	<p>Opens HP Business Availability Center in the selected mode. For details, see the Direct Link Parameters — Start in Mode page.</p> <p>Note: Available when you select the Open in context links option.</p>
Start impact map	<p>Enables you to create a URL that embeds an impact map into an external application. For details, see the Direct Link Parameters — Show Impact Map page.</p> <p>Note: Available when you select the Embedded links option.</p>
Show change report	<p>Enables you to create a URL that embeds a report displaying changes made to a specific CI into an external application. For details, see the Direct Link Parameters — Show Change Report page.</p> <p>Note: Available when you select the Embedded links option.</p>





GUI Element (A-Z)	Description
Show CI properties	<p>Enables you to create a URL that displays a CI's properties. For details, see the Direct Link Parameters — Show CI Properties page.</p> <p>Note: Available when you select the Embedded links option.</p>
Show change report on view	<p>Enables you to create a URL that embeds a report displaying changes made to a specific view into an external application. For details, see the Direct Link Parameters — Show Change Report on View page.</p> <p>Note: Available when you select the Embedded links option.</p>
Show CI Neighborhood	<p>Enables you to create a URL that embeds a topology map displaying a specific CI and the CIs that are linked to it by a distance of no more than one relationship, into an external application. For details, see Direct Link Parameters — Show CI Neighborhood page.</p> <p>Note: Available when you select the Embedded links option.</p>
Show Topology Report	<p>Enables you to create a URL that embeds a Topology Report into an external application. For details, see Direct Link Parameters — Show Topology Report page.</p> <p>Note: Available when you select the Embedded links option.</p>
Show related CIs	<p>Opens a topology map displaying the selected CI and its immediate neighbors within the selected view. For details, see Direct Link Parameters — Show Related CIs page.</p> <p>Note: Available when you select the Open in context option.</p>
Show view	<p>Displays the selected view and optionally preselect a node in it. For details, see Direct Link Parameters — Show Related View page.</p> <p>Note: Available when you select the Open in context option.</p>

Direct Link Parameters — CI Type Selector Page

Description	<p>Enables you to create a URL to a hierarchical tree or list of selected CI types, which you can embedded into an external application.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Embedded links > CI type selector.</p>
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.
Useful Links	<p>“CI Type Manager” on page 315</p>

The following elements are included (unlabeled GUI elements are shown in angle brackets>):



GUI Element (A-Z)	Description
CI type selector mode	View the selected CI types in either a hierarchical tree or list.
Root CI Type (tree only)	<p>Select the CI type you want to use as the root CI type in a hierarchical tree.</p> <ul style="list-style-type: none"> ▶ Click  to open the CI Type Selector dialog box. Select the CI type you want to use as the root CI type in the tree. ▶ Click  to delete the selected CI type. The default is IT Universe.
Invisible CITs (tree only)	<p>Select the CI types you do not want to appear in the tree.</p> <ul style="list-style-type: none"> ▶ Click  to open the CI Type Selector dialog box. Select the CI types you want to appear in the tree. ▶ Click  to delete the selected CI types.

GUI Element (A-Z)	Description
Unselectable CITs (tree only)	<p>Select the CI types which cannot be selected in the tree.</p> <ul style="list-style-type: none"> ▶ Click  to open the CI Type Selector dialog box. Select the CI types which cannot be selected in the tree. ▶ Click  to delete the selected CI types.
Visible CITs (list only)	<p>Select the CI types which you want to appear in the CI type list.</p> <ul style="list-style-type: none"> ▶ Click  to open the CI Type Selector dialog box. Select the CI types which you want to appear in the CI type list. ▶ Click  to delete the selected CI types. <p>Note: If you choose to view the CITs in a list, then you are required to select at least one CI type.</p>
Selection mode	Allow single or multiple selection of CI types.

Direct Link Parameters — Show Change Report Page

Description	<p>Enables you to create a URL to a specific Change report that displays the changes made to a specific CI and its children.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Embedded links > Show change report.</p>
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.
Useful Links	<ul style="list-style-type: none"> ▶ “Change Report” on page 813 ▶ “Working in Reports” in <i>Reports</i>



The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
Source CI object ID	<p>Enables you to create a URL to a specific Change report that displays the changes made to a specific CI and its children.</p> <ul style="list-style-type: none"> ▶ Click  to select the source CI and retrieve its object ID. Opens the Select Source CI dialog box. For details, see “View Explorer” on page 943. ▶ Click  to delete the value in the Source CI object ID box.
Date from:	Configure a start date and time for the report.
Date until:	Configure an end date and time for the report.
Time range:	Select a time range for which you want to view the report. For more information on defining a time period using the Time Range options, see “Generating Reports” in <i>Reports</i> .

Direct Link Parameters — Show Change Report on View Page

Description	<p>Enables you to create a URL to a specific Change report that displays the changes made to a specific view.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Embedded links > Show change report on view.</p>
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.
Useful Links	<ul style="list-style-type: none"> ▶ “Change Report” on page 813 ▶ “Working in Reports” in <i>Reports</i>







The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
Selected view	<ul style="list-style-type: none"> ▶ Click  to select the required view. Opens the Select View dialog box. ▶ Click  to delete the value in the Selected View box.
Date from:	Configure a start date and time for the report.
Date until:	Configure an end date and time for the report.
Time range:	Select a time range for which you want to view the report. For more information on defining a time period using the Time Range options, see “Generating Reports” in <i>Reports</i> .

Direct Link Parameters — Show CI Neighborhood Page

Description	<p>Enables you to embed into an external application, a topology map that displays a specific CI, and all the CIs that are linked to it by a distance of no more than one relationship.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Embedded links > Show CI Neighborhood.</p>
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.



The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
Source CI	<p>Select the CI whose related CIs you want to display in an embedded topology map.</p> <ul style="list-style-type: none"> ▶ Click  to select the required CI and retrieve its object ID. Opens the Select Source CI dialog box. For details, see “View Explorer” on page 943. ▶ Click  to delete the value in the Source CI box.
Restrict results to CI types	<p>Restrict the results of the topology map to related CIs of one or more CI types.</p> <ul style="list-style-type: none"> ▶ Click  to select the required CI types. Opens the CI Type Selector dialog box. ▶ Click  to delete the value in the Restrict results to CI types box.
Restrict results to view	<p>Restrict the results of the topology map to related CIs from a specific view.</p> <ul style="list-style-type: none"> ▶ Click  to select the required view. Opens the Select View dialog box. ▶ Click  to delete the selected view in the Restrict results to view box.

Direct Link Parameters — Show CI Properties Page

Description	<p>Enables you to view basic information for an existing CI.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Embedded links > Show CI Properties.</p>
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.
Useful Links	<p>“Configuration Item Properties Dialog Box” on page 84</p>



The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
Source CI object ID	<p>Select the required CI.</p> <ul style="list-style-type: none"> ▶ Click  to select the source CI and retrieve its object ID. Opens the Select Source CI dialog box. For details, see “View Explorer” on page 943. ▶ Click  to delete the value in the Source CI object ID box.

Direct Link Parameters — Show Impact Map Page

Description	<p>Enables you to run a Correlation rule defined in Correlation Manager.</p> <p>The URL you create enables you to embed a topology map showing a simulation of all the CIs that are affected by the selected trigger CI for the selected severity and state.</p> <p>For details, see “Run Correlation Dialog Box” on page 742.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Embedded links > Show impact map.</p>
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.
Useful Links	<p>“Topology View Application” on page 729.</p>



The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
State and Trigger Severity	<ul style="list-style-type: none"> ▶ Click  to select the required severity and state. Opens the Correlation State and Trigger Severity dialog box. For details, see “Run Correlation Dialog Box” on page 742. ▶ Click  to delete the selected severity and state.
Trigger CIs	Select the CIs that represent the simulated changes you want to make to the system. Opens the Select CIs dialog box.

Direct Link Parameters — Show Instances Grid Page

Description	<p>Display all of the CI instances found in the CMDB for selected CI type, and its children.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Embedded links > Show instances grid.</p>
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.
Useful Links	“Element Instances Dialog Box” on page 551



The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
CI type	<p>Select the required CI type.</p> <ul style="list-style-type: none"> ▶ Click  to select the required CI type. Opens the CI Type Selector dialog box. ▶ Click  to delete the CI type.

Direct Link Parameters — Show Related CIs Page

Description	<p>Enables you to create a URL to a topology map displaying the related CIs of the selected (source) CI. The topology map opens in either Topology view or IT Universe.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Open in context links > Show related CIs.</p>
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.



The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
Source CI object ID	<p>Select the (source) CI whose related CIs you want to display in a topology map.</p> <ul style="list-style-type: none"> ▶ Click  to select the source CI and retrieve its object ID. Opens the Select Source CI dialog box. For details, see “View Explorer” on page 943. ▶ Click  to delete the value in the Source CI object ID box.
Initial mode	Displays the related CIs in either Topology Map or IT Universe.
Source CI Object ID	The object ID of the source CI.

Direct Link Parameters — Show Topology Report Page

Description	Enables you to create a URL to a specific Topology report. To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Embedded links > Show topology report.
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.
Useful Links	<ul style="list-style-type: none"> ▶ “Topology Report” on page 823 ▶ “Working in Reports” in <i>Reports</i>





The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
Report name	Select the required Topology report. <ul style="list-style-type: none"> ▶ Click  to select the required Topology report. Opens the Reports Tree dialog box. ▶ Click  to delete the value that appears in the Report name box.

Direct Link Parameters — Show View Page

Description	<p>Enables you to create a URL to a specific view and optionally select a specific node in that view. When the view opens, the CI you chose is selected in the view.</p> <p>Note: The view opens in either Topology view or IT Universe.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Open in context links > Show view.</p>
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.

The following elements are included (unlabeled GUI elements are shown in angle brackets):



GUI Element (A-Z)	Description
<Left pane>	A graphic illustration of the selected option.
Select CI from view result	<p>(Optional) Click to select a CI and retrieve its object ID. When the view opens, the CI you chose is selected in the view.</p> <ul style="list-style-type: none"> ▶ Click  to choose the CI you want selected in the target view and retrieve its object ID. Opens the Select Source CI dialog box. For details, see “View Explorer” on page 705. ▶ Click  to delete the object ID for the selected CI in the Select CI from view result box.
Selected View	<p>The target view to be opened by the URL.</p> <ul style="list-style-type: none"> ▶ Click  to select the target view to be opened by the URL. Opens the Select View dialog box. ▶ Click  to delete the selected view in the Selected view box.

GUI Element (A-Z)	Description
View mode	<p>The view options are:</p> <p>View Topology. Displays an entire layer within a view.</p> <p>Related in View. Displays the selected CI and its immediate neighbors within the current view.</p> <p>Related in DB. Displays the selected CI and its immediate neighbors in the CMDB.</p>
Initial mode	Displays the view in either Topology Map or IT Universe.

Direct Link Parameters — Show View Topology Page

Description	<p>Enables you to display the topology map of the selected view and embed it in an external application.</p> <p>To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Embedded links > Show view topology.</p>
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
Selected View	<ul style="list-style-type: none"> ▶ Click  to select the required view to be opened by the URL. Opens the Select View dialog box. ▶ Click  to delete the selected view in the Selected view box.

Direct Link Parameters — Start in Mode Page

Description	Starts the UCMDB application in the required mode. To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select Command > Open in context links > Start in mode.
Important Information	<ul style="list-style-type: none"> ▶ For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45. ▶ Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.


The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<Left pane>	A graphic illustration of the selected mode.
Initial mode	Starts the UCMDB application in the selected mode.




Finish Page

Description	This is the final page of the Direct Links wizard. Click Finish to close the wizard and create a URL. Opens the Direct Links dialog box.
Important Information	For general information about the Direct Links Wizard, see “Direct Links Wizard” on page 45.

Select CIs Dialog Box

Description	Enables you to select the required CIs. For details on the CI Selector, see “View Explorer” on page 943. To access: Select Admin > Universal CMDB > Modeling > <TQL editor> > Edit > Direct Links Wizard > Select command > Embedded links > Show impact map. Then click the Edit button  in the Trigger CIs box.
--------------------	--

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
	Moves the selected CI in the CI Selector pane to the Trigger CIs pane.
	Moves the selected CI in the Trigger CIs pane to the CI Selector pane.
	Moves all the CIs in the Trigger CIs pane to the CI Selector pane.
CI Selector pane	<p>Enables you to choose the CIs you want to use as the trigger in an impact map.</p> <ul style="list-style-type: none"> ▶ Select the Browse Views tab to search for and display a view, and browse through the view to locate a particular CI. ▶ Select the Search CIs tab to search for and display a view, and browse through the view to locate a particular CI. <p>For details on how to use the CI Selector pane, see “View Explorer” on page 943.</p>
Trigger CIs pane	The CIs that are used as the triggers in an impact map.

3

Navigating HP Business Availability Center

This chapter provides details on how to navigate HP Business Availability Center.

This chapter includes:

Concepts

- ▶ Navigating HP Business Availability Center on page 62
- ▶ Working with the HP Business Availability Center Documentation Library on page 65

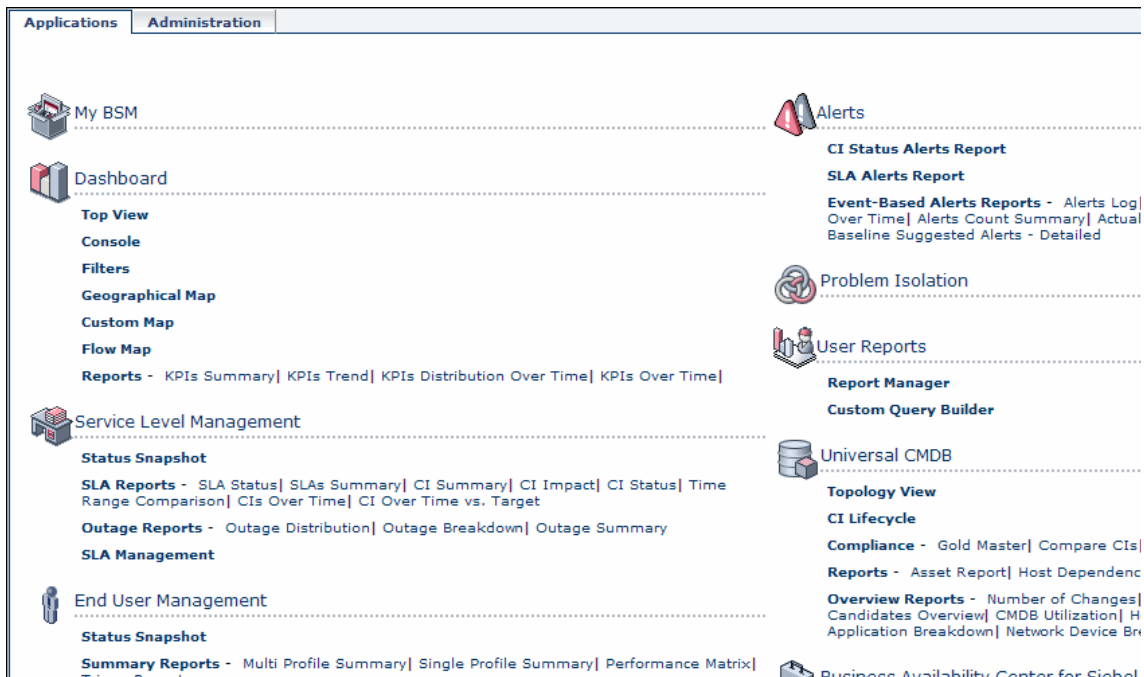
Reference

- ▶ Menus and Options on page 67

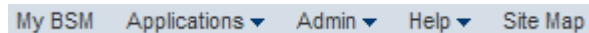
Navigating HP Business Availability Center

HP Business Availability Center runs in a Web browser. You move around HP Business Availability Center using the following navigation functions:

- ▶ **Site Map.** Enables quick access to all top-level contexts in the Applications menu or the Administration Console. The site map is the first page that opens, by default, after logging into HP Business Availability Center. If the default page is changed after login, you can access the site map by clicking the Site Map link, either in the top menu or from the Help menu.



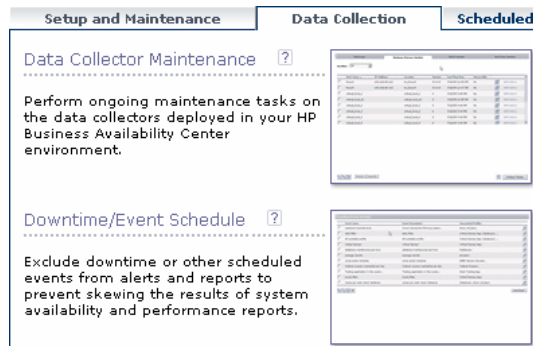
- ▶ **Menu bar.** Enables navigation to the applications, Administration Console pages, help resources, and a link to the site map.



Additionally, there is a **Logout** button on the top right corner of the page.



- ▶ **Tabs.** Enable navigation to various contexts within a particular area of HP Business Availability Center, such as to different types of reports within an application, different views within a report, or different administrative functions within the Administration Console. In certain contexts, tabs are used to distinguish between functions; in other contexts, tabs are used to group logically similar functions or features together.
- ▶ **Tab main menus.** Enable navigation from a tab front page to various contexts related to the tab. Tab main menus appear when selecting a tab that represents a category containing several contexts, such as report types or administrative settings. Tab main menus include a description and thumbnail image of each tab context.



- ▶ **Tab controls.** Assist in navigation from any context related to a tab to any other of the tab's contexts. To open the tab main menu, click the tab name.





To quickly jump to another context related to the tab, move your pointer over the tab and click the down arrow to open the tab dropdown menu. Click a tab menu option to move to that context.



- **Breadcrumbs.** Enable returning to previous pages within a multi-level context by clicking the appropriate page level. For example, in the following breadcrumb trail, you would click **Breakdown Summary** to return to the Breakdown Summary report:

Business Process > Breakdown Summary > Transaction Breakdown Raw Data > WebTrace by Location

Note: The Web browser **Back** function is not supported in HP Business Availability Center. Using the **Back** function does not always revert the current context to the previous context. To navigate to a previous context, use the breadcrumb function.

Working with the HP Business Availability Center Documentation Library

The HP Business Availability Center Documentation Library is an integrated help system comprising all the guides contained in the end-user documentation set delivered with Business Availability Center. The sections below describe how to navigate and use the Documentation Library.

Navigating the Documentation Library

The Documentation Library can be navigated in the following ways:

- ▶ **From the home page.** To access the home page, select **Documentation Library** in the HP Business Availability Center Help menu. The home page can also be accessed by clicking the **Home** entry on the Contents tab of the Documentation Library Navigation Pane (described below) and by clicking the **Home** icon located at the top of every content page.



The home page is divided into the following tabs:

- ▶ **Main Topics tab.** Organizes the various guides contained in the Documentation Library into logical sections.
- ▶ **Get Started tab.** Provides a checklist of major steps required to get up and running with HP Business Availability Center, and links to details for each step.
- ▶ **PDFs tab.** Organized similar to the Main Topics tab, but provides links to the guides in PDF format.
- ▶ **From the Navigation pane.** To access the navigation pane if it is not displayed, click the **Show Navigation** button.



The navigation pane is divided into the following tabs:

- ▶ **Contents tab.** The Contents tab organizes the various guides in a hierarchical tree, enabling direct navigation to a specific guide or topic.
- ▶ **Index tab.** The Index tab enables you to select a specific topic to display. Double-click the index entry to display the corresponding page. If your selection occurs in multiple documents, a dialog box is displayed enabling you to select a context.

- ▶ **Search tab.** The Search tab enables you to search for specific topics or keywords. Results are returned in ranked order. You can limit your search to a specific guide or set of guides by selecting a value from the scope list.
- ▶ **Favorites tab.** The Favorites tab enables bookmarking specific pages for quick reference. Note that the Favorites tab is available only when using the Java implementation of the Documentation Library. If your browser does not support Java, the JavaScript implementation is automatically used and the Favorites tab is not displayed.

Documentation Library Functionality

The following functionality is available from the top frame in the Documentation Library main pane.



- ▶ **Show Navigation button.** Click to display the navigation pane, which includes the Contents, Index, Search, and Favorites tabs. For details on the Navigation pane, see “Navigating the Documentation Library” on page 65. Note that this button is displayed only when the navigation pane is closed.



- ▶ **Show in Contents button.** Click to open the table of contents in the Contents tab and highlight the entry corresponding to the currently displayed page. This button is displayed only when the navigation pane is open.



- ▶ **Previous and Next buttons.** Click to move forward or backward in the guide currently displayed.



- ▶ **Send Documentation Feedback to HP button.** Click to open your e-mail client and send feedback to HP. An email message opens with the **To** and **Subject** fields already completed and a link to the current page in the message body. Make sure to complete the e-mail by entering your feedback. Note that you must have an e-mail client configured on the machine for this function to operate correctly.



- ▶ **Print button.** Click to print the currently displayed page.

Organization of Information into Topics

The material in most of the Documentation Library guides is organized by topic types. Three main topic types are in use: **Concepts**, **Tasks**, and **Reference**. The topic types are differentiated visually using icons. Below is an explanation of each topic type along with its corresponding icon:



- **Concepts.** Concept topics provide background, descriptive, or conceptual information. Read concept topics to get general information about what a feature does and how it works.



- **Tasks.** Task topics provide step-by-step guidance on how to complete specific tasks that are typically required to administer or use the software. Task topics also include scenarios for certain tasks. Read task topics and follow the steps listed to get a task done.



- **Reference.** Reference topics provide detailed lists and explanations of parameters, common user interface elements, and other reference-oriented material. Read reference topics when you need to look up some specific piece of reference information relevant to a particular context.



- **User Interface.** User Interface topics are a specialized form of reference topics that are used mainly for context-sensitive help. Help links from the software generally open the user interface topics.



- **Troubleshooting and Limitations.** Troubleshooting and limitations topics are a specialized form of reference topics that provide troubleshooting and list limitations of the feature. Read troubleshooting and limitations topics if you encounter unexpected behavior of the software. It is recommended that you review a feature's limitations before using it.



Menus and Options

The top menu bar enables navigation to the following applications and resources:

This section includes the following topics:

- “Business User Applications” on page 68
- “Administration Console” on page 71

- “Help Menu” on page 73

Business User Applications

HP Business Availability Center features the business user applications listed below. You access all applications from the Applications menu, except for the My BSM application which is accessed from the top level menu.

Menu Option	Description
My BSM	Select to open the My BSM application, a portal that individual users can customize to display key content relevant to them. For details, see <i>Using My BSM</i> .
Dashboard	Select to open the Dashboard application, a real-time dashboard for viewing performance and availability metrics from a business perspective. For details, see <i>Using Dashboard</i> .
Service Level Management	Select to open the Service Level Management application to proactively manage service levels from a business perspective. Service Level Management provides IT Operations teams and service providers with a tool to manage service levels and provide service level agreement (SLA) compliance reporting for complex business applications in distributed environments. For details, see <i>Using Service Level Management</i> .
End User Management	Select to open the End User Management application, used to monitor applications from the end user perspective and analyze the most probable cause of performance issues. For details, see <i>Using End User Management</i> .

Menu Option	Description
Diagnostics	Select to open the HP Diagnostics application (if a licensed version of HP Diagnostics is installed), to gain end-to-end visibility and comprehensive diagnostics for Java 2 Enterprise Edition (J2EE), .NET-connected, Siebel, SAP, Oracle, and other complex environments. For details, see the HP Diagnostics documentation accessed from the Help menu in HP Business Availability Center. For details, see the HP Diagnostics documentation installed with the product.
Business Process Insight	Select to view business processes and business process monitors, which enable you to visualize the health, performance, and effectiveness of your business processes. For details, see <i>Using Business Process Insight</i> .
TransactionVision	Select to view transaction topology and infrastructure for data collection and report viewing. For details, see <i>Using TransactionVision</i> .
System Availability Management	Select to open the System Availability Management application, used for complete system and infrastructure monitoring as well as event management. For details, see <i>Using System Availability Management</i> .
Alerts	Select to open the Alerts application to view CI Status Alert, SLA Alert, and Event-Based Alert reports. For details, see <i>Alerts</i> .
Problem Isolation	Select to open the Problem Isolation application, used for triaging and isolating problematic CIs identified by HP Business Availability Center as well as for viewing and analyzing proactive analysis data. For details, see <i>Using Problem Isolation</i> .

Menu Option	Description
User Reports	Select to access the Report Manager and create and save user reports—customized reports containing user-defined data and formatting that can help you focus on specific aspects of your organization's application and infrastructure resource performance. For details on the Report Manager, see <i>Reports</i> .
Universal CMDB	Select to open the HP Universal CMDB application, used to view a topology map of CIs, to compare CIs and views, to view reports about changes that occur in the CMDB, and to view overview reports. For details, see <i>Model Management</i> .
Business Availability Center for Siebel	Select to open HP Business Availability Center for Siebel Applications diagnostics tools. For details, see <i>Solutions and Integrations</i> .
Business Availability Center for SOA	Select to open HP Business Availability Center for SOA reports. For details, see <i>Solutions and Integrations</i> .
Performance and Availability Lifecycle	Select to open the Performance and Availability Lifecycle application, used to assist in constructing load tests based on real-user transaction data collected by the Real User Monitor. For details, see <i>Solutions and Integrations</i> .

Administration Console

Administrators use the Administration Console to administer the HP Business Availability Center platform and applications. The Administration Console consists of several sections, organized by function. You access each functional area from the Admin menu. You select from the following menu options:

Menu Option	Description
My BSM	Select to open the My BSM Administration pages, where you manage portal modules (including portlets), and set viewing permissions. For details, see <i>Using My BSM</i> .
Dashboard	Select to open the Dashboard Administration pages, where you attach Key Performance Indicators (KPIs) to CIs, define the custom and geographical maps, and customize the repositories. For details, see <i>Using Dashboard</i> .
Service Level Management	Select to open the Service Level Management Administration pages, where you create service agreements (SLAs, OLAs, UCs) and build services that link to the data that Service Level Management collects. For details, see <i>Using Service Level Management</i> .
End User Management	Select to open the End User Management Administration pages, where you configure and administer Business Process Monitor and Real User Monitor data collectors, as well as configure transaction order, color settings, and report filters. For details, see <i>Using End User Management</i> .
Diagnostics	Select to open the HP Diagnostics configuration page, where licensed HP Diagnostics users connect to an installed Diagnostics server and configure HP Diagnostics. For details, see the HP Diagnostics documentation installed with the product.
Business Process Insight	Select to create business processes and business process monitors, which enable you to visualize the health, performance, and effectiveness of your business processes. For details, see <i>Using Business Process Insight</i> .

Menu Option	Description
TransactionVision	Select to set up and configure transactions for data collection and report viewing. For details, see <i>Using TransactionVision</i> .
System Availability Management	Select to open the System Availability Management Administration pages, where you configure and administer the SiteScope data collector. For details, see <i>Using System Availability Management</i> .
Alerts	Select to open the Alerts Administration pages, where you configure alerts and system recipients. For details, see <i>Alerts</i> .
Problem Isolation	Select to open the Problem Isolation Administration pages, where you configure on-demand monitors, problem suspects, and proactive analysis. For details, see <i>Using Problem Isolation</i> .
Universal CMDB	Select to open the Universal CMDB Administration pages, where you build and manage a model of your IT universe in the CMDB. From Universal CMDB Administration, you manage Discovery and Dependency Mapping and the adapter sources that are used to populate the IT Universe model with configuration items (CIs), the templates for creating CIs, and the viewing system for viewing the CIs in HP Business Availability Center applications. You can also manually create CIs to add to the model. For details, see <i>Model Management</i> .
Business Availability Center for Siebel Administration	Select to open the Business Availability Center for Siebel Applications Administration page. For details, see <i>Solutions and Integrations</i> .
Platform	Select to open the Platform Administration pages, which provide complete platform administration and configuration functionality.

Menu Option	Description
EMS Integrations	Select to open the EMS Integrations application, where you access out-of-the-box integrations (HP ServiceCenter, HP OVO, Netscout nGenius, and others) and customize the Integration Monitor configuration files to correctly map the data Integration Monitors collect to a format recognizable by HP Business Availability Center. For details, see <i>Solutions and Integrations</i> .
Link to this page	Select to access the Link to this page feature, where you can create a URL that enables direct access to a specific page in HP Business Availability Center. For details, see “Link to This Page Window” on page 32.
Personal Settings	Select to access the Personal Settings tab, which enables personalization of various aspects of HP Business Availability Center, including menus and passwords. Note that Personal Settings are available to all users.

Help Menu

You access the following online resources from the HP Business Availability Center Help menu:

- ▶ **Help on this page.** Opens the Documentation Library to the topic that describes the current page or context.
- ▶ **Documentation Library.** Opens the Documentation Library home page. The home page provides quick links to the main help topics.
- ▶ **Diagnostics Help.** Opens the HP Diagnostics Help, if an HP Diagnostics server is connected to HP Business Availability Center.
- ▶ **Troubleshooting & Knowledge Base.** Opens the HP Software Support Web Site directly to the troubleshooting landing page (required HP Passport login). The URL for this Web site is <http://h20230.www2.hp.com/troubleshooting.jsp>

- ▶ **HP Software Support.** Opens the HP Software Support Web Site. This site enables you to browse the knowledge base and add your own articles, post to and search user discussion forums, submit support requests, download patches and updated documentation, and more. The URL for this Web site is <http://www.hp.com/go/hpssoftwaresupport>
- ▶ **HP Software Web Site.** Opens the HP Software Web site, which contains information and resources about HP Software products and services. The URL for this Web site is <http://www.hp.com/go/software>.
- ▶ **Task Assistant.** Opens the task assistant, which assists in accomplishing specific tasks by listing the task steps and providing links to the relevant Help topics for each step.
- ▶ **Site Map.** Opens the site map, which enables quick access to all top-level contexts in the Applications menu or the Administration Console.

Note: The Site Map is the default entry page when you log into HP Business Availability Center. Click **Change the default page** on the Site Map to open the Personal Settings tab and select a different entry page. For details on configuring Personal Settings, see “Personal Settings” on page 475.

- ▶ **What's New?** Opens the What's New document, which describes the new features and enhancements of the version.
- ▶ **About HP Business Availability Center.** Opens the About HP Business Availability Center dialog box, which provides version, license, patch, and third-party notice information.

Part II

Setup and Maintenance

4

Downloads

This chapter provides details on downloading components to HP Business Availability Center, and updating license information.

This chapter includes:

Concepts

- Downloads Overview on page 77

Tasks

- Download Components on page 78

Reference

- Downloads User Interface on page 78

Downloads Overview

Once the servers for HP Business Availability Center are installed, there are several components that must be downloaded. These components include tools for monitoring your enterprise and recording business processes.

To view and download components from the Downloads page after installing HP Business Availability Center, you must install the data collector setup file. For details, see "Installing Component Setup Files" in *the HP Business Availability Center Deployment Guide* PDF.

Download Components

This task describes how to download components on the **Download Components** page:

To download components on the Download Components page:

- 1** Click the component you want to download.
- 2** Save the component's setup file to your computer.
- 3** Run the component's setup file to install the component.

Downloads User Interface



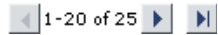
This section describes:

- Download Components Page on page 79

Download Components Page

Description	Lists the HP Business Availability Center components available for download, including tools for monitoring your enterprise and recording business processes. To Access: Select Admin > Platform > Setup and Maintenance > Downloads .
Important Information	<ul style="list-style-type: none"> ▶ You can filter the downloadable components either by category or by system. ▶ Since some files run immediately when you click to download them, right click the file you want to download, select Save Target As, and choose the location in which you want to save the file.
Useful Links	“Downloads Overview” on page 77

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
	Click to reset the table columns' width to its default setting. You can adjust the width of the table's columns by dragging the borders of the column to the right or the left.
	Click the Select Columns button to open the Select Columns dialog box and select the columns you want to be displayed on the table. For details on the Select Columns dialog box, see “Working with Tables” in <i>Reference Information</i> .
	Divides the table of data into pages. You move from page to page by clicking the relevant button: <ul style="list-style-type: none"> ▶ To view more reports, click the Next page or Last page buttons. ▶ To view previous reports in the list, click the Previous page or First page buttons.

GUI Element (A-Z)	Description
<p>Category</p>	<p>The downloadable component's category. Available categories are:</p> <ul style="list-style-type: none"> ▶ Business Process Insight. Downloadable files that enable you to install and run Business Process Insight components on HP Business Availability Center. ▶ Business Process Monitor. Downloadable files that enable you to install and run Business Process Monitor components on HP Business Availability Center. ▶ Dashboard Ticker. The HP Dashboard Ticker downloadable file that enables you to install and run the Dashboard Ticker component on HP Business Availability Center. Note: The 7.50 version of the HP Dashboard Ticker is compatible with HP Business Availability Center version 8.00. ▶ Diagnostics. Downloadable files that enable you to install and run Diagnostics components. ▶ Discovery Probe. The Discovery Probe downloadable file that enables you to install and run the Discovery Probe component on HP Business Availability Center. ▶ Real User Monitor. Downloadable files that enable you to install and run Real User Monitor components. ▶ SiteScope. The SiteScope downloadable file that enables you to install and run SiteScope components. Note: Ensure that you have selected the file that corresponds to the Operating System with which you are working. ▶ TransactionVision. Downloadable files that enable you to install and run TransactionVision components. ▶ TransactionVision or Diagnostics. Downloadable files that enable you to install and run the HP Diagnostics/TransactionVision Agent for Java file. ▶ Yahoo! Widgets. Downloadable files that enable you to continuously monitor the operational status of your business, without having Business Availability Center Dashboard open on your screen. Note: Ensure that you have selected the file that corresponds to the Operating System with which you are working.

GUI Element (A-Z)	Description
Description	An explanation of the specific downloadable file.
Document	A link to the PDF describing the component. Note: Not all components have a corresponding PDF document available.
File Name	The name of the specific file available for download.
System	The operating system on which the HP Business Availability Center components are to run.

5

Licenses

This chapter provides details on updating license information in HP Business Availability Center.

This chapter includes:

Concepts

- ▶ License Management Overview on page 83

Reference

- ▶ Licenses User Interface on page 85

License Management Overview

HP Operations administers these pages and the interface is hidden from your view.

To run monitors and transactions, as well as use various integral applications in HP Business Availability Center, you must have a valid license key.

The HP Business Availability Center license enables you to simultaneously run a predetermined number of monitors and transactions for a specified period of time. The number of monitors and transactions that you can run simultaneously, the specific applications that you can run, and the license key expiration date, all depend on the license your organization has purchased from HP.

The initial license key is installed during the installation process. Do not use Platform Administration to install it.

HP Business Availability Center posts a license expiration reminder on the login page of the Web site seven days before license expiration. To review the status of your maintenance number and license key, select **Help > About HP Business Availability Center**.

A number of HP Business Availability Center applications require additional licensing. In order to use these applications, you must obtain an updated license key from HP and then update the license key in HP Business Availability Center. For more information on updating your license key, see “License Management Page” on page 85.

Licenses User Interface

This section describes:

- ▶ License Management Page on page 85

License Management Page

Description	Displays information on general license properties, Business Process Monitor and Script Assignment license and general information, and the license status of various HP Business Availability Center applications. Enables you to update your license key, as necessary. To Access: Select Admin > Platform > Setup and Maintenance > License Management .
Important Information	<ul style="list-style-type: none"> ▶ To review the status of your license key, select Help > About HP Business Availability Center. ▶ The maintenance number has no relevance to HP Business Availability Center 8.0.
Useful Links	“License Management Overview” on page 83

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A–Z)	Description
New License Key	Click to update your license key.
New Maintenance Number	Click to update your maintenance number. Note: The maintenance number has no relevance to HP Business Availability Center 8.0.

General License Properties Pane

Description	<p>Displays information on general license properties in HP Business Availability Center. The General License Properties pane provides the following information:</p> <ul style="list-style-type: none"> ▶ License Key ▶ License Host ID ▶ Maintenance Number ▶ License Type ▶ Expiration Date <p>To Access: Select Admin > Platform > Setup and Maintenance > License Management</p>
Useful Links	“License Management Overview” on page 83

Business Process Monitor Pane

Description	<p>Displays license and general information on the Business Process Monitor data collector(s) installed in HP Business Availability Center.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > License Management.</p> <p>The Business Process Monitor pane provides the following information:</p> <ul style="list-style-type: none"> ▶ Allowed transactions. The maximum number of transactions allowed to run simultaneously under the current license key. ▶ Running transactions. The number of transactions currently running in all profiles. ▶ Total transactions. The total number of transactions currently configured in the database for all profiles (both running and stopped).
Useful Links	“License Management Overview” on page 83

Operations Management Pane

Description	<p>Displays license information on the Operations Management Components installed in HP Business Availability Center.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > License Management.</p> <p>The Operations Management pane provides the following information:</p> <ul style="list-style-type: none">▶ Event Management Foundation.▶ Topology Based Event Correlation.▶ Health Perspective Views.
Useful Links	"License Management Overview" on page 83

Applications Pane

<p>Description</p>	<p>Displays the validity of licenses for applications in HP Business Availability Center.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > License Management.</p> <p>The Applications Pane displays the validity of the licenses for the following areas of HP Business Availability Center:</p> <ul style="list-style-type: none"> ▶ Service Level Management ▶ End User Management ▶ Real User Monitor ▶ System Availability Management ▶ Business Availability Center for Siebel Applications ▶ Diagnostics ▶ Business Availability Center for SAP Applications ▶ Automatic Discovery ▶ Business Availability Center for SOA ▶ Problem Management ▶ Performance and Availability Lifecycle ▶ RUM for Generic TCP/IP Applications
<p>Useful Links</p>	<p>“License Management Overview” on page 83</p>

6

Database Administration

You can maintain and administer the databases HP Business Availability Center uses to store profile and monitoring data. You can create and manage profile databases directly from the Platform Administration. You can also enable the Partition and Purging Manager to purge the data in the database periodically according to your organization's needs.

This chapter includes:

Concepts

- ▶ Database Management - Overview on page 90
- ▶ Partitioning and Purging Historical Data from Profile Databases on page 92
- ▶ Removing Unwanted Data from the Profile Database on page 97

Tasks

- ▶ Configure a Profile Database on a Microsoft SQL Server on page 99
- ▶ Configure a User Schema on an Oracle Server on page 100
- ▶ Work with the Purging Manager on page 102
- ▶ Enable the Re-aggregation-Only Option on page 104
- ▶ Determine the Events Per Minute (EPM) for Data Arriving in HP Business Availability Center on page 105
- ▶ Customize Data Marking Utility Configurations on page 106

Reference

- ▶ Database Administration User Interface on page 107

Troubleshooting and Limitations on page 120

Database Management - Overview

Note to HP Software-as-a-Service customers: HP Operations administers these pages and the interface is hidden from your view.

Before you create profiles, you must configure the database into which you want profile data saved. A profile database can store data for multiple profiles, as well as from different types of profiles (Business Process Monitor, SiteScope). You can either create one database for all profile data or create dedicated databases (for example, for each profile type).

Note: The term **database** is used to refer to a database in Microsoft SQL Server. The term **user schema** refers to a database in Oracle Server.

HP Business Availability Center supports two database types:

- ▶ **Microsoft SQL Server.** This database runs on Windows operating systems only. For details on how to configure a database on a Microsoft SQL Server, see “Configure a Profile Database on a Microsoft SQL Server” on page 99.
- ▶ **Oracle Server.** This database runs on any HP Business Availability Center supported operating system. An Oracle Server database is referred to as a user schema. For details on how to configure a database on an Oracle Server user schema, see “Configure a User Schema on an Oracle Server” on page 100.

The Profile Database Management page, accessed from **Admin > Platform > Setup and Maintenance**, enables you to perform the following database management tasks:

- **Create a new database.** HP Business Availability Center automatically creates a new database and populates it with profile tables.
- **Assign a default profile database.** You must assign a default profile database, to enable HP Business Availability Center to collect the following types of data:
 - Service Level Management data
 - SOA data
 - data from Real User Monitor
 - data used in Dashboard
 - HP Diagnostics data
 - persistent custom data

Note: The first database added on the Database Management page is automatically designated as the default profile database.

- **Add profile tables to an existing, empty database.** HP Business Availability Center connects to an empty database that was manually created on your database server, and populates it with profile tables.
- **Connect to an existing database populated with profile tables.** HP Business Availability Center connects to a profile database that was either manually created and populated with profile tables, or previously defined in Platform Administration.

To deploy profile databases on Microsoft SQL Server or Oracle Server for your organization's particular environment, follow the instructions in "Introduction to Preparing the Database Environment" in *the HP Business Availability Center Database Guide* PDF. It is recommended that you review the relevant portions of *the HP Business Availability Center Database Guide* PDF before performing profile database management tasks.

Partitioning and Purging Historical Data from Profile Databases

Note to HP Software-as-a-Service customers: HP Operations administers these pages and the interface is hidden from your view.

You use the Partition and Purging Managers to instruct the platform to automatically partition historical data for later removal from profile databases.

The data collection tables in the profile databases can grow to a very large size. Over time, this can severely degrade system performance.

When enabled together, HP Business Availability Center's Partition and Purging Manager splits fast-growing tables into partitions at defined time intervals. After a defined amount of time has elapsed, data in a partition is made inaccessible for use in HP Business Availability Center reports. After an additional defined amount of time, a partition is purged from the profile database.

Once enabled, the Partition and Purging Managers partition and later remove data according to the time period listed for the database table. The size of each partition is determined by the EPM (events per minute) that you configured. After the retention time period set for each table has completed, the Purging Manager removes data that has been aggregated. The Partition and Purging Manager removes data only after the data has been aggregated.

HP Business Availability Center includes default time periods for keeping the data in each database table. You can also use the Partition and Purging Manager to set a specific time period—per table—for removing data.

The Partition and Purging Manager runs every hour to check if a new data partition needs to be created. If you do not modify the default time period and the Partition and Purging Manager is enabled, data is removed according to the default range listed for each table.

For guidelines and tips on using the Partition and Purging Manager, see “Guidelines and Tips for Using the Partition and Purging Manager” on page 96.

The Purging Manager page is divided into the following tabs:

- **Template and Multiple Databases.** Used to modify the template configurations, as well as database configurations in multiple databases. Any databases added at a later time adopt the template configurations.

Once you have made changes, the settings displayed in the Template & Multiple Databases tab remain the template settings, even if you did not make changes to the template and have manually changed settings for specific databases. Once those manual changes are applied, the settings displayed revert to the template settings. To see the settings you changed for specific databases, navigate to the **Database Specific** tab and select the appropriate database.

- **Database Specific.** Displays the configurations for the specified database.

For details on advanced partitioning and purging capabilities, see “Data Partitioning and Purging” in the *HP Business Availability Center Database Guide* PDF.

Partitioning Types

The HP Business Availability Center Purging Manager supports the following partitioning types:

- ▶ **Native Partitioning.** Used by databases and user schema that enable partitioning and purging separately. In Native Partitioning databases, partitioning and purging are automatically enabled. These databases run based on the **Enterprise** template on the Template and Multiple Databases tab in the Purging Manager.
- ▶ **View Partitioning.** Used by databases and user schema that enable partitioning and purging together. HP strongly recommends that you enable the Partition and Purging Manager. These databases run based on the **Standard** template on the Template and Multiple Databases tab in the Partition and Purging Manager.

For details on partitioning and purging capabilities according to database type, see “Partitioning by Database Type” on page 95.

Note: If there are no profile databases configured, the purging manager displays the template settings for the system (Enterprise or Standard), based on the template configured on the management database.

Partitioning by Database Type

Depending on the type of partitioning that is enabled, the Partition and Purging Manager can be used with profile databases located on specific database servers, as follows:

Database Server Type	View Partitioning	Native Partitioning
Oracle	Any Oracle Server version supported by HP Business Availability Center	Any Oracle Server version supported by HP Business Availability Center, except standard editions of each version
MS SQL	<ul style="list-style-type: none">▶ MS SQL Server 2000 Standard Edition▶ Microsoft SQL Server 2000 Enterprise editions (Microsoft SQL Server 7.0 and MSDE are not supported)	Microsoft SQL Server 2005 Enterprise Edition

Guidelines and Tips for Using the Partition and Purging Manager

This section contains guidelines and tips for using the Partition and Purging Manager.

- ▶ Prior to purging, the Partition and Purging Manager performs an additional check to ensure that raw data is not purged before it has been aggregated and reported to HP Business Availability Center.

If a particular profile database's data is scheduled for purging but its raw data has not yet been aggregated, the Partition and Purging Manager does not purge the data according to its schedule. The Partition and Purging Manager automatically purges the data on its next hourly run only after the data has been aggregated.

For example, if data was scheduled to be purged on Sunday at 8:00 but its data is only aggregated on Sunday at 10:00, the Partition and Purging Manager checks the data at 8:00, does not purge the data, and automatically purges the data on its next hourly run only after Sunday at 10:00 once the data has been aggregated.

- ▶ If you find that data is not being purged according to the schedules set in the Partition and Purging Manager and your profile databases are growing too large, check that the aggregator is running properly and view the Partition and Purging Manager logs located on the Data Processing server at **<HP Business Availability Center server root directory>/log/pmanager.log**.

HP Business Availability Center displays raw data only in the following contexts: SiteScope Warning Summary and SiteScope Error Summary reports, transaction breakdown data used in trend reports, Service Level Management reports, Real User Monitor Reports, and Excel Reports that use raw data.

Because aggregated data is not used in these reports, if the raw data for a specific time period has been removed from the profile database using the Partition and Purging Manager, those reports do not contain any data when generated for that time period.

- ▶ The default configuration uses the following principle: the length of time that raw data is kept is shorter than the length of time that one-hour chunks of aggregated data are kept, which is shorter than the length of time that one-day chunks of aggregated data are kept.
- ▶ Any changes made under the Template and Multiple Databases tab affect the default time periods for new profile databases created in the system. If a new profile database is created after you have made modifications to the time periods under the Template and Multiple Databases tab, data is kept in the tables of that new profile database for the time periods now listed under Template and Multiple Databases for all tables.

Removing Unwanted Data from the Profile Database

Note to HP Software-as-a-Service customers: This section is not relevant to HP Software-as-a-Service customers.

The Data Marking utility enables HP Business Availability Center users with superuser security privileges to mark specific sets of data in profile databases as unwanted. This filters out unwanted data and enables HP Business Availability Center to display only the most relevant data for the specified time period. After the utility marks the specified data as unavailable, HP Business Availability Center automatically re-aggregates the remaining raw data for the selected time period.

The Data Marking utility enables removal of unwanted Business Process Monitor and SiteScope data.

After you mark a specific set of data from a given time period as unwanted, HP Business Availability Center reruns the aggregation process on remaining raw data for the relevant time period so that the marked data is not displayed. The Data Marking utility also enables you to re-aggregate a defined set of data without marking it as unavailable. For details, see “Enable the Re-aggregation-Only Option” on page 104.

While the utility does not physically remove marked data from the database, it renders it unusable in reports and applications by assigning the marked data a status of **unavailable** in the database. During installation, HP Business Availability Center installs the Data Marking utility on the Gateway Server.

The Data Marking utility supports partitions. Thus, users running the Partition and Purging Manager can also use the Data Marking utility.

Configure a Profile Database on a Microsoft SQL Server

This task describes how to configure one or more Profile databases on a Microsoft SQL Server.

This task includes the following steps:

- “Prerequisites” on page 99
- “Add a Database” on page 100

1 Prerequisites

Before you begin, make sure that you have the following connection parameters to the database server:

a Server name. The name of the machine on which Microsoft SQL Server is installed. If you are connecting to a non-default Microsoft SQL Server instance in dynamic mode, enter the server name in the following format:

```
<host_name>\<instance_name>
```

b Database user name and password. The user name and password of a user with administrative rights on Microsoft SQL Server (if using SQL server authentication).

c Server port. The Microsoft SQL Server’s TCP/IP port. The default port, 1433, is automatically displayed. You must change the port number in one of the following instances:

- You connect to a non-default Microsoft SQL Server instance in static mode.
- The default Microsoft SQL Server instance listens to a port other than 1433.
- You connect to a non-default Microsoft SQL Server instance in dynamic mode. In this case, enter port number 1434.

If required, consult with your organization’s DBA to obtain this information.

2 Add a Database

- a** Access the Database Management page, located at **Admin > Platform > Setup and Maintenance > Manage Profile Databases**.
- b** Select **MS SQL** from the dropdown list, and click **Add**.
- c** Enter the parameters of your database on the **Profile Database Properties - MS SQL Server** page. For details on the Profile Database Properties - MS SQL Server page, see “Profile Database Properties - MS SQL Server Page” on page 111.

Configure a User Schema on an Oracle Server

This task describes how to configure one or more profile user schemas on your Oracle Server.

This task includes the following steps:

- “Prerequisites” on page 100
- “Gather connection parameters” on page 101
- “Add a User Schema” on page 101

1 Prerequisites

Before you begin, make sure that:

- a** You have created a dedicated default tablespace for profile user schemas (and a dedicated temporary tablespace, if required).
- b** You are using a secure network connection if you do not want to submit database administrator connection parameters over a non-secure connection. If you do not want to submit database administrator connection parameters via your Web browser at all, you can manually create profile user schemas and then connect to them from the Database Management page.

2 Gather connection parameters

Make sure that you have the following connection parameters to the database server:

- a Host name.** The name of the machine on which the Oracle Server is installed.
- b SID.** The Oracle instance name that uniquely identifies the instance of the Oracle database being used, if different from the default value, **orcl**.
- c Port.** The Oracle listener port, if different from the default value, **1521**.
- d Database administrator user name and password.** The name and password of a user with administrative permissions on the Oracle Server. These parameters are used to create the HP Business Availability Center user, and are not stored in the system.
- e Default tablespace.** The name of the dedicated default tablespace you created for profile user schemas (for details on creating a dedicated tablespace, see “Overview of Oracle Server Deployment” in *the HP Business Availability Center Database Guide PDF*). If you did not create, and do not require, a dedicated default tablespace, specify an alternate tablespace. The default Oracle tablespace is called **users**.
- f Temporary tablespace.** The name of the dedicated temporary tablespace you created for profile user schemas. If you did not create, and do not require, a dedicated temporary tablespace, specify an alternate tablespace. The default Oracle temporary tablespace is called **temp**.

If required, consult with your organization’s database administrator to obtain this information.

3 Add a User Schema

- a** Access the Database Management page, located at **Admin > Platform > Setup and Maintenance > Manage Profile Databases**.
- b** Select **Oracle** from the dropdown list, and click **Add**.
- c** Enter the parameters of your user schema on the **Profile Database Properties - Oracle Server** page. For details on the Profile Database Properties - Oracle Server page, see “Profile User Schema Properties - Oracle Server Page” on page 114.

Work with the Purging Manager

This task describes how to work with the Purging Manager.

This task includes the following topics:

- “Prerequisites” on page 102
- “Change the Database Template” on page 102
- “Change Settings for Multiple Databases” on page 103
- “Change Settings for Individual Databases” on page 104

1 Prerequisites

Ensure that you have at least one profile database configured in your HP Business Availability Center system. For details on configuring a profile database on a Microsoft SQL Server, see “Configure a Profile Database on a Microsoft SQL Server” on page 99.

For details on configuring a user schema on an Oracle Server, see “Configure a User Schema on an Oracle Server” on page 100.

2 Change the Database Template

To change settings for the database template, follow these steps:

- a** Access the Template and Multiple Databases tab on the Purging Manager page.
- b** Select the check box next to the setting you want to change. You can select multiple check boxes at once.
- c** Modify the specified setting accordingly in the **Keep Data for** and **Change to EPM** fields, and click **Apply**.
- d** Click the **Apply to** link and ensure that the appropriate template (**Enterprise** for Native Partitioning databases, or **Standard** for View Partitioning databases) is selected.
- e** Click **OK** to register your changes to the template.

Note: Once you have made changes, the settings displayed in the Template & Multiple Databases tab remain the template settings, even if you did not make changes to the template and have manually changed settings for specific databases. Once those manual changes are applied, the settings displayed revert to the template settings. To see the settings you changed for specific databases, navigate to the **Database-Specific** tab and select the appropriate database.

3 Change Settings for Multiple Databases

To change settings for multiple databases at once, follow these steps:

- a** Access the Template and Multiple Databases tab on the Purging Manager page.
- b** Select the check box next to the setting you want to change. You can select multiple check boxes at once.
- c** Modify the specified setting accordingly in the **Keep Data for** and **Change to EPM** fields, and click **Apply**.
- d** Click the **Apply to** link and ensure that the appropriate databases are selected. Clear the check box next to the template if you do not want your changes to apply to the template.
- e** Click **OK** to register your changes to the selected databases.

Note: Changes made to the databases are displayed only on the Database Specific tab, after the relevant database has been selected in the **Select a profile database** dropdown.

4 Change Settings for Individual Databases

To change settings for individual databases, follow these steps:

- a** Access the Database Specific tab on the Purging Manager page.
- b** Select the checkbox next to the settings you want to change.
- c** Select the profile database that you want your changes to apply to in the **Select a profile database** field.
- d** Modify the specified setting accordingly in the **Keep Data for** and **Change to EPM** fields, and click **Apply**.

Enable the Re-aggregation-Only Option

By default, the Data Marking utility always runs the data marking process, followed by the re-aggregation process. If required, you can enable a feature that allows you to instruct HP Business Availability Center to run only re-aggregation. This might be required if data marking passed successfully but re-aggregation failed. Alternatively, you can use this feature to re-aggregate a defined set of data without marking it as unavailable (for example, if data was aggregated and then late-arriving data was inserted into the raw data tables in the database).

To enable the re-aggregation-only option:

- 1** Open the file **dataMarking.bat** in a text editor.
- 2** Change the line:

```
%TOPAZ_HOME%\JRE\bin\java -Dtopaz.home=%TOPAZ_HOME% -jar datamarking.jar to  
%TOPAZ_HOME%\JRE\bin\java -Dtopaz.home=%TOPAZ_HOME% -DadvancedMode=true -jar datamarking.jar
```
- 3** Save the file. The next time you open the Data Marking utility, the **Advanced** button appears.

After you enable this feature, you can instruct the Data Marking utility to only run the data re-aggregation process when clicking the **Start** button.

To run data re-aggregation only:

- 1** Define the set of data you want to re-aggregate, as described in “Removing Unwanted Data from the Profile Database” on page 97.
- 2** Click the **Advanced** button. The Advanced window opens.
- 3** Select the **Run re-aggregation only** check box.
- 4** Select the categories of data for the re-aggregation and click **OK** to confirm selection.
- 5** Click **Start**.

Determine the Events Per Minute (EPM) for Data Arriving in HP Business Availability Center

You can determine the amount of data per minute that is arriving in HP Business Availability Center. You enter this number in the **Change to EPM** box at the bottom of the **Enable/Disable Purging Manager** page.

To determine the Events Per Minute for the selected data type:

- 1** Open the file located at:
 - <Gateway Server root
directory>\log\mercury_db_loader\LoaderStatistics.log
- 2** Locate the line in the select data sample that reads:
 - Statistics for: DB Name: <database name> Sample: <sample name> -
(collected over <time period>):**
- 3** Locate the line in the statistics section of the data sample that reads:
 - Insert to DB EPS (MainFlow)**

The selected number represents the events per second. Multiply this number by 60 to retrieve the events per minute.

If you have more than one Gateway Server, you must total the values obtained from each server.

Customize Data Marking Utility Configurations

You can configure the maximum duration for each data marking run. The current default is 6 hours and 59 minutes.

To configure the maximum duration:

- 1** Open the `<Gateway Server root directory>\tools\dataMarking\dataMarking.bat` file in a text editor.
- 2** Add the `-DmaximumDuration=xx` property to the command line, where `<xx>` represents the maximum duration in hours.

For example, to change the maximum duration to 23 hours and 59 minutes, replace:

```
%_HOME%\JRE\bin\java -Dtopaz.home=%TOPAZ_HOME% -jar  
datamarking.jar
```

with:

```
%TOPAZ_HOME%\JRE\bin\java -Dtopaz.home=%TOPAZ_HOME% -  
DmaximumDuration=24 -jar datamarking.jar
```

- 3** Save and close the file.

Database Administration User Interface


This section describes:

- Database Management Page on page 107
- Data Marking Utility Page on page 108
- Profile Database Properties - MS SQL Server Page on page 111
- Profile User Schema Properties - Oracle Server Page on page 114
- Purging Manager Page on page 117

Database Management Page

Description	Enables you to maintain and administer the databases HP Business Availability Center uses to store profile and monitoring data. To Access: Select Admin > Platform > Setup and Maintenance > Manage Profile Databases.
Important Information	The first database added on the Database Management page is automatically designated as the default profile database.

The Database Management page includes the following elements (listed alphabetically):

GUI Element	Description
	Click to disconnect the database or user schema. Note: You cannot delete the default profile database or a database which is in use.
Add	Click to add a Microsoft SQL Server database or Oracle Server user schema, as specified in the dropdown database list.
Database Name	The name of the database.

GUI Element	Description
Database Type	The type of database, either Microsoft SQL or Oracle.
Server Name	The name of the server on which the database is running.

Data Marking Utility Page

Description	<p>Enables you to select sets of data for removal by profile or by location for Business Process Monitor data, and by SiteScope target machine for SiteScope data.</p> <p>To Access: On the Gateway Server, double-click the <HP Business Availability Center Gateway Server root directory>\tools\dataMarking\dataMarking.bat file. A Command Prompt window opens, followed by the Data Marking utility login dialog box. Enter the user name and password of an HP Business Availability Center user with superuser privileges.</p>
Important Information	<ul style="list-style-type: none"> ▶ Do not run more than one instance of the Data Marking utility at a time, as this can affect the re-aggregation process. ▶ Do not mark data sets for time periods that include purged data (data that has been removed using the Partition and Purging Manager) as this can affect the re-aggregation process.
Useful Links	<p>“Removing Unwanted Data from the Profile Database” on page 97</p> <p>“Data Marking Utility Limitations” on page 120</p>

The Data Marking Utility page includes the following elements (listed alphabetically):

GUI Element	Description
Duration	Select the period of time, starting from the specified start time, for the utility to mark data as unavailable. Note: You can set a maximum duration of up to 6 hours and 59 minutes for each data marking run.
Get Info	Click before running the Data Marking Utility to view the number of data rows to be marked.
Locations	List of locations you can mark as obsolete.
Mark data as obsolete	Click to mark the filtered criteria (i.e. - Profiles, Transactions, Locations, or SiteScope Targets) as obsolete.
Mark data as valid (undo mark as obsolete)	Click to make selected data available again after having been marked as obsolete.
Profiles	List of profiles you can mark as obsolete.
Progress	Displays the progress of the data marking process and re-aggregation process.
SiteScope Targets	List of SiteScope target machines (i.e. - machines being monitored by SiteScope) you can mark as obsolete. Note: This field is only visible in the SiteScope view (i.e. - if you chose SiteScope View in the View by dropdown).
Start	Click to activate the Data Marking Utility and mark data as obsolete.
Start Time	Select a starting data and time for data to be marked as unavailable.

GUI Element	Description
Transactions	List of transactions you can mark as obsolete. Note: This field is only visible in the Profile view (i.e. - if you chose Profiles in the View by dropdown).
View by	Select the type of view to be visible in the Data Marking Utility.

Data Marking Information Window

Description	Displays the data to be marked as obsolete by the Data Marking Utility. To access: Click the Get Info button on the Data Marking Utility page.
Important Information	The lower window of the Data Marking Information Window dialog box displays the SLAs affected by the marked data. You can recalculate the affected SLAs on the Agreements Manager tab under Admin > Service Level Management. For details, see "Working with the Service Level Management Application" on page 187 in Service Level Management.
Useful Links	"Removing Unwanted Data from the Profile Database" on page 97 "Data Marking Utility Limitations" on page 120

The Data Marking Information Window includes the following elements (listed alphabetically):


GUI Element	Description
Number of Rows to Update	The number of data rows to be marked as obsolete.

GUI Element	Description
Profile Name	The name of the profile to be marked as obsolete.
Total Rows to Update	The total number of rows available to be marked as obsolete. This number can differ from the value of the Number of Rows to Update field. For details, see “Data Marking Utility Limitations” on page 120.

 **Profile Database Properties - MS SQL Server Page**

Description	<p>Enables you to configure a new or existing profile database on Microsoft SQL Server.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > Manage Profile Databases, select Microsoft SQL from the dropdown database list and click Add.</p>
Important Information	<ul style="list-style-type: none"> ▶ It is recommended that you configure Microsoft SQL Server databases manually, and then connect to them in the Database Management page. For details on manually configuring Microsoft SQL Server databases, see "Overview of Microsoft SQL Server Deployment" in the <i>HP Business Availability Center Database Guide</i> PDF. ▶ Database creation can take several minutes.
Included in Tasks	“Configure a Profile Database on a Microsoft SQL Server” on page 99
Useful Links	“Database Management - Overview” on page 90

The Profile Database Properties page includes the following elements (listed alphabetically):


GUI Element	Description
Create database and/or tables	<p>Select or clear as required.</p> <ul style="list-style-type: none"> ▶ To create a new database, or connect to an existing, empty database and populate it with profile tables, select the check box. ▶ To connect to an existing database already populated with profile tables, clear the check box.
Database name	<ul style="list-style-type: none"> ▶ If you are configuring a new database, type a descriptive name for the database. ▶ If you are connecting to a database that was previously created, type the name of the existing database.
Disconnect	<p>Click to disconnect the database from HP Business Availability Center.</p> <p>Note: This button only appears after you have clicked the Disconnect Database button  on the Database Management page.</p>
Make this my default profile database (required for custom data types)	<p>Select or clear as required.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ This setting is required if you are collecting Dashboard, Real User Monitor, HP Diagnostics (if installed), Service Level Management, SOA, or persistent custom data. For details about custom data, see “Working with Measurement Filters” on page 311. ▶ Selecting this check box overwrites the existing default profile database.
Password	<ul style="list-style-type: none"> ▶ If you are using Windows authentication, enter the password that runs the HP Business Availability Center service on the current machine. ▶ If you are using SQL server authentication, enter the password of a user with administrative rights on Microsoft SQL Server.

GUI Element	Description
Port	Enter the port number if: <ul style="list-style-type: none">▶ The Microsoft SQL Server's TCP/IP port is configured to work on a port different from the default (1433).▶ You use a non-default port in static mode.▶ You use a non-default port in dynamic mode. In this case, enter port 1434.
Server name	Enter the name of the machine on which the Microsoft SQL Server is installed. If you are using a non-default instance in dynamic mode, enter the server name in the following format: <my_server\my_instance>
SQL server authentication	Select if the Microsoft SQL Server is using SQL server authentication.
User name	<ul style="list-style-type: none">▶ If you are using Windows authentication, enter the user name that runs the HP Business Availability Center service on the current machine.▶ If you are using SQL server authentication, enter the user name of a user with administrative rights on Microsoft SQL Server.
Windows authentication	Select if the Microsoft SQL Server is using Windows authentication.

 **Profile User Schema Properties - Oracle Server Page**

Description	<p>Enables you to configure one or more profile user schemas on your Oracle server.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > Manage Profile Databases, select Oracle from the dropdown database list and click Add.</p>
Important Information	<ul style="list-style-type: none"> ▶ It is recommended that you configure Oracle Server user schemas manually, and then connect to them in the Database Management page. For details on manually configuring Oracle Server user schemas, see “Overview of Oracle Server Deployment” in the <i>HP Business Availability Center Database Guide</i> PDF. ▶ User schema creation can take several minutes. The browser might time out before the creation process is completed. However, the creation process continues on the server side. <p>If a timeout occurs before you get a confirmation message, verify that the user schema name appears in the database list on the Database Management page to ensure that the user schema was successfully created.</p>
Included in Tasks	“Configure a User Schema on an Oracle Server” on page 100
Useful Links	“Database Management - Overview” on page 90

The Profile User Schema Properties page includes the following elements (listed alphabetically):

GUI Element	Description
Create database and/or tables	<p>Select or clear as required.</p> <ul style="list-style-type: none"> ➤ To create a new user schema, or connect to an existing, empty user schema and populate it with profile tables, select the check box. ➤ To connect to an existing user schema already populated with profile tables, clear the check box. <p>Note: Clearing this check box disables the database administrator connection parameter and tablespace fields on the page, and instructs the platform to ignore the information in these fields when connecting to the Oracle Server machine.</p>
Database administrator password	<p>Enter the password of a user with administrative permissions on Oracle Server.</p> <p>Note: This field is only enabled if you selected the Create database and/or tables check box.</p>
Database administrator user name	<p>Enter the user name and password of a user with administrative permissions on Oracle Server.</p> <p>Note: This field is only enabled if you selected the Create database and/or tables check box.</p>
Default tablespace	<p>Enter the name of the default tablespace designated for use with profile user schemas.</p> <p>Default Value: users</p>
Disconnect	<p>Click to disconnect the user schema from HP Business Availability Center.</p> <p>Note: This button only appears after you have clicked the Disconnect Database button  on the Database Management page.</p>
Host name	<p>Enter the name of the machine on which the Oracle Server is installed.</p>

GUI Element	Description
Make this my default profile database (required for custom data types)	Select or clear as required. Note: <ul style="list-style-type: none"> ▶ This setting is required if you are collecting Dashboard, Real User Monitor, HP Diagnostics (if installed), Service Level Management, SOA, or persistent custom data. For details about custom data, see “Working with Measurement Filters” on page 311. ▶ Selecting this check box overwrites the existing default profile database.
Port	Enter the required Oracle listener port, or accept the default value.
Retype password	Retype the user schema password.
SID	Enter the required Oracle instance name, or accept the default value.
Temporary tablespace	Enter the name of the temporary tablespace designated for use with profile user schemas. Default Value: temp
User schema name	<ul style="list-style-type: none"> ▶ If you are configuring a new user schema, enter a descriptive name for the user schema. ▶ If you are connecting to a user schema that was previously created, enter the name of the existing user schema.
User schema password	<ul style="list-style-type: none"> ▶ If you are configuring a new user schema, enter a password that enables access to the user schema. ▶ If you are connecting to a user schema that was previously created, enter the password of the existing user schema. Note: You must specify a unique user schema name for each user schema you create for HP Business Availability Center on Oracle Server.

 **Purging Manager Page**

Description	<p>From the Purging Manager page, you can enable or disable the Partition and Purging Manager to instruct HP Business Availability Center to begin or stop the process of partitioning the data.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > Data Partitioning and Purging.</p>
Important Information	<p>When working with an Oracle standard edition database, it is strongly recommended that you set PARTITION_VIEW_ENABLED parameter in the init.ora file to true. For details on purging data from an Oracle database, see "About Data Partitioning and Purging" in the <i>HP Business Availability Center Database Guide</i> PDF.</p>
Useful Links	<p>"Partitioning and Purging Historical Data from Profile Databases" on page 92</p>

The Purging Manager page includes the following elements (listed alphabetically):

GUI Element	Description
Apply to	<p>Click to select the databases and template you want the configurations on the Template and Multiple Databases tab to apply to. You can clear all databases to make changes only to the selected template.</p>
Change to EPM	<p>The amount of data per minute to arrive in HP Business Availability Center.</p> <p>Note: Leave this field empty to retain the existing EPM value.</p> <p>For details on determining this value, see "Determine the Events Per Minute (EPM) for Data Arriving in HP Business Availability Center" on page 105.</p>
Database Specific	<p>Select this tab to change the time range for purging data in a table per individual profile database.</p>
Description	<p>Describes the corresponding database table.</p>

GUI Element	Description
Disable	<p>Click to disable the Partition and Purging Manager.</p> <p>Note: This button is displayed only when a database that supports View partitioning has been configured.</p>
Enable	<p>Click to enable the Partition and Purging Manager.</p> <p>Note: This button is displayed only when a database that supports View partitioning has been configured.</p>
Epm Value	<p>The amount of data per minute that is arriving in HP Business Availability Center. For details on determining this value, see “Determine the Events Per Minute (EPM) for Data Arriving in HP Business Availability Center” on page 136.</p>
Keep Data for	<p>The time range for keeping data in the database tables whose check box is selected. This element appears as follows:</p> <ul style="list-style-type: none"> ▶ Selection fields. At the top of the page, set the time period for how long you want data kept in the selected database tables. ▶ Column heading. Displays the time range for keeping data in each database table. This value is configured in the Keep Data for selection fields at the top of the page. <p>Note: The time period configured in the Keep Data for fields indicates that the data is stored for at least the specified amount of time - it does not indicate when the data is purged.</p>

GUI Element	Description
<p>Name of Table in Database</p>	<p>The name of the table in the database.</p> <p>Database tables are listed by the data collector from which the data was gathered. The following data types are available:</p> <ul style="list-style-type: none"> ➤ Business Logic Engine ➤ Business Process Monitor ➤ Diagnostics ➤ Real User Monitor ➤ SOA (Service Oriented Architecture) ➤ Service Level Management ➤ SiteScope ➤ UDX (custom data) ➤ WebTrace
<p>Select a profile database</p>	<p>Select a profile database for which you want to modify time range configurations for purging data.</p> <p>Note: This field is only visible on the Database Specific tab.</p>
<p>Template and Multiple Databases</p>	<p>Select this tab to:</p> <ul style="list-style-type: none"> ➤ Change the partitioning and purging parameters for multiple profile databases. ➤ Change the database template, for parameters to be adopted by new databases added in the future. <p>Note: Once you have made changes, the settings displayed in the Template & Multiple Databases tab remain the template settings, even if you did not make changes to the template and have manually changed settings for specific databases. Once those manual changes are applied, the settings displayed revert to the template settings. To see the settings you changed for specific databases, navigate to the Database-Specific tab and select the appropriate database.</p>

Troubleshooting and Limitations

Troubleshooting Data Marking Utility Errors

Various types of errors might occur while using the Data Marking utility. Generally, when an error occurs, the utility displays the following error message:

The Data Marking utility must shut down due to an internal error. For details see:
<HP Business Availability Center Gateway Server root directory>
\\log\\datamarking.log

Reasons for which the utility might display this error include:

- failure to connect to the database server or profile database
- failure to complete the data marking process, for example, due to communication error between the Aggregation Server and database
- failure of HP Business Availability Center to successfully re-aggregate raw data for the defined data set

In case of error, check the <HP Business Availability Center Gateway Server root directory>\\log\\datamarking.log file for error information.

Data Marking Utility Limitations

Following are limitations associated with the Data Marking utility:

- The utility does not support the removal of late arriving data.

For example, if a set of data for a specific time period is marked for removal and HP Business Availability Center later receives data from that time period (which arrived late due to a Business Process Monitor temporarily being unable to connect to the Gateway Server), the late arriving data is not available for use in reports. Use the **Get Info** button to check for late arriving data. If zero rows are not displayed, run the utility again, if required, to remove the data that arrived late.
- The utility does not support removal of data arriving during the data marking process.

For example, if a set of data for a specific time period is marked for removal, and during that same time period (while the utility is running), data arrives and enters the profile database, the rows of newly arrived data are not marked for removal, and are therefore not removed. In this case, after the utility finishes running, use the **Get Info** button to determine whether all rows of data were removed for the selected time period. If rows are displayed, run the utility again, if required, to remove the data that arrived during the run. This is a rare scenario, as you typically mark data for a previous time period and not for a time period that ends in the future.

- ▶ While the utility is running and removing data, reports that are generated for that time period may not show accurate results. Therefore, it is recommended to run the utility during off-peak hours of HP Business Availability Center usage.

7

Infrastructure Settings

Note to HP Software-as-a-Service customers: HP Operations administers these pages and the interface is hidden from view, except for the user accessing with superuser permissions.

You can configure HP Business Availability Center settings to meet your organization's specifications for the platform and its applications. You configure most Infrastructure Settings directly within the Administration Console.

This chapter includes:

Concepts

- Infrastructure Settings Manager - Overview on page 124

Tasks

- Modify the Ping Time Interval on page 125
- Modify the Location and Expiration of Temporary Image Files on page 126

Reference

- Infrastructure Settings User Interface on page 137

Infrastructure Settings Manager - Overview

HP Business Availability Center enables you to modify the value of many settings that determine how HP Business Availability Center and its applications run.

Important: Modifying certain settings can adversely affect the performance of HP Business Availability Center. It is highly recommended not to modify any settings without first consulting HP Software Support or your HP Services representative.

In the Infrastructure Settings Manager, you can select different contexts from which to view and edit settings. These contexts are split into the following groups:

► **Applications**

This list includes those contexts that determine how the various applications running within HP Business Availability Center behave. Contexts such as Dashboard Application, My BSM, and Service Level Management are listed.

► **Foundations**

This list includes those contexts that determine how the different areas of the HP Business Availability Center foundation run. Contexts such as UCMDB common and LDAP Configuration are listed.

Descriptions of the individual settings appear in the **Description** column of the table on the Infrastructure Settings page.

There are some infrastructure settings which are configured outside the Infrastructure Settings Manager. For details, see “Modify the Ping Time Interval” on page 125, and “Modify the Location and Expiration of Temporary Image Files” on page 126.

Modify the Ping Time Interval

Note: This Infrastructure Settings task is performed outside the Infrastructure Settings Manager.

You can modify the time interval after which the HP Business Availability Center Web site pings the server to refresh a session.

To modify the ping time interval:

- 1** Open the file <Gateway Server root directory>\conf\settings\website.xml in a text editor.
- 2** Search for the parameter: **user.session.ping.timeinterval**.
- 3** Change the value (120, by default) for the ping time interval. Note that this value must be less than half of the value specified for the session timeout period (the previous value defined in the file).
- 4** Restart HP Business Availability Center on the Gateway Server machine.

If you have multiple Gateway Server machines, repeat this procedure on all the machines.

Modify the Location and Expiration of Temporary Image Files

Note: This Infrastructure Settings task is performed outside the Infrastructure Settings Manager.

When you generate a report in HP Business Availability Center applications, or when HP Business Availability Center automatically generates a report to send via the scheduled report mechanism, images (e.g. - graphs) are created. HP Business Availability Center saves these images, for a limited period of time, in temporary directories on the Gateway Server machine(s) on which the images are generated.

You can modify the following settings related to these images:

- ▶ **the path to the directory in which the temporary image files are stored.**

For details, see “Modify the Directory in Which Temporary Image Files Are Stored” on page 127.

- ▶ **the length of time that HP Business Availability Center keeps temporary image files before removing them.**

For details, see “Modify the Length of Time that HP Business Availability Center Keeps Temporary Image Files” on page 132.

- ▶ **the directories from which temporary images are removed.**

You modify temporary image file settings in the **<Gateway Server root directory>\conf\topaz.config** file. For details, see “Specify the Directories from Which Temporary Image Files Are Removed” on page 136.

Modify the Directory in Which Temporary Image Files Are Stored

You can modify the path to the directory where HP Business Availability Center stores generated images used in scheduled reports and Analytics. For example, you might want to save generated images to a different disk partition, hard drive, or machine that has a greater storage capacity than the partition/drive/machine on which the Gateway Server machine is installed.

In certain cases, you might be required to modify the path to the directory in which images are stored. For example, if HP Business Availability Center reports are accessing the Gateway Server machine via a virtual IP—typical when there are multiple Gateway Server machines running behind a load balancer in the HP Business Availability Center architecture—since the load balancer could send requests to any of the Gateway Server machines, the image files need to be in a common location that is configured on all the Gateway Server machines and shared among them. For more details, see “Access Temp Directory with Multiple Gateway Server Machines” on page 128.

To support a shared location for temporary images in a Windows environment, the following configuration is recommended:

- ▶ All Gateway Servers—and the machine on which the shared image directory is defined, if different from the Gateway Servers—should be on the same Windows domain.
- ▶ The IIS virtual directory should be configured to use the credentials of an account that is a member of the domain users group.
- ▶ The account for the virtual directory should be given read/write permissions on the shared image directory.

Note: If your server configuration requires placing servers on different Windows domain configurations, contact HP Software Support.

To support a shared location for temporary images in a Solaris environment, the following configuration is recommended:

- ▶ The shared directory must be mounted with read/write access from other machines.
- ▶ The HP Business Availability Center user account must have read/write access on the shared directory.

To modify the path to the directory holding temporary image files:

- 1** Open the file `<Gateway Server root directory>\conf\topaz.config` in a text editor.
- 2** Search for the parameter `images.save.directory.offline`.
- 3** Remove the comment marker (`#`) from the line that begins `#images.save.directory.offline=` and modify the value to specify the required path.

Note: In Windows environments, use UNC path syntax (`\\server\path`) when defining the path. In a Solaris environment, use forward slashes (`/`) and not backslashes (`\`) when defining the path.

- 4** Save the `topaz.config` file.
- 5** Restart HP Business Availability Center on the Gateway Server machine.
- 6** Repeat the above procedure on all Gateway Server machines.
- 7** Map the newly defined physical directory containing the images to a virtual directory in the Web server on all Gateway Server machines. For details, see the next section.

Access Temp Directory with Multiple Gateway Server Machines

If you define a custom path to temporary images (as defined in the `images.save.directory.offline` parameter), you must map the physical directory containing the images to a virtual directory in the Web server on all Gateway Server machines.

To configure the virtual directory in IIS:

- 1 Rename the default physical directory containing the temporary scheduled report images on the Gateway Server machine.

For example, rename:

```
<Gateway Server root directory>\AppServer\webapps\
site.war\imgs\chartTemp\offline
```

to

```
<Gateway Server root directory>\AppServer\webapps
\site.war\imgs\chartTemp\old_offline
```

- 2 In the IIS Internet Services Manager on the Gateway Server machine, navigate to **Default Web site > Topaz > Imgs > ChartTemp**.
The renamed offline directory appears in the right frame.
- 3 In the right frame, right-click and select **New > Virtual Directory**. The Virtual Directory Creation Wizard opens. Click **Next**.
- 4 In the Virtual Directory Alias dialog box, type **offline** in the Alias box to create the new virtual directory. Click **Next**.
- 5 In the Web Site Content Directory dialog box, type or browse to the path of the physical directory containing the temporary images (the path defined in the **images.save.directory.offline** parameter). Click **Next**.
- 6 If the physical directory containing the temporary images resides on the local machine, in the Access Permissions dialog box, specify **Read and Write** permissions.

If the physical directory containing the temporary images resides on a machine on the network, in the User Name and Password dialog box, enter a user name and password of a user with permissions to access that machine.

- 7 Click **Next** and **Finish** to complete Virtual Directory creation.
- 8 Restart HP Business Availability Center on the Gateway Server machine.
- 9 Repeat the above procedure on all Gateway Server machines.

To configure the virtual directory on Apache HTTP Web Server:

- 1** Rename the default physical directory containing the temporary scheduled report images on the Gateway Server machine.

For example, rename:

<Gateway Server root
directory>\AppServer\webapps\site.war\lmg\chartTemp\offline
to

<Gateway Server root
directory>\AppServer\webapps\site.war\lmg\chartTemp\old_offline

- 2** Open the Apache configuration file <**Gateway Server root directory**>\WebServer\conf\httpd.conf with a text editor.
- 3** Map a virtual directory named **offline** to the physical location of the common directory by adding the following line to the file:

```
Alias /lmg/chartTemp/offline <shared_temp_image_directory>
```

where <shared_temp_image_directory> represents the path to the physical directory containing the temporary scheduled report images (the path defined in the **images.save.directory.offline** parameter).

- 4** Save the file.
- 5** Restart HP Business Availability Center on the Gateway Server machine.
- 6** Repeat the above procedure on all Gateway Server machines.

To configure the virtual directory on Sun Java System Web Server:

- 1 Rename the default physical directory containing the temporary scheduled report images on the Gateway Server machine.

For example, rename:

```
<Gateway Server root
directory>\AppServer\webapps\site.war\lmg\chartTemp\offline
to
```

```
<Gateway Server root
directory>\AppServer\webapps\site.war\lmg\chartTemp\old_offline
```

- 2 Open the Sun Java System Web Server configuration file **<Sun Java System Web Server installation directory>\server\<server_name>\config\obj.conf** with a text editor.
- 3 Add the following line inside the **<Object name=default>** directive (but before the line **NameTrans fn="pfx2dir" from="/lmg" dir="ProductDir/Site lmg/"**, if it exists, and before the line **NameTrans fn=document-root root="\$docroot"**):

```
NameTrans fn="pfx2dir" from="/topaz/lmg/chartTemp/offline"
dir="<shared_temp_image_directory>"
```

where **<shared_temp_image_directory>** represents the path to the physical directory containing the temporary scheduled report images (the path defined in the **images.save.directory.offline** parameter).

- 4 Save the file.
- 5 Restart the Sun Java System Web Server on the Gateway Server machine.
- 6 Repeat the above procedure on all Gateway Server machines.

Modify the Length of Time that HP Business Availability Center Keeps Temporary Image Files

You can modify settings that control how long HP Business Availability Center keeps temporary image files generated by the Gateway Server machine, before removing them from the defined temporary directories. You can modify settings for the following directories in the <HP Business Availability Center Gateway Server root directory>\conf\topaz.config file:

Directory Setting	Description
remove.files.0.path=../../AppServer/webapps/site.war/Imgs/chartTemp/offline	Path to images created when generating scheduled reports and Analytics reports
remove.files.1.path=../../AppServer/webapps/site.war/Imgs/chartTemp/online	Path to images created when generating reports in HP Business Availability Center applications
remove.files.3.path=../../AppServer/webapps/site.war/snapshots	Path to images created by the Snapshot on Error mechanism and viewed in Error Summary reports

For the above temporary image directories, you can modify the following settings:

- **remove.files.directory.number=<number of directories>**
Specifies the total number of directories for which you are defining settings.
- **remove.files.<num_of_path>.path=<path to directory>**
Specifies the path to the directory that contains the files you want to remove. For the default directories that remove temporary image files, these values must match the **images.save.directory.online** and **images.save.directory.offline** parameters, also defined in the topaz.config file.

Note: In Windows environments, use UNC path syntax (\\server\path) when defining the path. In Solaris environments, use forward slashes (/) only when defining the path.

► **remove.files.<num_of_path>.expirationTime=<file expiration time in sec>**

Specifies the time, in seconds, that HP Business Availability Center leaves a file in the specified directory. For example, if you specify "3600" (the number of seconds in 1 hour), files older than one hour are removed.

Leave this setting empty if you want HP Business Availability Center to only use maximum size criteria (see below).

► **remove.files.<num_of_path>.maxSize=<maximum size of directory in KB>**

Specifies the total size to which the defined directory can grow before HP Business Availability Center removes files. For example, if you specify "100000" (100 MB), when the directory exceeds 100 MB, the oldest files are removed in order to reduce the directory size to 100 MB.

If you also define a value in the

remove.files.<num_of_path>.expirationTime parameter, HP Business Availability Center first removes expired files. HP Business Availability Center then removes additional files if the maximum directory size limit is still exceeded, deleting the oldest files first. If no files have passed their expiration time, HP Business Availability Center only removes files based on the maximum directory size criteria.

This parameter is used in conjunction with the **remove.files.<num_of_defined_path>.deletePercents** parameter (see below), which instructs HP Business Availability Center to remove the specified percentage of files, in addition to the files removed using the **remove.files.<num_of_path>.maxSize** parameter.

Leave this and the **remove.files.<num_of_defined_path>.deletePercents** settings empty if you want HP Business Availability Center to only use the expiration time criterion.

- ▶ **remove.files.<num_of_path>.deletePercents=<percent to remove>**

Specifies the additional amount by which HP Business Availability Center reduces directory size—expressed as a percentage of the maximum allowed directory size—after directory size has been initially reduced according to the **remove.files.<num_of_path>.maxSize** parameter. HP Business Availability Center deletes the oldest files first.

Leave this and the **remove.files.<num_of_path>.maxSize** settings empty if you want HP Business Availability Center to only use the expiration time criterion.

- ▶ **remove.files.<num_of_path>.sleepTime=<thread sleep time in sec>**

Specifies how often HP Business Availability Center runs the mechanism that performs the defined work.

Example

HP Business Availability Center is instructed to perform the following work once every 30 minutes: HP Business Availability Center first checks whether there are files older than 1 hour and, if so, deletes them. Then HP Business Availability Center checks whether the total directory size is greater than 250 MB, and if so, it reduces directory size to 250 MB by removing the oldest files. Finally, HP Business Availability Center reduces the total directory size by 50% by removing the oldest files. As a result, HP Business Availability Center leaves files totaling 125 MB in the directory.

```
# remove files older than 1 hour (3600 sec.)
remove.files.0.expirationTime=3600
# reduce folder size to 250 MB
remove.files.0.maxSize=250000
# remove an additional 50% of max. folder size (125 MB)
remove.files.0.deletePercents=50
# perform work once every 30 min. (1800 sec)
remove.files.0.sleepTime=1800
```

Note: You can configure the file removal mechanism to remove files from any defined directory. You define the parameters and increment the index. For example, to clean out a temp directory, you would specify **6** instead of **5** for the number of directories in the **remove.files.directory.number** parameter; then you would define the directory's path and settings using the index value **4** (since 0-4 are already being used by the default settings) in the **num_of_path** section of the parameter. Do not use this mechanism to remove files without first consulting with your HP Software Support representative.

To modify the default settings:

- 1** Open the file <HP Business Availability Center Gateway Server root directory>\conf\topaz.config in a text editor.
-

Tip: Before modifying the values, back up the file or comment out (using #) the default lines so that the default values are available as a reference.

- 2** Modify the settings as required.
- 3** Save the **topaz.config** file.
- 4** Restart HP Business Availability Center on the Gateway Server machine.
Repeat the above procedure on all Gateway Server machines.

Specify the Directories from Which Temporary Image Files Are Removed

By default, temporary image files are removed from the root path of the specified directory. However, you can also configure HP Business Availability Center to remove temporary image files from the subdirectories of the specified path.

To configure HP Business Availability Center to remove temporary images files from subdirectories:

- 1** Open the file `<Gateway Server root directory>\conf\topaz.config` in a text editor.
- 2** Insert the following line after the specified path's other settings (described in the previous section):
`remove.files.<num_of_path>.removeRecursively=yes`
- 3** Save the `topaz.config` file.
- 4** Restart HP Business Availability Center on the Gateway Server machine.
- 5** Repeat the above procedure on all Gateway Server machines.

Infrastructure Settings User Interface


This section describes:




- Infrastructure Settings Manager Page on page 137

Infrastructure Settings Manager Page

Description	Enables you to define the value of many settings that determine how HP Business Availability Center and its applications run. To Access: Select Admin > Platform > Setup and Maintenance > Infrastructure Settings .
Important Information	Modifying certain settings can adversely affect the performance of HP Business Availability Center. It is highly recommended not to modify any settings without first consulting HP Software Support or your HP Services representative.
Useful Links	“Infrastructure Settings Manager - Overview” on page 124

The Infrastructure Settings Manager page includes the following elements (listed alphabetically):

GUI Element	Description
All	Select to view all the settings for both Applications and Foundations.
Applications	Select to edit one of the HP Business Availability Center applications.
Description	Describes the specific infrastructure setting. Note: This field is visible on both the Infrastructure Settings Manager page, and the Edit Setting dialog box after clicking the Edit button  next to the relevant setting.

GUI Element	Description
Foundations	Select to edit one of the HP Business Availability Center foundations.
Name	The name of the setting. Note: This field is visible on both the Infrastructure Settings Manager page, and the Edit Setting dialog box after clicking the Edit button  next to the relevant setting.
Restore Default	Click to restore the default value of the setting. Note: This button is visible on the Edit Setting dialog box after clicking the Edit button  next to the relevant setting.
Value	The current value of the given setting. Note: This field is visible on both the Infrastructure Settings Manager page, and the Edit Setting dialog box after clicking the Edit button  next to the relevant setting.

8

System Health

This chapter includes the main concepts of System Health.

This chapter includes:

Concepts

- ▶ System Health - Overview on page 140
- ▶ System Health Setup Wizard – Overview on page 142
- ▶ System Health Displays on page 144
- ▶ Understanding the Monitors Table on page 149
- ▶ Understanding Service Reassignment on page 150

Tasks

- ▶ Deploy and Access System Health on page 152
- ▶ Ensure the Health of Your System - Workflow on page 159

Reference

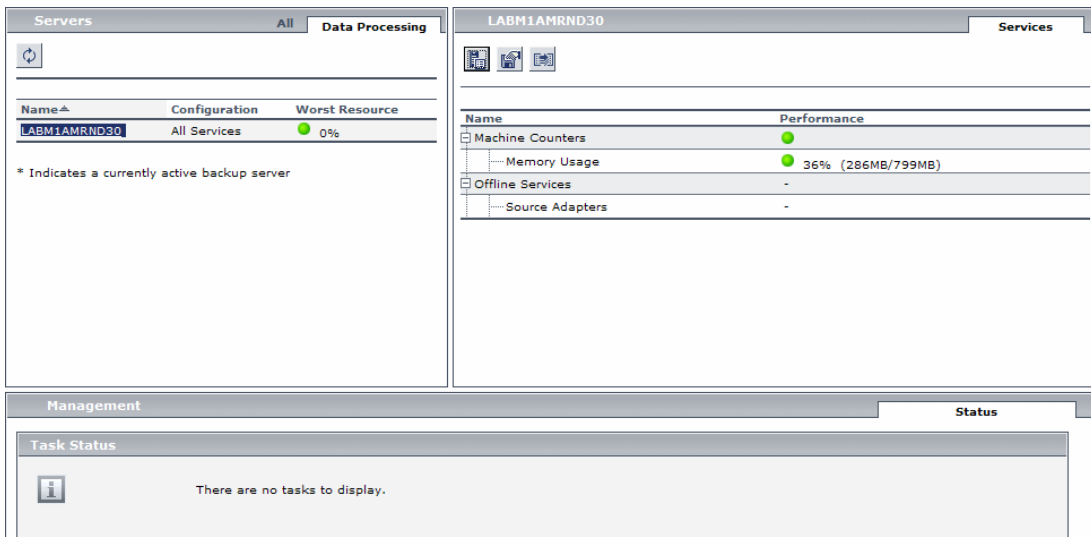
- ▶ HP Business Availability Center Components on page 164
- ▶ HP Business Availability Center Processes on page 166
- ▶ System Health Monitors on page 168
- ▶ Component and Monitor Status Indicators on page 206
- ▶ System Health User Interface on page 207

Troubleshooting and Limitations on page 245

System Health - Overview

System Health uses the SiteScope monitoring system to enable you to monitor the servers, databases, and data collectors running as part of your system.

Note: If you do not deploy the new System Health interface, your system defaults to the Legacy System Health application. For details on how to deploy the new System Health interface, see “Deploy and Access System Health” on page 152. For details on Legacy System Health, see “Legacy System Health” on page 247. To view the Legacy System Health interface, see below.



The screenshot displays the System Health interface with three main panels:

- Servers Panel:** Shows a table with columns for Name, Configuration, and Worst Resource. The server LABM1AMRND30 is listed with configuration 'All Services' and a resource usage of 0%. A note below states: "* Indicates a currently active backup server".
- LABM1AMRND30 Services Panel:** Shows a table with columns for Name and Performance.

Name	Performance
<input type="checkbox"/> Machine Counters	●
Memory Usage	● 36% (286MB/799MB)
<input type="checkbox"/> Offline Services	-
Source Adapters	-
- Management Panel:** Shows a 'Task Status' section with an information icon and the message: "There are no tasks to display."

HP Business Availability Center servers can be deployed through either the Recommended or Legacy Deployment configurations. For details, see “HP Business Availability Center Server Deployment” on page 141.

You use System Health to:

- Measure performance by viewing the output from monitors running on the various system components.
- Monitor areas of the databases that influence performance.
- Display problematic areas of the servers, databases, and data collectors.
- Perform operations on your environment, such as:
 - **Move Backend Services.** You can move backend services from one server to another of the same type, in case the server machine is not functioning properly or requires downtime for servicing. For details on the user interface for performing this task, see “Service Manager Dialog Box” on page 240.
 - **Configure Backup Servers.** You can define a backup server in case the server machine is not functioning properly or requires downtime for servicing. For details on the user interface for performing this task, see “Backup Server Setup Window” on page 241.
 - **Manage BAC Processes.** You can start or stop various HP Business Availability Center processes. For details on the user interface for performing this task, see “Process Manager Dialog Box” on page 242.
- View log files on specific components in a variety of formats.
- View information on components and monitors in .csv format (displaying current status) and Quick Report format (displaying status of the past 24 hours).



HP Business Availability Center Server Deployment

HP Business Availability Center servers can be deployed through either of the following configurations:

Recommended Deployment

The recommended deployment consists of a Gateway Server (or two Gateway Servers behind a load balancer) and a Data Processing Server. The Data Processing server can also have a backup server.

You can also deploy a separate Business Process Insight (BPI) server (BPI Full), to enable BPI Instance Tracking for full BPI functionality. For details on the BPI Application, see "BPI Application Concepts" in *Using Business Process Insight*, available from the Business Process Insight Portal.

Legacy Deployment

In legacy enterprise environments, the Data Processing Server is split into three standalone servers:

- ▶ Modeling Data Processing Server
- ▶ Online Data Processing Server
- ▶ Offline Data Processing Server

Each server is installed on a separate machine, and may also have one backup machine defined for it.

You can reassign the HP Business Availability Center services from one server to another. For details, see "Understanding Service Reassignment" on page 150.

For details on the HP Business Availability Center deployment configurations, see "Deployment Configuration" in the *HP Business Availability Center Deployment Guide* PDF.

System Health Setup Wizard – Overview

The System Health Setup Wizard enables you to create remote connections to the servers which System Health monitors. If remote connections are not created, only the monitors that do not require credential authorization to access the System Health servers will provide data.



Important: It is not possible for another user to access the System Health interface while you are configuring the System Health Setup Wizard.

For details on configuring the System Health Setup Wizard, see “Ensure the Health of Your System - Workflow” on page 159.

For details on the pages and elements contained in the System Health Setup Wizard, see “System Health Setup Wizard” on page 226.

Accessing the System Health Setup Wizard

The System Health Setup Wizard is accessible in one of the following ways:

- ▶ The first time you access the System Health application on the machine running HP Business Availability Center.
-  ▶ Clicking the **Soft Sync** button on the System Health Dashboard Toolbar or the Inventory Tab toolbar.
-  ▶ Clicking the **Full Model Synchronization** button on the System Health Dashboard toolbar or the Inventory Tab toolbar, when no specific component is selected.

Note: Clicking the **Soft Sync** button displays only the portion of the wizard relevant to changes made in the system. If no changes were made, the System Health Setup Wizard does not appear.

System Health Displays

You can view the status of the HP Business Availability Center components using the following formats:

System Health Dashboard

Displays a map of all components. The color of the component box outline, as well as the status icon's color in the **Monitors** table, determines the component status. For details on the components' outline colors, see "Component Status and Description" on page 219. For details on the status icon colors, see "Component and Monitor Status Indicators" on page 206.



Click the **expand** icon on a component to view its subcomponents.



Click the **collapse** icon on a component to hide its subcomponents.

You can perform actions on the components by clicking the various icons on the System Health Dashboard Toolbar. For details on the System Health Dashboard Toolbar, see "Toolbar" on page 234.

You can also retrieve information on HP Business Availability Center servers using the **General** table, and information on the server's components on the **Monitors** table in the System Health Dashboard Right Pane. The displayed monitors run on the selected component in the System Health Dashboard Left Pane. For details, see "Understanding the Monitors Table" on page 149.

The monitors table appears as follows:

Last Update Time: 08/07/08 15:26:43

labm1mam11 - Database server

Monitors

Monitor/Group Name	Status	Last Up...
Ping	●	08/07/0...
Virtual Memory	●	08/07/0...
CPU	●	08/07/0...
cmdbhist8	○	
fnd8	○	
cmdb8	○	

Monitor Details:

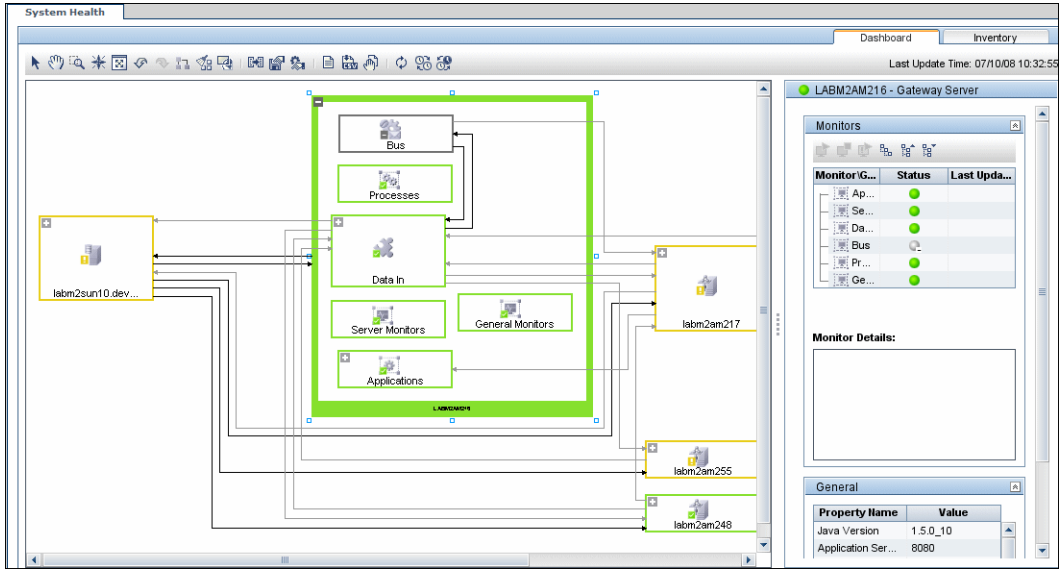
Description:
Checks the availability of the host via the network

Additional Information:
0.01 sec

General

Property Name	Value
OS Type	IBMPC/MIN_NT-8.1.0
Encoding	Cp1252
Database Type	ORACLE
IP	16.59.60.53
Name	labm1mam11
Version	Oracle Database 10g

The Dashboard tab appears as follows:



Inventory Tab

Displays information on Gateway Server and Data Processing Server components and their subcomponents, in table format. The Inventory tab enables you to compare the performance of the subcomponents and monitors on multiple servers by presenting their statuses in a single view.

The Inventory tab is divided into the following tables:

- ▶ **Gateway Machines.** Displays the status of the various components running on the HP Business Availability Center Gateway machines.
- ▶ **Processing Machines.** Displays the status of the various components running on the HP Business Availability Center Data Processing machines.
- ▶ **<Subcomponent Name> Details.** Displays information about the selected component's monitors. The **Monitor Details** area provides additional information on the subcomponent's monitors, if applicable.

Note: The <Subcomponent Name> **Details** table is displayed only when a specific component is selected on either on the Gateway Machines or Processing Machines table on the Inventory tab.

The component and monitor statuses are indicated by color icons in the components' cells. For details on the component status colors, see “Component and Monitor Status Indicators” on page 206.

The screenshot shows the System Health Dashboard with two main tables: Gateway Machines and Processing Machines. The Gateway Machines table has columns for Name, Type, Status, and several Application categories (SAM, SLM, Portal, Dashboard App, Server Monitors, Data In, Bus, Processes, General Monitors). The Processing Machines table has columns for Name, Type, Status, General Monitors, Server Monitors, Modeling (CMDB, Viewing System), Application Engines (Sched..., Reports DB, CDM, Validator, Dashboard Engine, SLM En...), Bus, Alerts Engine, Database Services Partition Manager, Applicatio, and Proces... Both tables use colored icons (green, yellow, red) to indicate the status of each component.

The component and monitor status is indicated on both the monitors table in the System Health Dashboard, and in the Inventory tab tables as a colored icon. For details on the colored icons, see “Component and Monitor Status Indicators” on page 206.

Log Manager Tab

The Log Manager tab displays the various log files associated with the components that System Health is monitoring. Logs are arranged hierarchically in **log bundles**. Nested under the log bundles are the machines in the HP Business Availability Center deployment that contain the individual log files. The entities that can be seen in the **Log Bundle** pane tree are:

- **Log Bundles.** Can contain any or all of the following:
 - Other log bundles
 - Machines
 - Logs (if there is no model configured on the System Health Dashboard), arranged by category.

- ▶ **Machines.** Contains a group of logs arranged by the machine they are located on. Machines are nested under the log bundles in the hierarchical tree.
- ▶ **Individual Logs.** The individual log files monitoring the behavior of the monitored components. Logs are nested either under the log bundles, or the specific machines on which they are running.

You configure a time frame for which you want data to be retrieved in the **Time Frame** pane, and then select one or more of the components in the **Log Bundles** pane. You can then perform one of the following actions:



- ▶ Download and save the selected logs by clicking the **Save Output** button in the **Log Bundles** pane.



- ▶ Retrieve and view the selected logs by clicking the **Retrieve Logs** button. The logs are displayed in the **Main** pane, where you can also save the displayed output by clicking the **Save Output** button.



You can select any combination of log bundles, machines, and log files.

For each log retrieval action that is performed, a separate tab opens in the **Main** pane displaying the logs contained in your selection. Tabs are numbered chronologically, according to the retrieval actions you perform. For details on the available functions in the Log Manager, see “Log Manager” on page 210.

Understanding the Monitors Table

The Monitors table displays information about the monitors running on the component selected in the System Health Dashboard.

Once you have drilled down to a specific monitor in the Monitors table, you can:

- ▶ enable the monitor
- ▶ disable the monitor
- ▶ run the monitor immediately, instead of waiting for it to run according to its schedule

The monitor groups correspond to the components contained in the highlighted component in the System Health Dashboard Left Pane. Additional information on the individual monitors is displayed in the **Monitor Details** pane.

You can double click a group in the Monitors table to open the monitor's parent component on the System Health Dashboard.

For details on the System Health monitors that are run by the SiteScope application, click the **SiteScope** link at the top left corner of the System Health interface.

For details on the Monitors table user interface, see “Monitors Table” on page 214.

Understanding Service Reassignment

You may want to reassign services running on HP Business Availability Center Data Processing servers, if a certain machine is not functioning properly or requires downtime for servicing. You can also preconfigure a specific Data Processing server to automatically fail over to a specific backup machine, to ensure that your data is not lost in the event of system downtime.

Note: Service Reassignment can be performed only by an administrator.

HP Business Availability Center servers can be deployed either through the recommended deployment configuration or legacy deployment configuration. For details, see “HP Business Availability Center Server Deployment” on page 141.

When reassigning services, the secondary machine must also be a Data Processing server.

The reassignment process can take up to 25 minutes, at which point the system is in downtime.

For details on reassigning services, see “Service Manager Dialog Box” on page 240.

Service Reassignment Flow Table

There are several theoretical scenarios for reassigning services among machines, depending on the type of deployment with which HP Business Availability Center servers are configured. For details on HP Business Availability Center server deployment, see “HP Business Availability Center Server Deployment” on page 141.

The table below illustrates these scenarios by indicating the paths along which services can be reassigned.

	To Full Data Processing Server (Backup server in recommended deployment)	To Modeling Data Processing Server	To Online Data Processing Server	To Offline Data Processing Server
From Full Data Processing Server	Yes Note: This is the recommended sever deployment	Yes - for modeling services	Yes - for online services	Yes - for offline services
From Modeling Data Processing Server	Yes	Yes	No	No

From Online Data Processing Server	Yes	No	Yes	No
From Offline Data Processing Server	Yes	No	No	Yes

Deploy and Access System Health

You deploy System Health in one of the following ways:

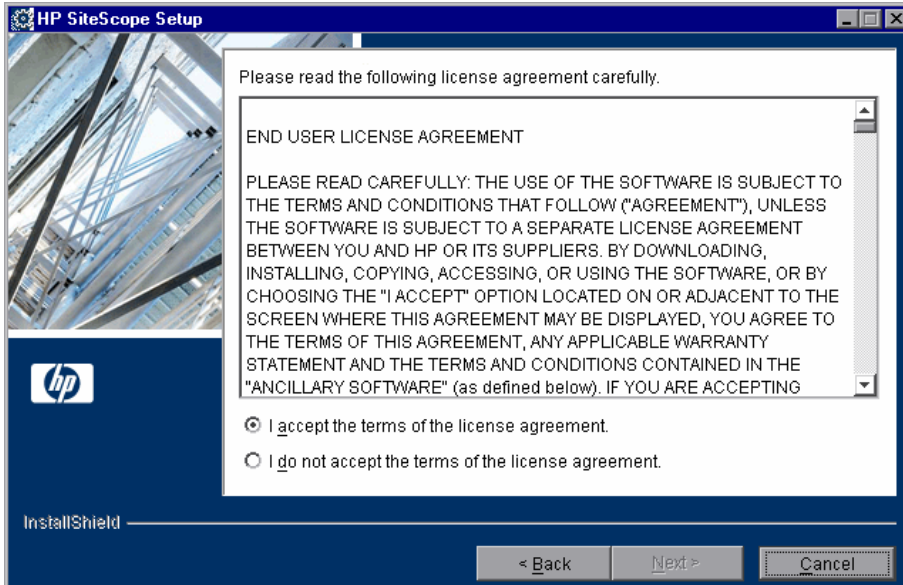
- ▶ On a standalone machine with access to HP Business Availability Center (recommended so that System Health continues to run if HP Business Availability Center servers are down).
- ▶ On any HP Business Availability Center Gateway server (should be done only if a standalone machine is not available).

Deploying System Health

You must ensure that the Gateway server and the Management database are up and running before deploying System Health. System Health must be deployed in the same domain as HP Business Availability Center, and any firewalls must be open.

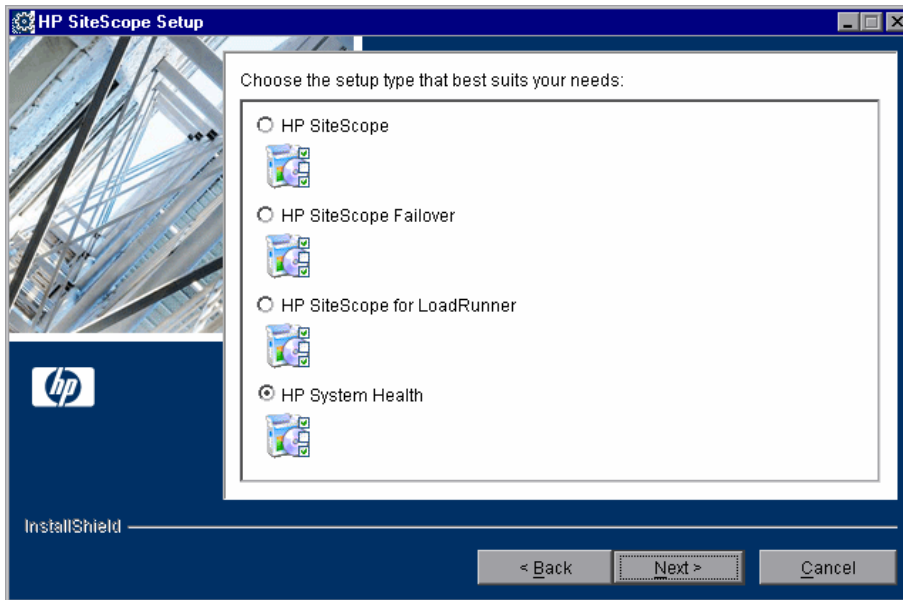
To deploy System Health:

- 1 Insert the SiteScope installation disk into your machine.
- 2 Select the **setup.exe** option. The HP SiteScope installation wizard is displayed.
- 3 Select **I accept the terms of the license agreement** and click **Next**.



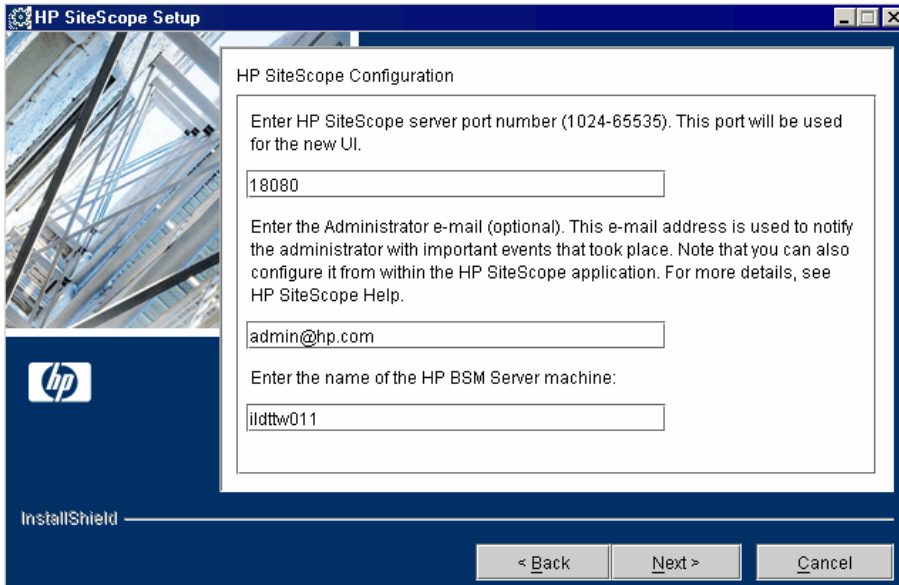
- 4 Enter a directory to install SiteScope on, or accept the default **C:\SiteScope**, and click **Next**.

5 Select the **HP System Health** setup type, and click **Next**.



- 6** Enter the following information in the HP SiteScope Configuration window:
- ▶ The HP SiteScope server port number. Accept the default port number of 18080, or choose another port that is free.
 - ▶ Optionally, the administrator email address, used to notify the administrator of important events that took place.

- The name of the HP Business Availability Center Gateway server.



- 7 Verify the summary of the information in the resulting window and click **Next**. The HP SiteScope installation process runs.
- 8 Click **Next** when the installation process finishes.
- 9 You must restart your computer for the HP SiteScope installation to take effect. Click **Yes** to restart your computer immediately, or **No** if you want to restart your computer later.
- 10 Click **Finish** to exit the HP SiteScope installation wizard.

Note: If System Health is deployed on a Solaris machine, it can monitor other Solaris machines only. You can configure general properties on the System Health setup wizard, but advanced properties must be configured using SiteScope.

Accessing System Health

You can access System Health:

- ▶ directly, through a Web browser using the syntax: **http://<server_name>.<domain_name>:<HP SiteScope Server port number>/**, where **<server_name>** is the name of the Gateway or dedicated server that System Health is deployed on, depending on the type of deployment you are using.
- ▶ as an application embedded in HP Business Availability Center, after configuring the appropriate URL in the Infrastructure Settings section of Platform Administration. For details, see the procedure below.

The System Health application can be accessed only by users with Superuser or Administrator permissions.

To access System Health directly, through a Web browser:

- 1 Ensure that System Health has been installed properly, either on your dedicated server or on your Gateway server.
- 2 Enter the following link into your browser window:

http://<machine name>:<port number>

Where the following values are true:

<machine name> = The machine System Health is installed on.

<port number> = 18080 by default, or you can choose another port that is free.

Note: It can take several minutes for the System Health application to appear on your screen.

- 3 Enter your login name and password in the appropriate boxes to login to System Health.

Initial access can be gained using the following default login parameters:

Login Name = **systemhealth**, Password = **systemhealth**

Administrator level access can be gained using the following default login parameters:

Login Name = **administrator**, Password = **syshealthadmin**

It is recommended that you change the password immediately to prevent unauthorized entry. To change the password, click the **Change Password** link on the System Health login page.

Note: After changing your password on the System Health login page, you must enter your System Health username and password when accessing System Health in HP Business Availability Center. Once you have done this, HP Business Availability Center does not require you to re-enter this information to access System Health until the next time your password is changed on the System Health login screen.

To access System Health in HP Business Availability Center:

- 1** Ensure that System Health has been installed, either on your dedicated server or on your Gateway Server.
- 2** Log into your HP Business Availability Center machine. For details, see “Log In and Out” on page 23.
- 3** Select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Foundations**, select **System Health**, and locate the **URL** entry in the System Health table. Modify the value to the following URL:

http://<machine name>:<port number>/SiteScope/Main.do

Where the following values are true:

<machine name> = The machine System Health is installed on.

<port number> = 18080 by default, or you can choose another port that is free.

- 4** Click **Save** to register the URL for accessing System Health in HP Business Availability Center.

Note: Steps 3 - 4 are performed the first time you access the System Health interface.

- 5 Select **Admin > Platform > Setup and Maintenance > System Health** to access the System Health interface.

Deploying System Health in a Secured Environment

When deploying System Health in a secured environment, note the following:

- ▶ On the System Health Dashboard, Reverse Proxy components are depicted in the Left Pane, together with the Load Balancer components, called **mediators**.
- ▶ The WDE URL monitor appears red until you enter the monitor's username and password in SiteScope.
- ▶ When accessing System Health via HP Business Availability Center, you must enter a username and password to view the System Health interface.
- ▶ You must supply the name of the Gateway server, and not the reverse proxy.

Ensure the Health of Your System - Workflow

This task describes how to monitor the components of your system and ensure they are functioning properly.

This task includes the following steps:

- “Prerequisites” on page 159
- “Configure Remote Connection Details for Monitors” on page 159
- “Monitor Performance of Components” on page 159
- “Move Backend Services” on page 160
- “Configure Backup Servers” on page 161
- “Manage BSM Processes” on page 162
- “Display a Quick Report” on page 163

1 Prerequisites

Before you can monitor the health of your HP Business Availability Center system, you must ensure that the System Health application is deployed properly. For details, see “Deploy and Access System Health” on page 152.

2 Configure Remote Connection Details for Monitors

You optionally provide the server’s remote connection details for the HP Business Availability Center monitors that require it, using the System Health Setup Wizard. You can also configure recipients to receive System Health alerts through email. For details, see “System Health Setup Wizard” on page 226.

3 Monitor Performance of Components

You can monitor the performance of the servers, databases, and data collectors running as part of your HP Business Availability Center system and view the results using either the System Health Dashboard tab or the Inventory tab. For details on the available System Health displays, see “System Health Displays” on page 144.

4 Move Backend Services

In the Service Manager Dialog Box, you move backend services from one Data Processing server to another of the same type, in case the server machine is not functioning properly or requires downtime for servicing.

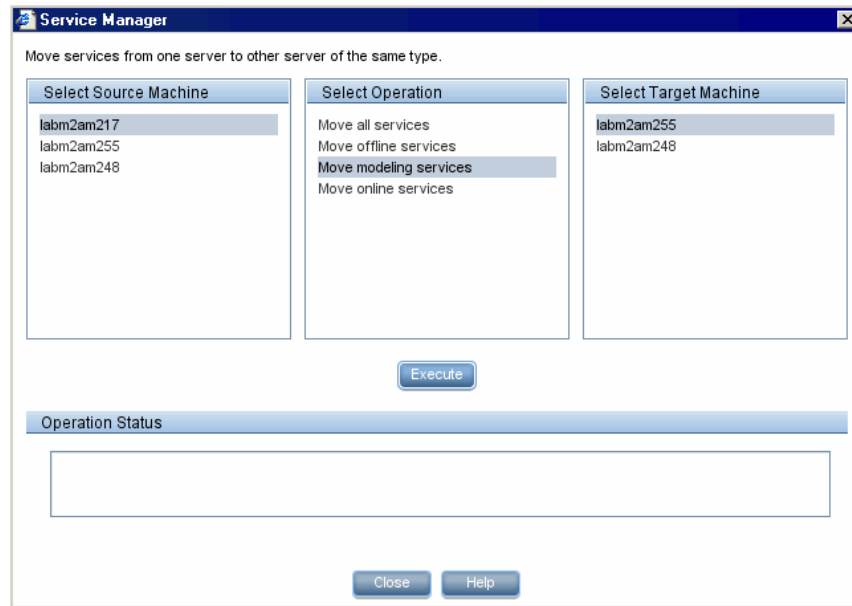
For details on the user interface for performing this task, see “Service Manager Dialog Box” on page 240.

Example



- a** On the Toolbar on either the System Health Dashboard or the Inventory tab, click the **Service Manager** button.
- b** In the **Select Source Machine** window, select the machine that you want to move services from.
- c** In the **Select Operation** window, select the operation you want to perform.
- d** In the **Select Target Machine** window, select the machine you want to move services to.

- e Click the **Execute** button. The **Operation Status** window indicates whether or not the operation request was sent successfully.



5 Configure Backup Servers

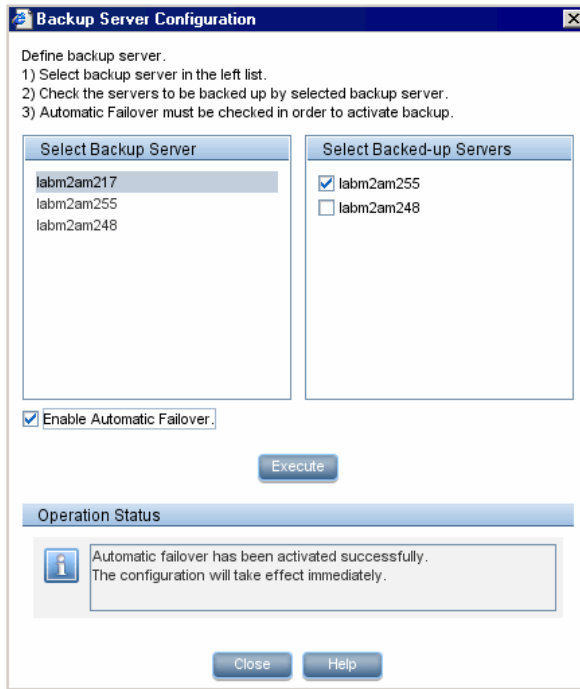
In the Configure Backup Servers dialog box, you define a backup server, in case the server machine is not functioning properly or requires downtime for servicing. For details on the user interface for performing this task, see “Backup Server Setup Window” on page 241.

Example

- a On the Toolbar on the System Health Dashboard or the Inventory tab, click the **Backup Server Configuration** button.
- b In the left pane, select a backup server.
- c In the right pane, select a server to be backed-up.
- d Click the **Enable Automatic Failover** check box to activate your backup server selection.



- e Click **Execute** to register your backup server. The **Operation Status** window indicates whether or not the operation succeeded.



6 Manage BSM Processes

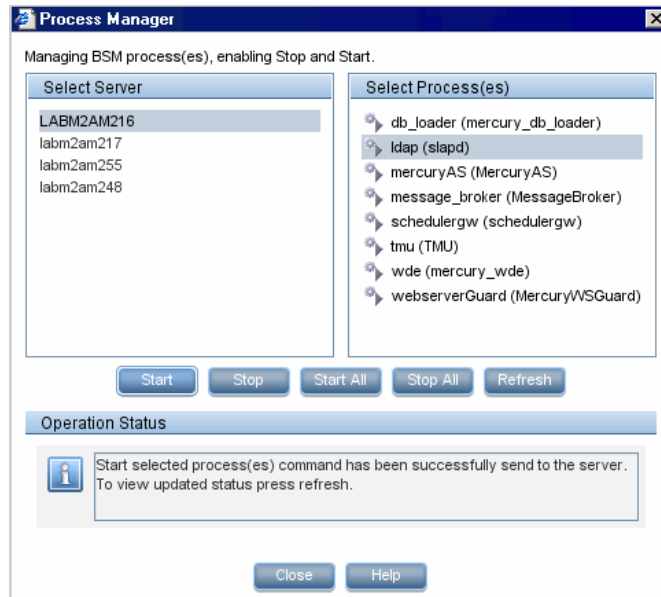
In the Process Manager dialog box, you stop or start processes on specific servers. For details on the user interface for performing this task, see “Process Manager Dialog Box” on page 242.

Example



- a On the Toolbar on the System Health Dashboard or the Inventory tab, click the **Process Manager** button .
- b In the **Select Server** window, select the server to start or stop processes on.
- c In the **Select Process(es)** window, select the process you want to start or stop.

- d** Click **Start** to start the selected processes, **Stop** to stop the selected processes, or **Refresh** to refresh the processes' status. You can also start all processes by clicking the **Start All** button, and stop all processes by clicking the **Stop All** button. The **Operation Status** window indicates whether or not the operation was successful.



7 Display a Quick Report



Click the **Quick Report** button to display a Quick Report with information gathered over the past 24 hours on the monitors deployed on the selected component. For details on the Quick Report screen, see “Quick Report Screen” on page 243.

Example

[Table Format](#) [Error List](#) [Warning List](#) [Good List](#) [Close Window](#)

Summary for Multiple Monitors

(information from 8:58 AM 7/9/07 to 12:18 PM 7/9/07)

Uptime Summary

Name	Uptime %	Error %	Warning %	Last
Durable Subscriber Group	94.73	0	5.27	good
Monitor Broker Group	94.73	0	5.27	good
Monitor Subscriber Group	94.73	0	5.27	good
Monitor Container Group	94.73	0	5.27	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\mercury_online_engine	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\mercury_offline_engine	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\mercury_data_upgrade	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\mam	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\mercury_upgrade_wizard	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\cmdb	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\common	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\mercury_wde	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\data_marking	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\PlainJava	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\EJB	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\mercury_pm	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\Servlets	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\bus	100	0	0	good
Log Level for D:\HPBAC\conf\core\Tools\log4j\mercury_db_loader	100	0	0	good
Out of Memory in log	100	0	0	good
Logged in Users	94.73	0	5.27	good

 **HP Business Availability Center Components**

The System Health interface displays the following components:

- **Data Collectors.** Tools that collect availability and performance data. Data collectors include:
 - **BPMs.** Business Process Monitors, which run scripts simulating user actions and collect resulting data.
 - **RUM Engines.** Real User Monitors, which monitor actual user traffic and activity and collect resulting data.
 - **SiteScopes.** Monitor performance of IT infrastructure.

- ▶ **Discovery Probes.** Discovers the components of your IT infrastructure, creates CIs for them, and sends the data to the CMDB.
- ▶ **HP Business Availability Center Servers.** System Health displays the following types of HP Business Availability Center servers:
 - ▶ **Gateway Machines.** Servers on which HP Business Availability Center runs. Gateway servers are responsible for:
 - ▶ Running HP Business Availability Center applications
 - ▶ Producing reports
 - ▶ Operating the Administration Console
 - ▶ Receiving data samples from the data collectors and distributing this data to the relevant HP Business Availability Center components
 - ▶ Supporting the bus
 - ▶ **Data Processing Machines.** Servers on which HP Business Availability Center runs. Data Processing servers are responsible for:
 - ▶ Aggregating and partitioning data
 - ▶ Running the Business Logic Engines
 - ▶ Controlling the HP Universal CMDB-related services

Server components are displayed on both the System Health Dashboard and the Inventory tab.

- ▶ **Load Balancing Machines.** Displayed only if deployed. Load balancers ensure that the data flow is evenly distributed among all HP Business Availability Center Gateway Servers so that no one particular server becomes overloaded.
- ▶ **Business Process Insight Machines.** Displayed only if deployed. A separate Business Process Insight (BPI) server (BPI Full) enables instance tracking and full BPI functionality. For details on the BPI machine, see "BPI Application Concepts" in *Using Business Process Insight*, available from the Business Process Insight Portal.
- ▶ **Databases.** Monitors the databases HP Business Availability Center is using.

- ▶ **UCMDB.** Displayed only if deployed separately. The UCMDB serves as a central repository for configuration information.
- ▶ **Reverse Proxy Server.** Displayed only when System Health is configured in a secure environment. For details on Reverse Proxies, see “Using a Reverse Proxy in HP Business Availability Center” in the *HP Business Availability Center Hardening Guide* PDF.

HP Business Availability Center Processes

The following table displays the processes that run on the HP Business Availability Center servers:

GUI Element (A-Z)	Description
CMDB Process	Runs on the CMDB database that stores all the configuration item data. It does not always run, depending on your HP Business Availability Center deployment. Process name: cmdb
data_upgrade	Enables transferring of data from a previous version of HP Business Availability Center to a newer version. Process name: DataUpgrade
dbloader	Runs the component on the server which loads the data into the database. Process name: mercury_db_loader
domain_manager	Responsible for all the bus processes in all HP Business Availability Center servers. Process name: DomainManager
ldap	Runs queries and modifications for directory services. Process name: slapd
mercuryAS	Runs the jboss application server, which provides access to all HP Business Availability Center applications. Process name: MercuryAS

GUI Element (A-Z)	Description
message_broker	Enables the transference of a message from the formal messaging protocol of the sending machine to the formal messaging protocol of the receiving machine. Process name: MessageBroker
offline_engine	Runs the engine which controls the offline components of the HP Business Availability Center system. Process name: mercury_offline_engine
bpi_process_repository	Manages process definitions, which you create using the BPI Modeler, to monitor IT operational resources defined within the CMDB. Process name: BPI Process Repository
online_engine	Runs the engine which controls the online components of the HP Business Availability Center system. Process name: mercury_online_engine
pmanager	Runs the Partition Manager to create new or purge old partitions in the profile database, as necessary. Process name: mercury_pm
schedulergw	Enables scheduling tasks to be continually run on the Gateway Server. Process name: schedulergw
schedulerpr	Enables scheduling tasks to be continually run on the Data Processing. Process name: schedulerpr
tmu	Checks the HP Business Availability Center license every five minutes and updates the database accordingly. Note: This process can be run only on a Windows server. Process name: TMU

GUI Element (A-Z)	Description
WDE	Runs the Web Data Entry component of the Gateway Server, which receives data from all registered data collectors and publishes the data to all HP Business Availability Center engines. Process name: mercury_wde
webserverguard	Ensures that the webserver is continually running. Process name: MercuryWSGuard

System Health Monitors

System Health uses SiteScope monitors to measure the performance of your components. Some of the monitors are monitors that are available in the SiteScope application and some are configured specifically for System Health.

Monitors are displayed in the **Monitors** table, located in the Right Pane of the System Health Dashboard. For details on the Monitors table, see “Monitors Table” on page 214.

This section describes the following groups of monitors:

- “Machine Hardware Monitors” on page 169
- “Database Monitors” on page 170
- “HP Business Availability Center Server Monitors” on page 171
- “Gateway Server Monitors” on page 179
- “Processing Server Monitors” on page 188
- “BPI Server Monitors” on page 199
- “Data Collectors” on page 202

Machine Hardware Monitors

The following group of monitors monitor the hardware and databases (where indicated) on which the Business Availability Center applications run:

Machine Hardware Monitors

Monitor Name	Description
Ping	<p>Checks the availability of the host via the network. Runs on HP Business Availability Center and Database servers. If Business Availability Center includes a proxy server or load balancer, this monitor runs on the mediator or load balancer.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Round Trip Time ▶ Loss Percentage <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Ping Monitor Overview” in <i>Using System Availability Management</i>.</p>
Server Virtual Memory	<p>Tracks how much virtual memory is currently in use on the server. Runs on HP Business Availability Center and Database servers.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Memory Monitor Overview” in <i>Using System Availability Management</i>.</p>
Server CPU	<p>Tracks how much CPU is currently in use on the server. Runs on HP Business Availability Center and Database servers.</p> <p>Threshold Configured in: SiteScope</p> <p>For details on the monitor, see “CPU Utilization Monitor Overview” in <i>Using System Availability Management</i>.</p>

Monitor Name	Description
Server Disk Space	Tracks how much disk space is currently in use on the hard disk drive where HP Business Availability Center is installed. Runs only on the HP Business Availability Center server. Threshold Configured In: SiteScope For details on the monitor, see “Disk Space Monitor Overview” in <i>Using System Availability Management</i> .

Database Monitors

The following monitors run on the database servers. There can be multiple databases running on a server, and there is a monitor instance for each database:

Monitor Display Name	Purpose
DB Statistics	Verifies that database statistics have been collected for all tables created more than 24 hours ago.
Database Connectivity	Verifies the connection between HP Business Availability Center and the database.

HP Business Availability Center Server Monitors

The following monitors run on the Gateway server, the Processing server, or, if not otherwise indicated, on both:

General Monitors

Monitor Name	Description
Out of Memory in Log	Searches for unexpected behavior due to the server being out of memory, displayed as instances of Out of Memory in topaz_all.ejb.log . For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Nanny Manager Process	Monitors whether HP Business Availability Center server processes are up and running. Threshold Configured In: SiteScope For details on the monitor, see “Service Monitor Overview” in <i>Using System Availability Management</i> .
Log Level for <configuration directory>	Checks if any of the log files in the specified directory are configured to debug log level (i.e. - searches for the string loglevel=debug). Threshold Configured In: SiteScope
BAC Application Server Response	Checks that the BAC Application server is responsive. Information goes straight to the application server and does not travel via the web server. This monitor runs only on the Gateway Server. Threshold Configured In: SiteScope For details on the monitor, see “URL Monitor Overview” in <i>Using System Availability Management</i> .

Monitor Name	Description
Logged In Users	Displays the percentage and number of total users logged into HP Business Availability Center.
Web Server Status	Displays the current status of the Web server indicating its availability.

Process Monitors

For descriptions of the processes, see “Process Manager Dialog Box” on page 242.

The two JVM monitors listed in the table below monitor only the Java processes, which include:

- cmdb;
- DataUpgrade;
- mercury_db_loader;
- MercuryAS
- MessageBroker
- mercury_offline_engine;
- mercury_online_engine;
- topaz_pm_process;
- mercury_wde;
- MercuryWSGuard;

The <process name> monitor monitors the both the Java and non-Java processes. For details on the processes, see “HP Business Availability Center Processes” on page 166.

Monitor Display Name	Description
<Process Name> JVM Statistics Memory Monitors	Monitors the memory measurements for a Java process. Included Measurements: <ul style="list-style-type: none"> ▶ Heap Free. Displays the amount of Heap Free space in JVM. ▶ Permanent Heap Free Memory. Displays the amount of Permanent Heap Free space in JVM.
<Process Name> JVM Statistics Threads Monitors	Monitors the threads measurements for a Java process. The process name is in the name of the monitor. Included Measurements: <ul style="list-style-type: none"> ▶ Current Thread Count. Current number of threads used by the process. ▶ Dead Locked Threads. Number of deadlocked threads in the process.
<process name>	Verifies whether the <process name> process is running, its CPU, and virtual memory utilization. For details on the monitor, see “Service Monitor Overview” in <i>Using System Availability Management</i> .

Bus

Monitor Display Name	Purpose
<p>Subscriber Group</p>	<p>Monitors subscriber-related measurements. Threshold Configured In: Infrastructure Settings. To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
<p>Broker Group</p>	<p>Monitors broker measurements. Threshold Configured In: Infrastructure Settings. To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
<p>Durable Subscriber Group</p>	<p>Provides information about durable subscribers in the broker. Threshold Configured In: Infrastructure Settings. To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

Modeling/CMDB

Monitor Display Name	Purpose
Model Objects Quota and Count	<p>Compares current CI count with the CI quota.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
TQL Quota and Count	<p>Compares current TQL count with the TQL quota.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
Oversized TQLs	<p>Displays TQLs that are larger than the size permitted by the configured threshold.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

Monitor Display Name	Purpose
<p>Availability and Performance</p>	<p>Checks system availability and response time.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Run AdHoc TQL. Checks how long the Run AdHoc TQL operation takes. ▶ Load ClassModel. Checks how long the Load ClassModel operation takes. <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
<p>DB - Could not reset timeout because the object is not monitored</p>	<p>Searches for Couldn't reset timeout because the object isn't monitored in cmdb.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>DB - Failed to borrow object from pool</p>	<p>Searches for Failed to borrow object from pool in cmdb.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>DB - Failed to create a connection</p>	<p>Searches for Failed to create a connection for in cmdb.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Monitor Display Name	Purpose
Notification - Cannot Publish	Searches for cannot publish in cmdb.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Notification - Cannot get notifications from the BUS	Searches for error occurred during receive of JMS message in cmdb.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Performance - Request Timeout	Searches for Request Timeout in cmdb.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .

Modeling/Viewing System

Monitor Display Name	Purpose
<p>All Symbols Quota and Count</p>	<p>Compares current symbols count with symbols quota.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
<p>Views Quota and Count</p>	<p>Compares current views count with views quota.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
<p>Oversized Views</p>	<p>Checks for views that are larger than the threshold configured in Infrastructure Settings.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

Gateway Server Monitors

The following monitors run on the Gateway Server:

Data In/Web Data Entry

Monitor Name	Description
Web Data Entry Status	<p>Determines the overall status of the Web Data Entry component.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Bus Status. Determines Web Data Entry connection to the bus. ▶ Gateway Status. Determines Gateway availability. ▶ Failures to Publish. Indicates number of samples which failed to publish. ▶ Output EPS. Determines the number of published samples per second.
Out of Memory Exception in Log	<p>Searches for unexpected behavior, displayed as instances of the string <code>OutOfMemoryExceptionInLog</code> in the wde.log file.</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
Class Not Found Exception in Log	<p>Searches for unexpected behavior, displayed as instances of the string <code>ClassNotFoundException</code> in the wde.log file.</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
Web Data Entry Availability	<p>Determines if Web Data Entry is up and running.</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Data In/Loader

Monitor Name	Description
Main Flow	<p>Measures flow of data in component.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Number of Samples in Queues. Used to control memory usage of the loader. ▶ Bus Connection Status. Checks loader connectivity to the bus. <p>Threshold Configured In: JMX of Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
EPS ratio in main flow	<p>Enables you to evaluate the ratio of the average insert rate to the loader with the average data insert rate to the database from the loader.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
Connection to DB	<p>Checks connection to the database from loader process.</p>
Average Insert Rate to DB (Recovery Flow)	<p>Monitors the average insert rate to the database from the recovery persistency folder.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

Monitor Name	Description
Out of Memory Exception in Log	Searches for the string Out of Memory in Loader.log . For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Class Not Found Exception in Log	Searches for errors in Loader.log . For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Max Files in Queue in Recovery Persister	Displays the number of files in the longest queue in the recovery persister directory. Threshold Configured In: Infrastructure Settings. To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.

Dashboard Application

Monitor Name	Description
Dashboard Admin	Searches for unexpected behavior, displayed as instances of ERROR, in bam.admin.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Dashboard Application	Searches for unexpected behavior, displayed as instances of ERROR, in bam.app.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .

Monitor Name	Description
<p>Dashboard Application Front-end</p>	<p>Searches for unexpected behavior, displayed as instances of ERROR, in bam.app.frontend.log. Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>Dashboard Front-end Actions</p>	<p>Searches for unexpected behavior, displayed as instances of ERROR, in bam.actionbase.log. Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>Dashboard BLE Plug-in</p>	<p>Searches for unexpected behavior, displayed as instances of ERROR, in bam.ble.plugin.log. Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>Dashboard Rules</p>	<p>Searches for unexpected behavior, displayed as instances of ERROR, in bam.app.rules.log. Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>Dashboard Business Reports</p>	<p>Searches for unexpected behavior, displayed as instances of ERROR, in bzd.log. Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Monitor Name	Description
Dashboard Open API	<p>Searches for unexpected behavior, displayed as instances of ERROR, in bam.open.api.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
Repositories	<p>Searches for unexpected behavior, displayed as instances of ERROR, in repositories.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
Repositories UI	<p>Searches for unexpected behavior, displayed as instances of ERROR, in repositories.ui.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
Repositories Upgrade	<p>Searches for unexpected behavior, displayed as instances of ERROR, in repositories.upgrade.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Monitor Name	Description
Repositories Context Menu UI	<p>Searches for unexpected behavior, displayed as instances of ERROR, in context.menu.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
Center High Availability	<p>Searches for unexpected behavior, displayed as instances of ERROR, in bac.ha.centers.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Portal Application

Monitor Display Name	Description
MyBAC	<p>Searches for unexpected behavior, displayed as instances of ERROR, in portal.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Verticals Application

Monitor Display Name	Description
Verticals Core	<p>Searches for unexpected behavior, displayed as instances of ERROR, in vertical.ejb.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
BAC for Siebel	<p>Searches for unexpected behavior, displayed as instances of ERROR, in siebel.ejb.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
BAC for SAP	<p>Searches for unexpected behavior, displayed as instances of ERROR, in sap.ejb.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

System Availability Management Application

Monitor Display Name	Purpose
SAM Admin Fatal	<p>Searches for unexpected behavior, displayed as instances of FATAL, in sam-admin.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
SAM Admin SiteScope Profiles on DB	<p>Searches for unexpected behavior, displayed as instances of ERROR-Unable to get SiteScope profiles from DB, in sam-admin.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
SAM Admin SiteScope Profiles List	<p>Searches for unexpected behavior, displayed as instances of Failed retrieve SiteScope profiles list, in sam-admin.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Service Level Management Application

Monitor Display Name	Purpose
SLAs Monitor Leaf Validator	Indicates that the SLM hierarchy does not detect its monitors, due to removed or replaced transactions or CIs.
SLM Logic	Searches for unexpected behavior, displayed as instances of unexpected result, in slm.rules.log . For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
SLM Reports	Searches for unexpected behavior, displayed as instances of unexpected result, in slm_reports.ejb.log . For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
SLM Snapshot	Searches for unexpected behavior, displayed as instances of unexpected result, in slm_snapshot.ejb.log . For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .

Processing Server Monitors

The following component monitors run on the Processing Server:

Alerts Engine

Monitor Display Name	Purpose
BLE-BUS Connection Monitor	Monitors connection between the BLE Offline Engine and the bus.
queue/alert_engine_alert	<p>Measures the size of the queue between the BLE and the Alerts Listener.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
queue/alert_engine_notification	<p>Measures the size of the queue between the Alerts Listener and the Notification Listener.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

Bus

Monitor Display Name	Purpose
Subscriber Group	<p>Monitors subscriber related measurements.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
Broker Group	<p>Monitors broker measurements.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
Durable Subscriber Group	<p>Provides information about durable subscribers in the broker.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

Database Services/Partition Manager

Monitor Display Name	Purpose
Partition Timely Creation	<p>Verifies that partitions are created according to partitioning policy.</p> <p>Note: This monitor is displayed as red for two hours after being connected.</p>
Oversized Partitions	<p>Finds partitions with more than the allotted number of rows specified in threshold settings.</p> <p>Threshold Configured In:</p> <p><HP Business Availability Center Root Directory>\conf\pmconfig.properties, located on the server that System Health is deployed on.</p> <p>You can edit these settings in the properties file:</p> <ul style="list-style-type: none"> ➤ MAX_ROWS_PER_PARTITION. The optimal number of rows per partition that PM strives to create. ➤ WARN_ROWS_PER_PARTITION. The number of rows in the partition that generate a warning. ➤ ERROR_ROWS_PER_PARTITION. The number of rows in the partition that generate an error.

Application Engines/Dashboard Engine

Monitor Display Name	Purpose
BLE Online Monitor	<p>Monitors BLE Online calculations.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Size of Model. Percentage of model size relative to the maximum capacity. ▶ DB Availability. Verifies connection to the database. ▶ Bus Connectivity. Verifies connection to the bus. ▶ Persistency. Indicates the number of failures in saving persistency data. ▶ Calculation Duration. Average calculation time. <p>Threshold Configured In: Infrastructure Settings. To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
Dashboard BLE Plug-in	<p>Searches for unexpected behavior, displayed as instances of ERROR, in bam.ble.plugin.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
Dashboard Rules	<p>Searches for unexpected behavior, displayed as instances of ERROR, in bam.app.rules.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Monitor Display Name	Purpose
<p>Repositories</p>	<p>Searches for unexpected behavior, displayed as instances of ERROR, in repositories.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>Repositories Upgrade</p>	<p>Searches for unexpected behavior, displayed as instances of ERROR, in repositories.upgrade.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Application Engines/SLM Engine

Monitor Display Name	Purpose
<p>BLE Offline Tasks</p>	<p>Indicates whether the time taken to perform the SLM tasks took longer than the time allotted in Infrastructure Settings.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Delayed Tasks. Shows whether there are delayed or failed SLM calculation tasks. ▶ Cycle Time. Shows the percentage of the overall measurement period used to complete calculation of ongoing SLM tasks. <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

Monitor Display Name	Purpose
BLE Offline Monitor	<p>Monitors BLE Offline calculations.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ DB Availability. Verifies connection to the database. ▶ Bus Connectivity. Verifies connection to the bus. ▶ Persistency. Indicates the number of failures in saving persistency data. ▶ Max Task Duration. Displays the duration of the longest task over the time configured in Infrastructure Settings, indicating whether or not the SLM calculation is too slow. ▶ Data Stream Fuse Violations. Indicates performance problems due to the amount of data queried for SLM calculations. <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
SLM Logic Monitor	<p>Searches for unexpected behavior, displayed as instances of unexpected result, in slm.rules.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Application Engines/Reports DB Aggregator

Monitor Display Name	Purpose
DB Aggregator	<p>Indicates whether the time to perform the DB Aggregation task took longer than the time configured in Infrastructure Settings.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Delayed Tasks. Displays whether delayed or failed tasks are found. ▶ Cycle Time. Shows the percentage of the overall measurement period used to complete aggregation calculations. <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
Validator	<p>Responsible for the creation of DB Aggregation and SLM tasks.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Validation Time. Checks whether validation ran within the time frame defined in the Offline Aggregation settings. <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
Scheduler	<p>Schedules when the DB Aggregator and SLM tasks are performed.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Threads Alive. Checks for active threads in the offline aggregation scheduler.

Application Engines/CDM

Monitor Display Name	Purpose
Adapters Framework	<p>Searches for unexpected behavior, displayed as instances of ERROR, in bam.shared.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Modeling/CMDB

Monitor Display Name	Purpose
Model Objects Quota and Count	<p>Compares current CI count with the CI quota.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
TQL Quota and Count	<p>Compares current TQL count with the TQL quota.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

Monitor Display Name	Purpose
<p>Oversized TQLs</p>	<p>Displays TQLs that are larger than the size permitted by the configured threshold.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
<p>Availability and Performance</p>	<p>Checks system availability and response time.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Run AdHoc TQL. Checks how long the Run AdHoc TQL operation takes. ▶ Load ClassModel. Checks how long the Load ClassModel operation takes. <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
<p>DB - Could not reset timeout because the object is not monitored</p>	<p>Searches for Couldn't reset timeout because the object isn't monitored in cmdb.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see "Log File Monitor Overview" in <i>Using System Availability Management</i>.</p>
<p>DB - Failed to borrow object from pool</p>	<p>Searches for Failed to borrow object from pool in cmdb.log.</p> <p>Threshold Configured In: SiteScope</p> <p>For details on the monitor, see "Log File Monitor Overview" in <i>Using System Availability Management</i>.</p>

Monitor Display Name	Purpose
DB - Failed to create a connection	Searches for Failed to create a connection for in cmdb.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Notification - Cannot Publish	Searches for cannot publish in cmdb.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Notification - Cannot get notifications from the BUS	Searches for error occurred during receive of JMS message in cmdb.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Performance - Request Timeout	Searches for Request Timeout in cmdb.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .

Modeling/Viewing System

Monitor Display Name	Purpose
All Symbols Quota and Count	<p>Compares current symbols count with symbols quota.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
Views Quota and Count	<p>Compares current views count with views quota.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
Oversized Views	<p>Checks for views that are larger than the threshold configured in Infrastructure Settings.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

 **BPI Server Monitors**

The following component monitors run on the BPI Server:

Monitor Display Name	Purpose
Data Samples Provider	Searches for [SEVERE ERROR] in bia_bacdatasamples0_0.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Notification Server	Searches for [SEVERE ERROR] in bia_notify0_0.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Servlet Engine	Searches for [SEVERE ERROR] in bia_tomcat0_0.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
CI Status Poller	Searches for [SEVERE ERROR] in bia_adaptor_framework0_0.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .

Monitor Display Name	Purpose
<p>JMS Business Event Handler</p>	<p>Searches for ERROR in Rolling_Adaptor_BIAJMSEngineAdaptor.log. Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>Process Repository</p>	<p>Searches for [SEVERE ERROR] in bia_model_repository0_0.log. Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>Monitor Engine</p>	<p>Searches for [SEVERE ERROR] in bia_metric_engine0_0.log. Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>Business Event Handler</p>	<p>Searches for ERROR in Rolling_Adaptor_BIAEngineAdaptor.log. Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>
<p>Web Services Provider</p>	<p>Searches for [SEVERE ERROR] in bia_webservices0_0.log. Threshold Configured In: SiteScope</p> <p>For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i>.</p>

Monitor Display Name	Purpose
Business Impact Engine	Searches for [SEVERE ERROR] in bia_bce0_0.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .
Admin Server	Searches for [SEVERE ERROR] in bia_adminserver0_0.log . Threshold Configured In: SiteScope For details on the monitor, see “Log File Monitor Overview” in <i>Using System Availability Management</i> .

 **Data Collectors**

Following are the data collectors that run as part of HP Business Availability Center:

BPM Data Collector

Monitor Display Name	Purpose
<p>BPM Last Ping Time</p>	<p>Reports time of most recent ping performed from BPM data collectors.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>
<p>BPM Last Reported Data Time</p>	<p>Measures last reported time of data received from BPM data collectors.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

SiteScope Data Collector

Monitor Display Name	Purpose
SiteScope status on <SiteScope instance>	<p>Measures the overall status of the SiteScope data collector.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ Last Heartbeat. Indicates the time of the most recent sample received from SiteScope that indicates the basic availability (i.e. - heartbeat) of the system. ▶ Health Status. Indicates the status of the SiteScope Health group, and number of monitors in the group with error status. <p>Note: Both measurements are monitored only if using SiteScope version 9.0 or higher. If a previous version is installed, only the Last Heartbeat measurement is monitored.</p> <p>Threshold Configured In: Infrastructure Settings.</p> <p>To access, go to Admin > Platform > Setup and Maintenance > Infrastructure Settings and search under System Health or the applicable component application.</p>

Discovery Probe Data Collector





Monitor Display Name	Purpose
Discovery Probe status on <Discovery Probe instance>	Receives discovery tasks from the server, dispatches them, and sends the results back to the CMDB through the server. Included Measurements: <ul style="list-style-type: none"> ▶ Last Report Time. The most recent report time. ▶ Amount of Reported CIs. The number of CIs reported by the probe. ▶ Last Access Time. The most recent time the probe was accessed.

RUM Data Collector

Monitor Display Name	Purpose
RUM Status on <RUM Engine Instance Name>	<p>Displays the aggregated status of the Real User Monitor data collector.</p> <p>Included Measurements:</p> <ul style="list-style-type: none"> ▶ RUM Engine. Aggregated status of the Real User Monitor engine monitors. ▶ RUM Probe IP. Aggregated status of the Real User Monitor probe with the specified IP address. Each probe has its own entry. ▶ Database. Aggregated status of Real User Monitor internal DB monitors. ▶ Samples to Business Availability Center server. Aggregated status of the Real User Monitor samples sent to HP Business Availability Center. <p>Threshold Configured In: Real User Monitor internal configuration.</p> <p>Note: If the Real User Monitor data collector's status is problematic, refer to the Real User Monitor web console for troubleshooting. For details, see "Monitoring the Health of HP Real User Monitor Components" in the <i>Real User Monitor Administration</i> PDF.</p>

Component and Monitor Status Indicators

The following table displays a colored icon and a description of its status, as displayed on both the Inventory tab and the Monitors table in the System Health Dashboard Right Pane:

Status	Description
	The component and all subcomponents are working properly (status is good).
	The component or a subcomponent has a critical problem (status is error). A red indicator is accompanied by an x symbol. It is recommended that you drill down in the component to identify its specific problematic monitors.
	The component or a subcomponent has a non-critical problem, or did not receive an answer from the server (status is warning). The yellow indicator is accompanied by a ! symbol.
	There is no data available for the monitors. Displayed if the monitors have not yet run. The gray indicator is accompanied by a - symbol.

Note: After deploying System Health, the monitor colors appear gradually as each monitor runs according to its schedule.

System Health User Interface

This section describes:

- Inventory Tab on page 207
- Log Manager on page 210
- System Health Dashboard on page 212
- System Health Setup Wizard on page 226
- Toolbar on page 234

Inventory Tab

Description	<p>Displays the status of the HP Business Availability Center servers and their respective components in table format.</p> <p>The Inventory tab enables you to compare the performance of servers of the same type and to view statuses in a flat view, versus the hierarchal view of the Dashboard.</p> <p>To Access: Click the Inventory tab on the System Health interface.</p>
Important Information	<p>In addition to fields representing the monitors and components displayed on the System Health Dashboard, the tables contain the following fields:</p> <ul style="list-style-type: none"> ➤ Name. The name of the server. ➤ Type. The type of server (appears only for Gateway and Processing server tables). ➤ Status. The overall status of the machine, indicated by a colored icon. For details on the colored icons, see “Component and Monitor Status Indicators” on page 206. <p>Descriptions of the monitors are displayed on the Monitor Details pane.</p>
Useful Links	“System Health Monitors” on page 168

Gateway Machines Table

Description	Displays information about the Gateway machines being monitored by System Health, and their subcomponents.
Important Information	<ul style="list-style-type: none"> ▶ Click the arrows in the header to expand or collapse the table. ▶ The subcomponents' status is indicated by a colored ball icon. For details on the status represented by each color, see "Component and Monitor Status Indicators" on page 206. ▶ Details on the selected subcomponent appear in the <Subcomponent Name> Details table. Note: The cell names are identical to the corresponding component or subcomponent displayed on the System Health Dashboard.
Useful Links	<p>"System Health Displays" on page 144</p> <p>"HP Business Availability Center Components" on page 164</p> <p>"System Health Monitors" on page 168</p>

Processing Machines Table


Description	Displays information about the Data Processing machines being monitored by System Health, and their subcomponents.
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Important Information	<ul style="list-style-type: none"> ▶ Click the arrows in the header to expand or collapse the table. ▶ The subcomponents' status is indicated by a colored ball icon. ▶ Details on the selected subcomponent appear in the <Subcomponent Name> Details table. <p>Note: The cell names are identical to the corresponding component or subcomponent displayed on the System Health Dashboard.</p>
Useful Links	<p>"System Health Displays" on page 144</p> <p>"HP Business Availability Center Components" on page 164</p> <p>"System Health Monitors" on page 168</p>



<Subcomponent Name> Details Table





Description	Displays information about the specific component or subcomponent selected in the Gateway Machines table or the Processing Machines table.
Important Information	<ul style="list-style-type: none"> ▶ The status of the subcomponent and its monitors are indicated by a either a colored icon, or, where applicable, a numerical value in the color indicating its status. For details on the colors' status, see "Component and Monitor Status Indicators" on page 206 ▶ The cell headings correspond to the monitors running on the selected component. The Name and Status cell headings display the name of the machine and its overall status, respectively. ▶ The Monitor Details pane provides additional information on the monitor selected in the <Subcomponent Name> Details table.
Useful Links	<p>"System Health Monitors" on page 168</p> <p>"Monitors Table" on page 214</p>

Log Manager

Description	Displays the logs file output associated with the various components being monitored by System Health. To access: Click the Log Manager tab on the System Health interface.
Important Information	<ul style="list-style-type: none"> ▶ You can view a log file by selecting a component in the Log Bundles pane and performing one of the following actions: <ul style="list-style-type: none"> ▶ Double click. ▶ Drag and drop it into the Main Pane. ▶ Click the Retrieve Logs button . ▶ You can search for a string in the Main Pane by selecting any point in the pane and typing the string you want to find. You can also search the content of a set of logs by saving the output to a .txt file and performing a search.
Useful Links	“Log Manager Tab” on page 148

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
	Click to retrieve logs for the specified entities. You can retrieve log files by selecting a specific file, a bundle, or a machine. Note: You can also view log files by dragging the selected entity to the main frame.
	Click to save the selected log files. <ul style="list-style-type: none"> ▶ When selecting this button in the main frame, the currently displayed logs are saved. ▶ When selecting this button on the Log Bundles pane, the selected entities are saved, without being displayed in the main frame. This option is useful if you are saving a large output of data, or if you want to perform a complex search on the data output.

GUI Element (A-Z)	Description
	<p>Indicates a log bundle or machine whose content has been collapsed or not expanded in the Log Bundles hierarchical tree.</p> <p>Note: This is the default view in the Log Bundles pane.</p>
	<p>Indicates a log bundle or machine whose content has been expanded in the Log Bundles hierarchical tree.</p>
	<p>Indicates a log file. You can view a log file in one of the following ways:</p> <ul style="list-style-type: none"> ▶ Double click the log file ▶ Drag and drop the log file into the main pane ▶ Select the log file and click the Retrieve Logs button 
<tab #>	<p>Indicates a selection of any combination of bundles, machines, or log files. The tabs are numbered chronologically, according to the number of retrieval actions you have performed.</p> <p>Note: The specific logs displayed in the tab are listed at the top of the pane. If more than 5 logs have been retrieved, the message, Assorted logs (more than 5) is displayed in place of the log list.</p>
From	<p>Select a date and time from which the log data is to begin being displayed.</p>
To	<p>Select a date and time until which the log data is to be displayed.</p>

System Health Dashboard

<p>Description</p>	<p>Enables you to view HP Business Availability Center components and their status, including information on the properties and monitors associated with the components.</p> <p>This is the default display when you access System Health.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > System Health.</p> <p>The System Health Dashboard consists of the following areas:</p> <ul style="list-style-type: none"> ➤ Left Pane ➤ Right Pane ➤ Monitors Table ➤ General Table <p>You can perform actions on the System Health Dashboard using the Toolbar above the Left Pane. For details, see “Toolbar” on page 234.</p>
<p>Additional Links</p>	<p>“Deploy and Access System Health” on page 152</p> <p>“System Health Setup Wizard” on page 226</p> <p>“System Health Displays” on page 144</p>

Left Pane

<p>Description</p>	<p>Displays a map of the databases, servers, data collectors, and mediators and load balancers (if they exist in your deployment) deployed on HP Business Availability Center. For details, see “Map of HP Business Availability Center System and Components” on page 218.</p>
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Important Information	The status of the components is indicated by the color of the box surrounding the icon and the accompanying symbol. For details, see “Component Status and Description” on page 219.
Useful Links	“System Health Displays” on page 144









Right Pane

Description	Displays information on components selected in the Left Pane.
Important Information	<p>The Right Pane consists of the following tables:</p> <ul style="list-style-type: none"> ▶ Monitors. Displays information about the monitors and subcomponents on the highlighted component in the Left Pane. ▶ General. Displays information about the properties of the highlighted server in the Left Pane. ▶ Data Collector Details. Displays information about the data collector highlighted in the Left Pane.
Useful Links	“System Health Displays” on page 144

Monitors Table

Description	Displays information on the monitors running on the selected component in the System Health Dashboard. Click the arrows in the header to expand or collapse the table.
Useful Links	“HP Business Availability Center Components” on page 164

The Monitors table includes the following elements (listed alphabetically):

GUI Element (A-Z)	Description
	Click to disable the selected monitor.
	Click to reactivate the selected monitor's schedule.
	Click to run the selected monitor immediately. The monitor must first be enabled for you to use this option.
	Click to expand the list of monitors to list all monitors and measurements for that object. This is the default view.
	Click to collapse the list of monitors to display only the monitors and hide the monitor measurements.
	Click to refresh the list of monitors to display the latest status for the monitors.
	An individual monitor that is running on the selected component.
	A group of monitors that are running on the selected component.
Last Updated	Indicates the last time that the monitor ran.

GUI Element (A-Z)	Description
Monitor Details	<p>Contains the following fields:</p> <ul style="list-style-type: none"> ▶ Description. Describes the selected monitor. ▶ Additional Information. Displays a text string result of the selected monitor's output. ▶ Value. Displays a numerical result of the selected monitor's output. <p>Note: Not all fields are displayed for every monitor.</p>
Monitor/Group Name	The name of the monitor or group of monitors running on the component selected in the Left Pane.
Status	Indicates the monitor or monitor group's status, displayed as a colored ball icon. For details on these icons, see "Component and Monitor Status Indicators" on page 206.

General Table

Description	<p>Displays information about the properties associated with the selected server in the Left Pane.</p> <p>Click the arrows in the header to collapse and expand the table.</p> <p>Click the header name to sort by the header's value.</p>
Important Information	This table appears only when a server is selected in the System Health Dashboard.









The General table includes the following elements (listed alphabetically):





GUI Element (A-Z)	Description
Property Name	<p>Lists the properties associated with the selected component, such as:</p> <ul style="list-style-type: none"> ▶ IP Address ▶ Build number ▶ Operating system type
Value	Lists the value of the specified property.

Data Collector Details Table

Description	Displays information, in tree form, about the data collector selected in the Left Pane. Click the arrows in the header to collapse and expand the table.
Important Information	This table appears only when a data collector is selected in the System Health Dashboard.

The Data Collector Details table includes the following elements (listed alphabetically):

GUI Element (A-Z)	Description
	A Discovery Probe.
	A Business Process Monitor (BPM) data collector.
	A Real User Monitor (RUM) data collector.
	A SiteScope (SiS) data collector.
	Displayed next to the IP address of the machine on which the Discovery Probe is running.
	Displayed next to the IP address of the machine on which the Business Process Monitor (BPM) data collector is running.
	Displayed next to the IP address of the machine on which the Real User Monitor (RUM) data collector is running.
	Displayed next to the IP address of the machine on which the SiteScope (SiS) data collector is running.

GUI Element (A-Z)	Description
	Denotes an instance of a Discovery Probe.
	Denotes an instance of a Business Process Monitor (BPM) data collector.
	Denotes an instance of a Real User Monitor (RUM) data collector.
	Denotes an instance of a SiteScope (SiS) data collector.
Property Name	<p>Lists the properties associated with the selected data collector, such as:</p> <ul style="list-style-type: none"> ▶ Build number ▶ Port number ▶ Version number
Value	Lists the value of the specified property.



Map of HP Business Availability Center System and Components




Description	<p>Depicts the various HP Business Availability Center components measured by System Health.</p> <p>To Access: Click the Dashboard tab on the System Health interface.</p> <ul style="list-style-type: none"> ▶ Database components appear on the left side of the map. ▶ Server components appear to the right of the database components. ▶ Load Balancer components (if deployed) appear to the right of the HP Business Availability Center Server components. <p>Note: When System Health is deployed in a secured environment, Reverse Proxy components appear with the Load Balancer components.</p> <ul style="list-style-type: none"> ▶ Data collector components appear on the right side of the map.
Important Information	<p>You may also see obsolete hosts that are no longer running HP Business Availability Center. To disable these obsolete hosts, browse to the URL http://<Gateway Server machine name>.<domain_name>/topaz/systemConsole/displayBACHosts.do and disable all obsolete hosts.</p>
Useful Links	<p>“System Health Displays” on page 144</p> <p>“Component and Monitor Status Indicators” on page 206</p> <p>“Monitors Table” on page 214</p>

Component Status and Description

Description	Displays the status of the components monitored by System Health.
Important Information	The color of all component outlines reflects the lowest functioning level subcomponent or monitor contained in the component, known as the worst child rule . The exception to this rule is the gray outlined components, which do not automatically cause their parent components to be outlined in gray.
Useful Links	<p>“System Health Displays” on page 144</p> <p>“Component and Monitor Status Indicators” on page 206</p> <p>“Monitors Table” on page 214</p>






The following table displays a sample icon and a description of its outlined color and status, as displayed on the System Health Dashboard:














Status	Description
	<p>A green outline indicates that the component and its subcomponents are working properly. The component’s icon is accompanied by a check symbol inside a green square.</p>
	<p>A red outline indicates that a critical problem exists in the component, in one of its subcomponents, or both. The component’s icon is accompanied by an x symbol inside a red square.</p> <p>It is recommended that you drill down in the component to identify its specific problematic monitors.</p>




Status	Description
	<p>A yellow outline indicates one of the following:</p> <ul style="list-style-type: none"> ▶ A non-critical problem exists either in the component, in one or more of its subcomponents, or both. ▶ The component's monitors were unable to connect with the server. <p>The component's icon is accompanied by a ! symbol inside a yellow square.</p>
	<p>A gray outline indicates that there are currently no monitors scheduled to run for the component. The component's icon is accompanied by a - sign inside a gray square.</p>
	<p>A jagged blue outline, together with the component's status color represents the currently highlighted component.</p>

Icons and Buttons

Following are the component icons and buttons on the Map of HP Business Availability Center System and Components:

GUI Element (A-Z)	Description
	<p>Click to expand the component and view its subcomponents.</p> <p>Important: You must select the cursor button  on the System Health Dashboard Toolbar to operate the Expand button.</p>
	<p>Click to hide the subcomponents contained within the selected component.</p> <p>Important: You must select the cursor button  on the System Health Dashboard Toolbar to operate the Hide button.</p>
	<p>A Database server</p>

GUI Element (A-Z)	Description
	A Database
	A Gateway server
	A Processing server
	A group of processes
	A group of server monitors
	A bus component
	A logical group Example: Alerts Engine
	An application Example: Dashboard
	A group of applications
	A service Example: Service Level Management Engine
	A group of Business Process Monitor data collectors
	A group of SiteScopes
	A group of Discovery Probes

GUI Element (A-Z)	Description
	<p>A group of Real User Monitor data collectors</p>
	<p>Indicates the flow of data.</p> <p>Note: Click the Navigation button  and then click anywhere on an arrow line to find the arrow's destination or origin.</p>

Database Components

<p>Description</p>	<p>The databases that are deployed on HP Business Availability Center.</p> <p>Database components appear on the left side of the System Health Dashboard Left Pane.</p>
<p>Important Information</p>	<p>You may also see obsolete hosts that are no longer running HP Business Availability Center. To disable these obsolete hosts, browse to the URL http://<Gateway Server machine name>.<domain_name>/topaz/systemConsole/displayBACHosts.do and disable all obsolete hosts.</p>
<p>Useful Links</p>	<p>“System Health Displays” on page 144</p> <p>“Component and Monitor Status Indicators” on page 206</p> <p>“Monitors Table” on page 214</p>

The following elements are displayed:

GUI Element (A-Z)	Description
CMDB Database	A central repository for configuration information.
History Database	Used for storage of data, over time, of the CMDB configuration items (CIs).
Foundation Database	Used to store system-wide and management-related metadata for the HP Business Availability Center environment.
Profile Database	Used to store raw and aggregated measurement data obtained from the HP Business Availability Center data collectors.

Server Components and Processes

The Map of HP Business Availability Center System and Components includes the following server elements (listed alphabetically):

- Alerts Engine
- Applications (Dashboard application, Service Level Management, System Availability Management, and Portal components)
- Applications Engines
- BPMs (Business Process Monitors)
- bus
- CMDB
- CDM
- Dashboard Engine
- Discovery and Dependency Mapping Probes
- modeling
- Portal application (My BSM)
- Processes (for details, see “HP Business Availability Center Processes” on page 166)

- Real User Monitor Engines
- Reports database aggregator
- SAM (System Availability Management - Management of SiteScopes)
- Scheduler (NOA service scheduler)
- Server monitors
- SiteScopes
- SLM (Service Level Management) Engine
- Validator (NOA service validator)
- Verticals (SAP service and Siebel service)

Data Collector Components

Description	Depicts the data collector elements that are deployed on HP Business Availability Center. Data Collector components appear on the right side of the System Health Dashboard Left Pane.
Important Information	You may also see obsolete hosts that are no longer running HP Business Availability Center. To disable these obsolete hosts, browse to the URL http://<Gateway Server machine name>.<domain_name>/topaz/systemConsole/displayBACHosts.do and disable all obsolete hosts.
Useful Links	“System Health Displays” on page 144 “Component and Monitor Status Indicators” on page 206 “Monitors Table” on page 214

The following elements are displayed:

GUI Element (A - Z)	Description
BPMs	Displays the status of the Business Process Monitor data collectors.
Discovery Probes	Displays the status of the Discovery Probes.

GUI Element (A - Z)	Description
RUM Engines	Displays the status of the Real User Monitor engines.
SiteScopes	Displays the status of the SiteScopes.

System Health Setup Wizard




<p>Description</p>	<p>Enables you to establish remote connectivity to the HP Business Availability Center and database servers for full monitoring.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > System Health.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ To enable configuring the System Health application, the System Health Setup Wizard opens automatically the first time you access the application after installation. For subsequent users and user instances, the wizard does not open automatically. ▶ You can also access the System Health Setup Wizard by performing either Full Model Synchronization or Soft Synchronization. Soft Synchronization generates the wizard only if changes were made to the System Health model, and Full Model Synchronization generates the wizard only if no component is selected. ▶ The user whose remote connection information you enter into the System Health Setup Wizard can perform only those actions for which they have permissions.
<p>Important Information</p>	<ul style="list-style-type: none"> ▶ If you do not enter remote connection details for the server, System Health retrieves information only for monitors that do not require credential authorization to access the HP Business Availability Center servers. ▶ The left pane of the System Health Setup Wizard indicates the page of the wizard on which you are currently working.

Wizard Map	The System Health Setup Wizard contains: Remote Servers Setup Page > Remote Databases Setup Page > Recipients Setup Page
Additional Links	“System Health Setup Wizard – Overview” on page 142 “Deploy and Access System Health” on page 152 “System Health Monitors” on page 168

Sample Status and Description

When creating remote connections through the System Health Setup Wizard, a colored icon indicates the connection status.


The following table describes each color and its status:

Status	Description
	A green icon indicates that the credentials entered are sufficient for all of the monitors to access the HP Business Availability Center servers.
	A red icon indicates that remote connectivity to the selected server has failed, due to one of the following reasons: <ul style="list-style-type: none"> ▶ The permissions level of the user entered in the wizard are not sufficient for the monitors to retrieve information from the specified server. ▶ The user entered in the wizard does not exist on the HP Business Availability Center machine running on the specified server. ▶ A mistake has been made in the user credentials entered in the wizard. A red icon is accompanied by an "x" symbol inside a red square.
	A gray icon indicates that no attempt was made to establish remote connectivity to the specified server. A gray icon is accompanied by a "-" symbol inside a gray square.

Remote Servers Setup Page

Description	Enables you to create a remote connection to HP Business Availability Center servers for System Health to monitor.
Important Information	<ul style="list-style-type: none"> ➤ You can configure different settings for each server, or apply the same settings to all servers. ➤ You must configure the remote connection details for the server in order for System Health to run all of the server's available monitors. If you do not enter remote connection details for the server, System Health retrieves information only for monitors that do not require credential authorization to access the HP Business Availability Center servers. <p>General information about the wizard is available in "System Health Setup Wizard" on page 226.</p>
Additional Links	"System Health Setup Wizard – Overview" on page 142
Wizard Map	The System Health Setup Wizard contains: Remote Servers Setup Page > Remote Databases Setup Page > Recipients Setup Page

The Servers Remote Setup Page includes the following elements (listed alphabetically):


GUI Element (A-Z)	Description
	Click to show descriptions of the Remote connection details fields. Click again to hide descriptions.
Apply	Click to apply the remote connection configurations for the selected servers.
Encoding	The encoding used by the server. Example: Cp1252, UTF-8

GUI Element (A-Z)	Description
Login	<p>Enter the login name to be used for establishing remote connectivity between the monitors and the specified servers.</p> <p>The user whose login name is entered must have the appropriate permission level for the monitors to run on the server.</p> <p>The format for entering information into this cell is DOMAINNAME\login.</p>
Method	<p>Select the method of communication for connecting to the HP Business Availability Center components.</p> <p>Example: NetBIOS, SSH</p>
OS Type	<p>Enter the Operating System running on the server.</p> <p>Example: Windows, UNIX</p> <p>Note: This field is only visible if System Health does not identify an operating system on the server.</p>
Password	<p>Enter the password of the login name to be used for establishing remote connectivity with the specified servers.</p> <p>The user whose password is entered must have the appropriate permission level for the monitors to run on the server.</p>

Remote Databases Setup Page

Description	Enables you to create a remote connection to databases for System Health to monitor.
Important Information	<ul style="list-style-type: none"> ➤ You can configure different settings for each server, or apply the same settings to all servers. ➤ You must configure the remote connection details for the database in order for System Health to run all of the database's available monitors. If you do not enter remote connection details for the database, System Health retrieves information only for monitors that do not require credential authorization to access the HP Business Availability Center servers. <p>General information about the wizard is available in "System Health Setup Wizard" on page 226.</p>
Wizard Map	The System Health Setup Wizard contains: Remote Servers Setup Page > Remote Databases Setup Page > Recipients Setup Page
Additional Links	"System Health Setup Wizard – Overview" on page 142

The Databases Remote Setup Page includes the following elements (listed alphabetically):

GUI Element (A-Z)	Description
	Click to show descriptions of the Remote connection details fields. Click again to hide descriptions.
Apply	Click to apply configurations for the selected database.
Encoding	Indicate the encoding used by the server running the database. Example: Cp1252, UTF-8


GUI Element (A-Z)	Description
Initialize Shell Environment	Optionally, enter any shell commands to be executed at the beginning of the session. Separate multiple commands with a semicolon (;). This option specifies shell commands to be executed on the remote machine directly after a Telnet or SSH session has been initiated.
Login	Enter the login name used to access the operating system running on the server on which the database is installed. Note: The format for entering information into this cell is DOMAINNAME\login .
Login Prompt	The prompt output when the system is waiting for the login to be entered. Default: login:
Method	Select the method of communication for System Health to speak to the database. Example: NetBIOS, SSH
Operating System	Enter the Operating System running on the server. Example: Windows, UNIX Note: This field is only visible if System Health does not identify an operating system on the server.
Password	Enter the password used to access the operating system running on the server on which the database is installed.
Password Prompt	The prompt output when the system is waiting for the password to be entered. Default: password:
Prompt	The prompt output when the remote system is ready to handle a command. Default: #

GUI Element (A-Z)	Description
Secondary Prompt	Optionally, enter the secondary prompts if the telnet connection to the remote server causes the remote server to prompt for more information about the connection. Separate multiple prompt string by commas (,).
Secondary Response	Optionally, enter the responses to any secondary prompts required to establish connections with this remote server. Separate multiple responses with commas (,).

 **Recipients Setup Page**

Description	Enables you to configure recipients to receive predefined System Health alerts through email.
Important Information	General information about the wizard is available in “System Health Setup Wizard” on page 226.
Wizard Map	The System Health Setup Wizard contains: Remote Servers Setup Page > Remote Databases Setup Page > Recipients Setup Page
Additional Links	“System Health Setup Wizard – Overview” on page 142

The Recipients Setup Page contains the following elements:

GUI Element (A-Z)	Description
	Click to display descriptions of the Recipient Details fields. Click again to hide descriptions.
<Recipients Pane>	Displays a list of recipients configured to receive predefined System Health alerts through email. Click the recipient's name to edit their details. Click Add new recipient to configure a new recipient.
BSM Databases	Select to receive alerts on the status of HP Business Service Management Databases.
BSM servers, services, and applications	Select to receive alerts on status of HP Business Service Management servers, services, and applications.
Create	Adds the configured recipient to the recipient list pane.
Email	Enter the recipient's email address.
Mediators	Select to receive alerts on status of HP Business Availability Center Mediators and Load Balancers.
Name	Enter the recipient's name.









Toolbar




Description	<p>Enables you to:</p> <ul style="list-style-type: none"> ▶ Customize the display of the HP Business Availability Center components on the System Health Dashboard. ▶ Perform actions on the components. ▶ Perform management operations on the components. ▶ Synchronize the status and model of the components. <p>To Access: The Toolbar is located at the top of both the System Health Dashboard and the Inventory tab.</p>
Important Information	<p>Buttons that customize the display of the HP Business Availability Center components (Dashboard Customization Buttons) appear only on the System Health Dashboard. All other buttons appear on both the System Health Dashboard and the Inventory tab.</p>
Useful Links	<p>“Service Manager Dialog Box” on page 240 “Backup Server Setup Window” on page 241 “Process Manager Dialog Box” on page 242 “Quick Report Screen” on page 243</p>

Dashboard Customization Buttons

Description	<p>Enable you to customize the appearance of the components on the System Health Dashboard.</p> <p>Note: The buttons that customize the display of the HP Business Availability Center components appear only on the System Health Dashboard, and do not appear on the Inventory tab.</p>
Useful Links	<p>“System Health Displays” on page 144</p>

The Dashboard Customization Buttons are:




GUI Element	Description
	<p>Click to enable selecting a component on the System Health Dashboard Left Pane.</p> <p>Note: This button is selected by default upon entering the System Health Dashboard.</p>
	<p>Click to pan the System Health Dashboard Left Pane.</p>
	<p>Click to zoom on a specific area of the System Health Dashboard Left Pane.</p> <p>You zoom by holding down the left click button on your pointer. Move the pointer down to zoom in; move the pointer up to zoom out.</p>
	<p>Click to navigate between components of the dashboard.</p> <p>You click the Navigation button and then click a line connecting two components or subcomponents. Depending on where on the line you click, the cursor navigates to either the original or endpoint component, whichever is further.</p>
	<p>Click to fit all open components and subcomponents into the visible area.</p>
	<p>Click to undo your previous action and go back to the previous display on the System Health Dashboard Left Pane.</p> <p>Note: This button is enabled only if you have generated more than one view on the System Health Dashboard Left Pane.</p>
	<p>Click to redo an action that has been undone with the undo button .</p> <p>Note: This button is enabled only if you have generated more than one view on the System Health Dashboard, and are not currently resting on the most recent view.</p>

GUI Element	Description
	<p>Click to realign System Health Dashboard Left Pane components, so that the components are aligned in their original order, which is (left to right):</p> <ul style="list-style-type: none"> ➤ Databases ➤ Servers ➤ Load Balancers (if deployed) ➤ Data Collectors
	<p>Click to return the System Health Dashboard Left Pane to its default view. This includes closing open components and realigning component boxes to their original state.</p>
	<p>Click for an overview map of all the component boxes on the System Health Dashboard Left Pane.</p> <p>The Overview Map appears in a separate window, with blue lines denoting the boundaries of the System Health Dashboard Left Pane.</p> <p>Note: You cannot perform other functions on the System Health Dashboard while the Overview Map is open.</p>

Action Buttons

Description	Enable you to perform actions on the HP Business Availability Center components monitored by System Health.
Useful Links	"System Health Displays" on page 144




The Action Buttons are:

GUI Element	Description
	<p>Click to open the Service Manager dialog box. This option enables you to move backend services from one server to another of the same type if the server machine is not functioning properly, requires downtime for servicing, or is overloaded. For details on the Service Manager dialog box, see “Service Manager Dialog Box” on page 240.</p> <p>Note: You must have more than one server of the same type configured in your HP Business Availability Center environment for this button to be enabled.</p>
	<p>Click to define a backup server, in case the current server is not functioning properly or requires downtime for servicing.</p> <p>Note: You must have more than one server of the same type configured in your HP Business Availability Center environment for this button to be enabled.</p>
	<p>Click to stop or start processes on selected servers, for maintenance purposes or in case these processes display a problematic status on the System Health Dashboard or the Inventory tab.</p>

Information Buttons

Description	Enable you to retrieve information on the HP Business Availability Center components monitored by System Health.
Useful Links	“System Health Displays” on page 144




The Information Buttons are:

GUI Element	Description
	<p>Click to receive a Quick Report on data collected over the past 24 hours for the selected component. For details on Quick Reports, see “Quick Report Screen” on page 243.</p>
	<p>Click to export a report containing of the System Health monitors’ and HP Business Availability Center components’ current status to a .csv file.</p>
	<p>Click to generate a .zip file containing the log files of a specific server.</p> <p>Note: You must select a server component on the System Health Dashboard Left Pane for this button to be enabled.</p>


Synchronization Buttons

Description	Enable you to synchronize the status and model of the HP Business Availability Center components monitored by System Health.
Important Information	If an HP Business Availability Center component was down while Soft or Full Model Synchronization was performed, System Health may not have configured the full monitoring solution onto these components. To prevent this from happening, ensure that all components are up and running during the System Health Setup Wizard configuration, and while performing Soft or Full Model Synchronization.
Useful Links	“System Health Displays” on page 144

The Synchronization Buttons are:

GUI Element	Description
	Click to refresh the selected component and retrieve its current status, without running the component's monitors.
	Click to update System Health with any changes to the System Health model. If required, the System Health Setup Wizard is generated for the area of System Health in which the changes were applied.
	Click to reset the configuration of the selected component, including resetting of all monitors and their status. If no specific component is selected, the entire System Health configuration is reset, and the System Health Setup Wizard is generated, where you must reconfigure the connection of all system monitors to the servers. For details, see “System Health Setup Wizard” on page 226.


Service Manager Dialog Box

Description	<p>Enables you to move backend services from one server to another of the same type, in case the server machine is not functioning properly, requires downtime for servicing, or is overloaded.</p> <p>To Access: Click the Service Manager button  on the toolbar on either the System Health Dashboard or the Inventory tab.</p>
Important Information	<ul style="list-style-type: none"> ▶ You can move services from a server only to another server of the same HP Business Availability Center type. ▶ You cannot move services from or to an external machine (such as UCMDB). ▶ When automatic failover moves processes to the backup machine, it may move only part of a service group, causing System Health to display the same service group on two different servers.
Useful Links	“Understanding Service Reassignment” on page 150

The Service Manager Dialog Box includes the following elements (listed alphabetically):

GUI Element	Description
Execute	Click to move the indicated customer services from one server to another.
Operation Status	Displays the status of the performed operation.
Select Operation	Select the type of service you want to move.
Select Source Machine	Select the machine from which you want to move the services.
Select Target Machine	Select the machine to which you want to move the services.


Backup Server Setup Window

Description	<p>Enables you to define a backup server to run the HP Business Availability Center server components, in case the server machine is not functioning properly or requires downtime for servicing.</p> <p>To Access: Click the Backup Server Setup button  on the Toolbar.</p>
Important Information	<ul style="list-style-type: none"> ▶ This button is enabled only if you have configured more than one Processing server. ▶ You must click the Enable Automatic Failover box for the backup server to be enabled. ▶ External machines, such as UCMDB, cannot be defined as a backup server.
Useful Links	“Move Backend Services” on page 160







The Backup Server Setup Window includes the following elements (listed alphabetically):

GUI Element	Description
Enable Automatic Failover	Select to activate the selected server as the backup server.
Execute	Click to define the selected server as the backup server.
Operation Status	Displays the status of the performed operation.
Select Backed-up Servers	Select the servers to be backed up.
Select Backup Server	Select the backup server.

Process Manager Dialog Box


Description	Enables you to stop or start processes on specific servers, in case these processes display a problematic status on the System Health Dashboard or Inventory tab, or the processes require maintenance. To Access: Click the Process Manager button  on the Toolbar.
Important Information	You can select multiple processes to start or stop in the Process Manager dialog box.
Useful Links	“Manage BSM Processes” on page 162 “HP Business Availability Center Processes” on page 166

The Process Manager Dialog Box includes the following elements (listed alphabetically):

GUI Element	Description
	Indicates the selected process is running.
	Indicates the selected process was started and is not yet running.
	Indicates the selected process was stopped.
	Indicates the selected process is currently being stopped.
	Indicates the selected process was launched.
	Indicates the selected process' status is unknown.
Operation Status	Displays the status of the performed operation.
Refresh	Click to refresh process statuses. Note: A stopped process appears in red.
Select Process(es)	Select the process you want to stop or start.

GUI Element	Description
Select Server	Select the server on which you want to start or stop processes.
Start	Click to start the selected processes.
Start All	Click to start all of the processes in the Select Process(es) window.
Stop	Click to stop the selected processes.
Stop All	Click to stop all of the processes in the Select Process(es) window.

Quick Report Screen


Description	<p>Displays a report on data gathered from the past 24 hours on the selected component's monitors.</p> <p>To Access: Click the Quick Report button  on the Toolbar.</p>
Important Information	<p>The following links appear on the Quick Report screen, which enable you to view specific information on the monitors:</p> <ul style="list-style-type: none"> ▶ Table Format: ▶ Error List: ▶ Warning List: ▶ Good List: <p>For details on the information each of these links displays, see below.</p>
Useful Links	<p>"Display a Quick Report" on page 163</p> <p>"New SiteScope Quick Report Dialog Box" in <i>System Availability Management</i>.</p>

The Quick Report screen includes the following elements (unlabeled GUI elements are shown in angle brackets):

GUI Element	Description
<Graphs>	Displays the monitor groups' output in graph format.
Error List	Click to display the monitor runs that retrieved an error status, based on the thresholds configured for the monitor.
Good List	Click to display the monitor runs that retrieved a good status, based on the thresholds configured for the monitor.
Measurement Summary Table	Displays measurement data for each of the HP Business Availability Center monitors.
Table Format	Click to display the monitor groups' output in table format.
Uptime Summary Table	Displays the percentage of uptime each HP Business Availability Center monitor experienced over the indicated time period.
Warning List	Click to display the monitor runs that retrieved a warning status, based on the thresholds configured for the monitor.

Troubleshooting and Limitations

The following table illustrates potential problems that can occur on the System Health interface, and suggested solutions:

Problem	Solution
Interface does not display any HP Business Availability Center components	Click the Refresh button on your browser. Note: This problem is most common when first logging into System Health on Microsoft Internet Explorer 7.0.
All components and monitors are displayed in gray	 Click the Full Model Synchronization button in the Toolbar on either the System Health Dashboard or the Inventory tab. The Full Model Synchronization button resets the System Health configuration and erases all of the monitors' history in HP Business Availability Center. You then reconfigure System Health to create remote connections to the servers which System Health monitors, using the System Health Setup Wizard. For details, see "System Health Setup Wizard" on page 226.
Monitors are not displayed on a component	

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Legacy System Health

Note to HP Software-as-a-Service customers: HP Operations administrators these pages and the interface is hidden from your view.

The System Health page enables high-level HP Business Availability Center administrators to manage the workload of the Data Processing Servers and the services they are running by setting up Automatic Failover or manually reassigning services among servers in response to resource issues or for maintenance purposes.

This chapter includes:

Concepts

- ▶ Legacy System Health - Overview on page 249
- ▶ Service Reassignment in Legacy System Health on page 250
- ▶ Understanding Backup Servers on page 253
- ▶ Data Processing Server Resource Status on page 255

Tasks

- ▶ Monitor System Resources on the System Health Page on page 258
- ▶ Configure Automatic Failover for the Data Processing Server on page 259
- ▶ Remove Automatic Failover on page 262
- ▶ Reassign Services Manually on page 263

Reference

- ▶ System Health Monitoring on page 265

- ▶ Legacy System Health User Interface on page 268
- ▶ **Troubleshooting and Limitations** on page 274

Important: Legacy System Health is available only if you have not deployed the new System Health interface, either as a stand-alone application or as an imbedded part of HP Business Availability Center. For details on deploying the new System Health interface, see “Deploy and Access System Health” on page 152.

Legacy System Health - Overview

The System Health page enables high-level HP Business Availability Center administrators to monitor the load on the Data Processing Servers in the HP Business Availability Center server architecture and manage the Data Processing Servers—by setting up Automatic Failover or by manually reassigning services from one server to another—to prevent downtime due to insufficient resources on a particular machine or due to required server machine maintenance. Automatic Failover is supported only in Data Processing Servers.

Administrators can also view static information about the machines on which the Gateway Servers are running.

Note:

- ▶ For complete details on setting up a high availability deployment of HP Business Availability Center servers, as well as descriptions of all services that run on the Data Processing Server, see “High Availability for HP Business Availability Center” in the *HP Business Availability Center Deployment Guide* PDF.
 - ▶ Reassigning services from one server to another can also be done using the JMX Console. It is recommended that the JMX Console only be used to reassign services that cannot be reassigned via the System Health page. For details, see “Manually Reassigning Services” in the *HP Business Availability Center Deployment Guide* PDF.
-

Permissions Required to Access the System Health Page

The System Health page can be accessed by users with Superuser or Administrator permissions.

System Health Page Layout

The System Health page can be viewed by selecting **Admin > Platform > Setup and Maintenance > System Health**. The System Health page is divided into three panes:

- ▶ **Servers.** The Servers pane is located on the top left of the page and lists:
 - ▶ in the All tab, the names and types of all the installed servers
 - ▶ in the Data Processing tab, the names of all the Data Processing Servers, the service configuration for each, and the status of the worst monitored server resource
- ▶ **Services.** The Services pane is located on the top right of the page and displays the statuses of all the monitored server resources for the server currently selected in the Servers pane.
- ▶ **Management.** The Management pane is located across the bottom of the page and displays the status of tasks that are running or were run during the course of the current Web session.

Service Reassignment in Legacy System Health

In typical enterprise environments, the Data Processing Server is split into three standalone servers:

- ▶ Modeling Data Processing Server
- ▶ Online Data Processing Server
- ▶ Offline Data Processing Server

Each server is installed on a separate machine. Each server might also be installed on one or more backup machines.

If a certain Data Processing Server machine is not functioning properly or requires downtime for servicing, administrators can manually reassign the services running on that machine to a different Data Processing Server machine. Administrators can also preconfigure a specific Data Processing Server to automatically fail over to a specific backup machine. For details on backup servers, see “Understanding Backup Servers” on page 253.

Important: Before manually reassigning services to another server or configuring a server as a backup server for Automatic Failover, ensure that the HP Business Availability Center service is running on that server.

When a service is reassigned via the System Health interface from an active Data Processing Server to a different Data Processing Server, for example a backup server, HP Business Availability Center modifies the setting in the management database that defines the active Data Processing Server. The newly defined server setting in the management database is read by the high availability controller running on the Data Processing Servers. At that point, a process begins whereby HP Business Availability Center stops using the services on the previously active server and begins using the services on the newly active server. This process can take up to several minutes, during which time the system is in downtime.

Note: The Source Adapters service (also known as the CDM service) on the Offline Data Processing Server uses the <**HP Business Availability Center root directory**>\CMDB directory. The CMDB directory must be moved to a separate machine for high availability purposes (that is, configured as a shared directory) to enable success of the Automatic Failover mechanism when backing up the Offline Data Processing Server. For details on configuring the CMDB directory as a shared directory, see “High Availability for the CDM” in the *HP Business Availability Center Deployment Guide* PDF.

Logging

All service reassignments are written to the Audit Log (**Admin > Platform > Setup and Maintenance > Audit Log**).

To view the history of service reassignments, select the **System Console** context in the Audit Log. If required, use the up and down arrows to scroll through the entries.

Log messages are written to the log file <HP Business Availability Center root directory>\log\systemConsole.log. The type of messages depend on the level of logging enabled. By default, only errors are written to this log. For details on changing log level, see “Changing Log Levels” in *Reference Information*.

Configuring Service Reassignment

High-level HP Business Availability Center administrators can use the System Health page to:

- ▶ configure Automatic Failover for the Data Processing Server. For details, see “Configure Automatic Failover for the Data Processing Server” on page 259.
- ▶ manually reassign services to accommodate the need for server machine maintenance. For details, see “Reassign Services Manually” on page 263.

There are several theoretical scenarios for reassigning services among machines, to manage resource issues or enable server administration. The table that follows illustrates these scenarios by indicating the paths along which services can be reassigned.

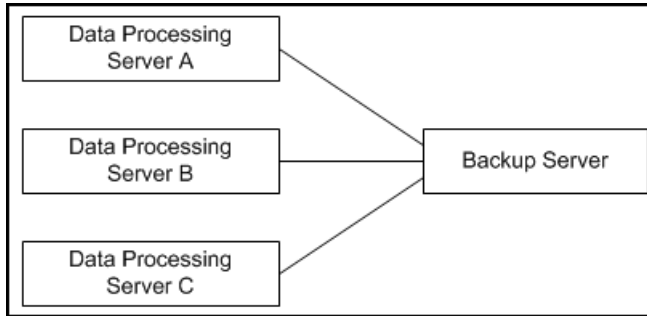
	To Full Data Processing Server	To Modeling Data Processing Server	To Online Data Processing Server	To Offline Data Processing Server
From Full Data Processing Server	Yes	Yes	Yes	Yes
From Modeling Data Processing Server	Yes	Yes	No	No
From Online Data Processing Server	Yes	No	Yes	No
From Offline Data Processing Server	Yes	No	No	Yes

Understanding Backup Servers

The following factors must be considered when configuring a backup server using automatic failover:

- ▶ A primary server does not have a default backup server. A backup server must be explicitly defined. If no backup server is defined, Automatic Failover does not try to locate a suitable backup server, even if one is available.
- ▶ Each server can have only one backup server.
- ▶ Several primary servers can be assigned to the same backup server. Keep in mind, however, that if several primary servers fail simultaneously, the backup server may also fail if it exceeds its performance capacity.

- ▶ The backup server cannot have a defined backup server.
- ▶ After a primary fails and its services move to a backup, the primary, after it restarts, acts as a backup to the backup server for its original services.



For the above diagram, when Data Processing Server A fails, its services automatically move to Backup Server. When it returns online, it acts as a backup for its original services which are now running on Backup Server. However, Data Processing Server A is not defined as a backup for Backup Server.

- ▶ The backup server must have the same operating system as the Data Processing server it backs up. In other words, the active server and its backup server must both be either Solaris or Windows.
- ▶ The active server and its backup server must both have the same version of HP Business Availability Center.
- ▶ The HP Business Availability Center service must be running on the backup server so that it can poll the database intermittently to know when it receives service assignments.
- ▶ If, after enabling Automatic Failover and configuring backup servers, you then disable Automatic Failover, the backup server assignments remain visible on the System Health page.

Data Processing Server Resource Status

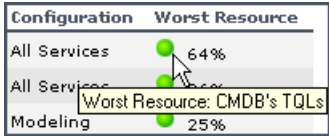
The resource status information that is displayed on the System Health page is based on capacity limit and threshold settings that are preconfigured by HP. These settings can be viewed in the Infrastructure Settings Manager (select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Foundations**, and select **System Health**).

Warning: Do not modify Capacity Limit settings, as doing so can adversely affect the performance of HP Business Availability Center. If your organization requires modification of these settings, it should be done in coordination with your HP representative.

Types of Resource Status Information

Two types of resource status information are displayed:

- ▶ **percentage of capacity limit.** Represents the actual usage of the resource relative to its configured capacity limit. In the example below, the CMDB's TQLs are at 64% of capacity (in this case, 77 TQLs out of a limit of 120).



Configuration	Worst Resource
All Services	64%
All Services	Worst Resource: CMDB's TQLs
Modeling	25%





- **threshold representation of the percentage of capacity limit.** Uses a color-coded icon to express the percentage of the capacity limit, based on the following ranges:

Range	Color Code
<=70% of capacity limit	Green
>70% but <=90% of capacity limit	Yellow
> 90% of capacity limit	Red
No data/No services running	Gray

Resource Status Information in the Servers Pane

In the Servers pane, you can see the following resource status information:

- for each active server in the list, the percentage of capacity limit and its threshold representation, in the Worst Resource column, indicating the status of the worst-performing resource among all the resources being monitored on that server.
- a tooltip with resource details. Place your mouse pointer over a threshold icon to view information on the specific resource whose status is being reported.

Name	Configuration	Worst Resource
PLATFORM02	All Services	 64%
PLATFORM03	All Services	 35%
PLATFORM1	Modeling	 0%
PLATFORM2	Online	 0%

Worst Resource: CMDB's TQLs

Note: The offline server configuration does not report any resource status information as there are currently no monitored resources for the Offline Data Processing Server.

Resource Status Information in the Services Pane

In the Services pane, you can see a detailed display of all monitored server resources for the server selected in the Servers pane.

Name	Performance
Machine Counters	
Memory Usage	43% (344MB/799MB)
Online Services	
Online BLE	
KPIs	0% (107/27000)
CIs	1% (75/15000)
Offline Services	-
Source Adapters	-

- ▶ The **Name** column displays, per resource group, the services and their monitored resources.
- ▶ The **Performance** column displays:
 - ▶ for each resource group, a threshold icon indicating the status of the resource group, based on the worst child rule (the parent node inherits the status of its worst child)
 - ▶ for each service, a threshold icon indicating the status of the service, based on the worst child rule (the parent node inherits the status of its worst child)

- ▶ for each monitored resource, a threshold icon and accompanying percentage indicating the status of the resource, and the numerical representation of the percentage, based on the preset capacity limit for the resource

Note that the capacity limits differ depending on the specific deployment architecture. For example, the capacity limit for CMDB TQLs is lower in a three-server deployment (the CMDB service runs on a Data Processing Server running all services) than it is in a five-server deployment (the CMDB service runs on a dedicated Modeling Data Processing Server).

Monitor System Resources on the System Health Page

This task describes how high-level HP Business Availability Center administrators can use the System Health page to monitor system resource status to identify potential resource issues and take action before the system is adversely affected.

1 View Server Architecture

From the All tab in the Servers pane, you can view the names of all the servers that are deployed in the HP Business Availability Center server architecture, and their type (Gateway or Data Processing).

2 View Data Processing Server Configuration

From the Data Processing tab in the Servers pane, you can view the names of all the Data Processing Servers that are deployed in the HP Business Availability Center server architecture, and their configuration (All services, Modeling, Online, Offline). For details on Data Processing Server configurations, see “High Availability for the Data Processing Server” in the *HP Business Availability Center Deployment Guide* PDF.

In addition, the status of the worst-performing monitored resource is displayed in the Worst Resource column. For details on resource status, see “Data Processing Server Resource Status” on page 255.

3 View Data Processing Server Properties



When a specific server is selected from the Data Processing tab in the Servers pane, you can view properties for that server by clicking the **Show Properties** button in the Services pane. The Properties dialog box displays the following properties:

- ▶ **Name.** The server name.
- ▶ **IP.** The server IP address.
- ▶ **Backup server for this server.** If a backup server is configured for the server, the name of the backup server is displayed. Note that this information is displayed even if Automatic Failover has been disabled.
- ▶ **This server is a backup for servers.** If the server is configured as a backup server, the names of the servers the server is backing up are displayed. Note that this information is displayed even if Automatic Failover has been disabled.

Configure Automatic Failover for the Data Processing Server

The process of automatically moving services from a primary server to another server is called **Automatic Failover**.

This task describes how to configure automatic failover for the Data Processing Server:

1 Enable Automatic Failover of Primary Servers

To enable automatic Failover of Primary Servers, perform the following steps:

- a** Select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Foundations**, select **High Availability Controller**, and locate the **Automatic Failover Enabled** entry in the High Availability Controller - General Properties table.
- b** Click the **Edit** button for **Automatic Failover Enabled**. The Automatic Failover Enabled dialog box opens.



- c Select **true** and click **Save**. The change takes effect immediately.

Note: It is recommended to keep the **Keep Alive Timeout (minutes)** default value of **20**. A lower value may give a false failure alert.

2 Configure the Backup Server for Primary Servers

To configure the backup server for primary servers, perform the following steps:

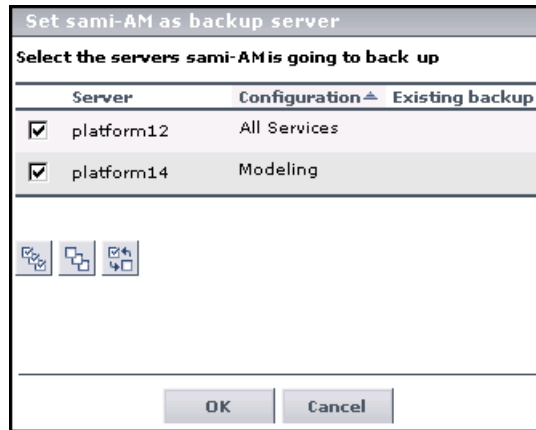
- a Select **Admin > Platform > Setup and Maintenance > System Health**.
- b In the Servers pane, choose the **Data Processing** tab. Click the server to be the backup server. Information about the selected server is displayed in the Services pane.
- c In the Services pane, click the Set as **Backup Server** button to define the server as a backup server. The Set as Backup Server dialog box opens with a list of Data Processing Servers.



For each listed server, the following information is displayed:

- **Server.** The server name.
- **Configuration.** The server configuration (All services, Modeling, Online, or Offline)
- **Existing backup.** Lists the backup server currently defined for the servers in the Server list.

- d Select the primary servers that the backup server is to back up and click **OK** to save your selections.



When a primary server exceeds the **Keep Alive Timeout** with no response, Automatic Failover automatically reassigns the services to the predefined backup server. The primary server automatically shuts down its services in order to prevent duplicate services from running.


Note: While Automatic Failover is moving services, a brief period of high CPU usage on the backup server may occur while those services start. CPU usage returns to normal once all services are running.

When the primary server becomes operational, you must manually reassign services to it from the backup server. For details on manually reassigning services, see “Reassign Services Manually” on page 263.

Remove Automatic Failover

This procedure describes how to stop a server from acting as a backup server for some or all of the servers it is backing up.

To stop a server from acting as a backup server:

- 1** Select **Admin > Platform > Setup and Maintenance > System Health**.
- 2** Choose the **Data Processing** tab In the Servers pane. Click the server that you no longer want to serve as a backup server. Information about the selected server is displayed in the Services pane.
-  **3** Click the **Set as Backup Server** button in the Services pane to open the Set as Backup Server dialog box.
- 4** Clear the check boxes beside some or all of the listed servers, as required.
- 5** Click **OK** to save the settings.

Reassign Services Manually

When there is a need to manually reassign services from one machine to another (for example, due to a resource issue on a given machine, required server maintenance, or to reassign services to a primary server after its services were automatically moved to a backup server using Automatic Failover), follow the procedure below to create and apply server reassignment tasks.

Note: The Source Adapters service (also known as the CDM service) on the Offline Data Processing Server uses the <HP Business Availability Center root directory>\CMDB directory. If the CMDB directory has not been moved to a separate machine for high availability purposes (that is, configured as a shared directory), when the Offline Data Processing Server services are manually reassigned to a different server, the CDM service will not function properly until the CMDB directory is manually copied to the new Offline Data Processing Server. For details on configuring the CMDB directory as a shared directory, see “High Availability for the CDM” in the *HP Business Availability Center Deployment Guide* PDF.

To manually reassign services:

- 1 In the Servers pane, select the server whose services you want to reassign.
- 2 In the Services pane (right pane), click the **Move services as group** button to view the Move services context menu.
- 3 Select one of the below options. The Move Services dialog box opens.
 - **Move all services.** Select to move all services from the server to a different server.
 - **Move modeling services.** Select to move modeling services from the server to a different server.
 - **Move offline services.** Select to move offline services from the server to a different server.
 - **Move online services.** Select to move online services from the server to a different server.

- ▶ **Move system services.** Select to move system services from the server to a different server.
- 4** In the Move Services dialog box, select the server to which you want to reassign the selected group of services. Only servers to which the services can be moved are listed.
- 5** Click **OK** to move the services.
- 6** Monitor the status of the running tasks from the Status tab.

The **Status** tab displays all tasks currently running, or that have completed running during the current Web session.

Note: When manually reassigning services, if a task does not complete (that is, the reassigned services do not start successfully), the **Status** tab continues to display a status message indicating that the task is in progress. Successful reassignment can be verified in the System Health log file, **systemConsole.log**, if the log file is configured to record messages at the **INFO** level. For details on the log levels, see “Log Severity Levels” in *Reference Information*.

System Health Monitoring

The table below describes the different resource groups, services, and monitored resources whose status can be monitored from the System Health page. Note that the offline server configuration—which includes offline services and system services—does not report any resource status information as there are currently no monitored resources for the Offline Data Processing Server.

Resource Group	Service	Monitored Resource	Description
Machine Counters (all servers)		Memory Usage	The percentage of memory usage by the mercury_as process. In addition, the absolute memory usage and total memory capacity values are displayed. These are taken from the server's operating system.
Modeling Services (Modeling Data Processing Server)	Viewing System	CI Instances	The number of configuration item (CI) instances in service views that the server can handle simultaneously
		Views	The number of views that the server can handle simultaneously
	CMDB	Model Objects	The number of CMDB model objects (CIs, KPIs, and so forth) that the server can handle simultaneously
		TQLs	The number of Topology Query Language (TQL) queries that the server can handle simultaneously

Resource Group	Service	Monitored Resource	Description
Online Services (Online Data Processing Server)	Online BLE	CIs	The number of configuration items (CIs) with associated KPIs that the server can handle simultaneously
		KPIs	The number of Key Performance Indicator (KPI) objects that the server can handle simultaneously
Offline Services (Offline Data Processing Server)	Source Adapters	Resource not monitored. If service is running, the "-" character appears. If service is not running, it does not appear in the table.	Service responsible for adding data collector entities to the CMDB

Resource Group	Service	Monitored Resource	Description
System Services (Offline Data Processing Server)	Purging Manager	Resource not monitored. If service is running, the "-" character appears. If service is not running, it does not appear in the table.	Service that handles data purging and partitioning
	New Offline Aggregation Manager	Resource not monitored. If service is running, the "-" character appears. If service is not running, it does not appear in the table.	Service that validates and synchronizes new tasks for the offline aggregator on an hourly or daily basis

Legacy System Health User Interface

This section describes:

- System Health Page on page 268


System Health Page

<p>Description</p>	<p>Displays the status of the servers, resource groups, services, and monitored resources running HP Business Availability Center.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > System Health.</p> <p>The System Health page consists of the following panes:</p> <ul style="list-style-type: none"> ➤ Servers ➤ Services ➤ Management
<p>Important Information</p>	<p>When a designated backup server becomes the active server (it starts running the services of the server it was backing up), an asterisk (*) appears beside the server name in the Servers pane. When the server ceases to act as a backup server (it no longer runs the services of the server it was backing up), the asterisk is removed.</p>
<p>Useful Links</p>	<p>“Legacy System Health - Overview” on page 249</p>

Servers Pane

Description	Displays the status of the servers running HP Business Availability Center. To Access: Select Admin > Platform > Setup and Maintenance > System Health
Important Information	<ul style="list-style-type: none"> ▶ Servers Pane elements described below appear on either the All tab, the Data Processing tab, or both. ▶ If the server is configured as a backup server, the names of the servers the server is backing up are displayed. This information is displayed even if Automatic Failover has been disabled.
Useful Links	<p>“Legacy System Health - Overview” on page 249</p> <p>“Data Processing Server Resource Status” on page 255</p>

The Servers Pane includes the following elements (listed alphabetically):


GUI Element	Description
	Click to refresh the list of servers.
All	Lists the name and type of all servers running HP Business Availability Center.
Configuration	The services that the specified server is configured for.
Data Processing	Lists information on the Data Processing Servers running HP Business Availability Center.
Name	The name of the server.

GUI Element	Description
Server Type	The type of the server.
Worst Resource	<p>The status of the worst-performing resource among all resources being monitored on the server. Performance is indicated as follows:</p> <ul style="list-style-type: none"> ➤ percentage of capacity limit. Represents the actual usage of the resource relative to its configured capacity limit. ➤ threshold representation of the percentage of capacity limit. Uses a color-coded icon to express the percentage of the capacity limit. For details on the ranges of the color-coded icons, see “Types of Resource Status Information” on page 255. <p>Tooltip: Resource details on the specific resource whose status is being reported.</p>

Services Pane




<p>Description</p>	<p>Displays the statuses of all the monitored resources for the server currently selected in the Servers pane.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > System Health</p>
<p>Important Information</p>	<p>The Services Pane is located on the right side of the page.</p> <p>Information is displayed only if you have selected a server in the Servers Pane.</p> <p>The capacity limits displayed in the Performance column differ depending on the specific deployment architecture. For example, the capacity limit for CMDB TQLs is lower in a three-server deployment (the CMDB service runs on a Data Processing Server running all services) than it is in a five-server deployment (the CMDB service runs on a dedicated Modeling Data Processing Server).</p>
<p>Useful Links</p>	<p>“Legacy System Health - Overview” on page 249</p> <p>“Data Processing Server Resource Status” on page 255</p> <p>“System Health Monitoring” on page 265</p>

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Name	Performance
<input type="checkbox"/> Machine Counters	●
└─ Memory Usage	● 43% (344MB/799MB)
<input type="checkbox"/> Online Services	●
<input type="checkbox"/> Online BLE	●
└─ KPIs	● 0% (107/27000)
└─ CIs	● 1% (75/15000)
<input type="checkbox"/> Offline Services	-
└─ Source Adapters	-

The Services Pane includes the following elements (listed alphabetically):

GUI Element	Description
	<p>Click to show properties of the selected server. The <server name> Properties page contains the following fields:</p> <ul style="list-style-type: none"> ▶ Name. The name of the server. ▶ IPs. The server IP address. ▶ Backup server for this server. If a backup server is configured for the server, the name of the backup server is displayed. Note that this information is displayed even if Automatic Failover has been disabled. ▶ This server is a backup for servers. If the server is configured as a backup server, the names of the servers the server is backing up are displayed. Note that this information is displayed even if Automatic Failover has been disabled.
	<p>Click to set the selected server as a backup server.</p>
	<p>Click to move services from the selected server to another server.</p> <p>You choose which services you want to move from the dropdown list that appears, and then enter the destination server in the resulting dialog box.</p>

GUI Element	Description
Name	The services and their monitored resources, per resource group.
Performance	<p>The performance level of the corresponding service, monitored resource, or resource group. Performance data is presented as follows:</p> <ul style="list-style-type: none"> ▶ for each resource group, a threshold icon indicating the status of the resource group, based on the worst child rule (the parent node inherits the status of its worst child) ▶ for each service, a threshold icon indicating the status of the service, based on the worst child rule (the parent node inherits the status of its worst child) ▶ for each monitored resource, a threshold icon and accompanying percentage indicating the status of the resource, and the numerical representation of the percentage, based on the preset capacity limit for the resource <p>For details on the ranges of the color-coded icons, see “Types of Resource Status Information” on page 255.</p>

Management Pane

Description	<p>Displays the status of tasks that are running or were run during the course of the current Web session.</p> <p>To Access: Select Admin > Platform > Setup and Maintenance > System Health</p>
Important Information	The Management Pane is located on the bottom of the page.
Useful Links	“Legacy System Health - Overview” on page 249

Troubleshooting and Limitations

Use the following information to troubleshoot issues, as required.

Problem: HP Business Availability Center servers installed and running in a distributed architecture appear as unavailable in the **Servers** pane.

Problem Cause: To determine server availability, HP Business Availability Center pings the servers according to the name registered in the **SERVERS** table in the database. In certain environments, the host machine performing the ping requires the target machine's IP (and not its machine name), but does not know the IP. Thus, the ping fails and the machine is reported as unavailable.

Solution: Map the names of all HP Business Availability Center server machines (Gateway and Data Processing) to their corresponding IPs in the **C:\WINNT\system32\drivers\etc\hosts** file (path may vary depending on Windows installation) on the Gateway Server machine. If there are multiple Gateway Server machines and/or Gateway Server machines behind a load balancer, perform the above procedure on all machines. Note that the left column is for IP addresses and the right column is for machine names.

10

Audit Log

HP Business Availability Center enables you to view a log of all the actions performed by different users accessing the platform.

This chapter includes:

Concepts

- ▶ Audit Log - Overview on page 275

Tasks

- ▶ Use the Audit Log on page 278

Reference

- ▶ Audit Log User Interface on page 279

Audit Log - Overview

You use the audit log to keep track of different actions performed by users in the system. You can track according to the following contexts:

- ▶ **Alert Administration.** Displays actions related to adding, modifying, deleting, enabling and disabling alerts, as well as registering and unregistering alert recipients.
- ▶ **CI Status Alert Administration.** Displays actions related to creating alert schemes for a configuration item (CI) status alert.
- ▶ **Customer Package Management.** For HP Software-as-a-Service only. Displays actions related to modifying package information such as: package location information, general package properties, Business Process Monitor package properties or SiteScope package properties.

- ▶ **Dashboard Administration.** Displays actions related to configurations made in the Dashboard Administration.
- ▶ **Data Collector Maintenance.** Displays actions related to removing Business Process Monitors and SiteScopes.
- ▶ **Database Management.** Displays actions related to creating, deleting, and modifying users and passwords for profile databases, as well as modifying the status of the Purging Manager.
- ▶ **Deleted Entities.** Displays actions related to adding and deleting data collectors from End User Management Administration. These are Business Process profiles, Real User Monitor engines, and SiteScope monitors.
- ▶ **Downtime/Event Scheduling.** Displays actions related to creating and modifying downtime and scheduled events.
- ▶ **IT World (IT Universe) Configuration.** Displays actions, including editing, updating, and removing CIs and relationship, performed in the IT Universe Manager application.
- ▶ **Monitor Administration (Business Process Monitor).** Displays actions related to profile management and configuration, including starting and stopping profiles, adding and deleting transaction monitors, modifying scheduling, defining and modifying hosts, adding and deleting WebTrace addresses, and modifying transaction thresholds.
- ▶ **Monitor Administration (Real User Monitor).** Displays actions related to Real User Monitor management and configuration, including the addition and deletion of Real User Monitor probes, servers, and host groups, and the configuration and deletion of pages, transactions, and end users.
- ▶ **Monitor Administration (SiteScope).** Displays actions related to profile management and configuration, including starting and stopping profiles, adding and deleting monitors, modifying monitors and groups, editing preferences, and configuring alerts.
- ▶ **Notification Template Administration.** Displays actions related to modifying open ticket information, ticket settings, closed tickets, ticket templates, and subscription information: notification types (locations or general messages), and recipients.

- ▶ **Permissions Management.** Displays all actions related to assigning permissions, roles, and permissions operations for resources onto users and user groups.
- ▶ **Recipient Administration.** Displays actions related to modifying information about the recipients of audit logs.
- ▶ **Scheduled Report Administration.** Displays actions related to modifying the reporting method and schedule of reported events.
- ▶ **Script Repository.** For HP Software-as-a-Service only. Displays actions related to modifying the type of verification of Business Process Monitor scripts, and verification of subscription information.
- ▶ **Service Level Management Configuration.** Displays actions related to service level agreements performed in the Service Level Management application. For a list of the audited actions, see “Use the Audit Log” on page 278.
- ▶ **SLA Alert Administration.** Displays actions related to creating, modifying, or deleting SLA alerts.
- ▶ **System Console.** Displays all services reassignments performed in the System Health interface to resolve system resource issues.
- ▶ **User Defined Reports.** For HP Software-as-a-Service only. Displays actions related to the creation and modification of custom reports.
- ▶ **User/Group Management.** Displays actions related to adding, modifying, and deleting users and user groups.
- ▶ **View Manager.** Displays actions related to KPIs such as adding a KPI, editing a KPI, and deleting a KPI. Additionally, it displays actions related to changing the **Save KPI data over time for this CI** and the **Monitor changes** options.

Use the Audit Log

You access the audit log from the Audit Log page, available from the Setup and Maintenance menu of Platform Administration.

To use the audit log:

- 1** Select **Admin > Platform > Setup and Maintenance > Audit Log**. The Audit Log page opens.
 - 2** Select a context using the Context filter.
 - 3** Where relevant, select a profile from the list. HP Business Availability Center updates the table with the relevant information.
 - 4** Optionally, click the Auditing Filters link to open the Auditing Filters pane and specify filter criteria. The following filters are available:
 - ▶ **User**. Specify a user in the system to view actions performed by only that user.
 - ▶ **Containing text**. Specify a text string that the action must contain to be displayed.
 - ▶ **Start after and End before**. Specify a starting and ending time period to view actions for only that period. Click the **More** button to open the Calendar dialog box where you can select a date.
- Click OK. HP Business Availability Center updates the table with the relevant information.
- 5** If required, use the Previous Page and Next Page arrows to move through the audit log.



Audit Log User Interface


This section describes:

- Audit Log Page on page 279

Audit Log Page

Description	Enables you to keep track of different actions performed by users in the system. To Access: Select Admin > Platform > Setup and Maintenance > Audit Log .
Useful Links	“Audit Log - Overview” on page 275




The Audit Log page includes the following elements (listed alphabetically):

GUI Element	Description
	Click to move to the previous page or next page in the audit log.
Actions	Displays the actions performed by the specified user.
Additional Information	Displays additional information, where relevant.
Auditing Filters	Click the Auditing Filters heading to specify filter criteria. For details, see “Auditing Filters Pane” on page 280.
Context	Select a context to view.
For user	Displays the user whose actions are displayed in the audit log, as specified in the Auditing Filters pane. Default Value: All
Modification Date	Displays the date and time that the specified actions were performed.
Modified By	Displays the user who performed the specified actions.

GUI Element	Description
Profile	Select a profile for which you want to view the actions performed. Note: This field is not visible for all contexts.
RUM Engine	Select a RUM Engine for which you want to view the actions performed. Note: This field is displayed only if you have chosen the Monitor Administration (RUM) context.
SiteScope	Select a SiteScope for which you want to view the actions performed. Note: This field is displayed only if you have chosen the Monitor Administration (SiteScope) context.
Time Period	Displays the time period whose actions are displayed in the audit log, as specified in the Auditing Filters pane. Default Value: All

Auditing Filters Pane

The Auditing Filters pane includes the following elements (listed alphabetically):

GUI Element	Description
	Click to open the calendar dialog box and select a date.
	Click to expand the Auditing Filters pane.
	Click to collapse the Auditing Filters pane.
Apply	Click to apply the selected filters.
Cancel	Click to cancel filtering and close the Auditing Filters pane.
Clear All	Click to clear the filters and display all log items.

GUI Element	Description
Containing text	Specify a text string that the action must contain to be displayed.
End before	Specify an ending time period to view actions for.
Start after	Specify a starting time period to view actions for.
User	Specify a user in the system to view actions performed by only that user.

11

Report Schedule Manager

This chapter provides information on the Report Schedule Manager.

This chapter includes:

Concepts

- ▶ Report Schedule Manager — Overview on page 283

Reference

- ▶ Report Schedule Manager User Interface on page 284

Report Schedule Manager — Overview

A user with Administrator permissions can edit, delete, resume, or pause scheduled reports in the Report Schedule Manager. You schedule user reports (custom reports, trend reports, service reports, and favorite filters) in Report Manager to enable specific recipients to automatically receive the specified report, via email, at regularly defined intervals. For details on scheduling user reports, see “Create a Schedule” in *Reports*.

Report Schedule Manager User Interface





This section describes:




- Report Schedule Manager Main Page on page 284

Report Schedule Manager Main Page

Description	Enables you to manage schedules configured on reports and report objects in the Report Manager. To access: Select Admin > Platform > Report Schedule Manager .
Important Information	You cannot create a new schedule from the Report Schedule Manager main page. For details on creating schedules, see “Create a Schedule” in <i>Reports</i> .
Included in Tasks	“Create a Schedule” in <i>Reports</i> .

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A–Z)	Description
	Click to open the Edit Schedule for <Report Name> dialog box and edit the selected schedule. For details, see “Create New Schedule Dialog Box” in <i>Reports</i> . Note: This dialog box enables you only to edit an existing schedule - you create a new schedule from Report Manager interface. For details, see “Create a Schedule” in <i>Reports</i> .
	Click to delete the selected schedule.
	Click to resume the selected schedule.
	Click to pause the selected schedule.

GUI Element (A–Z)	Description
	Click to refresh the Report Schedule Manager page.
	Click to reset the width of the columns to the default setting.
	Click to select columns to be visible in the table. For details, see “Working with Tables” in <i>Reference Information</i> .
Generation Time	The time (in the indicated time zone) that the schedule is to be generated.
Recipients	The individuals configured in Report Manager to receive the report or report item at scheduled intervals. For details on configuring Schedules, see “Create New Schedule Dialog Box” in <i>Reports</i> .
Recurrence	The recurrence pattern for the selected schedule.
Report Name	The name of the report that the schedule is configured for.
Report Type	The type of report that the schedule is configured for.
Status	<p>The status of the schedule. Possible values are:</p> <ul style="list-style-type: none"> ➤ Active ➤ Paused

Part III

Data Collection

12

Data Collector Maintenance

Note to HP Software-as-a-Service customers: HP Operations administrators these pages and the interface is hidden from view, except for the user accessing with superuser permissions.

You can perform ongoing maintenance tasks on the data collectors installed with your platform to suit the changing requirements of your organization.

This chapter includes:

Concepts

- ▶ Data Collector Maintenance - Overview on page 290
- ▶ Removing a Business Process Monitor on page 291

Tasks

- ▶ Remove a Business Process Monitor Remotely on page 291

Reference

- ▶ Data Collector Maintenance User Interface on page 293

Data Collector Maintenance - Overview

The HP Business Availability Center platform includes installable components that provide data collection capabilities. The Data Collector Maintenance page enables you to manage and maintain the data collectors in your platform.

You use the Data Collector Maintenance page to:

- view a detailed list of all data collectors in your platform
- remove a Business Process Monitor instance
- view a data collector's current properties

You can also link to the administration site of the data collector by clicking the link on the right column of the Data Collector Maintenance page.

Note: Data collectors can be installed from the Downloads page in Platform Administration. For details on downloading, see “Downloads Overview” on page 77.

The Data Collector Maintenance page is available in the Data Collection tab of Platform Administration and displays the current data collector instances registered in the management database for each data collector type. The page is divided into tabs representing the following types of data collectors:

- SiteScope
- Business Process Monitor
- Real User Monitor

Removing a Business Process Monitor

If a specific Business Process Monitor data collector becomes obsolete, you can use the Data Collector Maintenance page to remove it from the management database.

Removing a Business Process Monitor deletes it only from the management database, not from the profile database. For example, a removed Business Process Monitor instance that was added to a profile at least once, no longer appears in the list of available hosts that is displayed when creating profiles. However, the location of the removed host still appears in different areas of HP Business Availability Center (for example, in reports and filters). If you do not want a removed Business Process Monitor instance to appear in reports, use report filters to remove the location associated with the data collector. For details on configuring report filters, see “Report Filters Page” in *Using End User Management*.

Remove a Business Process Monitor Remotely

You can use HP Business Availability Center to remove Business Process Monitor data collectors that are no longer in use if one of the following criteria is met:

- ▶ The Business Process Monitor is not associated with any profiles.
- ▶ The Business Process Monitor has not pinged the database server hosting the management database for at least 24 hours.

To stop the Business Process Monitor from pinging the database server, you must shut down the Business Process Monitor.

To remove a Business Process Monitor instance:

- 1** Select **Admin > Platform > Data Collection**. Choose **Data Collector Maintenance**. The Data Collector Maintenance page opens.
- 2** If required, filter the list using the **Location** filters to view specific locations from which you want to remove data collector instances.

- 3 Select the check box for the data collector instance you want to remove, checking the removable column to see if it is removable.



If the Removable column has **No** listed for this instance, you can click the **Information** button to see why the data collector is not removable. A dialog box displaying information on the data collector opens. For details, see “Data Collector Information Dialog Box” on page 295.

- 4 Click **Remove**, and confirm that you want to remove the instances.

To refresh the list of services:



Click the **Refresh** button at the bottom of the page.

Data Collector Maintenance User Interface



This section describes:

- Data Collector Maintenance Page on page 293

Data Collector Maintenance Page


Description	<p>Enables you to:</p> <ul style="list-style-type: none"> ➤ View a list of your data collectors ➤ View data collector properties ➤ Remove a Business Process Monitor instance <p>To access: Select Admin > Platform > Data Collection > Data Collector Maintenance.</p>
Important Information	<ul style="list-style-type: none"> ➤ Elements described in the following table appear on all tabs, unless otherwise noted. ➤ A Business Process Monitor instance is identified by the combination of the Host Name and Location Name. Both the host name and location name are defined by the user when setting up a Business Process Monitor instance. For details, see “Business Process Monitor Host Page” in the <i>Business Process Monitor Administration</i> PDF.
Useful Links	“Data Collector Maintenance - Overview” on page 290

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A–Z)	Description
	Click to refresh the list of services.
	Click to view the information window for the specific data collector. For details, see “Data Collector Information Dialog Box” on page 295.

GUI Element (A–Z)	Description
<link to data collector's administration site>	Enables you to perform administrative tasks on the data collector directly from this page.
Export BPM Information Button	Click to export information from the selected Business Process Monitors to a text file. Note: This button is visible only on the Business Process Monitor tab.
Host Name	The name of the host machine on which the selected data collector is installed.
IP Address	The IP address of the host machine on which the data collector is installed.
Last Ping Time	The last time the service pinged the management database.
Location	The location of the host machine on which the data collector is installed.
Location drop down list	Select to filter the list of data collectors by host location.
Removable	An indication of whether or not the data collector instance is removable. Note: This column is visible only on the Business Process Monitor tab.
Remove Button	Click to remove selected Business Process Monitors. Note: This button is visible only on the Business Process Monitor tab.
Version	The version number, including build number, of the data collector software.

Data Collector Information Dialog Box

Description	Displays information on a data collector, including an explanation of why a non-removable instance cannot be removed. To access: Select Admin > Platform > Data Collection > Data Collector Maintenance ; click the Information Button  next to the selected data collector.
Important Information	The Data Collector Information dialog box displays the same fields that appear on the tables in the Data Collector Maintenance page tabs, in addition to the fields described in the following table.
Useful Links	“Data Collector Maintenance - Overview” on page 290

The following elements are included:

GUI Element (A–Z)	Description
Associated Profiles	The profiles currently associated with the data collector.
Build Number	The build number of the data collector software.
Installed Updates	A list of the updates that have been installed on the data collector software.
Last Error	The last reported error message, if one exists.
Last Error Time	The time of the last reported error message, if one exists.

13

Downtime/Event Scheduling

Note to HP Software-as-a-Service customers: HP Operations administers these pages and the interface is hidden from view, except for the user accessing with superuser permissions.

This chapter includes the main concepts and reference information for scheduling Downtime and Events.

This chapter includes:

Concepts

- ▶ Downtime and Event Scheduling - Overview on page 298

Reference

- ▶ Downtime Events User Interface on page 299

Downtime and Event Scheduling - Overview

Downtime or other scheduled events can sometimes skew the results of system availability and performance reports. You therefore may want to exclude these periods of time from reports and alerts.

You define downtime or a scheduled event that will occur in the future, and HP Business Availability Center excludes data collected during this time interval from its reports. For example, you might want to exclude a recurring maintenance event or a holiday.

Using the Downtime/Event Scheduling page, you can apply a downtime event to multiple profiles. For the defined time interval, you select whether HP Business Availability Center stops sending alerts, stops running the associated profiles, or both.

For details on defining downtime and events, see “Downtime/Event Schedule Page” on page 299.

Downtime Events User Interface

This section describes:

- Downtime/Event Schedule Page on page 299
- New Downtime/Event Schedule Dialog Box on page 300

Downtime/Event Schedule Page

Description	Displays the list of scheduled events in which HP Business Availability Center is marked as being in downtime. To access: Select Admin > Platform > Data Collection > Downtime/Event Schedule .
Important Information	You can edit and delete only those events for which you have full permissions on all the profiles associated with the event. For details on permissions, see “Permissions Overview” on page 363.
Useful Links	“Downtime and Event Scheduling - Overview” on page 298

The following elements are included:

GUI Element (A–Z)	Description
Associated Profiles	The profiles associated with the event.
Event Description	A description of the downtime or scheduled event.
Event Name	The name of the downtime or scheduled event.
New Event	Click to create a new downtime or scheduled event.

New Downtime/Event Schedule Dialog Box

Description	Enables you to schedule downtime or an event when HP Business Availability Center excludes data collected during this time interval from its reports. To access: Select Admin > Platform > Data Collection > Downtime/Event Schedule > New Event.
Important Information	These settings do not affect the generation of alerts defined in SiteScope and cannot stop SiteScope from running during downtime or scheduled events.
Useful Links	“Downtime and Event Scheduling - Overview” on page 298

Event Schedule General Properties Pane

Description	Enables you to enter the name and description of the event you are creating. To access: Click the New Event button on the Download/Event Schedule Page.
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The following elements are included:

GUI Element (A–Z)	Description
Event Description	Enter a description of the event being configured.
Event Name	Enter a descriptive name for the event being configured.

Event Frequency Pane

Description	Enables you to schedule the frequency with which the event is to occur. To access: Click the New Event button on the Download/Event Schedule Page.
Important Information	The time period that you define here must be according to the time at the HP Business Availability Center server, and not according to the time on the client on which you are working (if the server and client are in different time zones).

The following elements are included:



GUI Element (A–Z)	Description
End On...	Click to configure the date and time for the event to end.
Event Duration	Select the duration of the event you are configuring. Select the relevant number of days, hours, and minutes that the event is to take place for.
Event Duration	Configure the duration of the event, in hours and minutes.
Every	Select to configure an event that is to occur more than once. You then select the appropriate day(s) of the week that the event is to occur on.
Every <date> of each month	Select to configure an event that is to occur once per month. Select the date of the month from the corresponding drop-down box.
Limit event recurrence to the following time range	Select to limit the event recurrence to occur only during the specified time range.
Once	Select to configure an event that is to occur one time.
Recurring Event Start Time	Configure the time of day that the recurring event is to start on.

GUI Element (A–Z)	Description
Single Event Start On	Click to configure the start date for the event you are configuring.
Start On...	Click to configure the date and time for the event to start.

Event Schedule Action Pane

Description	Enables you to specify the action to be performed during the event, and the profiles for which they apply. To access: Click the New Event button on the Download/Event Schedule Page.
Important Information	Only those profiles for which the user has full permissions appear in the Available or Selected profiles list. Additional profiles for which the user does not have permissions may be defined in the platform, but they will not appear for this user.

The following elements are included:

GUI Element (A–Z)	Description
	Click to remove the highlighted profiles from the Selected Profile list.
	Click to move the highlighted profiles to the Selected Profiles list.
Available Profiles	Highlight a profile to move it to the Selected Profiles list. Hold the Ctrl key while selecting to choose multiple profiles.
Selected Profiles	The list of profiles associated with the event.

GUI Element (A–Z)	Description
Stop Running the Profile during the event occurrence	Select to stop running the selected Business Process profile and data collection during the time the event is scheduled to occur.
Stop sending Event Based alerts during the event occurrence	Select to prevent alerts from being generated during the time the event is scheduled to occur.

14

Profile Entity Maintenance

This chapter includes the main concepts and reference information for Profile Entity Maintenance.

This chapter includes:

Concepts

- ▶ Profile Entity Maintenance Overview on page 305

Reference

- ▶ Profile Entity Maintenance User Interface on page 306

Profile Entity Maintenance Overview

The Profile Entity Maintenance page enables you to exclude unwanted entities from your profiles by performing the following actions:

- ▶ Configure report filters globally. For details, see “Configure Report Filters Globally” on page 305.
- ▶ Delete entities from the database. For details, see “Delete Entities From the Database” on page 306.

Configure Report Filters Globally

Global report filters enable administrators to exclude - per profile - specific transactions, locations, and groups from all HP Business Availability Center reports for the current and future profile sessions. This is useful if you want information only from specific entities in your profile.

Global report filters affect all users. Any transaction, location, or group that is filtered out using global report filters is unavailable in the user-level report filters. For details on specifying report filters per user, see “Report Filters Page” in *Using End User Management*.

Delete Entities From the Database

HP Business Availability Center enables you to delete obsolete entities that are no longer associated with Business Process profiles. These entity types include transactions, locations, and groups.

When you add a transaction monitor to a Business Process profile, the transaction and the transaction’s location and group are added to the profile database. Even when a transaction monitor is deleted from the Business Process profile, the transaction and its location and group are still listed in the profile database. Until they are deleted in the Profile Entity Maintenance page, they appear in reports and filter lists for the profile.

Note: You use the End User Management Administration page to create Business Process profiles and add transaction monitors to those profiles. You also delete transaction monitors from profiles in End User Management Administration. For details, see “Managing Business Process Profiles Overview” in *Using End User Management*.

Deleting transactions, locations, and groups affects all users. You delete only those transactions, locations, and groups that are no longer associated with the selected profile.

Profile Entity Maintenance User Interface

This section describes:

- ▶ Profile Entity Maintenance Page on page 307

Profile Entity Maintenance Page

Description	<p>Enables administrators to exclude - per profile - specific transactions, locations, and groups from all HP Business Availability Center reports for the current and future profile sessions.</p> <p>To access: Select Admin > Platform > Data Collection > Profile Entity Maintenance.</p>
Important Information	<ul style="list-style-type: none"> ▶ To activate global filter settings for the current user, log out of HP Business Availability Center and log in again. ▶ Filtered values still appear in user-defined (Custom and Trend) reports that were created before configuring the filter. To remove newly filtered values from existing user-defined reports, you must remove and re-add the components containing the elements for which filters have been set, and save the report.
Useful Links	“Profile Entity Maintenance Overview” on page 305

The following elements are included:

GUI Element (A–Z)	Description
Apply	Click to activate the selected filter(s).
Associated Hosts	<p>The machine that hosts the location machine, if applicable.</p> <p>Note: This field appears only on the Locations tab.</p>
Associated Scripts	<p>The scripts associated with the specified transaction, if applicable.</p> <p>Note: This field appears only on the Transactions tab.</p>
Associated Locations	<p>The locations where the specified group is located, if applicable.</p> <p>Note: This field appears only on the Groups tab.</p>

GUI Element (A–Z)	Description
Delete	<p>Select the check box next to the transactions, locations, or groups you want to delete.</p> <p>Important: You can delete only those transactions, locations, or groups which are no longer associated with the selected profile (i.e. - not in use). Only the check boxes for those entities are enabled for deletion. If an entity is still associated with the selected profile, the Delete check box is disabled for that entity.</p>
Filter from Reports	<p>Select the check box next to the transactions, locations, or groups you want to exclude from reports for all users in the system.</p>
Group Name	<p>The name of the group you can exclude from reports for all users in the system.</p> <p>Note: This field appears only on the Groups tab.</p>
Groups tab	<p>Displays a table of the groups associated with the selected profile.</p>
Location Name	<p>The name of the location you can exclude from reports for all users in the system.</p> <p>Note: This field appears only on the Locations tab.</p>
Locations tab	<p>Displays a table of the locations associated with the selected profile.</p>

GUI Element (A–Z)	Description
Select Profile	Choose the profile from which you want to select transactions, locations, or groups to exclude from reports.
Transaction Name	The name of the transaction you can exclude from reports for all users in the system. Note: This field appears only on the Transactions tab.
Transactions tab	Displays a table of the transactions that are running on the selected profile.

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Working with Measurement Filters

Note to HP Software-as-a-Service customers: HP Operations administrators these pages and the interface is hidden from view.

This chapter includes the main concepts and tasks for Measurement Filters.

This chapter includes:

Concepts

- Measurement Filters Overview on page 312

Tasks

- Define Measurement Filters on page 313

Reference

- Measurement Filters User Interface on page 314

Measurement Filters Overview

Measurement filters enable you to harvest significant data from the quantities of data sent to the HP Business Availability Center database from various data sources (including HP data collectors and third-party data sources) by creating filters that display only the most relevant data required.

You can create measurement filters for all data samples for which HP Business Availability Center uses the Universal Data Exchange (UDX) framework. These include Real User Monitor data samples, SiteScope Integration Monitor data samples, and Business Logic Engine data samples. If you are building a measurement filter for certain Real User Monitor data types, you can choose the value from a list (instead of typing it in the field). For details on the applicable data types and the samples used in HP Business Availability Center, see “Data Samples” in *Reference Information*.

Once you set up measurement filters, you can use them in various contexts in HP Business Availability Center, including:

- ▶ when defining trend reports using the Custom monitor type
- ▶ when creating views in CMDB Administration (all defined measurement filters are automatically added as CIs to the UDX Measurement Filters view)
- ▶ when creating service level agreements (by adding measurement filter CIs to the SLA)

Note: In certain contexts in the HP Business Availability Center Web interface, the term "custom" data is used to categorize the data samples for which HP Business Availability Center uses the Universal Data Exchange (UDX) framework.

Define Measurement Filters

This task describes how to define a measurement filter.

You define measurement filters from the Measurement Filters page, which you access from the **Admin > Platform > Data Collection** tab. For details, see “Measurement Filters Page” on page 317.

For details on the data types listed on the Measurement Filters page, see “Data Samples” in *Reference Information*.

1 Prerequisites

You must access the Measurement Filters page to define a measurement filter. Select **Admin > Platform > Data Collection** tab, and click the **New Filter** button.

2 Create a New Filter

You create measurement filters to display only the most relevant data entering HP Business Availability Center. For details on the user interface for creating a measurement filter, see “Filter Page” on page 314.

3 Create a Category

Optionally, you define categories that help to organize your filters in a meaningful manner. For details on defining categories, see “Measurement Filters Page” on page 317.

4 Assign a Category to a Measurement Filter

Optionally, you can assign one or more categories to a filter. For details on assigning categories to a filter, see “Measurement Filters Page” on page 317.

Measurement Filters User Interface

This section describes:

- Filter Page on page 314
- Measurement Filters Page on page 317

Filter Page

Description	Enables you to configure a new filter for filtering data, according to data type, from HP Business Availability Center. To access: Select Admin > Platform > Data Collection > Measurement Filters , click the New Filter button.
Important Information	<ul style="list-style-type: none"> ➤ You build an expression by working in the following order: Field, Operator, Value. ➤ You should not use a field and operator combination twice in the same And phrase. ➤ The values you enter in the Value box are case sensitive and you must enter them precisely as they are used in the samples.
Included in Tasks	“Define Measurement Filters” on page 313
Useful Links	“Measurement Filters Overview” on page 312

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A–Z)	Description
Add 'OR' Expression	Click to define alternate parameters for the filter.
Add Values	Click to add specified values to the Value field. Note: This button is enabled only for select RUM data types fields. For details, see “Add Predefined Values to Fields” on page 316.
And	Click to define additional parameters for the filter.

GUI Element (A–Z)	Description
Boolean Expression	Displays the result of the configured filter as a boolean expression.
Field	Choose the field by which to filter the sample. For a list of fields associated with each sample, see “Data Samples” in <i>Reference Information</i> .
Name	Enter a descriptive name for the filter.
Operator	<p>Choose an operator to server as a rule for filtering data in fields for the chosen sample.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ The list of operators displayed depends on the selected field. ▶ If you select a numeric operator, the value must be in the same numeric format as appears in the database. ▶ If you select a text operator, you can enter a single value without quotation marks, as they are added automatically when HP Business Availability Center builds the expression. To add two values, add quotation marks around each value, and separate them by a comma. For example, to define a filter that searches for a transaction name that is either HP or OVO, enter "HP","OVO".
Select if this event is intended only for failures	<p>Select Yes to create an event that monitors failures only.</p> <p>Note: This field is displayed only if you are creating a filter for one of the following data types:</p> <ul style="list-style-type: none"> ▶ Alert Log ▶ Event ▶ KPI Statuses

GUI Element (A–Z)	Description
Set the event’s failure definition	<p>Set a severity value that filters data according to the values sent from an external application.</p> <p>Notes:</p> <ul style="list-style-type: none"> ▶ This field is enabled only if Yes is selected in the Select if this event is intended only for failures field. ▶ Severity values are defined in the external application.
Value	Enter a value that the expression compares with the value in the data sample.

Add Predefined Values to Fields



When configuring a new measurement filter, you enter a value that the boolean expression compares with the value in the data sample. However, if you are building a measurement filter for certain Real User Monitor data types, you can choose the value from a list (instead of typing it in the **Value** field). This is true for the following data types:

Data Type	Field	Operator
RUM Pages	Page Name End User Name	in/not in
RUM End Users	End User Name	in/not in
RUM Transactions	Transaction Name End User Name	in/not in

Measurement Filters Page

Description	Displays the measurement filters configured for the data received by HP Business Availability Center, to display only the most relevant data. To access: Select Admin > Platform > Data Collection > Measurement Filter .
Important Information	To edit a filter, click the filter's name in the list of filters.
Included in Tasks	"Define Measurement Filters" on page 313
Useful Links	"Measurement Filters Overview" on page 312 "Data Samples" in <i>Reference Information</i> .

The following elements are included:

GUI Element (A–Z)	Description
	Click to collapse and hide the filter list. Note: This option appears only selecting Category to view the Measurement Filter list by category.
	Click to expand and view the filter list. Note: This option appears only selecting Category to view the Measurement Filter list by category.
Category	Select to display the filters by category.
Category button	Click to view the category that the filter is associated with.

GUI Element (A–Z)	Description
Category Manager	<p>Click to open the Category Manager dialog box and view the list of filter categories. For details on the Category Manager dialog box, see “Category Manager Dialog Box” on page 318.</p> <p>Note: This button is visible only if you have chosen to view filters by category.</p> <p>The Category Manager page contains of the following elements:</p> <ul style="list-style-type: none"> ➤ Category Name. Lists the available categories. ➤ New Category. Click to create a new category.
Data Type	The data type for which you want to define a filter.
Duplicate button	Click to copy settings of the specific filter to a new filter.
Filter	The name of the specific filter.
Name	Select to display the filters by name.
New Filter	Click to create a new filter.
Search	<p>Enter the complete or partial filter name in the Search box and click Go to locate a specific filter.</p> <p>Note: You can type an asterisk to replace characters. For example, to search for the filter probe on cats machine, enter *cat*.</p>

Category Manager Dialog Box

Description	<p>Enables you to view the list of filter categories, and to add a new filter category.</p> <p>To access: Select Admin > Platform > Data Collection > Measurement Filter, select the Category option and click Category Manager.</p>
Included in Tasks	“Define Measurement Filters” on page 313

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
Category Name	Lists the available categories.
New Category Button	Click to open the New Category dialog box and create a new category. Enter the name of the category in the Name field of the New Category dialog box.

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Central Repository Service

Note to HP Software-as-a-Service customers: The repository for HP Software-as-a-Service scripts functions differently from the repository described here. For details on working with scripts, see “HP Software-as-a-Service Script Repository” on page 342.

This chapter includes the main concepts, tasks, and reference information for the Central Repository Service.

This chapter includes:

Concepts

- ▶ Central Repository Service - Overview on page 322
- ▶ Uploading Scripts and Creating File Sets on page 323

Tasks

- ▶ Upload Scripts on page 324
- ▶ Work With Scripts on page 325

Reference

- ▶ Central Repository Service Permissions on page 327
- ▶ Central Repository Service User Interface on page 330

Central Repository Service - Overview

The Central Repository Service is the central storage in which all your organization's Business Process Monitor scripts are stored. The repository enables you to organize your scripts into logical groups and to view and manage the properties of those scripts. The repository also enables version control and version updates.

The Central Repository Service enables you to:

- ▶ create and manage user-defined folders for organizing your scripts.
- ▶ upload scripts to a repository folder for use when creating monitors
- ▶ manage the scripts that have been uploaded to the repository
- ▶ control the versions of the file sets with check in and check out functionality, including downloading script content onto your local system for editing

The Central Repository Service is installed during HP Business Availability Center deployment and resides along with the management database configured for your HP Business Availability Center installation.

To generate business process data, you must create profiles and transaction monitors to run scripts that include those processes you want monitored. When you add a transaction monitor to a profile in End User Management Administration, you can add only those scripts that have been stored in the Central Repository Service. For details on adding profiles and transaction monitors, see “Creating Business Process Profiles and Monitors Overview” and “Managing Business Process Profiles Overview” in *Using End User Management*.

Note: If your HP Business Availability Center management database is running on an Oracle Server: For the Central Repository Service to function correctly, the management user schema requires execution permissions (the default) for the DBMS_LOB package. If these permissions have been revoked, the Central Repository Service is unable to access the database. Before using the Central Repository Service, confirm with your database administrator that these permissions are in place.

You can import the Production Analysis Reports from Application Performance Lifecycle (APL) Scripts to the Central Repository Service. For details, see “Work with the Central Repository Service (CRS)” in *Solutions and Integrations*.

Uploading Scripts and Creating File Sets

You create file sets that contain the scripts you upload to the Central Repository Service. File sets are the collection of files that make up the script and enable the transactions to be run by the Business Process Monitor. These file sets must be created within an existing folder in the Central Repository Service. For details on how to create file sets, see “Upload Scripts” on page 324.

To create scripts for use in HP Business Availability Center, you must record Business Process Monitor scripts using the HP Virtual User Generator recording tool. For details, see “VuGen Recording Tips” in *Using End User Management*.

Once these scripts are recorded and saved as .zip files, you upload them to the Central Repository Service.

Note: When zipping a script in Virtual User Generator for upload to the Central Repository Service, it is recommended that you zip only the script's run-time files.

You must upload scripts to the repository to access them when creating profiles in End User Management Administration. You create profiles and transaction monitors to collect performance data on the transactions within the scripts. For details on creating profiles, see “Creating Business Process Profiles and Monitors Overview” in *Using End User Management*.

Upload Scripts

This task describes how to upload scripts in the Central Repository Service.

This task includes the following steps:

- “Prerequisites” on page 324
- “Upload Scripts to the Central Repository Service” on page 324
- “Results” on page 325

1 Prerequisites

You must create folders to store scripts in. For details on creating and managing folders, see “Panel Tree Pane” on page 338.

2 Upload Scripts to the Central Repository Service

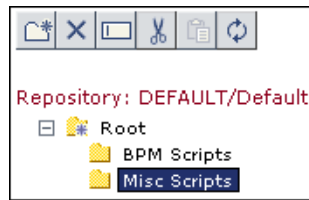
You upload scripts to the Central Repository Service folders.

- a** In the folder tree in the left pane, highlight the folder into which you want to upload the script.
- b** In the right pane, click the **New** button on the bottom right corner of the Folder Content area, and fill in the relevant cells in the Create File Set dialog box.

For details on uploading scripts, see “File Set Table Pane” on page 330.

3 Results

Folders are created under the Root folder.



The folders contain the various scripts you upload to the Central Repository Service.

Work With Scripts

This task describes how to work with scripts in the Central Repository Service.

This task includes the following steps:

- “Prerequisites” on page 325
- “Check out a Version” on page 326
- “Download File Set Content” on page 326
- “Upload File Set Content” on page 326
- “Checking In a File Set” on page 326
- “Results” on page 327

1 Prerequisites

You must upload a script in the Central Repository Service. For details on uploading scripts, see “Upload Scripts” on page 324.

2 Check out a Version

You can check out a version of a file set to ensure that no other user makes changes to this version of the script while you are editing it. For details on the user interface for checking out a version, see “Action Buttons” on page 332.

3 Download File Set Content

You download file set content to open and edit the downloaded script. It is good practice to check out the file set before downloading it to ensure that another user is not simultaneously editing the same file set’s script. For details on the user interface for downloading a file set, see “Action Buttons” on page 332.

4 Upload File Set Content

Optionally, you can upload a script without creating a new file set version. For details on the user interface for uploading a script, see “Action Buttons” on page 332.

5 Checking In a File Set

You check the file set back into the Central Repository Service once you have finished editing the script and saving the .zip file in your file system. Alternatively, you can cancel the check out to prevent the Central Repository Service from creating a new version number and leave the file checked in with its current version number. For details on checking in a file set and cancelling check out, see “Action Buttons” on page 332.

6 Results

Your scripts appear in the File Set Table Pane on the right side of the page.

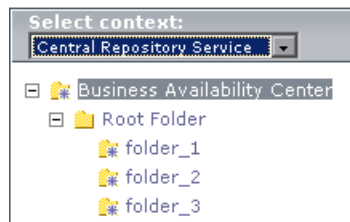
Folder Content:/Root/BPM Scripts				
Name	Owner	Last Update	Checked Out By	Action
<input type="checkbox"/> Springfield...upport	admin	08/08/05 15:57:23 PM		
<input type="checkbox"/> Sprin5...rvices	admin	08/08/05 16:00:11 PM		
<input type="checkbox"/> Springfield_Travel_Services	admin	08/08/05 17:43:31 PM	admin	<input checked="" type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> Unionv...upport	admin	08/08/05 18:19:13 PM	leza	<input checked="" type="checkbox"/> <input type="checkbox"/>

Central Repository Service Permissions

This section includes the following topics:

- “Setting Permission Mode” on page 328
- “Assigning Permissions Operation” on page 329

You can restrict a user’s access to individual folders and all of its scripts and subfolders. In the example below, if a user has permission to access the folder_1 folder, he also has permission to access its scripts and its subfolders.



Setting Permission Mode

Permission management is in either of the following modes:

- ▶ **enforce permission.** This is the default mode. Users authenticated in HP Business Availability Center are allowed to perform actions on specific folders. Only those folders and scripts that the user has permission to access are displayed in the Folder Content area.
- ▶ **do not enforce permission.** Any user authenticated in HP Business Availability Center can perform any action on any folder. All folders and scripts are displayed in the Folder Content area.

You can change the permission mode from **enforce permission** to **do not enforce permission**, and vice versa.

The following procedure changes the mode from **enforce permission** to **do not enforce permission**.

To change permission mode:

- 1 Stop HP Business Availability Center on the Gateway server.
- 2 Using WinZip or WinRAR, extract and then open <HP Business Availability Center root directory>/lib/crs_resources.jar. Do the following:
 - a rename `crs_common_config.xml` to `crs_common_config_tas.xml`
 - b rename `crs_common_config_full_permissions.xml` to `crs_common_config.xml`
 - c save and close `crs_resources.jar`
- 3 In the <HP Business Availability Center root directory>/conf/tas directory, do the following:
 - a rename `crsContext.xml` to `crsContext.xml.old`
 - b rename `crsContext.properties` to `crsContext.properties.old`
- 4 Restart HP Business Availability Center.

Assigning Permissions Operation

If Permission management is in **enforce permission** mode, you can assign the appropriate permissions operation. For details about permissions, see “Permissions Overview” on page 363.

To assign a permissions operation:

- 1** Select **Admin > Platform > Users and Permissions**. In the Resource Context list, select **Central Scripts Repository**. Select the appropriate folder underneath the Root folder. Operations assigned to a folder affect all folders contained beneath it.
- 2** In the Users and Groups area, select the user.
- 3** In the Roles and Operations area, select the **Operations** tab.
- 4** Check or clear either the **View** or the **Full Control** operation box:
 - ▶ If **View** is checked, the user can view and download a script in the Central Scripts Repository.
 - ▶ If **Full Control** is checked, the user can edit or delete any script in the selected folder or its subfolders.

Giving Full Control on the Root folder grants the user permissions on all folders under Root. If he later adds a folder under the Root folder, Full Control is automatically granted on that folder.
 - ▶ If neither **View** nor **Full Control** is checked, the user has no access to any script or subfolder in the selected folder. This is the default permissions operation.
- 5** Click **Apply Permissions** to save the settings.

If the user was logged in while you changed his permissions operation, he must log out and log in again for the changes to take effect.

Central Repository Service User Interface

This section describes:

- Central Repository Service Main Page on page 330
- File Set Table Pane on page 330
- Panel Tree Pane on page 338




Central Repository Service Main Page

Description	<p>Displays the Business Process Monitor scripts stored in the Central Repository Service, and the folders that contain the scripts.</p> <p>To access: Admin > Platform > Data Collection > Central Repository Service.</p>
Useful Links	<p>“Central Repository Service - Overview” on page 322</p>

File Set Table Pane




Description	<p>Displays, in table format, the file sets that have been created within the folder that is highlighted in the folder tree. The table also contains:</p> <ul style="list-style-type: none"> ➤ Information relating to the file sets ➤ Action buttons for managing the file sets. <p>To access: Select Admin > Platform > Data Collection > Central Repository Service.</p>
Useful Links	<p>“Central Repository Service - Overview” on page 322</p> <p>For details on viewing version properties, see “Version Properties Dialog Box” on page 338.</p>



The following elements are included (unlabeled GUI elements are shown in angle brackets>):



GUI Element (A–Z)	Description
	Denotes a Virtual User Generator (VUGen) script.
	Denotes a QuickTest Professional script.
	Click to activate the search for the string entered in the Search By Name box.
Action	Icons denoting the available options you can perform on the fileset.
Checked Out By	The user who has the file set currently checked out. Note: If the file set is not checked out, this column is blank.
Last Update	The date when the file set was last checked into the repository. Note: This could be the date the file set was first created.
Name	The name given to the file set when it was created and the script was uploaded. Tooltip: Displays the full name of the fileset, in case the name was long and therefore truncated in the table.
New	Click to open the Create File Set dialog box and create a new file set. For details, see “Create File Set Dialog Box” on page 334.
Owner	The user who created the file set by uploading the script.
Search By Name	Enter a string you want to search for appearing in the Name field of the File Set Table.

Action Buttons

The following elements are included in the Action column:

GUI Element (A–Z)	Description
	<p>Click to open the Version History page and view version history for the file set. For details, see “Version History Dialog Box” on page 335.</p>
	<p>Click to open the File Set Properties page and view properties of the file set.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ When a file is checked in, none of the fields in the File Set Properties dialog box are editable. When a file set is checked out, the Description field can be edited only by the user who checked out the file set. ▶ You can click Show Additional Properties to view the properties related to the script itself.
	<p>Click to check out the selected file set for editing.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ Checking out a file set ensures that no other user makes changes to this version of the script while you are editing it. ▶ Only one user at a time can check out a file set. ▶ Once that file set is checked out, only that user can check it in, delete it, or create a new version.

GUI Element (A–Z)	Description
	<p>Click to open a check-in version of the Version properties dialog box and check in the file set version. For details on the Version properties dialog box, see “Version Properties Dialog Box” on page 338.</p> <p>Important:</p> <ul style="list-style-type: none"> ▶ This button is displayed only for those file sets that have been checked out. ▶ When you check in a file set, the Central Repository Service automatically creates a new version number for the file set. For example, if you checked out version number 1.1.1 of a file set, the Central Repository Service creates version number 1.1.2 as a result of checking the file set back into the Central Repository Service. File set version 1.1.1 is still accessible and its script can be added to transaction monitors in End User Management Administration, but the latest version, file set version 1.1.2, becomes the default version.
	<p>Click to cancel checkout of the file set.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ This button is displayed only for those file sets that have been checked out. ▶ Cancelling a check out prevents the Central Repository Service from creating a new version number and leaves the file checked in with its current version number. If you have made modifications to the script that you do not want saved in the Central Repository Service file set, cancelling the check out ensures that those changes are not brought into the Central Repository Service.

GUI Element (A–Z)	Description
	<p>Click to upload a script to save your recent script modifications to the Central Repository Service without creating a new file set version.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ This action serves as an extra precaution when making many modifications to scripts so that the file set is saved to the repository. This is useful, for example, while you are testing the script in the recording tool. ▶ When you upload a script without checking in the file set, the content of this version of the file set is not available to other users. ▶ When you check in a file set that has been uploaded, you do not have to specify a location in your file system to locate the file set. ▶ The most recently uploaded file set is automatically checked in during the check in procedure.
	<p>Click to download file set contents for editing.</p> <p>Note: It is good practice to check out the file set before downloading it to ensure that another user is not simultaneously editing the same file set's script.</p>


Create File Set Dialog Box

The following elements are included:

GUI Element (A–Z)	Description
Content	Enter the path of the .zip file containing the script. You can also click Browse to locate the .zip file in your file system.
Description	Optionally, add a description for the new file set. The description appears in the file set properties.

GUI Element (A–Z)	Description
Name	The name of the content or .zip file specified in the Content field. You cannot fill this field in manually.
Type	<p>Choose the type of file set you want to add to the Central Repository Service from the Type list.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ If you select AUTO-DETECT, the script type is determined during the upload. ▶ Currently, the following types are supported in HP Business Availability Center: AUTO-DETECT, VUGEN SCRIPT, and QTP SCRIPT.

Version History Dialog Box

Description	<p>Displays a listing of all the versions of a file set and the actions that can be performed on that file set version.</p> <p>To access: Click the Show Versions button  in the Action column of the File Set table.</p>
Important Information	<ul style="list-style-type: none"> ▶ When you view the file set versions of a file set that is not checked out ▶ When you view the file set versions of a file set that has been checked out, the Version History dialog box is divided into the following tables: <ul style="list-style-type: none"> ▶ Checked Out Version. ▶ Available Version List. <p>Note: The elements in this table are identical to those which are displayed when you view the file set versions of a file set that is not checked out.</p>
Included in Tasks	“Upload Scripts” on page 324







Checked Out Version Table

The following elements are included:


GUI Element (A-Z)	Description
Action	If you are the user who checked out the file set, you can perform a variety of actions on the version checked-out version. For details on the available actions, see “Action Buttons” on page 332.
Locked By	The user who checked out the file set.
Modified	The date and time when the file set was last checked into the repository. If the file set has never been checked in, this is the date it was first created.
Version	The version number of the file set that is checked out.

Available Version List Table

The following elements are displayed:

GUI Element (A–Z)	Description
	Select to view version properties. <ul style="list-style-type: none"> ▶ You can optionally modify the Version Comment field. All other fields are uneditable. ▶ Click the Show Additional Properties to view properties of the script itself.
	Click to restore a previous version of a file set and make it the current version, which enables you to view information relevant to a specific date or activity.
	Click to download the specific version of the file set for editing. <p>Notes:</p> <ul style="list-style-type: none"> ▶ It is good practice to check out the file set before downloading it to ensure that another user is not simultaneously editing the same file set's script. ▶ You cannot download the version of a file set version that is checked out.
Action	Buttons enabling you to perform actions on the specified version, as follows: <ul style="list-style-type: none"> ▶  Click to view properties of the current version. ▶  Click to restore the selected version. ▶  Click to download the selected version.
Modified	The date and time when the file set was last checked into the repository. If the file set has never been checked in, this is the date the script was first downloaded and the file set was first created.
Modified By	The user who last checked in the version of the file set.
Version	The number given to the file set when it was last checked into the Central Repository Service.



Version Properties Dialog Box

Description	Displays properties and property values of the file set version you are checking in. To access: Click the Version Properties button  next to the file you want to view properties and property values for.
Included in Tasks	“Upload Scripts” on page 324









The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
Property	The property relevant to the specified file set version.
Show Additional Properties	Click to display advanced file set properties for the file set. Click Hide Additional Properties to hide the advanced file set properties.
Value	The value of the specified property.

Panel Tree Pane

Description	Displays a tree hierarchy of the folders in the Central Repository Service, and the buttons used to manage them. To access: Select Admin > Platform > Data Collection > Central Repository Service . You can hide and view the Panel Tree by clicking the appropriate icon   between the Panel Tree and File Set Table panes.
Useful Links	“Central Repository Service - Overview” on page 322

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A–Z)	Description
	Click to create a new folder. You create folders below the Root level folder.
	Click to delete the selected folder.
	Click to rename the selected folder.
	Click to cut the selected folder from its place in the tree hierarchy.
	Click to paste the previously cut folder to a new location in the tree hierarchy. Note: You cannot paste a folder into the same folder from which it was cut.
	Click to refresh the navigation tree. Tip: You refresh the tree to load the folder data that may have been modified by other users. Note: The tree refreshes automatically when you perform any of the folder operations, so it is not necessary to refresh it manually.
	Denotes the Root folder in the tree hierarchy.
	Denotes a Central Repository Service folder.

17

Data Collection Administration for HP Software-as-a-Service

Note: The Location IP Ranges, Script Repository, and Package Information pages are available to HP Software-as-a-Service customers only.

This chapter provides information on Data Collection Administration for HP Software-as-a-Service.

This chapter includes:

Concepts

- ▶ Data Collection Administration for HP Software-as-a-Service - Overview on page 342
- ▶ HP Software-as-a-Service Script Repository on page 342

Tasks

- ▶ Create and Upload Scripts to the Script Repository – Workflow on page 343

Reference

- ▶ Understanding the Script Verification Results on page 344
- ▶ HP Software-as-a-Service Data Collection User Interface on page 347

Data Collection Administration for HP Software-as-a-Service - Overview

Data Collection Administration for HP Software-as-a-Service enables you to do the following:

- ▶ Maintain your scripts and view their verification information. For details, see “HP Software-as-a-Service Script Repository” on page 342.
- ▶ View the customer’s list of locations and related information. For details, see “Location IP Ranges Page” on page 347.
- ▶ View information on the package the customer agreed to when the HP Software-as-a-Service contract is signed. For details, see “Package Information Page” on page 348.

HP Software-as-a-Service Script Repository

The HP Software-as-a-Service Script Repository is a central shared folder in which all your organization’s Business Process Monitor scripts are stored.

When you add a monitor to a profile in End User Management Administration, you can add only those scripts that have been stored in the Script Repository and were manually verified. For details, see “Managing Business Process Profiles Overview” in *Using End User Management*.

Once you have created and recorded the scripts, you upload them using the Script Repository page. For details, see “Create and Upload Scripts to the Script Repository – Workflow” on page 343.

To select a previous version of the script you must download it and upload it again; it then becomes the current version.

Create and Upload Scripts to the Script Repository – Workflow

This task describes how to create and upload scripts to the Script Repository.

This task includes the following steps:

- “Create and Record Business Process Monitor Scripts” on page 343
- “Zip Script Files” on page 343
- “Upload Scripts” on page 343
- “Edit Scripts” on page 344
- “Re-upload the Script” on page 344

1 Create and Record Business Process Monitor Scripts

You record Business Process Monitor scripts using the HP Virtual User Generator recording tool. For details, see “VuGen Recording Tips” in *Using End User Management*.

2 Zip Script Files

You zip only the Business Process Monitor scripts’ run-time files for upload. Zipping all files may cause script verification to fail due to a limit in the file size allowed by the repository.

3 Upload Scripts

You upload scripts by clicking the **Upload** button on the Script Repository page. For details on uploading scripts, see “Upload Script Dialog Box” on page 356.

4 Edit Scripts

Click the script name link and save the script to a local or network drive. You can then edit the file at a later time using the Virtual User Generator or you can open the file using any program that supports the .zip format.

5 Re-upload the Script

After editing a script, you must upload it again to the repository. You must zip the script before uploading. After you upload the edited script, HP Business Availability Center reruns the verification process on the script.

Understanding the Script Verification Results

After you upload a script to the script repository, HP Business Availability Center runs a verification process to verify that the script executes properly when it is run in a profile. Once the script passes verification, HP Business Availability Center displays the **Passed** status in the Status column. You can add a script to a profile only after it passes verification.

You can check the verifications for which your transaction failed in the <Script Name> Versions dialog box.

The complete list of conditions is as follows:

Running Verifications	Rule	Actual Result
Disallowed function calls: system;lr_load_dll	Do not use the function calls that are listed.	Lists the actual function calls used in the script.
Download size must be less than 3000000 bytes	The maximum size of the download.	Indicates the actual download size.
Execution must be less than 300 seconds	The maximum execution time of the script.	Indicates the actual execution time of the script.

Running Verifications	Rule	Actual Result
<p>Expected protocol: QTWeb; NCA; WinSock; Sap_web; SapGui; Siebel_Web; HTTP; SOAP; PS8; PS8WebJS; WinSockWeb; Oracle_NCA; OracleWebJS; WebJS; WinSockWeb; Tulip; Citrix_ICA; OracleWebJS; General-vbs; General-Js SMTP; POP3; IMAP; Oracle; ODBC; FTP; EJB-Testing; MLDAP; Rmi- Java; Java_protocols</p>	<p>Only use the listed protocol types.</p>	<p>Indicates the actual protocol type used in the script.</p>
<p>Extra files with the following extensions are allowed: ini;h;tst</p>	<p>Only use extra files with the listed extensions.</p>	<p>Lists the actual extensions used in the script.</p>
<p>Failed transactions are disallowed</p>	<p>Do not use failed transactions.</p>	<p>Indicates whether there were failed transactions in the script.</p>
<p>Maximum number of dynamic transactions allowed:0</p>	<p>Do not use more dynamic transactions than the allowed maximum number.</p>	<p>Indicates the number of dynamic transactions in the script. Dynamic transactions are the transactions that are not defined in the USR file; meaning their name has been generated dynamically (for example: Transaction + i == Transaction 1, Transaction 2, and so forth).</p>

Running Verifications	Rule	Actual Result
Maximum number of iterations allowed:1	Do not use more iterations than the allowed maximum number.	Indicates the number of time each action in a script is run. Every script is composed of actions (.c code files) which can be run more than once during one running of the script (a feature used mainly in LoadRunner and not in HP Business Availability Center). This iteration number must be limited so that duplicate transactions are not reported.
Maximum number of transaction instances allowed:1	Do not use more transaction instances than the allowed maximum number.	Indicates the number of transaction instances in the script.
Maximum number of transactions allowed:100	Do not use more transaction than the allowed maximum number.	Indicates the number of transactions in the script.
Total size must be less than 600000 bytes	The maximum total size of the script.	Indicates the actual total size of the script.

Note: The verification process differs depending on the contents of the script. Some scripts may go through a subset of the verifications listed above.

If any of these verification checks are not applicable to your organization, contact HP Software-as-a-Service Support.

HP Software-as-a-Service Data Collection User Interface

This section describes:

- Location IP Ranges Page on page 347
- Package Information Page on page 348
- Script Repository Page on page 352

Location IP Ranges Page

Description	Displays a list of locations defined in your package, including the detailed IP address ranges. To access: Select Admin > Platform > Data Collection > Location IP Ranges .
--------------------	---



The following elements are included:

GUI Element (A-Z)	Description
IP Address/Subnet Mask	The range of IP addresses for the location. The first number is the IP Address (and the beginning of the range). The second number is the Subnet Mask. The Subnet Mask is used to calculate the number of addresses in the range by subtracting the last set of three numbers (in this example: 240) from the set of three numbers before last (in this example: 255). The result is: $255 - 240 = 15$. This result is then added to the last set of three numbers in the IP Address (in this example $144 + 15 = 159$) to provide the upper IP Address in the range: 195.193.104.159. The range of Amsterdam IP Addresses is then from the IP Address: 195.193.104.144 to the calculated upper IP address: 195.193.104.159.
Location Name	The physical location: city, county, state, or province, and the name of the location.

Package Information Page


Description	<p>Displays information about the customer package, as agreed upon and entered in the HP Business Availability Center application when the HP SaaS contract is signed.</p> <p>To access: Select Admin > Platform > Data Collection > Package Information.</p>
--------------------	--

The following elements are included:

GUI Element (A-Z)	Description
	Click to view the available Business Process Monitor locations on which to run the packages. For details, see “Package Locations Page” on page 349.
	Click to open the Package Properties page to view and modify package properties information. For details, see “Package Properties Page” on page 349.
Business Process Monitor Transactions	The total number of Business Process Monitor transactions that can be run as part of the package.
Expiration	<p>The expiration date of the package.</p> <p>The expiration date becomes red 14 days before the expiration date of a paying customer package, and 7 days before the expiration date of an evaluation customer package.</p>
Global POPs	<p>The total number of Global Points Of Presence that can be run as part of the package. Any customer can access these package locations.</p> <p>A Point of Presence is a place where the package is located.</p>
Name	The name of the package.

GUI Element (A–Z)	Description
Private POPs	The total number of Private Points Of Presence that can be run as part of the package. Only the associated customer can access these package locations. A Point of Presence is a place where the package is located.
URLs	The total number of single URL monitors that can be accessed as part of the package.


Package Locations Page

Description	Displays the available Business Process Monitor locations on which to run the package. To access: Select Admin > Platform > Data Collection > Package Information , and click the Package Location button  .
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The following elements are included:

GUI Element (A-Z)	Description
Location Name	Indicates the locations that the package is available to run on. Select the check box to run the package; de-select the check box to disable the package from running.
Package Name	Indicates the name of the selected package.

Package Properties Page

Description	Displays information about the customer package for specific applications (Business Process Monitor and SiteScope). To access: Select Admin > Platform > Data Collection > Package Information , and click the Edit button  .
Important Information	This information is entered in HP Business Availability Center when the contract is signed with HP. You can modify only the subscribed recipients.


General Tab

Description	Displays general information about the selected package. To access: Admin > Platform > Data Collection > Package Information , click the Edit button  .
Important Information	The General Tab is the default selection on the Package Properties screen.

The following elements are included:

GUI Element (A–Z)	Description
Customer Name	The name of the customer.
Customer UDX Name	The customer name to be used when reporting data into the system.
Package Name	The name of the selected package.
Expiration Date	The expiration date of the package. The number to the right of the box indicates the number of days left before the package expiration date.
Number of Scheduled Reports	Number of scheduled reports included in the package. The number to the right of the box indicates the number of scheduled reports that have already been configured.
Subscribed Recipients	<p>The names of the recipients configured to receive package expiration notices via e-mail. Click Change to open the Select Recipients dialog box. For details on the Select Recipients dialog box, see</p> <ul style="list-style-type: none"> ▶ If you are a paying customer, the appropriate recipient will receive a package expiration notice via e-mail 14 days before the due date. ▶ If you are an evaluation customer, the appropriate recipient will receive a package expiration notice via e-mail 7 days before the due date.


End User Management Tab

Description	Displays package information related to End User Management. To access: Select Admin > Platform > Data Collection > Package Information , click the Edit button  and select the End User Management tab.
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The following elements are included:

GUI Element (A–Z)	Description
Number of Private POPs	The number of private POPs allowed for the package. The number to the right of the box indicates the number of private POPs already in use.
Number of locations	The number of locations allowed by the package. The number to the right of the box indicates the number of locations already in use.
Number of transactions	The number of transactions allowed by the package. The number to the right of the box indicates the number of transactions already in use.
Number of URLs	The number of single URL monitors allowed by the package. The number to the right of the box indicates the number of URLs already in use.
Schedule - max. frequency (min.)	The maximum frequency in minutes that your profiles can be scheduled to run.
Number of WebTrace addresses	The number of WebTrace addresses allowed for this package. The number to the right of the box indicates the number of WebTrace addresses already being monitored.

System Availability Management Tab

Description	Displays package information related to SiteScopes. To access: Select Admin > Platform > Data Collection > Package Information , click the Edit button  and select the System Availability Management tab.
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The following elements are included:

GUI Element (A–Z)	Description
Number of SiteScope profiles	The number of System Availability Management profiles allowed for this package. The number to the right of the box indicates the number of System Availability Management profiles already in use.

Script Repository Page


Description	Displays the Business Process Monitor scripts that have been uploaded. To access: Select Admin > Platform > Data Collection > Script Repository .
Important Information	The Script Repository Page consists of the following tabs: <ul style="list-style-type: none"> ▶ Business Process Monitor. Used to manage your Business Process Monitor scripts. ▶ Subscription Verification. Used to configure recipients to receive email notification when Business Process Monitor script verification is complete. For details, see “Subscription Verification Tab” on page 357.
Included in Tasks	“Create and Upload Scripts to the Script Repository – Workflow” on page 343
Useful Links	“HP Software-as-a-Service Script Repository” on page 342

The following elements are included:

GUI Element (A–Z)	Description
	Click to open the Manual Script Verification dialog box and manually verify the script. For details, see “Manual Script Verification Dialog Box” on page 354.
	Click to open the .usz file directly in the Virtual User Generator (if you have installed it).

GUI Element (A–Z)	Description
Last Update	The date the script was most recently updated.
Owner	The name of the most recent user to update the script.
Script Name	<p>The name of the script. Click to open the .zip or .obs files that comprise the transaction.</p> <p>You click the script name link and save the script to a local or network drive. You can then edit the file at a later time using the Virtual User Generator, or you can open the file using any program that supports the .zip or .obs formats.</p>
Starts with	Filter your view of the Script Repository content according to the first character in the Script Name.
Status	<p>The status of the verification process for the script.</p> <p>You double-click the status to open the Script Verification Results dialog box and modify it. For details, see “Script Verification Results Dialog Box” on page 354.</p>
Upload	Click to upload Business Process Monitor scripts to the Script Repository. For details, see “Upload Script Dialog Box” on page 356.
Version	<p>The current version of the script.</p> <p>The version of the script that is stored is the active version. To use a newer version or to go back to an older version of the script you must upload the script corresponding to the version you want. That script then becomes the active version of the script. For details on accessing older versions of a script, see “<Script Name> Versions Dialog Box” on page 355.</p>

Manual Script Verification Dialog Box

Description	<p>Enables you to change the verification status of a script and to remove a script from use.</p> <p>To access: Select Admin > Platform > Data Collection > Script Repository, click the Manual Verification button .</p>
Included in Tasks	“Create and Upload Scripts to the Script Repository – Workflow” on page 343
Useful Links	<p>“Script Repository Page” on page 352</p> <p>“HP Software-as-a-Service Script Repository” on page 342</p>

The following elements are included:

GUI Element (A-Z)	Description
Script Status	<p>Select from the following status options:</p> <ul style="list-style-type: none"> ▶ Verified for private POP. Select for scripts that you want to verify for use on your private Business Process Monitor. ▶ Verification failed. Select to disable a transaction before running your profile.

Script Verification Results Dialog Box

Description	<p>Displays the status of the verification process for the script.</p> <p>To access: Select Admin > Platform > Data Collection > Script Repository, select the Business Process Monitor tab and click the value in the Status field.</p>
Included in Tasks	“Create and Upload Scripts to the Script Repository – Workflow” on page 343
Useful Links	“Script Repository Page” on page 352

The following elements are included:

GUI Element (A–Z)	Description
Expected/Allowed Value Verifications	The conditions for the script verification.
Actual Results	The current results of the verification.
Description	The description of the verification.
Status	The status of the verification. Possible values are: <ul style="list-style-type: none"> ▶ Passed ▶ Warning ▶ Failed

 **<Script Name> Versions Dialog Box**

Description	<p>Displays the history of the script. Enables you to track changes made to scripts and to access them to perform additional changes.</p> <p>To access: Select Admin > Platform > Data Collection > Script Repository, select the Business Process Monitor tab and click the script version number.</p> <p>The <script-name> versions dialog box displays the history of the script. Each time you upload the script, a new line is added to this list and the version is incremented.</p>
Included in Tasks	“Create and Upload Scripts to the Script Repository – Workflow” on page 343
Useful Links	“Script Repository Page” on page 352

The following elements are included:

GUI Element (A–Z)	Description
Description	The description of the script. This is useful for version control: you can describe why changes were made to this version of the script.
Last Update	The date the script was most recently updated.
Owner	The name of the most recent user to update the script.
Status	The status of the verification process for the script. Click the status to open the Script Verification Results dialog box and modify it. For details, see “Script Verification Results Dialog Box” on page 354.
Version	Click to open the scripts. Scripts are stored in .zip format

Upload Script Dialog Box

Description	Enables you to upload a Business Process Monitor script to the Script Repository. To access: Select Admin > Platform > Data Collection > Script Repository , select the Business Process Monitor tab and click Upload .
Included in Tasks	“Create and Upload Scripts to the Script Repository – Workflow” on page 343
Useful Links	“Script Repository Page” on page 352

The following elements are included:

GUI Element (A–Z)	Description
Browse	Click to browse your system and select a Business Process Monitor script to upload.
Description	Enter a description of the script.

GUI Element (A–Z)	Description
Script	The path of the Business Process Monitor script you are uploading.
Upload	Click to upload the script to the Script Repository.

Subscription Verification Tab

Description	Enables HP Business Availability Center to send email notification to specified recipients when Business Process Monitor script verification is complete. To access: Select Admin > Platform > Data Collection > Script Repository , select the Subscription Verification tab.
Included in Tasks	“Create and Upload Scripts to the Script Repository – Workflow” on page 343

The following elements are included:

GUI Element (A-Z)	Description
Email address(es)	Specify one or more e-mail addresses of the recipients to receive email notification. Multiple recipient addresses must be separated by a semi-colon.
Notify the following recipients when script verification is complete	Click to enable subscription verification.

Part IV

Managing Users

18

User Management

This chapter includes the main concepts, tasks, and reference information for User Management.

This chapter includes:

Concepts

- ▶ User Management – Overview on page 362
- ▶ Permissions Overview on page 363
- ▶ Group and User Hierarchy on page 369
- ▶ Customizing User Menus on page 371

Tasks

- ▶ Configure Users and Permissions - Workflow on page 372
- ▶ Configure Users and Permissions - Scenario on page 374
- ▶ Assign Permissions on page 384
- ▶ Configure Group and User Hierarchy on page 386
- ▶ Customize User Menus - Workflow on page 388
- ▶ Customize User Menus - Scenario on page 390

Reference

- ▶ User Management Roles on page 395
- ▶ User Management Operations on page 418
- ▶ User Management User Interface on page 454

User Management – Overview

You use the User Management interface to:

- ▶ **Configure HP Business Availability Center Groups and Users.** You group users to make managing user permissions more efficient. Instead of assigning access permissions to each user one at a time, you can group users who are assigned the same permissions levels on the same resources.

You may want to create different groups based on how users access the different resources in HP Business Availability Center. Examples of criteria for grouping users that are relevant to your organization may be:

Tasks Within the Organization	Locations and Territories
Customer service representatives	Users working in different sales territories
System administrators	Users based on geographical location
High-level management	Users accessing network servers in different locations

You can change a user's parameters, including their username and password, in the General Tab. For details, see "General Tab" on page 456.

For details on creating groups and users, see "Groups/Users Pane" on page 467.

- ▶ **Assign Permissions to Groups and Users.** The User Management interface is available only to users with appropriate permissions. A user's permissions are either inherited from their assigned role, or granted individually when their parameters are configured. For details on permissions, see "Permissions Overview" on page 363.
- ▶ **Set Group and User Hierarchy.** You can add users to groups and nest groups within other groups. For details, see "Group and User Hierarchy" on page 369.
- ▶ **Customize User Settings.** Select the page users see when entering HP Business Availability Center, and choose the menu items available on pages throughout HP Business Availability Center. For details, see "Customizing User Menus" on page 371.

Permissions Overview

You can assign permissions to the groups and users defined in your HP Business Availability Center platform, enabling access to specific areas of HP Business Availability Center.

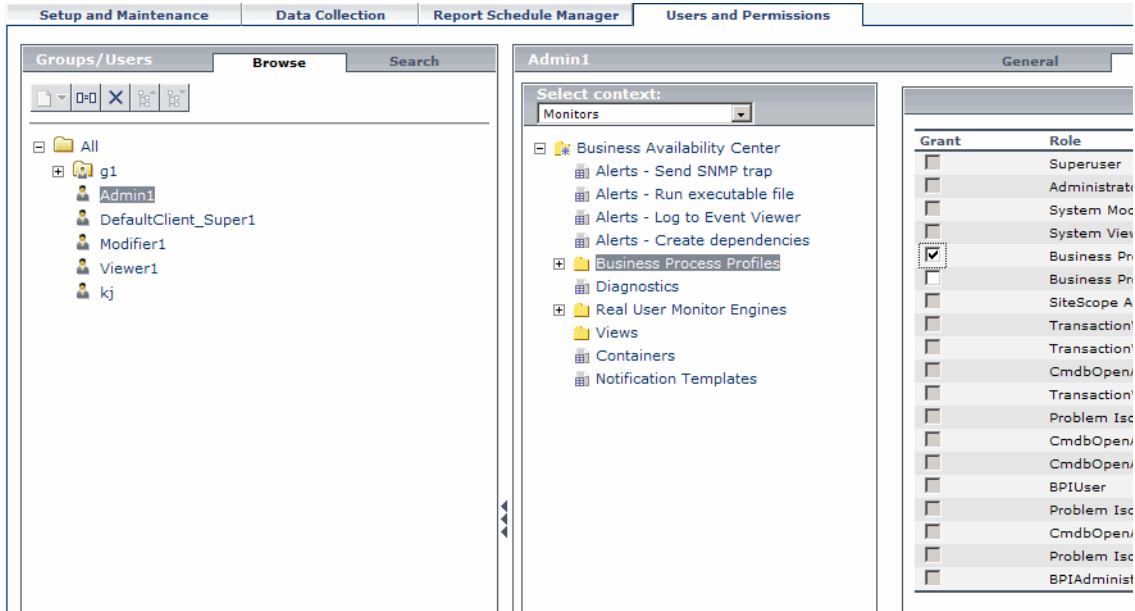
Granting permissions has the following components:

- ▶ The user
- ▶ The resource
- ▶ The operation or role being granted

The Permissions tab is divided into the following areas:

- ▶ The resource tree area in the center of the page, containing the resources and resource instances (known as **contexts**) on which permissions are assigned. For details, see “Understanding Permissions Resources” on page 365.
- ▶ The roles and operations area on the right side of the page. For details on roles, see “Roles” on page 368. For details on operations, see “Operations” on page 368.

Additionally, the **Groups/Users** pane is continually visible on the left side of the page.



For details on assigning permissions, see “Assign Permissions” on page 384.

Note:

- ▶ If you have upgraded from a previous version of HP Business Availability Center and had specific users and security levels defined, those users and security levels are mapped to the new roles functionality in the Permissions tab. For details, see “Roles” on page 368.
 - ▶ You can export users and groups, together with their assigned roles and permissions, from one HP Business Availability Center machine to another. For details, contact HP Software Support.
-

Understanding Permissions Resources

HP Business Availability Center enables you to fine tune your permissions management by applying permissions at the resource level. All of the resources on which permissions can be applied have been identified and categorized in a hierarchical tree, representing the HP Business Availability Center platform.

The resources and instances of those resources are organized according to logical groupings called **contexts**. Contexts make it easier to identify and select the area of the platform on which you want to apply permissions.

The resources are divided according to the context in which they function within the platform and not necessarily where they are found in the user interface.

Resources and Resource Instances

There are three types of resources in Permissions Management. Each is represented by a different icon in the resource tree:



- ▶ resource collection (a resource that can have instances)
- ▶ instance of a resource
- ▶ resource that cannot have instances in the permissions resource tree

An instance of a resource is displayed only if it has been defined in the platform. The instance of a resource appears as a child object of the resource in the tree with the name as it has been defined in the application. After instances of a resource are defined in the system, the resource collection acts as the parent resource for those instances.

There are some resources, such as the different data collector profiles, that contain other resources within them in the resource tree hierarchy. Some of these sub-resource types appear only if there are instances of the resource defined in your platform, such as Monitor and Transaction resources within a profile resource.

Resources that cannot have instances in the permissions tree are divided into the following types:

- ▶ Resources that are functions or options within the system that do not have any other instances or types.

Example

The Outlier Value resource determines whether the user can edit the outlier threshold value. It has no instances.

- ▶ Resources that do have instances - permissions can be applied only on the resource type and affect all instances of the resource.

Example

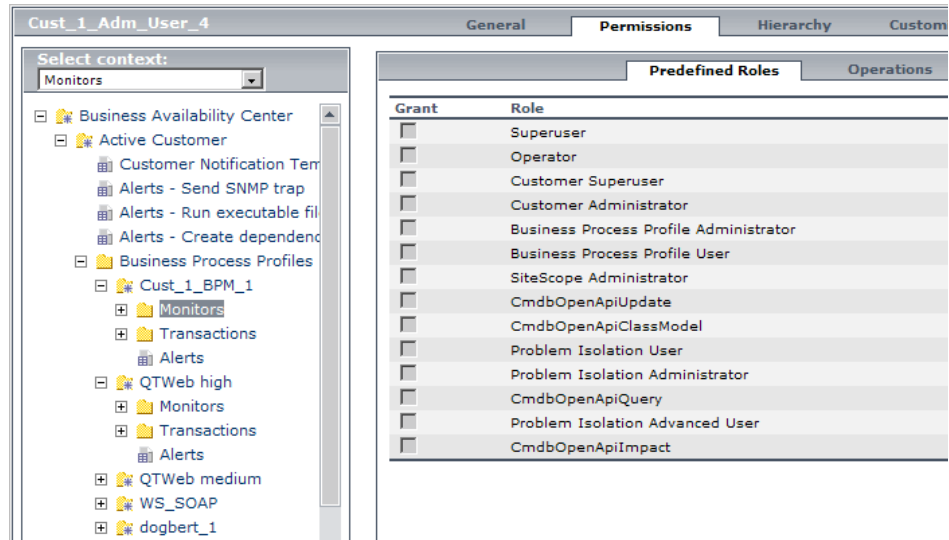
The Category resource includes all categories defined in End User Management Administration. **Change** permissions granted on the categories resource enables a user to modify all the categories defined in the system. You cannot grant or remove permissions for specific categories, only for every category defined in End User Management Administration.

Examples of Resources and Instances

An example of how resources and instances are displayed in the permissions hierarchy is the Business Process Profile resource within the Monitors context. The Business Process Profile resource includes instances only if there have been Business Process profiles defined in the system. If there are profiles defined in the system, each of those appears as an instance of the Business Process Profile resource with the name defined for the profile in End User Management Administration.

Because monitors, transactions, and alerts are defined in your platform per profile, the Monitors, Transactions, and Alerts resources appear under each of the instances of the profile resource. Monitors and Transactions are resource collections and can have their own instances, but Alerts is a resource that cannot have instances.

You can apply permissions to the Business Process Profile resource level. This enables the user access to all Business Process profiles created in the system. If you want to restrict a user's access to specific Business Process profiles that relate to the user's tasks, you can apply permissions to a specific Business Process profile, to the Monitors resource or to any instance of monitors that have been defined under the profile.



Guidelines for Working with Resources

- ▶ The Business Availability Center resource refers to all contexts in HP Business Availability Center.
- ▶ Only roles and not operations can be applied to the Business Availability Center resource. For details, see “Roles” on page 368.
- ▶ To manage the permissions on a subresource, you must provide the user with at least **View** permission on the selected resource's parent.
- ▶ You grant **Add** permission only on a resource and not on an instance of a resource.
- ▶ When a user defines or creates an instance of a resource, for example creates a Business Process profile, that user has **Full Control** permission on that resource instance and all of its child resources.

Roles

HP Business Availability Center enables you to apply permissions using predefined roles for specific users or groups in your organization. These roles include a preconfigured collection of resources and a set of operations that apply to those resources.

Roles are organized by context as to which resources and which operations have been preconfigured and included in the role. For details on how each operation applies to a specific resource, see “Operations” on page 368.

Roles can be applied only to specific resources:

- ▶ Roles that include resources from several contexts can be applied only to the Business Availability Center resource. Business Availability Center appears as the first resource collection in every context.
- ▶ Roles whose resources are all within one context can be applied to specific resources within that context.

For a description of each role, including details of the resources on which roles can be applied, see “User Management Roles” on page 395.

Operations

When working with operations, keep the following in mind:

- ▶ All of the operations that can be applied to a resource collection can also be applied to any instance of that resource. The one exception is the **Add** operation which cannot be applied to an instance of a resource.
- ▶ The **Full Control** operation automatically includes all the other operations available on the resource. When applied, the other operations are automatically selected.
- ▶ When the **Full Control** operation is applied to any resource, the user also has permissions to grant and remove permissions on that resource, or resource instance, for other users or groups.
- ▶ When the **View** operation is one of the resource’s available operations and you select one of the other available operations, the **View** operation is also automatically selected.

For details on the available operations in HP Business Availability Center, see “User Management Operations” on page 418.

Group and User Hierarchy

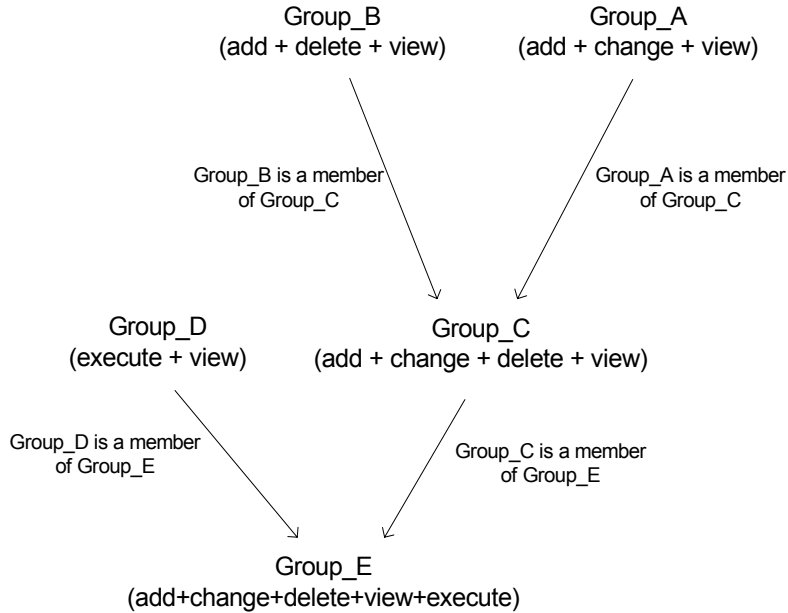
You can nest groups to make managing user and group permissions easier. Instead of assigning access permissions to each group one at a time, you can nest a group to inherit the permissions of its direct parent.

When nesting groups, note the following:

- A group can be a member of several groups.
- Permissions are assigned to nested groups in the same way as for regular, non-nested, groups. Changes in nested group permissions take effect at the user’s next login.
- There is no maximum number of levels of nested groups.

Example

In the example below, Group_A and Group_B are nested members of Group_C. Group_C inherits the combined permissions of both groups. Group_C and Group_D are nested members of Group_E. Group_E directly inherits the permissions of Group_C and Group_D, and indirectly inherits the permissions of Group_A and Group_B.



When permissions are added to, or removed from, a nested group, the changes are automatically implemented in the nested group's immediate parent and continue to propagate onward. For example, if delete permission in Group_B is removed, Group_C's permissions become add + change + view. Group_E's permissions become add + change + view + execute.

A circle of nested groups is not permitted. For example, Group_A is a member of Group_B, and Group_B is a member of Group_C. Group_C cannot be a member of Group_A.

Note: All permissions in the previous example refer to the same resource.

For details on setting up nested groups, see “Configure Group and User Hierarchy” on page 386.

Customizing User Menus

You can customize user menus to:

- ▶ select the default context that is displayed for specific users when logging into HP Business Availability Center.
- ▶ specify the first page that is displayed for specific users in each of the different parts of HP Business Availability Center.
- ▶ specify the tabs and options that are available on pages throughout HP Business Availability Center.

Customizing your entry page, menu items, and tabs enables the interface to display only the areas of HP Business Availability Center that are relevant to specific users.

For details on customizing user menus, see “Customize User Menus - Workflow” on page 388.

You customize user menus on the Customization tab. For details on the Customization tab user interface, see “Customization Tab” on page 454.

Configure Users and Permissions - Workflow

This task describes a suggested working order for the User Management application. You can configure User Management settings in any other logical order you choose.

For a scenario of this task, see “Configure Users and Permissions - Scenario” on page 374.

This task includes the following steps:

- ▶ “Prerequisites” on page 372
- ▶ “Create Groups” on page 373
- ▶ “Assign Permissions to Groups” on page 373
- ▶ “Create Users” on page 373
- ▶ “Configure User and Group Hierarchy” on page 373
- ▶ “Customize User Settings” on page 373

1 Prerequisites

Before you configure the User Management portal, you should map out the required users and user groups and their relevant permission levels before defining them in HP Business Availability Center. For example, in a spreadsheet enter the following information:

- ▶ A list of users required to administer the system, as well as the end users who are to access Dashboard and reports. Gather appropriate user details such as user names, login names, initial passwords, and user time zones. Although not needed to define users, at this stage it might be useful to also collect user contact information such as telephone number, pager, or email address (contact information is required for HP Software-as-a-Service customers).
- ▶ If categorization of users into modes (operations and business) is required, specify into which user mode to categorize each user. For details, see “KPIs for User Modes” in *Using Dashboard*.
- ▶ If multiple users require similar system permissions, a list of user groups and the users that should belong to each group.

- The permissions each user or user group requires. To aid in this process, review the Permissions Management page to learn about the different contexts and resources for which permissions can be granted. For details, see “Understanding Permissions Resources” on page 365.

2 Create Groups

You create groups in the **Groups/Users** pane as follows:



- Click the **Create New User/Group** button in the Browse tab, after selecting an existing group or the root group.
- Select **Create Group** and enter the group’s information in the Create Group dialog box. For details on the Create Group dialog box on the **Groups/Users** pane user interface, see “Create Group Dialog Box” on page 470.

3 Assign Permissions to Groups

HP Business Availability Center enables you to apply permissions to groups and users for specific resources and instances of those resources that are defined in the system. For details on assigning permissions, see “Assign Permissions” on page 384.

4 Create Users

You create users and then place them into the appropriate groups. For details on the user interface for creating users, see “Groups/Users Pane” on page 467.

5 Configure User and Group Hierarchy

In the Hierarchy tab, you set user and group hierarchy by adding users to groups and nesting groups within other groups. For details on configuring user and group hierarchy, see “Configure Group and User Hierarchy” on page 386.

6 Customize User Settings

In the Customization tab, you customize the menu items that are displayed in different contexts for users. For details on customizing menu items, see “Customize User Menus - Workflow” on page 388.

Configure Users and Permissions - Scenario

This scenario describes how to configure users and user groups in the User Management portal.

For a task of this scenario, see “Configure Users and Permissions - Workflow” on page 372.

This scenario includes the following steps:

- “Mapping Out Users and Groups” on page 374
- “Creating Groups” on page 375
- “Assigning Permissions to Groups” on page 376
- “Creating Users” on page 377
- “Configuring User and Group Hierarchy” on page 377
- “Customizing User Settings” on page 382

1 Mapping Out Users and Groups

Jane Smith is the System Administrator at NewSoft Company, and wants to configure users and user groups to be authorized to use HP Business Availability Center, as well as end users who will be accessing Dashboard and reports. Before doing so, she requests the following preliminary information from relevant staff members:

- User names
- Login names
- Initial Passwords
- User Time Zones
- Contact Information (for example, telephone number, pager, email address)

Note: Contact information is mandatory only for HP Software-as-a-Service customers.

With this information, she then decides to create one group of users with the permission level of System Modifiers, and another with the permission level of System Viewers. Furthermore, one of the users is to have an additional role of SiteScope Administrator.

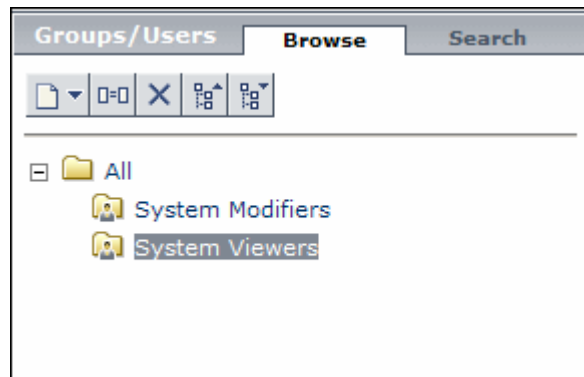
2 Creating Groups



Jane creates groups to group users together, according to the level of permissions they are to be granted. She clicks the **New Group/User** button in the **Groups/Users** pane and creates the following groups:

- System Viewers
- System Modifiers

The **Groups/Users** pane appears as follows:



3 Assigning Permissions to Groups

Once the groups have been created, Jane assigns the relevant permission levels to the groups. After selecting **System Modifiers** in the **Groups/Users** pane, she navigates to the Permissions tab in the Information Pane, and chooses the Root instance (**Business Availability Center**) from any context. In the Predefined Roles tab, she selects **System Modifier** and then clicks **Apply Permissions**. She then selects **System Viewers** in the **Groups/Users** pane and chooses the **System Viewer** role in the Predefined Roles tab, clicking **Apply Permissions** to assign the role.

The results are displayed on the Permissions tab as follows:

The screenshot displays the user management interface with three main panes:

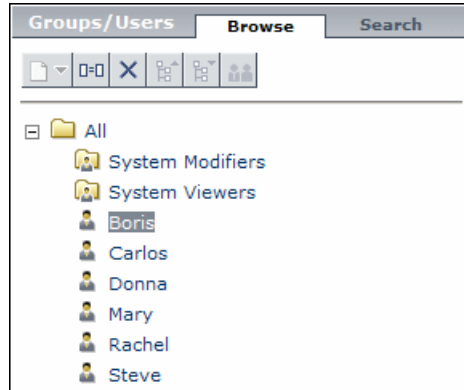
- Groups/Users:** Shows a tree view with 'System Modifiers' and 'System Viewers' selected.
- System Modifiers:** Shows a 'Select context:' dropdown set to 'Platform' and a list of system components. 'Business Availability Center' is selected.
- Permissions:** Shows the 'Predefined Roles' tab with a table of roles and their grant status.

Grant	Role
<input type="checkbox"/>	Superuser
<input type="checkbox"/>	Administrator
<input checked="" type="checkbox"/>	System Modifier
<input type="checkbox"/>	System Viewer
<input type="checkbox"/>	Business Process Profile Administ
<input type="checkbox"/>	Business Process Profile User
<input type="checkbox"/>	SiteScope Administrator
<input type="checkbox"/>	CmdbOpenApiImpact
<input type="checkbox"/>	CmdbOpenApiUpdate
<input type="checkbox"/>	CmdbOpenApiQuery
<input type="checkbox"/>	CmdbOpenApiClassModel
<input type="checkbox"/>	Problem Isolation User
<input type="checkbox"/>	Problem Isolation Advanced User
<input type="checkbox"/>	Problem Isolation Administrator

4 Creating Users



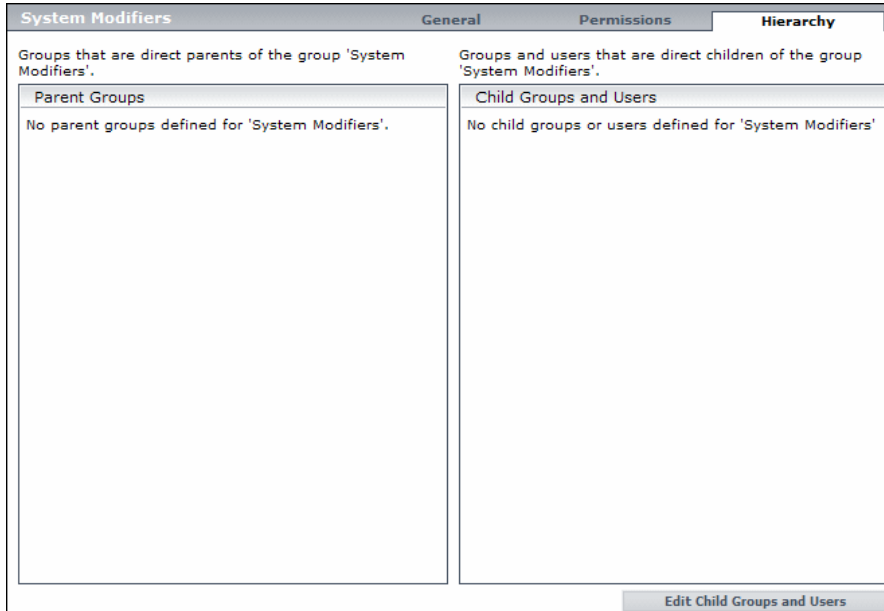
Jane must now create users to nest within the groups, in accordance with the desired permission levels of the individual users. She clicks the **New Group/User** button in the **Groups/Users** pane and while on the Root group, (**All**), she selects **Create User** and configures settings for each new user. The **Groups/Users** pane appears as follows:



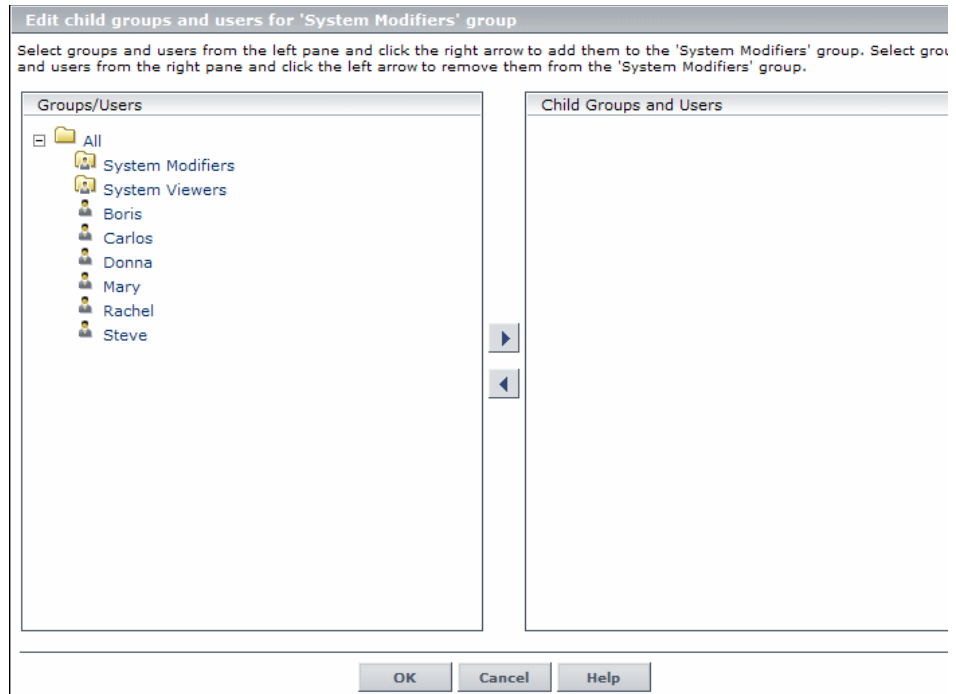
5 Configuring User and Group Hierarchy

Now that Jane has created users authorized to access HP Business Availability Center, she assigns their permission level by nesting them within the appropriate group.

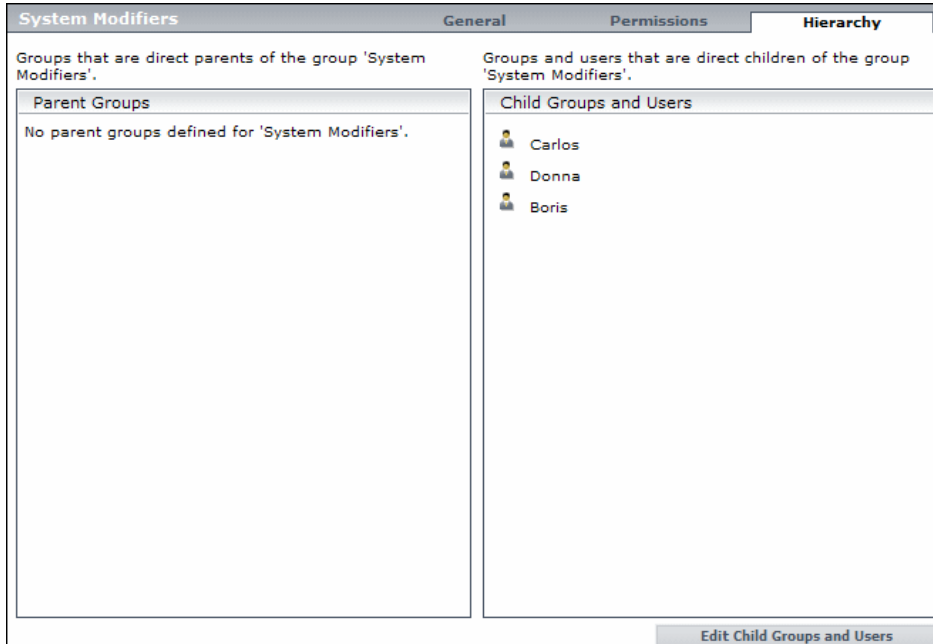
She selects the **System Modifiers** group from the **Groups/Users** pane to nest the appropriate users in this group. Jane then selects the **Hierarchy** tab from the Information Pane on the right side of the page. The hierarchy tab indicates that the System Modifiers group has no child groups, as follows:



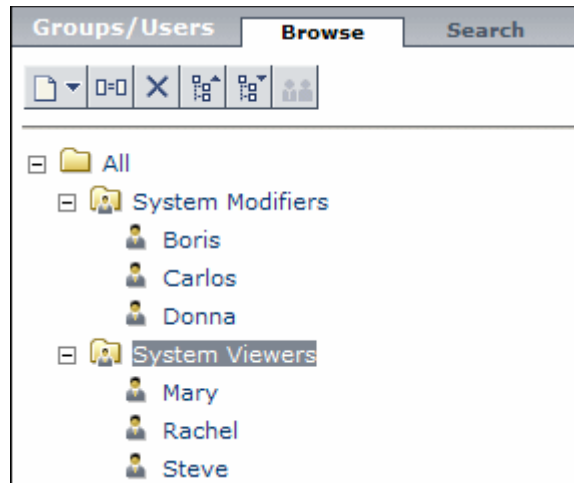
Jane clicks the **Edit Child Groups and Users** button to open the Edit Child Groups and Users dialog box:



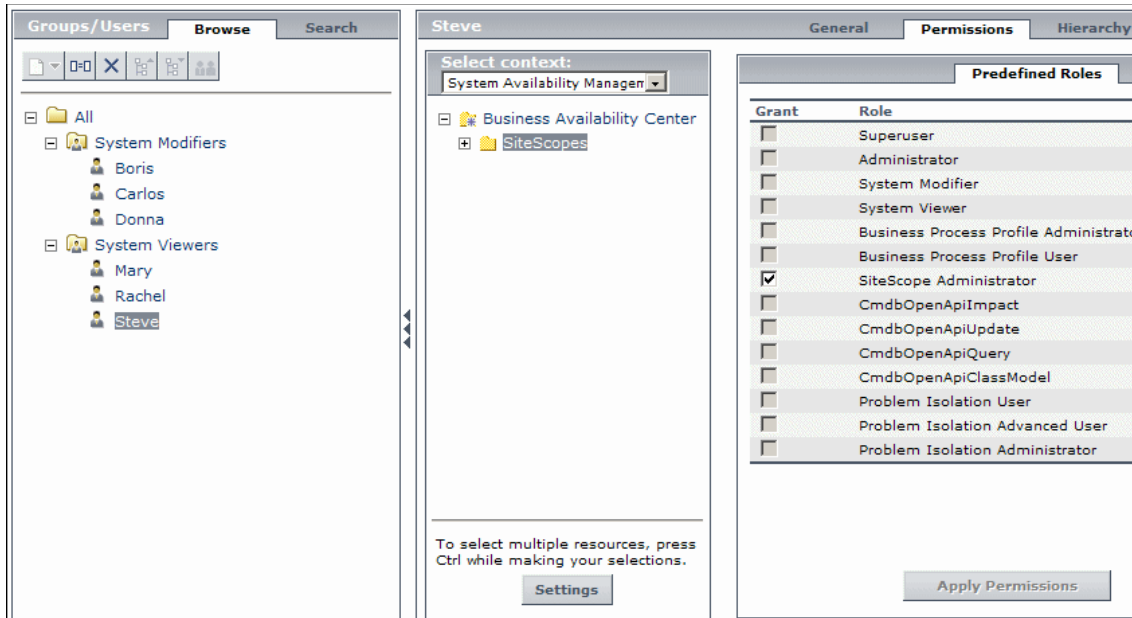
She then selects the relevant users from the **Groups/Users** pane and clicks the right arrow to move them to the **Child Groups and Users** pane. The Hierarchy tab indicates that these users are nested within the System Modifiers group, as follows:



After following the same procedure to nest the relevant users in the System Viewers group, the **Groups/Users** pane is displayed as follows:



Since Steve has the added permission level of SiteScope Administrator, Jane selects the username of the user in the **Groups/Users** pane whom she wants to give the added permission level of SiteScope Administrator, and in the Permissions tab, selects the **System Availability Management** context. After selecting a resource, she then selects **SiteScope Administrator** from the Predefined Roles tab, and clicks **Apply Permissions**. The resulting screen appears as follows:



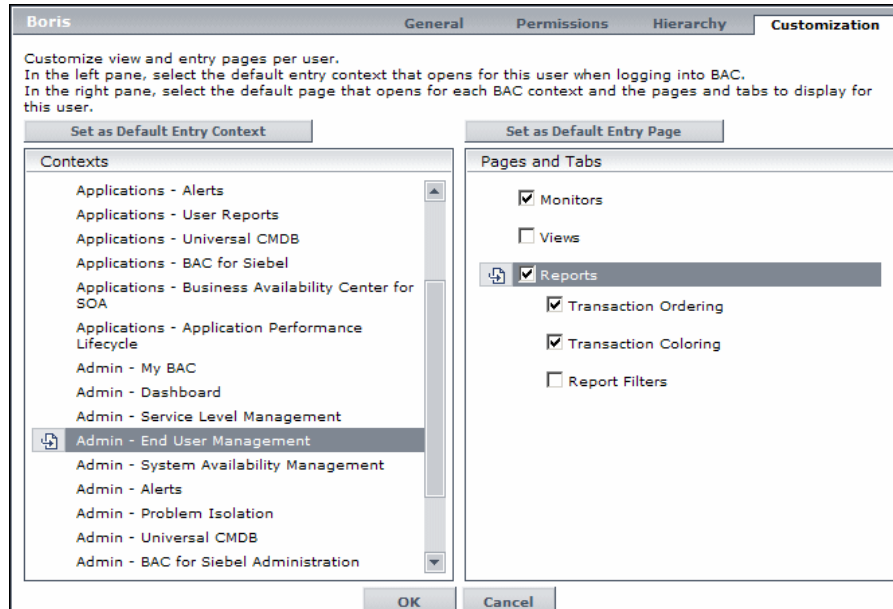
6 Customizing User Settings

Jane now sets the page each user sees when entering HP Business Availability Center, and the menu items available to them on pages throughout HP Business Availability Center. After selecting each user, she clicks the **Customization** tab and sets the following parameters:

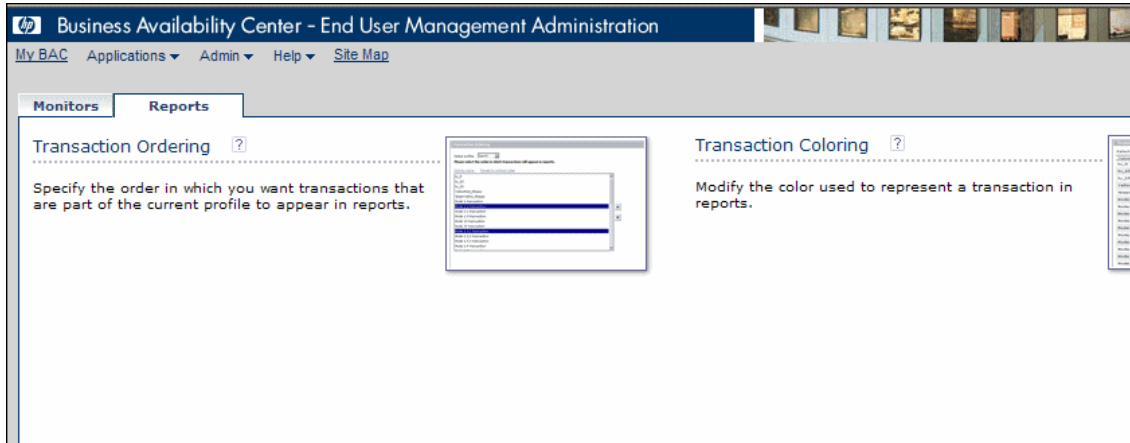
- ▶ The entry context that the user sees when logging into HP Business Availability Center. For example, **Admin - End User Management**.
- ▶ The page within the entry context that the user sees on the selected context. For example, **Reports**.

- The pages and tabs that are to be visible on each HP Business Availability Center page by selecting or clearing the relevant check boxes. For example, the **Views** page and the **Report Filters** tab are cleared to ensure that they are not visible on the **Admin - End User Management** context when the user logs in.

The configured settings are displayed on the customization tab as follows:



The login page that the user sees according to their customized configurations is as follows:



Assign Permissions

This task describes how to configure group and user permissions in User Management. For the applied permissions to take effect, the user for whom permissions have been granted or removed must log out and log in again to HP Business Availability Center.

This task includes the following steps:

- “Prerequisites” on page 385
- “Select a Group or User” on page 385
- “Select a Context” on page 385
- “Assign a Role” on page 385
- “Assign Operations - Optional” on page 385
- “Configure Permissions Settings - Optional” on page 385

1 Prerequisites

Ensure that groups and users are configured in your system. For details on the user interface for creating groups, see “Groups/Users Pane” on page 467.

2 Select a Group or User

Select a group or user from the **Groups/Users** pane on the left side of the page.

3 Select a Context

Select a context from the context list box above the resource tree in the center of the page. For details on the available contexts, see “Resource Contexts” on page 462.

4 Assign a Role

Permissions are assigned using predefined roles. You assign a role for the selected group or user in the **Predefined Roles** tab on the right side of the page. For details on the available roles, see “User Management Roles” on page 395.

5 Assign Operations - Optional

Optionally, you can assign individual operations in the **Operations** tab that the group or user can perform in HP Business Availability Center. For details on the available operations, see “User Management Operations” on page 418.

6 Configure Permissions Settings - Optional

Optionally, click **Settings** at the bottom of the resource tree. The Apply Permissions Settings dialog box opens and you can configure the settings for the current session of applying permissions. For details, see “Resource Tree Pane” on page 461.

Configure Group and User Hierarchy

This task describes how to configure user and group hierarchy. For details on the Hierarchy Tab user interface, see “Hierarchy Tab” on page 458.

This task includes the following steps:

- “Prerequisites” on page 386
- “View Group and User Hierarchy” on page 386
- “Nest Groups and Users” on page 386
- “Results” on page 387

1 Prerequisites

Ensure that you have configured at least one group and one user in the **Groups/Users** pane. For details on the **Groups/Users** pane, see “Groups/Users Pane” on page 467.

2 View Group and User Hierarchy

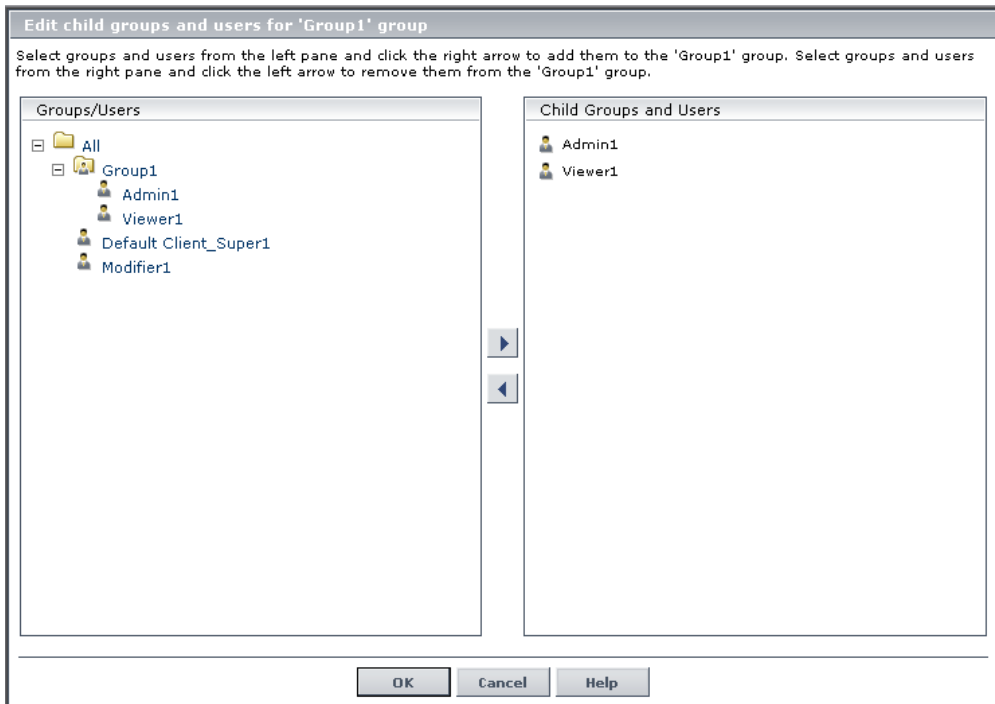
Select a group or user in the **Groups/Users** pane, and select the **Hierarchy** tab on the right side of the page to view the parent and child groups of the group or user, if applicable.

3 Nest Groups and Users

You choose a group in the **Groups/Users** pane, and choose groups and users to nest beneath it.

- a** Click a group or user in the **Browse** tab of the **Groups/Users** pane on the left side of the screen.
- b** Click the **Hierarchy** tab on the right side of the screen.

- c Select the group in the **Groups/Users** tab that you want to administer, and click the **Edit Child Groups and Users** button. The Edit Child Groups and Users window opens.



- d Assign users and nest groups by selecting the user or group in the **Groups/Users** pane, and clicking on the left-to-right arrow to move the group or user to the **Child Groups and Users** pane.

Unassign users and remove nested groups by selecting the group or user in the **Child Groups and Users** pane, and clicking on the right-to-left arrow.

4 Results

The nested groups and users appear in the Child Groups and Users pane in the Hierarchy tab.

Example

The screenshot shows a web interface for managing groups. At the top, there are four tabs: "Group 1", "General", "Permissions", and "Hierarchy". The "Hierarchy" tab is selected. Below the tabs, there are two main sections:

- Parent Groups:** A section titled "Groups that are direct parents of the group 'Group1'." It contains a sub-section "Parent Groups" with the text "No parent groups defined for 'Group1'."
- Child Groups and Users:** A section titled "Groups and users that are direct children of the group 'Group1'." It contains a sub-section "Child Groups and Users" with a list of two items: "Admin1" and "Viewer1", each preceded by a small user icon.

At the bottom right of the interface, there is a button labeled "Edit Child Groups and Users".

Customize User Menus - Workflow

This task describes how to customize the page users see when entering HP Business Availability Center, and choose the menu items available on pages throughout HP Business Availability Center.

For a scenario of this task, see “Customize User Menus - Scenario” on page 390.

This task includes the following steps:

- ▶ “Prerequisites” on page 389
- ▶ “Select a User” on page 389
- ▶ “Assign a Default Context” on page 389
- ▶ “Select Context Pages and Tabs” on page 389

- “Assign a Default Entry Page” on page 389
- “Results” on page 389

1 Prerequisites

Ensure that you have configured at least one user in the **Groups/Users** pane. For details on the **Groups/Users** pane, see “Groups/Users Pane” on page 467.

2 Select a User

Select a user from the **Browse** tab in the **Groups/Users** pane whose pages and menu items you want to customize, and select the **Customization** tab.

3 Assign a Default Context

Select a context from the **Contexts** pane that you want to be the default entry context this user sees when logging into HP Business Availability Center, and click **Set as Default Entry Context**. For details on the Contexts pane, see “Customization Tab” on page 454.

4 Select Context Pages and Tabs

In the **Pages and Tabs** pane, select the check boxes of the pages and tabs that you want to be visible on the selected context for the user. Clear the check boxes of the pages and tabs that you want hidden from the user.

5 Assign a Default Entry Page

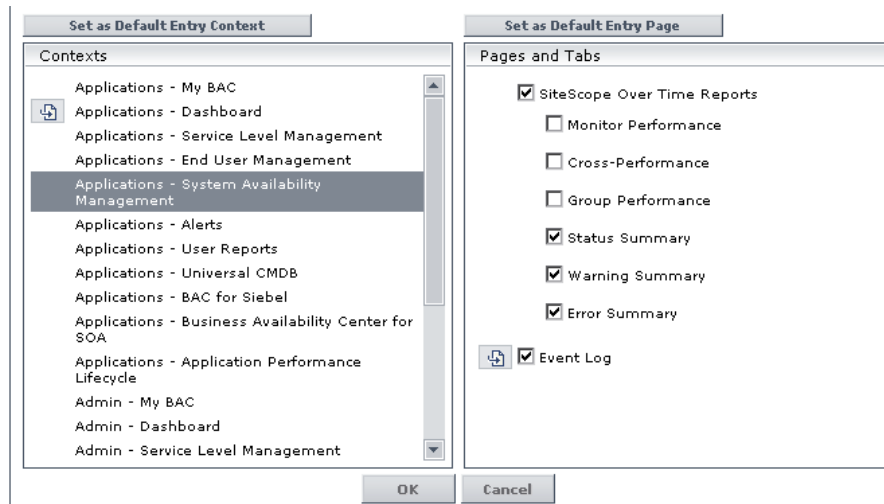
Select a page or tab to be the default entry page for the selected context, and click **Set as Default Entry Page**.

6 Results



The **Default Entry** icon appears next to the default entry context and page. Pages and tabs visible to the user are selected in the **Pages and Tabs** pane.

Example



Customize User Menus - Scenario

This scenario describes how to customize user menus for individual users.

For a task of this scenario, see “Customize User Menus - Workflow” on page 388.

This scenario includes the following steps:

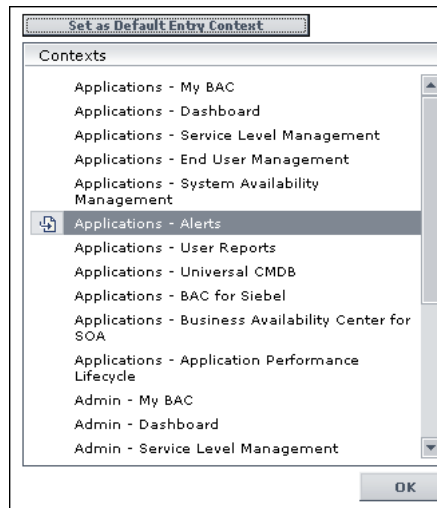
- “Choosing a User” on page 391
- “Assigning a Default Context” on page 391
- “Selecting Context Pages and Tabs” on page 392
- “Results” on page 393

1 Choosing a User

The administrator of ABC Insurance Company is creating several users in the User Management section of HP Business Availability Center. She decides that the user John Smith should be able to view only certain pages and tabs in HP Business Availability Center, and that a specific page should appear on his screen when he logs into HP Business Availability Center.

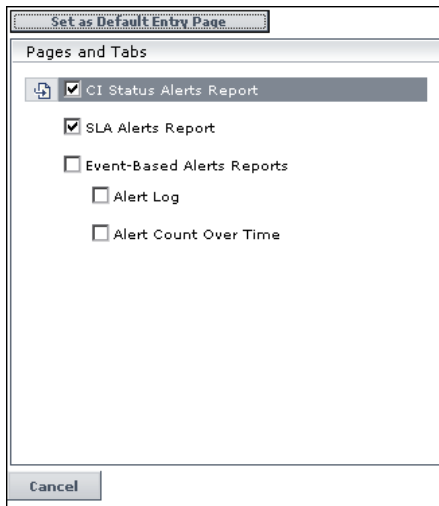
2 Assigning a Default Context

Since John's chief responsibility at ABC is to monitor alerts, the administrator designates the Applications - Alerts page as their default entry context. She selects **Applications-Alerts** in the Contexts pane, and clicks **Set as Default Entry Context**. The **Applications - Alerts** context is indicated as the default entry context with the default entry icon, as appears in the following image:



3 Selecting Context Pages and Tabs

Since John is not authorized to view Event-Based Alert Reports, that option is cleared in the Pages and Tabs pane, leaving the remaining tabs, CI Status Alerts Report and SLA Alerts Report, checked to be visible when John logs into HP Business Availability Center. As Configuration Items Alerts are of the highest priority for ABC Insurance, the administrator designates this as the first page for John to see upon logging in. She selects **CI Status Alerts Report** in the Pages and Tabs pane, and then clicks **Set as Default Entry Page**. The **CI Status Alerts Report** is indicated as the default entry page with the default entry icon, as appears in the following image:



4 Results

The context that opens when John Smith logs into HP Business Availability Center is the **Alerts** context on the Applications menu. The **CI Status Alerts Report** page opens, and the SLA Alerts Report page is also available to him.

The configured Customization tab in User Management appears as follows:

The screenshot displays the 'Customization' tab for user 'John Smith'. At the top, there are tabs for 'General', 'Permissions', 'Hierarchy', and 'Customization'. Below the tabs, there are instructions: 'Customize view and entry pages per user. In the left pane, select the default entry context that opens for this user when logging into BAC. In the right pane, select the default page that opens for each BAC context and the pages and tabs to display for this user.'

The interface is split into two panes:

- Left Pane (Contexts):** A list of contexts is shown. The 'Applications - Alerts' context is selected and highlighted. Other contexts include 'Applications - My BAC', 'Applications - Dashboard', 'Applications - Service Level Management', 'Applications - End User Management', 'Applications - System Availability Management', 'Applications - User Reports', 'Applications - Business Availability Center for Siebel', 'Applications - Business Availability Center for SOA', 'Admin - My BAC', 'Admin - Dashboard', 'Admin - Service Level Management', 'Admin - End User Management', 'Admin - System Availability Management', 'Admin - Alerts', 'Admin - Problem Isolation', 'Admin - Business Availability Center for Siebel Administration', and 'Admin - Platform'.
- Right Pane (Pages and Tabs):** A list of pages and tabs is shown. The 'CI Status Alerts Report' page is selected and highlighted. Other pages and tabs include 'SLA Alerts Report', 'Event-Based Alerts Reports', 'Alerts Log', 'Baseline Suggested Alerts Log', 'Alerts Count Over Time', 'Alerts Count Summary', 'Actual vs. Baseline Suggested Alerts', and 'Actual vs. Baseline Suggested Alerts - Deta'.

Chapter 18 • User Management

Business Availability Center - Alerts LOGOUT

myBAC Applications Admin Help Site Map User: John Smith

CI Status Alerts Report **SLA Alerts Report**

Configuration Item Status Alerts 3/18/08 12:00 AM - 6/18/08 12:00 AM (GMT+02:00)Asia,Jerusalem

View: Past quarter From: 3/18/08 3:34 PM To: 6/18/08 3:34 PM (GMT+02:00)...

Configuration Items: Filtered KPIs: All Generate

A very large number of alerts meet the criteria; only a subset of those alerts will be displayed. To reduce this number you can do one of the following:

- * Narrow the time range
- * Select a specific Configuration Item
- * Select a specific KPI

Status	Time	Alert Name	Configuration Item	KPI	Alert Action
OK	6/16/08 4:44 PM	any to OK	100per	Availability	Send E-mail to: av...pen i
Warning	6/16/08 4:44 PM	imp	100per	Performance	Send E-mail to: av...pen i
OK	6/16/08 4:44 PM	any to OK	100per	Performance	Send E-mail to: av...pen i
OK	6/16/08 4:44 PM	imp	100per	Performance	Send E-mail to: av...pen i
Critical	6/16/08 4:45 PM	any to crit	100per	Availability	Send E-mail to: av...pen i
Critical	6/16/08 4:45 PM	change to crit	100per	Availability	Send E-mail to: av...pen i
Critical	6/16/08 4:45 PM	wos	100per	Availability	Send E-mail to: av...pen i
Major	6/16/08 4:45 PM	imp	100per	Availability	Send E-mail to: av...pen i
Critical	6/16/08 4:45 PM	any to crit	100per	Performance	Send E-mail to: av...pen i
Critical	6/16/08 4:45 PM	change to crit	100per	Performance	Send E-mail to: av...pen i
Minor	6/16/08 4:45 PM	imp	100per	Availability	Send E-mail to: av...pen i
Critical	6/16/08 4:45 PM	wos	100per	Performance	Send E-mail to: av...pen i
Major	6/16/08 4:45 PM	imp	100per	Performance	Send E-mail to: av...pen i
OK	6/16/08 4:45 PM	any to OK	100per	Availability	Send E-mail to: av...pen i
Minor	6/16/08 4:45 PM	imp	100per	Performance	Send E-mail to: av...pen i
Warning	6/16/08 4:45 PM	imp	100per	Performance	Send E-mail to: av...pen i

User Management Roles

Details of the resources on which roles can be applied appear within the description of each role below. Some of the resources are applicable to HP Software-as-a-Service customers only and are noted accordingly.

This section describes the following roles:

- “Superuser” on page 396
- “Administrator” on page 396
- “System Modifier” on page 399
- “System Viewer” on page 404
- “Business Process Profile Administrator” on page 406
- “Business Process Profile User” on page 407
- “SiteScope Administrator” on page 407
- “TransactionVision User” on page 408
- “TransactionVision Administrator” on page 408
- “CmdbOpenApiImpact” on page 408
- “TransactionVision Operator” on page 409
- “CmdbOpenApiUpdate” on page 409
- “CmdbOpenApiQuery” on page 409
- “CmdbOpenApiClassModel” on page 410
- “Customer Superuser” on page 410
- “Customer Administrator” on page 413
- “BPI User” on page 415
- “Problem Isolation User” on page 416
- “Problem Isolation Advanced User” on page 416
- “Problem Isolation Administrator” on page 417
- “BPI Administrator” on page 417

Superuser

The Superuser role can be applied only to the Business Availability Center resource.

This role includes all available operations on all the resources in all the contexts. Only a superuser can apply the Superuser role to another user.

Important: The default superuser does not have permissions to write to Business Availability Center from the UCMDB WS API. Specific roles exist for that purpose. For details, see “CmdOpenApiQuery” on page 409 and “CmdOpenApiUpdate” on page 409.

Administrator

The Administrator role can be applied only to the Business Availability Center resource.

An administrator has a collection of permissions that enable adding profiles to the system, and managing the resources related to those profiles. Once a profile is added, the administrator has full control privileges on all resources within that profile instance.

Note: In the TransactionVision context, the Administrator has access to the TVB UI Administration tab.

Context	Resource	Allowed Operations
Business Process Insight	Business Process Insight Application	View
	Business Process Insight Administration	Full Control
CMDB	Views	Full Control

Context	Resource	Allowed Operations
Central Repository Service	Root Folder and Sub Level Folders	Full Control
My BSM	Manage Modules page	Full Control
	Manage Portlet Definitions page	Full Control
Monitors	Containers	Full Control
	Filters	Add
	Diagnostics	Full Control
	Business Process Profile	Add
	Real User Monitor	Add
Operations Orchestration Integration	Operations Orchestration Integration Administration	Full Control
	Operations Orchestration Integration Execution	Full Control
Platform	Audit Log	Full Control
	Custom Data Types	Full Control
	Database	Full Control
	Data Collectors	Change
		View
	Recipients	Full Control
	Scheduled Reports	Full Control
	Users	Full Control
User Groups	Full Control	

Context	Resource	Allowed Operations
Problem Isolation	Problem Isolation application	Full Control
	Problem Isolation Administration	Full Control
	Isolation History	Full Control
	Problem Isolation On Demand Monitor	Full Control
	Problem Isolation Revalidation Transaction	Full Control
	Proactive	Full Control
Production Analysis	Production Analysis	Full Control
Service Level Management	SLAs	Full Control
System Availability Management	SiteScopes	Add
Transaction Vision	Projects	Full Control
	User-created reports	Full Control
	Analyzer	Full Control
	User Data	Full Control
User Defined Reports	Custom Links	Full Control
	Custom Reports	Full Control
	Default Header/footer	Full Control
	Excel Reports	Full Control
	Trend Reports	Full Control
	Favorite Filter	Full Control
	Annotation	Full Control
	Service Report	Full Control

System Modifier

The System Modifier role can be applied only to the Business Availability Center resource.

A system modifier can view and change any and all of the resources within HP Business Availability Center. There are some resources on which the view or the change operation is not applicable. A system modifier has permissions for only those operations that are available in HP Business Availability Center.

A system modifier does not have full control privileges on any resource and therefore, cannot grant or remove permissions for other users.

Context	Resource	Allowed Operations
Business Process Insight	Business Process Insight Application	View
	Business Process Insight Administration	Full Control
CMDB	Views	View
		Change
Central Repository Service	Root Folder and Sub Level Folders	View
		Full Control
Monitors	Alerts (Business Process)	View
		Change
	Alerts - Create Dependency	Change
	Alerts - Log Event	Change
	Alerts - Run Executable File	Change
	Alerts - SNMP	Change
	Monitors (Business Process)	View
		Change
Containers	Change	

Context	Resource	Allowed Operations
Monitors	Filters	View
		Change
	Diagnostics	View
		Change
	Business Process Profile	View
		Change
	Real User Monitor Engines	View
		Change
	Alerts (Real User Monitor)	View
		Change
	End User (Real User Monitor)	View
		Change
	Engine Settings (Real User Monitor)	View
		Change
	Transactions (Real User Monitor)	View
		Change

Context	Resource	Allowed Operations
Monitors	SiteScope Preferences	View
		Change
	Solution Sets	Change
	Notification Templates	View
		Change
	Outlier Value (Business Process)	Change
	Transactions (Business Process)	View
		Change
	Notification Templates	View
		Change
	Customer Notification	View
		Change
Operations Orchestration Integration	Operations Orchestration Integration Administration	Change
		View
	Operations Orchestration Integration Execution	Execute

Context	Resource	Allowed Operations
Platform	Audit Log	View
	Databases	Change
		View
	Data Collectors	View
		Change
	Recipients	View
		Change
	Sample Type	Change
		View
	Scheduled Reports	Change
		View
	Users	Change
		View
	User Group	Change
View		
Problem Isolation	Problem Isolation application	View
	Problem Isolation Administration	View
	Isolation History	Change
	Problem Isolation On Demand Monitor	Execute
	Problem Isolation Revalidation Transaction	Execute
	Proactive	Change
View		
Service Level Management	SLAs	Change
		View

Context	Resource	Allowed Operations
System Availability Management	SiteScopes	Change
		View
TransactionVision	Projects	Change
		View
	User-created reports	View
	Analyzer	Execute
User Defined Reports	Custom Links	View
		Change
	Custom Reports	View
		Change
	Default Header/footer	Change
	Excel Reports	View
		Change
	Trend Reports	View
		Change
	Favorite Filter	View
		Change
	Annotation	View
		Change
	Service Report	View
Change		

System Viewer

The System Viewer role can be applied only to the Business Availability Center resource.

A system viewer can only view resources within HP Business Availability Center and has no permissions to change, add, or delete any resources or resource instances. There are some resources on which the view operation is not applicable. A system viewer has no access to those resources.

Context	Resource	Allowed Operations
Business Process Insight	Business Process Insight Application	View
CMDB	Views	View
Monitors	Alerts (Business Process)	View
	Monitors (Business Process)	View
	Filters	View
	Diagnostics	View
	Business Process Profile	View
	Real User Monitor Engines	View
	Alerts (Real User Monitor)	View
	End User (Real User Monitor)	View
	Engine Settings (Real User Monitor)	View
	Transaction	View
	Notification Templates	View
	Transactions (Business Process)	View
	Customer Notification Format	View

Context	Resource	Allowed Operations
Platform	Audit Log	View
	Database	View
	Data Collectors	View
	Recipients	View
	Sample Types	View
	Scheduled Reports	View
	Users	View
	User Group	View
Operations Orchestration Integration	Administration	View
Problem Isolation	Problem Isolation application	View
	Problem Isolation Administration	View
Service Level Management	SLAs	View
System Availability Management	SiteScopes	View
Transaction Vision	Projects	View
	User-created reports	View
User Defined Reports	Custom Links	View
	Custom Reports	View
	Excel Reports	View
	Trend Reports	View

Business Process Profile Administrator

The Business Process Profile Administrator role can be applied to only the Business Process Profile resource or specific instances of the profile resource.

When granted this role at the resource collection level, the Business Process Profile administrator can manage all of the platform’s Business Process profiles, including permissions on all the profiles. When granted this role at the instance level, the administrator can manage only those resources associated with the specific Business Process Profile instance.

Any administrator who was added as a user on a specific Business Process profile in the previous version is upgraded to the Business Process profile administrator role for that profile. This is in addition to being assigned the administrator role as described above (for details, see “Administrator” on page 396).

Context	Resource	Allowed Operations
Monitors	Business Process Profile	Full Control
	Monitor	Full Control
	Transaction	Full Control
	Alert	Full Control
	Scripts Repository	Full Control
	Package Work Manipulation	Full Control

Business Process Profile User

The Business Process Profile User role can be applied to only the Business Process Profile resource or specific instances of the profile resource.

These users have view permissions, but can modify transaction threshold settings and transaction descriptions.

Any regular user who was added as a user on a specific Business Process Profile in the previous version is upgraded to the Business Process Profile User role for that profile.

Context	Resource	Allowed Operations
Monitors	Business Process Profile	View
	Transaction	Change

SiteScope Administrator

The SiteScope Administrator role can be applied to only the SiteScope resource or specific instances of the resource.

When granted this role at the resource collection level, the SiteScope administrator can manage all of the platform's SiteScopes, including permissions on the SiteScopes. When granted this role at the instance level, the administrator can manage only those resources associated with the specific SiteScope instance.

Any administrator who was added as a user on a specific SiteScope in the previous version is upgraded to the SiteScope administrator role for that SiteScope.

Context	Resource	Allowed Operations
System Availability Management	SiteScopes	Full Control

TransactionVision User

The TransactionVision User role can be applied only to the Projects resource in the TransactionVision context.

Context	Resource	Allowed Operations
TransactionVision	Projects	View
	User-created Reports	View

TransactionVision Administrator

The TransactionVision Administrator role can be applied only to the Projects resource in the TransactionVision context. The TransactionVision Administrator role is useful in providing added security by enabling users to have Full Control access of TransactionVision administration, but not enabling access to the User Data resource.

Note: In the TransactionVision context, the TransactionVision Administrator has access to the TVB UI Administration tab.

Context	Resource	Allowed Operations
TransactionVision	Projects	Full Control
	User-created Reports	Full Control
	Analyzer	Full Control

CmdbOpenApilImpact

This role enables users to impact operations on the CMDB.

Context	Resource	Allowed Operations
UCMDB WS API	Cmdb Open API	View

TransactionVision Operator

The TransactionVision Operator role can be applied only to the Projects resource in the TransactionVision context.

Context	Resource	Allowed Operations
TransactionVision	Projects	View
	User-created Reports	View
	Analyzer	Execute

CmdbOpenApiUpdate

The CmdbOpenApiUpdate role can be applied to only the Cmdb Open API resource.

This role enables users to update the CMDB (Configuration Management Database) for communication with third-party applications.

Context	Resource	Allowed Operations
UCMDB WS API	Cmdb Open API	Change

CmdbOpenApiQuery

The CmdbOpenApiQuery role can be applied to only the Cmdb Open API resource.

This role enables users to query the CMDB (Configuration Management Database) for communication with third-party applications.

Context	Resource	Allowed Operations
UCMDB WS API	Cmdb Open API	View

CmdbOpenApiClassModel

This role enables users to perform operations on CITs.

Context	Resource	Allowed Operations
UCMDB WS API	Cmdb Open API	View

Customer Superuser

Note: This role can be applied to HP Software-as-a-Service customers only.

The Customer Superuser role can be applied only to the Active Customer resource instance. The Active Customer resource instance is available only to HP Software-as-a-Service customers and represents the customer level in the permissions resource tree. It is available in all contexts and applies to all contexts (like the Business Availability Center resource). The customer superuser is granted full control on all the resources and instances that belong to that customer. These include all resources, instances of those resources, and child resources under the customer resource.

Context	Resource	Allowed Operations
My BSM	Manage Modules page	Full Control
	Manage Portlet Definitions page	Full Control
CMDB	Views	Full Control

Context	Resource	Allowed Operations
Monitors	Alerts	Full Control
	Alert - Create Dependency	Full Control
	Notification Templates	Full Control
	Diagnostics	View
		Execute
	Monitors (Business Process)	Full Control
	Containers	Full Control
	Filters	Full Control
	Template	Full Control
	Business Process Profile	Full Control
	Real User Monitor Engines	Full Control
	Alerts (Real User Monitor)	Full Control
	End User (Real User Monitor)	Full Control
	Engine Settings (Real User Monitor)	Full Control
	Transactions (Real User Monitor)	Full Control
	Outlier Value (Business Process)	Full Control
Transactions (Business Process)	Full Control	

Context	Resource	Allowed Operations
Platform	Audit Log	Full Control
	Custom Data Types	Full Control
	Hosts	Full Control
	Package Information	Full Control
	Recipients	Full Control
	Scheduled Reports	Full Control
	Script Repository	Full Control
	System Tickets	Full Control
	Users	Full Control
	User Groups	Full Control
Production Analysis	Production Analysis	Full Control
Service Level Management	SLAs	Full Control
System Availability Management	SiteScopes	Full Control
UCMDB Open API	CMDB Open API	Change
		View
User Defined Reports	Custom Links	Full Control
	Custom Reports	Full Control
	Default Header/Footer	Full Control
	Excel Reports	Full Control
	Trend Reports	Full Control
	Favorite Filter	Full Control
	Annotation	Full Control
	Service Report	Full Control

Customer Administrator

Note: This role can be applied to HP Software-as-a-Service customers only.

The Customer Administrator role can be applied only to the Active Customer resource instance. The Active Customer resource instance is available only to HP Software-as-a-Service customers and represents the customer level in the permissions resource tree. It is available in all contexts and applies to all contexts (like the Business Availability Center resource).

The customer administrator is granted full control on a selection of resources, as well as either view, execute, or both on other resources. This user can add profiles of any type, and has full control on the created profile. However, the user is not granted permissions for profiles that were created by other users, even if these profiles are for the same customer. In the case of the **My BSM** resources, any user with this role can make changes to resources defined by other users.

Context	Resource	Allowed Operations
CMDB	Views	Full Control
	Production Analysis	Full Control
System Availability Management	SiteScopes	Add

Context	Resource	Allowed Operations
Monitors	Alerts	View
	Alerts Create Dependency	Full Control
	Diagnostics	View
		Execute
	Containers	Full Control
	Filters	Add
	Monitoring Filter (Views)	Full Control
	Business Process Profile	Add
	RUM	Add
Customer Notification Format	Full Control	
Platform	Audit Log	Full Control
	Customer Data Types	Full Control
	User Groups	Full Control
	Users	Full Control
	Package Information	Full Control
	Recipients	Full Control
	Scheduled Reports	Full Control
	Script Repository	Full Control
System Tickets	Full Control	
Service Level Management	SLAs	Full Control

Context	Resource	Allowed Operations
User Defined Reports	Custom Links	Full Control
	Custom Reports	Full Control
	Default Header/Footer	Full Control
	Excel Reports	Full Control
	Trend Reports	Full Control
	Favorite Filter	Full Control
	Annotation	Full Control
	Service Report	Full Control
My BSM	Manage Modules page	Full Control
	Manage Portlet Definitions page	Full Control

BPI User

The BPI User role can be applied only to the Business Process Insight resource.

Context	Resource	Allowed Operations
Business Process Insight	Business Process Insight Application	View
	Problem List	Change
	Problem Isolation Administration	View
	OnDemand Monitors	Execute
	Revalidation Transactions	Execute
	Proactive	View
Operations Orchestration Integration	Administration	View
	Execution	Execute

Problem Isolation User

The Problem Isolation User role can be applied only to the Problem Isolation Application resource.

A Problem Isolation user can only view resources within the Problem Isolation application, and has no permissions to change, add, or delete any resources or resource instances. There are some resources on which the view operation is not applicable. A Problem Isolation user has no access to those resources.

Context	Resource	Allowed Operations
Problem Isolation	Problem Isolation Application	View
	Problem Isolation Administration	View

Problem Isolation Advanced User

The Problem Isolation Advanced User role can be applied only to the Problem Isolation Application resource.

A Problem Isolation advanced user can view and run on demand monitors and revalidate problems, as well as view, change, add, or delete entries in the problem list.

Context	Resource	Allowed Operations
Problem Isolation	Problem Isolation Application	View
		Add
		Change
		Delete

Problem Isolation Administrator

The Problem Isolation Administrator role can be applied only to the Problem Isolation Application resource.

A Problem Isolation administrator has full permissions on all areas of Problem Isolation, and has full control over all resources and resource instances.

Context	Resource	Allowed Operations
Problem Isolation	Problem Isolation Application	View
		Add
		Change
		Delete
		Execute
		Full Control

BPI Administrator

The BPI Administrator role can be applied only to the Business Process Insight resource.

Context	Resource	Allowed Operations
Business Process Insight	Business Process Insight Administrator	Full Control
	Business Process Insight Application	Full Control
	Problem List	Full Control
	OnDemand Monitors	Full Control
	Revalidation Transactions	Full Control
	Proactive	Full Control
Operations Orchestration Integration	Administration	Full Control
	Execution	Full Control

User Management Operations

Within each context listed below is a table listing:

- every resource
- which operations can be applied to that resource
- a description of what the operation enables

This section describes the following HP Business Availability Center contexts, and the operations that can be applied to them:

- “Business Process Insight” on page 419
- “CMDB” on page 419
- “Central Repository Service” on page 421
- “Monitors” on page 421
- “My BSM” on page 432
- “HP Operations Manager i” on page 433
- “Operations Orchestration Integration” on page 434
- “Platform” on page 435
- “Problem Isolation” on page 441
- “Production Analysis” on page 442
- “Service Level Management” on page 443
- “System Availability Management Administration (SAM Admin)” on page 444
- “TransactionVision” on page 448
- “UCMDB WS API” on page 450
- “User Defined Reports” on page 451

Business Process Insight

Use the Business Process Insight context to assign permissions to the Business Process Insight instance configured within the system.

Resources	Operation	Description
Business Process Insight Application	View	Enables entering the Business Process Insight application.
Business Process Insight Administration	Full Control	Enables performing all available operations on Business Process Insight administration, and granting and removing permissions for other users.

CMDB

The CMDB context enables you to define the operations permitted for the views defined in IT Universe Administration and viewed in the View Explorer, Dashboard, and Service Level Management.

Tip: If a user has permissions on a view in CMDB, all the profiles that are in that view are visible to the user, even if the user does not have permissions on the profile. To prevent a user from viewing profiles for which the user does not have permissions while enabling the user to access a view, create a view for the user including only those configuration items for which you want the user to have permissions and grant the user permission on that view.

Resources	Operation	Description
Views	Add	Enables adding views in the View Manager, and creating Enrichments, Correlations, Queries, and Reports in UCMDB.
	Change	Enables adding a configuration item or relationship to a view, editing the view in the View Manager, and if user is the creator of the view, removing configuration items or relationships from the view. Enables modifying of Enrichments, Correlations, Queries, and Reports in UCMDB.
	View	Enables viewing the configured views in read-only mode, and viewing of Enrichments, Correlations, Queries, and Reports in UCMDB.
	Delete	Enables deleting views from the View Manager and deleting of Enrichments, Correlations, Queries, and Reports in UCMDB.
	Full Control	Enables performing all available operations on the views in the view Manager and IT Universe Admin, viewing all views in the applications, and granting and removing permissions for those operations. Also enables performing of all available options for Enrichments, Correlations, Queries, and Reports in UCMDB, and the granting of permissions to other UCMDB users.

Resources	Operation	Description
CMDB	Full Control	Enables performing all available operations on the CMDB, and granting and removing permissions to access the CMDB.

Central Repository Service

The Central Repository Service context enables you to define the operations permitted for the folders under the Root folder. Operations assigned to a folder affect all folders contained beneath it.

Resources	Operation	Description
Central Repository Service	View	Enables downloading scripts and reports into the Central Repository Service.
	Full Control	Enables performing all available operations on the folders in the Central Scripts Repository: view, edit, and delete any script or subfolder in the folder.

Monitors

The Monitors context includes all those resources that relate to data collection and monitoring. These resources can be found in Platform Administration and End User Management Administration.

The profile resources (Business Process and SiteScope) determine the permissions level of the user in all areas of the platform where you must select a profile to access the page or perform the action. These include most areas of End User Management Administration, Alert Management, Downtime/Event Scheduling, Transaction Ordering, Transaction Coloring, and various Reports.

Some of the resources listed appear only when instances of the parent resource have been defined in the platform. For example, the Monitors and Transactions resources appear only as child objects of an instance of a Business Process Profile.

Resources	Operation	Description
Alerts - Send SNMP Trap	Change	Enables selecting the option to send SNMP traps on alert, editing SNMP trap addresses, and clearing the option to send SNMP traps on alert.
	Full Control	Enables performing all available operations on sending SNMP traps on alerts, and granting and removing permissions for those operations.
Alerts - Run Executable File	Change	Enables selecting the option to run an executable file on alert, selecting and editing executable files to run on alert, and clearing the option to run an executable file on alert.
	Full Control	Enables performing all available operations on running an executable file on alert, and granting and removing permissions for those operations.
Alerts - Log to Event Viewer	Change	Enables selecting whether alerts should be logged in the Windows Event Viewer, which is accessed from Windows Administrative Tools.
	Full Control	Enables selecting whether alerts should be logged in the Windows Event Viewer, and granting and removing permissions on that operation.

Resources	Operation	Description
Alerts - Create Dependencies	Change	Enables creating and removing dependencies between alerts.
	Full Control	Enables creating and removing alert dependencies, and granting and removing permissions for those operations.
Business Process Profiles	Add	Enables creating Business Process profiles.
	Change	Enables renaming Business Process profiles and modifying profile properties.
	View	Enables viewing the Business Process profile details in End User Management Administration, and the Business Process profile in any application that lists the profiles, such as Alert Management, Service Level Management, Downtime/Event Scheduling, Analytics, and reports.
	Delete	Enables deleting Business Process profiles.
	Execute	Enables running and stopping Business Process profiles.
	Full Control	Enables performing all available operations on Business Process profiles, and granting and removing permissions for those operations.

Resources	Operation	Description
Monitors (under Business Process Profile instance)	Add	Enables adding transaction monitors, WebTrace monitors, and single URL monitors (HP Software-as-a-Service only) to Business Process profiles.
	Change	Enables editing transaction monitor, WebTrace monitor, and single URL monitor (HP Software-as-a-Service only) properties.
	View	Enables viewing transaction monitor, WebTrace monitor, and single URL monitor (HP Software-as-a-Service only) properties.
	Delete	Enables deleting transaction monitors, WebTrace monitors, and single URL monitors (HP Software-as-a-Service only) from the profile.
	Full Control	Enables performing all available operations on transaction monitors, WebTrace monitors, and single URL monitors (HP Software-as-a-Service only), and granting and removing permissions for those operations.
Transactions (under Business Process Profile)	Change	Enables editing transaction descriptions and threshold settings.
	View	Enables viewing transaction details.
	Full Control	Enables performing all available operations on transactions, and granting and removing permissions for those operations.

Resources	Operation	Description
Outlier Value (under Business Process Profile > Transaction instance)	Change	Enables setting a transaction's outlier value.
	Full Control	Enables setting the transaction's outlier value, and granting and removing permissions for that operation.
Alerts (under Business Process Profile instance)	Add	Enables adding alerts to the Business Process profile.
	Change	Enables editing details of alerts associated with the Business Process profile.
	View	Enables viewing alerts in the Business Process profile and viewing alert details in Alerts Management.
	Delete	Enables deleting alerts associated with the Business Process profile.
	Full Control	Enables performing all available operations on the alerts in the Business Process profile, and granting and removing permissions for those operations.

Resources	Operation	Description
Diagnostics	Change	Enables viewing Diagnostics administration and configuring the Diagnostics settings.
	View	Enables viewing the Diagnostics application when accessing Diagnostics from the Business Application Center.
	Execute	Enables changing the settings in the HP Diagnostics UI, such as setting thresholds.
	Full Control	Enables performing all operations on Diagnostics, and granting and removing permissions for those operations.
Real User Monitor Engines	Add	Enables adding Real User Monitor engines to End User Management Administration.
	Change	Enables editing Real User Monitor engine details.
	View	Enables viewing Real User Monitor engine details.
	Delete	Enables removing Real User Monitor engines from End User Management Administration.
	Full Control	Enables performing all available operations on Real User Monitor engines, and granting and removing permissions for those operations.

Resources	Operation	Description
Engine Settings (under Real User Monitor Engine instance)	Change	Enables editing the Real User Monitor preferences details.
	View	Enables viewing the preferences of a Real User Monitor engine.
	Full Control	Enables performing all available operations on Real User Monitor engines, and granting and removing permissions for those operations.
Domains (under Real User Monitor Engine instance)	Add	Enables adding a domain to the the Real User Monitor engine.
	Change	Enables editing the Real User Monitor properties.
	View	Enables viewing a Real User Monitor domain.
	Delete	Enables deleting a domain from a Real User Monitor Engine.
	Full Control	Enables performing all available operations on Real User Monitor domains, and granting and removing permissions for those operations.

Resources	Operation	Description
RUM Applications (under Real User Monitor Engine instance)	Add	Enables adding applications to a Real User Monitor engine, and pages and transactions to an application.
	Change	Enables editing the Real User Monitor application, page, and transaction details.
	View	Enables viewing the Real User Monitor application, page, and transaction.
	Delete	Enables deleting an application from a Real User Monitor engine.
	Full Control	Enables performing all available operations on a Real User Monitor application, page, and transaction, and granting and removing permissions for those operations.
Alerts (under Real User Monitor Engine instance)	Add	Enables adding alerts to a Real User Monitor engine.
	Change	Enables editing Real User Monitor alert properties.
	View	Enables viewing the properties of a Real User Monitor alert.
	Delete	Enables deleting an alert from a Real User Monitor engine.
	Full Control	Enables performing all available operations on Real User Monitor alerts, and granting and removing permissions for those operations.

Resources	Operation	Description
SiteScope	Add	Enables adding SiteScopes and SiteScope profiles to Monitor Administration.
	Change	Enables modifying SiteScope and SiteScope profile properties and attaching a SiteScope to, or detaching it from, Monitor Administration.
	View	Enables viewing SiteScope or SiteScope profile properties.
	Delete	Enables deleting a SiteScope profile from Monitor Administration.
	Full Control	Enables performing all available operations on SiteScopes and SiteScope profiles, and granting and removing permissions for those operations.
Template Containers	Add	Enables adding a container for templates to the Monitor Administration enterprise.
	Change	Enables modifying template container properties.
	View	Enables viewing template container properties in Monitor Administration.
	Delete	Enables deleting a template container from the Monitor Administration enterprise.
	Full Control	Enables all available operations on template containers, and granting and removing permissions for those operations.

Resources	Operation	Description
Solution Sets	Change	Enables editing the Solution Set container, and adding, editing, and deleting Solution Set template objects.
	Full Control	Enables all operations on Solution Sets, and granting and removing permissions for those operations.
Views	Add	Enables creating view setting filters in Monitor Administration.
	Change	Enables editing view setting filters in Monitor Administration.
	View	Enables viewing view setting filter definitions in Monitor Administration.
	Delete	Enables deleting view filters from End User Management Administration.
	Full Control	Enables performing all available operations on view filters, and granting and removing permissions for those operations.
Categories	Add	Enables creating a category in Monitor Administration.
	Change	Enables editing Monitor Administration category definitions.
	Delete	Enables deleting categories from Monitor Administration.
	Full Control	Enables performing all available operations on Monitor Administration categories, and granting and removing permissions for those operations.

Resources	Operation	Description
Containers	Add	Enables adding a container to the Monitor Administration enterprise.
	Change	Enables renaming and modifying the properties of a container.
	Delete	Enables deleting a container from Monitor Administration.
	Full Control	Enables performing all available operations on an Monitor Administration container, and granting and removing permissions for those operations.
Solution Sets	Change	Enables editing the Solution Set container, and adding, editing, and deleting Solution Set template objects.
	Full Control	Enables all operations on Solution Sets, and granting and removing permissions for those operations.
Notification Templates (HP Software-as-a-Service only)	Add	Enables creating and cloning a customer-specific notification template.
	Change	Enables editing the properties of a customer-specific notification template.
	View	Enables viewing the properties of a customer-specific notification template.
	Delete	Enables deleting a customer-specific notification template.
	Full Control	Enables performing all available operations on a customer-specific notification template, and granting and removing permissions for those operations.

Resources	Operation	Description
Notification Templates	Add	Enables creating and cloning notification templates.
	Change	Enables editing notification template properties.
	View	Enables viewing notification template properties.
	Delete	Enables deleting a notification template.
	Full Control	Enables performing all available operations on notification templates, and granting and removing permissions for those operations.

My BSM

The My BSM context enables you to assign permissions to work with the module and portlet definition pages in My BSM Administration.

Resources	Operation	Description
Modules	Full Control	Enables creating, editing, deleting, and performing all operations on the Manage Modules page.
Portlet definitions	Full Control	Enables creating, editing, deleting, and performing all operations on the Manage Portlet Definitions page.

HP Operations Manager *i*

Note: The HP Operations Manager *i* (OMi) context is available only if you have installed OMi on your HP Business Availability Center machine. For details on the OMi context, see "User Context Pane" in *Using HP Operations Manager i*.

The HP Operations Manager *i* (OMi) context enables you to assign permissions to work with the Operations Manager context. For details on the operations available for the HP Operations Manager *i* (OMi) context, see "User Operations Tab" in *Using HP Operations Manager i*.

Operations Orchestration Integration

Resources	Operation	Description
Administration	Add	Enables adding a run book.
	View	Enables viewing run book administration.
	Change	Enables editing run book administration.
	Delete	Enables deleting a run book.
	Full Control	Enables performing all available operations on run book administration, and granting or removing permissions for other users.
Execution	Execute	Enables run book execution.
	Full Control	Enables performing all available operations on run book execution, and granting or removing permissions for other users.

Platform

The Platform context includes all the resources related to administering the platform. Some of the resources listed are available for HP Software-as-a-Service customers only, and are marked accordingly.

Resources	Operation	Description
Authentication Strategy	Change	Enables the Configure button on the Authentication Strategy page, which enables changing configurations on the Authentication Strategy Wizard.
	View	Enables viewing the Authentication Strategy Wizard.
	Full Control	Enables performing all available operations on the Authentication Strategy Wizard.
Audit Log	View	Enables viewing the audit log.
	Full Control	Enables viewing the audit log, and granting and removing permission to view the audit log.
Users	Add	Enables adding users to the system.
	Change	Enables modifying user details.
	View	Enables viewing user details.
	Delete	Enables deleting users from the system.
	Full Control	Enables performing all available operations on users, and granting and removing permissions for those operations.

Resources	Operation	Description
User Groups	Add	Enables adding user groups to the system.
	Change	Enables modifying user group details.
	View	Enables viewing user group details.
	Delete	Enables deleting user groups.
	Full Control	Enables performing all available operations on user groups, and granting and removing permissions for those operations.
Data Collectors	Change	Enables performing remote upgrades, remote uninstalls, and settings updates on data collectors in Data Collector Maintenance.
	View	Enables viewing the data collectors in Data Collector Maintenance.
	Delete	Enables removing data collector instances.
	Full Control	Enables performing all available operations in Data Collector Maintenance, and granting and removing permissions for those operations.

Resources	Operation	Description
Notification System	Change	Enables modifying system ticket details.
	View	Enables viewing system tickets details.
	Delete	Enables deleting system ticket details.
	Add	Enables adding system tickets to the system.
	Execute	Enables executing system tickets in the system.
	Full Control	Enables performing all available operations on System Tickets, and granting and removing permissions for those operations.
Scheduled Reports	Add	Enables creating new scheduled reports.
	Change	Enables modifying scheduled reports.
	View	Enables viewing scheduled reports.
	Delete	Enables deleting scheduled reports.
	Full Control	Enables performing all available operations on scheduled reports, and granting and removing permissions for those operations.

Resources	Operation	Description
Recipients	Add	Enables adding recipients to the platform.
	Change	Enables editing recipient details.
	View	Enables viewing recipients and recipient details.
	Delete	Enables deleting recipients from the platform.
	Full Control	Enables performing all available operations on recipients, and granting and removing permissions for those operations.
Custom Data Types	Add	Enables adding custom data types to the system.
	Change	Enables modifying custom data types in the system.
	View	Enables viewing custom data types in the system.
	Delete	Enables deleting custom data types in the system.
	Full Control	Enables performing all available operations on sample types, and granting and removing permissions for those operations.

Resources	Operation	Description
Databases	Add	Enables adding profile databases to the system.
	Change	Enables modifying profile database details in database management.
	View	Enables viewing profile database management details.
	Delete	Enables deleting profile databases from the system.
	Full Control	Enables performing all available operations on profile databases in database management, working with the purging manager, and granting and removing permissions for those operations.
Script Repository (HP Software-as-a-Service only)	Add	Enables uploading new scripts to the script repository.
	View	Enables viewing scripts in the script repository.
	Remove	Enables deleting a script from the script repository.
	Execute	Enables subscribing to script verification and verifying scripts for private POP only.
	Full Control	Enables performing all available operations on scripts in the script repository, and granting and removing permissions for those operations.

Resources	Operation	Description
Package Work Manipulation (HP Software-as-a-Service only)	Change	Enables modifying package locations, renaming packages, and selecting recipients for package notifications.
	View	Enables viewing package information.
	Delete	Enables removing packages from a location.
	Full Control	Enables performing all available operations on package information, and granting and removing permissions for those operations.
System Tickets (HP Software-as-a-Service only)	View	Enables viewing system ticket details.
	Execute	Enables registering system notifications.
	Full Control	Enables performing all available operations on system tickets, and granting and removing permissions for those operations.

Problem Isolation

Use the Problem Isolation context to assign permissions for accessing the Problem Isolation application. Problem Isolation enables you to isolate and manage enterprise problems discovered in HP Business Availability Center, and to identify likely suspects, to help find the root cause of a problem.

Resources	Operation	Description
Problem Isolation Application	View	Enables entering the Problem Isolation application.
	Full Control	Enables performing all available operations on the Problem Isolation application, and granting or removing permissions for other users
Problem Isolation Administration	Change	Enables editing Problem Isolation administration.
	View	Enables viewing of Problem Isolation administration.
	Full Control	Enables performing all available operations for Problem Isolation administration, and granting and removing permissions for other users.
Isolation History	Change	Enables editing an existing Isolation History item, adding a root cause, and attaching or detaching service center entities.
	Execute	Enables triaging an existing Isolation History item.
	Full Control	Enables performing all available operations on the Isolation History and grant or remove permissions for other users.

Resources	Operation	Description
Problem Isolation On Demand Manual Run	Execute	Enables manually running On-demand Monitors to check the status of Suspect Configuration Items.
	Full Control	Enables performing all available operations on On Demand monitors, and granting or removing permissions for other users.
Problem Isolation Revalidation Transactions Manual Run	Execute	Enables manually running revalidation transactions.
	Full Control	Enables performing all available operations on revalidation transactions and grant or remove permissions for other users.
Proactive	Execute	Enables performing all available operations on the Proactive resource.

Production Analysis

Use the Production Analysis context to assign permissions to access the Production Analysis reports generating from the Application Performance Lifecycle application. These reports enable users to extract real-user transaction data to be used in Performance Center load tests and to create Virtual User Generator (VuGen) script templates, based on real-user activity.

Resources	Operation	Description
Production Analysis	Full Control	Enables accessing and downloading Production Analysis reports generated by Application Performance Lifecycle.

Service Level Management

Use the Service Level Management context to assign permissions to all SLAs or specific instances.

Resources	Operation	Description
SLAs	Add	Enables adding SLAs.
	Change	Enables renaming SLAs, adding descriptions to SLAs, viewing SLA configuration in administration pages, and changing SLA configurations.
	View	Enables generating and viewing reports and custom reports on SLAs.
	Delete	Enables deleting SLAs.
	Full Control	Enables performing all available operations on SLAs, and granting and removing permissions for those operations.

System Availability Management Administration (SAM Admin)

Use the SAM Admin context to assign permissions to the various SiteScopes configured within the system.

Note: The permission levels granted via the System Availability Management Administration (SAM Admin) context override any permission levels granted in the SiteScope standalone interface.

Resources	Operation	Description
SiteScopes	Add	Enables adding SiteScope profiles to System Availability Management.
	Change	Enables modifying a SiteScope profile in System Availability Management and enables adding the contents to the SiteScope root node (group, alert, report) and modifying contents to the SiteScope root node (alert, report), if the user has permissions for these resources.
	View	Enables viewing SiteScope profiles in System Availability Management.
	Delete	Enables deleting a SiteScope profile from System Availability Management and enables deleting the contents of the SiteScope root node (alert, report), if the user has permissions for these resources.
	Execute	Enables executing contents of the SiteScope root node (alert, report), if the user has permissions for these resources.
	Full Control	Enables performing all available operations on SiteScope profile and SiteScope root node.

Resources	Operation	Description
<SiteScope Groups> Note: Groups are listed individually, as you can configure different permission levels for each group.	Change	Enables modifying and adding a SiteScope group and enables modifying and adding the contents of the group (monitor, alert, report), if the user has permissions for these resources.
	View	Enables viewing the SiteScope group and reports contained within that group, and creating SiteScope Over Time reports.
	Delete	Enables deleting a SiteScope group and enables deleting the contents of the group (monitor, alert, report), if the user has permissions for these resources.
	Execute	Enables executing SiteScope monitors, generating SiteScope and HP Business Availability Center reports, and testing alerts contained within the group.
	Full Control	Enables performing all available operations on the SiteScope group and all the objects contained within the group (monitor, alert, report), if the user has permissions for these resources.
SiteScope Monitors	Change	Enables modifying, adding, deleting, disabling or enabling SiteScope monitors.
	Execute	Enables executing SiteScope monitors, acknowledging SiteScope monitors from the Dashboard, and using monitor tools.
	Full Control	Enables performing all available operations on SiteScope monitors.

Resources	Operation	Description
SiteScope Alerts	Change	Enables modifying, adding, deleting and disabling SiteScope alerts.
	Execute	Enables creating Adhoc alert reports and test SiteScope alerts.
	Full Control	Enables performing all available operations on SiteScope alerts.
SiteScope Preferences	Change	Enables modifying and viewing any of the Preference objects.
	Execute	Enables executing tests of SiteScope preferences.
	Full Control	Enables performing all available operations on SiteScope preferences.
SiteScope Reports	Change	Enables modifying, adding, deleting, disabling, and enabling SiteScope reports.
	Full Control	Enables performing all available operations on SiteScope reports.
SiteScope Views	Change	Enables modifying, adding, and deleting SiteScope views.
	View	Enables viewing predefined and user-defined SiteScope views.
	Full Control	Enables performing all available operations on SiteScope views.
SiteScope Categories	Change	Enables modifying, adding, and deleting SiteScope categories.
	View	Enables viewing SiteScope categories.
	Full Control	Enables performing all available operations on SiteScope categories.

Resources	Operation	Description
SiteScope Templates	Change	Enables modifying, adding, and deleting SiteScope templates.
	View	Enables viewing SiteScope templates and copying templates for deployment.
	Full Control	Enables performing all available operations on SiteScope templates.
SiteScope Other Options	View	Enables viewing SiteScope Progress and Logs.
	Execute	Enables using SiteScope Tools, Browse and Summary.
SiteScope Users	Change	Enables modifying, adding, and deleting user preferences for all other SiteScope users, except the SiteScope administrator user.
SiteScope Dashboard	Change	Enables modifying Dashboard favorites.

TransactionVision

Use the TransactionVision context to assign permissions to the various TransactionVision instances configured within the system.

Projects and User-created reports are containers that are dynamically populated, based on which projects and user created reports are available in TransactionVision. Project child resource instances are added and deleted from the Resource Tree pane in the User Management interface, as new projects are created and deleted using the project wizard.

User-created reports child resource instances are added and deleted from the Resource Tree pane whenever the following file is updated with custom report definitions: <TVISION_HOME>/config/ui/Reports.xml. The Report element's title attribute is then displayed in the Resource Tree pane.

Resources	Operation	Description
Projects	Change	Enables creating, editing, and deleting projects, as well as starting and stopping jobs on a project.
	View	Enables viewing projects. The user can also access all built-in reports, as well as view and modify queries.
	Full Control	Enables performing all available operations on projects, and granting and removing permissions for those operations.
User-created Reports	View	Enables viewing user-created reports.
	Full Control	Enables performing all available operations on user-created reports, and granting and removing permissions for those operations.
Analyzer	Execute	Enables starting and stopping the analyzer.
	Full Control	Enables performing all available operations on the analyzer, and granting and removing permissions for those operations.
User Data	View	Enables viewing user data in reports and in event details.
	Full Control	Enables performing all available operations on user data, and granting and removing permissions for those operations.

UCMDB WS API

The UCMDB WS API context includes the resource Cmdb Open API.

You can give a user permissions so that they can query or update the CMDB using the CMDB API. This enables the user to write API methods to add, remove, and update CIs.

Resources	Operation	Description
Cmdb Open API	Change	Enables running of updates in the cmdb open API.
	View	Enables running queries in the cmdb open API.

User Defined Reports

Use the User Defined Reports context to assign permissions to the various types of user-defined reports and related settings.

Resources	Operation	Description
Custom Reports	Change	Enables creating, editing, and deleting custom reports.
	View	Enables viewing custom reports.
	Full Control	Enables performing all available operations on custom reports, and granting and removing permissions for those operations.
Trend Reports	Change	Enables creating, editing, and deleting trend reports.
	View	Enables viewing trend reports.
	Full Control	Enables performing all available operations on trend reports, and granting and removing permissions for those operations.
Custom Links	Change	Enables creating and deleting custom links.
	View	Enables viewing custom links.
	Full Control	Enables performing all available operations on custom links, and granting and removing permissions for those operations.

Resources	Operation	Description
Excel Reports	Change	Enables adding, deleting, and updating Excel open API reports.
	View	Enables viewing Excel open API reports.
	Full Control	Enables performing all available operations on Excel open API reports, and granting and removing permissions for those operations.
Default Header/Footer	Change	Enables modifying the default header and footer for custom and trend reports.
	Full Control	Enables modifying, and granting and removing permissions to modify, the default header and footer for custom and trend reports.
Favorite Filter	Remove	Enables deleting a Favorite Filter.
	Change	Enables editing a Favorite Filter.
	Full Control	Enables performing all available operations on Favorite Filters, and granting and removing permissions for those operations.
Annotation	Remove	Enables deleting an Annotation.
	Change	Enables editing an Annotation.
	Full Control	Enables performing all available operations on Annotations, and granting and removing permissions for those operations.

Resources	Operation	Description
Service Report	Remove	Enables deleting a Service Report.
	Change	Enables editing a Service Report.
	Full Control	Enables performing all available operations on Service Reports, and granting and removing permissions for those operations.

User Management User Interface



This section describes:

- Customization Tab on page 454
- General Tab on page 456
- Hierarchy Tab on page 458
- Permissions Tab on page 460
- User Management Main Page on page 466

Customization Tab

Description	<p>Enables you to select the page users see when entering HP Business Availability Center, and choose the menu items available on pages throughout HP Business Availability Center.</p> <p>To access: Select Admin > Platform > Users and Permissions, select a user from the Groups/Users pane, and click the Customization tab.</p>
Important Information	<p>The Customization tab is displayed only when a user has been selected in the Groups/Users pane on the left side of the page.</p>
Included in Tasks	<p>“Configure Users and Permissions - Workflow” on page 372</p> <p>“Customize User Menus - Workflow” on page 388</p>
Useful Links	<p>“Customizing User Menus” on page 371</p>

The following elements are included:

GUI Element (A–Z)	Description
Contexts	<p>Select an HP Business Availability Center context. You can perform the following actions on the context:</p> <ul style="list-style-type: none"> ▶ Select pages and tabs in the Pages and Tabs pane to be visible for the specified user. ▶ Click the Set as Default Entry Context button to make it the context that is displayed when the user logs into HP Business Availability Center. <p>For details on HP Business Availability Center contexts, see “Resource Contexts” on page 462.</p>
Pages and Tabs	<ul style="list-style-type: none"> ▶ Select the pages and tabs you want to be visible for the HP Business Availability Center context selected in the Contexts pane. ▶ Assign a page or tab as the default page that opens for the context selected in the Contexts pane.
Set as Default Entry Context	<p>Click to set the selected context in the Contexts pane as the entry context that is displayed when the specified user logs into HP Business Availability Center.</p> <p>Note: The Default Entry Context icon  appears next to the specified context.</p>
Set as Default Entry Page	<p>Click to assign the specified page or tab as the default page that opens for the context selected in the Contexts pane.</p> <p>Note: The Default Entry Page icon  appears next to the specified page or tab.</p>

 **General Tab**

Description	Displays the parameters of the selected user or group. To access: Select Admin > Platform > Users and Permissions > General tab.
Important Information	<ul style="list-style-type: none"> ▶ You can edit the user or group's parameters by editing the relevant fields on the General tab. ▶ The Group Name and Group Description fields appear only when a group is selected in the Groups/Users pane. All other fields appear only when a user is selected in the Groups/Users pane.
Included in Tasks	"Configure Users and Permissions - Workflow" on page 372
Useful Links	<p>"User Management – Overview" on page 362</p> <p>"Groups/Users Pane" on page 467</p> <p>"Information Pane" on page 473</p>

The following elements are included (unlabeled GUI elements are shown in angle brackets>):



GUI Element (A-Z)	Description
Confirm password	Re-enter the edited password that you entered in the Password field.
email	The email address of the user. Note: This field is displayed for HP Software-as-a-Service customers only.
Group description	The description of the group, as configured on the Create Group dialog box. Note: This field is optional.
Group name	The name of the group, as configured on the Create Group dialog box.

GUI Element (A-Z)	Description
Login name	The name that the user logs into HP Business Availability Center with. Note: The Login name cannot be changed.
Password	The password of the selected user. Note: As a security precaution, this field appears blank on the General tab. To change the password, enter the new password and re-enter it in the Confirm Password field.
Time zone	The time zone configured on the Create User dialog box, according to the user's location.
User mode	The user mode, as configured on the Create User dialog box. Available options are: <ul style="list-style-type: none"> ▶ Unspecified. Leaves the user without a particular mode. Select this option if: <ul style="list-style-type: none"> ▶ HP Business Availability Center is working with user modes and you want this user to see KPIs for both modes in Dashboard views. ▶ Your system is not working with user modes. ▶ Operations User. Enables the user to view the operations version of KPIs. ▶ Business User. Enables the user to view the business version of KPIs.
User name	The name of the user, as configured on the Create User dialog box.

 **Hierarchy Tab**



Description	<p>Enables you to assign users to a group, unassign users from a group, or nest one group within another.</p> <p>To access: Select Admin > Platform > Users and Permissions, select a group or user from the Groups/Users pane, and click the Hierarchy tab.</p> <p>The Hierarchy tab displays:</p> <ul style="list-style-type: none"> ▶ Parent Groups. The groups that the selected group is nested under. ▶ Child Groups and Users. The groups and users that are nested directly beneath the selected group.
Important Information	<ul style="list-style-type: none"> ▶ To nest a user, you must select the group into which you want to nest it and click the Edit Child Groups and Users button. ▶ When removing a nested group from its parent, the group itself is not deleted. ▶ When deleting a parent group, the child groups and users are not deleted. ▶ If HP Business Availability Center groups have been synchronized with groups on an external LDAP server, HP Business Availability Center users cannot be moved between groups, and only groups appear on the interface. For details on synchronizing groups, see “Synchronizing Users” on page 513.
Included in Tasks	<p>“Configure Users and Permissions - Workflow” on page 372</p> <p>“Configure Group and User Hierarchy” on page 386</p>
Useful Links	<p>“Group and User Hierarchy” on page 369</p>

The following elements are included:

GUI Element (A–Z)	Description
	Denotes a group that the selected group or user is nested under.
	Denotes a user that is nested beneath the selected group.
Child Groups and Users	Displays the groups and users that are nested directly beneath the group selected in the Groups/Users pane.
Edit Child Groups and Users	Click to open the Edit Child Groups and Users window and nest or remove groups and users from the selected group. For details, see “Edit Child Groups and Users Dialog Box” on page 459. Note: This button is displayed only when selecting a group in the Groups/Users pane.
Parent Groups	Displays the groups that the group or user selected in the Groups/Users pane is directly nested under.

Edit Child Groups and Users Dialog Box

The following elements are included:




GUI Element (A–Z)	Description
	Click to move the group or user to the Child Groups and Users pane and nest the group or user under the specified group.
	Click to move the group or user to the Groups/Users pane and remove the group or user from being nested beneath the specified group.
Child Groups and Users	Select a group or user you want to remove from the specified group.
Groups/Users	Select a group or user you want to nest under the specified group.





Permissions Tab


<p>Description</p>	<p>Enables you to apply permissions to groups and users for specific resources and instances of those resources that are defined in the system.</p> <p>To access: Select Admin > Platform > Users and Permissions > Permissions tab.</p> <p>The Permissions tab is divided into the following areas:</p> <ul style="list-style-type: none"> ▶ Resource tree pane in the center of the page. For details, see “Resource Tree Pane” on page 461. ▶ Roles and operations pane on the right side of the page. For details, see “Roles and Operations Pane” on page 464.
<p>Important Information</p>	<ul style="list-style-type: none"> ▶ You can grant permissions to only one user or group at a time. ▶ Assigning Add permissions on the Operations tab does not automatically grant View permissions on the given resource. ▶ If you have many users for whom you have to grant permissions, it is recommended that you organize your users into logical groups via the Hierarchy tab. For details, see “Hierarchy Tab” on page 458.
<p>Included in Tasks</p>	<p>“Configure Users and Permissions - Workflow” on page 372</p> <p>“Assign Permissions” on page 384</p>
<p>Useful Links</p>	<p>“Permissions Overview” on page 363</p>

Resource Tree Pane

Description	<p>Displays the instances and resources available within each HP Business Availability Center context for which you set permissions.</p> <p>To access: Select Admin > Platform > Users and Permissions > Permissions tab.</p> <p>The types of resources displayed in the Resource Tree pane are:</p> <ul style="list-style-type: none"> ▶ Resource with instances  ▶ Instances of a resource  <p>Note: When a user defines or creates an instance of a resource, for example creates a Business Process profile, that user has Full Control permission on that resource instance and all of its child resources.</p> <ul style="list-style-type: none"> ▶ Resource without instances 
Important Information	<ul style="list-style-type: none"> ▶ The Business Availability Center resource refers to all contexts in HP Business Availability Center and can have only roles applied to it. ▶ The resources are divided according to the context in which they function within the platform and not necessarily where they are found in the user interface. ▶ You can select multiple resources only when selecting instances. For information on instances, see “Resources and Resource Instances” on page 365.
Included in Tasks	“Assign Permissions” on page 384
Useful Links	“Understanding Permissions Resources” on page 365 “Resource Contexts” on page 462

The following elements are included:

GUI Element (A–Z)	Description
	An instance of a resource.
	A resource without instances.

GUI Element (A–Z)	Description
	A resource that has instances (a resource collection).
Select Context	Select an HP Business Availability Center context for which to configure permissions. For details on the HP Business Availability Center contexts, see “Resource Contexts” on page 462.
Settings	<p>Click to apply specific permissions settings for configurations in your User Management session. Select from the following options:</p> <ul style="list-style-type: none"> ▶ Apply permissions automatically when selecting another resource. Selecting this option removes the necessity for clicking the Apply Permissions button after each operation. If this option is not selected, you must click Apply Permissions before going on to the next operation. ▶ Do not display warning message when revoking VIEW from resource. When the view operation is removed from a resource for a user, that user has no access to the resource or to any of its child resources or instances. Therefore, by default, a warning message appears when removing view permissions. Selecting this option will disable that warning message. <p>Note: When you select the settings for applying permissions, the options selected apply only to the current HP Business Availability Center session.</p>

Resource Contexts

The following contexts are included:

GUI Element (A–Z)	Description
Business Process Insight	Includes the resources enabling permissions for operating and administering the Business Process Insight application.
CMDB	Includes the view resources for the CMDB in IT Universe.

GUI Element (A–Z)	Description
Central Repository Service	Includes the storage location of all BPM scripts.
Monitors	Includes all the resources relating to data collection and monitoring.
My BSM	Includes resources needed to administer modules and portlet definitions.
Operations Orchestration Administration	Includes the resources enabling permissions for operating and administering the Operations Orchestration Administration application.
Platform	Includes all the resources for administering the platform.
Problem Isolation	Includes all the resources for working with and administering Problem Isolation.
Production Analysis	Includes all the resources relating to Application Performance Lifecycle (APL).
Service Level Management	Includes the SLA resource.
System Availability Management	Includes the various SiteScope groups.
TransactionVision	Includes the resources relating to working with the TransactionVision application.
UCMDB WS API	Includes the extraction of data from the CMDB for use with third-party or custom tools or to write data to the database.
User Defined Reports	Includes the custom report, trend report, custom link, and Excel report resources.

 **Roles and Operations Pane**

Description	Displays the predefined roles and operations configurable for groups and users in HP Business Availability Center. To access: Select Admin > Platform > Users and Permissions > Permissions tab.
Included in Tasks	“Assign Permissions” on page 384
Useful Links	“Understanding Permissions Resources” on page 365 “User Management Roles” on page 395 “User Management Operations” on page 418

The following elements are included:

GUI Element (A–Z)	Description
Apply Permissions	Click to apply the permissions configured for the role or resource.
Grant	Click the check box to assign the specified role or operation to the group or user.
Granted from Group/Role/Parent	Displays those permissions that have been granted from either a group, a predefined role, or a parent resource. Notes: <ul style="list-style-type: none"> ➤ You cannot remove any of these permissions individually, but you can grant additional permissions. ➤ If you want to remove permissions that are granted from a group, role, or parent resource, you must make the change at the group, role, or parent resource level.

GUI Element (A–Z)	Description
Inherit	<p>Select the check box in the Inherit column for the operation to be inherited to all the child resources within the selected resource.</p> <p>Notes:</p> <ul style="list-style-type: none"> ▶ The Inherit check box is enabled only for selected resources. ▶ By default, the Inherit check box is selected when you assign an operation to specific resource instances. You can remove the Inherit option to prevent the operation from being inherited to all the child resources within the selected resource.
Operation	<p>The operations that can be assigned to a group or user for the selected resource or instances. For details on the available operations, see “User Management Operations” on page 418.</p>
Operations	<p>Click this tab to apply specific operations on a resource for a user or group. For a detailed table of what each operation enables as it is applied to each resource, see “User Management Operations” on page 418</p> <p>Note: When assigning operations, the operation descriptions are displayed under the operations table. They appear when a resource or instance is selected and you move your cursor over an operation name.</p>
Predefined Roles	<p>Click this tab to apply roles that have been predefined for various resources. For a detailed description of each role, see “User Management Roles” on page 395.</p>
Role	<p>The roles that can be assigned to a group or user for the selected resource or instances. For a description of the available roles, see “User Management Roles” on page 395.</p>

User Management Main Page

Description	Displays information on the groups and users configured to access HP Business Availability Center, including their respective permission levels. To access: Select Admin > Platform > Users and Permissions .
Included in Tasks	“Configure Users and Permissions - Workflow” on page 372
Useful Links	“User Management – Overview” on page 362 “Groups/Users Pane” on page 467 “Information Pane” on page 473








The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<workflow page>	Displays an introductory workflow for the User Management application in the Information pane when: <ul style="list-style-type: none"> ▶ You enter the User Management application ▶ You have selected the Root group (All) in the Groups/Users pane. The Workflow page displays introductory information about the User Management application, and a suggested workflow for configuring groups and users.
Groups/Users pane	Displays the groups and users configured to access HP Business Availability Center. For details, see “Groups/Users Pane” on page 467.
Information Pane	Located on the right side of the page; displays information on the permissions, nested group hierarchy, and menu customization options of the selected user or group. For details, see “Information Pane” on page 473. Note: The Information pane is visible only if you have selected a specific group or user in the Groups/Users pane.

 **Groups/Users Pane**

Description	<p>Displays the list of users and groups of users configured to access HP Business Availability Center.</p> <p>To access: Select Admin > Platform > User Management; the Groups/Users pane appears on the left side of the page, and is visible on all views of the User Management application. The Groups/Users pane contains the following tabs:</p> <ul style="list-style-type: none"> ▶ Browse. Displays a list of configured users and groups, and enables you to create or delete users and groups. ▶ Search. Displays a table view of users and groups, and enables you to search for a user or group by any of the following criteria: <ul style="list-style-type: none"> ▶ Group name ▶ Login name ▶ User name ▶ User last login <p>You can sort the columns by clicking on the column headers above the boxes.</p> <p>You can include wildcards (*) in your search.</p>
Important Information	<ul style="list-style-type: none"> ▶ When selecting more than one user or group and modifying parameters, the changes take effect only for the first selected user. The exception is the Delete option, which deletes multiple users at once. ▶ When creating a group, the access permissions are automatically inherited by the group's users. ▶ When creating users while resting on a group, the users are automatically nested within that group.
Included in Tasks	“Configure Users and Permissions - Workflow” on page 372
Useful Links	“User Management Main Page” on page 466

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
	Click to create a user or group. Depending on whether you choose to create a user or group, the Create User or Create Group window opens.
	Click to copy the settings of an existing user or group to a new user or group.
	Click to collapse or expand the groups selected in the hierarchy tree.
	Click and select Group Mappings to map local groups to groups configured on the LDAP server, or Delete Obsolete Users to delete HP Business Availability Center users no longer configured on the LDAP server. After selecting Delete Obsolete Users , you can remove multiple users at once by holding the Ctrl button while selecting users. For details, see “Group Mappings Dialog Box” on page 471. Note: This button is displayed only if the Mapping option has been enabled in the Authentication Strategy Wizard. For details, see “Authentication Wizard - Introduction Page” on page 492.
	A configured user.
	A configured group of users.
	The root directory.

Create User Dialog Box

The following elements are included:

GUI Element (A–Z)	Description
Confirm password	Re-enter the password specified in the Password field.
Email	Enter a valid email address. Note: The Email field is available for HP Software-as-a-Service customers only.
Login name	Enter a login name for the user, to be used when accessing HP Business Availability Center. Notes: <ul style="list-style-type: none"> ▶ The Login name appears as a tooltip when hovering over the user name in the Browse tab of the Groups/Users pane. ▶ The maximum number of characters you can enter is 50. Syntax Exceptions: The following characters are not supported: “ \ / [] : < > + = ; , ? *
Password	Enter a password to be used when accessing HP Business Availability Center.
Time zone	Select the appropriate time zone, according to the user’s location.


GUI Element (A–Z)	Description
User mode	<p>Select the user mode for the user, from the following options:</p> <ul style="list-style-type: none"> ▶ Unspecified. Leaves the user without a particular mode. Select this option if: <ul style="list-style-type: none"> ▶ HP Business Availability Center is working with user modes and you want this user to see KPIs for both modes in Dashboard views. ▶ Your system is not working with user modes. ▶ Operations User. Enables the user to view the operations version of KPIs. ▶ Business User. Enables the user to view the business version of KPIs.
User name	<p>Enter a user name for the user.</p> <p>Note: The maximum number of characters you can enter is 50.</p> <p>Syntax exceptions: The following characters are not supported: “ \ / [] : < > + = ; , ? *</p>

Create Group Dialog Box


The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A–Z)	Description
Group description	<p>Enter a description for the group.</p> <p>Note: The group description is displayed as a tooltip when hovering on the group name in the Browse tab of the Groups/Users pane.</p>
Group name	<p>Enter a name for the group.</p>


Group Mappings Dialog Box

<p>Description</p>	<p>Enables you to map groups configured in HP Business Availability Center to groups configured on the LDAP server.</p> <p>To access: Select Admin > Platform > Users and Permissions; in the Groups/Users pane, click the LDAP Configuration button  and select Group Mappings.</p> <p>The Group Mappings dialog box consists of the following panes:</p> <ul style="list-style-type: none"> ▶ Corporate Directory Pane. For details, see “Corporate Directory Pane” on page 472. ▶ BAC Local Repository For Remote Group Pane: <group name>. For details, see “BAC Local Repository for Remote Group: <group name> Pane” on page 473. ▶ Local Groups to Remote Group Mappings. Displays a table of the LDAP groups and the BAC groups that they are assigned to. The LDAP groups are displayed in the Remote Group Name column, and the BAC Groups are listed in the Local Group Name column.
<p>Important Information</p>	<p>If you are switching from one LDAP server to another, ensure that you remove all existing group mappings from the original LDAP server before mapping to the new one.</p>

Corporate Directory Pane

<p>Description</p>	<p>Enables you to assign HP Business Availability Center groups to LDAP groups, and to list the users in the LDAP groups.</p> <p>To access: Select Admin > Platform > Users and Permissions; in the Groups/Users pane, click the LDAP Configuration button  and select Group Mappings.</p>
<p>Important Information</p>	<ul style="list-style-type: none"> ▶ To synchronize LDAP groups with HP Business Availability Center groups, click Assign Groups to open the Select Local Groups for Remote Group dialog box. ▶ To view the list of users associated with the respective LDAP groups, click List Users. <p>You can also select either of these options by right clicking on the group.</p> <ul style="list-style-type: none"> ▶ Once the LDAP groups have been mapped to the HP Business Availability Center groups, the HP Business Availability Center groups are managed only from the LDAP interface. This means that the following are fields are affected on the Users and Permissions interface: <ul style="list-style-type: none"> ▶ The Create User field is disabled. ▶ The User Name field is disabled. ▶ The Password field is invisible. ▶ The Hierarchy tab is enabled only for groups and not for users.

BAC Local Repository for Remote Group: <group name> Pane

Description	<p>Displays the HP Business Availability Center mapped to the LDAP group selected in the Corporate Directory Pane, and enables you to remove the mapped HP Business Availability Center groups.</p> <p>To access: Select Admin > Platform > Users and Permissions; in the Groups/Users pane, click the LDAP Configuration button  and select Group Mappings.</p>
Important Information	<ul style="list-style-type: none"> ▶ To remove groups, select the group you want to remove and click Remove Groups. ▶ You can remove multiple groups at once by holding the Ctrl button while selecting groups.

 **Information Pane**

Description	<p>Displays information on the specific user or group selected in the Groups/Users pane.</p> <p>To access: Select Admin > Platform > Users and Permissions.</p> <p>The Information pane is located on the right side of the User Management Main Page.</p>
Included in Tasks	“Configure Users and Permissions - Workflow” on page 372

The following tabs are included:

GUI Element (A-Z)	Description
Customization	<p>Enables you to set the default entry page and context for the user specified in the Groups/Users pane. For details, see “Customization Tab” on page 454.</p> <p>Note: The Customization tab is visible only if you have selected a user in the Groups/Users pane.</p>
General	<p>Displays general information about the user or group selected in the Groups/Users pane.</p> <p>Note: The fields on the General tab are identical to those in the Create User dialog box (for users), and the Create Group dialog box (for groups), accessed from the Groups/Users pane. For details, see “Groups/Users Pane” on page 467.</p>
Hierarchy	<p>Displays the parent and child groups, if applicable, for the user or group selected in the Groups/Users pane. For details, see “Hierarchy Tab” on page 458.</p>
Permissions	<p>Displays the permission level for the specific user or group selected in the Groups/Users pane, as well as the HP Business Availability Center contexts that the permission levels apply to. For details, see “Permissions Tab” on page 460.</p>

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Personal Settings

This chapter provides information on Configuring Personal Settings within HP Business Availability Center.

This chapter includes:

Concepts

- ▶ Personal Settings Overview on page 475

Tasks

- ▶ Customize Your HP Business Availability Center Menus and Pages - Workflow on page 477
- ▶ Customize Your HP Business Availability Center Menus and Pages - Scenario on page 478

Reference

- ▶ Personal Settings User Interface on page 482

Personal Settings Overview

Personal settings enable customization of the way HP Business Availability Center presents information to individual users.

Individual users can configure personal settings to customize their specific user-related behavior of HP Business Availability Center.

The Personal Settings tab contains the following options:

- **General Settings.** For details, see “General Settings” on page 476.
- **Menu Customization.** For details, see “Menu Customization” on page 476.

General Settings

On the General Settings tab, you can configure the following personal settings:

- User name
- User mode
- Time zone used when displaying reports
- Password
- Refresh rate of reports
- Customized menu items

For details on updating these settings through the General Settings user interface, see “General Settings Page” on page 482.

Menu Customization

On the Menu Customization tab, you can:

- Specify the default context that is displayed when logging into HP Business Availability Center.
- Specify the first page that is displayed in each of the different parts of HP Business Availability Center.
- Specify the tabs and options that are available on pages throughout HP Business Availability Center.

Customizing your entry page, menu items, and tabs enables your interface to display only the areas of HP Business Availability Center that are relevant to you. For details on the Menu Customization User Interface, see “Menu Customization Page” on page 484.

Customize Your HP Business Availability Center Menus and Pages - Workflow

This task describes how to customize the page you see when entering HP Business Availability Center, and choose the menu items available on pages throughout HP Business Availability Center.

For a scenario of this task, see “Customize Your HP Business Availability Center Menus and Pages - Scenario” on page 478.

This task includes the following steps:

- “Assign a Default Context” on page 477
- “Select Context Pages and Tabs” on page 477
- “Assign a Default Entry Page” on page 477
- “Results” on page 477

1 Assign a Default Context

Select a context from the Contexts pane that you want to be the default entry context you see when logging into HP Business Availability Center, and click **Set as Default Entry Context**. For details on the Contexts pane, see “Menu Customization Page” on page 484.

2 Select Context Pages and Tabs

In the Pages and Tabs pane, select the context of the pages and tabs that you want to be visible on the selected context for the user. Clear the check boxes of the pages and tabs that you want hidden from the user.

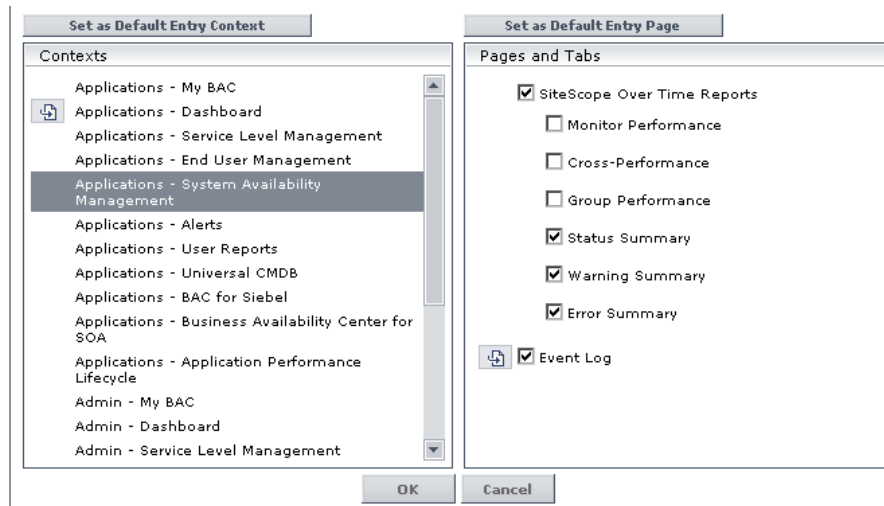
3 Assign a Default Entry Page

Select a page or tab to be the default entry page for the selected context, and click **Set as Default Entry Page**.

4 Results

The default entry icon appears next to the default entry context and page. Pages and tabs visible to the user are selected in the Pages and Tabs pane. Pages and tabs hidden from the user are cleared in the Pages and Tabs pane.

Example



Customize Your HP Business Availability Center Menus and Pages - Scenario

This scenario describes how to customize user menus for individual users.

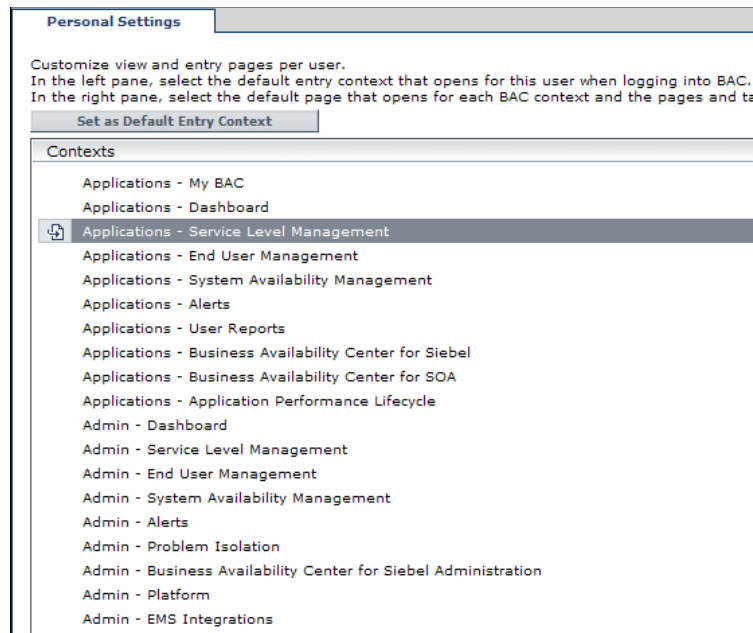
For a task of this scenario, see “Customize Your HP Business Availability Center Menus and Pages - Workflow” on page 477.

This task includes the following steps:

- “Assigning a Default Context” on page 479
- “Selecting Context Pages and Tabs” on page 480
- “Results” on page 481

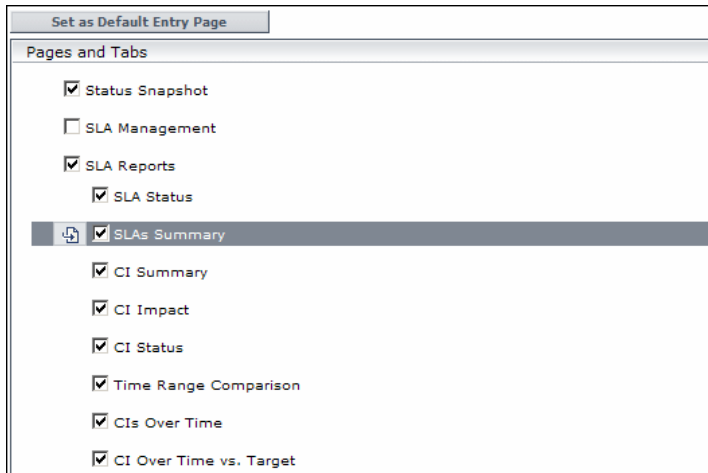
1 Assigning a Default Context

John Smith is a registered HP Business Availability Center user for the ABC Insurance Company. He wants to configure the Service Level Management application interface to be the default Business Availability Center context that he sees when logging in. He navigates to the Personal Settings option by selecting **Admin > Personal Settings**, and selects **Menu Customization** to open the Menu Customization page. He selects **Applications - Service Level Management** in the Contexts pane and clicks **Set as Default Entry Context**. The Applications - Service Level Management option is indicated as the default entry context:



2 Selecting Context Pages and Tabs

John wants to see only the pages and tabs that are relevant for his work, and wants to view the Service Level Agreements (SLAs) Summary report immediately upon logging in to HP Business Availability Center. In the Pages and Tabs pane, he deselects the SLA Management option, as the information presented on this tab is not relevant to his work. He selects the **SLAs Summary** option and clicks **Set as Default Entry Page**. The SLAs Summary page is indicated as the default entry page that John sees when logging in to HP Business Availability Center:



3 Results

The context that opens when John Smith logs into HP Business Availability Center is the **Service Level Management** context on the Applications menu. The **SLAs Summary Report** page is displayed on the SLA Reports tab:

SLAs	Availability (%)		Performance (%)	
	24x7	Business Hours	24x7	Business Hours
Default ClientSLA1_1	-	-	-	-
Default ClientSLA1V1_1	60.000	60.000	33.333	33.333

Personal Settings User Interface

This section describes:

- ▶ General Settings Page on page 482
- ▶ Menu Customization Page on page 484

General Settings Page

Description	Enables you to configure the user name, user mode, time zone, password, and refresh rate settings. To access: Select Admin > Personal Settings > General Settings . Note: The Personal Settings tab can also be accessed by clicking Change the default page on the Site Map.
Important Information	HP Business Availability Center saves these settings per defined user. Any changes you make remain in effect for all future Web sessions for only that user.
Useful Links	“General Settings” on page 476

The following elements are included:

GUI Element (A–Z)	Description
Confirm Password	Re-enter the password specified in the Password field.
Email	Enter a valid email address. Note: The Email field is available for HP Software-as-a-Service customers only.
Login name	The name used to login to HP Business Availability Center. Note: You cannot change the entry in this field.
Old Password	Enter the existing password.
Password	Enter a password to be used when accessing HP Business Availability Center.



GUI Element (A–Z)	Description
Select auto-refresh rate	<p>Select the rate at which you want HP Business Availability Center to automatically refresh the browser and load the most up-to-date data from the database.</p> <p>Note: This setting is active only when in the Past day or Past hour time resolution in reports.</p>
Time zone	<p>Select the appropriate time zone, according to the user's location.</p>
User mode	<p>Select the user mode for the user, from the following options:</p> <ul style="list-style-type: none"> ▶ Unspecified. Leaves the user without a particular mode. Select this option if: <ul style="list-style-type: none"> ▶ HP Business Availability Center is working with user modes and you want this user to see KPIs for both modes in Dashboard views. ▶ Your system is not working with user modes. ▶ Operations User. Enables the user to view the operations version of KPIs. For details on user types, see “KPIs for User Modes” in <i>Using Dashboard</i>. ▶ Business User. Enables the user to view the business version of KPIs. For details on user types, see “KPIs for User Modes” in <i>Using Dashboard</i>.
User name	<p>Enter a user name for the user.</p> <p>Notes:</p> <ul style="list-style-type: none"> ▶ The maximum number of characters you can enter is 50. ▶ All special characters are allowed except the following: “ \ / [] : < > + = ; , ? * ”

Menu Customization Page

Description	<p>Enables you to:</p> <ul style="list-style-type: none"> ▶ Specify the default context that is displayed when logging into HP Business Availability Center. ▶ Specify the first page that is displayed in each of the different parts of HP Business Availability Center. ▶ Specify the tabs and options that are available on pages throughout HP Business Availability Center. <p>To access: Select Admin > Personal Settings > Menu Customization.</p> <p>Note: The Personal Settings tab can also be accessed by clicking Change the default page on the Site Map.</p>
Included in Tasks	“Customize Your HP Business Availability Center Menus and Pages - Workflow” on page 477
Useful Links	“Personal Settings Overview” on page 475

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A–Z)	Description
Contexts	<p>Select an HP Business Availability Center context. You can perform the following actions on the context:</p> <ul style="list-style-type: none"> ▶ Select pages and tabs in the Pages and Tabs pane to be visible for the specified user. ▶ Click the Set as Default Entry Context button to make it the context that is displayed when the user logs into HP Business Availability Center.
Pages and Tabs	<ul style="list-style-type: none"> ▶ Select the pages and tabs you want to be visible for the HP Business Availability Center context selected in the Contexts pane. ▶ Assign a page or tab as the default page that opens for the context selected in the Contexts pane.

GUI Element (A–Z)	Description
Set as Default Entry Context	<p>Click to set the selected context in the Contexts pane as the entry context that is displayed when the specified user logs into HP Business Availability Center.</p> <p>Note: The Default Entry Context icon  appears next to the specified context.</p>
Set as Default Entry Page	<p>Click to assign the specified page or tab as the default page that opens for the context selected in the Contexts pane.</p> <p>Note: The Default Entry Page icon  appears next to the specified page or tab.</p>

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Authentication Strategies

This chapter includes the main concepts and reference information for Authentication Strategies in HP Business Availability Center.

This chapter includes:

Concepts

- ▶ Authentication Strategies - Overview on page 488
- ▶ Setting Up a Single Sign-On Authentication Strategy on page 488
- ▶ Setting Up a Lightweight Directory Access Protocol (LDAP) Authentication Strategy on page 489

Reference

- ▶ Authentication Modes in HP Business Availability Center on page 490
- ▶ Authentication Strategy User Interface on page 491

Authentication Strategies - Overview

HP Business Availability Center authentication is based on a concept of authentication strategies. Each strategy handles authentication against a specific authentication service. Only one authentication service can be configured with HP Business Availability Center at any given time.

The default authentication strategy for logging into HP Business Availability Center is the HP Business Availability Center internal authentication service. You enter your HP Business Availability Center user name and password from the login page, and your credentials are stored and verified by the HP Business Availability Center database. For a description of the authentication process in HP Business Availability Center, see “HP Business Availability Center Login Flow” on page 21.

You can choose to configure authentication using the Lightweight Directory Access Protocol (LDAP). HP Business Availability Center uses the LDAP server to verify a user’s credentials. For details on LDAP, see “Lightweight Directory Access Protocol (LDAP) Authentication and Mapping” on page 511.

Authentication strategies are configured in the Authentication Management Wizard. For details on the Authentication Management Wizard, see “Authentication Wizard - Introduction Page” on page 492.

Setting Up a Single Sign-On Authentication Strategy

Single Sign-On is a method of access control that enables a user to log in once and gain access to the resources of multiple software systems without being prompted to log in again. The applications inside the configured group of software systems trust the authentication, and you do not need further authentication when moving from one application to another.

The default single sign-on authentication strategy for HP Business Availability Center is Lightweight Single Sign-On Authentication (LW-SSO). LW-SSO is embedded in HP Business Availability Center and does not require an external machine for authentication. For details on LW-SSO, see “Lightweight Single Sign-On (LW-SSO) Strategy - Overview” on page 503.

If the applications configured outside of HP Business Availability Center do not support LW-SSO, or if you want a stronger Single Sign-On implementation, you can configure Identity Management Single Sign-On (IDM-SSO) using the Authentication Management Wizard. When enabled as a Single Sign-On strategy, IDM-SSO also serves as an authenticator. Any user authenticated through IDM-SSO can log into HP Business Availability Center, provided they fulfill the criteria defined in the **Users Filter** field of the LDAP Vendor Attributes dialog box. For details, see “LDAP Vendor Attributes Dialog Box” on page 499.

All requests to client applications are channeled through the SSO authentication. The supported applications need to know only the name of the authenticated user.

For details on the IDM-SSO authentication strategy, see “Identity Management Single Sign-On (IDM-SSO) - Overview” on page 508.

Setting Up a Lightweight Directory Access Protocol (LDAP) Authentication Strategy

The Lightweight Directory Access Protocol (LDAP) is an Internet protocol that email and other programs use to look up information from an external server. LDAP can be configured with HP Business Availability Center in one of the following ways:

- ▶ As an authentication mechanism for users logging into HP Business Availability Center.
- ▶ To map groups and synchronize HP Business Availability Center users with users configured on the external LDAP server, thereby simplifying the process of managing users for HP Business Availability Center administrators. For details, see “Map Groups and Synchronize Users” on page 516.

You enable and disable LDAP using the Authentication Management Wizard. For details, see “Authentication Wizard - Introduction Page” on page 492.

Authentication Modes in HP Business Availability Center

The following table displays the Authentication Strategy used by HP Business Availability Center, as determined by both the Single Sign-On mode and the LDAP mode selected in the Authentication Management Wizard:

Single Sign-On Mode	LDAP Mode	Authenticator
Disabled	Disabled	HP Business Availability Center Internal
	Enabled	LDAP
LW-SSO	Disabled	HP Business Availability Center Internal
	Enabled	LDAP
IDM-SSO	Disabled	IDM-SSO
	Enabled	IDM-SSO

Authentication Strategy User Interface

This section describes:

- Authentication Strategy Page on page 491
- Authentication Wizard - Introduction Page on page 492

Authentication Strategy Page

Description	<p>Displays the current authentication strategy and Single Sign-on configurations for logging into HP Business Availability Center.</p> <p>To access: Select Admin > Platform > Users and Permissions > Authentication Management.</p>
Important Information	<p>Access to the Authentication Management page is dependent on the following permission levels:</p> <ul style="list-style-type: none"> ➤ View. Enables viewing the Authentication Management Page. ➤ Change. Enables you to access the Authentication Management Wizard and change configurations. The Configure button is enabled. <p>You configure permissions on the Users and Permissions interface. For details, see “Assign Permissions” on page 384.</p>
Useful Links	<p>“Authentication Strategies - Overview” on page 488</p> <p>“Infrastructure Settings” on page 123</p>

The following elements are included:


GUI Element (A-Z)	Description
Configure	Click to open the Authentication Wizard and configure an authentication strategy. For details on the Authentication Wizard, see “Authentication Wizard - Introduction Page” on page 492.
Name	The name of the Single Sign-On or Lightweight Directory Access Protocol parameter.
Value	The value of the specified Single Sign-On or Lightweight Directory Access Protocol parameter.

Authentication Wizard - Introduction Page

Description	<p>Enables you to create an authentication strategy for logging into HP Business Availability Center.</p> <p>To access: Select Admin > Platform > Users and Permissions > Authentication Management, and click Configure.</p> <p>The Introduction page provides introductory information on the Authentication Wizard. Click Next to continue.</p>
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Important Information	<p>If the User Interface does not respond properly after upgrading your version of HP Business Availability Center (for example, the page does not load, or an error message is displayed), clean the java cache by following this procedure on your client PC:</p> <ul style="list-style-type: none"> ▶ Navigate to Start > Control Panel > Java. ▶ In the Temporary Internet Files section, click Settings. ▶ In the Temporary File Settings dialog box, click Delete Files.
Wizard Map	<p>The Authentication Wizard contains:</p> <p>Introduction Page > Single Sign-On Page > LDAP General Configuration Page > LDAP Users Synchronization Configuration Page > Summary Page</p>

Single Sign-On Page


Description	<p>Enables you to configure a Single Sign-On.</p> <p>To access: Select Admin > Platform > Users and Permissions > Authentication Management, and click Configure. Navigate to the Single Sign-On page.</p> <p>The elements displayed on the Single Sign-On page are determined by the Single Sign-On mode you choose.</p>
Important Information	<p>If a value in one of the wizard fields is blank or invalid, an error icon  is displayed on the field's cell. You can view a description of the error in one of the following ways:</p> <ul style="list-style-type: none"> ▶ Hover over the error icon to display a tooltip with the error message. ▶ Access the log file <code><HPBAC>/log/EJBContainer/login.log</code>.
Wizard Map	<p>The Authentication Wizard contains:</p> <p>Introduction Page > Single Sign-On Page > LDAP General Configuration Page > LDAP Users Synchronization Configuration Page > Summary Page</p>

The following elements are included:

GUI Element (A-Z)	Description
Disabled	Select to disable the Single Sign-On (SSO) authentication strategy.
Identity Management	<p>Select to configure the Identity Management Single Sign-On (IDM-SSO) authentication strategy. For details on the elements displayed this page, see “Identity Management Single Sign-On (IDM-SSO) Configuration” on page 495.</p> <p>Note: If you have selected this option, LDAP can be configured only for group mapping and not for authentication.</p>
Lightweight	Select to configure the Lightweight Single Sign-On (LW-SSO) authentication strategy. For details on the elements displayed on this page, see “Lightweight Single Sign-On (LW-SSO) Configuration” on page 495.


Identity Management Single Sign-On (IDM-SSO) Configuration

The following elements are included:

GUI Element (A-Z)	Description
	Indicates that the value in the specified field is empty or invalid. Hover over this icon to view a tooltip describing the error.
Header Name	Enter the header name for the token name passed by the Identity Management Single Sign-On. Example: sso_user Note: Ensure that the Identity Management Single Sign-On strategy is securing HP Business Availability Center resources before you enter this information.
Logout URL	Enter an alternate logout URL, to view a page other than the main login page when logging out of HP Business Availability Center. Example: \<alternativeLogoutURL>.jsp Note: This field is optional.

Lightweight Single Sign-On (LW-SSO) Configuration

The following elements are included:

GUI Element (A-Z)	Description
	Indicates that the value in the specified field is empty or invalid. Hover over this icon to view a tooltip describing the error.
Add	Click to add the domain to the list of protected domains.

GUI Element (A-Z)	Description
HP Business Availability Center Domain	Enter the relevant HP Business Availability Center domain, to be used for token creation. This field is required for multi-domain support and normalized URLs. Example: devlab.ad
Token Creation Key (initString)	Enter an initString value, used for encryption and decryption of the token. Example: Xy6stqZ
Protected Domains	Displays the list of protected domains that allow multi-domain support in the lower cell. Type a protected domain in the upper cell, and click Add to add the domain to the list of protected domains in the lower cell. Example: mercury.global, emea.hpqcorp.net, devlab.ad
Remove	Click to remove the domain selected in the box from the list of protected domains.


LDAP General Configuration Page

Description	<p>Enables you to use an external LDAP server to store authentication information (user names and passwords) and to enable user synchronization between LDAP users and HP Business Availability Center users.</p> <p>To access: Select Admin > Platform > Users and Permissions > Authentication Management, and click Configure. Navigate to the LDAP General Configuration page.</p> <p>The available LDAP modes are:</p> <ul style="list-style-type: none"> ➤ Enabled ➤ Disabled <p>Note: LDAP cannot be used for authentication when you choose IdentityManagement on the Single Sign-On Configuration page of the wizard.</p>
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Important Information	When configuring LDAP parameters, consult your LDAP Administrator for assistance.
Wizard Map	The Authentication Wizard contains: Introduction Page > Single Sign-On Page > LDAP General Configuration Page > LDAP Users Synchronization Configuration Page > Summary Page

LDAP General Configuration Section

The following elements are included:

GUI Element (A-Z)	Description
	Indicates that the value in the specified field is empty or invalid. You can view a description of the error in one of the following ways: <ul style="list-style-type: none"> ▶ Hover over the error icon to display a tooltip with the error message. ▶ Access the log file <code><HPBAC>/log/EJBContainer/login.log.</code>
Advanced	Click to enable the LDAP Vendor Attributes dialog box and modify configurations for the selected LDAP vendor. For details, see “LDAP Vendor Attributes Dialog Box” on page 499.
Distinguished Name (DN) Resolution	Select to enable entering only the Unique User ID, instead of the full Distinguished Name (DN) when logging in. Note: <ul style="list-style-type: none"> ▶ Selecting this checkbox enables the various Distinguished Name (DN) Resolution elements. ▶ If you do not select this checkbox, you must use the full Distinguished Name (DN) to login to HP Business Availability Center.

GUI Element (A-Z)	Description
Distinguished Name of Search Entitled User	Defines the Distinguished Name (DN) of a user with search privileges on the LDAP directory server. Note: Leave this entry blank for an anonymous user.
LDAP server URL	Enter the URL of the LDAP server. The required format is: ldap://machine_name:port/[??scope] Example: ldap://my.ldap.server:389/ou=People,o=myOrg.com??sub <ul style="list-style-type: none"> ➤ Possible values of scope = sub, one, or base, and are case sensitive. ➤ Business Availability Center ignores the attribute between the two question marks, if one exists. ➤ When the port number and scope value are empty, default values are used. <ul style="list-style-type: none"> ➤ Default port number for regular communication: 389 ➤ Default port number for SSL communication: 636 ➤ Default scope vaule: sub
LDAP vendor type	Enter the LDAP vendor you are using. Select from: <ul style="list-style-type: none"> ➤ Common LDAP ➤ Microsoft Active Directory ➤ Other Note: If you click Advanced and modify the LDAP Vendor Attribute settings, the value of this field automatically changes to Other .
Password of Search Entitled User	Defines the password of the user entitled to search the LDAP server entities for groups. Note: Leave this entry blank for an anonymous user.

Test DN Resolution Section

Description	Enables you to verify that both the configured LDAP parameters and the credentials of a specified user are valid.
Important Information	General information about the wizard is available in “Authentication Wizard - Introduction Page” on page 492.

The following elements are included:

GUI Element (A-Z)	Description
Password	The password of the user whose credentials are entered in the UUID field. Note: This field is optional. If left empty, anonymous user is tested.
Test	Click to test the LDAP configuration and user credentials validity. A message is displayed indicating whether or not the validation was successful.
UUID	The actual login name (Unique User ID) of the LDAP user you want to verify.

LDAP Vendor Attributes Dialog Box

Description	Enables you modify the default LDAP settings that are specific to the selected vendor. To access: Click Advanced on the LDAP General Configuration Page of the Authentication Management Wizard.
Important Information	If you modify the LDAP Vendor Attribute settings, the value of the LDAP Vendor Type field on the LDAP General Configuration page automatically changes to Other .


The following elements are included:

GUI Element (A-Z)	Description
Group class object	Defines which LDAP entities are to be considered groups on the LDAP server.
Groups member attribute	Defines the specific attribute that determines which of the LDAP group's entities are to be considered members of the LDAP group.
Restore Current	Click to restore the LDAP vendor attributes to their state upon logging into the current session of HP Business Availability Center.
Users filter	Defines which LDAP users are enabled to log into HP Business Availability Center.
Users object class	Defines which LDAP entities are to be considered users on the LDAP server.
Users unique ID attribute	The attribute you want to login to HP Business Availability Center with, as it appears on the LDAP server. Example: uid, mail

LDAP Users Synchronization Configuration Page

Description	Enables you configure the LDAP server to synchronize LDAP users with HP Business Availability Center users. To access: Select Admin > Platform > Users and Permissions > Authentication Strategy , and click Configure . Navigate to the LDAP Users Synchronization Configuration page.
Important Information	This page is enabled only if the LDAP General Configuration page has been configured correctly.
Wizard Map	The Authentication Wizard contains: Introduction Page > Single Sign-On Page > LDAP General Configuration Page > LDAP Users Synchronization Configuration Page > Summary Page

The following elements are included:

GUI Element (A-Z)	Description
	Indicates that the value entered in the specified field is invalid.
Enable User Synchronization	<p>Select to enable User Synchronization upon logging into HP Business Availability Center, to synchronize LDAP users with HP Business Availability Center users.</p> <p>Important: Ensure that you have mapped LDAP groups to HP Business Availability Center groups before selecting this checkbox. If you have not performed Group Mapping, all users are nested under the Root group and are assigned Viewer permissions. For details on mapping groups, see “Map Groups and Synchronize Users” on page 516.</p>
Groups base DN	The Distinguished Name (DN) of the LDAP entity from which you want to start your groups search from.
Groups search filter	Enter the relevant parameters to indicate which attributes are to be included in the groups search.
Root groups base DN	The Distinguished Name (DN) of the LDAP groups that are to be first on the hierarchical tree of mapped groups. This value must be a subset of the Groups base DN.
Root groups filter	Enter the parameters to determine which LDAP entities are to be the hierarchical base for the LDAP groups. The specified entities are then available to be mapped to groups in HP Business Availability Center.
Test	Click to verify that the parameters entered to define the LDAP groups structure are valid.
Test Groups Configuration Pane	Displays the groups available for mapping with HP Business Availability Center groups and the LDAP groups’ hierarchical structure. The displayed groups are determined by the parameters entered into the fields on the LDAP Users Synchronization Configuration page.

 **Summary Page**

Description	<p>Displays a summary of the authentication strategies configured in the Authentication Management Wizard.</p> <p>To access: Select Admin > Platform > Users and Permissions > Authentication Management, and click Configure. Enter information in the Single Sign-On and LDAP pages, and navigate to the Summary page.</p>
Wizard Map	<p>The Authentication Wizard contains:</p> <p>Introduction Page > Single Sign-On Page > LDAP General Configuration Page > LDAP Users Synchronization Configuration Page > Summary Page</p>

The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
LDAP General Configuration	Displays the LDAP General Configuration parameters, as configured on the LDAP General Configuration page of the wizard.
LDAP Users Synchronization Configuration	Displays the LDAP Users Synchronization Configuration parameters, as configured on the LDAP Users Synchronization Configuration page of the wizard.
Single Sign-On Configuration	Displays the Single Sign-On parameters, as configured in the wizard.

21

Lightweight Single Sign-On Strategy

This chapter provides information on the Lightweight Single Sign-On strategy.

This chapter includes:

Concepts

- ▶ Lightweight Single Sign-On (LW-SSO) Strategy - Overview on page 503

Tasks

- ▶ Configure Unknown User Handling Mode on page 504

Troubleshooting and Limitations on page 505

Lightweight Single Sign-On (LW-SSO) Strategy - Overview

The default single sign-on authentication strategy for HP Business Availability Center is Lightweight Single Sign-On (LW-SSO). LW-SSO is embedded in HP Business Availability Center and does not require an external machine for authentication.

For an overview of Single Sign-On strategies, see “Setting Up a Single Sign-On Authentication Strategy” on page 488.

You configure LW-SSO in HP Business Availability Center using the Authentication Wizard. For details on the Authentication Wizard, see “Authentication Wizard - Introduction Page” on page 492.

For details on limitations of working with LW-SSO, see “Lightweight Single Sign-On Authentication - General Reference” on page 523.

Configure Unknown User Handling Mode

This task describes how to handle unknown users trying to login to HP Business Availability Center - users that were authenticated by the hosting application but do not exist in the HP Business Availability Center users repository:

To configure unknown user handling mode:

- 1** Select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Foundations**, and select **Single Sign On**.
- 2** Locate the **Unknown User Handling Mode** entry in the Single Sign On - Lightweight (LW-SSO) field, and select one of the following options:
 - ▶ **Integration User.** A user with the User name **Integration User** is created in place of the user who attempted to login. This user has System Viewer permissions.
 - ▶ **Allow.** The user is created as a new HP Business Availability Center user and allowed access to the system. This user has System Viewer permissions, and his default password is his login name.
 - ▶ **Deny.** The user is denied access to HP Business Availability Center, and is directed to the login page.

The changes take effect immediately.

Note: When User Synchronization is enabled between HP Business Availability Center and the LDAP server, unknown users are always denied entry into HP Business Availability Center.

Troubleshooting and Limitations

This section includes the following topics:

- ▶ “Modify Lightweight Single Sign-On (LW-SSO) Parameters Using the JMX Console” on page 505
- ▶ “Synchronizing Users When Using LW-SSO” on page 506

Modify Lightweight Single Sign-On (LW-SSO) Parameters Using the JMX Console

If you are locked out of HP Business Availability Center, you can update selected Lightweight Single Sign-On (LW-SSO) parameters remotely using the JMX console on the application server that is embedded in HP Business Availability Center.

To modify Lightweight Single Sign-On (LW-SSO) parameters via the JMX console:

- 1** Enter the URL of the JMX console (**http://<server name>:8080/jmx-console/**) in a web browser.
- 2** Enter your JMX console authentication credentials. If you do not know your authentication credentials, contact your system administrator.
- 3** Locate the Lightweight Single Sign-On context, as follows:
 - a** Domain name: **Topaz**
 - b** Service: **LW-SSO Configuration**
- 4** Modify parameters accordingly.

The changes take effect immediately.

Synchronizing Users When Using LW-SSO

LW-SSO does not ensure user synchronization between integrated applications. Therefore, you must enable LDAP and configure group mapping for the integrated application to monitor users. Failure to map groups and synchronize users may cause security breaches and negative application behavior. For details on mapping users between applications, see “Map Groups and Synchronize Users” on page 516.

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Identity Management Single Sign-On Authentication

This chapter provides information on the Identity Management Single Sign-On (IDM-SSO) Authentication Strategy.

This chapter includes:

Concepts

- ▶ Identity Management Single Sign-On (IDM-SSO) - Overview on page 508

Reference

- ▶ Securing HP Business Availability Center Resources Under IDM-SSO on page 509

Identity Management Single Sign-On (IDM-SSO) - Overview

You implement IDM-SSO if you want a more secure connection than that offered by LW-SSO, or if the applications configured outside of HP Business Availability Center 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.

HP Business Availability Center requires the IDM vendor to store user information to render it available as a header on http requests. You configure both the Header name and the IDM-SSO strategy in the Authentication Wizard. For details, see "Authentication Wizard - Introduction Page" on page 492.

Note: If you have upgraded from a version prior to HP Business Availability Center 7.5 with IDM-SSO enabled, the HP Business Availability Center AuthenticationUpgrader takes the values of the **header** and **URL** attributes configured in the SYSTEM table and converts them to the appropriate values in the **Header name** and **Logout URL** fields in Infrastructure Settings, and sets the **Single Sign-On Mode** field value to **IdentityManagement**.

Securing HP Business Availability Center Resources Under IDM-SSO

The following HP Business Availability Center resources should be secured when using IDM-SSO as a Single Sign-On strategy:

Resource	Authentication Scheme
/ext/*	basic
/filters/*	form
/mam/*	basic
/mam-images/*	form
/mam-collectors/*	basic
/mcrs/*	form
/MercuryAM/*	form
/opal/*	form
/topaz/*	form
/topazSettings/*	form
/topaz/topaz_api/*	basic
/webinfra/*	form
/topaz/sitescope/*	basic
/tv/*	form
/tvb/*	form

Additionally, the following resources should be unprotected:

- **/topaz/images**
- **/topaz/lmgs/chartTemp**
- **/topaz/static**

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Lightweight Directory Access Protocol (LDAP) Authentication and Mapping

This chapter provides information on the Lightweight Directory Access Protocol (LDAP) Authentication and User Synchronization processes.

This chapter includes:

Concepts

- ▶ Lightweight Directory Access Protocol (LDAP) Authentication - Overview on page 512
- ▶ Mapping Groups on page 512
- ▶ Synchronizing Users on page 513

Tasks

- ▶ Map Groups and Synchronize Users on page 516
- ▶ Synchronize Users After Upgrading from a Previous Version of HP Business Availability Center on page 519
- ▶ Modify the Attribute Used to Log into HP Business Availability Center on page 520
- ▶ Delete Obsolete Users on page 520

Troubleshooting and Limitations on page 521

Lightweight Directory Access Protocol (LDAP) Authentication - Overview

You can use an external LDAP server to store users' information (usernames and passwords) for authentication purposes, instead of using the internal HP Business Availability Center service. You can also use the LDAP server to synchronize HP Business Availability Center and LDAP users. For optimal performance, it is recommended that the LDAP server be in the same subnet as the rest of the HP Business Availability Center servers. For optimal security, it is recommended to either configure an SSL connection between the HP Business Availability Center Gateway server and the LDAP server, or to have HP Business Availability Center servers and the LDAP server on the same secure internal network segment.

Authentication is performed by the LDAP server, and authorization is handled by the HP Business Availability Center server.

You configure the LDAP server for authentication and user synchronization using the Authentication Wizard. For details on the Authentication Wizard, see "Authentication Wizard - Introduction Page" on page 492.

For details on securing communication between an LDAP server and your HP Business Availability Center server over SSL, see "Securing Communication Between an LDAP Server and HP Business Availability Center Server Over SSL" in the *HP Business Availability Center Hardening Guide* PDF.

Mapping Groups

You map groups to enable user synchronization between LDAP users and HP Business Availability Center users. The Group Mapping feature is accessible through the Users and Permissions interface, using the **Group Mappings** button menu. This button is enabled only if the following conditions are met:



- ▶ The **LDAP mode** on the Authentication Strategy page is configured to **Enabled**.
- ▶ The user has administrator permissions.

Once user synchronization is enabled, the User Management interface has the following limitations:

- ▶ You cannot create a user.
- ▶ The User name and Login name fields for individual users are disabled.
- ▶ The Password field is invisible.
- ▶ You cannot nest users in groups via the Hierarchy tab.

You can optionally map an LDAP group to multiple HP Business Availability Center groups, or multiple LDAP groups to an HP Business Availability Center group.

When enabling the Group Mapping feature, you can log into HP Business Availability Center with any unique user attribute that exists on the LDAP server (for example, an email address). For details, see “Modify the Attribute Used to Log into HP Business Availability Center” on page 520.

Synchronizing Users

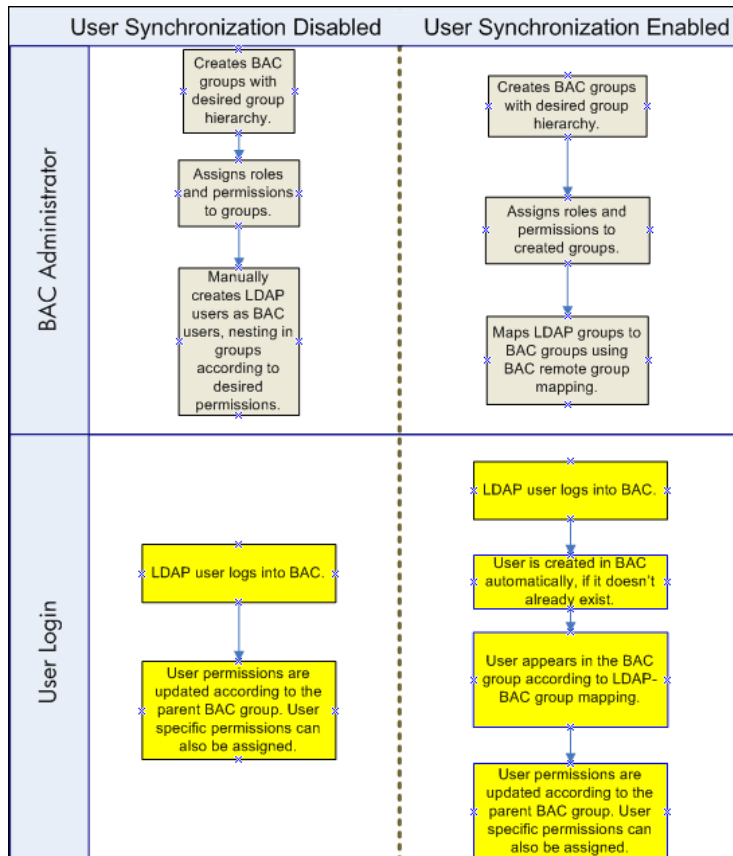
The user synchronization feature maps users on an LDAP server to users in HP Business Availability Center. This simplifies the process of managing users for HP Business Availability Center administrators, as all of the user management functions are done through the LDAP server. It is recommended to grant permissions on the group level in HP Business Availability Center, and then nest users into groups according to their desired permission level. If users are moved between LDAP groups, they are moved between their corresponding mapped groups on the HP Business Availability Center server after logging into HP Business Availability Center.

An LDAP user that does not exist in HP Business Availability Center who logs into HP Business Availability Center is created as an HP Business Availability Center user. Their status is determined as follows:

- ▶ If the user belongs to a mapped LDAP group, they are automatically assigned to the HP Business Availability Center group that is mapped to their LDAP group.

- ▶ If their group is not mapped to an HP Business Availability Center group, or if they do not belong to an LDAP group, they are nested under the **Root** group and created as an HP Business Availability Center user with **System Viewer** permissions. Their permissions and user hierarchy can be modified on the User Management interface.

The following flowchart displays the process of User Management when LDAP is enabled, as performed by the HP Business Availability Center administrator and HP Business Availability Center itself when the user logs in:



For an LDAP user to log into HP Business Availability Center, they must match the criteria defined in the **Users filter** field on the LDAP Advanced General Configuration dialog box in the Authentication Wizard. For details on the LDAP General Configuration page, see “LDAP Vendor Attributes Dialog Box” on page 499.

Users that have been removed from the LDAP server are still displayed as HP Business Availability Center users, even though they are no longer registered as LDAP users and cannot log into HP Business Availability Center. These users are called **Obsolete Users**. For details on removing Obsolete Users from HP Business Availability Center, see “Delete Obsolete Users” on page 520.

For details on synchronizing LDAP users with HP Business Availability Center users, see “Map Groups and Synchronize Users” on page 516.

For details on synchronizing groups after upgrading from a previous version of HP Business Availability Center, see “Synchronizing Users After Upgrading from a Previous Version of HP Business Availability Center” on page 515.

Synchronizing Users After Upgrading from a Previous Version of HP Business Availability Center

When upgrading from a previous version of HP Business Availability Center, the **Enable User Synchronization** setting in Infrastructure Settings is set to **False** by default. This enables you to map the LDAP groups to groups in HP Business Availability Center using the **LDAP Configuration** button on the Users and Permissions interface. If you do not map the groups at this time, all HP Business Availability Center groups are nested under the Root directory.

Once the LDAP and HP Business Availability Center groups have been mapped, you must change the **Enable User Synchronization** setting in Infrastructure Settings to **True** for users to be synchronized upon login to HP Business Availability Center.

For details on performing this task, see “Synchronize Users After Upgrading from a Previous Version of HP Business Availability Center” on page 519.

Map Groups and Synchronize Users

This task describes how to map LDAP groups to HP Business Availability Center groups, and how to synchronize LDAP users with HP Business Availability Center users:

This task includes the following steps:

- “Configure the LDAP Server for Mapping Groups” on page 516
- “Create HP Business Availability Center Groups and Hierarchy” on page 516
- “Map LDAP Groups to HP Business Availability Center Groups” on page 516
- “Enable User Synchronization” on page 518

1 Configure the LDAP Server for Mapping Groups

You enable the LDAP server for Group Mapping, using the Authentication Wizard. For details on how to perform this task, see “Authentication Wizard - Introduction Page” on page 492.

2 Create HP Business Availability Center Groups and Hierarchy

You create local groups in HP Business Availability Center with the appropriate roles to nest users into, and users adopt the permission level of the group they are nested in. For details on how to perform this task, see “Groups/Users Pane” on page 467.

3 Map LDAP Groups to HP Business Availability Center Groups

You map user groups on the LDAP server to groups in HP Business Availability Center.

Important: Administrators must do one of the following, to avoid being locked out of HP Business Availability Center when logging out after enabling the LDAP server but before configuring group mapping and user synchronization:

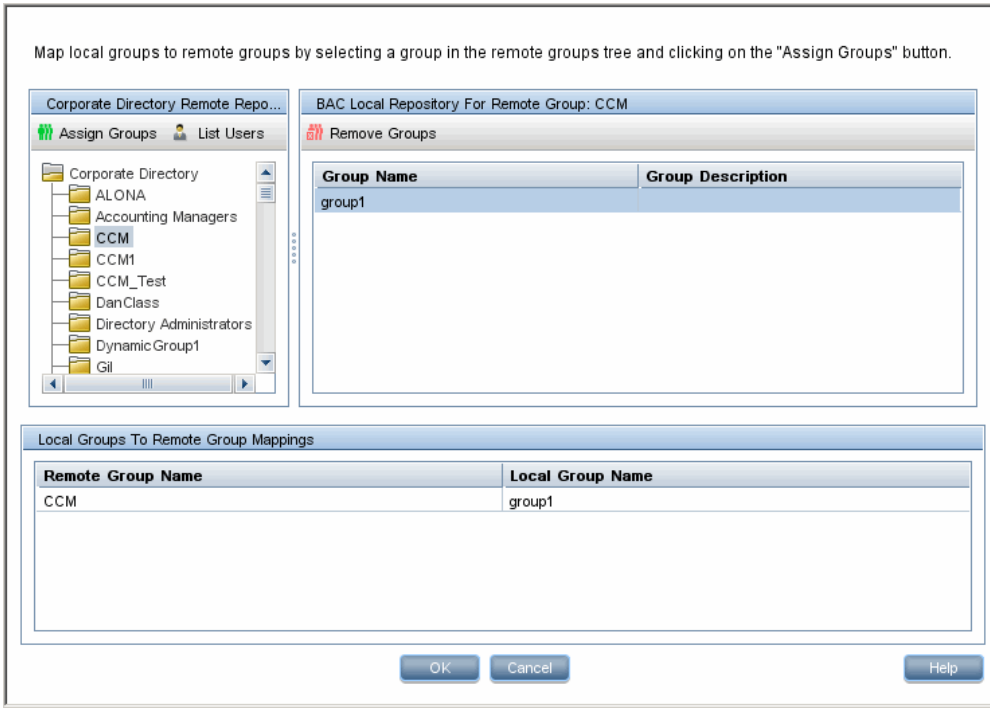
- Ensure that they have mapped their own group, to enable logging into HP Business Availability Center after enabling User Synchronization.
 - Create an account in HP Business Availability Center with superuser permissions.
-



- a** On the Users and Permissions interface, navigate to the Groups/Users pane, click the **LDAP Configuration** button and select **Group Mappings** to open the Group Mappings dialog box.
- b** In the <Repository Name> **Remote Repository** pane, select a remote LDAP server group and click **Assign Groups**.

The HP Business Availability Center groups mapped to the selected LDAP group are displayed in the **BAC Local Repository for Remote Group: <group name>** pane.

Existing mapping of all LDAP groups is displayed in the **Local Groups to Remote Groups Mapping** pane.



4 Enable User Synchronization

You enable synchronization of user groups on the LDAP server with user groups in HP Business Availability Center by configuring the relevant settings on the LDAP Users Synchronization Configuration page in the Authentication Wizard.

Note:

- ▶ Before enabling user synchronization, ensure that you have either created a superuser account in HP Business Availability Center that matches your own LDAP user login, or mapped an appropriate LDAP group to an HP Business Availability Center group that has the **superuser** role assigned to it. If you have not done so, and log out of HP Business Availability Center after enabling LDAP but before group mapping is completed and user synchronization is enabled, the designated HP Business Availability Center superuser account will be locked out of HP Business Availability Center.
 - ▶ To disable user synchronization and enable management of users through the User Management interface in HP Business Availability Center, clear the **Enable User Synchronization** checkbox on the **LDAP Users Synchronization Configuration** page in the Authentication Wizard.
-

For details on synchronizing users through the Authentication Wizard, see “LDAP Users Synchronization Configuration Page” on page 500.

Synchronize Users After Upgrading from a Previous Version of HP Business Availability Center

To synchronize LDAP and HP Business Availability Center users after upgrading from a previous version of HP Business Availability Center:

- 1** If you have upgraded from a version prior to HP Business Availability Center 7.50, ensure that the **Enable User Synchronization** checkbox on the **LDAP Users Synchronization** page of the Authentication Wizard is cleared.
- 2** Ensure that LDAP groups have been mapped to HP Business Availability Center groups. For details on performing this task, see “Map Groups and Synchronize Users” on page 516.
- 3** Navigate to the LDAP Users Synchronization page in the Authentication Wizard, and select the **Enable User Synchronization** checkbox.

Modify the Attribute Used to Log into HP Business Availability Center

This task describes how to modify the LDAP attribute with which you want to log into HP Business Availability Center.

To modify the LDAP attribute with which you want to log into HP Business Availability Center:

- 1 Navigate to **Admin > Platform > Users and Permissions > Authentication Strategy**.
- 2 Click the **Configure** button to activate the Authentication Strategy Wizard.
- 3 Navigate to the **LDAP General Configuration** page, and click the **Advanced** button.
- 4 Modify the **User unique ID** attribute to the attribute you want to log in with, as it appears on the LDAP server.

Delete Obsolete Users

This task describes how to delete HP Business Availability Center users who no longer exist on the LDAP server.

This option is enabled only if the following conditions are met:

- The **Remote user repository mode** on the Authentication Strategy page is set to **Enabled**.
- The user has **Delete** permissions.

To delete obsolete users:



- 1 Select **Admin > Platform > Users and Permissions**, click the **LDAP Configuration** button in the Groups/Users pane, and select **Delete Obsolete Users**.
- 2 Select the user you want to delete.

Troubleshooting and Limitations

If you have configured HP Business Availability Center to use LDAP Authentication and are unable to log into HP Business Availability Center, see the HP Software Self-solve knowledge base (<http://h20230.www2.hp.com/selfsolve/document/39499>). To enter the knowledge base, you must log in with your HP Passport ID.

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Lightweight Single Sign-On Authentication - General Reference

This chapter provides general reference information on the Lightweight Single Sign-On (LW-SSO) authentication strategy, applicable to LW-SSO version 2.0.

This chapter includes:

- ▶ About Lightweight Single Sign-On on page 523
- ▶ LW-SSO System Requirements on page 524
- ▶ HP Products Integrated with LW-SSO on page 525
- ▶ Web Single Sign-On – Use Cases on page 525
- ▶ LW-SSO Limitations on page 527
- ▶ LW-SSO Security Warnings on page 531
- ▶ LW-SSO Important Information on page 533
- ▶ Troubleshooting LW-SSO on page 534

About Lightweight Single Sign-On

Single Sign-On is a method of access control that enables a user to log on once and gain access to the resources of multiple software systems without being prompted to log on again. The applications inside the configured group of software systems trust the authentication, and there is no need for further authentication when moving from one application to another.

The default single sign-on authentication strategy for HP Business Availability Center is Lightweight Single Sign-On (LW-SSO). LW-SSO is embedded in HP Business Availability Center and does not require an external machine for authentication.

LW-SSO System Requirements

The requirements for LW-SSO configuration, per application, are as follows:

Application	Version	Comments
Java	1.5 and higher	N/A
HTTP Sevlets API	2.1 and higher	N/A
Internet Explorer	6.0 and higher	Browser should enable HTTP session cookie and HTTP 302 Redirect functionality
FireFox	2.0 and higher	Browser should enable HTTP session cookie and HTTP 302 Redirect functionality
Jboss Authentications	Jboss 4.0.3 Jboss 4.3.0	
Tomcat Authentications	Standalone Tomcat 5.0.28 Standalone Tomcat 5.5.20	N/A
Acegi Authentications	Acegi 0.9.0 Acegi 1.0.4	N/A
Web Services Engines	Axis 1 - 1.4 Axis 2 - 1.2 JAX-WS-RI 2.1.1	N/A

HP Products Integrated with LW-SSO

The HP products that are currently integrated with the LW-SSO authentication strategy are:

HP Product	Version
Business Availability Center	8.0
NNMi and SPi	8.10
Operations Orchestration	7.5
SAR (Service Automation Reporter)	7.5
SiteScope	10.0
Release Control	4.10

Web Single Sign-On – Use Cases

This section describes the use cases of LW-SSO via the Web.

This section includes:

- “Login Use Case” on page 526
- “Logout Use Case” on page 526
- “Application Checks if Request Is Secured” on page 527

Login Use Case

The login use case is as follows:

- 1 The application authenticates the user.
- 2 The application creates a user context using one of the **SecurityContextFactory** methods:

```
// The application creates user context with SecurityContextFactory.  
// Please find below one example. Application can use any API of  
SecurityContextFactory  
String userName = "Bob";  
SecurityContextFactory factory =  
SecurityContextFactoryUtils.getSecurityContextFactory();  
SecurityContext securityContext = factory.createSecurityContext(userName);
```

- 3 The application enables Single Sign-On.

```
LWSSOUtils.enableSSO(servletRequest, servletResponse, securityContext);
```

Note: The weakest authentication framework used by the LW-SSO integrated applications determines the level of authentication security for all of the applications. It is recommended that only applications using strong and secure authentication frameworks issue an LW-SSO token.

Logout Use Case

A logout is declarative in LW-SSO. The logout pages are configured in the LW-SSO infrastructure configuration file.

When an application requests a logout URL, LW-SSO cleans the security context.

Application Checks if Request Is Secured

LW-SSO uses the `isRequestSecured` function to verify that the request is secured. This function is used when the `LWSSOUtils.getSecurityContext` returns a value of `null`, and the application wants to distinguish the following:

- You want to access a protected resource in the application without being authenticated, and a login screen is shown.
- You want to access the login page or a resource that is not protected (for example, help documents).

```
boolean isSecured = LWSSOUtils.isRequestSecured(servletRequest);
```

By default, all URLs are secured, but the LW-SSO infrastructure is configured with non-secure URLs.

If user accesses the non-secure URLs, the function returns a value of **false**.

If secure URLs are accessed, it returns a value of **true**.

Note: The method returns the correct answer only when the LW-SSO Filter is used.

LW-SSO Limitations

This section describes limitations of the LW-SSO configuration:

- **Accessing the application:**

The client must access the application with the Fully Qualified Domain Name (FQDN) in the login URL, for example:
`http://flood.mercury.global:8080/WebApp`

LW-SSO does not support URLs with an IP Address, or URLs without a domain.

► **LW-SSO framework integration:**

Applications can leverage and use LW-SSO capabilities only if integrated within the LW-SSO framework in advance.

► **JAAS Realm:**

The JAAS Realm in Tomcat is not supported.

► **Using spaces in tomcat directories:**

Using spaces in Tomcat directories is not supported.

It is not possible to use LW-SSO when a Tomcat installation path (folders) includes spaces (for example, Program Files) and the LW-SSO configuration file is located in the common\classes Tomcat folder.

► **Load balancer configuration:**

A load balancer deployed with LW-SSO must be configured to use sticky sessions.

► **Multi-Domain Support:**

► Multi-domain functionality is based on the HTTP referrer. Therefore, LW-SSO supports links from one application to another and does not support typing a URL into a browser window, except when both applications are in the same domain.

► The first cross domain link using **HTTP POST** is not supported.

Multi domain functionality does not support the first **HTTP POST** request to a second application (only the **HTTP GET** request is supported). For example, if your application has an HTTP link to a second application, an **HTTP GET** request is supported, but an **HTTP FORM** request is not supported. All requests after the first can be either **HTTP POST** or **HTTP GET**.

► LW-SSO Token size:

The size of information that LW-SSO can transfer from one application in one domain to another application on another domain is limited to 15 Groups/Roles/Attributes (note that each item may be an average of 15 characters long).

- Linking from Protected (HTTPS) to Non protected (HTTP) in a Multi domain scenario:

Multi domain functionality does not work when linking from a protected (HTTPS) to a non protected (HTTP) page. This is a browser limitation where the referring header is not sent when linking from a protected to a non-protected resource. For an example, see:

<http://support.microsoft.com/support/kb/articles/Q178/0/66.ASP>

- Third-Party cookies behavior in Internet Explorer:

Microsoft Internet Explorer 6 contains a module that supports the "Platform for Privacy Preferences (P3P) Project", meaning that cookies coming from a Third Party domain are by default blocked in the "Internet" security zone. Session cookies are also considered Third party cookies by IE, and therefore are blocked, causing LW - SSO to stop working. For details, see: <http://support.microsoft.com/kb/323752/en-us>.

To solve this issue, add the launched application (or a DNS domain subset as *.mydomain.com) to the "Intranet"/"Trusted" zone on your computer (on Microsoft Internet Explorer, select **Menu > Tools > Internet Options > Security > Local Intranet > Sites > Advanced**), which causes the cookies to be accepted.

Important: The LW-SSO session cookie is only one of the cookies used by the Third party application that is blocked.

- **SAML2 token:**

- When using a Java based application integrated with LW-SSO to access another Java based application also integrated with LW-SSO, do not use the SAML2 token. Using the SAML2 token in this case can lead to unexpected behavior. Use the LW-SSO token instead.

The SAML2 token should only be used when one of the applications is not integrated with LW-SSO.

- Logout functionality is not supported when the SAML2 token is used.

Therefore, if the SAML2 token is used to access a second application, then a user who logs out of the first application will not be logged out of the second application.

- The SAML2 token's expiration is not reflected in the application's session management.

Therefore, if the SAML2 token is used to access a second application, then each application's session management will be handled independently of each other.

- **IdM security and outbound web services:**

Applications that are integrated with LW-SSO, that use IdM security as the security token for outbound web service security, will not be able to create or issue LW-SSO security tokens for UI (either automatically created or else).

In this case, the LW-SSO configuration must include the following values:

- **enableAutoCreation = "false"**
- **enableCookieCreation = "false"**

► **Security context:**

The LW-SSO security context supports only one attribute value per attribute name.

Therefore, when the SAML2 token sends more than one value for the same attribute name, only one value is accepted by the LW-SSO framework.

Similarly, if the IdM token is configured to send more than one value for the same attribute name, only one value is accepted by the LW-SSO framework.

► **Multi-domain logout functionality when using Internet Explorer 7:**

Multi-domain logout functionality may fail when using Internet Explorer 7 and when the application is invoking more than 3 consecutive HTTP 302 redirect verbs in the logout procedure.

In such a scenario, Internet Explorer 7 may mishandle the HTTP 302 redirect response and display an "Internet Explorer cannot display the webpage" error page instead.

As a workaround, it is recommended that, if possible, you reduce the number of application redirect commands in the logout sequence.

LW-SSO Security Warnings

This section describes security warnings that are relevant to the LW-SSO configuration:

► **Enable LW-SSO only if required:**

LW-SSO should be disabled unless it is specifically required.

► **Level of authentication security:**

The application that uses the weakest authentication framework and issues a LW-SSO token that is trusted by other integrated applications determines the level of authentication security for all the applications.

It is recommended that only applications using strong and secure authentication frameworks issue an LW-SSO token.

► **Confidential InitString parameter in LW-SSO:**

LW-SSO uses Symmetric Encryption to validate and create a LW-SSO token. The **initString** parameter within the configuration is used for initialization of the secret key. An application creates a token, and each application using the same **initString** parameter validates the token.

Note:

- It is not possible to use LW-SSO without setting the **initString** parameter.
- The **initString** parameter is confidential information and should be treated as such in terms of publishing, transporting, and persistency.
- The **initString** parameter should be shared only between applications integrating with each other using LW-SSO.
- It is recommended to use at least 12 characters for the **initString** parameter.

► **Symmetric encryption implications:**

LW-SSO uses symmetric cryptography for issuing and validating LW - SSO tokens. Therefore, any application using LW-SSO can issue a token to be trusted by all other applications sharing the same **initString**. This potential risk is relevant when an application sharing an **initString** either resides or is accessible in an untrusted location.

► **User mapping (Synchronization):**

The LW-SSO framework does not ensure user mapping between the integrated applications. Therefore, the integrated application must monitor user mapping. We recommend that you share the same user registry (as LDAP/AD) among all integrated applications.

Failure to map users may cause security breaches and negative application behavior, such as the same user name being assigned to different real users in the various applications.

In addition, in cases where a user logs onto an application (AppA) and then accesses a second application (AppB) that uses container or application authentication, the failure to map the user will force the user to manually log onto AppB and enter a username. If the user enters a different username than was used to log onto AppA, the following unexpected behavior can arise: If the user subsequently accesses a third application (AppC) from AppA or AppB, then they will access it using the usernames that were used to log onto AppA or AppB respectively.

► **Identity Manager:**

Used for authentication purposes, all unprotected resources in the Identity Manager must be configured with the **nonsecureURLs** setting in the LW-SSO configuration.

LW-SSO Important Information

This section contains important information regarding LW-SSO.

- **LW-SSO Token expiration.** The LW-SSO Token's expiration value determines the application's session validity. Therefore, its expiration value should be at least the same value as that of the application session expiration value.
- **Recommended configuration of the LW-SSO Token expiration.** Each application using LW-SSO should configure token expiration. The recommended value is 60 minutes. For an application that does not require a high level of security, it is possible to configure a value of 300 minutes.
- **GMT time.** All applications participating in an LW - SSO integration must use the same GMT time with a maximum difference of 15 minutes.
- **Multi-domain functionality.** Multi-domain functionality requires that all applications participating in LW-SSO integration configure the **protectedDomains** settings, if they are required to integrate with applications in different DNS domains. In addition, they must also add the correct domain in the **lwssso** element of the configuration.

- ▶ **Get SecurityToken for URL functionality.** To receive information sent as a **SecurityToken** for a URL from other applications, the host application should configure the correct domain in the **lwssso** element of the configuration.
- ▶ **Login and Logout URLs.** We recommend that you not configure the application's Login and Logout URL's as nonsecureURLs. Configuring them in this way may lead to unexpected behavior.

Troubleshooting LW-SSO

The following tables describe potential problems that can occur with LW-SSO, and possible solutions for these problems.

This section includes:

- ▶ “LW-SSO Related Use Cases” on page 534
- ▶ “SAML2 Related Use Cases” on page 537

LW-SSO Related Use Cases

Problem	Possible Cause	Possible Solution
LW-SSO cookie is not created after logging in.	A domain is not defined properly in the LW-SSO element of the configuration.	Make sure that the domain defined in the LW-SSO element of the configuration is equal to the application's domain.
	A domain that is passed as a parameter to the enableSSO function is not correct.	Make sure that the domain that is passed as a parameter to the enableSSO function is equal to the application's domain.
	You did not access the application with the Fully Qualified Domain Name (FQDN) in the login URL.	Make sure that you access the application with the Fully Qualified Domain Name (FQDN) in the login URL.

Problem	Possible Cause	Possible Solution
LW-SSO fails to create a cookie for AutoCookieCreation functionality.	A domain is not defined properly in the LW-SSO element of the configuration.	Make sure that the domain defined in the LW-SSO element of the configuration is equal to the application's domain.
The LW-SSO token is not validated.	The two applications have different initString parameters in the crypto element of the configuration (or other crypto parameters).	Use the same initString in both applications (in addition to all other crypto parameters in the LW-SSO creation element).
	Some applications have a GMT time difference greater than 15 minutes.	Make sure that all applications participating in a LW - SSO integration are set to the same GMT time, with a maximum difference of 15 minutes.

Problem	Possible Cause	Possible Solution
<p>LW-SSO fails to validate the LW-SSO token in a multi domain environment.</p>	<p>In the configuration of one of the applications, a domain is not defined properly in the LW-SSO element.</p>	<p>The domain defined in the LW-SSO element of the application's configuration must be the same as the application's domain according to real domains in use.</p>
	<p>In the configuration of one of the applications, a domain is not defined correctly in the protectdDomains list.</p>	<p>Make sure that the domains in the protectedDomains list of all of the applications' configurations are defined correctly.</p>
	<p>The LW-SSO session cookie is blocked/denied when using the Internet Explorer 6.0 or 7.0 browsers.</p>	<p>Add all LW-SSO servers to the "Intranet"/"Trusted" zone in the Internet Explorer security zones on your computer (Tools > Internet Options > Security > Local Intranet > Sites > Advanced). This will allow all cookies to be accepted.</p>
	<p>Some applications have different initString parameters in the crypto element of the configuration (or other crypto parameters).</p>	<p>Use the same initString in all applications (in addition to all other crypto parameters in the LW-SSO creation element).</p>
	<p>Some applications have a GMT time difference greater than 15 minutes.</p>	<p>Make sure that all applications participating in a LW - SSO integration are set to the same GMT time with a maximum difference of 15 minutes.</p>
	<p>Multi domain link goes from the protected (HTTPS) to the Non protected (HTTP) resource.</p>	<p>When linking/crossing from one domain to another, make sure that the first link/cross request goes from one protected resource (HTTPS) to another protected resource (HTTPS).</p>

 **SAML2 Related Use Cases**

Problem	Possible Cause	Possible Solution
LW-SSO fails to issue a SAML2 Token.	A keystore configuration for SAML2 creation is not valid and most likely does not point to a valid keystore.	Make sure that the keystore configuration for SAML2 creation is valid and points to a valid keystore.
	A privateKeyAlias or privateKeyPassword configuration for SAML2 creation is not valid. They might not be pointing to a valid private key.	Make sure that the privateKeyAlias or privateKeyPassword configuration for SAML2 creation is valid and point to a valid private key.
LW-SSO fails to validate the SAML2 token.	A keystore configuration for SAML2 validation is not valid. It most likely does not point to a valid keystore.	Make sure that the keystore configuration for SAML2 validation is valid and points to a valid keystore.
	A certificate used for signing is not imported in the configured keystore with a required public key alias. Note that the public key alias may be configured in the SAML2 validation configuration or it can be passed in SAML2 token by the issuer.	Make sure that the certificate used for signing in is imported in the configured keystore with a required public key alias.
LW-SSO fails to receive all roles or groups.	The element's roleAttributeName or groupAttributeName defined in the SAML2 configuration is different then the one configured in the applications' configurations element.	Make sure that the elements roleAttributeName or groupAttributeName is defined equally in all of the applications' configurations as in the SAML2 configuration.

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