



Enterprise Maps

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Windows and Linux Operating System

Administration Guide

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Chapter 1: Administration Overview

Administration in HPE Enterprise Maps can be broadly divided into the following areas:

- **Managing Content**

The most important content management concept in HPE EM is the use of *Domains*. The administrator can create a domain structure that represents your organizational structure. Each domain represents a working area with users assigned to specific roles within each domain and the content of the domain managed to restrict its visibility and access rights. For more details, see ["Domains" on page 11](#).

The administrator is also responsible for the day-to-day maintenance of the data content in the Catalog and reports about its status. HPE EM provides a set of administration tasks that the administrator can execute manually or schedule to run at set times or periodically to maintain and update this information. For details, see ["Administration Task Management" on page 74](#).

- **Managing Users**

The management of users is normally delegated to an external user store, such as LDAP, where the management of the people and groups who actually use HPE EM should take place. HPE EM represents users with *User* artifacts which the particular user or an administrator can manage. Users can create additional *Contact* artifacts to represent external contacts who do not use the product in order to associate them with particular artifacts in the Catalog. For details, see ["User Management" on page 38](#).

If necessary, the administrator can add and manage additional local groups to organize users into groups that are not represented by the external user store. For details, see ["Group Management" on page 44](#). HPE recommends using roles instead of creating local groups.

An important concept in HPE EM is the use of *Roles*. Roles are generic job descriptions that can apply to users and groups in specific domains. The use of roles enables the administrator to manage generic templates for lifecycle processes and security management in the top-level global domain which then resolve to specific users and groups within each working domain. Roles also control user access to functionality in the user interface. For more details, see ["Role Management" on page 47](#).

Administrators within each domain are responsible for assigning users to roles within their domain. For details, see ["Domains" on page 11](#).

- **Managing Security**

The administrator is responsible for managing and controlling user access to Catalog content. HPE EM uses Access Control Lists (ACL) to restrict access based on users, groups, or roles. For details, see ["Security and Access Control" on page 19](#).

- **Managing Global Artifacts**

HPE EM uses domains to divide content into working areas with users assigned to specific roles within the domain. Containing all the working domains is a top-level domain which contains global artifacts which apply across all domains. HPE EM restricts access to these artifacts and their management to the top-level administrator. For details, see ["Lifecycle Process Management" on page 56](#).

- **Product Integration**

The user needs to import the certificate of the server, the data of which needs to be imported and integrated into HPE EM. This import activity must be done via HTTPS. For details, see ["Product Integration Management" on page 111](#)

- **Configuration and System Management**

The administrator is responsible for the configuration of each deployment of HPE EM.

The Administration tab provides access to certain aspects of the configuration which can be managed while HPE EM is running. For details, see ["Configuration Management" on page 79](#).

- **Administration Utilities**

The administrator is responsible for the command-line tools located in the bin directory of the Installation folder. For details, see ["Administration Utilities" on page 204](#)

Understanding Domain Types

Enterprise Maps 3.20 has added a new property 'type' which helps domains further distinguish data used for modeling (reference model) from the actual asset of your enterprise architecture. HPE recommends the following usage:

- *Reference Model*: domain that stores your application reference/deployment models and service designs as a result of integration with Cloud service automation. The domain that stores service designs must essentially be named 'CSA Service Designs' for better differentiation with domains that store reference/deployment models (which do not have this particular name).
- *As-is/To-be Architecture*: domain that stores your enterprise architecture.
- *Demo Data*: domain that stores data of enterprise architecture for demonstration/testing purpose.

Enterprise Maps provides the following domains upon installation of HPE EM:

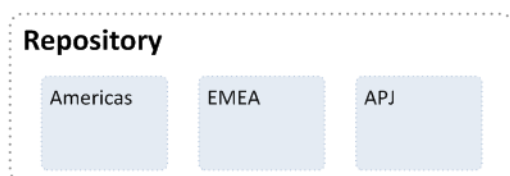
- *CSA Service Designs*: domain that contains topology service designs that have been published to, or imported from CSA.
- *Cloud Transformation*: domain that contains server classes and server profiles of all the major Cloud providers, available in the market.
- *Default Domain*: domain where you would usually store your enterprise architecture.
- *Top-level Domain*: domain that contains system artifacts and configuration.

<div><div></div><div></div><div></div></div>		
<input type="checkbox"/> Name	Description	Type
<input type="checkbox"/> CSA Service Designs	Contains CSA service designs (infrastructure services) and topology components (deployment specifications), which are synchron...	Reference Model
<input type="checkbox"/> Cloud Transformation Reference Models	Holds artifacts and models related to cloud transformation such as server types (Server Profiles) offered by Data Centers and...	Reference Model
<input type="checkbox"/> Default Domain	The default domain represents a default working area for all users until the administrator creates additional working area domains...	As-is/To-be Architecture
<input type="checkbox"/> Demo Example Domain		Demo Data
<input type="checkbox"/> Top-level Domain	The top-level domain is a special domain containing system and global data, such as lifecycle processes, policies, and taxonomi...	

Domains

Domains provide a logical separation of data within the Catalog. Each domain can represent a discrete working area for an individual department or organizational unit. This separation allows users to focus on the data that is most relevant to them and enables data to be structured by working area.

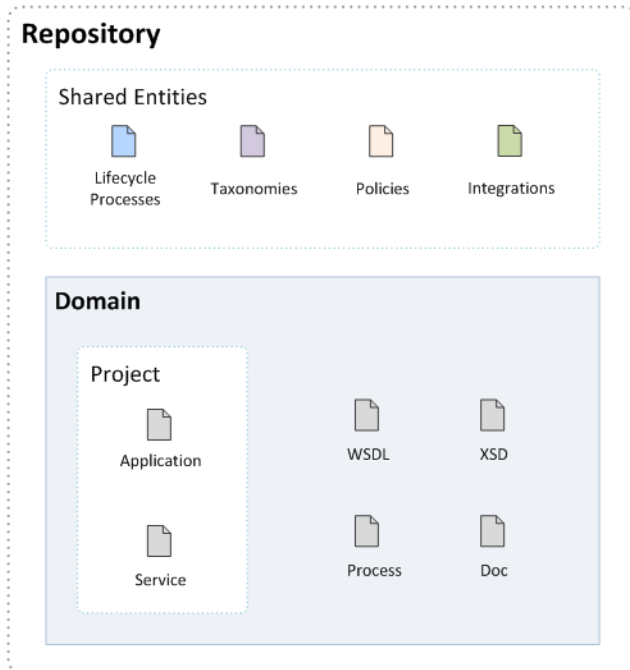
In this release, HPE EM provides support for a single layer of domains within a global top-level repository domain. For example, a domain structure representing organizational regions, Americas, EMEA, and APJ.



After installation, HPE EM consists of the top-level repository domain and a default domain. The default domain represents a default working area for all users until the administrator creates additional working area domains and assigns users to them.

The default domain contains out-of-the-box common artifacts and default access rights which can be reused as a template for other domains. When creating a new domain, default access rights of default domain are copied into the new domain.

The top-level domain is a special domain containing system and global data, such as lifecycle processes, policies, and taxonomies, which apply across all domains, and each working domain contains the specific data relevant to users of that domain.



The exact separation of data between the top-level and working domains is as follows:

Top-Level Domain (Global Configuration)

- Lifecycle Processes
- Taxonomies
- Policies
- User Profiles
- Roles and Groups Definition
- Integration Servers
- Shortcuts Definition
- Scheduled Tasks
- Managed Scripts
- Default Access Rights
- System settings (including SDM and UI customizations)

Working Domains

- Artifacts (for example: Services, Applications and Documents) that belong to the domain
- User Role Assignments (for example: Joe is an architect in the EMEA domain)
- Default Settings (for example: default server folder, default role)
- Additional Default Access Rights
- Additional Integration Servers (Sparx EA, BSM/UCMDB, PPM, database)

Working domains inherit all settings applied in the top-level repository domain. For example, access rights, roles, and lifecycle processes set in the top-level domain apply in all domains.

This domain structure creates a logical separation, not only between departments or organizational units, but also between global functions and working area domain functions.

Users in HPE EM perform specific functionality based on the roles assigned to them and the user interface restricts their access to functionality and artifacts based in these roles.

The user roles are split into the following user types:

- **Top-Level Repository Administrators**

Global administration with responsibility for the following functional areas:

- Create and delete domains. For details, see ["How to Create and Delete Domains" on page 32](#).
- Domain Management for all domains. For details, see ["Domain Management" on page 31](#).
- Lifecycle process Administration. For details, see ["Lifecycle Process Management" on page 56](#).
- User and Group Management. For details, see ["User Management" on page 38](#) and ["Group Management" on page 44](#).
- Role Administration. For details, see ["Role Management" on page 47](#).
- Integration Management. For details, see ["Product Integration Management" on page 111](#).
- Server Configuration Management. For details, see ["Configuration Management" on page 79](#).
- The Administrator can also access all the functionality of Domain Administrators.

- **Domain Administrators**

Users assigned to the administrator role in a specific domain with responsibility for the following functional areas:

- Domain Management for their assigned domains. For details, see ["Domain Management" on page 31](#).

- The Domain Administrator can also access all the functionality of catalog users in their assigned domains.

- **Domain Users**

Users assigned to a specific role within a domain with specific functionality associated with that role. The same user can access different domains in different roles.

This separation of functions and roles is described in more detail in ["Roles" below](#).

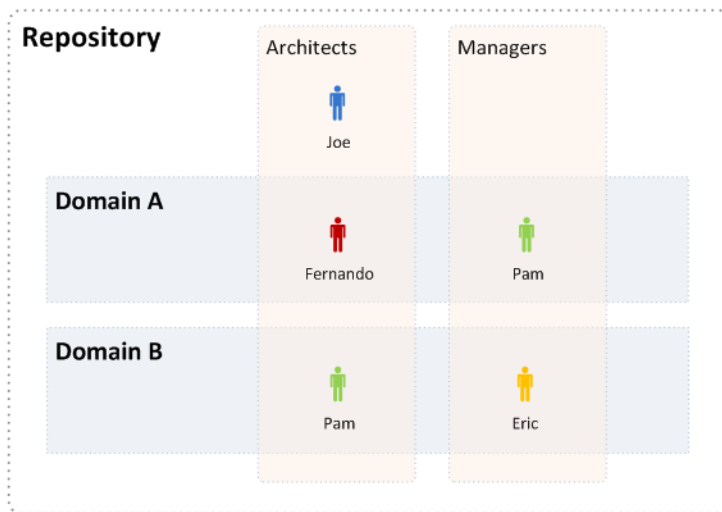
Each artifact belongs to exactly one domain. This domain is set to the current domain when a user creates an artifact. Typically, the domain does not change during the artifact lifecycle, but if required it is possible to transfer single artifact or multiple artifacts from one domain to another one using the Change Domain operation.

By default, artifacts are only visible in the owning domain but they can be explicitly shared for all users across all domains using the Share operation. Typically, this operation applies to artifacts entering production and associated with a lifecycle process. For details, see ["How to Define Automatic Actions" on page 65](#).

Roles

HPE EM offers functionality across the entire service development lifecycle. In most organizations, these functions are performed by many individuals and teams with specific permissions. HPE EM uses *Roles* to enable you to define and assign these permissions, and use these assignments to focus each user or group on specific functionality and tasks and restrict their access to artifacts appropriate to their role.

The administrator defines roles in the top-level domain, but user assignment to roles can be global or to different roles in different domains. For example, in the following diagram, Joe is assigned a global architect role in the top-level repository domain, Fernando is assigned the architect role in Domain A, Pam is assigned the manager role in Domain A and the architect role in Domain B, and Eric is assigned to the manager role in Domain B.



These assignments mean that in Domain A, Joe and Fernando access functionality and artifacts relevant to the architect role, whereas Pam accesses functionality relevant to the manager role.

Pam has a different role in Domain B, so along with Joe, accesses architect functionality, whereas Eric accesses functionality relevant to the manager role.

To assign users or groups to roles, see ["How to Manage User Roles in Domains" on page 32](#). For more details about domains, see ["Domains" on page 11](#).

The following topics describe in more detail how HPE EM uses roles:

- ["Roles in the User Interface" on the next page](#)

The UI uses roles to restrict the availability of functionality to users in appropriate roles.

- ["Roles in Lifecycle" on page 17](#)

You can create Lifecycle templates with specified tasks and actions assigned to specific roles.

- ["Catalog User Role" on page 18](#)

A role common to most users with access given to perform most tasks.

- ["Security and Access Control" on page 19](#)

HPE EM restricts access to artifact types using ACLs which can use roles as well as users and groups.

The default roles and their assigned functionality is described in the following topic:

- ["Administrator Role" on page 19](#)

The administrator can extend the default roles by adding additional customized roles. For details, see ["How to Manage Roles" on page 47](#).

HPE EM also includes a special role, Sharing Principal, specifically associated with sharing artifacts. By default, this role is associated with the `system#registered` group which represents all users who access HPE EM. For more details, see ["How to Change the Sharing Principal" on page 48](#).

Roles in the User Interface

HPE EM restricts access to UI functionality according to your role.

- **Catalog User**

The Catalog tab enables users in the Catalog User role to create, develop, and manage artifacts in architectures. For more details, see ["Catalog User Role" on page 18](#).

The Navigator tab provides a visual representation of the relationships between the artifacts. It provides various layouts and role-based filters to enable you to visualize the content of the repository from your point of view.

The Reports tab provides access to view and create reports on the Catalog content.

- **Administrator**

In addition to all the tabs and functionality accessible by users in the Catalog User role, administrators access an Administration tab to enable them to manage users, groups, roles, domains, and other system artifacts. For more details, see ["Administration Overview" on page 9](#).

- **Survey Manager**

Survey Manager's role is specific to managing surveys. It is created for the sole purpose of initiating and controlling surveys. Access rights are granted by the administrator for sending out mass surveys.

A user with Survey Manager role also needs to have Catalog User rights to be able to access Survey Definition through Catalog tab. For more details, see "Survey Overview" in the *Concepts Guide*.

Survey Manager role is not permitted to create or manage Survey Definitions, as only the administrator role has those privileged rights. Administrator role can grant or revoke access to users.

- **Finance**

Finance role permits a user to view financial data of artifacts. To view financial data, a user also needs to have access rights of Catalog User role in order to be able to access the Catalog tab. For more details, see "Financial Profile Tab" in *User Guide*.

Roles in Lifecycle

Lifecycle management makes use of roles to enable global lifecycle process management with role-based assignments in a lifecycle process template.

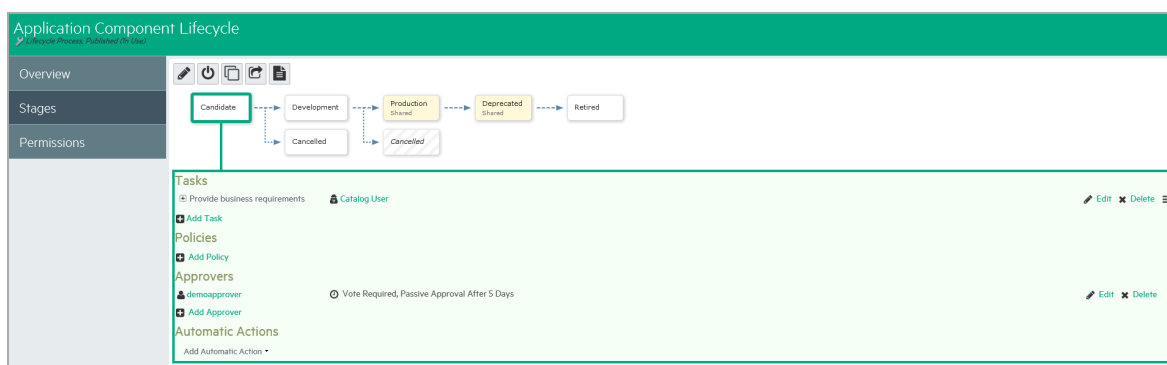
The administrator of the top-level domain manages lifecycle processes and uses roles to define the following:

- The user role responsible for approving particular lifecycle stages.
- The user roles with read-only, write access, and ownership permissions for artifacts at particular lifecycle stages.
- The user roles responsible for performing tasks associated with a lifecycle stage.
- The user roles that are automatically notified as a result of specific events within the lifecycle.

Within specific domains, these role assignments resolve to the users and groups assigned to the role in that domain. For example, consider the development stage of a lifecycle process for services.

The stage might consist of the following role assignments:

- A task to build and test the service assigned to the QA Engineer role.
- A stage approver in the Service Provider role.
- An automatic action to notify the users in the Operations Manager role when a service is approved at the development stage.



In different domains, different users perform each of these roles. Within domains, HPE EM replaces the roles in the template with the specific users and groups assigned to that role in that domain.

In the EMEA domain, this could result in the following specific assignments:

- A member of the EMEA QA Engineers group, assigned to the QA Engineer role, must complete the Build and Test task.
- An EMEA domain user, assigned to the Service Provider role, must approve the development stage for the service.
- When the service is approved, all users in the Operations Manager role in the EMEA domain are notified that the service is ready for deployment.

In the US domain these assignments are to different users and groups performing the same roles.

Catalog User Role

The Catalog User role is a common role for most users of Enterprise Maps . General users must be assigned to this role so that they can do most of the tasks including view, navigate and manage artifacts; view and print existing reports; and create new policy reports.

Users in the Catalog User role perform the following functions:

- Search and Discover artifacts. For details, see "Searching for Artifacts" in the *User Guide*.
- Collaborate with your colleagues, leave comments or rating on a particular artifact. For details, see "Collaboration Overview" in the *User Guide*.
- Author new Catalog content. For details, see "Creating Artifacts" and "Relationship Editor" in the *User Guide*.
- View and edit existing Catalog content. For details, see "Artifact View Page" in the *User Guide*.
- Visualize the Catalog content in Navigator graphical view.
- Synchronize Catalog content with integrated products. For details, see "Product Integration Management" in the *Administration Guide*.
- Synchronize Catalog content with architecture tools. For details, see "Extension for Sparx Systems EA" in the *User Guide*.
- Participate in the lifecycle of Catalog content. For details, see "Lifecycle Overview" in the *Concept Guide*.
- View and print reports on Catalog content. For details, see "Reports" in the *User Guide*.

Administrator Role

HPE EM provides an administrator role with responsibility for managing users, groups, roles, and system artifacts. The responsibilities of administrators vary according to the domain that they manage.

- **Top-Level Repository Administrators**

Global administration with responsibility for the following functional areas:

- Domain Management for all domains. For details, see ["Domain Management" on page 31](#).
- Lifecycle Process Administration. For details, see ["Lifecycle Process Management" on page 56](#).
- User and Group Management. For details, see ["User Management" on page 38](#) and ["Group Management" on page 44](#).
- Role Administration. For details, see ["Role Management" on page 47](#).
- Server Configuration Management. For details, see ["Configuration Management" on page 79](#).
- The Administrator can also access all the functionality of Domain Administrators.

- **Domain Administrators**

Users assigned to the administrator role in a specific domain with responsibility for the following functional areas:

- Domain Management for their domain. For details, see ["Domain Management" on page 31](#).
- Management of administrative tasks within their domain. For details, see ["Administration Task Management" on page 74](#).

Security and Access Control

Most organizations restrict access to resources by user and group permissions. HPE EM extends this type of security by enabling the use of domain and role-based access rights.

HPE EM uses Access Control Lists (ACL) to define who can access particular resources and their permissions. Each ACL consists of a set of Access Control Elements (ACE) which define the following for a resource or collection of resources:

- **User Identification**

The user identification as a specified user, a group of users, or a role that resolves to users and groups in the domain that the artifact belongs to.

- **Granted Permission**

One of the following:

- **Read Permission**

Access to read the data and metadata of an artifact or resource, or a collection of artifacts.

- **Write Permission**

Access to modify the data and metadata of an artifact or resource, or to create new artifacts, resources, and sub-collections, and update the metadata of a collection of artifacts. Users assigned as the owner of an artifact and administrators always have write permission.

ACLs apply in the following use cases:

- **Artifact Creation Rights**

The administrator can define which roles can create artifact types within a domain. Within the domain, the users in the allowed roles can access the artifact creation pages for the specified artifact types. The default creation rights are cumulative, so default rights given in the top-level domain apply in all other domains, and rights given to a group or role also apply in addition to rights given to each user in the group or role. For details, see ["How to Manage Default Access Rights" on page 34](#).

- **Governed Artifact Access Rights**

The access rights for artifacts in governance are determined by the lifecycle process applicable to the artifact. The administrator can assign rights and permissions to particular roles for each stage of a lifecycle process. Within a domain, these roles resolve to the assigned users and groups who have the specified access to the artifact at that lifecycle stage. For details, see ["How to Define Permissions" on page 66](#).

- **Ungoverned Default Artifact Access Rights**

In the cases where artifacts are not governed, the administrator can define which roles can read or write particular artifact types within a domain. Within the domain, the users in the allowed roles can access the artifact edit pages for the specified artifact types. In addition, you can extend this default access control functionality using particular values of categorization properties. For example, this enables you to define different access rights for services categorized as application services and for services categorized as infrastructure services. The default access rights are cumulative, so default rights given in the top-level domain apply in all other domains, and rights given to a group also apply to all the users of the group. For details, see ["How to Manage Default Access Rights" on page 34](#).

Controlling UI Access - Tutorial

New perspectives can be granted for one or many UI Roles in HPE EM.

Each unique User Perspective is defined by the Administrator, and allows access to many different views and a variety of artifacts in the UI. The Administrator can grant the User Perspective to an existing user, or can create a new UI Role and define a User Perspective for the new user.

You can do the following sequences of operations to customize your user experiences:

- Create a new UI Role, create a new Perspective, and Grant a new Perspective to an existing UI Role.
- Create a new Role and assign a new UI Role to this role.
- Create a new User and assign a new Role for the user.

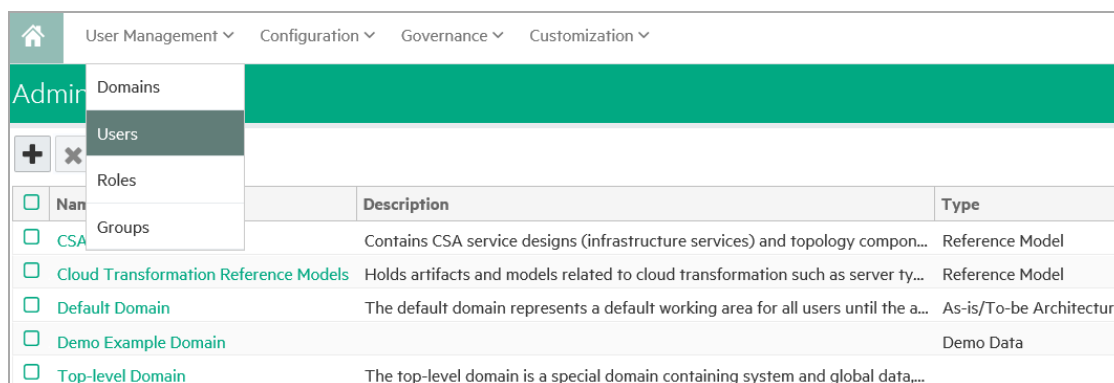
After following these steps, an assigned user will have access to a new perspective in the HPE EM User Interface.

Create New User













To create a new Internal User in HPE EM, use the following procedure:

NOTE: This new user cannot log in until the Administrator creates and defines the user from LDAP or the user configuration file.

1. Log in as the Repository Administrator, and then navigate to the Administration tab.
2. Open **User Management > Users**.



3. On the Users page, click the **Create User** icon to create a new user.

Users				
<div>        </div>				
<input type="checkbox"/>	Name ▲	Status	Username	Email
<input type="checkbox"/>	Administrator	Active	admin	em_admin@company.com
<input type="checkbox"/>	Andy Miller	Active	euser	euser@company.com
<input type="checkbox"/>	APM Administrator	Active	aadministrator	
<input type="checkbox"/>	Bev Bailey	Active	bbailey	bbailey@company.com
<input type="checkbox"/>	Business Analyst	Active	analyst	
<input type="checkbox"/>	Business Partner	Active	partner	
<input type="checkbox"/>	Dave Olson	Active	dolson	dolson@company.com
<input type="checkbox"/>	david	Active	david	
<input type="checkbox"/>	demoapprover	Active	demoapprover	
<input type="checkbox"/>	demouser	Active	demouser	
<div>   Page 1 of 2    Change Page Size </div>				

- Enter the information about the new user such as Name, Description, Login Name, email, Contact Information, Address and Categories if required.

Create User

Create new...

Name: *

Description:

User

B

I

U

Metric ▾

A ▾

T ▾

Login Name: *

Keywords:

Language Code:

User

▾

< No Value >

▾

Contact Information

Email:

Add

Phone:

Add

Instant Messenger:

Add

Address

Recipient:

Street:

City:

State Province:

Postal Code:

Country:

Categories

Add Category

Save

Cancel

- When you finish, click **Save** to save the new user. The resulting page will display the New User.

User

User

Overview

Documentation

Tree View

History

Relationships

Administration

Login Name: user

External User: No

Roles By Domain

Default Domain: Sharing Principal Change

Top-level Domain: empty Change

CSA Service Designs: empty Change

Cloud Transformation Reference Models: empty Change

Demo Example Domain: Sharing Principal Change

Groups

Group ▲

system#everyone

system#registered


Access Security

New Artifacts Ownership: Change

Default Domain: Change

- Now the Administrator needs to change the Role Membership of the user. On the New User view page, go to the Roles By Domain section. Find the role that the new user belongs to, and click the **Change** link.

Change Role Membership ×

 **Warning:** At least one role should be selected.

☐ ▾

Name ▲

☐ Architects

☐ Business Analyst

☐ Business Partner

☐ Catalog User

☐ Developers

☐ Domain Administrator

☐ Finance

☐ Project Managers

☐ Project Sponsors

☐ Provider

«

◀

Page 1 of 2

▶

»

↺

Change Page Size

Displaying 1 - 10 of 14

Set

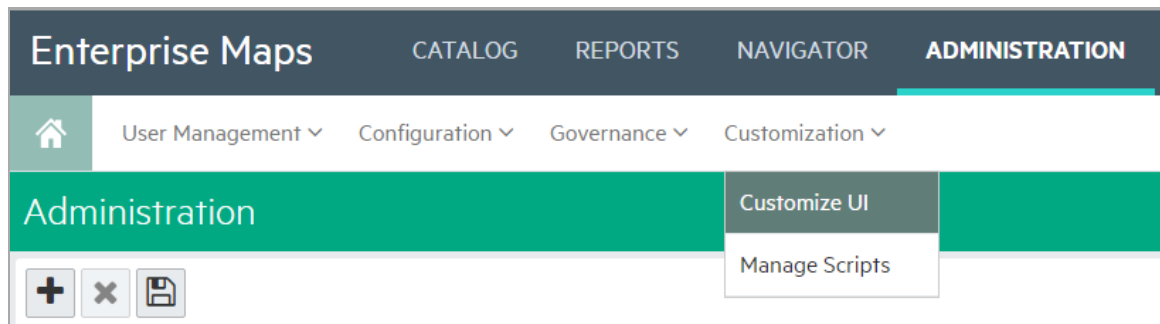
Cancel

7. In the Change Role Membership dialog, select New Role, and then click the **Set** button to save the changes.

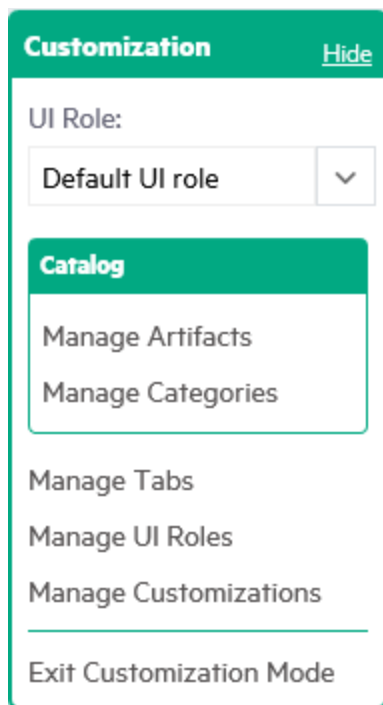
Create a New User Perspective

You can create a new perspective for users in HPE EM, which changes the user's view of the artifacts and the data available to that user.

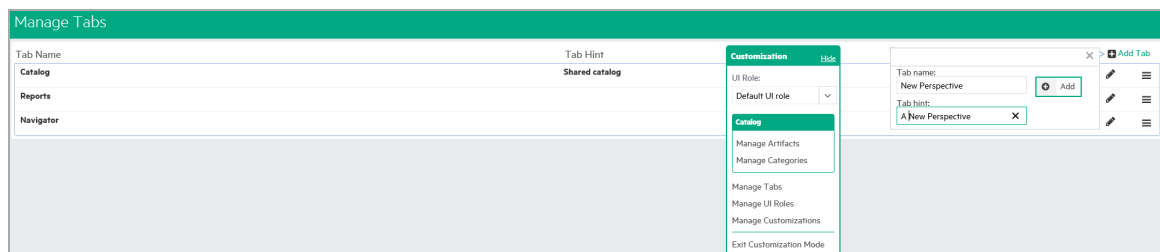
1. Log in as the Repository Administrator, and then navigate to the Administrator tab.
2. Navigate to the Customization tab and click **Customize UI**.



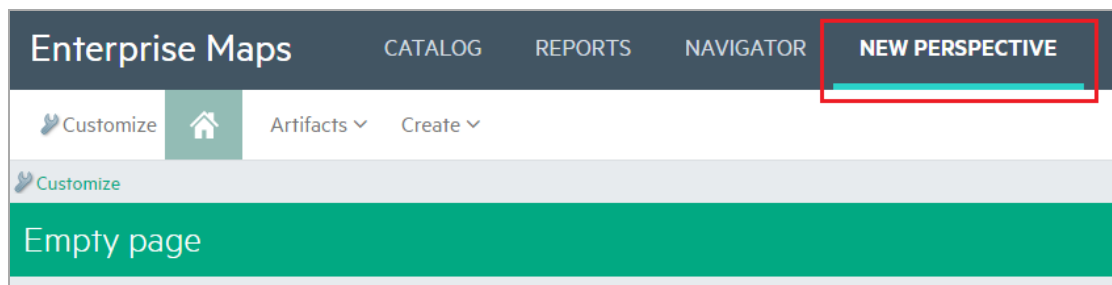
3. In the Customization menu, click **Manage Tabs**.



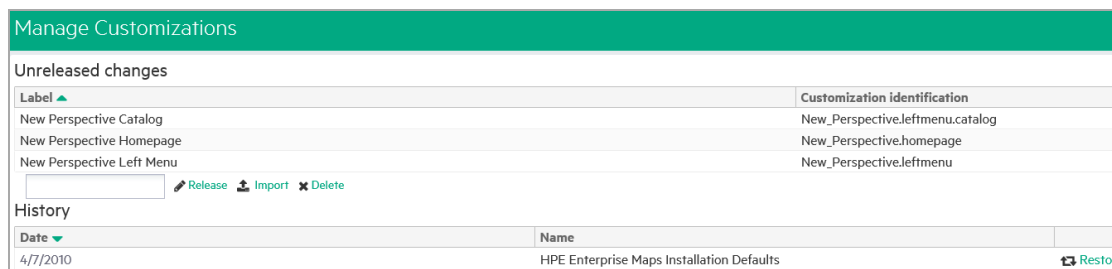
4. In the Manage Tabs page, select **Add Tab**, enter the Tab name and Tab hint, and then click **Add**.



5. Navigate to the New Perspective tab. Click the **Customize** icon and add the components and artifacts you want to make available in the user's new perspective.



- Click on the **Manage Customizations** link in the Customization menu to open the Manage Customizations page, and then release all changes.

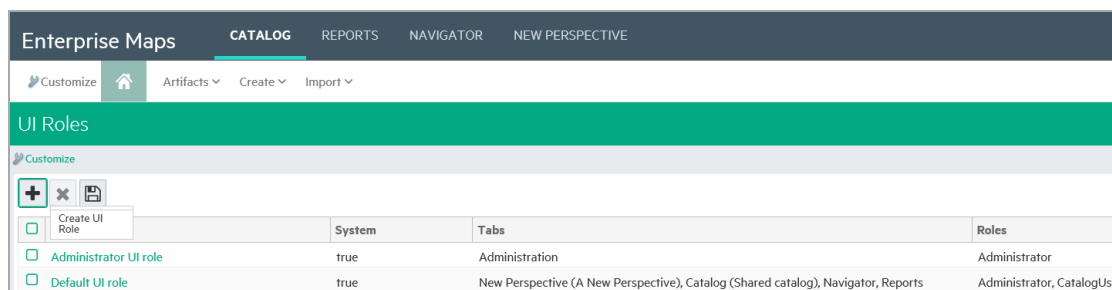


- When you are finished, click **Exit Customization Mode**.

Create a New UI Role

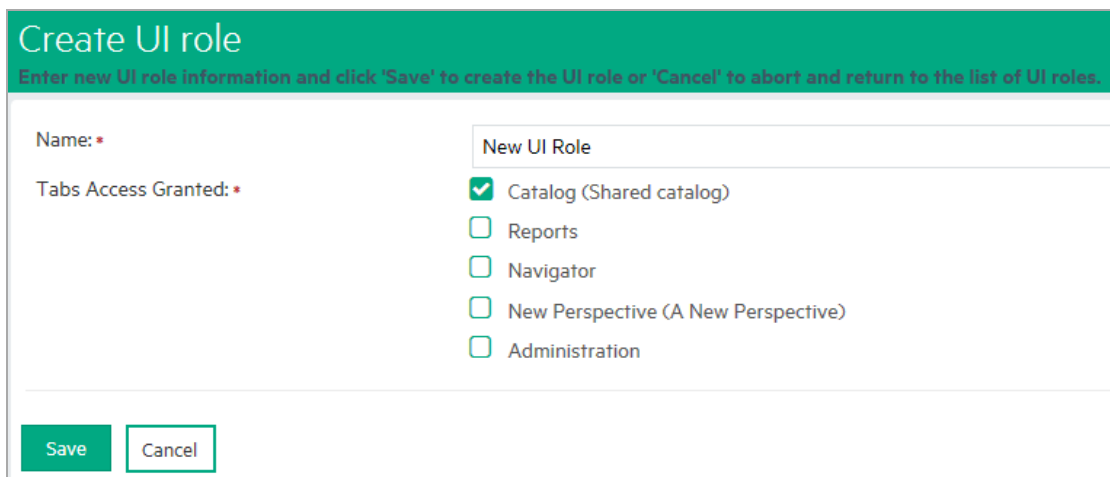
Create a new UI role in HPE EM using the following steps:

- Log in as the Repository Administrator, and then navigate to the Administration tab.
- Open Customization, and then click **Customize UI**.
- In the Customization menu, open UI Roles.
- In the UI Roles page, click the **Create UI Roles** button.



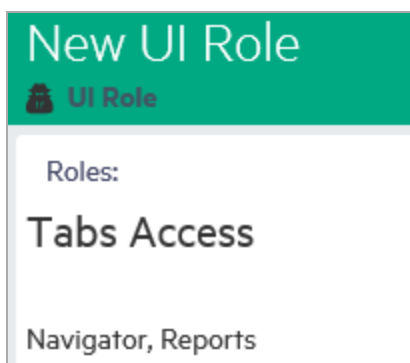
- Enter the Role Name, and then select Tabs Access Granted for the tabs you wish the role to have

access to.



The 'Create UI role' form has a teal header with the title 'Create UI role' and a subtitle 'Enter new UI role information and click 'Save' to create the UI role or 'Cancel' to abort and return to the list of UI roles.' Below the header, there are two main sections. The left section contains a 'Name: *' label and a 'Tabs Access Granted: *' label. The right section is titled 'New UI Role' and contains a list of checkboxes: 'Catalog (Shared catalog)' (checked), 'Reports' (unchecked), 'Navigator' (unchecked), 'New Perspective (A New Perspective)' (unchecked), and 'Administration' (unchecked). At the bottom of the form, there are two buttons: 'Save' and 'Cancel'.

- When you finish, click **Save** to save the UI Role. The resulting page will display the new UI Role.



The 'New UI Role' page has a teal header with the title 'New UI Role' and a subtitle 'UI Role'. Below the header, there is a 'Roles:' label and a 'Tabs Access' label. The 'Tabs Access' label is followed by a list of roles: 'Navigator, Reports'.

- When you are finished, click **Exit Customization Mode**.

Assign Users to a Role

You can assign a user to a distinct role in HPE EM.

Log in as the Administrator, and then click the **Administration** tab.

Go to **User Management > Users** and select the user to assign a different role.

Andy Miller

User








Overview

Documentation

Tree View

History

Relationships



Automatically created user account

Contact Information


Email: euser@company.com


Administration


Login Name: euser


External User: No


Roles By Domain

Default Domain: Catalog User, Sharing Principal  Change

Top-level Domain: empty  Change

CSA Service Designs: Catalog User  Change

Cloud Transformation Reference Models: Catalog User  Change

Demo Example Domain: Catalog User, Sharing Principal  Change

In the Roles By Domain section, click the **Change** link.

Note: Make sure to assign each user to the correct domain.

In the Change Role Membership page, select the roles that you want the User to be assigned to, and then click Set. The user will see the new perspective in their UI the next time they sign in.


Enterprise Maps

CATALOG

REPORTS

NAVIGATOR

ADMINISTRATION



User Management ▾

Configuration ▾




Governance ▾

Customization ▾

Administration

Customize UI

Manage Scripts

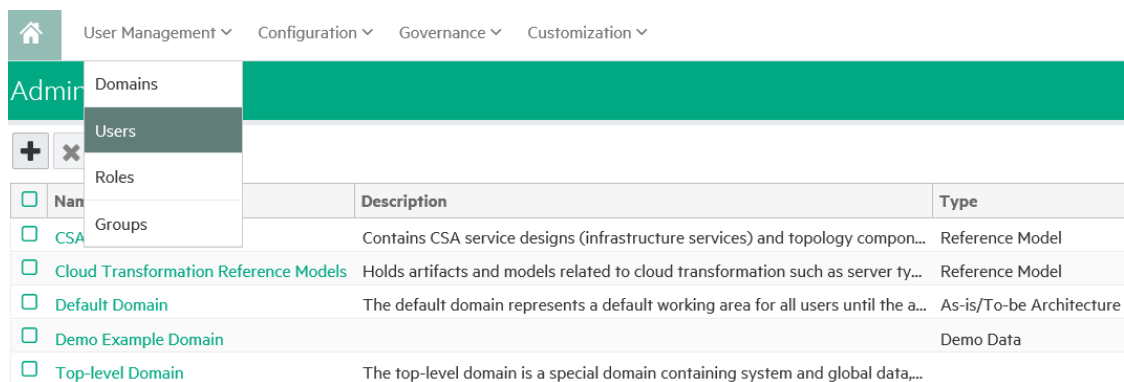


Import External Users

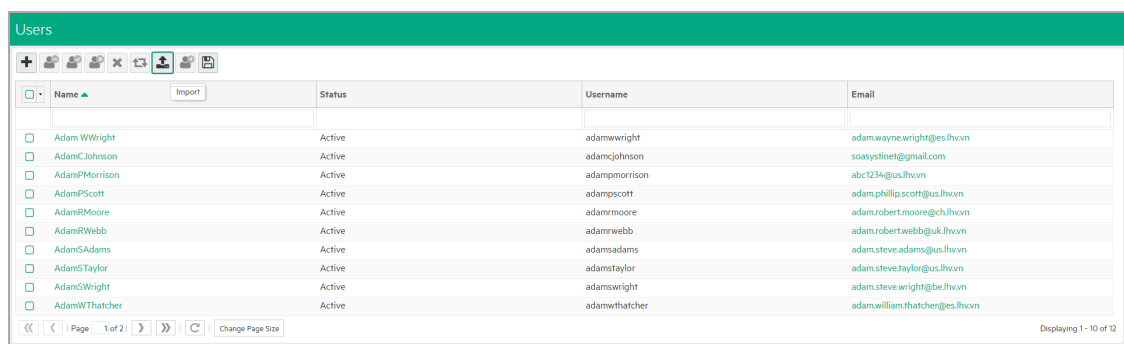
To import a new External User into HPE EM, use the following procedure:

NOTE: This procedure is used when the HPE EM server is already installed with LDAP.

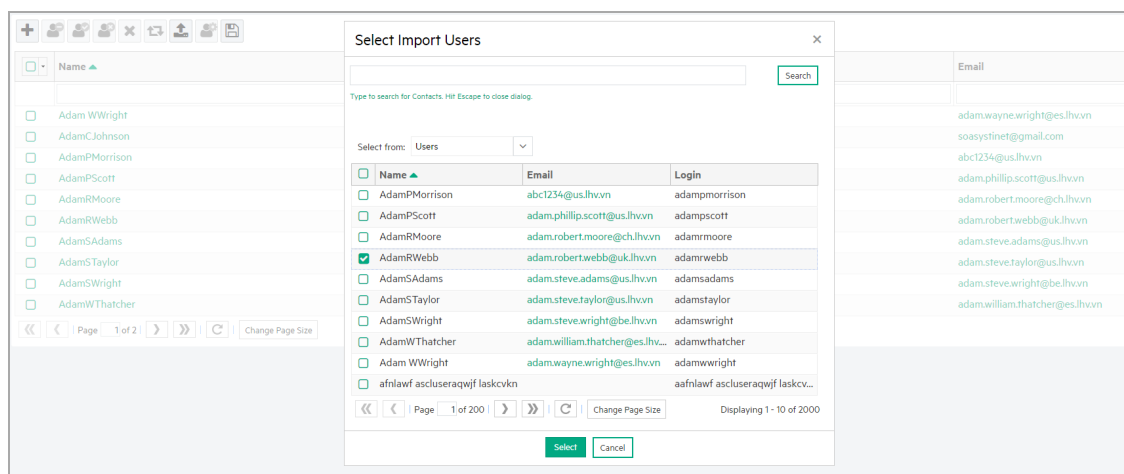
1. Log in as the Repository Administrator, and then click the **Administration** tab.
2. Click **User Management > Users** to open the Users page.



3. On the Users page, click the **Import** button to import users.



4. Select the users that you want to import, and then click the **Select** button to finish importing users.



Chapter 2: Domain Management

HPE EM enables the administrator to create a domain structure that reflects the organization of your business. Each artifact in the Catalog belongs specifically to one domain and the administrator can assign users specific roles in specific domains. This enables you to compartmentalize your Catalog and restrict the access and visibility of data to only the users who need it. For more details about the concept of domains, see ["Domains" on page 11](#).

Access domain management from the Administration tab. In the Administration menu, click **Domains** to view the list of all domains. Click a domain name to view its details.

Responsibility for domain management is divided into the following parts:

- **Managing the Domain Structure**

Users with the Administrator role have responsibility for the overall domain structure. Only the Administrator can create and delete domains. For details, see ["How to Create and Delete Domains" on the next page](#).

- **Managing a Domain**

The Administrator can assign a separate administrator for specific domains. Users with the administrator role within a domain are responsible for the following:

- Editing the domain.
- Setting the default role for the domain. For details, see ["How to Manage User Roles in Domains" on the next page](#).
- Assigning users to roles in the domain. For details, see ["How to Manage User Roles in Domains" on the next page](#).
- Managing default permissions in the domain. For details, see ["How to Manage Default Access Rights" on page 34](#).

- **Setting Default Domains**

When users sign in they access their default domain. The administrator can set default domains for users and groups and individual users can set their own default domain. For details, see ["How to Set Default Domains for Users" on page 40](#) and .

Note: By default, HPE EM contains a default domain which users who are not assigned to a specific working domain sign-in to. To change which domain is the default, change the setting

of the `platform.catalog.defaultUiAdapter.defaultDomain` property to the Domain ID of the required domain. For details, see ["How to Manage System Properties" on page 83](#). The administrator can also disable default domain sign-in to prevent users who are not assigned to a specific working domain from signing-in. For details, see ["How to Disable and Enable Users" on page 38](#).

How to Create and Delete Domains

The Administrator has responsibility for creating and deleting domains within the Catalog.

Access domain management functionality in the Administration tab. In the Administration menu, click **Domains** to open the Domains page. The Domains page provides Add and Delete Domain functionality for Administrators.

To Add Domains:

1. In the Domains page, click **Add Domain** to open the Create Domain page.
2. In the Create Domain page, set a name and description for the domain.
3. *Optional:* Set a Default Domain Location to be the default location for attached data content.
4. Click **Save** to create the new domain.

All working domains exist in a single layer as sub-domains of the top-level global domain. Administrators of the top-level domain have administrative rights in all domains and can assign users and groups to be administrators of specific domains.

To Delete Domains:

1. In the Domains page, select the domains to delete.
2. Click **Delete**, and confirm your choice to delete the selected domains.

Note: You cannot delete a domain if it contains any artifacts.

How to Manage User Roles in Domains

The administrator of a domain is responsible for assigning users to roles in the domain. For more details and domains and roles, see ["Domains" on page 11](#) and ["Roles" on page 14](#).

Managing roles in a domain consists of setting a default role and assigning users and groups to specific roles in the domain.

Note: If the administrator assigns a role to a user or a group in the top-level domain, the role assignment applies to all domains.

To Set a Default Role for a Domain:

1. In the Domain detail page select the Overview tab.
2. In the Default Role section, click **(Change)** to open the Choose Role dialog box.
3. Select the role from the list. Optionally, use the filter to find a particular role.
4. Click **Select** to set the selected role as the default role for the domain.

HPE EM assigns the selected role to any user who signs into the domain who does not have a role assignment for the domain.

To Assign Users and Groups to Roles for a Domain:

1. In the Domain detail page select the Roles tab.
2. Select the role that you want to add users or groups to.
3. Click **Add Member** to open the Add Member dialog box.
4. Do one of the following:
 - Select the Users tab, and select the users to add. Optionally, use the filter to locate a particular user.
 - Select the Groups tab, and select the groups to add. Optionally, use the filter to locate a particular group.
5. Click **Select** to add the selected users and groups to the selected role in the domain.

To Assign Roles to Users and Groups for a Domain:

1. In the Domain detail page select the Members tab.
2. Click the **Edit** icon in the Roles column for the user or group you want to assign roles to. The Change Roles dialog box opens.
3. Select the roles that you want to add to the user or group. Optionally use the input dialog to search for a specific role.
4. Click **OK** to add the roles to user or group in the domain.

Once users or groups are assigned to roles within a domain, the administrator can extend their role memberships within specific domains. For details, see ["How to Assign Users to Groups and Roles" on page 39](#) and ["How to Assign Groups to Roles" on page 45](#).

How to Manage Default Access Rights

The administrator of a domain is responsible for defining who is able to create artifacts within the domain they manage. They can also define who has read and write access to artifact types. For more details about domains and security, see ["Domains" on page 11](#) and ["Security and Access Control" on page 19](#).

To access default access rights, in the Administration tab Administration menu, click **Domains** to open the Domains browse page. Select the domain that you administrate to open its details page and select the **Default Access Rights** tab.

The Default Access Rights tab displays the current Artifact Creation and Read / Write Access permissions for the domain.

Note: Domains inherit all default access rules from the top-level global domain and displays them as non-editable rules for the domain. Any permission rules set within the scope of the domain are additive to those global rules. The administrator of the top-level domain can edit these global rules from the detail page of the top-level domain.

To Manage Artifact Creation Rights:

1. In the Administration tab Administration menu, click **Domains** to open the Domains browse view.
2. Click the name of the domain you want to set creation rights for to open its details page.
3. Select the **Default Access Rights** tab to view the current permissions for the domain.
4. In the Artifact Creation table, do one of the following:
 - o **To Add Artifact Creation Rules:**
 - i. Click **Add Rule** to open the Add Artifact Creation Rule page.
 - ii. Select the artifact type to add creation rights for from the **To Artifact Type** drop-down list.
 - iii. In the Granted To table, click **Add Member** to open the Add Member dialog box.
 - iv. Click **Browse Address Book** and select the roles to add creation rights for the selected artifact type. Optionally, use the dialog search input to find a particular role.
 - v. Click **Select** to add the selected roles to the Granted To table.
 - vi. Click **Save** to add the rule for the selected artifact type to the Artifact Creation table.

- **To Edit Artifact Creation Rules:**
 - i. Click the **Edit** link for the rule to open the Edit Artifact Creation Rule page.
 - ii. Use the Granted To table to add and remove roles from the rule.
 - iii. Click **Save** to apply the changes to the rule to the Artifact Creation table.
- **To Remove Artifact Creation Rules:**
 - Select the rules to remove, click **Remove Selected**, and confirm your decision.

To Manage Default Read / Write Access:

1. In the Administration tab Administration menu, click **Domains** to open the Domains browse view.
2. Click the name of the domain you want to set creation rights for to open its details page.
3. Select the **Default Access Rights** tab to view the current permissions for the domain.
4. In the Read / Write Access table, do one of the following:
 - **To Add Read / Write Access Rules:**
 - i. Click **Add Rule** to open the Add Read / Write Access Rule page
 - ii. Select to add **Read** only or **Read / Write** access.
 - iii. Select the artifact type to add read / write access for from the **To Artifact Type** drop-down list.
 - iv. In the Granted To table, click **Add Member** to open the Add Member dialog box.
 - v. Select the roles, users, or groups to add read / write access for the selected artifact type. Optionally, use the dialog search input to find a particular role, user, or group.
 - vi. Click **Select** to add the selected roles, users, and groups to the Granted To table.
 - vii. *Optional:* Use the Condition table to add conditions to the access rule. These conditions enable you to further restrict access rights based on artifact type specific rules.
 - viii. Click **Save** to add the rule for the selected artifact type to the Read / Write Access table.
 - **To Edit Read / Write Access Rules:**
 - i. Click the **Edit** link for the rule you want to edit to open the Edit Read / Write Access Rule page.
 - ii. Select **Read** only or **Read / Write** access.
 - iii. Use the Granted To table to add and remove roles, users, and groups from the rule.
 - iv. *Optional:* Use the Condition table to edit conditions for the access rule. These conditions enable you to further restrict access rights based on artifact type specific rules.
 - v. Click **Save** to apply the changes to the rule to the Read / Write Access table.

- **To Remove Read / Write Access Rules:**
 - Select the rules to remove, click **Remove Selected**, and confirm your decision.

Note: The default read and write permissions only apply to artifacts that are not governed by a lifecycle process or where the initial stage of the governing lifecycle process does not define access rights.

Caution: Do not remove write permission from the Contacts artifact type for the system#registered group. This permission is required for the registration of new users.

How to Export Domain Content

The administrator can export the content of an entire domain. Using this functionality for the top-level domain enables you to export the entire content of the Catalog.

Caution: The export / import functionality of the UI is not compatible with the command-line export / import tools available to the administrator. For more details about command-line export / import, see *HPE Enterprise Maps Customization Guide - CSV Import and Export Tools*.

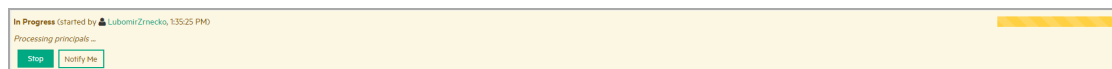
To Export Domains:

1. In the Domain Details page Overview tab, click the **Export** context action to open the Export dialog box.
2. *Optional:* Change the name of the archive.
3. *Optional:* Expand **Advanced Options**, and select from the following options:

Advanced Option	Description
Data	Select to export all artifacts that are assigned to the domain.
System Settings	Select which domain settings to export.

4. Click **Export** to create a ZIP archive containing the domain artifacts.

This process executes as a bulk operation. An information bar opens informing you that the operation is in progress and on completion notifies you to view the report.



The operation executes asynchronously, so you can navigate and perform other tasks while the operation completes.

5. When the export archive is complete you are prompted for a download location. Alternatively, open the export report and click **Download Content** to save the archive.

The archive is available for import using the Import Repository Archive functionality.

Chapter 3: User Management

HPE EM delegates user management to LDAP or an application server user store. Users are represented in HPE EM by user artifacts for artifact ownership, notification, and contact purposes.

User artifacts represent users in the user store and contact artifacts represent external contacts. A contact does not have a corresponding LDAP or application user store account and cannot sign in.

When users first sign in, they are authenticated against the external user store and HPE EM creates a user artifact based on their external account.

Note: HPE EM also checks new users against existing contacts. If a matching contact artifact exists, the login name is attached and the contact becomes a user artifact.

Responsibility for user management is divided into the following parts:

- Each user can manage their own user artifact.
- Users with appropriate permissions can create new contacts in the Catalog tab.

Caution: Only create contacts for people who need to be represented in the Catalog but who do not need to use HPE EM. Use LDAP or your application server user store to create users who use HPE EM.

- The Administrator is responsible for the following aspects of user management:
 - ["How to Disable and Enable Users" below](#)
 - ["How to Assign Users to Groups and Roles" on the next page](#)
 - ["How to Set Default Domains for Users" on page 40](#)
 - ["How to Set New Artifact Ownership" on page 41](#)
 - ["How to Import Users from LDAP" on page 42](#)
 - ["How to Synchronize Profiles with LDAP" on page 43](#)

How to Disable and Enable Users

The administrator can block access to HPE EM by disabling users.

To Disable Multiple Users:

1. In the Administration tab Administration menu, click **Users** to open the Users browse page.
2. Select the users to disable.
3. Click **Disable** and confirm your selection to block the selected users from accessing HPE EM.

To Disable or Enable a Single User:

1. In the Administration tab Administration menu, click Users to open the Users browse page.
2. Click the name of the User you want to Disable or Enable to open their User details page.
3. In the User details page Overview tab, click the **Disable** or **Enable** context action.

How to Assign Users to Groups and Roles

The administrator can assign a user to be a member of multiple groups or roles within specific domains.

To Assign Users to Groups:

1. In the Administration tab Administration menu, click **Users** to open the Users browse page.
2. Click the name of the User to open its detail page.
3. Select the **Groups and Roles** tab to view the group details for the user.
4. In the Groups table, do one of the following:
 - **To remove the users from groups:**
 - i. Select the groups to remove the user from.
 - ii. Click Remove and confirm your decision.
 - **To add the users to groups:**
 - i. Click **Add to Group** to open the Add Groups to User dialog box.
 - ii. Select the groups to add the user to.
 - iii. Click **Select** to add the user to the selected groups.

The administrator can also manage the membership of groups from the group perspective. For details, see ["How to Manage Group Membership" on page 44](#).

To Assign Users to Roles:

1. In the Administration tab Administration menu, click **Users** to open the Users browse page.
2. Click the name of the User to open its detail page.
3. Select the **Groups and Roles** tab to view the role details for the user.
4. In the Roles by Domain section, click **Change** for the required domain to open the Change Role Membership dialog box.
5. Select the additional roles to assign to the user for the domain and click **Set** to apply the changes.

Note: This functionality is only available if the user is already assigned to roles in a domain and can only be used to extend the roles set there. For details, see ["How to Manage User Roles in Domains" on page 32](#).

How to Set Default Domains for Users

The administrator can set the default domain that new users sign in to.

To Set the Default Domain for a Single User:

1. In the Administration tab Administration menu, click **Users** to open the Users browse page.
2. Click a user name to open their details page.
3. In the Overview tab Access Security section, click the Default Domain **Change** link to open the Set Default Domain dialog box.
4. Select a default domain and click **Select**.

When the user signs in for the first time they access the selected domain.

To Set the Default Domain for Multiple Users:

1. In the Administration tab Administration menu, click **Users** to open the Users browse page.
2. Expand Manage Members, and select **Set Default Domain** to open the Set Default Domain dialog box.
3. Select a domain from the list and click **Select** to set the domain as the default for new users.

When the selected users sign in for the first time they access the selected domain.

Default domains can also be set for groups and individual users can set their own default domain. For details, see ["How to Set Default Domains for Groups" on page 45](#)

How to Set Default Domains for Groups

The administrator can set the default domain that members of groups sign in to.

To Set the Default Domain for Groups:

1. In the Administration tab Administration menu, click **Groups** to open the Groups browse page.
2. Click the name of the group to open its details page.
3. Click **Set Default Domain** to open the Set Default Domain dialog box.
4. Select a domain from the list and click **Select** to set the domain as the default for the group.

When members of the selected group sign in they access the selected domain.

Default domains can also be set for users and individual users can set their own default domain.

How to Set New Artifact Ownership

By default, users who create artifacts become the *owner* of the artifact. The owner of an artifact has default read / write permission for the new artifact.

The administrator can configure new artifact ownership for users so that instead of the artifact ownership being assigned to the user, it is instead assigned to a specified role or group.

To Set New Artifact Ownership for a Single User:

1. In the Administration tab Administration menu, click **Users** to open the Users browse page.
2. Click a user name to open their details page.
3. In the Overview tab Access Security section, click the New Artifact Ownership **Change** link to open the Select New Artifacts Ownership dialog box.
4. Click **Change** to select a new owner.
5. Input a role or group search term or click **Browse Address Book** and select from the list of roles or groups.

Note: The users must be members of the selected group or assigned to the selected role in at least one domain.

6. Click **Select** to apply the new artifact ownership assignment to the selected users.

To Set New Artifact Ownership for Multiple Users:

1. In the Administration tab Administration menu, click **Users** to open the Users browse page.
2. Select the users to apply new artifact ownership assignment to.
3. Expand Manage Members, and select **Set New Artifacts Ownership** to open the Set New Artifacts Ownership dialog box.
4. Click **Change** to open the dialog box.
5. Input a role or group search term or click **Browse Address Book** and select from the list of roles or groups.

Note: The users must be members of the selected group or assigned to the selected role in at least one domain.

6. Click **Select** to apply the new artifact ownership assignment to the selected users.

When the selected users create artifacts, HPE EM assigns ownership to the specified role or group.

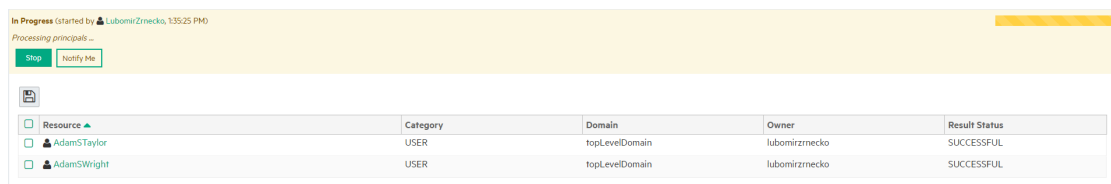
How to Import Users from LDAP

If HPE EM is synchronized with an LDAP user store you can create user artifacts based on corresponding LDAP accounts.

To Import LDAP Accounts:

1. In the Administration tab Administration menu, click **Users** to open the Users browse page.
 2. Click **Import** to open the Select Import Users dialog box.
 3. Do one of the following:
 - Use the Search input and click **Search** to populate the Users list with users in the LDAP user store matching the search term.
- Tip:** Select a user from the *as-you-type* drop-down to immediately create a matching user artifact.
- Click **Browse Address Book** to populate the Users list with all the users in the LDAP user store.
 4. Select users from the Users or Groups list, and click **Select** to create matching user artifacts.

This process executes as a bulk operation. An information bar opens informing you that the operation is in progress and on completion notifies you to view the report.



The operation executes asynchronously, so you can navigate and perform other tasks while the operation completes.

Note: Import uses the LDAP cache so changes in LDAP may not be immediately visible in HPE EM.

How to Synchronize Profiles with LDAP

If HPE EM is synchronized with an LDAP user store you can update user artifacts with the latest versions of the corresponding LDAP accounts.

To Synchronize Profiles with LDAP Accounts:

1. In the Administration tab Administration menu, click **Users** to open the Users browse page.
2. In the Users browse page, select the users you want to synchronize.
3. Click **Synchronize** and confirm your decision.

This process executes as a bulk operation. An information bar opens informing you that the operation is in progress and on completion notifies you to view the report.



The operation executes asynchronously, so you can navigate and perform other tasks while the operation completes.

Note: Synchronize uses the LDAP cache so changes in LDAP may not be immediately visible in HPE EM.

Chapter 4: Group Management

In addition to any groups managed by the external user store, the administrator can manage local groups in HPE EM.

Note: HPE Software recommend using roles instead of local groups.

Access group management from the Administration tab. In the Administration menu, click **Groups** to view the list of all groups. Click a group name to view its details.

To Create Groups:

- In the Groups page, click **Create Group** to open the New Group page.
- Enter a name and description, and optionally add group members as described in ["How to Manage Group Membership" below](#).

The administrator is also responsible for the following aspects of group management:

- ["How to Manage Group Membership" below](#)
- ["How to Assign Groups to Roles" on the next page](#)
- ["How to Set Default Domains for Groups" on the next page](#)
- ["How to Retire and Delete Groups" on page 46](#)

How to Manage Group Membership

The administrator is responsible for managing the membership of local groups.

To Manage Group Membership:

1. In the Administration tab Administration menu, click **Groups** to open the Groups browse page.
2. Click the name of the group to open its details page.
3. Click **Edit** to open the Edit Group page.
4. In the Members table, do one of the following:

- **To remove users from the group:**
 - i. Select the users to remove from the group.
 - ii. Click **Remove** and confirm your decision.
 - **To add users to the group:**
 - i. Click **Add Member** to open the Add Users to Group dialog box.
 - ii. Select the users to add to the group.
 - iii. Click **Select** to add the selected users to the group.
5. Click **Save** to apply your group membership changes.

The administrator can also manage the membership of groups from the user perspective. For details, see ["How to Assign Users to Groups and Roles" on page 39](#).

How to Assign Groups to Roles

The administrator can assign a group to be a member roles within specific domains.

To Assign Groups to Roles:

1. In the Administration tab Administration menu, click **Groups** to open the Groups browse page.
2. Click the name of the Group to open its detail page.
3. In the Roles by Domain section, click **Change** for the required domain to open the Change Role Membership dialog box.
4. Select the additional roles to assign to the group for the domain and click **Set** to apply the changes.

Note: This functionality is only available if the group is already assigned to roles in a domain and can only be used to extend the roles set there. For details, see ["How to Manage User Roles in Domains" on page 32](#).

How to Set Default Domains for Groups

The administrator can set the default domain that members of groups sign in to.

To Set the Default Domain for Groups:

1. In the Administration tab Administration menu, click **Groups** to open the Groups browse page.
2. Click the name of the group to open its details page.
3. Click **Set Default Domain** to open the Set Default Domain dialog box.
4. Select a domain from the list and click **Select** to set the domain as the default for the group.

When members of the selected group sign in they access the selected domain.

Default domains can also be set for users and individual users can set their own default domain.

How to Retire and Delete Groups

The Administrator can retire and then delete internal groups.

Note: These processes do not retire or delete the users who are members of these groups.

To Retire Multiple Groups:

- In the Groups browse page, select the groups to retire, click **Retire** and confirm your decision.

To Retire a Single Group:

1. In the Group details page, click the **Retire Group** context action to open the Retire Group dialog box.
2. Click **(Change)** to select a new owner for any artifacts owned by members of the group.

To Delete Multiple Groups:

- In the Groups browse page, select the groups to delete, click **Delete** and confirm your decision.

To Delete a Single Group:

- In the Group details page, click the **Delete Group** context action.

Note: A group must be retired before you can delete it.

Chapter 5: Role Management

HPE EM enables the administrator to assign users to specific roles related to their job functions. These roles restrict their access to artifacts, and limit their functionality only to that appropriate to their role.

For more details about the concept of roles, see ["Roles" on page 14](#).

Access role management from the Administration tab. In the Administration menu, click **Roles** to view the list of all roles. Click a role name to view its details.

Responsibility for role management is divided into the following parts:

- **Managing Roles**

Users with the Administrator role have responsibility for the roles available in HPE EM. Only the Administrator of the top-level domain can create and delete roles. For details, see ["How to Manage Roles" below](#).

- **Assigning Users to Roles**

Users with the administrator role within a domain are responsible assigning users to specific roles within their domain and setting a default role for new users of the domain. For details, see ["How to Manage User Roles in Domains" on page 32](#).

How to Manage Roles

The Administrator has responsibility for managing roles in HPE EM. For details about the concept of roles, see ["Roles" on page 14](#).

To view the list of roles in HPE EM, in the Administration tab Administration menu, click **Roles** to open the Roles browse page.

The Roles browse page provides the following functionality:

- **Delete**

Select the roles to delete, and click **Delete**.

Note: You cannot delete the default roles.

- **Create Role**

Click **Create Role** to open the ["Create Role Page" below](#).

After you create a role, it is available for user and group assignment, for use in lifecycle processes, and for default access rights.

Click a role name to open its details page, showing its properties and UI Access details.

Click **Edit** to change the details for a role. For system roles, you can only change the UI Access details. For details of the Edit Role page parameters, see ["Create Role Page" below](#).

For details about using roles, see the following topics:

- ["How to Manage User Roles in Domains" on page 32](#)
- ["How to Create Lifecycle Processes" on page 57](#)
- ["How to Manage Default Access Rights" on page 34](#)

How to Change the Sharing Principal

The Sharing Principal is a special role associated with sharing artifacts to make them visible to more users. The default functionality is to use the `system#registered` group which represents all users who access HPE EM.

To Change the Sharing Principal:

1. In the Administration tab Administration menu, select **Domains** to open the Domains page.
2. Select the Top-Level domain to open the Domains details page.
3. Select the Roles tab to view the roles and their membership for the domain.
4. Select the Sharing Principal role to view its membership.
5. Use **Remove Selected** and **Add Member** to edit the membership of the role.

The selected users and groups see any artifacts that are shared.

Create Role Page

The Create and Edit Role pages contain the following parameters:

Parameter	Definition
Name	Name of the Role.
Description	A description including rich text and HTML support. This description displays in the Artifact Details page Overview tab properties area. This description is limited by the display length available in the Overview tab. If you need a longer description or an artifact specification edit the Specification property.
Sub-Roles	Select from the set of existing roles to inherit their functionality and artifact access for the new role.
Additional UI Access	Select whether users in the new role can access additional specified tabs.
Allows Login	Allow users in the new role to access the UI.

Chapter 6: Policy Management

HPE Enterprise Maps enables you to use technical policies in the following ways:

- **Lifecycle Stage Validation**

Lifecycle stages in a lifecycle process can have a set of policies associated with them that serve as validation checks for artifacts at that lifecycle stage. Policies can be optional or required and can also validate that tasks associated with the stage are complete. These policies are automatically validated when a user requests stage approval or can be manually validated by users. The collective status of these policies gives a Compliance Status for an artifact which measures the current percentage of required policies which pass validation. The administrator assigns policies to lifecycle stages during the creation of lifecycle processes. For details about setting up lifecycle validation, see ["How to Define Policies" on page 62](#).

HPE Enterprise Maps includes a default Lifecycle Validation Task, scheduled to run once a day, which automatically validates all artifacts in governance against the policies that apply to their current lifecycle stage. For details about managing this task, see ["Administration Task Management" on page 74](#).

- **Manual Validation**

You can use the Policy Report feature of the Reports tab to perform ad-hoc manual validation. You can set up a policy report which validates a selected set of artifacts against a set of selected technical policies. For details, see "Policy Reports" in *User Guide*.

- **Artifact Form Validation**

The administrator can configure a set of technical policies that validate an artifact whenever it is created or modified. You can use this type of validation to ensure that new and amended artifacts contain a minimum set of descriptive data such as keywords and impact type, and enforce rules such as the versioning schema. Each artifact type can have its own set of form validation. For details about configuring form validation, see ["How to Manage Artifact Form Validation" on the next page](#).

The administrator of the top-level domain is responsible for policy management. For procedural details, see the following topics:

- ["How to Manage Technical Policies" on the next page](#)
- ["How to Manage Assertions" on the next page](#)

How to Manage Technical Policies

The administrator manages technical policies in the Administration tab.

In the Administration tab Governance menu, click **Technical Policies** to view the list of policies in the Catalog.

The **Applicable To** column enables you to filter the policies table according to the artifact type that it is applicable to.

How to Manage Assertions

The administrator manages assertions in the Administration tab.

In the Administration tab Governance menu, click **Assertions** to view the list of assertions in the Catalog.

Assertions cannot be used alone. They must be used in scope of technical policies which are designed for different purposes. An assertion can be reused in many technical policies.

Note: The creation and editing of assertions is delegated to Assertion Editor. For details, see the *Assertion Editor Guide*.

How to Manage Artifact Form Validation

The Administrator can assign policies to validate artifacts when a user creates or edits them. For example, to ensure that keywords are set when a user creates a service.

To Assign Artifact Validation Policies:

1. On the Administration menu, click **Governance > Data Integrity Constraints** to open the Artifact Validation page.
2. Select the artifact type that you want to validate for creation and edit. The Validated By table refreshes to show the policies used to validate the selected artifact type.

Artifact Type	Validated by
Application Collaboration (3)	<input type="checkbox"/> <input type="checkbox"/>
Application Component	
Application Component Financial Profile	
Application Function	
Application Interaction	
Application Interface	
Application Layer	
Application Service	
Artifact	
Assessment	
Batch/File processing	
Binary Document	
BPEL Process	
Business Actor	
Previous	Next

3. Do one of the following:

- o **To Add Policies:**
 - i. Click **Add a technical policy** to open the Add Policy dialog.
 - ii. Use the search criteria to locate the technical policies you want to use.
 - iii. Select the policies to use and click **Select** to add the policies to the Validate By table.

Add Policy

Add Criteria
Search
Clear

<input type="checkbox"/>	Name	Applicable To
<input type="checkbox"/>	Administrator Should Not Be Artifact Owner	HPE Enterprise Maps resource
<input type="checkbox"/>	All Application Components Deprecated	HPE Enterprise Maps resource
<input type="checkbox"/>	All Application Components Developed	HPE Enterprise Maps resource
<input type="checkbox"/>	All Application Components in Production	HPE Enterprise Maps resource
<input type="checkbox"/>	All Application Components Retired	HPE Enterprise Maps resource
<input type="checkbox"/>	All Process Implementations Deprecated	HPE Enterprise Maps resource
<input type="checkbox"/>	All Process Implementations Retired	HPE Enterprise Maps resource
<input type="checkbox"/>	All Project Artifacts Developed	HPE Enterprise Maps resource
<input type="checkbox"/>	All Project Artifacts In Production	HPE Enterprise Maps resource
<input type="checkbox"/>	All Service Implementations Deprecated	HPE Enterprise Maps resource

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OK
Cancel

- o **To Remove Policies:**
 - i. Select the policies to remove.
 - ii. Click **Remove all selected policies** and confirm your decision to remove the selected

policies from the Validated By table.

Validated by	
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Remove all selected policies
<input checked="" type="checkbox"/>	All Application Components Deprecated
<input type="checkbox"/>	All Application Components Developed
<input type="checkbox"/>	Administrator Should Not Be Artifact Owner

Description
All application's components (services) are approved in Deprecated stage
All application's components (services) are approved in Development stage

You can extend form validation to also validate data attachments to artifacts. Set property `platform.autovalidation.validateData` to `true`. For details, see ["How to Manage System Properties" on page 83](#).

Default Technical Policies

HPE Enterprise Maps includes a prepackaged set of technical policies. These technical policies are explained in the tables below organized by the type of validation they perform:

Artifact: Policies that verify artifact documentation

Technical Policy (consisting of)	Definition
Business Requirements	Verifies that an artifact has a business requirements document.
Project Plan	Verifies that an artifact has a project plan document.
Detailed Design	Verifies that a service has a detailed design document.
Functional Specification	Verifies that a service has a functional specification document.
Installation Instructions	Verifies that a service has an installation instruction document.
Technical Specification	Verifies that a service has a technical specification document.
User Manual	Verifies that a service has a user manual document.
Analysis	Verifies that a Project artifact has an analysis document.

Related Artifact: Policies that verify the lifecycle stage of constituent artifacts governed by other processes

Technical Policy	Definition
All Application Components Deprecated	Verifies that the referenced artifacts of an application are all approved at the Deprecated stage.
All Application Components	Verifies that the referenced artifacts of an application are all approved

Developed	at the Development stage.
All Application Components Retired	Verifies that the referenced artifacts of an application are all approved at the Retired stage.
All Application Components in Production	Verifies that the referenced artifacts of an application are all approved at the Production stage.
All Process Implementations Deprecated	Verifies that all realizing artifacts of a business process are approved at the Deprecated stage.
All Process Implementations Retired	Verifies that all realizing artifacts of a business process are approved at the Retired stage.
All Project Artifacts Developed	Verifies that the referenced artifacts of a project are all approved at the Development stage.
All Project Artifacts in Production	Verifies that the referenced artifacts of a project are all approved at the Production stage.
All Service Implementations Deprecated	Verifies that all realizing artifacts of a business service are approved at the Deprecated stage.
All Service Implementations Retired	Verifies that all realizing artifacts of a business service are approved at the Retired stage.
All Sub-Processes Developed	Verifies that all referenced sub-processes are approved at the Development stage.
All Sub-Processes in Production	Verifies that all referenced sub-processes are approved at the Production stage.
All Sub-Services Developed	Verifies that all referenced sub-services are approved at the Development stage.
All Sub-Services in Production	Verifies that all referenced sub-services are approved at the Production stage.
Process Implementation in Production	Verifies that at least one realizing artifact of a business process is approved at the Production stage.
Process Implementation in Testing	Verifies that at least one realizing artifact of a business process is approved at the Testing stage.
Service Implementation in Production	Verifies that at least one realizing artifact of a business service is approved at the Production stage.
Service Implementation in Testing	Verifies that at least one realizing artifact of a business service is approved at the Testing stage.

WSDL and SOAP: Policies that verify WSDL and SOAP conformance with standard schema.

Technical Policy	Definition
WSDL Validity Policy	Verifies that a WSDL is compliant with the WSDL 1.1 XML Schema, that all references to external WSDL descriptions and schemas are valid, and that the WSDL is compliant with WS-I Basic Profile 1.1.
WS-I Basic Profile Policy	Verifies that a WSDL or SOAP message complies with WS-I Basic Profile 1.1.
XSD Validity Policy	Checks that an XML Schema is valid and that all contained references are resolvable.
SOAP Validity Policy	Verifies that SOAP messages are compliant with SOAP 1.1 XML Schema and WS-I Basic Profile 1.1.

Chapter 7: Lifecycle Process Management

Before a Lifecycle Process can be used, it must be first defined and published by a user with Administrator rights.

A Lifecycle Process can also be copied and modified so as to maintain certain values rather than having to be constructed from the beginning.

Lifecycle Processes are defined by clicking **Lifecycle Processes** under the Administration tab and either selecting an existing process for modification or clicking **Create** to build a new one.

In the Lifecycle Process Overview or Stages tab it is possible to edit, publish, clone, delete or export the current process by clicking on the appropriate action.

The following tasks may be required when defining a new, or editing an existing Lifecycle Process:

- ["How to Create Lifecycle Processes" on the next page](#)
- ["How to Define Stages" on page 58](#)
- ["How to Define Transitions" on page 60](#)
- ["How to Define Tasks" on page 61](#)
- ["How to Define Policies" on page 62](#)
- ["How to Define Approvers" on page 63](#)
- ["How to Define Automatic Actions" on page 65](#)
- ["How to Define Permissions" on page 66](#)
- ["How to Publish a Process" on page 67](#)
- ["How to Export Lifecycle Processes" on page 68](#)

["Lifecycle Best Practice" on page 68](#) describes HPE recommended principles for lifecycle governance and describes the default lifecycle processes included with HPE EM.

See "Lifecycle Overview" in the *User Guide* for the user view of Lifecycle Processes.

How to Create Lifecycle Processes

The first step in artifact lifecycle management is the creation of a lifecycle process.

To create a new lifecycle process:

1. In the Administration menu, click **Lifecycle Processes** to open the Lifecycle Processes page, and then click **Create**.
2. In the upper section, enter a **Name** and **Description** for the lifecycle process.
3. Define the lifecycle stages for the lifecycle process as follows:
 - a. Select the Root Artifact Type from the drop down list.
 - b. Optionally select the Sub-Artifact Type(s) by selecting the check box of the required types
 - c. Traverse ArchiMate relationships: if unchecked, ArchiMate relationships are completely ignored on searching for sub-artifacts.
 - d. Traverse 'Composed of' only: if checked, when searching for sub-artifacts all ArchiMate relationships are ignored except 'Composed of'.
4. If the new process is to be automatically assigned to artifacts, click the check box and add categories for **Categorized as** and **Not Categorized as** to apply taxonomic association rules for the automatic assignment of the lifecycle process to artifacts based on their categorizations
 - **In Categories:** Artifacts must contain these categories to be automatically assigned to the lifecycle process.
 - **Not In Categories:** Artifacts must not contain these categories to be automatically assigned to the lifecycle process.
 - **In Domains:** Select which domains lifecycle process will be used in.

Note: In cases where two or more automatically assigned lifecycle processes apply for an artifact type, HPE EM uses these association rules to assign the most appropriate lifecycle process.

5. Click **Save**.

The status of a newly created lifecycle process is set to **Draft** and the user is redirected to the Overview tab of the process page in which lifecycle stages can be defined.

How to Define Stages

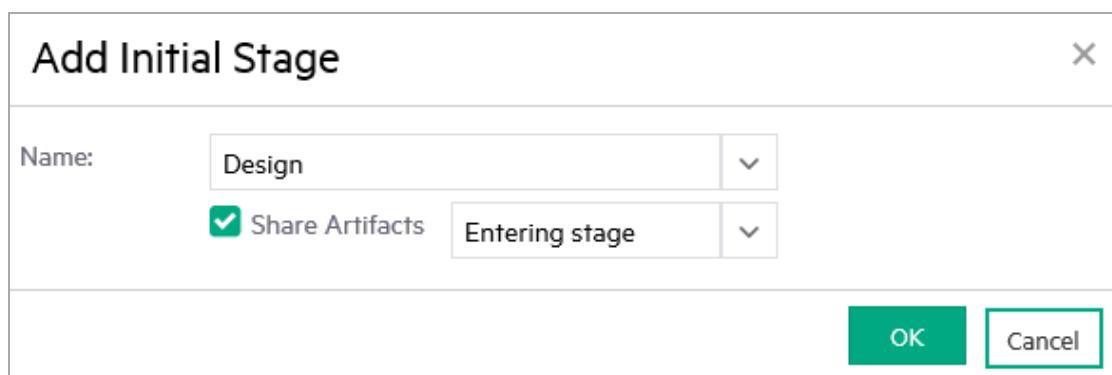
Lifecycle stages represent important milestones in the lifecycle process. Lifecycle stages and their order are defined in the lifecycle process definition. New lifecycle processes have no stages assigned to them.

To define lifecycle stages:

1. In the Administration menu, click **Lifecycle Processes** to open the Lifecycle Processes page, and then select the required process.

The Lifecycle Processes page opens in the **Overview** tab.

2. To set a initial stage definition for artifacts click **Add Stage**. The Add Initial Stage dialog opens.

The image shows a dialog box titled "Add Initial Stage" with a close button (X) in the top right corner. Inside the dialog, there is a "Name:" label followed by a dropdown menu currently showing "Design". Below this, there is a checked checkbox labeled "Share Artifacts" followed by another dropdown menu currently showing "Entering stage". At the bottom right of the dialog, there are two buttons: "OK" and "Cancel".

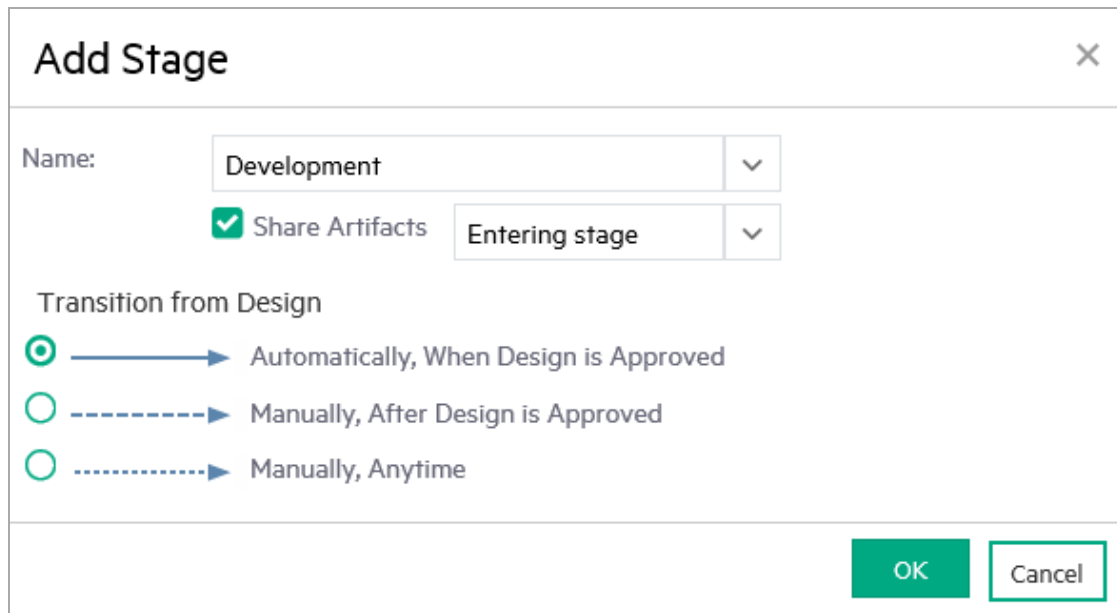
Add Initial Stage		X
Name:	Design	▼
<input checked="" type="checkbox"/> Share Artifacts	Entering stage	▼
		OK Cancel

3. Select Stage name from dropdown list or the user may enter a custom name.

Click the Share Artifacts checkbox and select when the artifact will be shared if required (this can also be altered in the Permissions tab). The After Approval option is not available if the transition to the next stage is automatic.

Click **OK**

Additional stages can be added by clicking **Add Stage**, selecting a Stage name and a transition type.



The 'Add Stage' dialog box features a title bar with a close button (X). The main content area includes a 'Name' field with a dropdown menu currently showing 'Development'. Below this is a checked checkbox labeled 'Share Artifacts' and another dropdown menu showing 'Entering stage'. A section titled 'Transition from Design' contains three radio button options: 'Automatically, When Design is Approved' (selected), 'Manually, After Design is Approved', and 'Manually, Anytime'. Each option is accompanied by a visual representation of the transition (solid, dashed, or dotted arrow). At the bottom right, there are 'OK' and 'Cancel' buttons.

Any process can be edited, cloned, exported, deprecated or deleted by clicking the appropriate button

It is also possible to add the same stage into a process multiple times. These are called referral stages and are visually different from regular stages. Attempting to edit a referral stage automatically sends the user back to the properties of the initial version of that stage.

4. Before publishing the process, go to the Stages tab and do the following:

Note: A valid stage definition must contain at least one of the following conditions.

- Set transitions

For details, see ["How to Define Transitions" on the next page](#)

- Set voters for approval

For details, see ["How to Define Approvers" on page 63](#).

- Define tasks to complete before stage approval.

For details, see ["How to Define Tasks" on page 61](#)

- Set policies to comply with before stage approval.

For details, see ["How to Define Policies" on page 62](#)

- Define automatic actions to execute when a lifecycle transition occurs.

For details, see ["How to Define Automatic Actions" on page 65](#)

- Specify whether to automatically promote on stage approval

For details, see ["How to Define Permissions" on page 66](#)

Click **Save** to save the Stage Definition and return to the Lifecycle Process page.

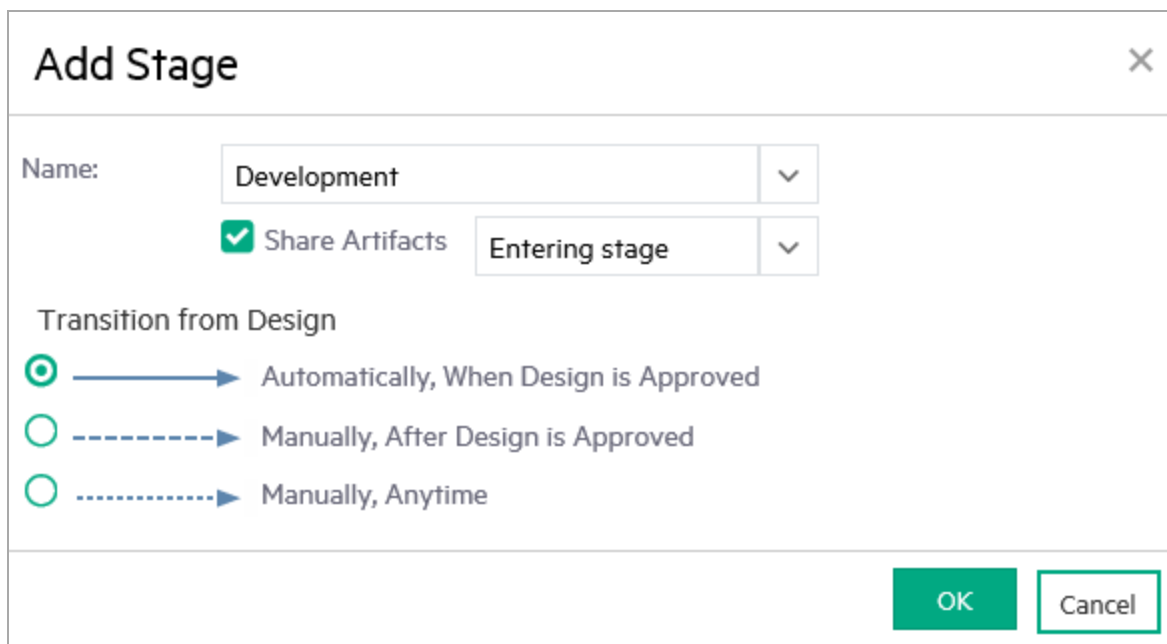
All stage details are listed. You can edit or copy a stage definition using **Edit** or **Copy**. Stages can also be deleted by clicking the **Delete** link.

When process is complete, click **Publish** to make active.

Note: Stage layout cannot be changed once the process is published.

How to Define Transitions

When adding a stage, a type of transition is required by HPE EM and there are three options to choose from.



The "Add Stage" dialog box contains the following elements:

- Name:** A dropdown menu with "Development" selected.
- Share Artifacts:** A checked checkbox.
- Entering stage:** A dropdown menu with "Entering stage" selected.
- Transition from Design:** Three radio button options:
 - ☒ Automatically, When Design is Approved (represented by a solid blue arrow)
 - ☐ Manually, After Design is Approved (represented by a dashed blue arrow)
 - ☐ Manually, Anytime (represented by a dotted blue arrow)
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

Automatically, When stage_name is Approved

- Stage will transition to the next stage as soon as approved by designated approvers.

Manually, After stage_name is Approved

- Stage will require approval from all designated approvers before it can be manually advanced to the next stage.

Manually, Anytime

- Stage does not require approval from all designated users before being manually advanced

Hovering over the stage or the transition between stages and clicking the pencil icon allows you to edit a transition.

Note: If a stage shares several common previous stages, the transitions types are presented together when editing the stage.

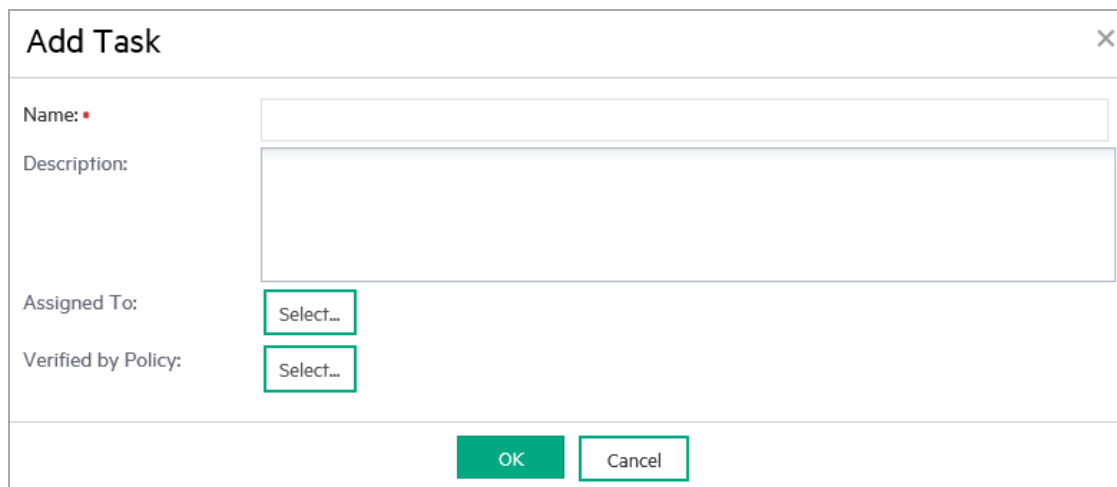
Caution: If a stage has several next stages, only one of the transitions may be automatic and the rest must be set as **Manually, Anytime**. In case of conflict the user will be notified about the automatic change.

How to Define Tasks

You can define a set of manual tasks to be performed as part of a lifecycle stage.

To add a task:

1. Click **Stages** tab and select the stage you wish to add a task to.
2. Click **Add Task** to open the Add Task dialog box.

The image shows a dialog box titled "Add Task" with a close button (X) in the top right corner. The dialog contains four input fields: "Name:" with a red asterisk, "Description:", "Assigned To:", and "Verified by Policy:". The "Assigned To:" and "Verified by Policy:" fields have "Select..." buttons next to them. At the bottom of the dialog are two buttons: "OK" and "Cancel".

Add Task	
Name: *	<input type="text"/>
Description:	<input type="text"/>
Assigned To:	<input type="button" value="Select..."/>
Verified by Policy:	<input type="button" value="Select..."/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

3. Enter a name and optional description for the task
4. A Task may be assigned to a Role, a User or a Group by clicking the **Select** next to **Assigned To:** label. Clicking the **Browse Addressbook** button will reveal lists of Roles, Users and Groups that can have assigned tasks.

5. A Task may be verified by policy by clicking the **Select** next to **Verified by Policy** label which will provide a list of existing policies that may be applied.

Note: Only one policy may be associated with a task at a time. Only policies not used within the same stage can be selected (either in tasks or policies).

6. Click **OK**.

The new task is added to the Tasks field.

How to Define Policies

You can define a set of policies to validate artifact compliance as part of a lifecycle stage.

To add a policy:

1. Click **Stages** tab and select the stage that requires a policy.
2. Click **Add Policy** to and the **Select policy** dialog opens.

Select policy

Enter text to search ...

Add Criteria

Search

Clear

	Name	Applicable To
<input type="radio"/>	☆ Administrator Should Not Be Artifact Owner	HPE Enterprise Maps resource
<input type="radio"/>	☆ All Application Components Deprecated	HPE Enterprise Maps resource
<input type="radio"/>	☆ All Application Components Developed	HPE Enterprise Maps resource
<input type="radio"/>	☆ All Application Components in Production	HPE Enterprise Maps resource
<input type="radio"/>	☆ All Application Components Retired	HPE Enterprise Maps resource
<input type="radio"/>	☆ All Process Implementations Deprecated	HPE Enterprise Maps resource
<input type="radio"/>	☆ All Process Implementations Retired	HPE Enterprise Maps resource
<input type="radio"/>	☆ All Project Artifacts Developed	HPE Enterprise Maps resource
<input type="radio"/>	☆ All Project Artifacts In Production	HPE Enterprise Maps resource
<input type="radio"/>	☆ All Service Implementations Deprecated	HPE Enterprise Maps resource

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Select

Cancel

You may use either the search function or select a policy from the presented list using the radio button.

Note: Only policies not used within the same stage can be selected (either in tasks or policies).

3. Click **Select**.

The next window allows you to change your choice of policy, the artifact type it is applicable to and whether the policy is required to approve the stage.

4. Click **OK** to apply the policy.

How to Define Approvers

For each lifecycle stage in a lifecycle process you can define a unique set of approvers. The approvers determine whether the artifacts governed by the process are complete for the current stage.

To define voters for approval:

- Click the **Stages** tab and then select the stage you require an approval for.

Select Approver

Search

Type to search for Contacts. Hit Escape to close dialog.

Select from: Roles

	Name
<input type="radio"/>	Administrator
<input type="radio"/>	Architects
<input type="radio"/>	Business Analyst
<input type="radio"/>	Business Partner
<input type="radio"/>	Catalog User
<input type="radio"/>	Developers
<input type="radio"/>	Domain Administrator
<input type="radio"/>	Finance
<input type="radio"/>	Project Managers
<input type="radio"/>	Project Sponsors

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Select

Cancel

- To add an individual, group or role of voter(s):
 - a. Click the **Browse Addressbook** button.
 - b. Principals can be found in the lists or can be found by entering a name in the **Search** field and clicking **Search** to show matching search results.
 - c. Click the radio button next to the Role/User/Group required and click **Select** to add selection as an approver.
 - d. If the selected approver is not an individual, but a role or group, select the number of votes required by that role or group.

- e. The Passive Approval option can now be selected with a specified number of days before automatic approval.
- f. Click **OK** to add the Approver
- To remove voters, click on the **Delete** button next to their name.
- To edit the Passive Approval option, click the **Edit** button next to the name of the approver.

Note: Approvers can also be viewed, edited or added under the **Permissions** tab.

How to Define Automatic Actions

To define automatic actions, click on the **Add Automatic Actions** link at the bottom of the stage details window on the stages tab.

Dependent on the artifact type, the following actions may be available:

- **Execute Script** - Invoke a custom javascript code previously defined using administration, customization, and manage scripts. In the Advanced tab, you can define a javascript fragment, which is executed prior to running the referenced script artifact.
- **Parent Request Approval** - Create approval request for parent artifact. *Parent Artifact Type* and *Parent Stage* must be selected in the pop-up dialog. Click **OK** to add automatic action. This automatic action is triggered when the following conditions are met:
 - *Parent Artifact Type* is defined as root artifact in a different lifecycle process, which also defines current artifact type in sub-artifact list.
 - Current artifact has a relationship with parent artifact.
 - Current artifact is approved in this stage.
 - Parent artifact is in progress in *Parent Stage*.

For example:

- Define Application Interface as sub-artifact in Application Component lifecycle process.
- Define this automatic action in first stage of Application Interface lifecycle process. This initiates request for approval in first stage of Application Component lifecycle process.
- Create an Application Interface 'app int 1' which *composes* Application Component 'app com 1'.

- Start governance for 'app int 1' and approve the first stage. This initiates a request for approval for first stage of 'app com 1' which is then created automatically.
- **Remove Comments** - Once artifact goes into production, all comments will be removed.
- **Notify** - HPE EM Enables you to send e-mail notifications to artifact stakeholders. You can send set up automatic notifications to be sent as a result of lifecycle changes. Notifications require a subject, and may include Lifecycle Status and an attached text.

The possible recipients of the notification are described in the following table:

Notification Recipients

Recipient	Description
Owner	The user, group, or role that owns the artifact. "How to Edit Artifact ownership" in the UG.
Maintainers	Users, groups, and roles groups with write permission for the artifact. For details, see "How to Edit Access Rights in the UG.
Contacts	Users and organizational units associated with the artifact by the contact relationship or listed in the artifact stakeholder property. For details, see "How to Manage Contacts" in the UG. The Contacts recipient group can be refined into selectable contact roles.
Other Recipients	Click Add Other Recipients and use the user, group, and role search feature to add any other required recipients.
Previous Stakeholders	Expand Show Advanced Options and select Include Recipients from Previous Versions to notify stakeholders from previous versions of the artifact about changes to a newer version. The stakeholders notified by this option match those for the current artifact version. For example, if Consumers is selected, then the consumers of previous versions are notified.







Automatic actions can be deleted by clicking the **Delete** icon and the Notifications and Parent Request Approval actions can be edited by clicking the **Edit** icon.

How to Define Permissions

For each lifecycle stage in a lifecycle process you can define a set of permissions. These permissions determine which Role, Group or User has ownership, access rights, approver status and whether artifacts are shared or not.

Note: Permission settings are not carried forward to the next stage.

To set permissions for a stage, select the **Permissions** tab in the **Lifecycle Process** window.

Overview	! Approvers always have read access. Owners always have read and write access.					
Stages	     					
Permissions	<input type="checkbox"/> Stage ▲	Approvers	Read	Read and Write	Ownership	Share Artifacts
	<input type="checkbox"/> Candidate	No approvers	No access	Catalog User	No change	No Sharing ▼
	<input type="checkbox"/> Implementation	No approvers	No access	Catalog User	No change	No Sharing ▼
	<input type="checkbox"/> Supported	No approvers	No access	Catalog User	No change	No Sharing ▼
	<input type="checkbox"/> Deprecated	No approvers	No access	Catalog User	No change	No Sharing ▼
	<input type="checkbox"/> Retired	No approvers	No access	Catalog User	No change	No Sharing ▼

Click the select box for any stage that requires a change in **Permissions** setting.

Add Approver

- Click **Add Approver** to open the Add Approver dialog box

Approvers can be assigned from either the Roles, Users or Groups lists

- Click **Select**

The Approver can be given passive approval with a set date if required

- Click **OK**

Read or Write Access can be assigned to individual Users, Roles or Groups by clicking on the Add Read Access or Add Write Access buttons or the corresponding value in the permissions matrix.

- The owner of the Stage can be assigned by clicking the **Set Owner** button or the **Ownership** value in the matrix.
- Artifacts can be shared by selecting a value from the **Share Artifacts** drop-down list.
- Permissions for a stage can be removed by clicking the **Clear** button
- Defined Stage Permissions can be copied to another stage by clicking the **Copy** button and selecting which stages and/or roles require the copies values.

How to Publish a Process

After creating a lifecycle process, the next step is to make it available for the governance of artifacts.

To publish a lifecycle process:

- From the Lifecycle Processes page, select the processes to be published by clicking on the check box next to the process name and click **Publish**.
- Processes can also be published from the Overview or Stages tab of a selected process.

- Processes can be deprecated by clicking the **Deprecate** button in either the processes page or the Overview or Stages tab of a selected process.

This lifecycle process is now available to be used in the governance of root and sub-artifacts.

How to Export Lifecycle Processes

Any Lifecycle Process can be exported from either the Overview or Stages tab.

1. Click **Export** from the right menu.
2. Provide a name for the exported file and click **Export** in the dialog window.
3. Either open or provide a location for the exported file.

Lifecycle Best Practice

The following list enumerates the lifecycle basic best practice:

- Govern all artifacts.

HPE recommends governing artifacts whenever possible. We are aware that in some situations (such as for system artifacts) there may be additional overhead, but the benefits gained are worth it. For example, versioning works properly only for governed artifacts.
- Assign lifecycle processes automatically.

HPE recommends marking lifecycle processes as automatically assignable. In our opinion, common users should not select a lifecycle process for their artifact(s). Instead, the Administrator should create an appropriate lifecycle process that is assigned to the artifact automatically after artifact creation.

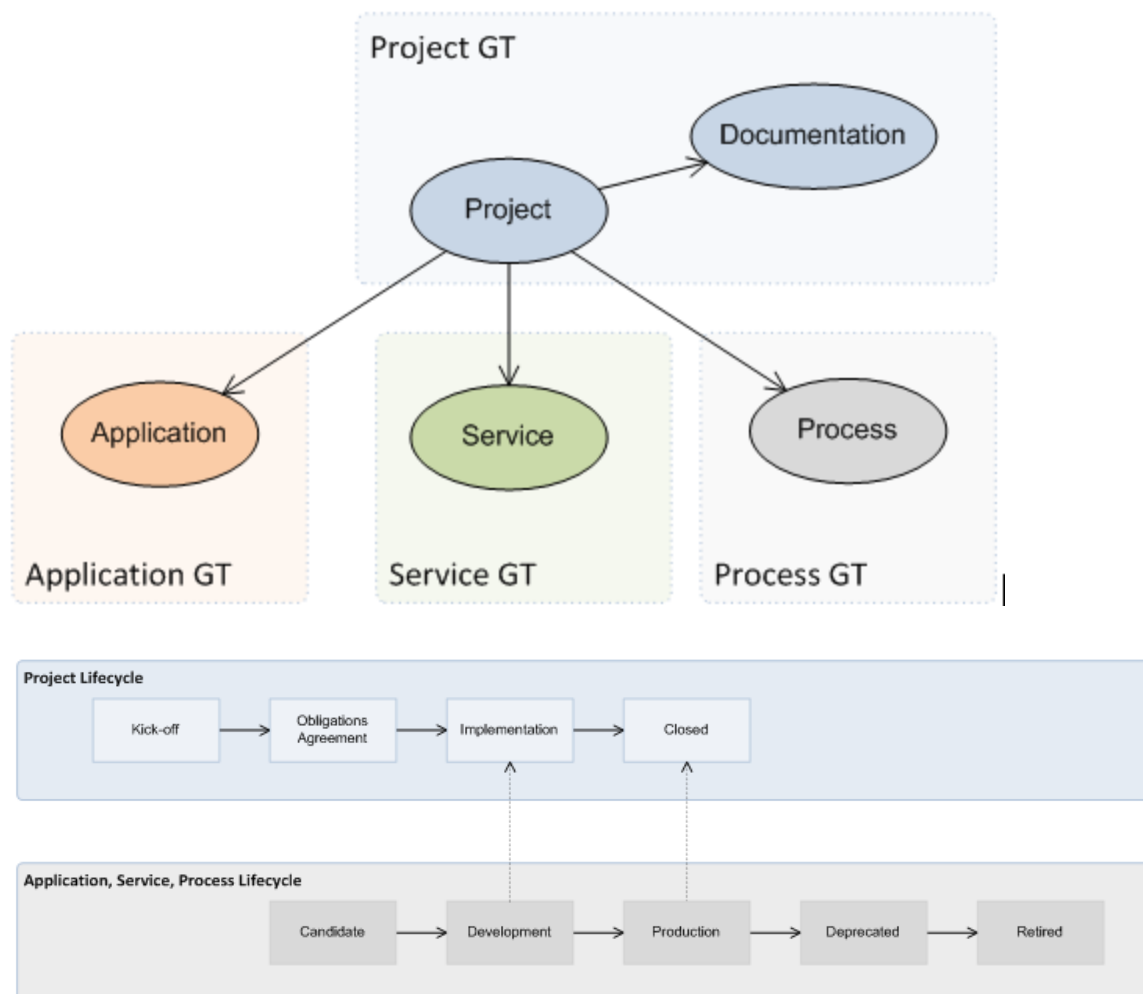
Action Set Lifecycle Process / Stage provides users with the possibility to set any process to the artifact. Administrators can even set a specific stage and mark it as approved. This action is intended mainly for administrators who import data to the repository. If the data is suitable, Administrators can use this action to set for example, Production stage.
- Separate lifecycle processes.

HPE recommends separating lifecycle processes and defining different lifecycle process for different artifact types. These processes can be connected together via policies but it is crucial to not govern all artifacts in one process.

As an example, you can review the default lifecycle processes include in this topic. There is a special lifecycle process for Project artifacts containing only Project artifacts and their documents. And similarly there are separated lifecycle processes for Applications, Services, and Processes.

As mentioned, processes are separated but they can be tied together. For example it is possible to define the following rules.

- A Project can be approved at the Implementation stage only if all project artifacts (Applications, Services or Processes) are approved at the Development stage. Similarly, a Project can be approved at the Closed stage only if all underlying artifacts (such as applications, services and processes) are approved at the Production stage.

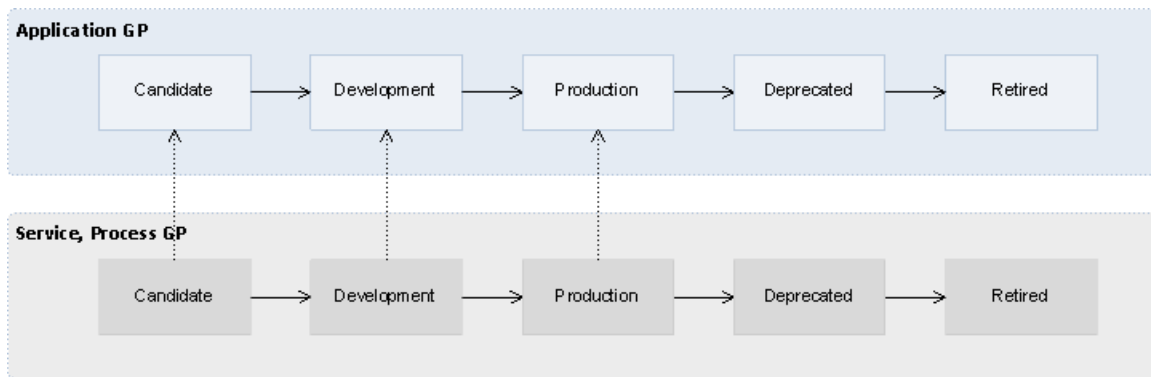


Application Lifecycle

Applications represent business functionality in the real world. Applications can consist of multiple components (services and business processes) but these do not form part of the application lifecycle tree.

Application Lifecycle Tree:

- Application
 - Documentation
 - SLO



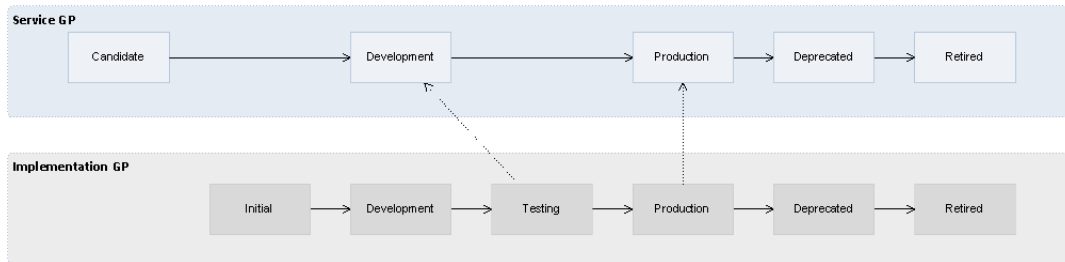
The Application Lifecycle Process depends on the lifecycle processes of its component artifacts. For example, the Production stage of an application cannot be approved until all its component artifacts are approved in the Production stage.

Service Lifecycle

Services represent business functionality (or concepts) in the real world. Services consist of sub-services and implementations but these do not form part of the lifecycle tree.

Service Lifecycle Tree:

- Service
 - Documentation
 - SLO



The Service Lifecycle Process depends on the lifecycle processes of its constituent artifacts. For example, the Development stage of a service cannot be approved until all its sub-services are approved in the Development stage and at least one of its implementations is approved in the Testing stage.

Service Implementation Lifecycle

In the real world an implementation represents a specific service version being implemented, in the repository it represents a package with the service executables which can be later deployed to multiple environments.

Service Lifecycle Tree:

- Implementation
 - Operation
 - Endpoint
 - Interface (WSDL)
 - Schema (XSD)
 - Documentation
 - SLO

Each implementation represents one service and the Service Lifecycle Process depends on the Implementation Lifecycle Process. For details, see ["Service Lifecycle" on the previous page](#)

Project Lifecycle

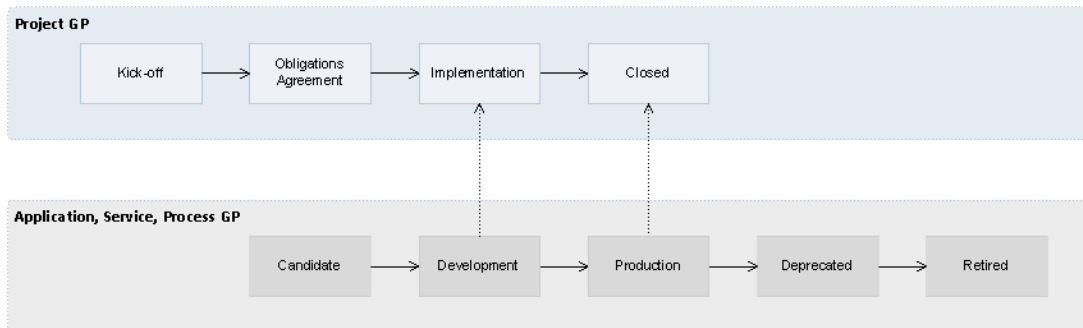
Projects represent any progressive activity (such as service development). Projects can be composed of services, applications, business processes, and other artifacts. In this release, the goal of a project

is to successfully deploy its constituent artifacts to a production environment.

Project Lifecycle Tree:

- Project
 - Documentation

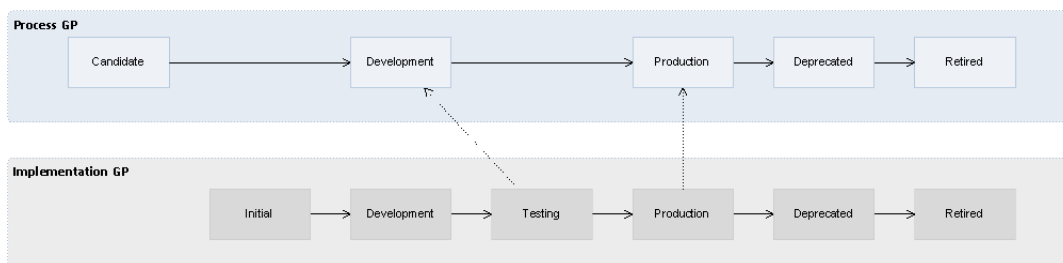
Promotion is automatic after the approval of each stage as per the following image:



The Project Lifecycle Process depends on the lifecycle processes of its constituent artifacts (applications, services, and business processes). For example, the Closed stage of a project cannot be approved until all its constituent artifacts are approved in the Production stage.

Process Lifecycle

The Process lifecycle is similar to the Service Lifecycle. Some of the tasks and policies vary, but the stages and dependency on the process implementation lifecycle is the same as that between a service and its implementation.



Process Implementation Lifecycle

The lifecycle process for business process implementations is similar to that for service

implementations. Some tasks and policies vary, but the stages and relationships to the process lifecycle are the same.

Chapter 8: Administration Task Management

HPE EM includes a number of default administration tasks to help administrators to manage their deployment and the data it contains. In addition, the administrator can configure additional tasks to perform change management or custom tasks included in an extension.

In the Administration menu, click **Tasks** to open the Tasks page.

Tasks	
Icon View	
Table View	
Scheduled	
Today	
Data File Cleaner Task Next Run: 6:00 PM Recurrence: Daily Run Edit Schedule	Recycle Bin Cleaner Task Next Run: 5:30 PM Recurrence: Daily Run Edit Schedule
Report Cleanup Task Next Run: 6:30 PM Recurrence: Daily Run Edit Schedule	Lifecycle Passive Approval Task Next Run: 8:00 PM Recurrence: Daily Run Edit Schedule
Change Stages based on Plateaus Task Next Run: 9:00 PM Recurrence: Daily Run Edit Schedule	Shortcuts Consolidating Task Next Run: 4:00 PM Recurrence: Daily Run Edit Schedule
Application Cost Diagnostic Task Next Run: 11:30 PM Recurrence: Daily Run Edit Schedule	
This Week	
Lifecycle Validation Task Next Run: Mar 31 Recurrence: Daily Run Edit Schedule	Policy Report Validation Task Next Run: Mar 31 Recurrence: Daily Run Edit Schedule
Activity Report Update Task Next Run: Mar 31 Recurrence: Daily Run Edit Schedule	Send Delayed Notifications Task Next Run: Mar 31 Recurrence: Daily Run Edit Schedule
No Schedule	
Deployment Specification Association Update Task Next Run: None Run Schedule	Repository Data Diagnostic Task Next Run: None Run Schedule
Import from "Cloud PPM" Next Run: None Run Schedule	Import from "Cloud uCMDB 9.03" Next Run: None Run Schedule

The initial view of the Administrator Task page provides a simplified grid interface to deal with the administration of Daily, Weekly, and unscheduled tasks. Any running tasks are also visible with options to either stop them independently or to stop all running tasks. The administrator can execute tasks immediately or schedule them to run on a periodic basis. For details, see ["How to Run Tasks" below](#) and ["How to Schedule Tasks" on the next page](#).

In addition to the default tasks, the administrator can add change management tasks and custom tasks. For details, see ["How to Add Change Management Tasks" on page 76](#) and ["How to Add Custom Tasks" on page 76](#).

How to Run Tasks

You may want to immediately execute a task. If you have sufficient permissions, there is a **Run** option in the initial Tasks overview as well as in the detail view of the task.

To Manually Execute Tasks:

Click **Run** in either the Task overview or in the Task detail page.

How to Schedule Tasks

HPE EM enables you to execute tasks on a timed or periodic basis.

Caution: HPE EM converts and stores any input time to GMT. If you import scheduled tasks from a data image, review the scheduling to ensure that the tasks execute at the local time that you require.

To Schedule Tasks:

1. Do the following:
 - In the task window or detail view of the task click **Edit Schedule** to open the Edit Schedule dialog.

Edit Schedule

Start: ☐ Immediately ☒ On: Mar 30, 2016 [Calendar Icon] 6:00 PM [Clock Icon]

Recurrence: Daily [Dropdown Arrow]

End: ☒ Indefinitely ☐ On: [Date Field] [Calendar Icon] 1:00 PM [Clock Icon]

☐ [Text Field] times

Advanced Options

OK Cancel

- Select a start date and time for the task
- Set the frequency at which the task will run
- Either set the task to run Indefinitely, set a finish date and time or enter a value representing the number of times the task must run

- Advanced Options allow you to select whether the schedule should be followed during downtime or to wait until HPE EM start running.
- Click **OK** to set the schedule for the task

How to Add Change Management Tasks

Sync Tasks enable the administrator to synchronize artifacts in the repository with those imported from an external source

To Create Sync Tasks:

1. Click **Add Data Synchronization Task** to open the dialog.
2. Add a name and optional description for the task.
3. Artifacts can be selected through using either standard search methods or they can be selected from a filtered list.

Click **Save** .
4. Clicking **Edit Schedule** will allow you to set a schedule for the running of the new task or the task can be run immediately by clicking **Run**.
5. The task may be edited by clicking on **Edit**.

How to Add Custom Tasks

If HPE EM includes an extension which contains custom task implementations, you can add and schedule them in the Tasks page.

To Create Custom Tasks:

1. Click **Add Javascript Task** to open the dialog.
2. Select a Task Implementation and add a name for the task.

Task parameters and variables are defined according to how the task component was composed.
3. Click **Save**.
4. Clicking **Edit Schedule** will allow you to set a schedule for the running of the new task or the task

can be run immediately by clicking **Run**.

5. The task may be edited by clicking on **Edit**.

Default Tasks

HPE EM provides the following default administration tasks:

- **Activity Report Update**

Updates the artifact activity data used to generate the Activity Report shown in the Reports tab Homepage.

- **Deployment Specification Association Update**

Links Deployment Specifications with Application Components and System Software sharing the same name. If the deployment specification name contains version numbers inside the parentheses, the task uses this version to match with that of application components and system software.

- **Lifecycle Passive Approval**

Approves Lifecycle stages that have been set to automatic approval after a set number of days.

- **Lifecycle Validation**

Performs a validation of all artifacts in governance against the policies that apply to their current lifecycle stage.

- **Policy Report Validation**

Performs an update of any policy reports.

- **Recycle Bin Cleaner**

Permanently removes deleted artifacts from the recycle bin as the defined schedule.

- **Report Cleanup**

Removes old reports and events based on their age against properties set in the Configuration page Report Cleanup tab. For details, see ["Configuration Management" on page 79](#).

- **Data File Cleaner**

Removes deleted artifacts in recycle bin based on their age against property `platform.recycleBin.timeout` set in the Configuration page System Properties tab. For details, see ["System Configuration Properties" on page 86](#).

- **Shortcuts Consolidating**

Consolidates all shortcut instances available in the server.

- **Send Delayed Notifications**

Sends all expired delayed notifications.

- **Application Cost Diagnostic**

Calculates minimum estimated HW costs, current hardware cost estimate and recommended data center for all application components.

Chapter 9: Configuration Management

HPE EM provides a customizable configuration that enables the administrator to control nearly every aspect of the behavior of HPE EM.

The Administrator can modify most parts of the configuration of HPE EM from the Administration tab.

In the Administration menu, select **Configuration > Setting** to open the Configuration page.

The Configuration page is split into the following tabs:

- **Basic Settings**

Settings that affect the operation of HPE EM repository. For more details, see ["How to Manage Basic Settings" on the next page](#).

- **System Properties**

The detail level settings of the configuration. The administrator can use this tab to modify individual settings at a global, or domain level. This tab also enables the export and import of the configuration as a whole. For details, see ["How to Manage System Properties" on page 83](#).

- **License**

A summary page detailing the terms of the current license with an option to enter a new license key and manage licensed users. For more details, see "License Management" in the *Installation and Configuration Guide*.

- **Self-Test**

Details the status of HPE EM with an option to disable self-test. For more details, see ["Self-Test" on page 81](#).

- **Report Cleanup**

Set the maximum age of reports and events to be retained when the Report Cleaner Task executes. You can set a different age by report and event type. You can also use the following system properties to filter the processing of the Report Cleaner Task:

- `platform.reportCleanerDao.batchNum` - Sets the number of reports to be cleaned in a database transaction. The default value is 20.
- `platform.reportCleanerDao.interval` - Sets the interval (in millisecond) that the Report Cleaner Task will sleep after a database transaction is committed. The default value is 10000.

Manage the execution and scheduling of the Report Cleaner Task using the Tasks page. For details, see ["Administration Task Management" on page 74](#).

How to Manage Basic Settings

HPE EM enables the administrator to control some basic aspects of the configuration from the Administration tab.

To Configure Basic Settings:

1. In the Administration menu, select **Configuration > Settings** to open the Basic Settings tab.
2. In the Basic Settings tab, set any of the following options:

- **Send automatic email notification**

Select the check box for the system to send automatic notifications to artifact owners for administrative tasks such as bulk updates, data import etc.

- **Currency Symbol**

Set the currency symbol when showing the amount.

- **Full Text Search**

Select this option to enable full text search in the HPE EM UI.

Note: Full-text search must also be enabled on the database as described in the following sections of the *Installation and Configuration Guide* under *Configuring HPE EM*:

- Enable Full-Text Search in MSSQL
- Enable Full-Text Search in Oracle

At present, HPE Enterprise Maps does not support full-text search on PostgreSQL.

By default, HPE EM appends a % to search terms. To disable this functionality after installation, set the configuration property `shared.db.fulltextsearch.appendpercentage` to `FALSE`. For details, see ["How to Manage System Properties" on page 83](#).

- **SSL Customization**

Select the authentication method to apply to SSL certificates.

Certificate Trust and Customization Categories

Certificate Trust	Customization
Java/JSSE default key/trust stores...	default
Server certificates are always trusted...	skipped
Database key/trust stores...	database
Composition of database and default...	composite

3. Click **Save** to make your changes or **Reset to Defaults** to restore these settings to their defaults.

Self-Test

HPE EM includes a Self-Test application that runs a series of checks on the installation and configuration.

The administrator can access the Self-Test from the Administration tab. In the Administration menu, select **Configuration** to open the Configuration page, and then select the **Self-Test** tab.

Use the **Disable** / **Enable** button to turn Self-Test off and on. The Self-Test tab displays a summary followed by details of the self-test checks as in the below image. A text only output is available on the server at `EM_HOME/log/em_self_test.log`. An HTML output is available at **`http://hostname:port/context/self-test`**.

Caution: For security reasons, HPE recommends turning off the self-test output after deployment of HPE EM passes the self-test.

Note: TestAccess to Self-Test is enabled. The report is accessible by visiting this page or at <http://hpswvm233071.hpswlab.s.adapps.hp.com:8080/em/self-test>

Disable

HPE Enterprise Maps checks (2 problems found)

- Product configuration checks (OK)
- Product runtime checks (OK)
- Application server checks (OK)
- JNDI checks (OK)
- Datasource checks (1 problem found)
- JMS checks (OK)
- LDAP checks (OK)
- Performance checks (1 problem found)

Group : HPE Enterprise Maps checks

Group : Product configuration checks

Product Configuration Checker : Reading product configuration from database

Product Configuration Checker : Product configuration read: [\[see more\]](#)

Product Configuration Checker : This check took 15ms.

Product Endpoint Properties Checker (shared) : Checking 'shared' endpoint properties

Product Endpoint Properties Checker (shared) : Base URL is <http://hpswvm233071.hpswlab.s.adapps.hp.com:8080/em>

Product Endpoint Properties Checker (shared) : Secure base URL is not used

Database Indexing

Database indexing is Enterprise Maps in-memory indexing for smooth performance of queries. Administrators can turn on/off database indexing or run a full rescanning. Click **Administration tab > Configuration > Database Indexing** menu.

- **Update Index on Every Update** (default: On)

Upon every change in artifact properties or relationships, the index of this artifact gets updated immediately. For better data consistency, it is recommended to keep it on.

- **Automatic Regular Index Rebuilding** (default: Off)

When turned on, all indexes are rebuilt every 10 minutes. For better performance, it is recommended to turn it off.

- **Rescan**

In case of data inconsistency (for example: if a path shortcut is not resolved), administrators can click **Rescan** to force rebuilding of all indexes.

After a repository archive is imported, a full rescan is triggered automatically to update indexes of imported artifacts.

How to Manage the System Configuration

HPE EM stores system settings in a configuration file in the installation folder. The Administrator can view and edit these settings directly in the Administration tab.

In the Administration menu, click **Configuration > Setting** to open the Configuration page, and select the **System Properties** tab to view the current system configuration.

The Configuration page System Properties tab provides functionality described in the following topics:

- ["How to Manage System Properties" below](#)
- ["How to Export and Import System Properties" on page 85](#)
- ["System Configuration Properties" on page 86](#) provides a reference to configuration properties available in the System Settings tab.

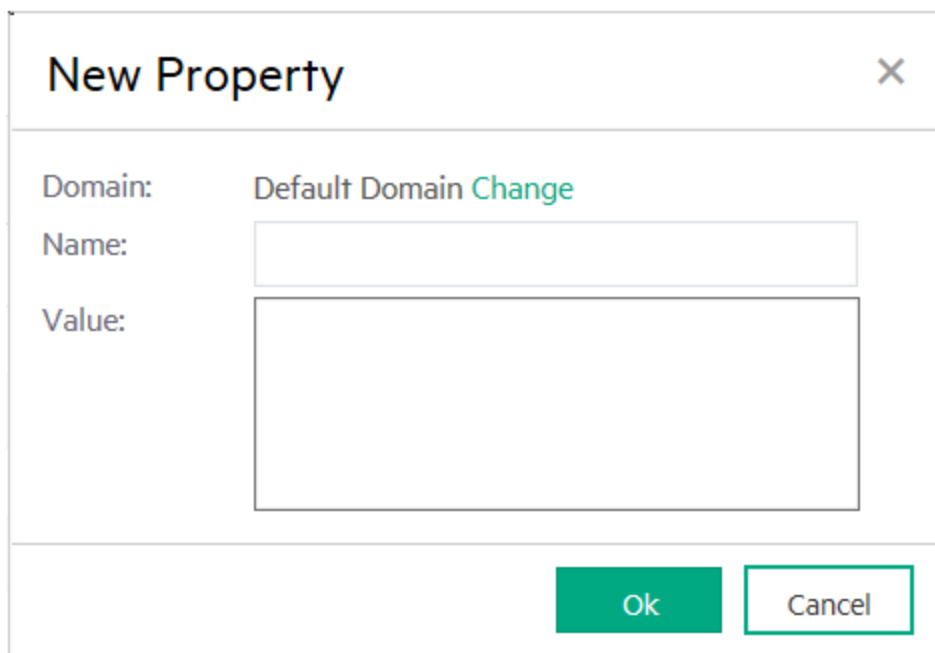
How to Manage System Properties

In the Configuration page System Properties tab, the administrator can add, edit, and remove system properties.

System properties can apply globally, or within a specific domain. If a domain setting exists, it takes precedence over global setting.

To Add System Properties:

1. In the Configuration page System Properties tab, click **New Property** icon to open the New Property dialog box.
2. *Optional:* Click **Change** to alter the domain that the setting applies to.



The image shows a 'New Property' dialog box. It has a title bar with the text 'New Property' and a close button (X). The main area contains three labels: 'Domain:', 'Name:', and 'Value:'. The 'Domain:' label is followed by the text 'Default Domain Change'. The 'Name:' label is followed by a text input field. The 'Value:' label is followed by a larger text area. At the bottom right, there are two buttons: 'Ok' and 'Cancel'.

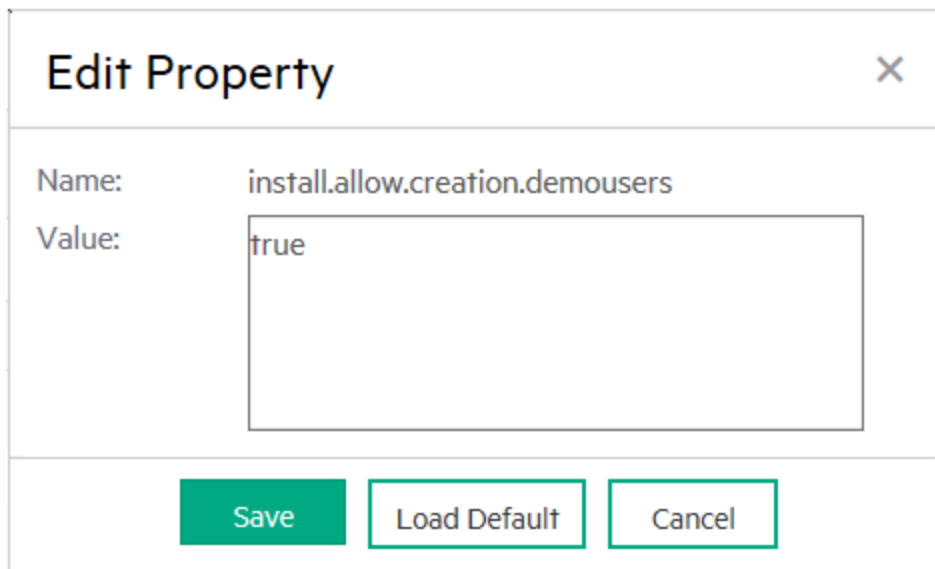
3. Set a name and value for the property, and click **Ok** to add the property to the system properties for the selected domain.

To Add System Properties from a File:

1. In the System Properties tab, click **Add File Property** to open the Add File Property dialog box.
2. *Optional:* Click **Change** to alter the domain that the setting applies to.
3. Set a name for the property, browse for the file on your local filesystem, and click **Ok** to add the property to the system properties for the selected domain.

To Edit System Properties:

1. In the System Properties tab, use the Name filter to locate the setting you want to edit.
2. Click **Edit** for the setting to open the Edit Property dialog box.

A dialog box titled "Edit Property" with a close button (X) in the top right corner. It contains two labels: "Name:" and "Value:". The "Name:" field is a text input containing "install.allow.creation.demousers". The "Value:" field is a text input containing "true". At the bottom of the dialog, there are three buttons: "Save" (green), "Load Default" (white with green border), and "Cancel" (white with green border).

Edit Property [X]

Name: install.allow.creation.demousers

Value: true

Save **Load Default** **Cancel**

3. Do one of the following:
 - Input a new value and click **Save** to set a new value.
 - Click **Load Default** to reset the value to its default installation value.

To Delete System Properties:

1. In the System Properties tab, select the properties you want to delete.
2. Click **Ok** to remove.

How to Export and Import System Properties

The administrator can export system settings to a ZIP file to preserve a particular configuration. Import enables a stored configuration to overwrite the current settings.

To Export System Settings:

1. In the Configuration page System Properties tab, select the properties to export, click the **Export** icon, and confirm your decision.
2. Click **Ok** and select a file location for the ZIP file.

To Import System Settings:

1. In the System Properties tab, click the **Import** icon to open the Import dialog box.
2. Browse and upload the file, and click **Ok**.

System Configuration Properties

This reference topic divides the configuration properties by module and specified their type into the following scenarios:

- **SC-I**: Runtime configurable properties that apply immediately.
- **SC-II**: Runtime configurable properties with additional steps required. After the change, the administrator should make some additional changes outside the application, for example, change the application server configuration.
- **SC-III**: Runtime configurable properties which require a restart of the application server.
- **SC-IV**: These properties can only be changed using the Setup Tool.

HTTP Client

Property Name	Description	Value Type	Default	Scenario
shared.http.client.proxy.enabled	Sets whether proxy is enabled.	Boolean	<i>false</i>	SC-I
shared.http.client.proxy.host	Proxy host.	Text	Not used. (<i>proxyhost</i>)	SC-I
shared.http.client.proxy.password	If is proxy secured, password of proxy user.	Text	Not used.	SC-I
shared.http.client.proxy.port	Proxy port.	Text	8080 - Not used.	SC-I
shared.http.client.proxy.nonproxyhosts	Sets all non proxy hosts.	Text	Not used. (<i>localhost, 127.0.0.1</i>)	SC-I
shared.http.client.proxy.user	If is proxy secured, user name of proxy	Text	Not used.	SC-I

HTTP Client, continued

Property Name	Description	Value Type	Default	Scenario
	user.			
shared.http.connections.per.host	Max count of connections per host.	Integer	30	SC-I
shared.http.total.connections	Max count of available connections by HTTPClient.	Integer	100	SC-I
shared.http.user.agent.identification	Identification of user agent header. Sets user agent header field for all calls which do not specify another one.	Text	<i>HTTPClient/?.</i>	SC-I

Integrations

Property Name	Description	Value Type	Default	Scenario
platform.integration.discovery.bac.mappingConfiguration9	Maps artifacts between Enterprise Maps and HPE Business Service Management 9.x.	XML file which contains mapping from Enterprise Maps artifacts to BSM entities.	XML file mapping from Enterprise Maps artifacts (SOAP Service, Business Service, Organization Unit) to BSM entities	SC-III

Integrations, continued

Property Name	Description	Value Type	Default	Scenario
			(webservice, business_service, organization).	
platform.sync.mapping.csa	Artifacts mapping between Enterprise Maps and HPE Cloud Service Automation.	XML file which contains mappings from CSA entities to Enterprise Maps artifacts.	Component types, Topology Designs.	SC-III
platform.sync.mapping.ppm	Artifacts mapping between Enterprise Maps and HPE Project and Portfolio Management.	XML file which contains mappings from PPM entities to Enterprise Maps artifacts.	Asset, Project, Process, Business Objective, Proposal, Location, Operating System, Server, Application.	SC-III
platform.sync.mapping.rdbms	Artifacts mapping between Enterprise Maps and Relational Database.	XML file which contains mappings	User and Group	SC-III

Integrations, continued

Property Name	Description	Value Type	Default	Scenario
		g from Enterprise Maps artifacts to Database query results.		
platform.sync.mapping.sparxEa	Artifacts mapping between Enterprise Maps and Sparx System EA.	XML file which contains mapping from Enterprise Maps artifacts to EA elements.	Archimate® 2 elements excluding System Software and Node.	SC-III
platform.sync.mapping.sparxEa.all	Artifacts mapping between Enterprise Maps and Sparx System EA.	XML file which contains mapping from Enterprise Maps artifacts to EA elements.	Archimate® 2 elements	SC-III
platform.sync.mapping.ucmdb	Artifacts mapping between Enterprise	XML file which contain	Business Service, Business Process,	SC-III

Integrations, continued

Property Name	Description	Value Type	Default	Scenario
	Maps and HPE Universal Configuration Management Database.	s mapping from UCMD B entities to Enterprise Maps artifacts.	Business Application, Web Service, Organization, Person, Location, Running Software, Node.	

Lifecycle

Property Name	Description	Value Type	Default	Scenario
platform.lifecycle.notify.approvers	Sets whether the approvers are automatically notified by e-mail containing approval request.	Boolean	true	SC-I
platform.lifecycle.notify	Turns off lifecycle notifications when set to false.	Boolean	true	SC-I
platform.lifecycle.requestApproval.automatic	Turns off automatic request for approval when set to false.	Boolean	true	SC-I
platform.lifecycle.stageAttributes	Configuration setting (e.g. color, background)	XML file	Predefined XML file	SC-I

Lifecycle, continued

Property Name	Description	Value Type	Default	Scenario
	color of predefined lifecycle stages).			

Publishing

Property Name	Description	Value Type	Default	Scenario
platform.publishing.duplicates.limit	Max count of duplicities returned by duplicate finder in publisher.	Integer	5	SC-I
platform.publishing.http.connection.manager.timeout	HTTP connection manager timeout.	Integer	3000	SC-I
platform.publishing.http.socket.timeout	Socket timeout.	Integer	3000	SC-I
platform.publishing.limit.concurrent.uploads.user	Maximum count of concurrent uploads by a single user.	Integer	3	SC-I
platform.publishing.limit.concurrent.uploads.total	Maximum count of concurrent uploads by all users.	Integer	6	SC-I
platform.publishing.limit.max.archive.bytes	Maximum size of an archive file (such	Integer	10000000 (10 MB)	SC-I

Publishing, continued

	as zip, jar, ear) in bytes for publishing.			
platform.publishing.limit.max.archive.files	Maximum number of files in an archive file for publishing.	Integer	10000	SC-I
platform.publishing.limit.max.files	Maximum number of files allowed to be imported at a time (applicable to Import CSV only).	Integer	50	SC-I
platform.publishing.limit.max.file.bytes	Maximum size of a file (such as wsdl, docx, xlsx, csv) in bytes for import.	Integer	2000000 bytes (2 MB)	SC-I
platform.publishing.memory.limit.all	Max possible amount of usable memory.	Integer	2097152	SC-I
platform.publishing.memory.limit.single	Max possible amount memory used by single consume	Integer	65536	SC-I

Publishing, continued

	r.			
platform.publishing.ui.enforcedCollections	By default, if publishing fails for a data resource, HPE EM publishes it as documentation. Use this property to prevent this default functionality for specified artifact types.	List of collections to enforce during publishing.	<i>documentation</i>	SC-I
platform.publishing.ui.zipArchiveExtensions	A list of archive types that HPE EM extracts during publishing.	Comma-separated list of archive extension types that must conform to the ZIP format.	<i>zip,jar,ear,war,bpr</i>	SC-I
platform.ui.upload.allowed.extensions	List of extensions allowed for upload.	Comma-separated list of	<i>txt,html,htm,xml,csv,doc,docx,odt,ppt,pps,pptx,odp,</i>	SC-I

Publishing, continued

		allowed extensions	<i>xslx,xsl,ods,odg,odf,odp, pdf,svg,jpg,jpeg,png,gif,ico, xslt,dtd,xsd,wsdl,xpdl,bpel, composite,sca,zip,jar,rar ,tar,gzip,gz.</i>	
platform.ui.upload.allowed.extensions.enabled	Set whether to enable upload prevention for malicious files.	Boolean	True	SC-I
platform.webui.max.upload.size	Maximum size of a file in bytes for upload. If set to unlimited, the specific limits for different file types are used.	Integer	-1 (Unlimited)	SC-I

Security

Property Name	Description	Value Type	Default	Scenario
platform.exception.stacktrace.show	Enables or disables the stack trace in UI.	Boolean	FALSE (Production Mode) TRUE (Development Mode)	SC-I
platform.security.lockout.count.aboutWarn	Number of remaining	Integer	3	SC-I

Security, continued

Property Name	Description	Value Type	Default	Scenario
	logins that triggers a warning. For example: count is set to 5, aboutWarn is 3. After two failed login attempts, user will see a warning about only 3 attempts remaining before the account gets locked.			
platform.security.lockout.enabled	enable/disable lockout feature.	Boolean	True	SC-I
platform.security.lockout.failed.count	Number of failed logins under the same user ID to trigger lockout this account. If this number ≤ 0 , then lockout mechanism is disabled.	Integer	5	SC-I
platform.security.lockout.release.minutes	Number of minutes to release the account from lockout.	Integer	15	SC-I
platform.security.lockout.reset.seconds	Number of seconds between this failed login	Integer	60	SC-I

Security, continued

Property Name	Description	Value Type	Default	Scenario
	<p>and the previous one to help lockout counter to:</p> <ul style="list-style-type: none"> Count this failed login into counter if it is \leq this value Reset lockout counter, if it is $>$ this value 			
<code>shared.dql.security.allowNative</code>	Determines whether NATIVE clauses are allowed in DQL queries.	TRUE or FALSE	FALSE	SC-III
<code>shared.dql.security.allowNoAcl</code>	Determines whether no_acl modifier is allowed in DQL queries.	TRUE or FALSE	FALSE	SC-III
<code>shared.siteminder.enabled</code>	Turns on CA Single Sign On(HTTP Header) authentication.	Boolean	<i>false</i>	SC-IV
<code>shared.siteminder.groupsHeaderDelimiter</code>	Delimiter for found groups.	Text	<code>^</code>	SC-I
<code>shared.siteminder.groupsHeaderName</code>	Name of groups header or cookies used in case	Text	<i>sm-role</i>	SC-I

Security, continued

Property Name	Description	Value Type	Default	Scenario
	useCookies equal to true.			
shared.siteminder.importGroups	Sets whether import also groups to security context.	Boolean	false	SC-I
shared.siteminder.loginNameField	Sets name of login name header/cookie.	Text	sm-userdn	SC-I
shared.siteminder.requireAuthentication	Require authentication by CA Single Sign On, it fails when no user is received from CA Single Sign On.	Boolean	false	SC-I
shared.siteminder.useCookie	Sets whether use cookie to pass the login name.	Boolean	false	SC-I
shared.siteminder.useHeader	Sets whether use HTTP Header to pass the login name.	Boolean	true	SC-I

Uncategorized

Property Name	Description	Value Type	Default	Scenario
platform.catalog.defaultUiAdapter.assignRole	This domain ID is the default domain for the logged in user if there is none other.	Text	CatalogUser	SC-I

Uncategorized, continued

platform.catalog.defaultUiAdapter.defaultDomain	This domain ID is the default domain for the logged in user if there is none other.	Text	defaultDomain	SC-I
platform.ui.download.ftpUrl	FTP server to download shared content in EM.	Text	<i>ftp://em:D9go!LR8@ftp.ext.hpe.com</i>	SC-I
platform.ui.download.server.profile.pricing	Specific location for storing list of cloud pricing. It is used in combination with <i>platform.ui.download.ftpUrl</i> to create the full path i.e. <i>[platform.ui.download.ftpUrl]/[EM current version]/[platform.ui.download.server.profile.pricing]</i> .	Text	data/pricing.xlsx	SC-I
platform.ui.relationship.artifact.max	Number of related artifacts directly visible.	Integer	4	SC-I
platform.ui.recentDocuments.maxcount	Number of recent documents directly visible.	Integer	10	SC-III
platform.ui.userevent.notificationsEnabled	Enables event checker to check new events for Artifact Changes, Task Reports, Lifecycle or Contracts.	Boolean	FALSE	SC-II
shared.db.fulltextsearch.appendpercentage	Determines whether a % is appended to search terms.	TRUE or FALSE	TRUE	SC-III
shared.db.fulltextsearch.prefixpercentage	Determines whether a % is added in front of search terms.	TRUE or FALSE	FALSE	SC-III
shared.ui.artifact-icons	Prefix of artifact icons configuration.	Prefix of artifact	Without default value.	SC-I

Uncategorized, continued

		tics config uratio n.		
<code>platform.ui.preferences.newButtonEnable</code>	Enables creation of new data artifacts without requiring to upload associated data content.	Boolean	TRUE	SC-I
<code>platform.ui.preferences.enableAutoNamingFinancialProfile</code>	Enables automatic naming of a financial profile artifact when created on the Financial Profile tab of an Application Component or Project artifact.	Boolean	TRUE	SC-I

Usage Statistics

Property Name	Description	Value Type	Default	Scenario
<code>platform.usage.stats.excluded.artifact.types</code>	List of artifact types which are excluded from Activity Report (usage stats) computation.	Comma-separated list of artifact types.	<i>reportArtifact,taskArtifact</i>	SC-I

User Management

Property Name	Description	Value Type	Default	Scenario
<code>shared.um.account.backend.className</code>	Group backend class name.	Text representation of whole class name.	Inserted in installation process.	SC-IV
<code>shared.um.account.backend.enableMoreBackends</code>	By group backend	Boolean	<i>true</i>	SC-IV

User Management, continued

	allows more backends.			
<code>shared.um.account.backend.type</code>	Type of group backend.	Text value. One of [ldap, database, external]	Inserted in installation process.	SC-IV
<code>shared.um.account.caseInsensitiveLoginName</code>	Sets whether login may be name case insensitive.	Boolean	<i>true</i>	SC-I
<code>shared.um.account.domain.enabled.dn</code>	Distinguished Name of enabled domain.	Text representation DN of enabled domain.	Not set.	SC-I
<code>shared.um.account.domain.enabled.name</code>	Name of enabled domain.	Text representation name of enabled domain.	Not set.	SC-I
<code>shared.um.account.domain.disabled.dn</code>	Distinguished Name of disabled domain.	Text representation DN of disabled domain.	Not set.	SC-I
<code>shared.um.account.domain.disabled.name</code>	Name of disabled domain.	Text representation name of disabled domain.	Not set.	SC-I
<code>shared.um.account.ldapAddress</code>	LDAP property name for address.	Text	Inserted in installation process.	SC-II
<code>shared.um.account.ldapAlternatePhone</code>	LDAP property name for alternate	Text	Inserted in installation process.	SC-II

User Management, continued

	phone.			
shared.um.account.ldapBlocked	LDAP property name for index of blocking.	Text	Inserted in installation process.	SC-II
shared.um.account.ldapBusinessName	LDAP property name for business name.	Text	Inserted in installation process.	SC-II
shared.um.account.ldapCity	LDAP property name for city.	Text	Inserted in installation process.	SC-II
shared.um.account.ldapCountry	LDAP property name for country.	Text	Inserted in installation process.	SC-II
shared.um.account.ldapDescription	LDAP property name for account description.	Text	Inserted in installation process. (<i>description</i>)	SC-II
shared.um.account.ldapEmail	LDAP property name for email.	Text	Inserted in installation process. (<i>mail</i>)	SC-II
shared.um.account.ldapFullName	LDAP property name for full name.	Text	Inserted in installation process. (<i>cn</i>)	SC-II
shared.um.account.ldapLanguageCode	LDAP property name for language code.	Text	Inserted in installation process.	SC-II
shared.um.account.ldapLoginName	LDAP property	Text	Inserted in installation process. (<i>uid</i>)	SC-II

User Management, continued

	name for login name.			
<code>shared.um.account.ldapPhone</code>	LDAP property name for phone.	Text	Inserted in installation process.	SC-II
<code>shared.um.account.ldapZip</code>	LDAP property name for zip code.	Text	Inserted in installation process.	SC-II
<code>shared.um.group.backend.enableMoreBackends</code>	By account backend allows more backends.	Boolean	<i>true</i>	SC-IV
<code>shared.um.group.backend.className</code>	Account backend class name.	Text representation of whole class name.	Inserted in installation process.	SC-IV
<code>shared.um.group.backend.type</code>	Type of account backend.	Text value. One of [ldap, database, external]	Inserted in installation process.	SC-IV
<code>shared.um.group.ldapDescription</code>	LDAP property name for group description.	Text	Inserted in installation process. (<i>description</i>)	SC-II
<code>shared.um.group.ldapMember</code>	LDAP property name for group member.	Text	Inserted in installation process. (<i>uniqueMember</i>)	SC-II
<code>shared.um.group.ldapName</code>	LDAP property name for group name.	Text	Inserted in installation process. (<i>cn</i>)	SC-II

User Management, continued

<code>shared.um.group.ldapOwner</code>	LDAP property name for group owner.	Text	Inserted in installation process. (<i>owner</i>)	SC-II
<code>shared.um.java.naming.factory.initial</code>	LDAP factory.	Full LDAP factory class name.	Inserted in installation process. (<i>com.sun.jndi.ldap.LdapCtxFactory</i>)	SC-IV
<code>shared.um.java.naming.provider.url</code>	LDAP url.	URL.	Inserted in installation process. (<i>ldap://ldap.example.com:389</i>)	SC-IV
<code>shared.um.java.naming.security.authentication</code>	LDAP authentication type. [none, simple, sasl_mech] where sasl_mech is a space-separated list of SASL mechanism names.	Text	Inserted in installation process.	SC-IV
<code>shared.um.java.naming.security.credentials</code>	LDAP credentials.	Text	Inserted in installation process.	SC-IV
<code>shared.um.java.naming.security.principal</code>	LDAP principal.	Text	Inserted in installation process.	SC-IV
<code>shared.um.ldap.connect.pool</code>	Enabling connection pooling.	Boolean	<i>false</i>	SC-I
<code>shared.um.ldap.connect.pool.authentication</code>	Connection	Text	Not used.	SC-I

User Management, continued

	pooling authentication value.			
shared.um.ldap.connect.pool.debug	Connection pooling debug switch.	Boolean	Not used. (<i>false</i>)	SC-I
shared.um.ldap.connect.pool.initsize	Connection pooling initial size.	Integer	Not used. (<i>1</i>)	SC-I
shared.um.ldap.connect.pool.maxsize	Connection pooling max size.	Integer	Not used. (<i>no max size</i>)	SC-I
shared.um.ldap.connect.pool.protocol	Connection pooling protocol.	Text	Not used. (<i>plain</i>)	SC-I
shared.um.ldap.connect.pool.timeout	Connection pooling connection timeout.	Integer	Not used. (<i>no timeout</i>)	SC-I
shared.um.ldap.connect.timeout	Timeout for connection to LDAP.	Integer	<i>0</i>	SC-I
shared.um.uddi.ldap.allowBlankPassword	LDAP sign for allowing blank password.	Boolean	Inserted in installation process. (<i>false</i>)	SC-IV
shared.um.uddi.ldap.searchbase.group	LDAP search	Text	Inserted in installation process.	SC-IV

User Management, continued

	base for group.		<i>(ou=groups,ou=big,dc=example,dc=com)</i>	
<code>shared.um.uddi.ldap.searchbase.user</code>	LDAP search base for user.	Text	Inserted in installation process. <i>(ou=people,ou=big,dc=example,dc=com)</i>	SC-IV
<code>shared.um.uddi.ldap.searchfilter.group</code>	LDAP search filter for group.	Text	Inserted in installation process. (<i>objectClass=groupofuniquenames</i>)	SC-IV
<code>shared.um.uddi.ldap.searchfilter.user</code>	LDAP search filter for user.	Text	Inserted in installation process. (<i>objectClass=person</i>)	SC-IV
<code>shared.um.uddi.ldap.searchMaxResults.group</code>	LDAP search max results for user.	Integer	Inserted in installation process. (<i>10000</i>)	SC-IV
<code>shared.um.uddi.ldap.searchMaxResults.user</code>	LDAP search max results for user.	Integer	Inserted in installation process. (<i>10000</i>)	SC-IV
<code>shared.um.uddi.ldap.searchscope.group</code>	These property sets search scope for users and group entries within an LDAP : 0 = object scope (useless in this case), 1 = one level (flat)	Integer	Inserted in installation process. (<i>2</i>)	SC-IV

User Management, continued

	scope, 2 = subtree scope.			
shared.um.uddi.ldap.searchscope.user	These property sets search scope for users and group entries within an LDAP : 0 = object scope (useless in this case), 1 = one level (flat) scope, 2 = subtree scope.	Integer	Inserted in installation process. (2)	SC-IV
shared.um.scenarios.type	Type of scenario for communication with LDAP server.	One of single.ldap.[single or multiple].searchbase, , multiple.ldap.[single or multiple].searchbase values.	<i>single.ldap.single.searchbase</i>	SC-I

Versioning

Property Name	Description	Value Type	Default	Scenario
platform.versioning.schema.initial	Initial schema version.	Text	1.0	SC-I

WSDL Publishing

Property Name	Description	Value Type	Default	Scenario
platform.publishing.ui.defaultDecomposition	Default decomposition setting on Upload Data Content. 0 - None (Only WSDL), 1 - Implementations (WSDL and related, SOAP S.+Endpoint+Operations), 2 - As 1 + Business S.	Integer	2	SC-I
platform.publishing.ui.defaultServiceType	Means default service type. One of [businessService, applicationService, infrastructureService].	One of service type.	<i>businessService</i>	SC-I

Chapter 10: License Management

You must have a valid license installed to work with HPE EM. To retrieve your license key, go to <http://enterpriselicense.hpe.com>, enter your HPE Entitlement Order Number, and click **Go** to activate your HPE EM license.

The license must be installed on the same machine on which the HPE EM Server is installed. You need to be an Administrator to install a license.

Note: For better user support, the administrator is allowed to log in even after the license has expired. Other users remain locked.

See the following topics to install, manage and reset HPE EM licenses.

- ["HPE EM License Overview" below](#)
- ["Installing an HPE EM License" on the next page](#)
- ["Managing Licensed Users" on page 110](#)

HPE EM License Overview

HPE Enterprise Maps supports the following licenses:

- [User License](#)
- [Integration License](#)

Manage Software Licenses - HPE Enterprise Maps	
Valid for:	60 days (expires Sep 30, 2016)
<hr/>	
Concurrent Users:	10 (1 used)
Named Users:	10 (3 used)
COS Premium Named Users:	10 (4 used)
COS Express Named Users:	10 (7 used)
Connectors for External System:	10
Content Pack Connectors for External Resources:	10

User License

The following are the user license types:

- **Concurrent Users:** defines the maximum number of users concurrently logged into HPE EM. Any user who is not assigned to the named user license accounts for one seat defined by this license. Once the limit is reached, the user who is logging into HPE EM is assigned to a named license with respect to this priority **Named Users > COS Premium Named Users > COS Express Named Users** i.e. if the Named Users is full, that user is assigned to COS Premium Named Users and so on.
- **Named Users:** defines the user who has the entire access to HPE EM functionality.
- **COS Premium Named Users:** defines the user who is limited to HPE EM Cloud Transformation feature only. This user is redirected immediately to the EM-CSA UI after the login.
- **COS Express Named Users:** defines the user who is limited to HPE EM Cloud Assessment feature only. This user is redirected immediately to the EM-CSA UI after the login.

Integration License

The following are the integration license types:

- **Connectors for External System:** used for integrating HPE EM with any non-HPE systems such as Sparx EA. Any value greater than 0 means “enabled”.
- **Content Pack Connectors for External Resources:** used for integrating HPE EM with any external resources such as the RDBMS. Any value greater than 0 means “enabled”.

Installing an HPE EM License

The following is the procedure to install an Autopass license, a .dat file or several .dat files that HPE sent to you. You then import the license as described in the following steps. The HPE EM server enables you to view all installed licenses.

To install a license:

1. Sign in to HPE EM with Administrator credentials.
2. Select the **Administration** tab > **Configuration** > **Configuration Settings** to open the

Configuration page.

3. Select **License** to open the License page.
4. Click **Import License File > Choose File** to upload the license .dat file.
5. Click **Finish**.

The License page displays the license details.

Managing Licensed Users

Where the license determines a limited number of user seats, the administrator can modify which users can access HPE EM.

To manage licensed users:

1. Sign in to HPE EM with the login credentials.
2. Select the **Administration** tab > **Configuration > Configuration Settings** to open the Configuration page.
3. Select **License** to view the current license details in the License page.
4. Click **Edit** next to the Licensed User Seats to open the Edit Licensed Users page.

Note: The Edit option is only visible for licenses with limited user seats.

5. In the Edit Licensed Users page, do any of the following:
 - To add licensed users, click **Add** and use Browse Address Book or the search input to locate the users you want to add. Click **Select** to confirm your additions.
 - To remove licensed users, select the users in the table, click **Remove** and confirm your decision.

Chapter 11: Product Integration Management

To enable product integration in Enterprise Maps , the administrator must create integration artifacts first to keep the information about the integration servers/repositories.

The integrations can be created in sub-domain by Domain Administrator or in top-level domain by Repository Administrator. The integrations created in top-level domain are available for use in all sub-domains.

Administrators can perform these common tasks for all integrations:

- ["Create a Connector to Integration Server/Repository" below](#)
- ["Importing Data from Integration Server" on page 114](#)
- ["Viewing and Purging Imported Data" on page 115](#)
- ["Viewing and Editing Integration Mapping" on page 116](#)

For details of specific integrations, refer to the integration topics in ["Product Integration Reference" on page 117](#):

- ["PPM Integration" on page 118](#)
- ["BSM/UCMDB Integration" on page 121](#)
- ["Sparx Systems EA Integration" on page 129](#)
- ["Database Integration" on page 122](#)
- ["CSA Integration" on page 121](#)

Create a Connector to Integration Server/Repository

To create a connector to integration server/repository:

1. Click **Administration > Configuration > Integrations** tab and then click **BROWSE DOMAINS** to select the domain.

Integrations

Configuration

Integration Connectors

Mappings

To connect HPE Enterprise Maps to external systems you need to configure an integration connector. The connectors limit the scope of the integration to a particular domain and connectors defined in the top-level domain are global and apply to content of all domains. In order to create a new integration connector, start in **BROWSE DOMAINS**, select a domain, integration, switch to Integrations tab and add the connector.

Present Integration Connectors

Type ▲	Name	Domain	Mapping Configuration	Artifacts	
HPE BSM/UCMDB	Cloud uCMDB 9.03	Default Domain	Default UCMDB mapping	0	Import
HPE PPM	Cloud PPM	Demo Example Domain	Default PPM mapping	0	Import
HPE PPM	Cloud PPM	Default Domain	Default PPM mapping	0	Import
Sparx EA	Default Sparx EA Synchronization	Default Domain	EM's ArchiMate types	0	
Sparx EA	Global Sparx EA Synchronization	Top-level Domain	EM's ArchiMate types	0	
Sparx EA	Demo Domain Sparx EA Synchronization	Demo Example Domain	EM's ArchiMate types excluding...	0	

2. Open the domain in which the Integration Connector is to be added.

Domains

<input type="checkbox"/>	Name ▲	Description	Type
<input type="checkbox"/>	CSA Service Designs	Contains CSA service designs (infrastructure servic...	Reference Model
<input type="checkbox"/>	Cloud Transformation Reference Models	Holds artifacts and models related to cloud transfo...	Reference Model
<input checked="" type="checkbox"/>	Default Domain	The default domain represents a default working a...	As-is/To-be Architecture
<input type="checkbox"/>	Demo Example Domain		Demo Data
<input type="checkbox"/>	Top-level Domain	The top-level domain is a special domain containin...	


3. Click the **Integrations** tab to create an integration connector of the type and fill in the required fields below:


Default Domain

Domain


- Overview
- Roles
- Members
- Default Access Rights
- Integrations

HPE BSM/UCMDB


 Cloud uCMDB 9.03
Production


 [Add Integration](#)

HPE CSA/Codrar

 [Add Integration](#)


HPE PPM

 Cloud PPM

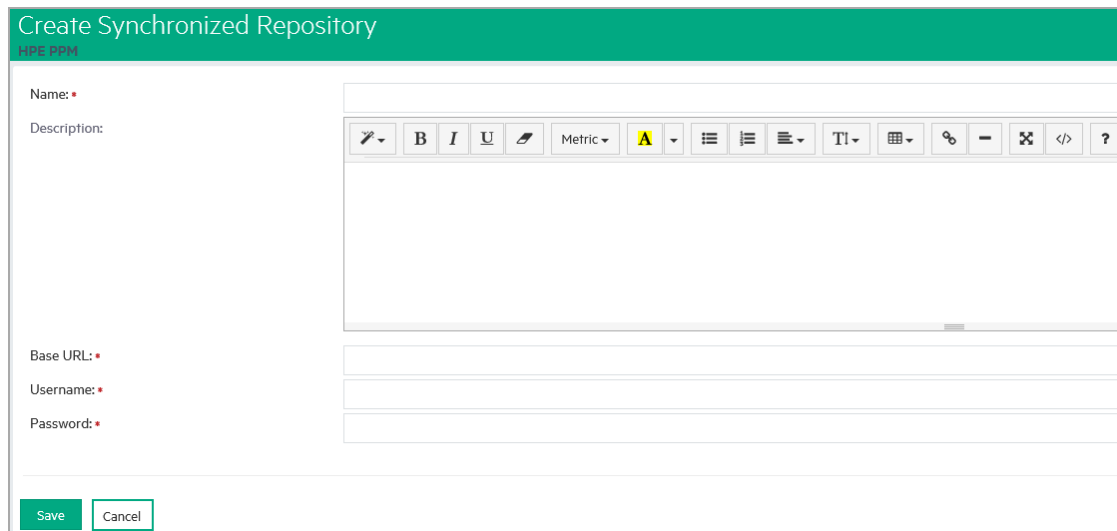
 [Add Integration](#)

Database

*) Content Pack Connector licenses required

 [Add Integration](#)

Sparx EA



- Name (Required): name to identify this server in EM.
- Description (Optional): description for this server.
- Base URL (Required): URL of the integrated server. It must be running.
- Username (Required): integrated server login username.
- Password (Required): integrated server login password.

4. Click **Save**.

Importing Data from Integration Server

For Sparx EA integration, refer to "Extension for Sparx Systems EA" in the *User Guide* to understand data synchronization between Sparx EA and Enterprise Maps .

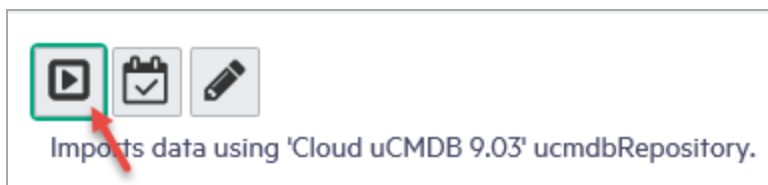
For other integrations, there is an Import Task automatically created, and associated with the integration upon creation of that integration.

To import data from integration that has associated Import Task:

1. Open integration detailed page and click the Associated Import Task icon.



- Click the **Run** icon to start the synchronization, and confirm the decision.



- The import runs in the background, which means that you can perform other tasks without interrupting the import.

Execution History			
Started at	Result	Run Time	Details
5:23 PM	In Progress	00:00:01	Imports data using 'Cloud uCMDB 9.03' ucmdbRepository.

- Upon completion, the Result column is updated to **Finished** and the **Details** column shows the path to import the log file, which is useful for troubleshooting if an error occurs during the import process
- Optionally, administrators can schedule the Import Task to run automatically at a specific time. For details, refer to ["How to Schedule Tasks" on page 75](#).




Viewing and Purging Imported Data

Data imported from the integration server/repository is created in the same sub-domain of the integration connector or in the default domain of the administrator who executes the Import Task (in case the integration connector is in the top-level domain).

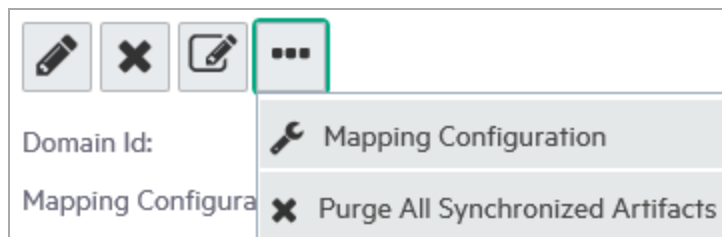
Imported data can be viewed using normal Catalog functions and can be visualized using Reports functions with other artifacts in Enterprise Maps .

Follow the below mentioned steps to view and manage imported data from a specific integration:

- Open the integration detailed page and click **Synchronized Artifacts** tab to see the data which has been imported.

PPM 9.30 HPE PPM			
Overview		Synchronized Artifacts	
Synchronized Artifacts		  	
<input type="checkbox"/>	Name ▲	Version	Type
<input type="checkbox"/>	App from UCMDB	1.0	Application Component
<input type="checkbox"/>	Ass1	1.0	Application Component
<input type="checkbox"/>	Ass1	1.0	Application Component Financial Profile
<input type="checkbox"/>	BO01	1.0	Goal
<input type="checkbox"/>	BO02	1.0	Goal
<input type="checkbox"/>	dthung asset1	1.0	Application Component

- To edit a specific artifact, select it and click **Edit** in artifact detailed page.
- To edit or delete multiple artifacts, select by clicking the respective check boxes and click **Edit** or **Delete** button.
- To purge all synchronized artifacts from this integration, expand the Export Tools icon and click **Purge All Synchronized Artifacts**, then click **Yes** to confirm.



Viewing and Editing Integration Mapping

Each integration server/repository type has a single default mapping (except for Sparx EA integration which has two) to control which artifacts can be synchronized between Enterprise Maps and the integration server/repository.

To view the current mapping:

- Open the integration detailed page
- Expand **Expert Tools** and click **Mapping Configuration** to view the current mapping for

integration.

Default PPM mapping

Mapping configuration reference between EM and PPM entities

Status: **AUTOMATIC SUCCESS** (Details)

Source XML: configuration property [platform.sync.mapping.ppm](#)

Reference Attributes: useType

Top-level Extensions: [ppm.exporter](#)

#	id	EM entity type	PPM entity type
1	apmApplication	sdmName=applicationComponentArtifact	Type=Request.APM - Application
2	apmLocation	sdmName=locationArtifact	Type=Request.APM - Location
3	apmProcess	sdmName=businessProcessArtifact	Type=Request.APM - Process
4	apmServer	sdmName=serverArtifact	Type=Request.APM - Server
5	businessObjective	sdmName=goalArtifact	Type=Decomposed.BusinessObjective
6	fp_pfmAsset	sdmName=appFinancialProfileArtifact	Type=Decomposed.FPofAsset
7	fp_project	sdmName=projectFinancialProfileArtifact	Type=Decomposed.FPofProject
8	operationSystem	sdmName=systemSoftwareArtifact	Type=Decomposed.OS
9	pfmAsset	sdmName=applicationComponentArtifact	Type=Request.PFM - Asset
10	pfmProposal	sdmName=proposalArtifact	Type=Request.PFM - Proposal
11	project	sdmName=projectArtifact	Type=Project

ppm

1. apmApplication (sdmName=applicationComponentArtifact <=== Type=Request:APM - Application)

EM attributes [name](#), [description](#), [version](#), [ownerFullName](#)^{virtual}

PPM attributes [REQ_DESCRIPTION](#), [REQ_APM_APP_VERSION](#), [description](#)^{virtual}, [REQ_ASSIGNED_TO_NAME](#)

EM references [usedBy](#), [uses](#), [assignedFrom](#), [associatedWithIncoming](#)

PPM references [REQ_APM_SUPPORTED_PROCESSES](#), [REQD.APM DOWNSTREAM APPS](#), [REQD.APM UPSTREAM APPS](#), [REQD.APM SERVER LIST](#), [REQ.APM APP LOCATION](#), [project](#)

```
164 <: <entityMapping id="apmApplication">
165 <: <internal>
166 <: <type>
167 <: <property name="sdmName" value="applicationComponentArtifact"/>
168 <: </type>
169 <: <attribute name="name">
170 <: <mapping>
171 <: <select-attribute name="REQ_DESCRIPTION"/>
172 <: </mapping>
173 <: </attribute>
174 <: <attribute name="description">
175 <: <mapping overwrite="true">
176 <: <select-attribute name="description" classifier="virt"/>
177 <: </mapping>
178 <: </attribute>
179 <: <attribute name="version">
180 <: <mapping>
181 <: <select-attribute name="REQ_APM_APP_VERSION"/>
182 <: </mapping>
183 <: </attribute>
184 <: <attribute name="ownerFullName" classifier="virt">
185 <: <mapping>
186 <: <select-attribute name="REQ_ASSIGNED_TO_NAME" classifier="self"/>
187 <: </mapping>
188 <: </mapping>
```

To customize the current mapping:

1. Go to **Administration tab > Configuration > Settings > System Properties**.
2. Search for the integration property which requires editing. For all integration system properties, refer to **"System Configuration Properties" on page 86**.
3. Click **Download** to get the mapping in XML format.
4. Edit the mapping file.
5. Click **Upload** to upload the edited mapping file.

Product Integration Reference

This section covers the following topics:

- "PPM Integration" below
- "BSM/UCMDB Integration" on page 121
- "CSA Integration" on page 121
- "Database Integration" on page 122
- "Sparx Systems EA Integration" on page 129

PPM Integration

HPE EM integrates (imports and synchronizes) the following areas of the HPE PPM (Project & Portfolio Management) software with Enterprise Architecture: Project, Financial and Demand Management.

The PPM software is a primary source of financial and project information about applications in the corporation. The HPE EM integration and synchronization with PPM provides useful financial insights into enterprise architecture. HPE EM can generate views showing architecture aligned with demand management, project, and asset management, including financial views from PPM.

The integration brings about an effective way of providing a transparent control over architecture solution that is required in order to accept the proposal, estimate its costs and also estimate the time required to realize the change.

In addition, Application and Portfolio Management (APM) has been supported for integrating by enhancing the built-in PPM mapping to support the basic APM types and the relationships between them. APM which is a PPM product module helps with optimization of application portfolio based on business goals. It determines the feasibility of applications with the objective of eliminating application redundancy.

Note: HPE APM is commonly referred as a shortcut for Application Performance Management which is a completely different product.

Only the Administrator role can synchronize HPE EM with HPE PPM.

The input URL must contain itg context. For example: <http://ppmhost:8080/itg>.

Adding EM Link in PPM UI

You can customize PPM to show the link to artifacts in EM UI, that are synchronized from PPM to EM. This function applies to PFM Proposal artifact type in PPM.

To show EM link in PPM:

1. Open PPM Workbench.
2. Click **Demand Management > Request Types**.
3. Open "PFM Proposal" request type.
4. Create a new rule inside **Rules** tab.
5. Create a new field inside **Fields** tab.

Field Definition

Field: EM Link

Field Prompt: EM Link Token: EM_LINK

Description: URL Link to Enterprise Map

Enabled: ☒ Yes ☐ No

Validation: EM-LINK

Component Type: Web Address (URL)

Multi-Select Enabled: ☐ Yes ☒ No

Attributes | Default | Storage | Security

Section Name: Request Type Fields Display Only: ☒ Yes ☐ No

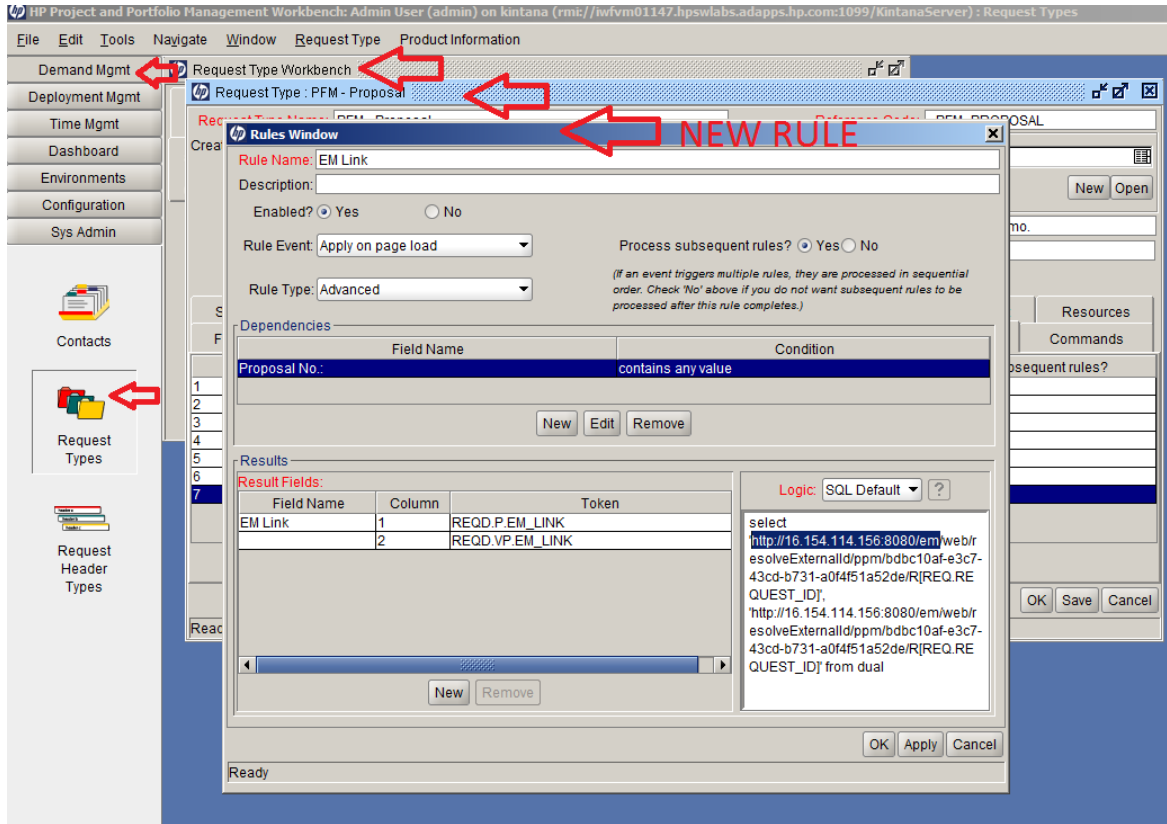
Transaction History: ☐ Yes ☒ No Notes History: ☐ Yes ☒ No

Display on Search and Filter: ☐ Yes ☒ No Display: ☒ Yes ☐ No

Search Validation:

Ready

Rule Definition



The above definition ensures rendering of the following link on PPM proposal view page:

Request Type Fields	
EM Link	http://16.154.114.156:8080/em/web/resolveExternalId/ppm/bdbc10af-e3c7-43cd-b731-a0f4f51a52de/R34228

The EM link works according to the following endpoint provided by EM for PPM:

/web/resolveExternalId/{REPOTYPE}/{REPOID}/{EXTERNALID}

URL Parameters:

- **REPOTYPE** is a repository type.
- **REPOID** is a repository UUID.
- **EXTERNALID** is an external ID used in the EM repository during import of an external entity.

Note: The EM link does not render properly in Chrome in PPM 9.20 because it supports only IE7, IE8, IE9 and FF11+. For details, refer to *PPM Support Matrix guide*.

BSM/UCMDB Integration

Business Service Management or Universal Configuration Management Database is a primary source of information about runtime systems. HPE EM can import and synchronize relevant data from BSM/UCMDB configuration items (CIs). This gives the architect up-to-date data about the baseline architecture at the Technology layer and brings visibility on the as-is state. The enterprise architect can reuse the imported BSM/UCMDB CIs and link them to the application architecture to provide traceability between the application and technology layer

To connect to BSM Integration, the input URL must be a valid BSM URL. Following is an example of the URL format (ending with topaz, trailing slash not to be included): <http://bsmhost/topaz>.

To connect to UCMDB Integration, the UCMDB context is optional in the input URL. Following is an example of the URL format: <http://ucmdbhost:8080>.

Note: HPE EM does not support integration with SmartCard Authentication configuration in BSM.

CSA Integration

HPE EM integrates with HPE CSA (Cloud Service Automation) to synchronize components and service designs.

The following artifacts are imported from CSA into HPE EM:

- Component Types: topology components with type `Concrete` and `Capability`, are imported into EM as Deployment Specifications (type: `CSA Component`)
- Topology Designs: topology service designs are imported into EM as Infrastructure Services and associated Deployment Specifications (type: `CSA Service Design`) in CSA Service Designs domain.
- Abstract topology components and also Sequenced Designs (including sequenced components) are not imported.

To connect to CSA, the input URL must use **HTTPS**. Following is an example of the URL format:

<https://csahost:8444/csa>

Note: When a CSA integration is created (whether automatically or manually), there is always a sync task created and associated with this integration. Only difference being the task associated with automatic integration is scheduled to run hourly.

Note: CSA Integration can be created in CSA Service Designs domain only.

Database Integration

To connect to Database Integration, a JNDI must be pre-configured in the HPE EM embedded Application Server and a Database Integration connector must be created in EM Administration UI. Follow the steps below to do so:

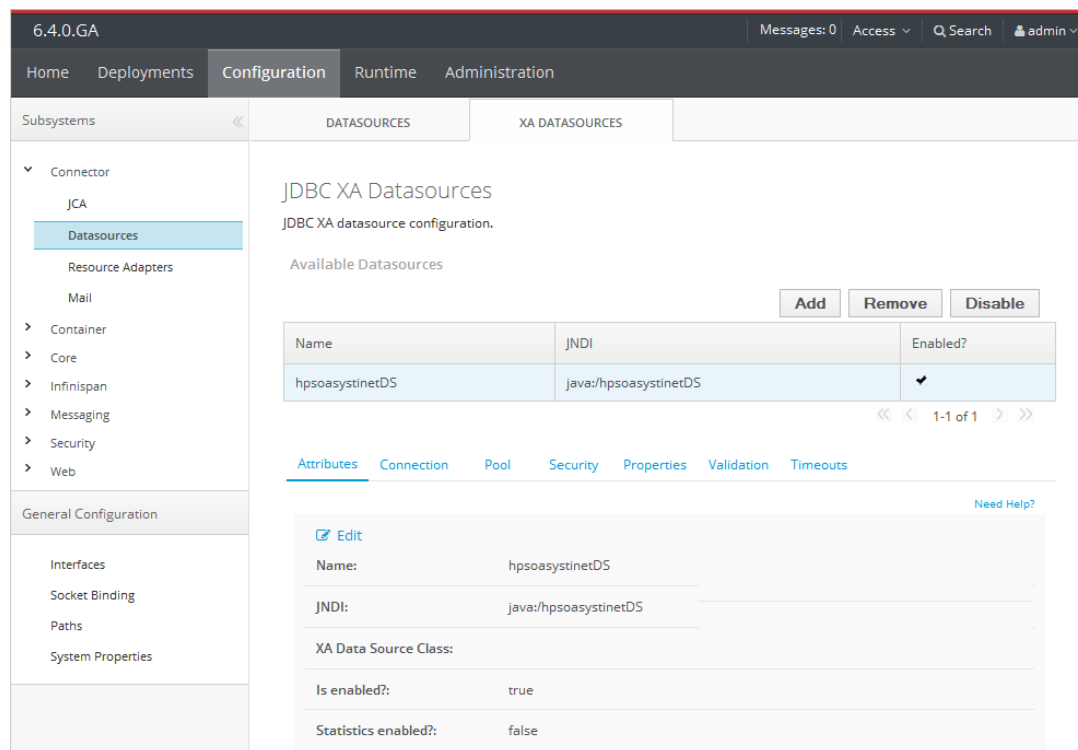
1. ["Create JNDI Data Sources to Configure a Connection to your Database" below](#)
2. ["Define Database Entity Types and Mapping Configuration" on page 124](#)
3. ["Create a Database Integration Connector" on page 126](#)
4. ["Import Entities from the Database to the Platform" on page 127](#)
5. ["Logging and Debugging" on page 128](#)

1. **Create JNDI Data Sources to Configure a Connection to your Database**

Database repositories must be connected via an XA data source (as a limitation of the first version of the Database integration). You can use one of the following options to configure a new JNDI data source:

- **Application Server Admin Console**

In the application server admin console at <http://localhost:9990>, define a new data source, based on the definition in `java:/hpsoasystinetDS`. This definition is used by HPE EM internally to connect to their database. For details, refer to JBoss documentation online at https://access.redhat.com/documentation/en-US/JBoss_Enterprise_Application_Platform/.

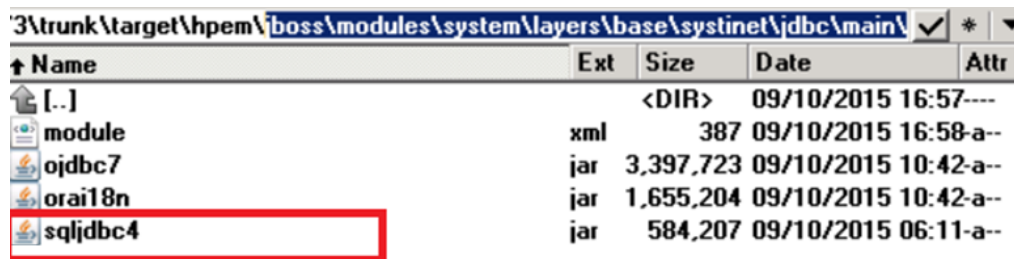


Manual Data Source Configuration

Data sources can be configured in the application server so as to enable the required J2EE infrastructure for running HPE EM. The embedded Application Server is placed in EM_HOME/jboss. Refer to JBoss wiki for more details.

To configure the driver for XA data source:

- i. Copy your jdbc.jar file(s) to %EM_HOME%\jboss\modules\system\layers\base\systinet\jdbc\main.



- ii. Add your jdbc to %EM_HOME%\jboss\modules\system\layers\base\systinet\jdbc\main\module.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<module xmlns="urn:jboss:module:1.0" name="systinet.jdbc">
  <resources>
    <resource-root path="ojdbc7.jar"/>
    <resource-root path="orai18n.jar"/>
    <resource-root path="sqljdbc4.jar"/>
  </resources>
  <dependencies>
    <module name="javax.api"/>
    <module name="javax.transaction.api"/>
  </dependencies>
</module>
```

To configure XA data source:

- iii. Add your XA data source to %EM_HOME%\jboss\standalone\configuration\standalone-full.xml.

```
1 <subsystem xmlns="urn:jboss:domain:datasources:1.2">
2   <datasources>
3     <xa-datasource jndi-name="java:/RDBMSDemoDS" pool-name="RDBMSDemoDS">
4       <!-- Systinet Installer: datasource -->
5       <xa-datasource-property name="URL">jdbc:sqlserver://[db host]:[db port];DatabaseName=[db name];SelectMethod=cursor</xa-datasource-property>
6       <driver>RDBMSDemoDriver</driver>
7       <transaction-isolation>TRANSACTION_READ_COMMITTED</transaction-isolation>
8       <xa-pool>
9         <is-same-vm-override>false</is-same-vm-override>
10        <no-tx-separate-pools/>
11        <min-pool-size>4</min-pool-size>
12        <max-pool-size>100</max-pool-size>
13        <prefill>false</prefill>
14      </xa-pool>
15      <security>
16        <user-name>DATABASE_USERNAME</user-name>
17        <password>PASSWORD</password>
18      </security>
19      <validation>
20        <timeout>
21          <xa-resource-timeout>900</xa-resource-timeout>
22        </timeout>
23        <statement>
24          <prepared-statement-cache-size>5</prepared-statement-cache-size>
25          <share-prepared-statements>false</share-prepared-statements>
26        </statement>
27      </xa-datasource>
28    </datasources>
29    <drivers>
30      <driver name="RDBMSDemoDriver" module="systinet.jdbc">
31        <!--Systinet Installer: driver added -->
32        <xa-datasource-class>com.microsoft.sqlserver.jdbc.SQLServerXADataSource</xa-datasource-class>
33      </driver>
34    </drivers>
35  </subsystem>
```

- iv. Restart EM server for changes to take effect.

2. Define Database Entity Types and Mapping Configuration

A mapping file is defined in the system configuration at a top-level domain. It has keys starting with "platform.sync.mapping.rdbms". For example: the default mapping of the above mentioned system property is used to connect to the same Database that HPE EM is running, to import HPE EM (internal) user profiles and their associated HPE EM groups. The profiles are imported as Archimate's business actors and business roles.

```
<entityMappings xmlns="urn:com.hp.systinet.sync.mapping:1.0"
  xmlns:rdbms="urn:com.hp.systinet.sync.mapping:extension:rdbms:1.0"
  name="Sample Default Database Mapping"
```

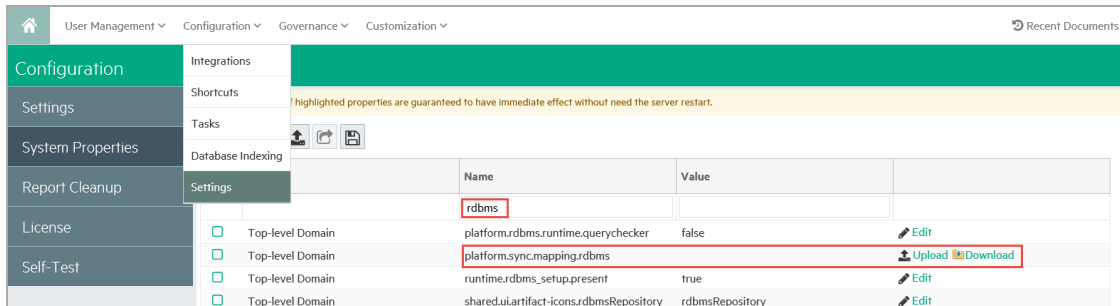
```

    externalType="rdbms">
<entityMapping id="user">
  <internal>
    <type>
      <property name="sdmName" value="businessActorArtifact"/>
    </type>
    <attribute name="name">
      <mapping>
        <select-attribute name="fullName"/>
      </mapping>
    </attribute>
    <attribute name="description">
      <mapping>
        <value>userAlreadyLogged: </value>
        <select-attribute name="userAlreadyLogged"/>
      </mapping>
    </attribute>
    <reference name="assignedTo">
      <mapping>
        <select-reference refId="group"/>
      </mapping>
    </reference>
  </internal>
  <external definesMapping="false">
    <type>
      <property name="entityType" value="user"/>
      <rdbms:listQuery>select loginName as externalId, fullName from
passwd</rdbms:listQuery>
      <rdbms:idQuery name="userStatistics">select value as
userAlreadyLogged from passwdProperty where loginName=:externalId and
name='userAlreadyLogged'</rdbms:idQuery>
      <rdbms:idQuery name="userGroups">select groupName from
groupMembers where memberName=:externalId</rdbms:idQuery>
    </type>
    <attribute name="fullName"/>
    <attribute name="userAlreadyLogged"
rdbms:queryRef="userStatistics"/>
    <reference name="group" rdbms:queryRef="userGroups"/>
  </external>
</entityMapping>
<entityMapping id="group">
  <internal>
    <type>
      <property name="sdmName" value="businessRoleArtifact"/>
    </type>
    <attribute name="name">

```

```
<mapping>
  <select-attribute name="name"/>
</mapping>
</attribute>
<attribute name="description">
  <mapping>
    <select-attribute name="description"/>
  </mapping>
</attribute>
</internal>
<external definesMapping="false">
  <type>
    <property name="entityType" value="group"/>
    <rdbms:listQuery>select groupName as externalId, groupName as
name, description from groups</rdbms:listQuery>
  </type>
  <attribute name="name"/>
  <attribute name="description"/>
</external>
</entityMapping>
</entityMappings>
```

In the Administration UI, you can add, modify or delete the mapping configuration. Upload the file with a .bin extension each time you create or update a mapping file.



	Name	Value	
	rdbms		
<input type="checkbox"/> Top-level Domain	platform.rdbms.runtime.querychecker	false	Edit
<input type="checkbox"/> Top-level Domain	platform.sync.mapping.rdbms		Upload Download
<input type="checkbox"/> Top-level Domain	runtime.rdbms_setup.present	true	Edit
<input type="checkbox"/> Top-level Domain	shared.ui.artifact-icons.rdbmsRepository	rdbmsRepository	Edit

The mapping file structure is driven by XSD files and is validated every time an import or export is executed. Changes in the mapping files are effective immediately, and it is not required to restart HPE EM. For more details, see ["Viewing and Editing Integration Mapping" on page 116](#).

3. Create a Database Integration Connector

The list of Database integration repositories is available in the Integrations section of a domain. You need to select the option to create a new Connector. Enter the Connector name, mapping configuration (if more are available) and a JNDI name of the data source to connect to the Database.

The default Database mapping configuration is a working example that requires the database schema of HPE EM. Therefore, use the `java:/hpsoasystinetDS` to point to a data source used internally by HPE EM. For more details, see ["Create a Connector to Integration Server/Repository" on page 111](#)

Demo DB integration

Database

Name: *

Description:

Demo DB integration

Mapping Configuration:

JNDI Name: *

Sample Default Database Mapping

java:/hpsoasystinetDS

Save Cancel




4. Import Entities from the Database to the Platform

Once a Database integration Connector is created, you can access the associated tasks that import the data. Use the toolbar icon on the Database Integration Connector view page.

The task can then be run or scheduled for later execution using its toolbar's icons. The task page contains the full execution history. For more details, see ["Importing Data from Integration Server" on page 114](#)

When you run the task, the internal database of HPE EM user profiles and groups are mapped to

business actors and roles.

Synchronized Artifacts			
  			
<input type="checkbox"/>	Name ▲	Version	Type
<input type="checkbox"/>			
<input type="checkbox"/>	Administrator userAlreadyLogged: true	1.0	Business Actor
<input type="checkbox"/>	Andy Miller userAlreadyLogged: true	1.0	Business Actor
<input type="checkbox"/>	APM Administrator userAlreadyLogged:	1.0	Business Actor
<input type="checkbox"/>	Application Providers People who provide applications	1.0	Business Role

5. Logging and Debugging

The mapping configuration is validated every time an associated import task is executed. Errors in the mapping file bring the execution to an end and appear in the execution history of the task. The execution history describes a server log file and associated keyword that you can use to get more information about the execution of the task. The file `EM_HOME/log/integration.log` (by default) contains all the DEBUG messages that are useful to monitor the progress of the task's execution.

To know the Database entities that are produced by the associated SQL queries, you can switch the log4j category `com.hp.eam.sync.import` to the TRACE level. This can also be achieved by using the JBOSS console at `http://localhost:9990` or by manually modifying the application server configuration file `%EM_HOME%\jboss\standalone\configuration\standalone-`

full.xml. For the latter method, you need to restart the EM server.

```
<!--EAM Installer: Integration import/export messages are written to a separate log-->
<periodic-rotating-file-handler name="INTEGRATION">
  <encoding value="UTF-8"/>
  <formatter>
    <pattern-formatter pattern="%d{Hh:mm:ss,SSS} %-5p [%c{3}] %m%n"/>
  </formatter>
  <file relative-to="jboss.server.log.dir" path="integration.log"/>
  <suffix value=".yyyy-ww"/>
</periodic-rotating-file-handler>
<logger category="com.hp.eam.sync.import" use-parent-handlers="true">
  <level name="DEBUG"/> change to TRACE
  <handlers>
    <handler name="INTEGRATION"/>
  </handlers>
</logger>
<logger category="com.hp.eam.sync.export" use-parent-handlers="true">
  <level name="DEBUG"/>
  <handlers>
    <handler name="INTEGRATION"/>
  </handlers>
</logger>
</subsystem>
```

Sparx Systems EA Integration

The Sparx EA repository allows Sparx EA to connect to Enterprise Maps (via Extension for Sparx EA) to synchronize diagrams and artifacts.

To synchronize data, we need to setup the Extension for Sparx Systems Enterprise Architect to connect to the corresponding Sparx repository in Enterprise Maps .

Note: Synced artifacts and diagrams are visible across domains.

Mapping configuration

Each repository is associated with a mapping configuration describing how Enterprise Maps artifacts and Sparx EA elements are synced together. There are the 3 Sparx EA mapping configurations out of the box:

- EM's Archimate types (notes mapped to specification): all artifact types are synchronized. The Element's note in SparX is mapped to artifact's specification in EM. This is the default mapping for most domains.
- EM's Archimate types (notes mapped to description): all artifact types are synchronized. The Element's note in SparX is mapped to artifact's description in EM.
- No system software and nodes (deprecated): SystemSoftware, node and their sub types are not synchronized. The Element's note in SparX is mapped to artifact's description in EM.

To view or edit mapping details, see ["Viewing and Editing Integration Mapping" on page 116](#).

Note: If you make changes to the mapping configuration in Enterprise Maps , you need to re-open the project in Sparx EA for the new mapping to take effect.

Include Reference Model Data

By default, data in Reference Model domains are synchronized with Sparx EA. You can turn off this option to ignore data in Reference Model domains. For example, Cloud Transformation feature when not in use.

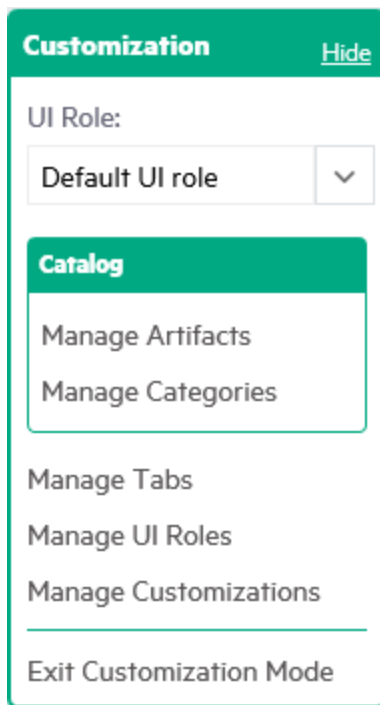
Chapter 12: UI Customization

The primary purpose of the role-based UI is to present users with only the information and functionality relevant to their roles. As the nature of these roles varies in different organizations, the UI displayed for each role in HPE EM is customizable.

Each element in a role-based UI is customizable in the same way.

To customize a role-based UI:

In the Administration tab, click **Customize** and then click **Customize UI** to open the customization menu and select the *ROLENAME* from the dropdown menu.



Customization Menu

The UI for that role opens in customization mode.

You can navigate the role-based UI in customization mode in the same way as a user in that role. Each customizable UI component has its own **Customize** link enabling you to modify it.

Customize individual UI elements as required referring to the following sections which are organized according to the pages where the elements appear. UI Customizations provide the most commonly

required customizations and automate the process, but if you need more detailed customization you may use the XML Customizations.

- UI Customizations:
 - ["Managing Artifacts in the UI" on the next page](#)
 - ["How to Customize Categories" on page 157](#)
 - ["How to Create Role-Based Tabs" on page 159](#)
 - ["How to Customize Relationship Editor" on page 161](#)
- XML Customizations:
 - ["How to Customize Menus" on page 137](#)
 - ["How to Customize Homepages" on page 141](#)
 - ["How to Customize Browse Pages" on page 143](#)
 - ["How to Customize Create / Edit Artifact Pages" on page 148](#)
 - ["How to Customize Artifact Detail Pages" on page 151](#)
 - ["How to Customize Artifact Selection in Survey" on page 154](#)
 - ["Adding New Properties to the UI" on page 135](#)

Tip: For ease of customization, HPE recommends the copying of existing customizations and pasting them into new customizations. For example, most browse pages are similar, and only the artifact types differ.

Note: This is not a comprehensive list of customizable UI elements but the customizations described should enable you to customize other pages and components. Refer to ["Role Customization Reference" on page 171](#) for full details of each customizable UI element.

Click **Manage Customizations** to open the Manage Customizations page displaying a list of prepared customizations.

For more details about managing your customizations, see ["How to Manage UI Customizations" on page 158](#).

Select the customizations to release, and select **Release**.

The selected customizations are released to the server and all users in the role use the customized UI the next time they sign in to HPE EM .

Customizations can also be imported or deleted from this page.

Note: However, UI Customizations are not guaranteed to work when migrating across major releases of EM.

Clicking **Exit Customization Mode** returns you to the normal Catalog page.

UI Customization Use Cases

Apart from changing the layout and content of the UI, the main use case for UI customization is to incorporate your Service Definition Model customizations into the UI.

Note: WYSIWYG customizations are not supported for Person artifacts. Use XML customizations if required.

This section describes the main customization use cases in the following sections:

- ["Managing Artifacts in the UI" below](#)
- ["Adding New Properties to the UI" on page 135](#)










Managing Artifacts in the UI

After you add a new artifact to your SDM, you may want it to be available to users in role-based UIs.

To add an artifact to the UI:

1. In Customization mode, select the UI Role that requires to access the new artifact and click **Manage Artifacts**.
2. Locate the required artifact type from the tree view of artifact types, then under Catalog column, change from *Hidden* to *Generate from SDM*.
3. Click **Apply Changes**. Customization of the new artifact is generated from its SDM and

accessible for the UI Role.

Artifact Type	Catalog (Shared catalog)
 Artifact	Hidden
 Application Layer	Default
 Application Collaboration	Hidden
 Application Component	
 Database Schema	Redirect
 J2EE Application	Reset to Default
 Web Application	Generate from SDM
 Application Function	
 Application Interaction	Default

Note: Some artifact types have special UI which cannot be generated again from SDM. For example: Deliverable and Plateau.

You may wish to hide some artifacts from the UI.

To remove an artifact from the UI:

1. In Manage Customizations mode, select the user UI role that requires to disable access to the artifact and click **Manage Artifacts**.
2. Locate the required artifact type from the tree view of artifact types and under the Catalog column, change from *Default* to *Hidden*.
3. Click **Apply Changes**. The artifact becomes inaccessible for the UI Role.

Note: This action does not require a release of the customization.

After you have changed artifact customization, you may wish to revert your changes.

To reset customization of an existing artifact:

1. In Manage Customizations mode, select the UI role that requires the artifact to be edited and click **Manage Artifacts**.
2. Locate the required artifact type from the tree view of artifact types and under the Catalog column, change from *Default* to *Reset to Default*.
3. Click **Apply Changes**. Customization of the edited artifact is reset to its default (stored customization of last Generate from SDM action).

Note: This action does not require a release of the customization.

When working with multiple tabs, you may wish to copy an artifacts' customization from one tab to another, or just redirect artifacts from a tab to another.

To copy artifact customization from a tab to another:

1. In Manage Customizations mode, select the UI role that requires to copy the artifact customization and click **Manage Artifacts**.
2. Select the required artifact type from the tree view of artifact types, then in the tab where you wish to have the customization copied from another tab, select 'As a copy of [TAB_NAME]' option.
3. Click **Apply Changes** to submit your change.

To redirect an artifact to its view in another tab:

1. In Manage Customizations mode, select the UI role that requires to redirect the artifact view and click **Manage Artifacts**.
2. Select the required artifact type from the tree view of artifact types, then in the tab where you wish to redirect the selected artifact to another tab, select 'Redirect to [TAB_NAME]' option.
3. Click **Apply Changes** to submit your change.

Artifact Type	Catalog (Shared catalog)	New Perspective (Details...
Artifact	Hidden	Hidden
Application Layer	Hidden	Hidden
Application Collaboration	Default	Hidden
Application Component	Hidden	Hidden
Database Schema	As a copy of New Persp...	Hidden
J2EE Application	Redirect	Hidden
Web Application	to New Perspective (...	Hidden
Application Function	Reset to Default	Click to redirect to tab 'New Perspective (Details on new perspective)'
Application Interaction	Generate from SDM	Hidden
Application Interface	Default	Hidden
Batch/File processing	Default	Hidden
Database Interface	Default	Hidden
Messaging	Default	Hidden
Publish/Subscribe	Default	Hidden
Queue	Default	Hidden
REST API	Default	Hidden
RPC	Default	Hidden

Adding New Properties to the UI

After you add a simple or taxonomic property to an artifact type, you may want it to be visible to users in a role-based UI.

To add a property to the UI:

1. To enable users to view the value of the property for artifact instances, customize the Artifact Detail page for the artifact type to add the simple or taxonomic property to the artifact details.

For details, see ["How to Customize Artifact Detail Pages" on page 151](#).

2. To enable users to add or edit a property value to new or existing artifacts, customize the Create and Edit pages for the artifact type.

For details, see ["How to Customize Create / Edit Artifact Pages" on page 148](#).

3. To enable users to sort or filter the artifact type based on the property, add the property to tables showing the artifact type or add the property to search criteria for the artifact type.

For details, see and ["How to Customize Browse Page Search Criteria" on page 146](#).

How to Customize Search Components

You can customize the Search component on the homepage.

To customize a homepage search component:

1. In the customization view of the role-specific UI, navigate to the homepage.
2. Click **Customize** in the Search component. The XML editor for homepage search opens.

The homepage search forms the following hierarchy of elements:

- `<suggestConfig>`

The containing element for the search component and defines the dynamic results behaviour.

- `<datasource>`

Defines the query for the search.

- `<search>`

Defines the criteria for the search specifying which properties of the artifact types specified by the query are searched.

- `<table>`

Defines the layout of the dynamic results table

- `<actionComponent>`

Determines the navigation behaviour when you click an artifact in the dynamic results table.

3. Modify the XML extract as required.

For more details, see ["Search Component Customization Reference" on page 186](#).

4. Click **Save** to save your changes locally.

How to Customize Menus

Each page in HPE EM contains the menu on the top (right below the product logo).

The menu is organized into groups and items. Items are usually navigation links to other pages or specific functionality, or a component which performs some function (for example: Recent Documents).

To customize a menu:

1. Navigate to any page in customization mode for the role-based UI that you want to modify.
2. Click the **Customize** link above the menu to open the XML representation of the menu.

The menu forms the following hierarchy of elements:

- <navigation>

The holding element for the menu.

- <group>

Each group consists of a set of tasks and components with a heading.

- <task>

A navigation link to another page.

For details, see "Reusable Tasks".

- <component>

A more complex piece of functionality.

3. Modify the menu as required,

For more details, see ["Menu Customization Reference" on page 168](#)

4. Click **Save** to save your menu customization locally.

To understand better, see the examples below:

- ["Adding a Heat Map to Report Menu" on the next page](#)
- ["Adding a Structure Map to Reports Menu" on page 139](#)

Adding a Heat Map to Report Menu

You can create a customized Heat Map report after you create a Heat Map portlet's embedded script. The new report will appear on the Reports menu under Heat Map Reports.

To create a Heat Map report:

1. On the **Administration** tab, select **Customization > Manage Scripts**.
2. Create a Heat Map portlet script:
 - a. Click **Reports & Portlets** in the left panel and click the **Create new portlet** icon. This opens the Portlet Script editor.
 - b. Add a unique name and select **Javascript** as the **Script language** and **Heat map** as the **Execute on** option. Click **Save**.
3. Click **Edit Script** to add the script content and click **Save**.
4. Open the Customization mode by selecting the **Administrator** tab > **Customization > Customize UI**.
5. Customize the Dashboard menu by adding a new item for the Heat Map Reports group. The following is a content example:

```
17 <parameter name="collectionId">hpsoaBirtReports</parameter>
18 </task>
19 </group>
20 <group id="reports.artifacts" label="Artifact Reports" styleClass="systinet-horizontal-menu-dir">
21 <component componentName="core/catalog/menultemCatalogRenderer" id="reports.artifacts.browse">
22 <parameter name="customizationId">reports.leftmenu.artifactReportCatalog</parameter>
23 <parameter name="browseArtifact">true</parameter>
24 <parameter name="collectionId">artifactReports</parameter>
25 <parameter name="browseLinkRenderer">/reports/impl/catalog/reportBrowseLinkRenderer</parameter>
26 <parameter name="rendersCustomizeLinks">true</parameter>
27 </component>
28 </group>
29 <group id="reports.policy" label="Policy Reports" styleClass="systinet-horizontal-menu-dir">
30 <component componentName="/reports/catalog/policyReportBrowser" id="report.policy.browse">
31 <parameter name="browseArtifact">true</parameter>
32 <parameter name="windowTitle">Policy Reports</parameter>
33 </component>
34 </group>
35 <group id="reports.birt" label="Custom Reports" styleClass="systinet-horizontal-menu-dir">
36 <component componentName="/reports/catalog/birtReportBrowser" id="reports.birt.browse">
37 <parameter name="browseArtifact">true</parameter>
38 <parameter name="windowTitle">Birt Reports</parameter>
39 </component>
40 </group>
41 <group id="report.heatmap" label="Heatmap Reports" styleClass="systinet-horizontal-menu-dir">
42 <task id="reports.heatmap.projects" label="Projects By Cost" taskLocation="/reports/impl/heatmap">
43 <parameter name="scriptLocation">/scripts/Projects By Cost</parameter>
44 </task>
45 <task id="reports.heatmap.applications" label="Applications By Cost" taskLocation="/reports/impl/heatmap">
46 <parameter name="scriptLocation">/scripts/Applications By Cost</parameter>
47 </task>
48 <task id="reports.heatmap.applications.cus" label="Applications By Annual Labor Cost" taskLocation="/reports/impl/heatmap">
49 <parameter name="scriptLocation">/scripts/Applications By Annual Labor Cost</parameter>
50 </task>
51 <!-- Use above heatmap implementation for now -->
52 <!--<task id="reports.treemap.projects" label="%customization.ReportsCustomizationMessages$reports_leftmenu_reports_heatmap_projectsByCost"
53 <parameter name="sdmName">projectArtifact</parameter>
54 </task>
55 <task id="reports.treemap.applications" label="%customization.ReportsCustomizationMessages$reports_leftmenu_reports_heatmap_applicationsByC
56 <parameter name="sdmName">applicationComponentArtifact</parameter>
57 </task>
```

Add new report into Heatmap Reports group

Save Cancel

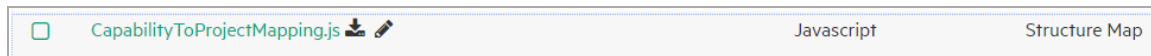
Adding a Structure Map to Reports Menu

You can define a structure map's component to refer to the configuration of an existing structure map portlet script in managed scripts.

To add/embed structure map components:

1. On the **Administration** tab, click **Customization > Customize UI**.
2. Place a component into your working customization xml file such as the following example:

```
<component componentName="/report/impl/structureMap" id="capaMapComponent">  
  <parameter name="scriptLocation">/scripts/CapabilityToProjectMapping.js  
  </parameter>  
  <parameter name="artifactUuid">${artifact._uuid}</parameter>  
</component>
```



Properties of Business Function

259

<!--Leads to: businessFunctionArtifact, businessProcessArtifact, businessInteractionArtifact

260

<component componentName="/core/layout/relationshipItemComponent" id="flowsTo_24_ItemCompone

261

<parameter name="relationshipName">flowsTo</parameter>

262

<parameter name="artifactTypes">businessFunctionArtifact,businessProcessArtifact,business

263

<parameter name="hideIfEmpty">true</parameter>

264

<!--<parameter name="readOnly">>false</parameter>

265

<parameter name="deleteOnly">>false</parameter>

266

<parameter name="tableViewOnly">>true</parameter>

267

-->

268

</component>

269

<!--Leads to: junctionArtifact, businessProcessArtifact, businessFunctionArtifact, businessI

270

<component componentName="/core/layout/relationshipItemComponent" id="flowsFrom_25_ItemCompo

271

<parameter name="relationshipName">flowsFrom</parameter>

272

<parameter name="artifactTypes">junctionArtifact,businessProcessArtifact,businessFunction.

273

<parameter name="hideIfEmpty">true</parameter>

274

<!--<parameter name="readOnly">>false</parameter>

275

<parameter name="deleteOnly">>false</parameter>

276

<parameter name="tableViewOnly">>true</parameter>

277

-->

278

</component>

279

<component componentName="/core/relations/customRelationshipComponent" id="customRelationshi

280

<parameter name="currentAvailableRelationships">providedBy,aggregatedBy,triggeredBy,flows

281

</component>

282

<component componentName="/core/impl/relations/emptyEditorHidingComponent" id="relationshipH

283

<component componentName="/core/layout/invalidRelationships" id="invalidRelationshipsCompone

284

<parameter name="excludeRelationships">associatedWith,associatedWithIncoming</parameter>

285

</component>

286

<component componentName="/report/impl/structureMap" id="capaMapComponent">

287

<parameter name="scriptLocation">/scripts/CapabilityToProjectMapping.js</parameter>

288

<parameter name="artifactUuid">\${artifact._uuid}</parameter>

289

</component>

290

</group>

291

</content>

292

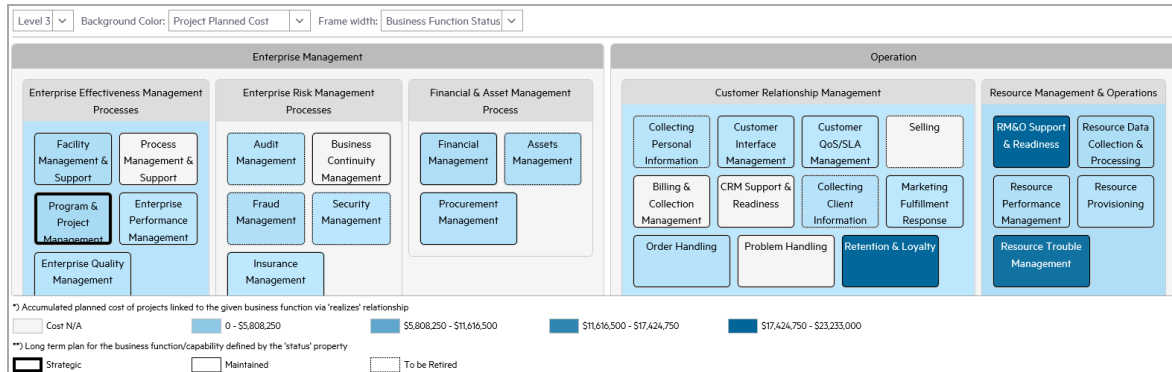
</div>

Save

Cancel

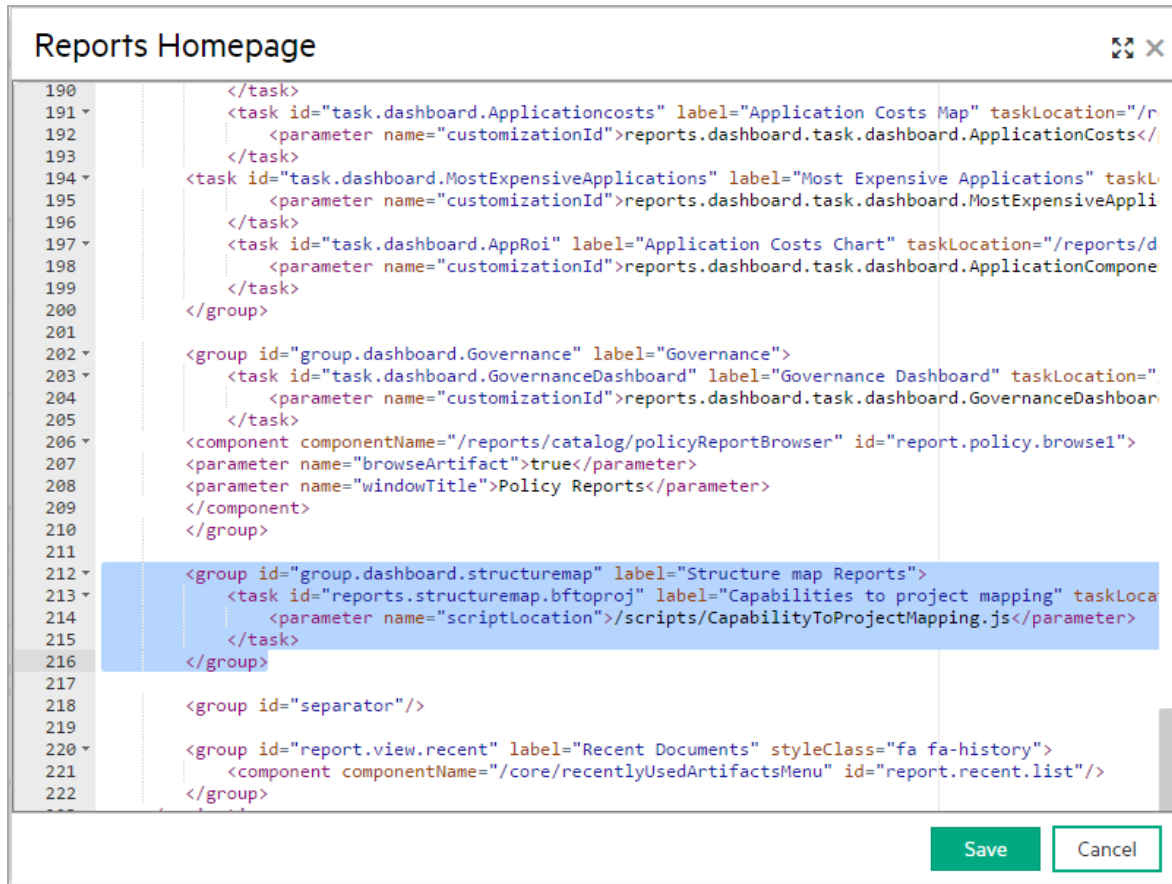
You can also create a new StructureMap portlet then use its script location for the **scriptLocation** parameter.

The resulting artifact page shows the embedded structure map component like this:



- To add a menu link to a structure map page that will display in the Reports tab, add this code to the script:

```
<task id="reports.structuremap.bftoproj" label="Capabilities to project mapping" taskLocation="/ui-ea-catalog/structureMap">
  <parameter name="scriptLocation">/scripts/CapabilityToProjectMapping.js</parameter>
</task>
```



Your new menu link will appear when you access the Reports tab.

4. To add a menu link to a structure map page that will display in the Catalog tab, add this code to the script:

```
<task id="reports.structuremap.bftopproj" label="Capabilities to project
mapping" taskLocation="/ui-ea-catalog/structureMap">
  <parameter name="scriptLocation">/scripts/CapabilityToProjectMapping.js
  </parameter>
</task>
```

Your new menu link will appear when you access the Catalog tab.

How to Customize Homepages

Each role-based UI opens with a homepage for that role when a user logs in.

You can customize the following elements of the homepage:

- Customize the page layout using the **Customize** link at the top right of the page.
For details, see ["How to Customize Homepage Layouts" below](#).
- Customize HTML area Useful Links, using the **Edit** link in the component.
For details, see ["How to Customize HTML Areas" on the next page](#).
- Customize Search using the **Customize** link in the Search component.
For details, see ["How to Customize Search Components" on page 136](#).
- Customize Latest Events by clicking on the Customize link in the Latest Events Component
For details, see ["How to Use Events" in the User Guide](#).

How to Customize Homepage Layouts

You can customize the order and placement of components on the homepage as well as the value of some of the components (if applicable).

To customize the homepage layout:

1. In the customization view of the role specific UI, navigate to the homepage, and click **Customize** in the top right of the page.

An XML editor window opens displaying the XML extract for the page.

The page layout forms the following hierarchy of elements:

- <columns>

The holding element for a page layout.

- <column>

Contains the content of each column, usually a set of components organized into one or two columns.

- <component>

A more complex piece of functionality, such as the Search component.

2. Modify the XML extract as required.

For more details, see ["Page Layout Customization Reference" on page 170](#).

Tip: HPE recommends only using this customization to move components on the page or to

remove them from the page.

3. Click **Save** to save your changes locally.

How to Customize HTML Areas

On the homepage, **Useful Links** is a customizable HTML area.

To customize an HTML area:

1. In the customization view of the role specific UI, navigate to the homepage.
2. Click **Edit** for the HTML area you want to customize. The rich-text HTML editor for the component opens.
3. Edit the rich text HTML as required.

You can edit rich text using the Editor toolbar buttons, or switch to source HTML editing with the button.

For details of allowed source HTML content, see "[HTML Areas Customization Reference](#)" on [page 189](#).

4. Click **Save** to save your changes locally.

How to Customize Browse Pages

The links in the Artifact part of the menu open Browse Artifact pages for the particular artifact type. Browse pages consist of multiple sets of filters, search criteria, and results tables and so provide multiple ways to browse a particular artifact type.

Each filter (for example, **All** or **Favorite** in the drop-down) represents a particular query on the artifact type and links to a particular set of search criteria and a results table.

Caution: To enable browse pages for an artifact type, make the artifact type a primary artifact in the tab configuration. For details, see "How to Create Role-Based Tabs".

The default browse page consists of customizable elements as shown in the image below.

The **Edit Page** button at the top-right of the page enables you to customize the table layout by adding or subtracting columns, rearranging column location, adding sections and adding properties to those sections.

Customize → Customize page layout

Customize → Customize queries or page filters

Application Interfaces

Edit Page

All

Located in: All Non-Reference

Filter

Customize → Customize search criteria

Customize → Customize table columns

+

×

...

□

-

Na

Export

Governance

Save as CSV

		Version	Domain	Rating	Package	Lifecycle Stage
<input type="checkbox"/> <input type="checkbox"/>	<div>☆</div> <div>Acc</div>	1.0	Demo Example Domain	☆☆☆☆☆		Initial
this web service provides information about mutual funds holdings.						
<input type="checkbox"/>	<div>☆</div> <div>AddDepositOrder</div>	1.0	Demo Example Domain	☆☆☆☆☆		Initial
<input type="checkbox"/>	<div>☆</div> <div>ArchiveDocument</div>	1.0	Demo Example Domain	☆☆☆☆☆		Initial
<input type="checkbox"/>	<div>☆</div> <div>BankAccountService</div>	1.0	Demo Example Domain	☆☆☆☆☆		Production

<http://mercury.dss/> - BankAccountService (generated from WSDL)

Edit Browse Page For Application Interface

Define table in browse page.

Artifact Label:	<input type="text" value="Application Interface"/>
Artifact Label (plural):	<input type="text" value="Application Interfaces"/>

Menu Category: ▼

i Drag columns to reorder. Toggle eye icon to change visibility.

Table Columns:

		[No Name]	
		Name	
		Version	
		Domain	
		Rating	
		Package	
		Lifecycle Stage	
		Artifact Type	
		Owner	
		Keywords	
		Pending Tasks	
		Lifecycle Status	
		Lifecycle Process	
		Last Approved Stage	
		Last Approved Date	
		Modified	
		Lifecycle Compliance	

For details of these customizations, see the following sections:

- "How to Customize Browse Page Filters" on the next page
- "How to Customize Browse Page Search Criteria" on page 146
- "How to Customize Browse Page Tables" on page 147

How to Customize Browse Page Filters

The content of the table in browse pages and the criteria used by the search component are linked to search filters. Each filter is a query on the artifact type.

Each filter is associated with a corresponding set of search criteria and a table. The following example sets two filters for the Application Components browse page, All Application Components, and Favorite Application Components:

To create a set of browse page filters:

1. Open the **Application Components** browse page, as described in "Customizing Browse Artifact Pages".
2. Click **Customize** above the filters to open the XML representation of the page filters.
3. Replace the default content with the following XML extract:

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="cust artifactView.xsd">
  <queries>
    <item icon="All" id="allServices" label="All">
      <datasource>
        <query> select from applicationComponentArtifact s </query>
      </datasource>
      <parameter name="criteria">${customizationId}.criteria</parameter>
      <parameter name="table">${customizationId}.results</parameter>
    </item>
    <item icon="Favorites" id="favoriteServices" label="Favorite"
selected="true">
      <datasource>
        <query> select from applicationComponentArtifact s where s._isFavorite
= 1 </query>
      </datasource>
      <parameter name="criteria">${customizationId}.criteria</parameter>
      <parameter name="table">${customizationId}.results</parameter>
    </item>
  </queries>
</customization>
```

Each filter consists of a datasource containing a DQL query. For more details about DQL queries, see "Using DQL" in the *Customization Guide*.

For more details, see ["Query Selector Customization Reference" on page 182](#).

4. Click **Save** to create your Application Component search filters.

To complete the application of the filters modify the search component and table for each filter.

For details of these customizations, see the following sections:

- ["How to Customize Browse Page Search Criteria" below](#)
- ["How to Customize Browse Page Tables" on the next page](#)

How to Customize Browse Page Search Criteria

Browse pages contain a search component enabling you to quickly find the artifacts in the table of artifacts. There are multiple search components to correspond with each filter in a browse page.

To demonstrate the functionality of these elements the following example describes the creation of search criteria for the All filter for Application Components:

To create search criteria:

1. Edit the **Application Components** browse filters, as described in ["How to Customize Browse Page Filters" on the previous page](#).
2. Click the **All** filter to refresh the page with the search criteria for that filter.
3. Click **Customize** inside the search box to open the XML representation of the search criteria.
4. Replace the default content with the following XML extract:

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="cust artifactView.xsd">
  <search>
    <criteria id="nameAndDescription" label="" type="properties" visible="true"
      widget="search:nameAndDescription">
      <parameter name="name">name</parameter>
      <parameter name="name">description</parameter>
    </criteria>
```

```
<criteria id="timing" label="Timing Required" type="property"
visible="false">
  <parameter name="name">s.timingRequired</parameter>
</criteria>
</search>
</customization>
```

For more details, see ["Search Criteria Customization Reference" on page 183](#).

5. Click **Save** to create the Application Components search criteria for the All filter.
6. Repeat this procedure selecting the **Favorites** filter with an appropriate criteria customization.

In this example, the main text box query is for name and description and the Timing Required property is now available as an additional criteria for the search. Set `visible=true` to make additional criteria appear by default in the search component.

Notice that the `timing` criteria uses a property of Application Components defined by the SDM model and the alias set in the filter customization. For more details about DQL queries, see "Using DQL" in the *Customization Guide*.

How to Customize Browse Page Tables

Browse pages contain a table listing artifacts primarily determined by the datasource query from the selected filter and then any specified search criteria from the search component.

The table consists of the following elements:

- A set of facets, enabling you to reduce the table content according to the selectable criteria.
- A table of artifacts.

To demonstrate the functionality of these elements the following example describes the creation of a results table for the All filter for the Browse Application Components page:

To create a table:

1. Edit the **Application Components** browse filters, as described in ["How to Customize Browse Page Filters" on page 145](#).
2. Click the **All** filter to refresh the page with the table for that filter.
3. Click **Customize** in the table component to open the XML representation of the table.
4. Replace the default content with the following XML extract:

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="cust table.xsd">
  <table>
    <column filterBy="s.name" id="name" label="Name" sortBy="s.name">
      <content componentName="/core/util/artifactLinkRenderer">
        <parameter name="uuid" queryColumn="s._uuid"/>
        <parameter name="caption" queryColumn="s.name"/>
        <parameter name="sdmName" queryColumn="s._sdmName"/>
      </content>
    </column>
    <rowPreview id="description">
      <content queryColumn="s.description"/>
    </rowPreview>
  </table>
  <facets>
    <facet id="impactFacet" label="Business Impact"
      queryColumn="s.businessImpact" type="category"/>
  </facets>
</customization>
```

For more details, see ["Table Customization Reference" on page 174](#).

5. Click **Save** to create your Application Components table.
6. Repeat this procedure selecting the **Favorites** filter with an appropriate table customization.

In this example, the table contains a link to each Application Component artifact using the core artifactLinkRenderer component and the description property and a facet for filtering the table by Business Impact categories.

Notice that the table content is defined by SDM property names and the alias set in the filter query. For more details about DQL queries, see "Using DQL" in the *Customization Guide*.

How to Customize Create / Edit Artifact Pages

Clicking **Create** in the **Artifact** menu Create Artifact page for the artifact type. Access Edit Artifact pages from the context actions component in on the right side of artifact detail pages.

The customization for a create/edit artifact page is very similar to the customization for the artifact detail pages. There are two customization links at the top-left, the first contains the page layout which usually only contains the /detail/editArtifactProperties component and should not need any

customization. The second link refers to the artifact content and is similar to the customization for the artifact content in artifact detail pages. The customization usually consists of a set of artifact properties and related artifact tables with add/upload functionality.

To customize a create/edit artifact page:

1. In the customization view of the role specific UI, navigate to the new/edit artifact page you want to modify, and click the second **Customize** at the top-left of the page.

An XML editor window opens displaying the XML extract for the page content.

The customization contains a set of property and component elements that are usually organized into groups with label headings.

2. Modify the XML extract as required.

For details, see ["Artifact Content Customization Reference" on page 172](#)

3. Click **Save** to make your changes.

The following example extends the existing Create Application Component page with the addition of the Business Impact property and a Documentation table with Add, Upload, and Delete functionality.

To add a Documentation table to the Create Application Component page:

1. Click the **Application Component** link in the **Create** section of the menu as described in ["How to Customize Menus" on page 137](#).
2. Click **Application Component** to the existing Create Application Component page.
3. Click the second **Customize** link to open the default XML representation of the content of the page.
4. Add the following property element between description and keywords to add the Business Impact taxonomic property:

```
<property name="businessImpact" id="businessImpact"/>
```

5. Add the following XML extract after the Objectives group to add a Documentation table at the bottom of the page:

```
<group id="documentation" label="Documentation">
  <component componentName="/core/relations/genericRelationshipComponent"
id="documentation.table">
    <parameter name="tableDefinitionId">${parentCustomizationId}.documentation
    </parameter>
    <parameter name="relation">documentation</parameter>
    <parameter name="artifact">${artifact}</parameter>
```

```
</component>  
</group>
```

The most significant element in this extract is `<parameter name="relation">`. Use the SDM name of the relationship in this element to define which set of related artifacts the table handles.

6. Click **Save** to add property and the table to the page content.

This adds the property and the default documentation table which does not contain the required functionality and requires further customization.

7. Click **Customize** in the Documentation table to open the XML representation of the table.
8. Replace the content of the table customization with the following XML extract:

```
<?xml version="1.0" encoding="UTF-8"?>  
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"  
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"  
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
  xsi:schemaLocation="cust table.xsd">  
  <table selectionModel="multiple" visible="ifNotEmpty">  
    <rowId queryColumn="_uuid"/>  
    <column filterable="false" id="fav" label="" sortable="false">  
      <content componentName="/core/favorites/addFavorite">  
        <parameter name="uuid" queryColumn="_uuid"/>  
        <parameter name="mode">table</parameter>  
      </content>  
      <property name="menuDisabled">true</property>  
      <property name="fixed">true</property>  
      <property name="width">30</property>  
    </column>  
    <column filterBy="name" id="name" label="Name" sortBy="name">  
      <content componentName="/core/util/artifactLinkRenderer">  
        <parameter name="uuid" queryColumn="_uuid"/>  
        <parameter name="caption" queryColumn="name"/>  
        <parameter name="mode">data</parameter>  
      </content>  
    </column>  
    <column id="type" label="Document Type">  
      <content queryColumn="documentType.name"/>  
    </column>  
    <column id="version" label="Version">  
      <content queryColumn="version"/>  
      <property name="hidden">true</property>  
    </column>  
    <column id="date" label="Date">  
      <content queryColumn="_revisionTimestamp"/>
```

```
</column>
<rowPreview id="description">
  <content queryColumn="description"/>
</rowPreview>
</table>
<actions>
  <actionComponent action="addDocumentArtifact"
    componentName="/core/documentation/uploadDocument"
    description="Upload a local file to the repository"
    id="addDocumentArtifact"
    label="Upload" styleClass="Upload">
    <parameter name="artifactType">DocumentationArtifact</parameter>
    <parameter name="artifact">${artifact}</parameter>
    <parameter name="datasource">${datasource}</parameter>
  </actionComponent>
  <actionComponent action="addRelation"
    componentName="/core/rerelations/addRelation"
    description="Add an existing artifact" id="addRelation" label="Add"
    styleClass="Add">
    <parameter name="relation">${relation}</parameter>
    <parameter name="artifact">${artifact}</parameter>
    <parameter name="datasource">${datasource}</parameter>
  </actionComponent>
  <actionComponent action="removeRelation"
    componentName="/core/rerelations/removeRelation"
    description="Delete selected items" id="removeRelation"
    label="Delete" styleClass="Remove">
    <parameter name="selectionBag">${selectionBag}</parameter>
    <parameter name="relation">${relation}</parameter>
    <parameter name="artifact">${artifact}</parameter>
    <parameter name="datasource">${datasource}</parameter>
  </actionComponent>
</actions>
</customization>
```

This XML is a copy of the customization for the Documentation table in the Create Service page and requires no modification to function in the Create Application Component page.

9. Click **Save**. The table now contains Add, Delete, and Upload functionality.

How to Customize Artifact Detail Pages

Clicking an artifact name opens a detail page for the artifact. Depending on the artifact type, the page contains a set of artifact properties, related artifact tables, context actions, a number of components and thirteen tabs offering different views of the artifact.

Caution: There must be an instance of the artifact type accessible to users in the UI in order to be able to navigate to the artifact details page.

The default artifact detail page consists of the following customizable elements:

- Click **Customize** at the top-left of the page to modify the overall layout of the page.
For details, see [""How to Customize Artifact Detail Tab Layouts" below](#).
- Click **Customize** above the artifact name to customize the set of artifact properties and related artifacts shown for the artifact type.
For details, see [""How to Customize Artifact Detail Page Properties" on the next page](#).
- Click **Customize** in a component to customize that component, for example, context actions, projects, and contacts.
For example, see ["Context Actions Customization Reference" on page 180](#).

How to Customize Artifact Detail Tab Layouts

Artifact detail pages consist of two columns, containing artifact properties, related artifact tables, and a set of components.

To customize a detail tab layout:

1. In the customization view of the role specific UI, navigate to the tab page you want to modify, and click **Customize** in the top left of the page under the tab name.

An XML editor window opens displaying the XML extract for the page.

2. Modify the XML extract as required.

The XML extract for a page layout may contains the following customizable elements:

- An artifact details component in the left column.
- A set of components in the right column.
- A table

3. Click **Save** to save your changes locally.

How to Customize Artifact Detail Page Properties

The properties and related artifacts shown for an artifact are determined by the artifact details component.

To customize a detail page component:

1. In the customization view of the role specific UI, navigate to the detail page you want to modify, and click **Customize** for the component you want to modify.

An XML editor window opens displaying the XML extract for the component.

For example, in the detail page for an Application Component, click **Customize** above the Application Component name to modify its details layout.

2. Modify the XML extract as required.

For details, see [“Artifact Content Customization Reference” on page 172](#).

For example, add the following extract to the `general` element of the Application Component details XML representation:

```
<property name="businessImpact" id="businessImpact"/>
```

Adding a table of related artifacts is the same as described in the example in “Customizing Create/Edit Artifact Pages”.

3. Click **Save** to make your changes.

In this example, Business Impact and the value for the Application Component appears in the Application Component properties section of the page.

How to Display Relationship Attributes in Relationship Editor

To display relationship attributes, customization of relationship components must be updated manually or by using Generate from SDM (if relationship attributes are defined in SDM). For example, to display the ‘useType’ attribute of *realizes* relationship between deliverableArtifact and businessFunctionArtifact, add the following parameters to the customization of *Realizes* relationship component in the Deliverable Artifact overview page.

Relationship Attributes in SDM:


```
<realizes localName="businessFunctionArtifact">  
  <attribute label="Target Stage" mappedTo="useType" major="true"/>  
</realizes>
```

Relationship Attributes in UI:




```
<parameter name="attrLabels"> Target Stage </parameter>  
<parameter name="attrMappedTargets">useType </parameter>  
<parameter name="attrMajors">true </parameter>
```


Note: All parameters are comma-separated strings, including attrMajors. If attrMajors contains at least one 'true' value, relationship attributes are displayed as icons.

Deliverable - A/R Billing Upgrade

Owner:  Mary River

Relationships

Realizes: Service Strategy & Planning , Fraud Management  


Realized By: A/R Billing Upgrade 

Relationship Attributes


Target Stage: Candidate


To switch to inline display, change all values of attrMajors to 'false'.

Deliverable - A/R Billing Upgrade

Owner:  Mary River

Relationships

Realizes: Service Strategy & Planning (Target Stage: Candidate), Fraud Management (Target Stage: Candidate) 

Realized By: A/R Billing Upgrade 

How to Customize Artifact Selection in Survey

Administrators can define a custom filter for artifacts to be viewed in Assessment Portfolio and selected in the Start Survey wizard. For example: administrators might want to show Application Components which are in 'Candidate' stage only when starting new surveys.

To define a custom artifact selection, follow the steps below:

1. Open a survey definition
2. Click **Edit > Change Properties**. In **Artifact Selection CustomizationID** field, enter a new ID.
For example: filter1.

The screenshot shows the 'Cloud Technical Assessment' Survey Definition form. The 'Artifact Selection CustomizationID' field is highlighted with a red box and contains the text 'filter1'. Other fields include 'Name', 'Description', 'Applicable to Artifacts', 'Target Contact Roles', 'Script Language', 'Execute on', and 'Save/Cancel' buttons.

3. Switch to Customization mode
4. Open **Assessment Portfolio** tab of the survey definition and click the **Customize** link above the filter box.

The screenshot shows the 'Cloud Technical Assessment' Survey Definition form in the 'Assessment Portfolio' tab. The 'Customize' link is highlighted with a red box. The form displays a list of artifacts with a filter box and a 'Filter' button.

5. Add condition `b._currentStage.name = 'Candidate'` and to 'where' clause of **All that have not been surveyed yet** filter and click **Save**.

Query list of Survey (applicationComponentArtifact)

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization" xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization" >
3   <queries>
4     <item icon="All" id="notSurveyedYet" label="All that have not been surveyed yet" selected="true">
5       <datasource>
6         <query>
7           select :columns from artifactBase b where b._currentStage.name = 'Candidate' and b._uuid not in (
8             select iner._uuid from artifactBase iner, surveyArtifact s (force_all_domains), surveyDefinitionArtifact
9             where bind(s.surveyedArtifacts, iner) and bind(s.surveyDefinition, d)
10            and d._uuid = :surveyDefUuid) and :dqlCondition
11         </query>
12         <parameter name="surveyDefUuid"/>
13       </datasource>
14       <parameter name="criteria">criteria</parameter>
15       <parameter name="table">results</parameter>
16     </item>
17     <item icon="All" id="alreadySurveyed" label="Already surveyed">
18       <datasource>
19         <query>
20           select :columns from artifactBase b where b._uuid in (
21             select iner._uuid from artifactBase iner, surveyArtifact s (force_all_domains), surveyDefinitionArtifact
22             where bind(s.surveyedArtifacts, iner) and bind(s.surveyDefinition, d)
23             and d._uuid = :surveyDefUuid) and :dqlCondition
24           </query>
25           <parameter name="surveyDefUuid"/>
26         </datasource>
27       </item>

```

Save Cancel

- The list of artifacts refreshes to show only Application Components in 'Candidate' stage.

Overview Customize
Preview Customize
Assessment Portfolio Customize
Access Rights Customize

Here you can see the status of the artifacts that are subject to this survey - both that have been surveyed already and also those that are still waiting for assessment.

All that have not been surveyed yet Filter

	Name	Vers...	Alias	Transformation Stra...	Domain	Rating	Package	Lifecycle Stage	Artifact Type
<input type="checkbox"/>	ASCENT DB	1.0		Transform	Demo Example Domain	☆☆☆☆		Candidate	Database Schema
<input type="checkbox"/>	ASCENT Web	1.0		Transform	Demo Example Domain	☆☆☆☆		Candidate	J2EE Application
<input type="checkbox"/>	Analyst Research	0.2			Demo Example Domain	★☆☆☆		Candidate	Application Component
<input type="checkbox"/>	Brand Identity	6.2		Postpone	Demo Example Domain	★☆☆☆		Candidate	Application Component
<input type="checkbox"/>	BrandMart	9.1		Automated	Demo Example Domain	★★★★☆		Candidate	Application Component

- Exit Customization mode. Start a new survey. For more details, see "Starting New Survey" in *User Guide*.
- In the second step of start survey wizard, you will see only Application Components in 'Candidate' stage for selection.

Start survey 'Cloud Technical Assessment'

Select the artifacts you want to be surveyed. You can see all the artifacts that have not been surveyed yet. You can switch the table to display all and further filter the list. If you are missi

All that have not been surveyed yet								
Filter								
<input checked="" type="checkbox"/>	Name	Version	Alias	Transform...	Domain	Rating	Package	Lifecycle Stage
<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/>	Monitors	1			Demo Example Domain	★★★★☆		Candidate
Acronym: MONPurpose: Phasellus consequat pharetra ligula, id placerat eros fermentum consectetur.								
<input checked="" type="checkbox"/>	Estate Management	1.2			Demo Example Domain	☆☆☆☆☆		Candidate
Acronym: ESMALias: EstateMPurpose: Vivamus pretium nisi in velit blandit dictum elementum leo sollicitudin.								
<input checked="" type="checkbox"/>	Analyst Research	0.2			Demo Example Domain	★★★★☆		Candidate
Acronym: ARPPurpose: Sed commodo orci et felis consequat at euismod erat tempor.								
<input checked="" type="checkbox"/>	Doc Center	4.2			Demo Example Domain	☆☆☆☆☆		Candidate
Acronym: DCALias: DocPurpose: Etiam tincidunt quam convallis felis tempor molestie.								
<input checked="" type="checkbox"/>	Visual Studios	6.3			Demo Example Domain	☆☆☆☆☆		Candidate
Acronym: VSALias: StudiosPurpose: Suspendisse elementum orci quis mauris ullamcorper sed pharetra nibh pellentesque.								
<input checked="" type="checkbox"/>	Remote Install	8.3			Demo Example Domain	☆☆☆☆☆		Candidate
Acronym: RIALias: AutoInstallPurpose: Integer a diam libero, vitae egestas nulla.								
<input checked="" type="checkbox"/>	Reviews Repository	4.2			Demo Example Domain	☆☆☆☆☆		Candidate
Acronym: RRRPurpose: Vestibulum quis neque quis lacus molestie gravida.								

Note:

Artifact selection customization ID (for example: filter1) can be reused in another Survey Definition.

Administrators must release customization changes so that other users are able to see them. For more details, see ["How to Manage UI Customizations" on the next page](#)

How to Customize Categories

Within each role-based UI, categories are available for browsing or selection in the following places:

- The Categories component on the homepage.
- The Categories page accessible from the **View All Categories** link.
- The Add Categories function available in Create Artifact pages and as criteria in Search pages and components.


Each of these categories displayed is a predefined set of taxonomies which you can customize in the standard UI.


To customize categories:

1. In the Administration tab, click **Customize UI** to open the customization menu.
2. Click **Manage Categories** to open the dialog for the currently selected role tab

3. Clicking **Add Category** presents a list of categories that can be added once selected. Click **Add Selected** to make them visible. Categories can be deleted by clicking the red **X** on the right hand side of the named row.

Select Categories ×

 Customize

<input type="checkbox"/>	Name 
<input type="checkbox"/>	Contact classifications taxonomy
<input type="checkbox"/>	Account States
<input type="checkbox"/>	Application Architecture
<input type="checkbox"/>	Application Type
<input type="checkbox"/>	Artifact types taxonomy.
<input type="checkbox"/>	Assertion Classification Taxonomy
<input type="checkbox"/>	Associated application taxonomy
<input type="checkbox"/>	Binary Document Type
<input type="checkbox"/>	Broker type
<input type="checkbox"/>	Buffer Type

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Add Selected

4. Click **Save**.

How to Manage UI Customizations

The Manage Customizations page lists all role-based UI customizations, both Public and Private. Access the page by clicking the **Manage Customizations** link in the Customization menu in customization mode.

The Manage Customizations page contains a table of unreleased customizations, an import tool, a delete option and a history.

The table of customizations contains the following functionality:

- **Release**

Select private customizations, and click **Release** to make them public. All users in the appropriate role view these customizations the next time they log in.

- **Delete**

Select private customizations, and click **Delete** to remove them from your local version.

- **Restore**

Select public customizations, and click **Restore** to remove these customizations and change to the default version.

Use the import functionality to transfer customizations between different HPE EM servers.

To import UI customizations:

1. In the Manage Customizations page, click **Import** and then **Browse** to locate your customization archive, or input the full path.
2. Click **Import** to upload the selected customization archive.

Tab Customizations enable you to modify the configuration of the tabs for particular user roles, or create new tabs for existing perspectives.

For details, see and ["How to Create Role-Based Tabs" below](#)

How to Create Role-Based Tabs

As well as customizing the default tabs provided for the Business Analyst and Business Partner, you can create additional tabs for specified user perspectives.

To create a role-based tab:

1. From the Administrator Tab, start Customization mode by clicking the **Customize UI** link
2. Select the role from the drop-down list for which a new tab is required and click **Manage tabs**

A list of existing tabs for this role is displayed.

3. Click the **Add Tab** button, enter a name for the tab and click **Add** to create the tab.

Tab Name	Tab Hint
Catalog	Shared catalog
Reports	
Navigator	

Tab name:
demo tab 2

Tab hint:
demo name

Add

X

Add Tab

The location of the tab can be moved by clicking and holding on the far right of the named row and dragging it to the desired location. Upon refreshing the page, the tab will be visible in the selected location.

Note: Default tabs cannot be deleted, only the newly created ones can be deleted.

4. Create the pages for your new tab. For ease of customization, HPE recommends copying equivalent customizations from another tab of the same type, pasting them into the new tab and making your required changes.

HPE suggests making your customizations in the following order:

- a. Customize the menu to create a set of navigation links enabling you to open the pages you require.

For details, see ["How to Customize Menus" on page 137](#) and ["Menu Customization Reference" on page 168](#).

- b. Customize the homepage.

For details, see ["How to Customize Homepages" on page 141](#) and ["Page Layout Customization Reference" on page 170](#).

- c. Use the View links in your menu to access the Browse pages you want to customize.

For details, see ["How to Customize Browse Pages" on page 143](#) and ["Page Layout Customization Reference" on page 170](#).

- d. Use the New links in your menu to access the Create pages you want to customize.

For details, see ["How to Customize Create / Edit Artifact Pages" on page 148](#) and ["Page Layout Customization Reference" on page 170](#).

- e. To customize artifact detail pages you need to create an artifact of that type. Either import a data set with artifacts visible to the perspective, or create a set of New links in the menu so that you can create artifacts.

Click the View link to open the browse page for the artifact type you want to modify, and then click an artifact name to open the artifact detail page.

For details, see ["How to Customize Artifact Detail Pages" on page 151](#) and [""Page Layout Customization Reference" on page 170](#).

- f. Use the Edit context action in your artifact detail pages to access the Edit pages you want to customize.

For details, see ["How to Customize Create / Edit Artifact Pages" on page 148](#) and ["Page Layout Customization Reference" on page 170](#).

How to Customize Relationship Editor

This section includes the explanation for the customization feature in the Relationships section of the artifact. Following topics are covered:

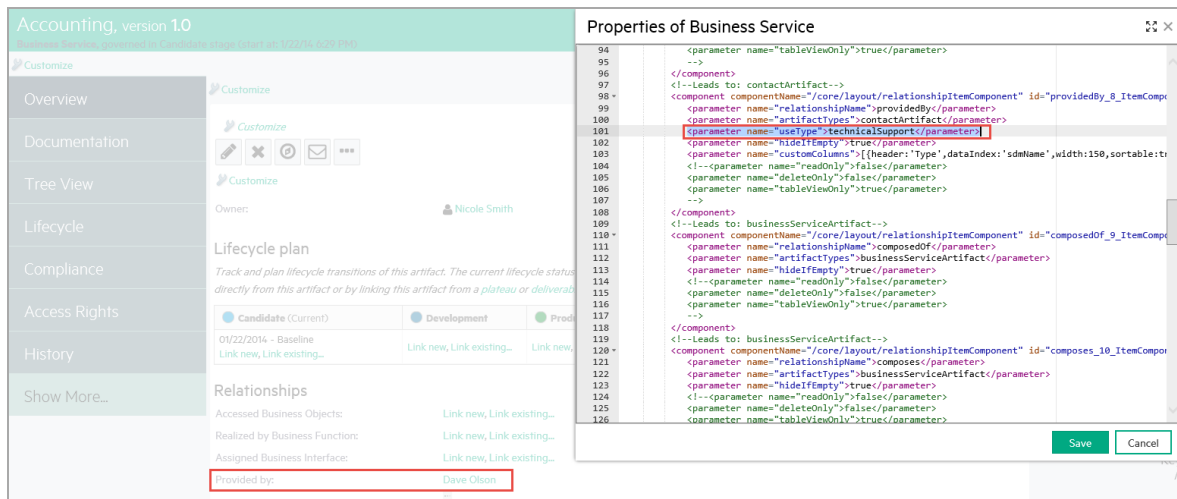
- ["How to Filter Relationship by Attributes" below](#)
- ["How to Display Relationship Attributes in Relationship Editor" on page 153](#)
- ["How to Hide Artifacts from Relationship Editor" on the next page](#)
- ["How to Change Display of Relationship Table" on page 164](#)

How to Filter Relationship by Attributes

You can customize the relationship editor to display specific relationships using relationship attributes to define relationships.

Currently only *useType* attribute and *providedBy* relationship is supported. To show only artifacts of a particular contact type of **Provided by** relationship, add the parameter below to the customization of the relationship editor:

```
<parameter name="useType">technicalSupport</parameter>
```

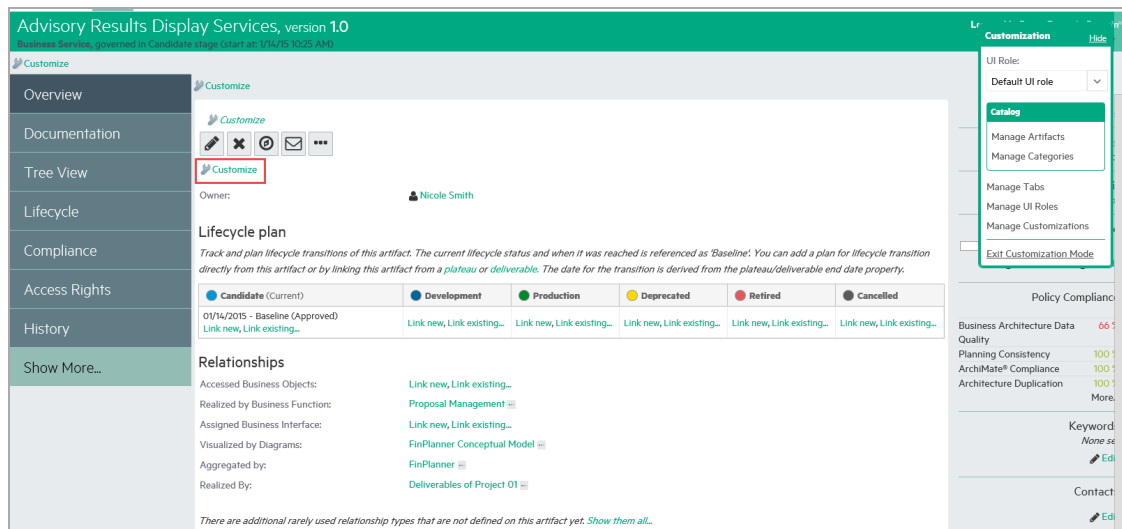


Note: The parameter accepts a single value only. If this value is invalid, all contacts are displayed.

How to Hide Artifacts from Relationship Editor

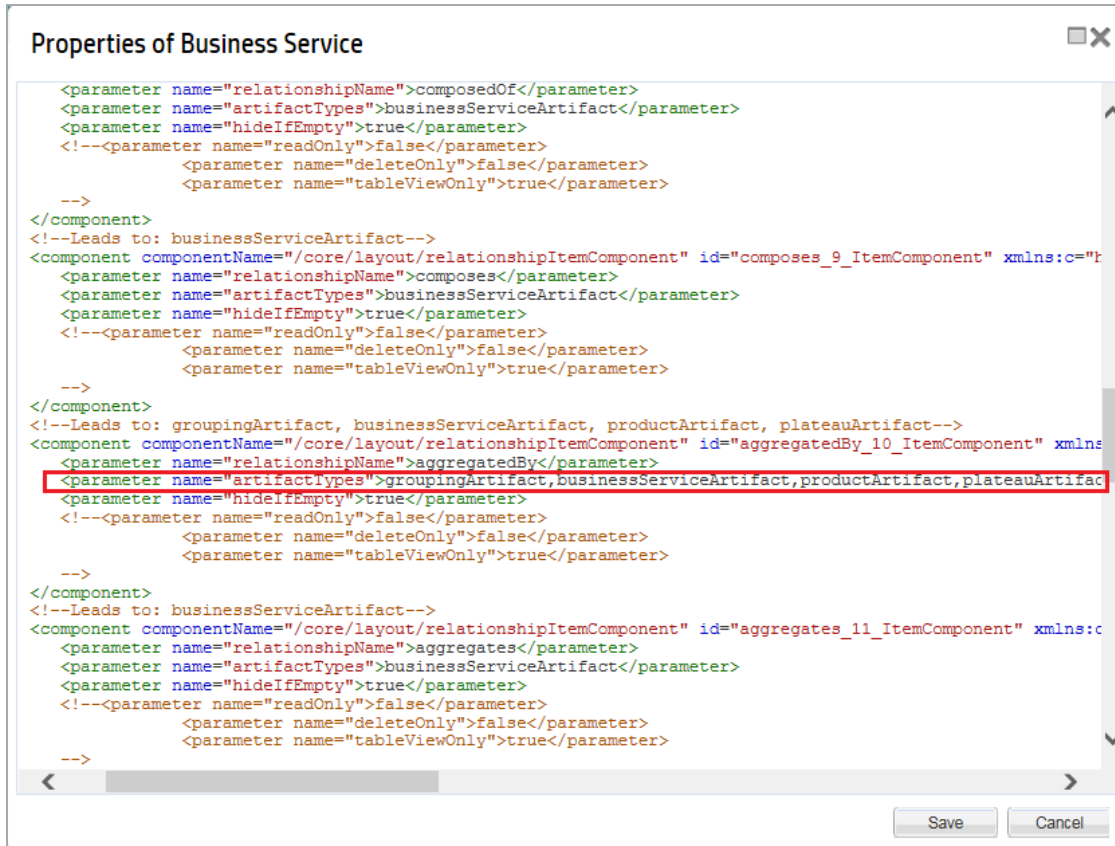
You can hide certain artifact type for a specific relationship with the use of `artifactTypes` parameter.

1. In the Customize UI mode click the **Customize** icon. Select the artifact you wish to customize.



2. Set the `artifactTypes` parameter as follows:

- To add a parameter:
 - `<parameter name="artifactTypes">artifact type name</parameter>`.
- Separate by comma for more than one artifact type.
- Artifacts not included in artifactTypes parameter are hidden from viewing and editing actions from Link new, Link existing or Table view.



The artifact types included in the artifactTypes parameter show up when you click the more button next to artifact name.

Relationships	
Accessed Business Objects:	Link new, Link existing...
Realized by Business Function:	Proposal Management ...
Assigned Business Interface:	Link new, Link existing...
Requirements:	Link new, Link existing...
Visualized by Diagrams:	FinPlanner Conceptual Model ...
Used by Interactions:	Link new, Link existing...
Influenced Values:	Link new, Link existing...
Provided by:	Link new, Link existing...
Composed of:	Link new, Link existing...
Composes:	Link new, Link existing...
Aggregated by:	FinPlanner ...
Aggregates:	Link new, Link existing...
Realized By:	Link new, Link existing...
Assigned From:	Link new, Link existing...
Used By:	Link new, Link existing...
Associated with:	Link new, Link existing...
Specialized by:	Link new, Link existing...
Specializes:	Link new, Link existing...
Triggered by:	Link new, Link existing...

How to Change Display of Relationship Table

Relationship table displays artifacts related to the current artifacts, linked with each other by a distinctive relationship.

When you click the more button for a relationship and select Table view, it displays the relationship table in a new pop-up window by default. However, this default behavior can be changed to display the table inline by changing the value of the `tableViewOnly` parameter.

Therefore, the values assigned can be as follows:

- `false` : shows relationship table in a pop-up dialog upon clicking **Table view** menu
- `true`: shows relationship table inline within the web page

Pop-up window:

Below is the display of relationship table when `tableViewOnly` is set to *false*. This is also the default setting.

Overview

Documentation

Tree View

Lifecycle

Compliance

Access Rights

History

Show More...

Owner:

Nicole Smith

Lifecycle plan

Track and plan lifecycle transitions of this artifact. The current lifecycle status and when it was reached is referenced as 'Baseline' directly from this artifact or by linking this artifact from a *plateau* or *deliverable*. The date for the transition is derived from the

<div>Candidate (Current)</div>	<div>Development</div>	<div>Production</div>	<div>Deprecated</div>
01/13/2015 - Baseline (Approved) Link new, Link existing...	Link new, Link existing...	Link new, Link existing...	Link new, Link existing...

Relationships

Accessed Business Objects: [Link new, Link existing...](#)

Realized by Business Function: [Collecting Client Information, Proposal Management](#)

Assigned Business Interface: [Link new, Link existing...](#)

Requirements: [Link new, Link existing...](#)

Visualized by Diagrams: [FinPlanner Conceptual Model](#)

Used by Interactions: [Link new, Link existing...](#)

Influenced Values: [Link new, Link existing...](#)

Provided by: [Link new, Link existing...](#)

Composed of: [Link new, Link existing...](#)

+ Link new

Link existing

Table view

"Advisory Results Display Services" Realized By

+ ▾

▾

✕

<input type="checkbox"/> Name ↑	Type	Version	Stage
<input type="checkbox"/> Collecting Client Information	Business Function	1.0	Supported
<input type="checkbox"/> Proposal Management	Business Function	1.0	Deprecated

<

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Displaying 1 - 2 of 2

Close

Inline Display:

To change the table view to inline:

1. Switch to Customization mode.
2. Open the detailed page of the artifact (for example: Application Component).
3. Click the **Customize** button in Relationship Editor section.
4. Navigate to <component> element of the relationship you wish to customize for the table view (for example: *uses*).
5. Uncomment tableViewOnly parameter, and change the value to *true* or *false*.

```
<component componentName="/core/layout/relationshipItemComponent"
id="uses_5_ItemComponent"
xmlns:c="http://soa.systinet.hp.com/2009/02/ui/customization">
  <parameter name="relationshipName">uses</parameter>
  <parameter name="label">Used Infrastructure</parameter>
  <parameter
name="artifactTypes">infrastructureInterface,infrastructureServiceArtifact,node
Artifact</parameter>
  <parameter name="tableViewOnly">true</parameter>
</component>
```

See below the display of the relationship table when tableViewOnly is set to *true*:

Relationships

Realized application services:

Link new, Link existing...

Used Servers/Nodes:

Link new, Link existing...

Realized by Projects:

Link new, Link existing...

Financial Profile:

Agresso 3.1 for FY2015

Financial Profiles History:

Link new, Link existing...

Fully Automates:

Link new, Link existing...

Used Application Architecture

<div><input type="checkbox"/></div> <div>Name ↑</div>	Type	Version	Stage
<div><input type="checkbox"/></div> <div>Grow</div>	Application Compon...	6.3	Candidate
<div><input type="checkbox"/></div> <div>Signage</div>	Application Compon...	2	Candidate

Displaying 1 - 2 of 2

UI Customization Reference

This section contains a reference guide to customizing role-based UIs in the following sections:

- ["Generic XML Customization" below](#)
- ["Customizable Components Reference" on the next page](#)
- ["Reusable UI Components Reference" on page 190](#)
- ["Reusable UI Tasks Reference" on page 201](#)

Generic XML Customization

A typical UI customization XML contains the following:

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="cust table.xsd">
  ...
</customization>
```

- An XML definition, with recommended UTF-8 encoding.
- A root customization element.

This element must use namespace `http://soa.systinet.hp.com/2009/02/ui/customization` and must have an associated XML schema, in this example, `table.xsd`.

In many places in customization XMLs, you can use JSTL expression language to provide runtime values. For example, in an artifact detail page you can use expression `${artifact._uuid}` as a datasource parameter. HPE EM replaces this parameter during runtime with the UUID of the current artifact.

If you use another customizable component in a customization, you must provide a `customizationId` parameter for it. You can use the following type of expression to provide a parameter:

```
<parameter name="customizationId">${parentCustomizationId}.aboutText</parameter>
```

This expression means, use the customization ID of the component and add `.aboutText` to it. If you use this in the analyst homepage (with customization ID `analyst.homepage` the included component has customization ID parameter `analyst.hhomepage.aboutText`.

Customizable Components Reference

Each page in a role-based UI consists of a set of customizable elements which may contain further customizable elements.

This section describes the main customizable elements, their typical XML, and the attributes for each XML element, in the following sections:

- ["Menu Customization Reference" below](#)
- ["Page Layout Customization Reference" on page 170](#)
- ["Artifact Content Customization Reference" on page 172](#)
- ["Table Customization Reference" on page 174](#)
- ["Context Actions Customization Reference" on page 180](#)
- ["Query Selector Customization Reference" on page 182](#)
- ["Search Criteria Customization Reference" on page 183](#)
- ["Search Component Customization Reference" on page 186](#)
- ["HTML Areas Customization Reference" on page 189](#)

Menu Customization Reference

Role-based UIs display a navigation menu on the left of all pages. The menu consists of grouped items and components and must conform to the `navigation.xsd` schema.

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="cust navigation.xsd">
  <navigation>
    <group id="analyst.view" label="View">
      <task id="analyst.view.home" label="Home"
        taskLocation="/analyst/homepage"/>
      <task id="analyst.view.favorites" label="Favorites"
        taskLocation="/common/favorites"/>
      <ruler id="analyst.view.ruler1"/>
      <task id="analyst.view.services" label="Services"
        taskLocation="/analyst/browseArtifact">
```



```

        <parameter name="artifactType">businessServiceArtifact</parameter>
      </task>
      ...
    </group>
    <group id="analyst.new" label="New">
      <task id="analyst.new.service" label="Service"
        taskLocation="/analyst/newArtifact">
        <parameter name="sdmName">businessServiceArtifact</parameter>
      </task>
      ...
    </group>
    <group id="analyst.recent" label="Recent Documents">
      <component componentName="/core/recentlyUsedArtifacts"
        id="analyst.recent.list"/>
    </group>
  </navigation>
</customization>

```

The customization XML for the menu contains the following tags with their attributes and parameters:

XML Element	Description (Contains elements)	Attributes	Description
<navigation>	Containing element for the menu. <ul style="list-style-type: none"> • <group> 		
<group>	Provides a visual grouping of navigation items. <ul style="list-style-type: none"> • <task> • <component> • <ruler> 	id	A unique group identifier.
		label	The group display name.
<task>	Defines a link to a framework task defined in the framework configuration file (webui.xml). <ul style="list-style-type: none"> • <parameter> 	id	Unique task identifier.
		label	The link label.
		taskLocation	The target task URI.
<component>	Includes a more complex piece of functionality into the menu (for example, Recent Documents).	componentName	The component identification as defined in the web framework

XML Element	Description (Contains elements)	Attributes	Description
	<ul style="list-style-type: none"> <parameter> 		configuration file (webui.xml).
		id	A unique component placement identifier.
<ruler>	Display an item separator line.	id	A unique ruler identifier
<parameter>	Optional name and value parameter pairs to pass to the target task or component.	name	Parameter name with the value expressed as the parameter element content.

Page Layout Customization Reference

Page layouts define the content of pages. They are typically a set of components organized into a one or two column layout. Page customizations must conform to `columns.xsd`.

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="cust columns.xsd">
  <columns>
    <column id="leftColumn">
      <component componentName="/core/text/editableRichTextArea"
id="leftColumn.about">
        <parameter
name="customizationId">${parentCustomizationId}.aboutText</parameter>
        <parameter name="title">About Catalog</parameter>
      </component>
      <component componentName="/core/search/homepageSearch"
id="leftColumn.search">
        <parameter name="customizationId">${parentCustomizationId}.suggestedSearch
          </parameter>
        <parameter name="viewId">analyst</parameter>
      </component>
      ...
    </column>
    <column id="rightColumn">
      <component componentName="/core/contract/myContracts"
id="rightColumn.mycontracts">
        <parameter name="numberOfContracts">5</parameter>
      </component>
      <component componentName="/core/favorites/favoriteList"
```

```
id="rightColumn.favorites"/>
    ...
</column>
</columns>
</customization>
```

The customization XML for pages contain the following tags with their attributes and parameters:

XML Element	Description (Contains elements)	Attributes	Description
<columns>	Containing element for pages. <ul style="list-style-type: none"> <column> 		
<column>	Defines a page column with a unique ID. There must be one or two columns in a page. <ul style="list-style-type: none"> <component> 	id	A unique group identifier.
<component>	Includes a component into the column. Components appear in the same order as they are listed in the customization. <ul style="list-style-type: none"> <parameter> 	competent	The component identification as defined in the web framework configuration file (webui.xml). You can have multiple occurrences of the same component on a page but they must have different IDs.
		id	A unique group identifier.
<parameter>	Optional name and value parameter pairs to pass to the target component.	name	Parameter name with the value expressed as the parameter element content.

Role Customization Reference

The example syntax is:

```
<contextActions>
  <task id="navigator" label="Navigator" taskLocation="/common/navigator">
    <parameter name="uuid">${artifact._uuid}</parameter>\
    <restriction allowOwner="true">
      <visibleFor>ROLE1</visibleFor>
      <visibleFor>ROLE2</visibleFor>
    </restriction>
  </task>
```

```
</contextActions>
```

This declaration causes the "Navigator" link to be only displayed to users with ROLE1 or ROLE2. Note, that some built-in roles depend on licenses present (for example, PolicyDeveloper or ContractRequestor).

Items that can be restricted (inner element restriction in the customization XML):

- parameter
- property
- task
- group
- component

Visible for nested elements list required role(s), allowOwner flag allows access if the user owns the current artifact (e.g. when the artifact detail is being viewed).

Artifact Content Customization Reference

Artifact detail pages are typically organized into two columns with components in the right column and on the /detail/viewArtifactProperties component in the left column. You can access and customize the artifact content displayed in the left column with the **Customize** link at the top of the column. New Artifact pages usually contain the similar content to the left column of detail pages. The customization typically consists of components and properties organized into groups.

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemalocation="cust artifactDetail.xsd">
  <content>
    <property id="description" name="description"/>
    <group id="properties" label="">
      <property id="version" name="version"/>
      <property id="criticality" name="criticality"/>
      <component componentName="/core/contact/providerWrapper" id="provider">
        <parameter name="artifact">${artifact}</parameter>
        <parameter
name="customizationId">${viewId}.contacts.suggestedSearch</parameter>
      </component>
      <display componentName="/core/util/parentLinksRenderer" id="parentArtifacts"
```

```

label="Parent Artifacts">
  <parameter name="uuid">${artifact._uuid}</parameter>
  <parameter name="sdmName">${artifact._artifactSdmName}</parameter>
</display>
</group>
<group id="documentation" label="Documentation">
  <component componentName="/core/relations/genericRelationshipComponent"
id="documentation.table">
    <parameter name="tableDefinitionId">${parentCustomizationId}.documentation
    </parameter>
    <parameter name="relation">documentation</parameter>
    <parameter name="artifact">${artifact}</parameter>
  </component>
</group>
</content>
</customization>

```

The customization XML for artifact content contains the following tags with their attributes and parameters:

XML Element	Description (Contains elements)	Attributes	Description
<content>	Containing element for artifact content. <ul style="list-style-type: none"> • <group> • <property> • <component> • <display> 		
<group>	Surrounds a set of properties or components in a labelled colored block. <ul style="list-style-type: none"> • <property> • <component> • <display> 	id	A unique group identifier.
		label	An optional label for the group.
<property>	Displays and artifact property. There must be a defined widget for the property in the widgets configuration.	id	A unique property display ID.

XML Element	Description (Contains elements)	Attributes	Description
		name	The SDM name of the property.
		label	An optional property label. If a label is not specified the label from the SDM is used.
<component>	Includes a more complex piece of functionality, for example a table of related artifacts. <ul style="list-style-type: none"> <parameter> 	componentName	The component identification as defined in the web framework configuration file (<code>webui.xml</code>). You can have multiple occurrences of the same component on a page but they must have different IDs.
		id	A unique component placement identifier.
<display>	Provides the same functionality as a component with the additional option to add a label before the component. <ul style="list-style-type: none"> <parameter> 	componentName	The component identification as defined in the web framework configuration file (<code>webui.xml</code>). You can have multiple occurrences of the same component on a page but they must have different IDs.
		id	A unique component placement identifier.
		label	An optional label for the component.
<parameter>	Optional name and value parameter pairs to pass to the target component.	name	Parameter name with the value expressed as the parameter element content.

Table Customization Reference

HPE EM uses table components in many pages in the role-based UI. These tables display the results of a query provided by a datasource and provide filtering, sorting, and paging functionality. Table customizations must conform to `table.xsd`.

Table customizations contain a number of elements:

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
```

```
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="cust table.xsd">
<datasource>
  ...
</datasource>
<table>
  ...
</table>
<facets>
  ...
</facets>
<actions>
  ...
</actions>
</customization>
```

The following sections describe each of these elements:

- ["Datasource Customization Reference" below](#)
- ["Table Layout Customization Reference" on the next page](#)
- ["Table Actions Customization Reference" on page 179](#)

Datasource Customization Reference

A datasource provides a set of query results for a table. You can put the datasource in a table customization or alternatively, put it in another component customization (for example, search criteria) and pass it as a parameter to the table.

```
<datasource>
  <type>dsl</type>
  <query>select from businessServiceArtifact where b._uuid = :serviceUuid</query>
  <parameter name="serviceUuid">${artifact._uuid}</parameter>
</datasource>
```

The customization XML for a datasource contains the following tags with their attributes and parameters:

XML Element	Description (Contains elements)	Attributes	Description
<datasource>	Containing element for a datasource. <ul style="list-style-type: none">• <type>• <query>		

XML Element	Description (Contains elements)	Attributes	Description
	<ul style="list-style-type: none"> <parameter> 		
<type>	An optional element which defaults to dql.		
<query>	A shortcut for <parameter name="query"> containing the actual query.		
<parameter>	Optional name and value parameter pairs to replace query content specified by :parametername.	name	Parameter name with the value expressed as the parameter element content.

For more details about DQL queries, see "Using DQL" in the *Customization Guide*.

Note: Table components do not maintain the datasource instance. It is created on each request from the configuration and must be maintained by the calling component if it needs to be maintained in a session.

Table Layout Customization Reference

The <table> element of the customization defines the layout and functionality of the table itself.

```
<table visible="ifNotEmpty" selectionModel="multiple" filter="auto" pageSize="10">
  <rowId queryColumn="i._uuid"/>
  <column id="name" label="Name" sortBy="a.name" filterBy="a.name">
    <content componentName="/core/util/artifactLinkRenderer">
      <parameter name="uuid" queryColumn="a._uuid"/>
      <parameter name="caption" queryColumn="a.name"/>
    </content>
  </column>
  <column id="version" label="Version">
    <content queryColumn="a.version"/>
    <property name="hidden">true</property>
  </column>
  <rowPreview id="description">
    <content queryColumn="a.description"/>
  </rowPreview>
</table>
```

XML Element	Description (Contains elements)	Attributes	Description
-------------	---------------------------------	------------	-------------

<table>	<p>Containing element for a table layout controlling its global functionality.</p> <ul style="list-style-type: none"> • <rowId> • <column> • <rowPreview> 	visible	<p>Control table visibility with the following options:</p> <ul style="list-style-type: none"> • always: The table always displays even if it is empty. • ifDatasourceAvailable (default): Display the table if an executable datasource is passed to it. • ifNotEmpty: Display the table if the datasource returns at least one row.
		selectionModel	<p>Controls the row selection functionality with the following options:</p> <ul style="list-style-type: none"> • none (default): No row selection is available. • one: Displays radio buttons for single row selection. • multiple: Displays checkboxes for multiple row selection. If selectionModel is one or multiple then element <rowId> is required.
		filter	<p>Control column filter visibility with the following options:</p> <ul style="list-style-type: none"> • none: No column filters. • hidden: Add a link allowing users to display filters. • auto (default): Display filters if there is more than one page of unfiltered data. • visible: Always display column filters.
		pageSize	<p>Number of rows to display on a page (the default is 10).</p>

<rowId>	Adds a datasource column with unique row identification which is required if the selectionModel attribute is set in the <table> element.	id	A unique row preview identifier.
<column>	Defines table columns and their content. <ul style="list-style-type: none"> • <content> • <property> 	id	A unique column ID.
		label	An optional datasource column name used to sort the column.
		sortBy	An optional datasource column used to sort the column.
		sortable	An optional true (default) or false value to control if the column is sortable.
		filterBy	An optional datasource column name used to filter the column.
		filterable	An optional true or false value to control the visibility of the column filter.
		defaultSort Direction	An optional asc or desc value to mark the column as the primary column for sorting the table in the specified order.
<rowPreview>	Special definition to display a value across all columns, typically artifact descriptions. Users can enable/disable preview rows. <ul style="list-style-type: none"> • <content> • <property> 	id	A unique row preview identifier.
<property>	Additional table content attributes.	name	A property name with options: <ul style="list-style-type: none"> • hidden: If true, the column is hidden with an option to show it using the column menu.

			<ul style="list-style-type: none"> width: A number setting the column width. fixed: If true, the column cannot be resized. menuDisabled: If true, there is no column menu for the column. visible: A true or false value for the visibility of a <code><rowPreview></code> element.
<code><content></code>	Defines the column content. There must be at least one content element in a column. <ul style="list-style-type: none"> <code><parameter></code> 	queryColumn	The name of the datasource column to display in the table column.
		componentName	An optional component identification used to define table content.
<code><parameter></code>	Optional name and value parameter pair to pass to a target component.	name	Parameter name with an optional constant value expressed as the parameter element content.
		queryColumn	Use this attribute to specify a value from a datasource column.

Table Actions Customization Reference

Actions define a set of functions displayed in the toolbar at the top of the table.

```
<actions>
  <actionComponent id="addDocumentArtifact"
componentName="/core/documentation/uploadDocument"
    action="addDocumentArtifact" label="Upload"
    description="Upload a local file to the repository" styleClass="Upload">
    <parameter name="artifactType">DocumentationArtifact</parameter>
    <parameter name="artifact">${artifact}</parameter>
  </actionComponent>
  <actionComponent id="removeRelation"
componentName="/core/relations/removeRelation"
    action="removeRelation" label="Delete" description="Delete selected items"
    styleClass="Remove" requiresSelection="true">
    <parameter name="relation">${relation}</parameter>
  </actionComponent>
</actions>
```

```
</actionComponent>
</actions>
```

XML Element	Description (Contains elements)	Attributes	Description
<actions>	Containing element for a set of table actions. <ul style="list-style-type: none"> <actionComponent> 		
<actionComponent>	A reference to a component that specifies a table action. <ul style="list-style-type: none"> <parameter> 	id	A unique action ID.
		componentName	The required component to render the action and its functionality.
		action	The action invoked when a user clicks the action button.
		label	A label for the action button.
		description	A tool tip for the action button.
		styleClass	An optional CSS class to associate with the button.
		requiresSelection	An optional true or false flag to declare that at least one table row must be selected to use this action.
<parameter>	Optional name and value parameter pairs to pass to the component.	name	Parameter name with the value expressed as the parameter element content.

Context Actions Customization Reference

The context actions component is a customizable set of context links on artifact detail pages. the customization must conform to contextActions.xsd.

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
```

```

xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="cust contextActions.xsd">
<contextActions>
  <component componentName="/core/favorites/addFavorite" id="addFavorite">
    <parameter name="uuid">${artifact._uuid}</parameter>
  </component>
  <ruler id="ruler"/>
  <task id="navigator" label="Navigator" styleClass="UI PageAction Navigator"
        taskLocation="/common/navigator">
    <parameter name="uuid">${artifact._uuid}</parameter>
  </task>
</contextActions>

```

XML Element	Description (Contains elements)	Attributes	Description
<contextActions>	Containing element for context actions. <ul style="list-style-type: none"> • <task> • <component> • <ruler> 		
<task>	Defines a link to a framework task defined in the framework configuration file (webui.xml). <ul style="list-style-type: none"> • <parameter> 	id	Unique task identifier.
		label	The link label.
		taskLocation	The target task URI.
		styleClass	Optional CSS class to use for this link.
<component>	Includes a reference to the component which renders the context action. <ul style="list-style-type: none"> • <parameter> 	componentName	The component identification as defined in the web framework configuration file (webui.xml).
		id	A unique component placement identifier.
<ruler>	Display an item separator line.	id	A unique ruler identifier
<parameter>	Optional name and value parameter pairs to pass to the	name	Parameter name with the value expressed as the

XML Element	Description (Contains elements)	Attributes	Description
	target task or component.		parameter element content.

Query Selector Customization Reference

Query selectors define the filters used on browse pages. They render as a icon which corresponds to a particular query and also specify particular instances of search criteria and results tables.

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="cust queryList.xsd">
  <queries>
    <item icon="All" id="allServices" label="All" selected="true">
      <datasource>
        <query>select distinct :columns from businessServiceArtifact b left join
          hpsoaProjectArtifact p using p.r_projectContent</query>
      </datasource>
      <parameter name="criteria">criteria</parameter>
      <parameter name="table">results</parameter>
    </item>
    <item icon="Personal" id="myServices" label="My">
      <datasource>
        <query>select distinct :columns from businessServiceArtifact b (my) left
join
          hpsoaProjectArtifact p using p.r_projectContent</query>
      </datasource>
      <parameter name="criteria">criteria</parameter>
      <parameter name="table">results</parameter>
    </item>
  </queries>
</customization>
```

XML Element	Description (Contains elements)	Attributes	Description
<queries>	Containing element for query selectors. <ul style="list-style-type: none"> <item> 		

XML Element	Description (Contains elements)	Attributes	Description
<item>	Defines a particular query filter with a corresponding set of criteria and a results table. <ul style="list-style-type: none"> • <datasource> • <parameter> 	icon	Optional CSS classname to render the filter icon.
		id	A unique query filter ID.
		label	The display label for the query filter.
		selected	Optional true or false to mark the query filter as the default when a user opens the page.
<datasource>	Containing element for the datasource defining the query. <ul style="list-style-type: none"> • <type> • <query> • <parameter> 		
<type>	An optional element which defaults to dql.		
<query>	A shortcut for <parameter name="query"> containing the actual query.		
<parameter>	Within <item> there are two required parameters specifying the IDs of the matching criteria and table customizations to match the filter. For <datasource> the parameter is an optional replacement for an element in the query.	name	Parameter name with the value expressed as the parameter element content. name="criteria" and name="table" are required within the <item> element. The value appends to the item ID to specify the Id of these customizations.

Search Criteria Customization Reference

Search criteria define the options available in the search component on browse pages. Each browse page may have multiple sets of criteria, each corresponding to a defined filter. Select the filter first to

ensure that you customize the correct criteria.

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="cust searchCriteria.xsd">
  <search>
    <criteria id="nameAndDescription" label="Query" type="properties"
visible="true"
      widget="search:nameAndDescription">
      <parameter name="name">b.name</parameter>
      <parameter name="name">b._longDescription</parameter>
    </criteria>
    <criteria id="keywords" label="Keywords" type="property" visible="true">
      <parameter name="name">b.keyword</parameter>
    </criteria>
    <criteria id="provider" label="Provider" type="relation" widget="text">
      <parameter name="name">d.name</parameter>
      <parameter name="relation">d.provides</parameter>
      <parameter name="targetSdmName">contactArtifact</parameter>
      <parameter name="useTypes">provider;EMPTY</parameter>
    </criteria>
    <criteria id="artifactType" label="Artifact Type">
      <parameter name="name">consumer.artifactType</parameter>
      <widgetParameters>
        <parameter name="availableArtifactTypes">${availableArtifactTypes}</parameter>
      </widgetParameters>
    </criteria>
  </search>
</customization>
```

XML Element	Description (Contains elements)	Attributes	Description
<search>	Containing element for search criteria. <ul style="list-style-type: none"> • <datasource> • <criteria> 		
<datasource>	Optional datasource to define the datasource specifically for the search criteria. The datasource is normally passed from the query selector instead. <ul style="list-style-type: none"> • <type> 		

XML Element	Description (Contains elements)	Attributes	Description
	<ul style="list-style-type: none"> <query> <parameter> 		
<criteria>	Defines a particular search criteria. <ul style="list-style-type: none"> <parameter> <widgetParameters> 	id	A unique criteria ID.
		label	A criteria display label.
		type	The type of criteria from the following options: <ul style="list-style-type: none"> properties: Filter over multiple properties. The requested value must match at least one specified artifact property to generate a result. property: Filter by a single primitive or taxonomy property. relation: Filter by a property of a related artifact. custom: Use a special filter (for example, artifact type).
		visible	If true, the criteria is visible by default, if false, the criteria is hidden but available using the Add Criteria function.
		widget	The name of the widget to display criteria input. Typically it is obtained automatically from the property name.
<widgetParameter>	Parameters passed to a widget component responsible for criteria rendering (for example, taxonomy identification to obtain a list of categories). <ul style="list-style-type: none"> <parameter> 		

XML Element	Description (Contains elements)	Attributes	Description
<parameter>	Parameter name and value pairs to pass to the datasource filter created by the criteria or the widget component used to render the criteria.	name	The parameter name with the value expressed as the element content.

Search Component Customization Reference

The search component on home pages displays an input field and returns dynamic results as you type.

```
<?xml version="1.0" encoding="UTF-8"?>
<customization xmlns="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:cust="http://soa.systinet.hp.com/2009/02/ui/customization"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="cust suggestedSearch.xsd">
  <suggestConfig minCharacters="2" typedelay="500">
    <datasource>
      <query>select :columns from artifactBase a</query>
    </datasource>
    <search>
      <criteria id="nameAndDescription" label="" type="properties" visible="true"
        widget="search:nameAndDescription">
        <parameter name="name">name</parameter>
        <parameter name="name">_longDescription</parameter>
      </criteria>
    </search>
    <table>
      <column id="id" label="Uuid">
        <content queryColumn="a._uuid"/>
        <property name="hidden">true</property>
      </column>
      <column id="name" label="">
        <content queryColumn="a.name"/>
        <property name="css">Name</property>
      </column>
      <column id="version" label="Version">
        <content queryColumn="a.version"/>
        <property name="css">Version</property>
      </column>
    </table>
    <actionComponent action="viewArtifact"
  componentName="/core/search/searchRedirectToArtifact"
    id="viewArtifactRedirect" label="OnSelect">
      <parameter name="id">${id}</parameter>
```

```
</actionComponent>
</suggestConfig>
</customization>
```

XML Element	Description (Contains elements)	Attributes	Description
<suggestConfig>	Containing element for dynamic search. <ul style="list-style-type: none"> • <datasource> • <search> • <actionComponent> 	minCharacters	The minimum number of characters the user types before dynamic search starts.
		typeDelay	The delay between the last key press and starting dynamic search.
<datasource>	The datasource to define the search. <ul style="list-style-type: none"> • <type> • <query> • <parameter> 		
<search>	Defines the filtering criteria for matching the input to the query set. <ul style="list-style-type: none"> • <criteria> 		
<criteria>	Defines a particular search criteria. <ul style="list-style-type: none"> • <parameter> 	id	A unique criteria ID.
		label	A criteria display label.
		type	The type of criteria from the following options: <ul style="list-style-type: none"> • properties: Filter over multiple properties. The requested value must match at least one specified artifact property to generate a result.

XML Element	Description (Contains elements)	Attributes	Description
			<ul style="list-style-type: none"> • property: Filter by a single primitive or taxonomy property. • relation: Filter by a property of a related artifact. • custom: Use a special filter (for example, artifact type).
		visible	If true, the criteria is visible by default, if false, the criteria is hidden but available using the Add Criteria function
		widget	The name of the widget to display criteria input. Typically it is obtained automatically from the property name.
<table>	Defines a description for the dynamic result display. <ul style="list-style-type: none"> • <column> 		
<column>	Defines a column of the dynamic results specifying a property to display. <ul style="list-style-type: none"> • <content> • <property> 	id	A unique column ID.
		label	A column display label.
<content>	Defines the column content.	queryColumn	The query column to display.
<property>	Additional properties for the column.	name	Specify the CSS class to render the column.
<actionComponent>	Specify the action when a user clicks a dynamic result. <ul style="list-style-type: none"> • <parameter> 	componentName	Specify the component to call on user selection.

XML Element	Description (Contains elements)	Attributes	Description
		action	The action to trigger with this component.
		id	A unique ID.
		label	the name of the client browser the component listens to, typically OnSelect.
<parameter>	Additional action or criteria parameter name and value pairs to pass to the datasource filter created by the criteria or the action component.	name	The parameter name with the value expressed as the element content.

For more details about DQL queries, see "Using DQL" in the *Customization Guide*.

HTML Areas Customization Reference

These components are not customized directly using XML in the editor like other components. Instead HPE EM provides a rich-text HTML editor.

You can edit rich text using the Editor toolbar buttons, or switch to source HTML editing using the button.

HPE EM allows the following HTML tags and attributes:

HTML Tag	Description	Attributes
a	Anchor, often a URL.	href
b	Bold text.	
br	Single line break.	
em	Emphasized text.	
font	Font, color, and size for text.	face
		size
		color
i	Italic text.	

HTML Tag	Description	Attributes
li	List item.	
ol	Ordered List.	
p	Paragraph.	
strong	Strong text.	
u	Underlined text.	
ul	Unordered list.	

Note: For security reasons only a very limited set of markup is allowed, all other disallowed markup is filtered out when you save.

HPE EM stores the data in XML format according to the `contentWrapper.xsd` schema.

```
<content>
<![CDATA[
<p>
Welcome to HPE Enterprise Maps - the platform for managing and transforming your
enterprise architecture.
</p>
]]>
</content>
```

The content is represented in a CDATA section because it does not need to be valid XML (for example, `
` elements).

Reusable UI Components Reference

The following components are available for use in various places in customization XMLs. You can include them using the component element with a proper `componentName` attribute (for example, in main page layouts or as table cell content). For each component there is a description, the elements in the UI where you can use them and list of all required and optional parameters.

HPE EM provides the following components organized into the UI elements where you can use them:

- ["Page Content Components" on the next page](#)
- ["Column Components" on page 197](#)
- ["Artifact Property Components" on page 198](#)
- ["Left Menu Components" on page 198](#)

- ["Table Action Components" on page 199](#)
- ["Table Cell Components" on page 200](#)
- ["Context Action Components" on page 200](#)
- ["Report" on page 201](#)

Page Content Components

Component Name & Description	Parameter	Parameter Description
/core/browse/browseArtifactCriteria Provides a customizable set of additional browse criteria.	customizationId (required)	Specify the id of the customization component.
	wrapCaption (optional)	If provided, the whole component is surrounded by a color area with the specified title.
	wrapStyle (optional)	If wrapCaption is specified, use wrapStyle to specify the style of the component outline with options, Common (default) and Green.
	resultTableId (required)	ID of the result table.
/core/contact/manageContacts Allow users to view or edit artifact contacts grouped by job roles.	artifactUuid (required)	The UUID of the artifact to manage contacts for.
	viewId (required)	ID of the view.
	artifact (required)	The instance of the ArtifactBase object representing current artifact.
/core/groupMembership Display a list of groups that the current user is a member of.	artifact (required)	The instance of the Person artifact for the user.
/core/layout/header Display a page content header with optional subtitle and icon.	title (optional)	Specify a page title, defaults to the current task caption.
	subtitle (optional)	Specify a page subtitle. Empty by default.

Page Content Components, continued

Component Name & Description	Parameter	Parameter Description
	subtitleClass (optional)	CSS class used to render the subtitle. A possible value is Artifact.
	iconType (optional)	The name of the icon to display, typically an artifact type (for example, businessServiceArtifact).
	iconFormat (optional)	Specify the version of the icon to display from options small, large, or vector.
/core/relations/genericRelationshipComponent Display a table of related artifacts and enable add/remove relationship functionality.	tableDefinitionId (required)	Specify a customization ID for the table.
	artifact (required)	The instance of ArtifactBase for the current artifact.
	relation (required)	The SDM name of the relationship which targets the artifact type in the table.
	useType (optional)	Only display relationships with this useType. Also set for newly created relationships
	addMode (optional)	Specify how the user selects target artifacts with options, search (default) and browse.
	wrapCaption (optional)	If provided, the whole component is surrounded by a color area with the specified title.
	wrapStyle (optional)	If wrapCaption is specified, use wrapStyle to specify the style of the component outline with options, Common (default) and Green.
/core/search/homepageSearch Provide a search component with dynamic results and link to advanced	customizationId (required)	Specify the ID of this custom component.

Page Content Components, continued

Component Name & Description	Parameter	Parameter Description
search.		
	viewId (required)	Specify which tab to open when the user clicks Go .
	wrapCaption (optional)	If provided, the whole component is surrounded by a color area with the specified title.
	wrapStyle (optional)	If wrapCaption is specified, use wrapStyle to specify the style of the component outline with options, Common (default) and Green.
/core/search/searchCriteria Provide a customizable set of additional criteria.	customizationId (required)	Specify the ID of this custom component.
	resultTableId (required)	ID of the result table.
	searchExpressionWrapper (optional)	Search expression wrapper.
	advancedOptionsExpanded (optional)	Advance option expanded.
	searchDefinition (optional)	Search definition.
	defaultValue (optional)	Default value.
	allowSave (optional)	Allow save or not.
	wrapCaption (optional)	If provided, the whole component is surrounded by a color area with the specified title.
	wrapStyle (optional)	If wrapCaption is specified, use wrapStyle to specify the style of the component outline with options, Common (default) and Green.
/core/search/searchQueryList	customizationId (required)	Specify the ID of this custom component.

Page Content Components, continued

Component Name & Description	Parameter	Parameter Description
Provide a customizable list of queries for browse pages.		
	wrapCaption (optional)	If provided, the whole component is surrounded by a color area with the specified title.
	wrapStyle (optional)	If wrapCaption is specified, use wrapStyle to specify the style of the component outline with options, Common (default) and Green.
/core/table Display data from a datasource in a table, with sorting, paging, and filtering.	customizationId (required)	Specify the ID of this custom component.
	tableId (required)	ID of the table.
	datasource (optional)	The datasource providing the query results for the table. If it is not provided as a parameter, it must be defined in the table.
	wrapCaption (optional)	If provided, the whole component is surrounded by a color area with the specified title.
	wrapStyle (optional)	If wrapCaption is specified, use wrapStyle to specify the style of the component outline with options, Common (default) and Green.
/core/taxonomy/homepage/homepage View Display a list of taxonomies with categorized artifact counts and links to category browsing.	homepageGid (required)	Identify the reduced set of taxonomies to display in this component. The list of taxonomies is available in ui.taxonomyGroupsPreferences.xml in SYSTINET_HOME/conf/setup/data.
	allGid (required)	Identify the group of full taxonomy lists to display in the Category Browsing page accessible with the More link.

Page Content Components, continued

Component Name & Description	Parameter	Parameter Description
/core/text/editableRichTextArea Display a customizable HTML text area.	customizationId (required)	Specify the ID of this custom component.
	title (optional)	Text area title text.
/detail/editArtifactProperties Display customizable artifact properties or other artifact related components in editable mode.	customizationId (required)	Specify the ID of this custom component.
	artifact (optional)	The instance of Artifact Base to edit.
	subtitle (optional)	Text to display in the page content header.
	wrapCaption (optional)	If provided, the whole component is surrounded by a color area with the specified title.
	wrapStyle (optional)	If wrapCaption is specified, use wrapStyle to specify the style of the component outline with options, Common (default) and Green.
/detail/viewArtifactProperties Display customizable artifact properties or other artifact related components in view mode.	customizationId (required)	Specify the ID for this custom component.
	artifact (required)	The instance of ArtifactBase to view.
	subtitle (optional)	Text to display in the page content header.
	wrapCaption (optional)	If provided, the whole component is surrounded by a color area with the specified title.
	wrapStyle (optional)	If wrapCaption is specified, use wrapStyle to specify the style of the component outline with options, Common (default) and

Page Content Components, continued

Component Name & Description	Parameter	Parameter Description
		Green.
/content/layout/tabs Define component with tabs inside.	customizationId (required)	Specify the ID for this custom component.
	description (optional)	Description above the tabs.
/data/js Support script code in the client side can call java method in the server side.	sourceId (required)	Source ID.
	code (required)	Java method with full package path in a script function.
	clientJs (optional)	Java script code.
/content/layout/steps Define color for boxes in each step.	customizationId (required)	Specify the ID for this custom component.
	panelColor (required)	Panel color.
	gradientStartColor (required)	The first color value in the range.
	gradientEndColor (required)	The last color value in the range.
/newui/layout/verticalPanel/templatePanel Define dql query and template structure for each box.	dql (required)	DQL query.
	template (required)	HTML structure.
/newui/layout/verticalPanel/progressingKPI Define DQL to query number (percent format) and display progressing base on the number.	label (required)	Label of the component.
	dql (required)	DQL query.
	icon (optional)	Icon
	color (optional)	Color
	text (optional)	Description

Column Components

Component Name & Description	Parameter	Parameter Description
/core/contact/contactsMenu Renders a list of contacts ordered by their useTypes.	artifact (required)	The instance of the ArtifactBase object representing the current artifact.
	artifactUuid (required)	UUID of the artifact.
	viewId (required)	ID of the view.
	moreMode (optional)	More mode options.
	readOnly (optional)	If true, then link from the current component to a read-only contact management page.
	maximumVisibleItems (optional)	Specify the maximum number of contacts to display. The default is to display all of them.
/core/contract/myContracts Renders a list of current accepted and pending contracts for the current user.	numberOfContracts (optional)	Specify the maximum number of contracts to display. A full list is available with the More link.
/core/layout/contextActions Display customizable context actions for the current artifact.	customizationId (required)	Specify the Id of this customization component.
	artifact (required)	The instance of the ArtifactBase object representing the current artifact.
	wrapCaption (optional)	If provided, the whole component is surrounded by a color area with the specified title.
	wrapStyle (optional)	If wrapCaption is specified, use wrapStyle to specify the style of the component outline with options, Common (default) and Green.
/core/layout/columns A layout column container, often used with a tab.	customizationId (required)	Specify the ID of this customization component.

Column Components, continued

Component Name & Description	Parameter	Parameter Description
	browseLocation (optional)	Browse location.
	artifactType (optional)	Type of artifact.

Artifact Property Components

Component Name & Description	Parameter	Parameter Description
/core/contact/provider Renders a virtual Provider property in artifact details and provides a dialog to change it.	customizationId (required)	Specify the ID of this customization component.
	artifact (required)	The instance of the ArtifactBase object representing the current artifact.
	readOnly (optional)	If true, then users cannot change the provider.
	wrapCaption (optional)	If provided, the whole component is surrounded by a color area with the specified title.
	wrapStyle (optional)	If wrapCaption is specified, use wrapStyle to specify the style of the component outline with options, Common (default) and Green.
/core/util/parentLinksRenderer Displays links to parents of current artifact.	uuid (required)	The UUID of the current artifact.
	sdmName (required)	The SDM name of the current artifact..
/detail/viewArtifactProperties Displays artifact properties	artifact (required)	The instance of the ArtifactBase object representing current artifact.
	customizationId (required)	Specify the ID of this customization component.

Left Menu Components

Component Name	Description	Parameter
/core/recentlyUsedArtifacts	Displays list of the last 5 artifact the user viewed or edited.	None

Left Menu Components, continued

Component Name	Description	Parameter
	maxItems (optional)	Maximum item permitted.

Table Action Components

Component Name & Description	Parameter	Parameter Description
/core/contact/addContact Table action to add a relationship between the current artifact and a selectable contact artifact.	artifact (required)	The instance of the ArtifactBase object representing the current artifact.
	useType (required)	The contact role from the Job Roles taxonomy.
/core/documentation/uploadDocument Open a document upload pop-up window. Uploaded documents are associated with the current artifact.	artifact (required)	The instance of the ArtifactBase object representing the current artifact.
	artifactType (required)	Type of artifact.
	datasource (optional)	Data source.
	asLink (optional)	As link.
/core/relations/addNew Table action to create a new artifact and the relationship to the current artifact.	artifact (required)	The instance of ArtifactBase for the current artifact.
	artifactSdmName (required)	The SDM name of the artifact type to create
	relation (required)	The SDM name of the relationship to use between the current artifact and the newly created one.
/core/relations/addRelation Create a relationship of the specified type between the current artifact and a user selected artifact.	relation (required)	The SDM name of the relationship to use between the current artifact and the selected one.
	artifact	Selected artifact.
	datasource	Data source.

Table Action Components, continued

Component Name & Description	Parameter	Parameter Description
	useType (optional)	An attribute used to render newly created relationships.
/core/relations/removeRelation Removes relationships between the selected artifacts and the current artifact.	relation (required)	The SDM name of the relationship to remove.
	artifact	Selected artifact.
	datasource	Data source.
	selectionBag	Selection Bag.
	useType (optional)	Remove only relationships of the specified type.

Table Cell Components

Component Name & Description	Parameter	Parameter Description
/core/favorites/addFavorite Display a clickable icon in a table cell. The current artifact status is indicated by the icon color.	uuid (required)	The UUID of the current artifact.
/core/util/providerLinksRenderer Display links to providers of the current artifact.	uuid (required)	The UUID of the current artifact.
	sdmName (required)	The SDM name of the current artifact.
	maxCount (optional)	The maximum number of parent artifact to show (default is 3).

Context Action Components

Component Name & Description	Parameter	Parameter Description
/core/contextActions/deleteArtifact Renders a delete artifact context link.	artifact (required)	The instance of the ArtifactBase object representing the current artifact.
	common (optional)	Boolean value.
/core/contextActions/editArtifact Renders an edit artifact context action.	artifact (required)	The instance of the ArtifactBase object representing the current artifact.
	common (optional)	Boolean value.

Report

Component Name & Description	Parameter	Parameter Description
/report/impl/visualizedPortlet Load and render portlet content.	portletClass (required)	Portlet class.
	scriptLocation (required)	Location of the script.
	config (optional)	Extra Configuration for Portlet (which extends from Ext Panel) as JSON format.
	callback (optional)	Callback methods after the portlet was loaded.
/core/impl/artifact/alignment/radarChart Draw the radar chart base on the input configuration.	type (required)	Chart type.
	tabId (required)	Tab ID.
	config (required)	JSON format properties that used to calculate and display on the Chart.

Reusable UI Tasks Reference

The following table lists the task URIs and parameters you can use to reference pages in role-based UIs.

Tasks prefixed by `/common` keep the current UI active. If you want to specify a page in a specific tab replace `/common` with the tab identification, for example, `/analyst/browseArtifact` instead of `/common/browseArtifact`. There is no common homepage, so you must use specific tab IDs.

Task URI	Description	Parameter	Description
<code>/common/advancedSearch</code>	The advanced search page, it prepares an empty datasource usable by criteria and		

Task URI	Description	Parameter	Description
	table components.		
/common/browseArtifact	The browse page for the specified artifact type. The artifact type must be defined as a primary artifact for the active tab.	artifactType (required)	The SDM name of the artifact type to display.
		title (optional)	The text to display for the browse page header.
/common/categorization/categoryView	Entry point for the category browser.	allGid (required)	Defines the id of the taxonomy group containing all visible taxonomies in the category browser. The definition of taxonomy groups is in <code>ui.taxonomyGroupsPreferences.xml</code> in <code>SYSTINET_HOME/conf/setup/data/</code> .
/common/editArtifact	Opens the edit page for the specified artifact, artifact type must be listed in the active tab as a primary or secondary artifacts.	uuid (required)	The uuid of the artifact to edit.
/common/favorites	Open the Favorites page for the current user.		
/common/newArtifact	Open the new artifact	sdmName (required)	The SDM name for the artifact type to create.

Task URI	Description	Parameter	Description
	page for the specified artifact type.		
/common/contract/contractRequestWizard	Open the contract request wizard.	uuid (required)	The uuid of the provider artifact.
/[tabID]/homepage	Open the homepage for the specified tab.		
/artifact/[artifactUuid]	Open the artifact detail page for the specified artifact.		
/document/[artifactUuid]	Open the attached data content for the specified artifact. For example, the actual document associated with a Documentation artifact.		

Chapter 13: Administration Utilities

HPE EM administration utilities consist of command-line tools located in the `bin` directory of the installation folder.

The utilities are summarized in below table:

Note: If passwords are encrypted, set the option `--passphrase passphrase` on the command-line when you launch any tool that requires authentication.

Note: Most utilities are located in `EM_HOME/bin`. If a utility is not in `EM_HOME/bin`, a relative path is shown for the command.

Note: If a command requires arguments, running it without arguments displays a help screen, unless otherwise stated.

Command	Description
<code>env</code>	A script used by other HPE EM tools to set system variables. Do not execute this script directly.
<code>export</code>	Creates a data image for specified components of HPE EM. For details, see "Export Tool" on page 208 .
<code>import</code>	Imports a data image for specified components of HPE EM. For details, see "Import Tool" on the next page .
<code>rebrand</code>	Re-brand or co-brand HPE EM with your company specific logos and names. For details, see "Rebrand Tool" on page 210 .
<code>reset</code>	Resets the data for specified components of HPE EM. For details, see "Reset Tool" on page 211 .
<code>../lib/sdm/bin/sdm2dbmap</code>	Creates a report of the relationship between the SDM structure and the database tables. For details, see "SDM to Database Mapping Tool" on page 212 .
<code>serverstart</code>	Calls <code>env</code> to set critical system variables for JBoss, and then starts the platform application server.
<code>serverstop</code>	Stops the platform application server for JBoss.
<code>setup</code>	Starts the Setup Tool to reconfigure the platform server. For details, see "Setup Tool" on page 212 .

Command	Description
ssltool	Configures and views your SSL configuration. For details, see "SSL Tool" on page 215 .
fastimport & fastexport	enables you to perform a backup and restore HPE EM data in the database. For details, see "Fast Import and Export Tools" on page 216 .

Import Tool

The **import** command enables you to import HPE EM configuration and data to the database from an image.

Note: When importing an image with governed artifacts using the default options, lifecycle processes with identical Uuids in the image are not imported. To avoid inconsistencies in the lifecycle of artifacts use the import tool with the **--reset** option which deletes all existing artifacts and lifecycle processes.

Note: Importing image replaces the current group membership with group membership from the image.

The syntax for import is:

import --image *IMAGE_NAME* [OPTIONS]

Note: HPE recommends updating Oracle Database schema statistics after importing large amounts of data. Old statistics may impact the performance of some data queries. Consult your database administrator.

To Update Oracle Schema Statistics:

- Execute the following command:

```
EXEC DBMS_STATS.GATHER_SCHEMA_STATS (ownname => '&1',no_invalidate => FALSE,options => 'GATHER');
```

This command does not require database admin privileges and can be run by the schema owner (ownname).

The Import Tool includes the following options:

--image <i>IMAGE_NAME</i>	The path to the directory where the image is stored.
----------------------------------	--

<code>--components [COMPONENT]</code>	<p>The following component options are available:</p> <ul style="list-style-type: none"> • <code>all</code> This is also the default if you omit <code>--components</code>. Imports all the data without the configuration. • <code>configuration</code> The configuration data. • <code>content</code> All data without the configuration and security data. • <code>security</code> The security configuration. User profiles and groups and the default ACLs for newly created resources.
<code>--quiet</code>	Execute the command without a confirmation request.
<code>--silent</code>	Less verbose console output.
<code>--reset</code>	Executes the reset command first deleting all existing artifacts and lifecycle processes, with matching component options.
<code>--passphrase <i>PASSPHRASE</i></code>	Use the master passphrase entered during installation if password encryption is enabled.
<code>--configuration-passphrase <i>IMAGE_PASSPHRASE</i></code>	If image was exported from a server having a different passphrase than the current one; specify using this parameter to decrypt the configuration data in image.
<code>--force</code>	If an imported service catalog resource is already in the database, it is overwritten.
<code>--platform-bootstrap</code>	Import the service catalog data in bootstrap format.
<code>--platform-update-blacklist</code>	Append imported service catalog resources to the migration blacklist. Useful for bootstrap installation.
<code>--platform-rest-blacklist</code>	Save imported service catalog resources to the migration blacklist.
<code>--platform-ignore-sdm-merge-warn</code>	Continue service catalog data import if the SDM merge check only reports warnings.
<code>--executions-force</code>	If an imported execution report or item is already in the database, it is overwritten.
<code>--configuration-all</code>	Import the complete configuration (not recommended).
<code>--configuration-application</code>	Import the application configuration (default).

<code>--configuration-system</code>	Import the system configuration.
<code>--configuration-licence</code>	Import license details.
<code>--userEvents-dontSkip</code>	Import user event data (not imported by default). Existing user event data is deleted before this data imports.

Caution: HPE EM must not be running when you execute these commands.

The import checks the directory specified by `IMAGE_NAME`, which contains the following depending on the image:

- `image.properties`
A file containing the export execution properties and a list of the data sets exported.
- `configuration`
A directory containing the configuration properties files, including role-based UI customizations. The file also contains the license details if the export used the **--configuration-license** option.
- `dist`
Contains properties specific to a particular distribution. Use the **--configuration-force** option to import this data.
- `executions`
A directory containing the execution report results of asynchronous tasks such as publishing, discovery, and bulk operations.
- `lifecycle`
A directory containing the lifecycle data.
- `platform`
A directory containing the service catalog data.
- `policyManager`
A directory containing the policy data.
- `reporting`
A directory containing the reporting definitions.
- `security`
A directory containing the security configuration.

- `userEvents`

A directory user specific event information.

Note: If specific components are specified, the other component folders are ignored. If a specified component is not present, the import fails.

Export Tool

The **export** command enables you to export the configuration and data in the database to an image, and then import that data at a later date.

The syntax for export is:

export --image *IMAGE_NAME* [OPTIONS]

The Export Tool includes the following options:

<code>--image <i>IMAGE_NAME</i></code>	The path to the directory where the image is stored.
<code>--components [COMPONENT]</code>	<p>The following component options are available:</p> <ul style="list-style-type: none">• <code>all</code> This is also the default if you omit <code>--components</code>. Exports all the configurations and data except the license.• <code>configuration</code> The configuration data.• <code>content</code> All data without the configuration and security data.• <code>security</code> The security configuration. User profiles, groups, and roles and the default ACLs for newly created resources.
<code>--quiet</code>	Execute the command without a confirmation request.
<code>--silent</code>	Less verbose console output.
<code>--last-revision</code>	Exports only last artifact revision. Last revision number will be reset to 1.
<code>--include-generated-data</code>	Enforce export of all non-valuable data such as user event, execution, and validation data. This option also covers these options:

	<ul style="list-style-type: none"> • <code>--userEvents-dontSkip</code> • <code>--executions-flat-limit</code> • <code>--policyManager-validations</code>
<code>--executions-flat-limit N</code>	<p>Export execution reports in a flat layout with a limit of <i>N</i> reports/items.</p> <p>Note: By default, execution reports are exported in a flat layout up to a predefined number of reports and items. If the limit is exceeded a hashed layout is used instead to prevent potential excess directory errors. Use this command to define your own limit for flat layout exports.</p>
<code>--configuration-all</code>	Export the complete configuration (not recommended).
<code>--configuration-application</code>	Export the application configuration (default).
<code>--configuration-system</code>	Export the system configuration (default).
<code>--configuration-licence</code>	Export license details.
<code>--policyManager-validations</code>	Enable the export of policy manager validation data (not exported by default).
<code>--userEvents-dontSkip</code>	Export user event data (not exported by default).

Caution: HPE EM must not be running when you execute these commands.

The export creates the directory specified by `IMAGE_NAME`, containing the following, depending on the component options used:

- `image.properties`
A file containing the export execution properties and a list of the data sets exported.
- `configuration`
A directory containing the configuration properties files, including role-based UI customizations. The file also contains the license details if you use the `--configuration-license` option.
- `dist`
Contains properties specific to a particular distribution. Create this data with the `--configuration-force` option.
- `executions`

A directory containing the execution report results of asynchronous tasks such as publishing, discovery, and bulk operations.

- `lifecycle`

A directory containing the lifecycle data.

- `platform`

A directory containing the service catalog data.

- `policyManager`

A directory containing the policy data.

- `reporting`

A directory containing the reporting definitions.

- `security`

A directory containing the security configuration.

- `userEvents`

A directory user specific event information.

Rebrand Tool

The rebrand tool enables you to extract the images, text, and libraries from HPE EM used to identify and brand it as an HPE product. You can then modify these files and reapply your own corporate image to HPE EM.

The command for rebranding is:

rebrand [OPTIONS]

The Rebrand Tool includes the following options:

<code>--extract</code>	Extract the current branding image.
<code>--apply</code>	Apply a new branding image.
<code>--image IMAGE</code>	The path to the image archive file (--apply) or a path to directory to export the extracted image to (--extract).
<code>--imageconf FILE</code>	Custom path to create an image configuration XML file (--extract only).

<code>--quiet</code>	Execute with no confirmation queries.
<code>--silent</code>	Less verbose console output.
<code>--force</code>	Ignore branding image consistency check errors, for example missing files, (<code>--extract</code> option only).
<code>--passphrase <i>PASSPHRASE</i></code>	Specify the master passphrase entered during installation or setup if password encryption is enabled.

Caution: HPE EM must not be running when you execute these commands.

Reset Tool

The **reset** command enables you to reset the HPE EM data in the database and import the default image.

Note: All artifacts and lifecycle processes are deleted prior to the import. This resolves any conflicts with identical artifacts or process UUIDs between existing and imported data.

The syntax for reset is:

reset [OPTIONS]

The Reset Tool includes the following options:

<code>--components [COMPONENT]</code>	<p>The following component options are available:</p> <ul style="list-style-type: none">• <code>all</code> This is also the default if you omit <code>--components</code>. Resets all data.• <code>content</code> Resets all data, excluding security.• <code>security</code> Resets only security configuration. User security profile, groups, roles and default ACL's for newly created resources.• <code>ui-configuration</code> Resets only UI customization to installation defaults.
<code>--quiet</code>	Execute the command without a confirmation request.

Caution: HPE EM must not be running when you execute these commands.

SDM to Database Mapping Tool

Artifacts in the Catalog are stored in the form of XML documents. Their structure is defined by the System Data Model (SDM). Artifacts are serialized into a database over a standard serialization layer. The serialization of data may differ from the norm, based on customer specific extensions or modifications.

The `sdm2dbmap` tool is a mapping tool that generates a report containing the mapping between your SDM and database tables.

To generate the report, execute the following command:

EM_HOME/lib/sdm/bin/sdm2dbmap

The mapping report is output to the following file:

`EM_HOME/lib/sdm/build/sdm2dbmap.html`

The output consists of the following parts:

- A top level 1:1 mapping between SDM artifacts and DB tables. Each artifact listed, maps directly to one table.
- A list of artifacts. Each artifact in the report maps each SDM property to a specific column in the table. There are also associated tables and foreign keys, joined using the primary key of the artifact table.
- A report documenting the DB schema for all database tables coming from the SDM. Tables with names ending in `_Rev` are used to store older revisions.

Setup Tool

Included with HPE EM is the Setup Tool. You can use it for the following functions, which you select as **Scenarios** when running the tool.

To access the Setup Tool user interface, execute the following command:

EM_HOME/bin/setup

The Setup GUI opens at the Welcome screen.

Click **Next** to be presented a set of scenarios, as described in the following sections:

- ["Changing the License Key" below](#)
- ["Applying Extensions" below](#)
- ["Updating HPE EM" on the next page](#)
- ["Advanced Setup Tool Options" on the next page](#)

The Setup Tool can also be used in command line mode.

For details, see ["Setup Tool Command-Line Options" on the next page](#).

Note: By default, the Setup Tool does not allow you to import data or apply extensions while there is a server running in order to protect data consistency. In some environments (for example, behind a load balancer proxy or using CA Single Sign On) there is always something running at the server endpoint. To enable the Setup Tool in these environments set the `install.ignore.running.platform` property to `TRUE`. For details, see ["How to Manage System Properties" on page 83](#). Alternatively, execute the Setup Tool with the following command option: - **Dinstall.ignore.running.platform=true**

Changing the License Key

The Setup Tool enables you to change the license.

To Change the License Key with the Setup Tool:

1. In the Scenario Selection page, select **Change License Key**, and then click **Next**.

The License Information page opens.

2. In the License Information page, do one of the following:
 - Select Install a 60 day evaluation license.
 - Select Enter license details, and input the license details provided by your sales representative.

Click **Next**.

3. Click **Next** through each confirmation and progress page, and when the setup is complete, do one of the following:
 - Click Setup Again to return to the Scenario Selection page.
 - Click Finish to exit the Setup Tool.

Note: The Administration Tab also provides support for changing the license key. For details, see ["License Management" in the Administration Guide](#)

Applying Extensions

For details see Installation and Configuration Guide, section Apply Custom Extensions .

Updating HPE EM

The Setup Tool enables you to install updates to HPE EM, which are downloaded or copied to the EM_HOME/updates directory.

Advanced Setup Tool Options

The Advanced scenario enables you to select specific parts of the configuration procedure to suit the needs of a specific task.

To Select Specific Configuration Processes:

In the Scenario Selection page, select **Advanced**, and then click **Next**.

The Custom Scenario Selection page opens and enables you to select which parts of the configuration you want to execute.

Every part of the configuration process is listed as an individual step. The steps required for a particular process vary depending on what configuration you want to change.

Setup Tool Command-Line Options

The Setup Tool can also be executed as a command line tool.

The setup command is:

EM_HOME/bin/setup [OPTIONS]

The following options are available:

- **-h, --help [scenarios|steps]**

Display the available options or list the available scenarios or steps in the console

- **-c, --console**

Execute the Setup Tool in console mode.

- **-a, --dbadmin-mode**

Enables DB administrator mode. The setup stops after creating the DB scripts, allowing the administrator to execute them manually. Continue installation after script execution with setup -c.

- **-n, --scenarios SCENARIO**

Execute only the specified steps in the installation. Use --help scenarios to view a list of available scenarios.

- **-p, --steps [comma separated list of steps]**

Execute only the specified steps in the installation. Use `--help` steps to view a list of available steps.

- **-u, --use-config FILE**

Use the properties in the specified file to override the default or current configuration properties.

- **--passphrase PASSPHRASE**

If password encryption is enabled, specify the passphrase to use for encryption.

- **-d, --debug**

Execute the setup in debug mode. All properties, SQL statements, and installation details are output to `EM_HOME/log/setup.log`.

SSL Tool

The SSL Tool is a combined tool enabling you to setup client-side SSL for a deployed HPE EM application. It also enables you to print SSL server certificates, as well as to download the SSL server certificate chain.

The SSL Tool has the following basic actions:

- **serverInfo**

Prints the SSL requirements for the specified HTTPS URL, and saves the server certificate to a file.

- **keystoreEI**

Exports or imports SSL certificates to the HPE EM database keystore or truststore.

- **customize**

Change the effective SSL customization.

The syntax for `ssltool` is:

EM_HOME/bin/ssltool [ACTION] [options]

Execute **ssltool** with no action or options to view the help with some examples.

Execute **ssltool [ACTION] --help** to view specific help for each type of action with the available options.

Fast Import and Export Tools

The *fastexport* and *fastimport* commands enable you to perform a quick backup and restore HPE EM data respectively in the database.

Important guidelines:

- As the exported image relies upon current EM database schema, it becomes non-importable if the EM schema is changed (for example: in case of a new property being introduced by applying an extension). In such cases, use traditional import and export tools instead.
- *fastimport* deletes all existing data before importing them from image file. However, by default the server configurations are preserved (only artifacts are overwritten).
- HPE EM must not be running when you execute these commands.

Syntax:

fastexport: `fastexport --image IMAGE_NAME [OPTIONS]`

fastimport: `fastimport --image IMAGE_NAME [OPTIONS]`

Fast Import and Export Tool Options

Options	Description
--image IMAGE_NAME	The path to a directory or a zip file where the image is stored. The directory or zip file is created by <i>fastexport</i> and is read by <i>fastimport</i> .
--passphrase PASSPHRASE	Use the master passphrase entered during installation if password encryption is enabled.
--quiet	Execute the command without a confirmation request.
-- configuration	Import the configurations from image and overwrite those in server. This option is applicable to <i>fastimport</i> simply because <i>fastexport</i> always exports the server configurations. Note: However, this option is not recommended.

Chapter 14: Security Management

Enterprise Maps has been full-proofed with certain security mechanisms to eliminate risks or threats as far as possible. The administrator is provided with essential guidelines on how to harness these issues and build a better security around EM.

This is briefly explained in the following topic:

["Authentication Lockout" below](#)

Authentication Lockout

HPE EM provides an authentication lockout mechanism to mitigate the security breach of password break-in. This is managed by locking a user account after a limited number of failed log-in attempts. The user would need to wait for a certain period of time before the account is reset automatically.

Supported Authentication

- Embedded JBoss authentication
- Supported LDAP

Lockout Configuration

The authentication lockout is defined based on several system properties as below:

- platform.security.lockout.count.aboutWarn
- platform.security.lockout.enabled
- platform.security.lockout.failed.count
- platform.security.lockout.reset.seconds
- platform.security.lockout.release.minutes

For further details see, ["System Configuration Properties" on page 86](#).