HP EnterpriseView

For the Windows Operating System

Software Version: 2.5

User Guide

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Contents

Chapter 1: Welcome to This Guide

Welcome to HP EnterpriseView User Guide. This guide provides you with information about all of the operational aspects of EnterpriseView.

This guide is intended for all EnterpriseView users.

This guide includes the following chapters:

About EnterpriseView

EnterpriseView is a framework that enables Chief Information Officers (CIOs) and Chief Information Security Officers (CISOs) to analyze security risk information in a business context and prioritize actions to minimize that risk. By tying IT risk and compliance information to business services it ensures alignment with management objectives. EnterpriseView bridges the gap between IT operations and the security office by interconnecting and consolidating business processes across the organization and establishing a rational basis for decision making. This product incorporates a holistic, enterprise approach, streamlining and integrating risk, compliance, threat and vulnerability information, while providing a business context to executives. It anticipates threats and provides continuous monitoring, by regularly updating and testing security related functions.

The main modules in EnterpriseView are:

- **Policy and Compliance Management**: This module enables you to assess and audit the assets in your organization. Use the policy builder to create customized policies and the Statement of Applicability (SoA) feature to apply controls to assets. EnterpriseView includes out-of-the-box policies, such as Unified Compliance Framework (UCF) enabling "audit once - comply with many" functionality.
- **Risk Management**: This module enables you to manage all aspects of the risk life cycle. Use the flexible and expandable threat library to define the threats that may potentially harm your organization, create threat scenarios by assigning threats to assets, analyze the risk and specify its impact and likelihood, and mitigate the risk by using controls or other effective actions.
- **Vulnerability Management**: This module collects vulnerabilities from vulnerability assessment tools, removes duplicates, assigns them to assets, and prioritizes them accordingly, allowing you to manage the remediation process.
- **External Risk Factors**: This module enables you to import risk factor information from external sources, manage it and display it on top of the business model and in dashboards.
- **Asset Management**: Assets are the building blocks of the business model, which is the foundation for all core EnterpriseView functionality. The business model depicts the entire organization from high-level business assets to low-level IT assets, on which policy, risk, and vulnerability operations are performed. You can create the business model by synchronizing EnterpriseView with an external asset repository or by creating it by using the Assets module.
- **Dashboards and Reports**: This module includes sophisticated executive dashboards, such as Risk Register, and reports, and enables you to create your own customized dashboards and reports.
- **Task Management**: EnterpriseView enables you to create, manage, and monitor workflows. Use workflows to structure and streamline your organization’s processes and assign tasks to the relevant people.

What's New

This topic describes the new features and enhancements added in this release.

Configuration Vulnerabilities

EnterpriseView now supports the import of configuration vulnerabilities from scanners, along with network and application vulnerabilities that have been supported until now. For more information on configuration vulnerabilities, see "Vulnerability Types" on page 130. The vulnerability lifecycle has been updated to accommodate configuration vulnerabilities, as well as the control to vulnerability mapping capabilities. Configuration vulnerabilities have a different and stronger affect on controls than network and application vulnerabilities; they can be used to fully determine the compliance of

an asset with a control and are regarded as an automatic means of assessment. For more information, see "Use Configuration Vulnerabilities to Determine Compliance Score" on page 55.

Enhanced External Risk Factor Management Capabilities

EnterpriseView now includes an External Risk Factor Management page, allowing you to centrally manage all of your external risk factors on top of your business model. On this page you can compare the state of your risk posture using snapshots, use advanced search and filter capabilities to create different view on your business model, and edit scores manually. For more information, see "External Risk Factors" on page 161.

New HP Experience Look and Feel

A new clean and crisp look and feel that enhances the user experience across the entire application.

New Navigation Panel and Toolbar

This version of EnterpriseView includes a new navigation panel and a general toolbar, that appears on all EnterpriseView pages and includes capabilities such as refresh, access to My Tasks, access to Settings, report generation, and context sensitive help, providing a better user experience across the application. For more information, see "Navigating the User Interface " below.

Navigating the User Interface

You can navigate the EnterpriseView user interface using the navigation bar or by clicking on the module name in the home page. The navigation bar and the home page provide you access to all the modules and pages in EnterpriseView.

The module pages to which you have access depend on the following factors:

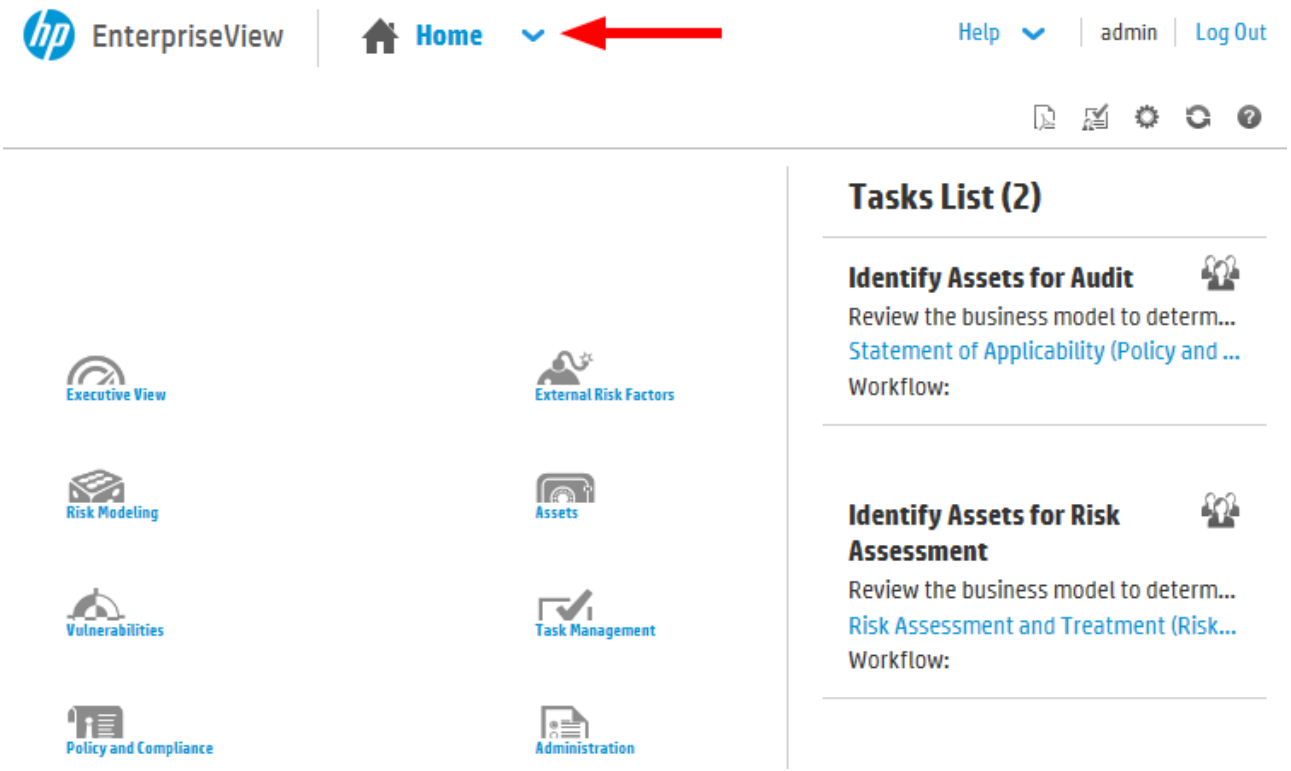
- **Your EnterpriseView license**. Modules for which you are not licensed are disabled.
- **Your role**. Pages that you do not have permissions for are not displayed.

The content to which you have access to depends on your authorization. For more information, see "Business Model Authorization" on page 19.

EnterpriseView stores the last asset and policy element that you worked on. When you navigate EnterpriseView, the UI pages appear in the context of that asset or that policy element. For example, you can view statistical information for a specific asset in the different dashboards without having to select the asset in every dashboard. The context is also saved when you log out.

The navigation bar

To access the navigation bar, click **Home**.



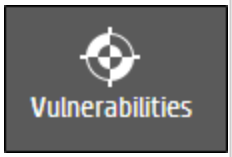
Clicking the module in the navigation bar or on the home page opens a sub menu that includes all the pages that belong to that module.

The following table includes information on the navigation bar, assuming you have a license for the complete module set.

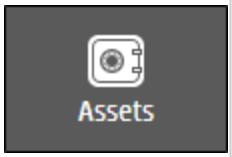
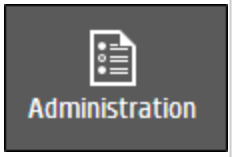
Navigation Bar Description

Module	Pages	Description
Home	None	The EnterpriseView home page includes links to all module components. In addition, it displays the tasks assigned to you or to your group in the My Tasks pane. You can click the task name to open the page on which you need to perform the task. For example, in the previous figure , click Statement of Applicability to open the Statement of Applicability page.
Executive View	• Overall Score Heat Map • Risk Register • Risk Indicators	Executive dashboards enable CIOs and CISOs to view and analyze security risk information in a business context.

Navigation Bar Description, continued

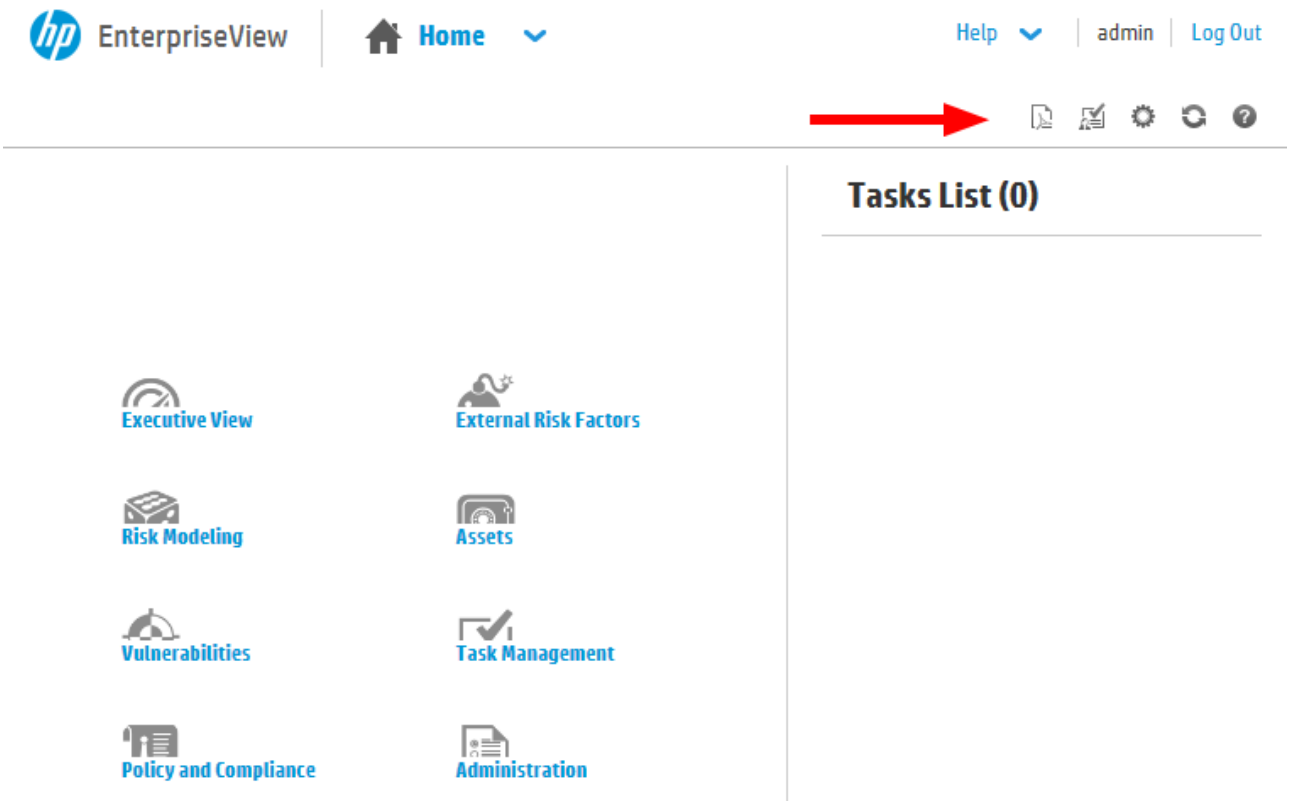
Module	Pages	Description
	• Risk Heat Map and Scorecard • Risk Modeling Dashboard • Threat Library Builder • Threat Assignment • Risk Assessment and Treatment • Control to Threat Mapping	Use the flexible and expandable threat library to define threat scenarios for the assets in your organization's business model and specify impact and probability to calculate their risk.
	• Vulnerability Dashboard • Vulnerability Assignment • Vulnerability Management • Vulnerability Dictionary	Manage and remediate the vulnerabilities according to their severity and the criticality level of your assets.
	• Compliance by Policy Dashboard • Compliance Dashboard • Compliance Map • Policy Builder • Statement of Applicability • Policy and Compliance Assessment • Policy Mapping • Control to Vulnerability Mapping	Define policies or use out-of-the-box policies to define a statement of applicability and perform audit.
	• External Risk Factors Dashboard • External Risk Factors Management	View and analyze risk factor information imported into EnterpriseView from external sources.

Navigation Bar Description, continued

Module	Pages	Description
	Asset Profiling	Create and manage a business model that depicts your organization from high-level business assets to low-level IT assets, on which policy, risk, and vulnerability management is performed.
	• Task Management Dashboard • Workflow Management	Create, manage, and monitor workflows. Use workflows to structure and streamline your organization's processes and assign tasks to the relevant people.
	• Audit Log • Configuration • Job Management • User Management • Dashboard Builder • KPI Management	Administer EnterpriseView by creating customized dashboards, managing roles and permissions, monitoring batch jobs and managing application settings.

The toolbar

The EnterpriseView toolbar appears on every page except for the **Configuration** page. The toolbar appears on the top right side of every page.



The toolbar includes the tools described in the following table.

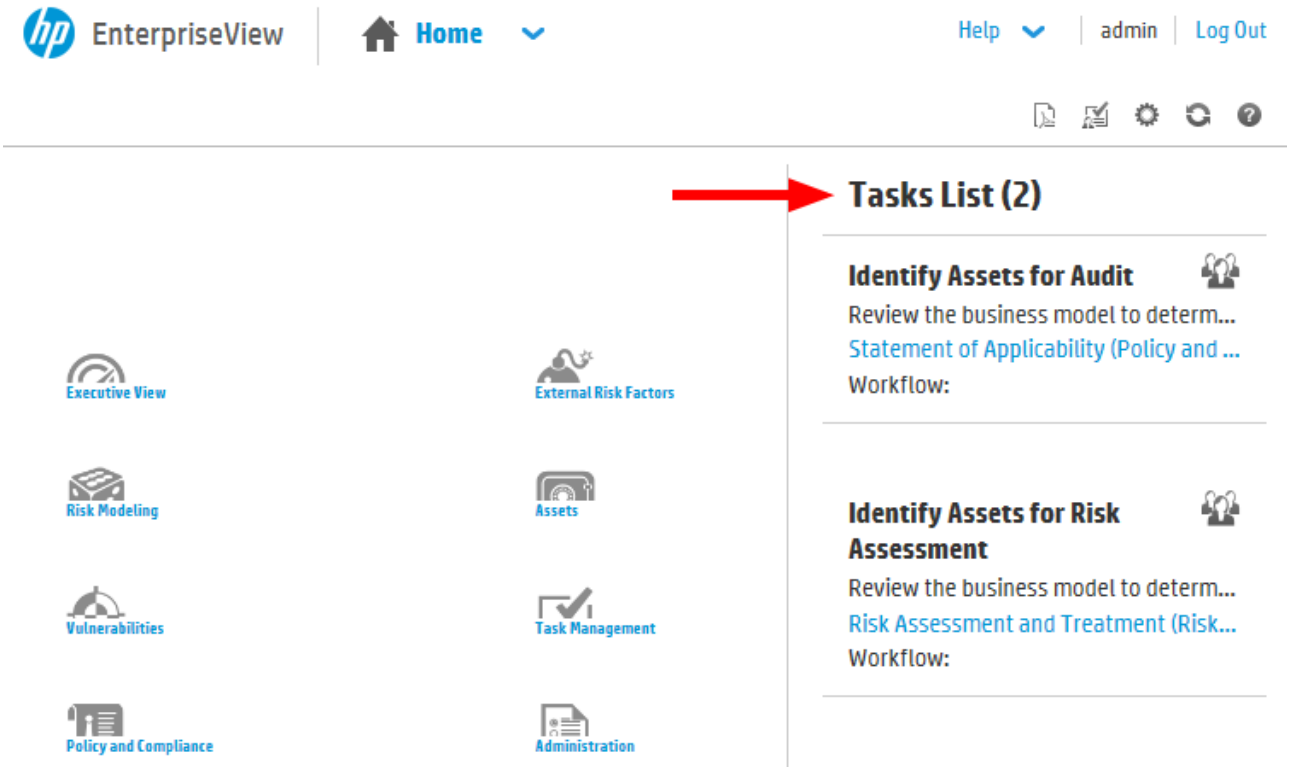
Toolbar Description

Tool	Description
Generate Report	**Generate Report** Click this button to generate a report. Select a report from the list of reports. If you are prompted, select to always allow pop-ups from the EnterpriseView server. You can save the report as a PDF. This button does not appear on pages that do not have reports. If you create a report for that page and assign it to the category of that page, then the button will appear on the toolbar.
My Tasks	Click this button to open the **My Tasks** dialog box. For more information, see "Manage Your Tasks" on page 248.
Settings	Click this button to open the **Settings** dialog box. For more information, see "Settings" on page 261.

Toolbar Description, continued

Tool	Description
Refresh	Click this button to refresh the information on this page.
Help on this page	Click this button to open the help relevant to this page.

The Tasks List



For information on the Tasks List, see "Manage Your Tasks" on page 248.

Chapter 2: Asset Profiling

In EnterpriseView, an asset is an entity that represents a physical or logical resource in the system. For example, assets can represent hardware, software, services, people, documents or business units.

Assets are the building blocks of the business model. They are organized into a hierarchical format based on the dependencies in your organization's IT environment.The EnterpriseView business model depicts the entire IT environment, from the highest level of the organization (such as an office location or a line of business) to the lowest level (such as a software application). Each entity in the EnterpriseView business model is an asset. For more information on building a business model, see "How to Build a Business Model" on page 23.

The business model is the foundation for all core EnterpriseView functionality. Using a business model, risk and regulation compliance (policies) can be assessed effectively, providing "apply once—affect all" capabilities. Policies can be applied to top level assets and trickled down to all lower level assets that belong to that hierarchy. Conversely, risk assessments and policy audits can be performed on lower level assets and then trickled up and aggregate to top level assets, providing a business centric analysis of security risk and policy compliance. Data analysis, scorecards, and reports can be viewed on all asset levels, providing stakeholders in an organization with access to data that is relevant to their role. An extensive business model provides EnterpriseView users with more accurate information about the organization's overall risk.

Assets in the business model are restricted to authorized users, with the exception of the Administrator, who is automatically authorized to work on the entire business model. For more information, see "Business Model Authorization" below.

There are many different types of assets, which are divided into categories. For more information,see "Manage Asset Types" on page 21.

Business Model Authorization

When EnterpriseView is first deployed, there is only one asset defined: My Organization. All other assets must be imported from an external asset repository or created manually. The Administrator (the user defined during installation) is the only user who is automatically authorized to view or edit all assets in EnterpriseView. Users must be authorized to work with at least one asset in order to work on any page in EnterpriseView that is associated with assets (has an asset selector component), primarily, the Asset Profiling page. Therefore, when creating the business model, the Administrator must grant users and groups access rights to work with assets that are relevant to them. This does not mean that the Administrator must create the entire business model. The Administrator can authorize users that have EDIT ASSETS permissions (such as Asset Profilers) to work on select business model branches. After these users are authorized, they can continue creating the business model and authorizing other EnterpriseView users and groups to work with the assets that are relevant to them. To authorize users to work with an asset, see "Authorize a User to Work with an Asset" on page 27.

The access rights of a user determine the scope of action that the user has in EnterpriseView. For example, a user with a Policy Auditor role with access rights to the Main Office asset, will be able to see the Main Office branch in the business model and perform an audit on that branch. This user will not be able to see any other assets in EnterpriseView. This concept is applied throughout EnterpriseView and includes all the pages, dashboards, and printable reports.

Asset access rights are automatically inherited from parent assets, therefore, when a user is authorized to work on an asset, the user can also work on all of the asset's children. Access rights can be granted on any asset, but can be revoked only on the asset on which they were granted; inherited access rights cannot be revoked.

Assets that are unattached can be viewed or edited by any user that has EDIT ASSETS permissions. After an asset is attached to the business model, only authorized users can work with the asset.

Common Platform Enumeration

Common Platform Enumeration (CPE) is a structured naming scheme for describing and identifying classes of applications, operating systems, and hardware devices present among an enterprise's computing assets. The official version of the CPE Product Dictionary is maintained by National Institute for Standards and Technology (NIST).

In EnterpriseView, a CPE is primarily an asset property that helps identify the asset by using this standardized method. But it is also one of the vulnerability properties, for the vulnerabilities defined in the vulnerability dictionary.This means that you can use CPEs as a source of information for identifying potential vulnerabilities on your organizations assets. CPEs are updated along with the vulnerability dictionary.

A CPE has the following URI-based format:

cpe:/<part>:<vendor>:<product>:<version>:<update>:<edition>:<language>

The part field includes one of the following values:

- **a** for applications
- **h** for hardware platforms
- **o** for operating systems

Fields at the end of the URI can be left off.

For example:

cpe:/a:hp:loadrunner:11.50.

This format is based on the CPE 2.2 version, although the CPEs in the dictionary are from version 2.3.

When you create assets locally, you can add or removes CPEs to these assets, as required. But when you import assets from an external asset repository, you cannot add or remove their corresponding CPEs.

CPEs are supported when you import assets from a CSV file or from ESM; they are not supported if you import assets from UCMDB.

Note: If your business model is based on ESM, CPEs are derived from data found in ESM asset categories. This means that your business model must be category-based in order to include CPEs.

Manage Asset Types

EnterpriseView includes the following asset categories:

- **Organization**: Includes only one asset type—Organization. The Organization is the starting point of the business model. EnterpriseView includes a predefined Organization asset.
- **Location**: Includes types such as Country, City, and Building.
- **Business**: Includes a business reference or a line of business, such as online banking.
- **IP**: Includes only one asset type—IP Address. EnterpriseView supports both IPv4 and IPv6.
- **Infrastructure Elements**: Includes hardware, such as a computer (network entity) or a printer.
- **Running Software**: Includes software applications, such as a mail server or a database.
- **People**: Includes groups and individuals.
- **Documents**: Includes one asset type—Document.

Each of these categories includes various predefined asset types. In addition to the asset types that come with EnterpriseView, you can add new asset types to any category, except the Organization category, which includes only one Organization asset.

You can also edit or delete an asset type.

Note: Deleting or renaming an asset type in the Configuration module only affects new assets; they do not affect existing assets in the business model. Existing assets of the deleted or renamed type are displayed with a question mark icon.

To add an asset type

1. Click **Administration > Configuration**.

2. In the **Configuration** module, in the left pane, click **Asset Management > Asset Type Categories**, and then click the asset category to which you want to add an asset type.

3. In the right pane, click the **Add configuration to configuration set**  button, and then do the following:
   - In the **Type** box, enter the internal name of the asset type.
   - In the **Label** box, enter the display name of the asset type.
   - From the **Icon** list, select the image for the asset type icon.

4. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section in the *HP EnterpriseView Deployment Guide*.

To edit an asset type

1. Click **Administration > Configuration**.

2. In the **Configuration** module, in the left pane, click **Asset Management > Asset Type Categories**, and then click the asset category to which the asset type that you want to edit belongs.

3. In the right pane, make the required changes for the asset type that you want to change.

4. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section in the *HP EnterpriseView Deployment Guide*.

To delete an asset type

1. Click **Administration > Configuration**.

2. In the **Configuration** module, in the left pane, click **Asset Management > Asset Type Categories**, and then click the asset category from which you want to delete an asset type.

3. In the right pane, click the asset type that you want to delete, and then click the **Remove configuration from the configuration set**  button.

4. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section in the *HP EnterpriseView Deployment Guide*.

How to Build a Business Model

There are two ways to build a business model in EnterpriseView:

- **Import**: you can synchronize EnterpriseView with the external asset repository that is the primary asset management system in your organization.

  Note: You can add assets that you created in EnterpriseView to an imported business model.

- **Create locally**: you can use EnterpriseView as the primary asset management system of your organization and build a business model within EnterpriseView.

The following procedures outline the steps for creating a business model in EnterpriseView.

To import a business model

1. Follow the instructions in the *Synchronize Assets with External Asset Repository* section in the *HP EnterpriseView Deployment Guide*.

2. During the first import, all imported assets are saved as **Unattached**. Follow the instructions in "Connect an Asset to the Business Model" on page 28. Repeat this process until all imported assets are connected to the business model.

   Creating the business model from imported assets is a one-time task. After the business model is created, each subsequent synchronization automatically updates the business model for all existing assets, and only newly introduced assets are saved as unattached.

3. Authorize users to work with assets, as described in "Authorize a User to Work with an Asset" on page 27.

To build a local business model

1. Review the predefined asset types.
   a. Click **Administration > Configuration**.

   b. In the **Configuration** window, click **Asset Management > Asset Type Categories**.

   c. Review the asset types for all categories to see whether they reflect the asset types required by your organization's business model.

   d. If required, add asset types, as described in "Manage Asset Types" on page 21.

2. Create the business model.
   a. Click **Assets > Asset Profiling**.

   b. In the **Asset Profiling** window, click the **New** tab. The predefined **My organization** asset icon is displayed in the map area.

   c. Click the **My organization** asset.

   d. In the asset card, click the **Edit Asset Properties**  button, and enter the asset name and any other information that you have on this asset.

   e. Follow the instructions in "Create an Asset" on the next page to add assets to the business model.

   f. For each asset that you create, authorize users to work with it, as described in "Authorize a User to Work with an Asset" on page 27

Create a Business Model View

A view is a specific business model composition that displays only the assets that you want to see on the map. A view allows you to concentrate on the assets that interest you the most without being distracted by the multitude of assets in your organization. You can create multiple views that allow you to manage different parts of the organization. For example, you can create a view that includes only business assets that belong to a major office, or a view that includes only servers in a specific office building.

You can create views in the following pages:

- Asset Profiling

  Views on this page include asset composition.

- Risk Indicators

  Views on this page include asset composition and the risk factor.

- External Risk Factor Management

  Views on this page include asset composition, the risk factor, and the score type.

The views are not shared between pages, meaning that you must create separate views for each page.

After you save the view, when you reopen the page, the business model displayed in the map area is resized to the default zoom and to fit to window.

You can also modify a view.

Assets that were disconnected from the business model are not displayed in the view.

To create a new view

1. Click **Assets > Asset Profiling**.

   Note:

   - To create a view in the **Risk Indicators** page, click **Executive View > Risk Indicators**.
   - To create a view in the **External Risk Factors Management** page, click **External Risk Factors >Management**.

2. In the business model map, expand and collapse assets as needed, to create the map composition that you require.
3. In the toolbar, click the arrow next to the **Save** button, and then click **Save New View**.
4. In the **Save View** dialog box, in the **Name** box, enter a name for the view, and then click **OK**.

   The view that you created is added to the list of views and are available from the **You are viewing** list.

To modify an existing view

1. Click **Assets > Asset Profiling**.

   Note:

   - To modify a view in the **Risk Indicators** page, click **Executive View > Risk Indicators**.
   - To modify a view in the **External Risk Factors Management** page, click **External Risk Factors >Management**.

2. From the **You are viewing** list, select the view that you want to modify.
3. Make the required changes to the view.
4. Click **Save**.

Create an Asset

New assets must be connected to the business model. You cannot create an unattached asset, but you can create a new asset and then detach it from the business model. For more information, see "Disconnect an Asset from the Business Model" on page 30.

To create an asset

1. Click **Assets > Asset Profiling**.
2. Search for the source (parent) asset, as described in "Search for an Asset" on page 29, or click the asset in the map.
3. In the asset's asset card, click the **Connect to another asset (mark as source asset)** button.

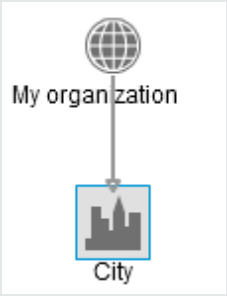
   The connection panel is displayed in the map area.

4. In the left pane, click the **New** tab.
5. On the **New** tab, click the asset type that you want to create and connect to the business model.
6. In the left pane, click the **Create as target asset** button. This asset will be connected to the business model as a child asset.
7. In the connection panel, click **Create and Connect**.

   The asset is added to the business model and the **Edit Asset Properties** dialog box opens.
8. In the **Edit Asset Properties** dialog box, enter the relevant information, and then click **Save**. For a detailed description on asset properties, see "Asset Properties" on page 32.
9. To cancel the connection, in the connection panel, click **Cancel**.

You can also drag the asset from the **New** tab and drop it on the parent asset in the map area. For example, to create a city asset under the **My organization** asset, drag the **City** asset from the left pane and drop it on the **My organization** asset in the map area. The following path is created:



Authorize a User to Work with an Asset

By default, the Administrator has access rights to all assets and the asset owner is automatically authorized to work with the asset; all other users must be authorized manually. For detailed information on authorization, see "Business Model Authorization" on page 19.

Note: You must have access rights to at least one asset in order to perform this task.

To authorize a user to work with an asset

1. Click **Assets > Asset Profiling**.
2. Search for the asset to which you want to grant access rights, as described in "Search for an Asset" on page 29.
3. Click the asset in the search results, and then click the **Edit Asset Properties**  button.
4. In the **Edit Asset Properties** dialog box, click the **Authorized Users** tab.
5. In the **Search for Users or Groups** box, enter the name or the partial name of the user or group that you want to add to the list of authorized users, and then click **Add**.
6. Click **Save**.

   The user that you added to the list now has access rights to the asset and all of its children.

Connect an Asset to the Business Model

You can connect unattached assets to the business model or connect assets that are already part of the business model to a different parent asset.

There are two scenarios in which assets are saved as unattached in EnterpriseView:

- Assets are saved as unattached the first time that they are imported from an external asset repository. After the business model is created, each subsequent synchronization automatically updates the business model for all existing assets, and only newly introduced assets are saved as unattached.
- Assets that have been disconnected from the business model are also saved as unattached.

To connect an asset to the business model

1. Click **Assets > Asset Profiling**.
2. In the left pane, click the **Unattached** tab and find the asset that you want to connect to the business model, or search for the asset, as described in "Search for an Asset" on the next page.
3. Click the **Mark as target asset**  button. This asset will be connected to the business model as a child asset.

   The connection panel is displayed in the map area.

4. Search for the source (parent) asset, as described in "Search for an Asset" on the next page or click the asset in the map.
5. In the asset card of the source parent, click the **Connect to another asset (mark as source asset)**  button.
6. In the connection panel, click **Connect**.

   The asset is added to the business model.

7. To cancel the connection, in the connection panel, click **Cancel**.

Note: You can also drag the asset from the left pane and drop it on the parent asset in the map area.

Search for an Asset

You can search for a name or a partial name of any asset, either attached to the business model or unattached, in the **Search** tab. You can also search for an asset according to the user or group that is authorized to work on that asset.

To search for an asset

1. Click **Assets > Asset Profiling**, and then, in the left pane, click the **Search** tab.
2. In the **Search asset name** box, enter the asset name or a partial asset name, and then press **ENTER**.

   The search results are displayed in the left pane. The two immediate parent assets are displayed next to each asset that is found.
3. Click **Advanced** to search by asset category or type. Select the category or type from the list, and then click **Search**.
4. To display the asset in the business model map, click the **Show on Map**  button.

To search for an asset by user or group

1. Click **Assets > Asset Profiling**, and then, in the left pane, click the **Authorized User** tab.
2. In the **Search asset by user or group** box, enter the name of the user or group according to which you want to search, and then press **ENTER**.

   The search results are displayed in the left pane.

   Note: Only assets on which the user or group are authorized to work on directly (as opposed to assets that inherited the access rights) are displayed.

Filter Assets by a CPE

You can filter assets by a CPE in order to create a business model view that is product or vendor specific. For example, you can create a filter that displays a segment of the business model that includes only servers that host an Oracle database. For more information on CPEs, see "Common Platform Enumeration" on page 20.

The filter is applied to the entire Asset Profiling page. This means that if you filter the page and search for assets, you will receive search results out of the filtered results.

To filter assets by a CPE

1. Click **Assets > Asset Profiling**.
2. In the **Asset Profiling** page, in the **Filter by CPEs** box, enter the CPE (vendor:product:version) or a partial CPE (vendor:product).

   The business model is collapsed.
3. Expand the business model to display the assets that are associated with the CPE.

   The assets that are displayed in the map in the business model are assets that are directly associated with the CPE and their parent assets. The full hierarchy is displayed.

Disconnect an Asset from the Business Model

To disconnect an asset from the business model you must delete the relationship between the asset and its parent.

You can delete only relationships that you created within EnterpriseView. You cannot delete relationships that you imported from an external asset repository.

If the asset has only one parent, then when it is disconnected, it is saved as unattached; the asset itself is not deleted. If the asset has more than one parent, then it remains in the business model.

Disconnected assets can be reconnected to the business model at any time.

To disconnect an asset from the business model

1. Click **Assets > Asset Profiling**.
2. Search for the asset that you want to disconnect, as described in "Search for an Asset" on the previous page.
3. In the **Search** tab, click the asset that you want to disconnect, and then click the **Show on Map**  button.
4. In the map area, click the relationship between the asset that you want to disconnect and its parent asset, and then press **DELETE**.
5. Click **Yes** to confirm the action.

   The disconnected asset can be viewed in the **Unattached** tab in the left pane.

Delete an Asset

You can only delete assets created in EnterpriseView. In order to preserve the integrity of the business model, assets imported from an external asset repository cannot be deleted directly from

EnterpriseView; they must be deleted in the system from which they originated. When the business model is next synchronized, the change will be displayed in EnterpriseView.

To delete an asset

1. Click **Assets > Asset Profiling**.
2. Search for the asset that you want to delete, as described in "Search for an Asset" on page 29.
3. Click the asset that you want to delete and then click the **Delete**  button or select the asset in the map and press **DELETE**.

   A confirmation message is displayed. Confirm this action by clicking **Yes**.

   Note: If you delete an asset that has children, then the asset is deleted and the children are saved as unattached.

Add a CPE to an Asset

You can add or remove CPEs that are associated with an asset. You can add CPEs only to asset that belong to the following categories:

- Running Software
- Infrastructure Element
- IP

You can add CPEs only to assets that were created in EnterpriseView. CPEs that were imported from a CSV file or from ArcSight ESM cannot be removed and are read-only.

To add a CPE to an asset

1. Click **Assets > Asset Profiling**.
2. Search for the asset to which you want to add a CPE, as described in "Search for an Asset" on page 29.
3. Click the asset in the search results, and then click the **Edit Asset Properties**  button.
4. In the **Edit Asset Properties** dialog box, click the **CPEs** tab.
5. In the search box, enter a CPE (vendor:product:version) or a partial CPE (vendor:product).

   Note: To optimize your search, enter the full vendor and product name.

6. Click **Add**.
7. Click **Save**.

To remove a CPE from an asset

1. Click **Assets > Asset Profiling**.
2. Search for the asset from which you want to remove a CPE, as described in "Search for an Asset" on page 29.
3. Click the asset in the search results, and then click the **Edit Asset Properties**  button.
4. In the **Edit Asset Properties** dialog box, click the **CPEs** tab.
5. From the list of CPEs, click the CPE that you want to remove, and then click the **Remove this CPE from the asset**  button.
6. Click **Save**.

Asset Properties

The asset properties include the following information:

- **Asset General Properties**

  The following table describes all of the properties for each asset category.

- **Authorized Users**

  You can add or remove users and groups that are authorized to work on the asset. For more information, see "Authorize a User to Work with an Asset" on page 27.

- **CPEs**

  A CPE is an asset identifier. For more information, see "Common Platform Enumeration" on page 20.

  You can add or remove CPEs that are associated with the asset. CPEs that were imported from a CSV file or from ArcSight ESM cannot be removed and are read-only.

  You can filter assets according to their CPE, as described in "Filter Assets by a CPE" on page 29.

Asset General Properties

Category	Property	Description
General	**Name**	The name of the asset. It is displayed in the business model's graphic view along with the asset type icon. This field is mandatory.
	Description	Additional information about the asset.
	Type	The asset type.
	Source	The source name for the Organization asset is **System**. The source name for assets created in EnterpriseView is empty. For assets imported from an external asset repository, the source name is the same as the connector name defined in the **Configuration** module.
	Owner	The person responsible for the asset and who is contacted in situations requiring manual intervention. The asset owner is automatically authorized to work with the asset.
Location	**Latitude**	The geographical coordinates of the asset's location.
	Longitude	The geographical coordinates of the asset's location.
	Address	The street address of the asset.
	ZIP Code	The asset location ZIP code.
	City	The city of the asset.
	State	The state of the asset.
	Country	The country of the asset.
	Criticality Level	A numeric index, between 0 and 10, indicating the severity of a potential catastrophe and the probability of its occurrence. The default criticality level of all assets is 1. The criticality level of an asset affects the weight of its scores when policy assessment aggregation, risk aggregation, and vulnerability score aggregation are done. For more information, see "Weights and Criticality Level" on page 83, "Risk Score Aggregation Mechanism" on page 110, and "Asset Vulnerability Score Aggregation Mechanism" on page 147.

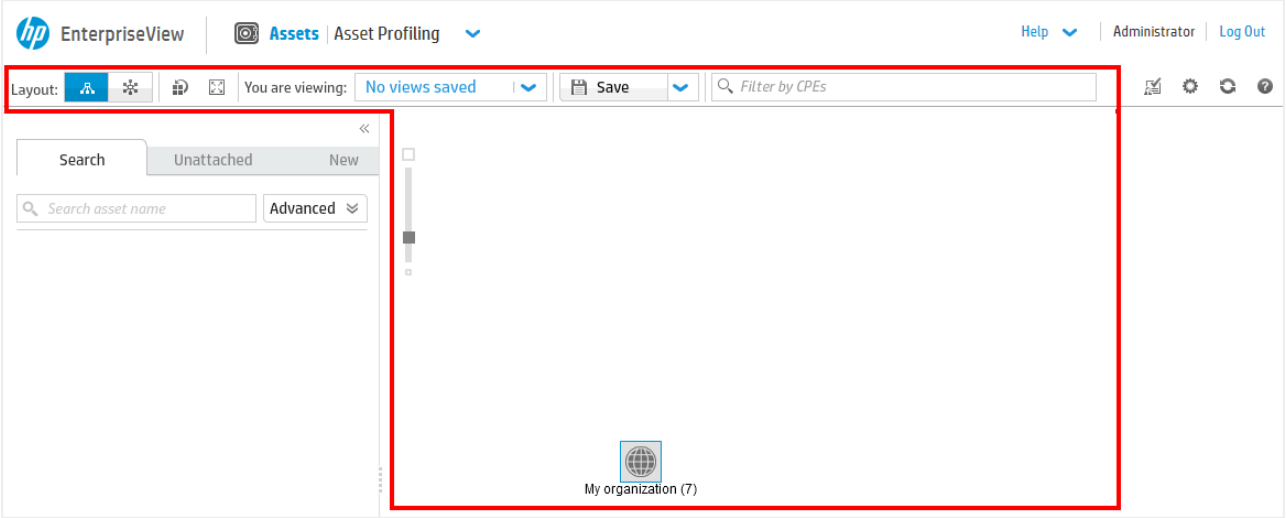
Asset General Properties, continued

Category	Property	Description
Business	**Criticality Level**	See above description.
	Value	A numeric, monetary value.
Infrastructure Element	**OS Name**	The operating system that is installed on the infrastructure element.
	OS Version	The version of the operating system that is installed on the infrastructure element.
Running Software	**Application Name**	The name of the application.
	Application Version	The version of the application.
IP	**DNS Name**	The server name as defined in the network DNS.
	MAC Address	The server MAC address.
	IP Address	The server IP address.
People	**Role**	The role of the person or the group in the organization.
Documents	**Version**	The version of the document.
	Purpose	The purpose for which the document was created.
	Classification	The type of document, such as legal or technical.
	Release Date	The date on which the document was published.

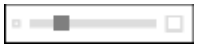
Asset Profiling Window

The Asset Profiling window enables you to create and maintain your organization's business model.The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

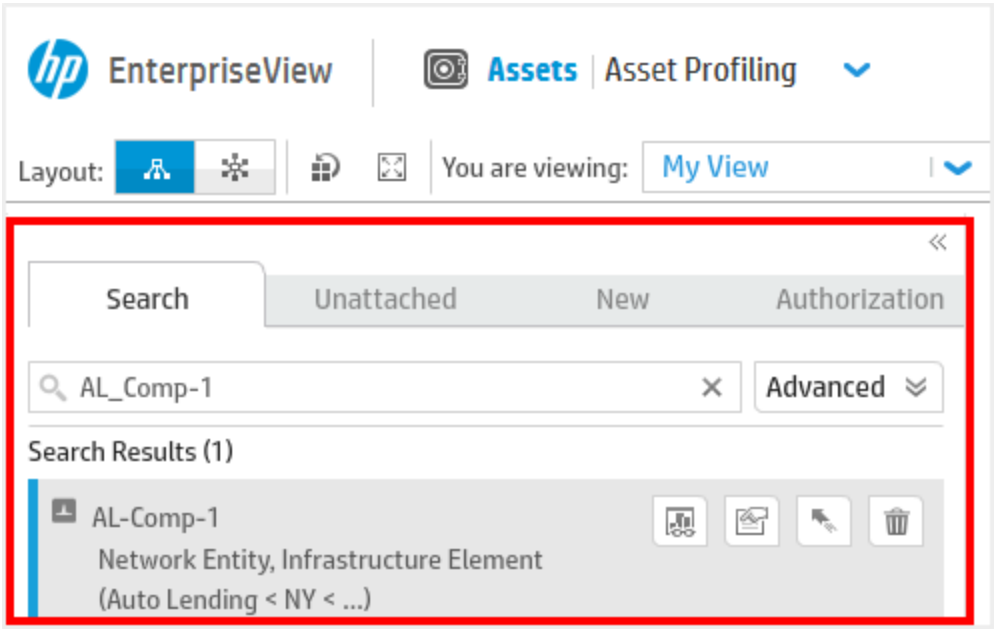
Map Area



UI Element	Description
(Layout)	**Display the business model in a tree layout** Displays the business model in a tree structured graph.
(Layout)	**Display the business model in a circular layout** Displays the business model in an interconnected ring and star topology.
	Optimize Layout Refreshes the layout of the business model in the graph.
	Fit to Window Resizes and displays the entire business model in the map area.
You are Viewing	The name of the view that is displayed. If there are multiple views, you can select a different view from the list.

UI Element	Description
Save New View	Creates a new view based on the current business model view displayed in the map. Access this option by clicking the arrow next to the Save button. After you save the view, when you reopen the Asset Profiling page, the business model displayed in the map area is resized to the default zoom and to fit to window. **Note:** Assets that were disconnected from the business model are not displayed in the view. Views are user-specific; you cannot see views that other users created. For more information, see "Create a Business Model View" on page 24.
Save	Saves the changes that you made to the view displayed on the map.
Filter by CPEs	Filter the business model by a CPE. For more information, see "Filter Assets by a CPE" on page 29.
	**Zoom** Zooms the business model in and out.
	**Refresh** Refreshes the data on the page.

Left Pane

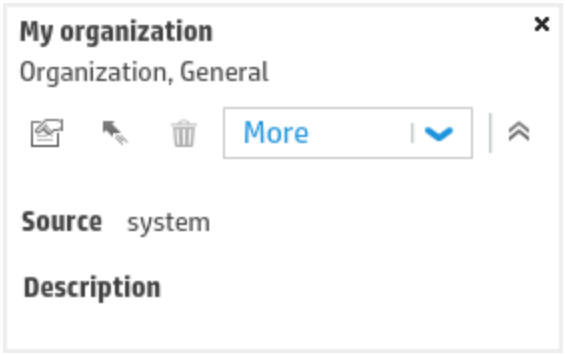


UI Element	Description
Search tab	Enables you to search for a name or a partial name of any asset in EnterpriseView, connected to the business model or unattached. You can also search by asset category or type by clicking **Advanced**.
Unattached tab	Includes assets that have either been imported from an external asset repository and have not been connected to the business model or any asset that has been disconnected from the business model.
New tab	Displays all of the asset types according to categories. When you create a new asset in EnterpriseView you also connect it to the business model.
Authorization	Enables you to search for assets according to users or groups that are authorized to work with the assets. For more information, see "To search for an asset by user or group" on page 29.
	**Delete** Deletes the selected asset. You can delete only assets created in EnterpriseView. In order to preserve the integrity of the business model, assets imported from an external asset repository cannot be deleted directly from EnterpriseView; they must be deleted in the system from which they originated. When the business model is next synchronized, the change will be displayed in EnterpriseView. If you delete an asset that has children, then the asset is deleted and the children are saved as unattached. This button is available in: • **Search** tab • **Unattached** tab • **Asset Card**
	**Show on Map** Displays the asset in the business model in the map area. This button is disabled if the asset is unattached. This button is available in the **Search** tab.

UI Element	Description
	**Edit Asset Properties** Opens the **Edit Asset Properties** dialog box. For more information on asset properties, see "Asset Properties" on page 32. This button is available in: • **Search** tab • **Unattached** tab • **Asset Card**
	**Connect to another asset (mark as source asset)** Marks an asset as the parent asset when you connect an asset to the business model. A source asset must be attached to the business model. This button is available in: • **Search** tab • **Asset Card**
	**Mark as target asset** Marks an asset as the child asset when you connect it to the business model. A target asset can be unattached or already connected to the business model. This button is available in: • **New** tab • **Unattached** tab • **Search** tab after the source asset has been defined • **Asset Card** after the source asset has been defined
	**Refresh** Refreshes the business model to display any changes that might have occurred, for example, synchronization with an external asset repository. Available in all tabs.
	**Collapse** Collapses the left pane.

UI Element	Description
	**Expand** Expands the left pane.

Asset Card



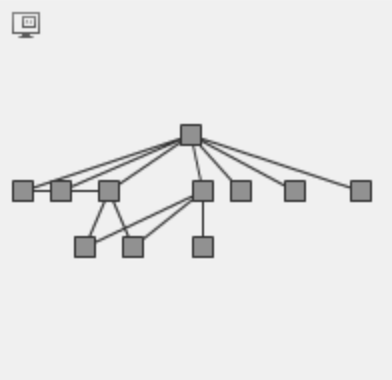
You can open the asset card by clicking on the asset in the business model map.

The asset card includes the asset name, category and type. The following table includes the functionality available from the asset card.

UI Element	Description
	See "Delete" on page 37.
	See "Connect to another asset (mark as source asset)" on the previous page
	See "Mark as target asset" on the previous page.
	See "Edit Asset Properties" on the previous page.

UI Element	Description
Expand	Displays the direct children of the asset in the business model map. Click **More > Expand**. If the asset has more than 20 children, then the assets are not displayed automatically in order not to overload the business model. In this case, the **Show Children on Map for Asset** dialog box is displayed, enabling you to select the children you want to display. The number of direct children that an asset has is displayed in the business model map by the asset name. You can also expand by double-clicking the asset. **Note:** You cannot expand an asset that has more than 1000 children in the business model. If you attempt to expand such an asset, you will receive an error message.
Collapse	Hides the direct children of the asset in the business model map. Click **More > Collapse**. You can also collapse by double-clicking the asset.
Show Parents	Displays the parent assets of the asset in the business model map. Click **More > Show Parents**.
Hide Parents	Hides the parent assets of the asset in the business model map. Click **More > Hide Parents**.
	**Open Properties** Displays properties in read-only mode. For more information on asset properties, see "Asset Properties" on page 32.
	**Close Properties** Closes properties view.

Mini-Map



When the business model is expanded to a larger size than the map area, you can navigate it by clicking and dragging in the mini-map area.

To expand or collapse the mini-map, click the **Expand/Collapse**  button.

Chapter 3: Policy and Compliance

Organizations must fulfill a set of legal, statutory, regulatory, and contractual requirements in order to satisfy their trading partners, contractors, service providers, and socio-cultural environment. These requirements are bound in policies. EnterpriseView provides a set of integrated components that create a complete security policy compliance management framework.

The following components comprise the stages of policy management:

- **Policy creation and library**

  The EnterpriseView policy library includes out-of-the-box policies, such as NIST800-53 (revision 3), PCI DSS v2.0, and HIPAA Security Rule (NIST), and a Unified Compliance Framework (UCF) 2013 Q1 release. UCF contains a comprehensive set of IT regulatory compliance controls compiled from hundreds of industry standard polices such as PCI, HIPAA ,and ISO/IEC 27001, allowing you to assess once and comply with many. For more information, see "About Unified Compliance Framework" on the next page.

  EnterpriseView Policy Builder includes a highly configurable policy template for defining in-house policies, as described in "Create a Policy" on page 45. The policy template can be easily simplified or enhanced. It can be configured to include basic control definitions, blocks of text for emulating the different parts of traditional industry standard policy books (such as sections and chapters on various levels) or it can be more comprehensive, including parameters such as auditing attributes (for example: priority, GRC designation, type, and purpose).

  Control maturity and compliance acceptance levels are derived from the maturity and compliance score ranges, defined, and can be edited in the Policy Builder. For more information, see "Configure Compliance and Maturity Score Ranges" on page 63.

- **Policy Mapping**

  EnterpriseView policy mapping enables you to perform policy compliance assessments on assets for a single policy and create compliance reports for multiple policies, saving you the effort of assessing the compliance for each policy to which your organization is obligated. For more information, see "Policy Mapping" on page 59.

- **Control to Vulnerability Mapping**

  EnterpriseView enables you to map controls, from any policy, to any vulnerability defined in the vulnerability dictionary in order to refine or determine asset compliance scores. Configuration vulnerabilities can be used to automatically determine compliance, while network and application vulnerabilities can be used to refine a score applied either manually or automatically. For more information, see "Control to Vulnerability Mapping" on page 54.

- **Setting Statements of Applicability (SoA)**

  The SoA identifies the controls chosen for the assets in the organization. The SoA is derived from the output of the risk assessment and directly relates the selected controls back to the

original risks they are intended to mitigate. Both industry standard and in-house controls can be applied, as described in "Set Statement of Applicability" on page 48. Applied controls are trickled down to lower-level assets and can be viewed at any point on the business model hierarchy, but can also be overridden for specific assets. Controls that are not applicable are also defined, complying with industry best practices.

- **Auditing**

  EnterpriseView enables you to assess policy compliance and control maturity for all assets that comprise your organization's business model, as described in "Audit Assets" on page 50.

  EnterpriseView applies a Control Maturity Model, which is aligned primarily with the widely adopted Capability Maturity Model (CMM), in order to benchmark IT processes, performance, and capability, performed through the Policy Assessment module. The Control Maturity Model is implemented by a scoring method that is based on five factors that make up the overall control score. This scoring method results in a higher level of quality in the deployment of a security control on an asset. For more information, see "P5 Control Maturity Model Guidelines" on page 76.

  The policy assessment module also supports control audit annotation and attachments.

About Unified Compliance Framework

Unified Compliance Framework (UCF) is an industry-vetted compliance database that includes a comprehensive set of IT regulatory compliance controls from hundreds authority documents, such as PCI, HIPAA,and ISO/IEC 27001. UCF eliminates overlapping controls and bridges the gaps between the different authority documents, providing you with a harmonized list of controls.

In EnterpriseView, UCF is portrayed as a single policy, allowing you to assess one policy while complying with the many policies to which your organization is obligated.

The structure of the UCF policy in EnterpriseView is a simplified version of the original framework, which includes main security categories containing a flat list of controls. The controls are grouped according to main security categories (known as Impact Zones in UCF) and include their control ID.

The following table includes the mapping between EnterpriseView policy elements and their corresponding elements in UCF.

EnterpriseView	UCF	Additional Information
Policy	**Authority Document**	In the original framework, every control includes Citations. Each citation includes a reference to an authority document that has this control or a similar, corresponding control. In EnterpriseView, UCF is represented as a policy entity. The various authority documents, such as PCI, HIPAA, and ISO/IEC 27001, are not represented as standalone policies. Instead, they are used to filter controls when creating the Statement of Applicability, as described in "Set Statement of Applicability" on page 48 and for reporting purposes.
Main Security Category	**Impact Zone**	UCF includes impact zones, such as: • Leadership and High Level objectives • Audit and Risk Management • Product Design and Development • Acquisition of Technology • Operational Management • Human Resources Management • Records Management • Technical Security • Physical Security • Systems Continuity • Monitoring and Reporting • Privacy • System Hardening Through Configuration Management
Control Text	**Control Statement**	In some cases when a Control Statement does not exist, then the control text reflects the Policy Statement.
Title	**Control Title**	

Manage Policies

This section includes information about how to manage policies.

Create a Policy

EnterpriseView includes the Unified Compliance Framework, as described in "About Unified Compliance Framework" on page 43. You can also create your own policies. When you create a new policy, you can decide on the complexity of its format and you can configure the control template to suit the needs of your organization and the specific policy.

Creating the policy is a two-step process:

1. Create the policy and configuring the policy template. We recommend planning the policy template in advance. However, you can modify the template at any time.
2. Add content to the policy.

After you have created a new policy, if you want to begin working with the policy, you need to activate it, as described in "Activate a Policy" on page 47.

You can fully modify policies that you created in EnterpriseView. For out-of-the-box policies or imported policies, you can modify the control template and add guidelines to controls, but you cannot modify the content of the policy.

To create a new policy and configure the policy template

1. Click **Policy and Compliance > Policy Builder**.
2. On the **Policy Builder** tab, click **Create Policy**.
3. In the **Template** page, do the following, and then click **Save** or **Save and Activate**:
   a. In the **Policy Name** box, enter a name for the policy.
   b. In the **Policy Description** box, enter a description for the policy.
   c. In the **Control Template** area, select the attributes relevant for this policy according to the information available in the Template tab, as described in "Policy Builder Window" on page 64.

To add content to the policy

1. Click **Policy and Compliance > Policy Builder**.
2. In the **Policy Builder** page, in the left pane, click the **Content** tab. In the left pane, from the policy drop-down list, select the policy to which you want to add content.
3. Follow these steps to add a Main Security Category. For more information on policy attributes, see "Policy Builder Window" on page 64.
   a. In the left pane, click the **New Main Security Category**  button.
   b. In the right pane, enter the following information, and then click **Save**:
      - **Paragraph Number**: Can be any alphanumeric string, up to 255 characters.
      - **Title**: Of the security category.
      - **Text**: Any additional text explaining this security category.
4. Add more security category levels, if required:
   a. In the left pane, click the security category to which you want to add another level, and then click the **New Security Category**  button.
   b. In the right pane, enter the paragraph number, title, and text.
   c. Click **Save**.
5. Add controls to the security categories, as required:
   a. In the left pane, click the security category to which you want to add the control, and then click the **New Control**  button.
   b. In the left pane, enter basic control information, as described in "Policy Builder Window" on page 64. If required, expand **Guidelines** and **Additional Auditing Information** to enter additional control information.
   c. Click **Save**.
6. Repeat steps 3 through 5 to complete the policy content.

Activate a Policy

You must activate a policy before you can start working with it. Policies that you do not activate are not displayed in any of the pages that belong to the Policy and Compliance module, except for the Policy Builder.

There are two ways to activate a policy:

- Through the policy builder. We recommend this option when you want to create a policy and immediately activate it.
- Through the EnterpriseView **Settings** dialog box. We recommend this option for managing the state of all the policies in EnterpriseView.

To activate a policy through the Policy Builder

1. If you have not just created the policy, click **Policy and Compliance > Policy Builder** and from the top left pane, select the policy that you want to activate.
2. Click the **Settings** tab, and then select the **Activate Policy** check box.
3. Click **Save**.

To activate a policy through the EnterpriseView Settings dialog box

1. On the EnterpriseView toolbar, click **Settings**.
2. In the **Settings** dialog box, click **Policy and Compliance > Policy Administration**.
3. In the **Policy Administration** page, select the check boxes of the policies that you want to work with.
4. If you want to work with UCF authority documents, select the **Unified Compliance Framework** check box, and then select the authority documents with which you want to work.
   - You can search for a specific authority documents or sort them by **Name** or by **Selected Items**.
   - You can select the **Select All** check box to automatically select all the authority documents displayed on the page. If you already filtered the list, then only the filtered results are selected.
5. Click **Save**.

Import a Policy

You can import policies in XML format from your local computer into EnterpriseView. The XML file must match the XML Schema Definition (XSD), which you can find in the following location:

<server_URL>/redcat/content/policy.xsd

Note:

- The paragraph numbers of all the policy elements in the XML must be unique.
- Policy names in EnterpriseView are unique; you cannot import a policy that already exists.

To import a policy

1. Click **Policy and Compliance > Policy Builder**, and then click **Import Policy**.
2. In the **Select file to upload by** dialog box, navigate to the location of the file, select the file, and then click **Open**.
3. After the policy is imported, you are prompted to activate the policy.

Delete a Policy

Note: You cannot restore a deleted policy.

Out-of-the-box policies and policies that are in an assessment process cannot be deleted. If you delete a policy that is mapped to another policy, then these mappings are deleted.

To delete a policy

1. Click **Policy and Compliance > Policy Builder**.
2. In the left pane, from the policy list, select the policy that you want to delete, and then, on the top right-hand side, in the Policy Toolbar, click **Delete Policy**.
3. A confirmation message is displayed. Click **OK** to confirm this action.

Set Statement of Applicability

You can apply controls to assets, which will be assessed during the auditing phase. Once applied, controls are automatically trickled down to all lower-level (children) assets. You can override these settings and reapply controls to the lower-level assets.

Note: After an asset has entered the assessment process (at least one control that is applied to the asset is already assessed for a specific policy), then none of the controls that are applied to this asset can be removed. However, controls that are not applied to this asset can be applied at any time.

To comply with industry best practices, we recommend explicitly identifying controls that are not applicable to the asset.

To apply controls to assets

1. Click **Policy and Compliance > Statement of Applicability**.

2. In the **Statement of Applicability** page, in the left pane, in the **Organization** tab, expand the business model tree and locate the asset for which you want to set applicability. You can also search for an asset, as described in "Search for an Asset" on page 29.

3. In the **Unassigned Controls** pane, from the policy list, select the required policy.

   All of the controls that belong to this policy but have not yet been assigned to the asset that you have selected are displayed below the policy. The controls are grouped according to their security category.

4. Click  next to the security category to expand and display the controls. The number of unassigned controls in the security category is displayed. For example, (12/12) means that 12 out of 12 controls that belong to the security category are not yet assigned to the asset that you have selected.

5. If you select the Unified Compliance Framework policy, then you can filter the results according to a specific authority document or policy in EnterpriseView. For more information, see "About Unified Compliance Framework" on page 43. Enter the name of the authority document in the **Filter by authority document** box. The results are filtered accordingly.

6. From the list of controls, do the following:

   a. Drag the controls that you want to apply to the asset to the **Applied to Asset** area. You can drag an entire security category or a main security category.

   b. Drag the controls that are not applied to the asset to the **Not Applied to Asset** area.

   c. Drag controls or security categories between the **Applied to Asset** area and the **Not Applied to Asset** area, as needed.

   The controls that you applied to the asset are automatically applied to all its child assets. All controls that inherit their applicability from their parent asset are marked with the **Inherited from: <asset>**  icon. If you decide that a policy, a control, or a set of controls are no longer relevant to an asset, then you can return the controls to the **Unassigned Controls** pane. The controls are removed from all children.

   You can override these settings and reapply controls to any asset, as described in the following procedure.

To override control applicability

1. Click **Policy and Compliance > Statement of Applicability**.

2. In the **Statement of Applicability** page, in the left pane, in the **Organization** tab, expand the business model tree and locate the asset for which you want to override applicability. You can also search for an asset, as described in "Search for an Asset" on page 29.

3. Make the necessary changes by dragging the controls from the **Applied to Asset** area to the **Not Applied to Asset** area and vice versa. Controls for which applicability has been overridden are marked with the **Inheritance Exception: <asset>**  icon.

Audit Assets

EnterpriseView enables you to apply a quantitative assessment to assets on two levels:

- **Asset Compliance**: Helps assess compliance with a policy control.
- **Control Maturity**: Helps identify capability gaps. These gaps can be demonstrated to management, and action plans can then be developed to bring these controls up to the desired capability target level.

There are a number of methods to assess asset compliance and control maturity. The following table includes a description of the assessment types.

Assessment Methods

Method		Description
Manual		The score is applied manually. A manual assessment overrides all automatic assessment methods.
Automatic	**External systems (REST API)**	The score is imported from an external system, such as HP Server Automation (SA). Scores from external systems have precedence over configuration vulnerabilities and aggregation.
	Configuration vulnerabilities	Relevant only for compliance assessment. Under certain circumstances, configuration vulnerabilities determine the compliance score. For more information, see "Control to Vulnerability Mapping" on page 54. Scores from configuration vulnerabilities have precedence over aggregation.
	Aggregation	The default score. The aggregate score of a control is overridden by any other assessment method. For more information, see "Control Scores Aggregation Mechanism" on page 77.

The precedence of the assessment methods is as follows:

If the control that you are assessing is mapped to another control and they are both applied to the asset, then an indication that the control is mapped is displayed, and you can access the mapped control details.

To assess asset compliance, see "Assess Asset Compliance" below.

To assess control maturity, see "Assess Control Maturity" on the next page.

Assets are assessed in the Policy Assessment window. For more information, see "Policy and Compliance Assessment Window" on page 70.

When assessments are obsolete, you can clear them, as described in "Clear Assessment on Assets" on page 54.

Assess Asset Compliance

For information on the different assessment methods, see "Assessment Methods" on the previous page.

To assess compliance

1. Click **Policy and Compliance > Assessment**.
2. In the left pane, click **Select an Asset**, expand the asset tree, and click the asset that you want to assess. Alternatively, search for the asset by entering its name. Click **OK**.

   The policies that are relevant to this asset (those that have at least one control assigned to the asset) are displayed in the left pane.
3. From the left pane, select the required policy. Expand the policy, and then click the control that you want to assess.

   The **Assessment** tab opens in the right pane.
4. In the right pane, in the **Compliance Assessment** area, click the **Edit Base Compliance Score** button.
5. In the **Edit Compliance Assessment** dialog box, select one of the following options, and then click **Save**:

   - **Manual**: In the box, enter a score between 0-100, or use the slider.
   - **Automatic**: The score is provided by the system, depending on the available assessment methods. to learn more, see "Assessment Methods" on the previous page.

6. Select the **Ignore Vulnerabilities** check box, if you want to disable the affect of vulnerabilities mapped to this control. Network or application vulnerabilities can affect the compliance score only under certain circumstances. For more information, see "Use Network and Application Vulnerabilities to Refine Compliance Score" on page 56.

7. In the **Implementation Details** box, enter the details of how you implemented this control.

8. Click **Save**.

   If there are network and application vulnerabilities mapped to the control, then the compliance score is automatically recalculated (reduced) to include the impact of the vulnerabilities. For more information, see "Control to Vulnerability Mapping" on page 54.

   The **Compliance Score** is trickled up and aggregated to higher-level assets for every applied control. The value is displayed in the left pane in the asset tree. For more information, see "Control Scores Aggregation Mechanism" on page 77.

   The date and time of this assessment is updated in the **Last Updated On** field.

Assess Control Maturity

Review the P5 Control Maturity Model Guidelines, as described in "P5 Control Maturity Model Guidelines" on page 76 in order to determine the appropriate control maturity score to apply to each maturity factor.

To assess control maturity

1. Click **Policy and Compliance > Assessment**.

2. In the left pane, click **Select an Asset**, expand the asset tree, and click the asset that you want to assess. Alternatively, search for the asset by entering its name. Click **OK**.

   The policies that are relevant to this asset (those that have at least one control assigned to the asset) are displayed in the left pane.

3. From the left pane, select the required policy. Expand the policy, and then click the control that you want to assess.

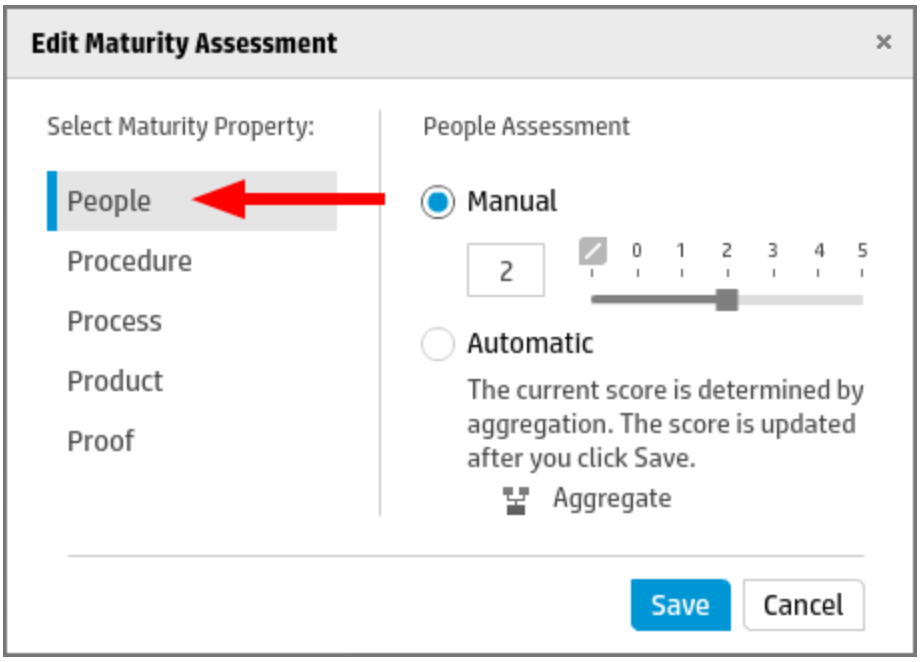
   The **Assessment** tab opens in the right pane.

4. In the right pane, in the **Maturity Assessment** area, click the **Edit P5 Maturity Factor Scores**  button.

   The **Maturity Score** is a weighted average of all maturity factors. Maturity factor weights are defined in the policy template. For more information, see "P5 Applicability Weights" on page 66.

5. In the **Edit Maturity Assessment** dialog box, select the maturity factor that you want to assess.

   In the following example, the People factor is selected.



6. Select one of the following options, and then click **Save**:

   - **Manual**: In the box, enter a score between 0-5, or use the slider. Review the P5 Control Maturity Model Guidelines, as described in "P5 Control Maturity Model Guidelines" on page 76 in order to determine the appropriate control maturity score to apply to each maturity factor.

   - **Automatic**: The score is provided by the system, depending on the available assessment methods. To learn more, see "Assessment Methods" on page 50.

     The maturity score is calculated, in addition to the maturity assessment progress, which reflects how many maturity factors have been assessed. Each maturity factor counts for a percentage of the overall score, depending on the number of maturity factors employed. For example, if all maturity factors are employed, then each factor counts for 20% of the overall score. If two out of the five maturity factors have been assessed, then the maturity assessment progress will be 40%. The scores and progress are displayed in the Control Data area. For more information, see "Policy and Compliance Assessment Window" on page 70.

     The **Maturity Score** and the **Maturity Progress** are trickled up and aggregated to higher-level assets for every applied control. Their values are displayed in the left pane in the asset

tree. For more information, see "Control Scores Aggregation Mechanism" on page 77.

The date and time of this assessment is updated in the **Last Updated On** field.

Clear Assessment on Assets

You can clear assessments on assets for outdated audits.

This action can be performed only by users who have access rights to the Organization asset.

This action is performed on the entire business model, meaning that the assessments on all assets are cleared for the policies that you select. This action invokes the Archive Trend Data Job.

For more information on this job, see the *Archive Trend Data* section in the *HP EnterpriseView Administration Guide*.

Note: When you clear assessments, they are deleted permanently. Notes or attachments connected to these assessments are also deleted. This action cannot be reversed.

To clear assessments

1. Click **Policy and Compliance > Assessment**.
2. On the **Policy and Compliance Assessment** window, click **Clear Assessment**.
3. On the **Clear Assessment** dialog box, select the policies for which you want to clear assessments, and then click **OK**.

   This action might take a few minutes. Refresh the page to see the changes.

Control to Vulnerability Mapping

There is an inherent correlation between vulnerabilities and policy controls. Vulnerabilities are a factor throughout the life cycle of a control. A vulnerability may be the primary cause for defining a control, its existence or lack of it may affect the organization's decision of applying a control, and its persistence affects the level of compliance of a control.

A vulnerability score can be used to determine the compliance score or to refine it, depending on the vulnerability type:

- **Determine**: Configuration vulnerabilities determine the base compliance score. For more information, see "Use Configuration Vulnerabilities to Determine Compliance Score" on the next page.
- **Refine**: Network and application vulnerabilities refine the compliance scores, Meaning that they alter the *base compliance score* and are reflected in the final *compliance score*. For more

information, see "Use Network and Application Vulnerabilities to Refine Compliance Score" on the next page.

A control can be mapped to more than one vulnerability and more than one vulnerability type. This means that, theoretically, a control's base compliance score can be determined by a configuration vulnerability and then refined by network and application vulnerabilities, resulting in the final compliance score.

EnterpriseView includes out-of-the-box mappings between vulnerabilities defined in the vulnerability dictionary and the policies provided with EnterpriseView. These mappings represent the correlation between controls and vulnerabilities.

Vulnerabilities automatically affect the compliance score of a control when the following conditions occur:

- The vulnerability is mapped to the control
- The control is applied to an asset
- The vulnerability is attached to the asset

Through the **Control to Vulnerability mapping page** (**Policy and Compliance > Control to Vulnerability mapping page**, you can search for specific mappings using free text.

Note: You can perform wildcard searches. For example, if you type **ser***, the results will contain words beginning with ser (such as server and service). An asterisk cannot be placed before a string (*ser).

You can add new mappings, edit existing mappings, or delete mappings. For more information, see "Map Controls to Vulnerabilities " on page 57, "Edit Control to Vulnerability Mapping" on page 57, and "Delete Vulnerability to Control Mapping" on page 58 respectively.

Use Configuration Vulnerabilities to Determine Compliance Score

You can use configuration vulnerabilities to determine compliance scores. Configuration vulnerabilities are considered an automatic scoring method, along with assessments imported from external systems. You can override the score manually. For more information on the different assessment methods, see "Audit Assets" on page 50.

There can be more than one configuration vulnerability mapped to a control. Each vulnerability can have a different check result: passed, failed, or unknown. For more information on check results, see "Score" on page 140.

The formula that is used to determine the compliance score for an asset for a control is the sum of passed and unknown configuration vulnerabilities divided by the sum of passed, unknown, and failed vulnerabilities multiplied by their weights (1,2, and 4 accordingly).

$$\frac{n_{Passed\ Vulnerabilities} + n_{Unknown\ Vulnerabilities}}{n_{Failed\ Vulnerabilities} * 4 + n_{Passed\ Vulnerabilities} * 1 + n_{Unknown\ Vulnerabilities} * 2} * 100$$

Examples:

- If there is one passed configuration vulnerability, then the score is 100.
- If there is one unknown configuration vulnerability, then the score is 50.
- If there is one failed configuration vulnerability, then the score is 0.

Use Network and Application Vulnerabilities to Refine Compliance Score

You can use network and application vulnerabilities to refine compliance scores.

The compliance score is affected as follows:

- If the control is either manually or automatically assessed, then the vulnerability lowers the control's compliance score. The following indication is displayed on the screen below the compliance score:

  "Score is affected by <n> vulnerabilities. Reduced by m%."

  You can click the "n vulnerabilities" link to view the details of the vulnerabilities that are mapped to the control. For more information, see "Score is affected by <n> vulnerabilities " on page 75.

- If the control is not assessed, then its compliance score is changed from Not Assessed to "0".

Note: This feature can be disabled for each control by selecting the **Ignore Vulnerabilities** check box in the Policy Assessment window, as described in "Policy and Compliance Assessment Window" on page 70.

Most mappings are between a control and a group of vulnerabilities rather than between a control and an individual vulnerability. Vulnerabilities are grouped according to different vulnerability categories. EnterpriseView adopted the Common Weakness Enumeration (CWE) system for identifying most vulnerability groups. Other vulnerability groups are internal and can be identified by an "EVG" prefix.

The formula that is used to determine the impact of vulnerabilities on a control's compliance score considers the following variables:

- The vulnerability score. For more information on the vulnerability score, see "Vulnerability Properties" on page 140.

  There is a negative correlation between the vulnerability score and the control's compliance score; the higher the vulnerability score, the lower the compliance score will be.

- The number of vulnerabilities that are mapped to the control.
- The weight of the vulnerability with the highest score.

Map Controls to Vulnerabilities

You can add new control to vulnerability mappings.

To map a control to vulnerabilities

1. Click **Policy and Compliance** > **Control to Vulnerability Mapping**.
2. On the **Control to Vulnerability Mapping** page, click **Add Mapping**.
3. On the **Select a Control** page, do the following:
   a. From the **Policy** list, select a policy.
   b. Expand the policy tree and select the control that you want to map.
   c. Click **Next**.
4. On the **Select Vulnerabilities** page, do the following:
   a. From the **Select vulnerability type** list, select either **Network and Application** or **Configuration**.
   b. if you selected **Network and Application**, then select one of the following options:
      - **Groups**: Select groups of vulnerabilities to map to a control.
      - **Vulnerabilities**: Select individual vulnerabilities to map to a control.
   c. From the list, select the group (for network and application only) or vulnerability that you want to map to the control, and then click the **Add to Mapping**  button.

   To remove groups (for network and application only) or vulnerabilities from the mapping, click the **Remove from Mapping**  button.
5. Click **Finish**.

Edit Control to Vulnerability Mapping

You can edit existing control to vulnerabilities mappings.

To edit a mapping

1. Click **Policy and Compliance** > **Control to Vulnerability Mapping**.
2. On the **Control to Vulnerability Mapping** page, select the mapping that you want to edit, and then click **Edit Mapping**.

   You can search for specific mappings by using free text search.

   Note: You can perform wildcard searches. For example, if you type **ser***, the results will contain words beginning with ser (such as server and service). An asterisks cannot be placed before a string (*ser).
3. To add vulnerabilities, on the **Edit Mapping** dialog box, do the following:
   a. From the **Select vulnerability type** list, select either **Network and Application** or **Configuration**.
   b. If you selected **Network and Application**, select either **Groups** or **Vulnerabilities**.
   c. From the list of groups (only for network and application) or vulnerabilities, select the group or vulnerability that you want to map to the control, and then click the **Add to Mapping**  button.
4. To remove groups (only for network and application) or vulnerabilities from the mapping, click the **Remove from Mapping**  button.
5. Click **Finish**.

Delete Vulnerability to Control Mapping

You can delete both user-created and out-of-the-box mappings.

To delete a mapping

1. Click **Policy and Compliance** > **Control to Vulnerability Mapping**.
2. On the **Control to Vulnerability Mapping** page, select the mapping that you want to delete, and then click the **Delete Mapping**  button.

   You can search for specific mappings using free text.
3. Click **Yes** to confirm the action.

Policy Mapping

EnterpriseView allows you to map controls from one policy to another policy. For more information on mapping policy controls, see "Map Controls" on the next page. When assets are being assessed by auditors, if a control is mapped to another control and both controls are applied to the asset, then the auditor can access the details of the mapped control (for both source controls and target controls) from the Policy Assessment window. This capability helps you reduce the effort of assessing the compliance for each and every policy to which your organization is obligated.

EnterpriseView includes mappings between controls in the Unified Compliance Framework (UCF) policy and the controls of the rest of the policies provided with EnterpriseView. You can import mappings between UCF and policies that are not included in your EnterpriseView package, such as ISO/IEC 27001 and ISO/IEC 27002. For more information on obtaining this content, contact your EnterpriseView representative. For more information on importing UCF mappings, see "Import UCF Mappings" below.

About the Policy Mappings Import Job

The Policy Mappings Import Job imports mappings between UCF controls and controls of other policies into the EnterpriseView database, as follows:

Note: The job can import multiple files. Each file is handled separately. As such, it is possible for one file to be imported successfully, while another import fails. To verify the status of each file, refer to the following log:

<EnterpriseView Installation Folder>\logs\redcat.log

1. The process opens the first file from the following location:

   <EnterpriseView Installation Folder>\content\policyMapping

2. The process identifies the policy that is mapped to UCF. The name of the policy in the file must match the name of the policy in EnterpriseView.

3. The process copies all the mappings into the EnterpriseView database. The control data in the file must be identical to the control data in EnterpriseView. If it is not identical, the import of the file fails.

4. If there is another mappings file, the process proceeds to the next file.

Import UCF Mappings

You can import mappings between UCF and policies that are not included in your EnterpriseView package, such as ISO/IEC 27001 and ISO/IEC 27002. For more information on obtaining this content, contact your EnterpriseView representative.

Before you begin, make sure that the policies for which you are importing mappings, are in EnterpriseView. For information on importing policies, see "Import a Policy" on page 47.

To import UCF mappings

1. Copy the mapping files to the following location:

   <EnterpriseView Installation Folder>\content\policyMapping

2. Run the **PolicyMappingsImportJob** from the Job Management module, as described in the *Launch Batch Jobs Manually* section in the *HP EnterpriseView Administration Guide*.

   For more information on the Policy Mappings Import Job, see "About the Policy Mappings Import Job" on the previous page.

Map Controls

Control mapping is a two-way mapping; controls from policy A are mapped to controls from policy B and vice versa.

To map controls between policies

1. Click **Policy and Compliance > Policy Mapping**.
2. In the **Policy A** pane, from the **Select a policy** list, select a policy.

   The security categories of the policies are displayed. Expand the security categories to display their controls. Controls in policy A that are not mapped appear in bold.

3. In the **Policy B** pane, from the **Select a policy** list, select a policy.

   The security categories of the policies are displayed . Expand the security categories to display their controls.

4. From the **Policy A** pane, from the list of controls, select the control that you want to map, and drag it to the **A** column in the **Mapped Controls** table or click **Map** .

   The control that you added to the mapping is displayed in a regular font style (not bold) in the policy tree in the **Policy A** pane.

   Note: You cannot add controls to the **Mapped Controls** table until both **Policy A** and **Policy B** are selected.

5. From the **Policy B** pane, from the list of controls, select the control that you want to map, and drag it to the **B** column in the **Mapped Controls** table that reads "**Drag here**", or click **Map**.

   The **Mapped Controls** table displays only the paragraph number of the control; it does not display the control title.

6. Repeat steps 4 and 5 until all of the required controls are mapped.

   A control from policy A is displayed only once in the **Mapped Controls** table, even if it is mapped to more than one control from policy B. However, if more than one control from policy B is mapped to the same control from policy A, then all of the controls from policy B are displayed in the same table cell.

Search for Controls

You can search for mapped or unmapped controls.

To search for controls

1. Click **Policy and Compliance > Policy Mapping**.
2. You can search for controls in policy A and in policy B. Do one of the following:
   a. In the **Policy A** pane, from the **Select a policy** list, select a policy. In the **Search Controls** box, enter the control paragraph number, title or both. You can also enter a partial search string.
   b. In the **Policy B** pane, from the **Select a policy** list, select a policy. In the **Search Controls** box, enter the control paragraph number, title, or both. You can also enter a partial search string.

To search for mapped controls

1. Click **Policy and Compliance > Policy Mapping**.
2. In the **Policy A** pane, from the **Select a policy** drop-down list, select a source policy, and in the **Policy B** pane, from the **Select a policy** drop-down list, select a policy.

   All of the control mappings between the two policies that you selected are displayed.
3. In the **Mapped Controls** pane, in the **Search Controls** box, enter the paragraph number of any control from either policies. You can also enter a partial search string.

   Note: The search field is not case-sensitive.

Delete Mapping Between Controls

You can delete mappings between the controls of various policies.

Note: Changes made to control mapping might be reflected in policy assessment reports.

To delete a mapping between controls

1. Click **Policy and Compliance > Policy Mapping**.
2. In the **Mapped Controls** table, locate the mapping that you want to delete. You can use the **Search Associated Controls** box to filter the mappings. For more information, see "Search for Controls" on the previous page.
3. Click the **Delete Mapping**  button. A confirmation message is displayed. Confirm this action.

   The mapping is deleted from the **Mapped Controls** table.

Policy Mapping Window

The Policy Mapping window enables you to map controls between two policies. For more information, see "Policy Mapping" on page 59. The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

UI Element	Description
	Click this button to add the selected control to the **Associated Control** table. This button is enabled only when you have selected both policy A and policy B and when an unmapped control in the policy A is selected. You can also drag and drop controls to the **Mapped Controls** table. For more information, see "Map Controls" on page 60.
	Click a control and then click this button to display the control details.
<**Search Controls**>	This page provides three different search options: • **Search Controls** (policy A). Search within the list of controls that belong to policy A, both mapped and not mapped. • **Search Controls** (policy B). Search within the list of controls that belong to the policy B, both mapped and not mapped. • **Search Associated Controls**. Search for controls that are already mapped, from the **Mapped Controls** pane. For more information, see "Search for Controls" on the previous page.

UI Element	Description
	Click the control that you want to delete from the **A** column in the **Mapped Controls** pane, and then click this button. For more information, see "Delete Mapping Between Controls" on page 61.
<% controls mapped>	The percentage of controls from policy B that are mapped to controls in policy A. Displayed on the bottom of the **Policy B** pane.
<Controls not mapped:>	The number of controls from policy A that are displayed in the **Mapped Controls** table, but do not have a control from policy B mapped to them. This indication helps you manage your mappings by filtering controls that are in the process of being mapped and for which mapping has not been completed. To the left, you can also see a list of these controls, by control paragraph number. Click in the list, and then select the control to which you want to navigate to in the **Mapped Controls** table.
 	**Go to previous unassociated control** / **Go to next unassociated control** This button helps you navigate between controls in policy A that are displayed in the **Mapped Controls** table but that do not have a control from policy B mapped to them.

Configure Compliance and Maturity Score Ranges

You can configure the ranges for the score severity indication for compliance and maturity scores.

Scores are displayed with one of the following icons:

 High score

 Medium score

 Low score

This configuration is reflected throughout the application wherever these scores are displayed. For example, in the Policy and Compliance Assessment page.

To configure maturity and compliance score ranges

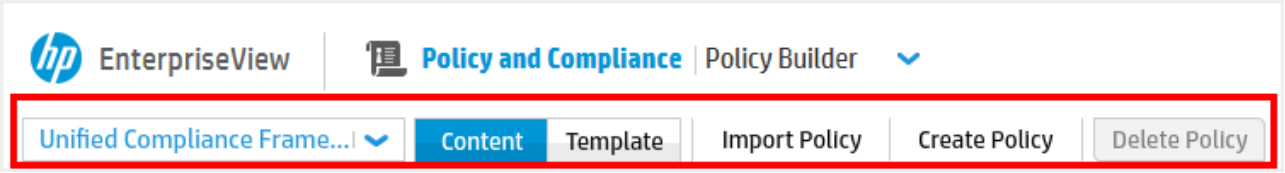
1. On the EnterpriseView toolbar, click the **Settings**  button.
2. In the **Settings** dialog box, click **Policy and Compliance > Compliance and Maturity Score Ranges**.

3. In the **Compliance and Maturity Score Ranges** page, drag the slider to define the ranges for maturity or compliance score, and then click **Save**.

Policy Builder Window

The Policy Builder window enables you to define new policies according to a configurable template, edit existing policies, delete policies, import policies, and create reports. The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

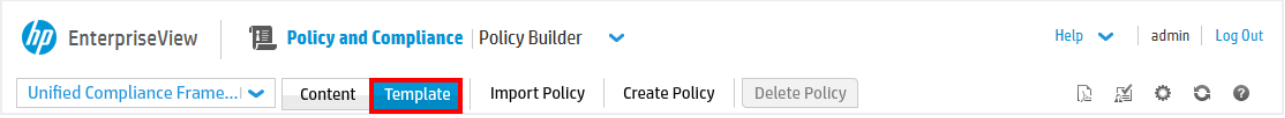
Policy Builder Toolbar



Policy Builder Toolbar

UI Element	Description
<Policy list>	Select a policy from the list.
Content tab	See "Content Tab" on page 66
Template tab	See "Template Tab" below
Import Policy	Click this button to import a policy. For more information, see "Import a Policy" on page 47.
Create Policy	Click this button to create a new policy. For more information, see "Create a Policy" on page 45.
Delete Policy	Click this button to delete a policy. This button is disabled if the assessment process has begun (meaning that at least one control that is applied to an asset is assessed). **Note:** If you delete a policy that includes controls that are already assigned to an asset, whether the controls are applied to the asset or not, then the assignment and any related assessment are deleted.

Template Tab



Use this screen to configure the control template for each policy that you create.

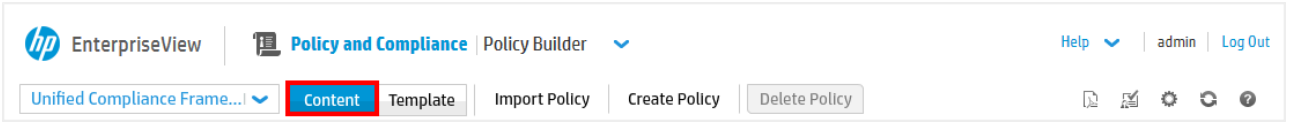
Template Tab

UI Element	Description
Control Text **Guideline Introduction** **Guidelines** **Guideline Additional Text** **Control Additional Text**	The **Basic** attributes include content elements. Selecting an attribute adds a text box to the control in which you can add content. For example, if the control has numerous guidelines, you can select the **Guidelines** attribute. If you add Guidelines to your template, when you create the content for the policy, you will have the option of adding tags (short, descriptive text) to the guidelines. You can remove a tag by clicking the X on the right side of the tag. Tag names are limited to 64 characters. The **Control Text** attribute is selected by default.
Priority	You can prioritize controls by selecting this check box. The following priorities can be applied: • **Low** • **Medium** • **High**
GRC Designation	You can categorize the controls according to the following criteria: • **Regulation** • **Legal Status** • **Standards** • **Threats**
Type	You can further categorize the controls according to the following criteria: • **Management** • **Technical** • **Operations**

Template Tab, continued

UI Element	Description
Purpose	Additional segmentation according to purpose: • **Confidentiality** • **Integrity** • **Availability** • **Audit** • **Privacy**
Control Weight	You can apply a weight between 0 and 100 to a control. The control weight affects the aggregation calculation when the policy assessment score is trickled up. For more information, see "Weights and Criticality Level" on page 83. If this check box is not selected, then all of the controls will have the same weight.
P5 Applicability Weights	You can apply different weights to the P5 control maturity factors. For more information on P5 control maturity factors, see "Maturity Score" on page 72. For example, if the organization business strategy is focused on the human factor, give People a higher weight than the other factors. The weights affect the calculation of the P5 maturity score when a control is assessed. By default, all of the P5 control maturity factors are selected. Clearing the check box will remove the specific factor from the control, meaning that the factor is not displayed when the control is assessed. You can narrow down the factors for a specific control further when you add content to the policy. For more information, see "Create a Policy" on page 45.
Attachments	You can add the ability to upload, download, or delete attachments from a policy. For more information, see "Attachments" on page 69.

Content Tab



Use this screen to add content to a policy that you created.

Left Pane (Content Toolbar)

UI Element	Description
	**New Main Security Category** A Security Category lets you group controls with common characteristics. It is like a heading, but it includes a **Text** field where you can add a description of the category. Examples of security categories in ISO can be: Asset Management, Risk Assessment and Treatment, and Security Policy. Examples of security categories in COBIT can be: Plan and Organize, Acquire and Implement. A policy can include a hierarchy of security categories. The first level must be a Main Security Category. A main security category can only serve as a first-level category, meaning that you cannot create a main security category under a main security category. Click this button to create a new Main Security Category. In the right pane, enter the security category information.
	**New Security Category** After you created a Main Security Category, you can create another level of categories using Security Categories.You can create multiple levels of Security Categories. Click on the parent category (it may be a Main Security Category or a regular Security Category), and then click this button. In the right pane, enter the security category information.
	**New Control** Controls are typically used to make sure that risks are reduced to an acceptable level. Controls are guidelines and rules and are the foundation of any policy; you must define controls in order to assess an asset's compliance with your organization's rules and regulations. Click the security category to which the control belongs, and then click this button. In the right pane, enter the control information. **Note:** A control cannot be created directly under the policy, it must be created under a security category.
	**Delete** Deletes a Main Security Category, Security Category, or Control.

Left Pane (Content Toolbar), continued

UI Element	Description
 	**Move Up/Move Down** Changes the order of any one of the following items in the policy tree: • **Main Security Category** within a policy • **Security Category** within a policy or within another security category • **Control** within a security category. In order to move a control between security categories, you need to drag and drop the control.

Right Pane

UI Element	Description
Paragraph Number	An alphanumeric string, up to 255 characters, that uniquely identifies the security category or the control.
Title	The title of the security category or the control.
Control Text	A description of the control.
Guidelines	Includes the following information, as defined in the policy template: • Guideline Introduction • Guidelines: To add a guideline, click **Add Guideline**, and then, in the **Guideline** box, enter the guideline text. To delete a guideline, click the **Delete Guideline** button next to the guideline that you want to delete. To add a tag to a guideline, enter a tag name and click **Add**. • Guideline Additional Text • Control Additional Text

Right Pane , continued

UI Element	Description
Additional Auditing Attributes	Includes the following information, as defined in the policy template: • Priority: For more information, see "Priority" on page 65. • GRC Designation: For more information, see "GRC Designation" on page 65. • Type: For more information, see "Type" on page 65. • Purpose: For more information, see "Purpose" on page 66. • Control Weight: For more information, see "Control Weight" on page 66. • P5 Applicability Weights: For more information, see "P5 Applicability Weights" on page 66.

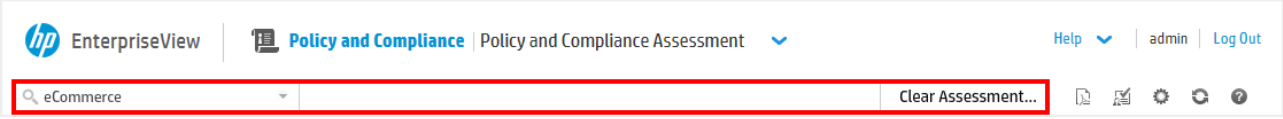
Attachments

UI Element	Description
Upload	Click this button to attach a file to this assessment. The maximum file size is 5.00 MB.
Delete	To delete a file from this control assessment, click the file that you want to delete, and then click this button.
Download	To download a file to your local computer, click the file that you want to download, and then click this button.

Policy and Compliance Assessment Window

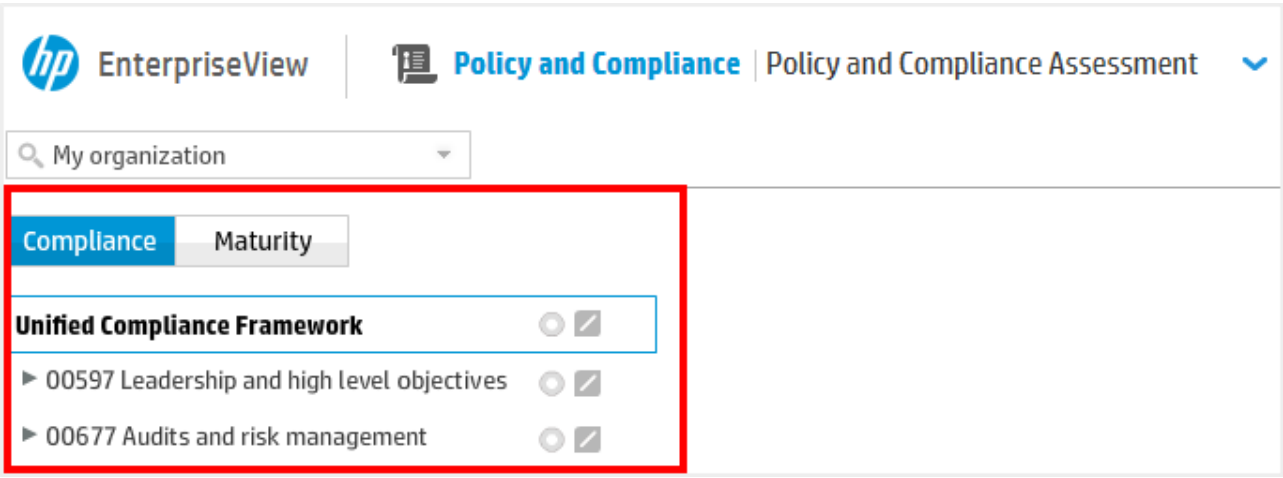
The Policy and Compliance Assessment window enables you to audit assets by assessing the control maturity and asset compliance with a control, for each asset. The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

Policy and Compliance Assessment Toolbar



UI Element	Description
<Asset Selector>	Select the asset that you want to assess from this list or search for an asset by entering its name.
Clear Assessment	Click this button to clear assessments on the entire business model. For more information, see "Clear Assessment on Assets" on page 54.

Left Pane

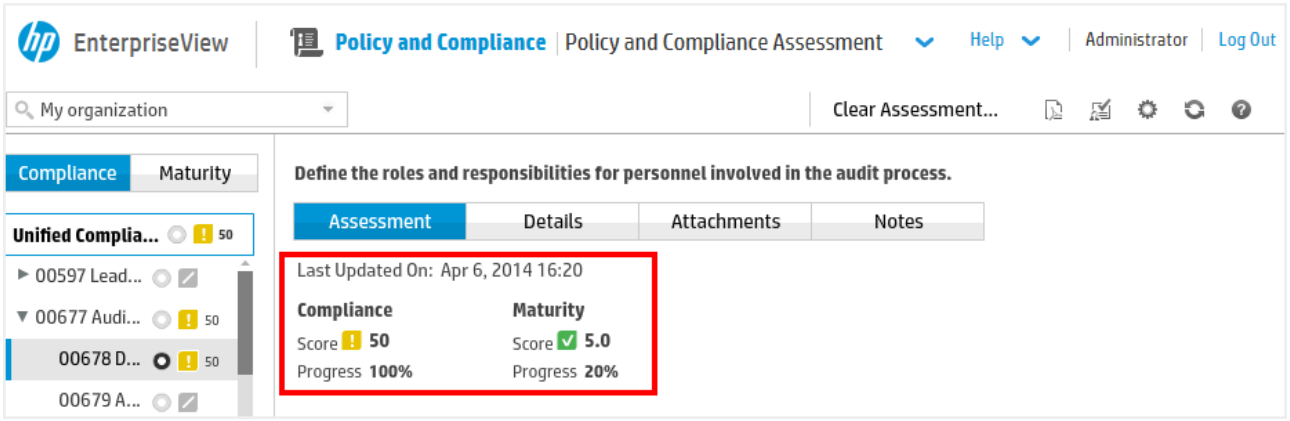


The left pane includes an hierarchical view of the policy or policies, and assessment information on the policy, security categories, and controls. For detailed information on how the assessment information is calculated, see "Control Scores Aggregation Mechanism" on page 77.

UI Element	Description
Compliance tab	Click this tab to display the assessment progress and the compliance score for each policy element (policy, security categories, and controls).

UI Element	Description
Maturity tab	Click this tab to display the assessment progress and the control maturity score for each policy element ((policy, security categories, and controls).
	Reflects the assessment progress in both **Compliance** and **Maturity** tabs. Provides a visual indication of how much each policy element is assessed. For the exact assessment percentage, hover over the relevant icon. For information on how assessment progress is calculated, see "Control Scores Aggregation Mechanism" on page 77.
<Score Range>	The score range for a specific policy element is indicated by one of the following icons: High score Medium score Low score The ranges are determined in "Configure Compliance and Maturity Score Ranges" on page 63. The actual score is displayed next to this icon.

Right Pane (Summary)

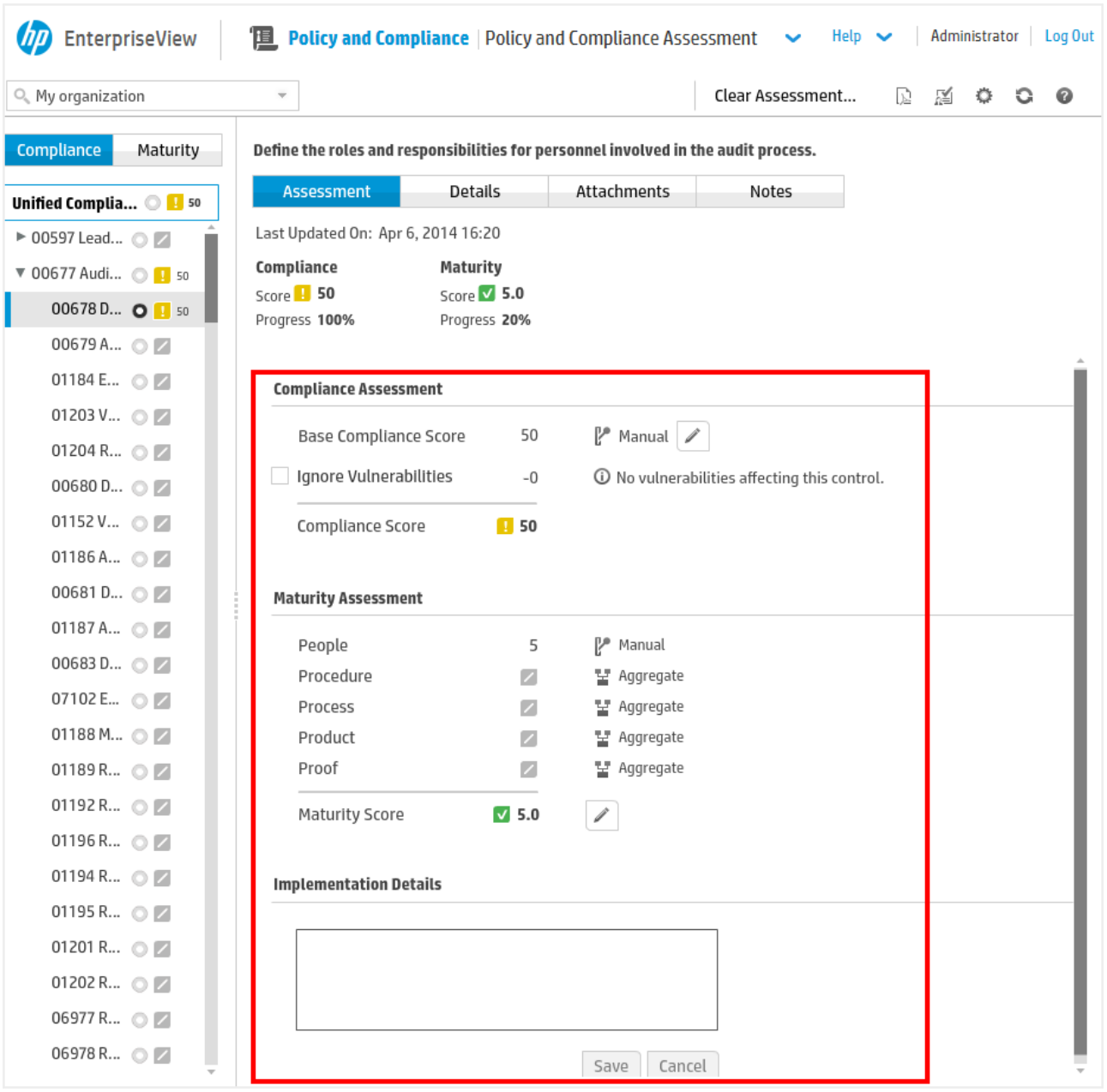


The summary area in the right pane includes information that is displayed on each of the tabs.

UI Element	Description
Last Updated On	The last date and time that the control was assessed for the specific asset.

UI Element	Description
Maturity Score	Measured as a score between 0 and 5. The evolutionary state of a control when it is applied to a specific asset, comprised by the weighted average of five factors: People, Procedure, Process, Product, Proof, also known in EnterpriseView as P5 maturity factors. For example, if the scores are: People=5, Procedure=5, Process=5, Product=3, and Proof=3, then the control maturity score is 4.2.
Maturity Progress	Measured as a percent. The maturity assessment progress reflects how many maturity factors have been assessed. Each maturity factor counts for a percentage of the overall score, depending on the number of maturity factors employed. For example, if all maturity factors are employed, then each factor counts for 20% of the overall score, so if two out of five maturity factors have been assessed, then the maturity assessment progress will be 40%. **Note:** If the control employs fewer than five factors, then the percentage distribution changes accordingly.
Compliance Score	See "Compliance Score" on page 75.
Compliance Progress	Measured as a percent. The compliance assessment progress reflects the percentage of overall asset compliance with a policy.
Control Mappings	Indicates whether the control is mapped to other controls. Is displayed under the following conditions: • The assessed control is mapped to another control in a different policy. • The control to which it is mapped is applied to the same asset (SoA). You can click the "n controls" link to see the details of these controls. For more information on mapping controls between polices, see "Policy Mapping" on page 59.

Assessment Tab



UI Element	Description
Compliance Assessment	In this area you assess how compliant the selected asset is with the selected control.

UI Element	Description
Base Compliance Score	This score is the compliance score before network and application vulnerabilities are considered. If there are no network and application vulnerabilities that affect compliance, then the base compliance score and the final compliance score are identical. To edit this score, click the **Edit base Compliance Score** button. For more information, see "Assess Asset Compliance" on page 51. An icon representing the assessment method is displayed (see the following four icons).
	**Score applied manually** This icon indicates that a score was applied manually.
	**Score imported from external source** This icon indicates that a score was applied automatically by importing the assessment from an external system.
	**Aggregate score** This icon indicates that a score was aggregated from its lower level assets. For more information, see "Control Scores Aggregation Mechanism" on page 77.
	**Score determined by configuration vulnerabilities** This icon indicates that a score was determined by configuration vulnerabilities. For more information, see "Use Configuration Vulnerabilities to Determine Compliance Score" on page 55.
Ignore Vulnerabilities	Select this check box if you want to disable the affect of vulnerabilities mapped to this control. For information on the correlation between vulnerabilities and controls, see "Use Network and Application Vulnerabilities to Refine Compliance Score" on page 56.

UI Element	Description
Score is affected by <n> vulnerabilities	This indication is displayed only if the vulnerabilities that are mapped to the control are also attached to the asset that is being assessed. Click the "n vulnerabilities" link to view information about these vulnerabilities. **Reduced by m%** This indication is displayed only if the assessment on the control was saved. The vulnerabilities reduce the compliance score. The reduction is expressed as a percent and is done automatically when you click **Save**. To override this effect, select the **Ignore Vulnerabilities** check box, but note that selecting this check box also ignores imported automatic assessments. For more information on the correlation between vulnerabilities and controls, see "Control to Vulnerability Mapping" on page 54.
Compliance Score	This number defines how compliant the asset is with the control. It is calculated as: *Base Compliance Score - affect of network and application vulnerabilities*.
Maturity Assessment	In this area you assess how mature the control is.
Maturity Score	The maturity score is the average of all the P5 maturity score factors. To determine the maturity score, click the **Edit P5 Maturity Factor Scores**  button. For more information, see "Assess Control Maturity" on page 52.
Implementation Details	Record details of how this control has been implemented.

Details Tab

This tab displays information about the control, such as the control text and guidelines. For more information on control details, see "Content Tab" on page 66.

Attachment Tab

UI Element	Description
Upload	Click this button to attach a file to this assessment. The maximum file size is 5.00 MB.
Delete	To delete a file from this control assessment, click the file that you want to delete, and then click this button.

UI Element	Description
Download	To download a file to your local computer, click the file that you want to download, and then click this button.

Notes Tab

You can add comments and notes to the assessment.

In the text box, enter the required information, and then click **Upload**. The information is displayed in a table and includes the creation date and the user name. Click the  icon next to the date in order to view the entire note. You cannot delete or edit notes.

P5 Control Maturity Model Guidelines

The P5 Model states that there are five basic factors to every control that must exist in order for that control to perform properly.

The following describes the factors of the P5 Model:

- **P1: People** Assigned staff to oversee and manage controls.
- **P2: Policy/Procedure** Governance documentation used to specify and manage control.
- **P3: Process** Operational sequence of activities designed to reduce risk.
- **P4: Product** Defense-in-depth technologies/solutions to manage/mitigate risk.
- **P5: Proof** Metrics or validation methods used to track control effectiveness.

Key Performance Indicators	0 Not Performed	1 Performed Informally	2 Planned and Tracked	3 Well Defined	4 Quantitatively Controlled	5 Continuously Improving
P1: People	No personnel assigned to control	Part-time personnel assigned	Full-time personnel assigned	Formally trained personnel assigned	Certified personnel assigned	Back-up personnel assigned
P2: Policy & Procedure	No policy for control exists	Assumed policy, not documented or widely known	Formal published policy with acknowledgment	Policy applied to third parties	Policy actively enforced by HR department	Policy externally reviewed

Key Performance Indicators	0 Not Performed	1 Performed Informally	2 Planned and Tracked	3 Well Defined	4 Quantitatively Controlled	5 Continuously Improving
P3: Process	No process for control exists	Assumed processes, not documented or widely known	Task list oriented processes	Detailed narrative-based descriptive processes	Processes include evidence of change control	Processes can be used by external personnel to perform control
P4: Product	No product for control exists	Default, open source or shareware solution deployed	Standardized point solution (tool) deployed, results monitored	Tool deployed with specific SLA and/or KPI targets tracked	Tool deployed with integrated management, logging and reporting	Multiple layer tools deployed, providing defense in-depth approach
P5: Proof	No proof for control exists	Subjective verbal attestation only	Subjective results; however, regularly reported in written format	Results automatically tracked and reviewed by internal audit	Results independently reviewed and/or validated by 3rd party	Formal independent attestations by TOD/TOE (SAS 70, SysTrust etc.)

Control Scores Aggregation Mechanism

In EnterpriseView, assessments that are done on lower-level assets, such as servers, are automatically trickled up to higher-level assets, such as a department; this mechanism is called aggregation.

Aggregation is performed on two different levels:

1. Aggregation on the business model level

   Parent assets get the aggregate compliance score, control maturity score, compliance assessment progress and maturity assessment progress from their children, for each control. This is done for the entire business model hierarchy.

2. Aggregation on the policy level

   After aggregation is done on the business model level, security categories, main security categories and, lastly, the policy inherit the compliance score, control maturity score compliance assessment progress and maturity assessment progress from the controls. This is done separately for each asset in the entire policy hierarchy. If more than one policy is applied to the asset, then the asset receives the lowest compliance and maturity scores.

The following table includes a description of all assessment parameters.

Parameter	Description
Compliance Score	Measured as a percent. The compliance of an asset with a specific control.
Control Maturity Score	Measured as a score between 0-5. The evolutionary state of a control when it is applied to a specific asset, comprised by the weighted average of five factors: People, Procedure, Process, Product, and Proof (also known in EnterpriseView as P5 maturity factors). For example, if the scores are: People=5, Procedure=5, Process=5, Product=3, and Proof=3, then the control maturity score is 4.2.

Parameter	Description
Maturity Assessment Progress	Measured as a percent. The maturity assessment progress reflects the percentage of the overall control maturity within a policy. Each maturity factor counts for a percentage of the overall score, depending on the number of maturity factors employed. For example, if all maturity factors are employed, then each factor counts for 20% of the overall score, and if out of the five maturity factors two have been assessed, then the maturity assessment progress will be 40%. **Note:** This parameter is significant only in policy-level aggregation.
Compliance Assessment Progress	Measured as a percent. The compliance assessment progress reflects the percentage of overall asset compliance with a policy. **Note:** This parameter is significant only in policy-level aggregation.

Note: Assets that have not been assessed for compliance or control maturity do not affect the aggregation calculation. For example, asset A has two children: asset B and asset C. Asset B is assessed and C is not assessed. Asset A will receive the score from asset B.

Aggregation on the Business Model Level

The following sections describe the aggregation mechanism for each of the parameters.

Note: Scores are aggregate from a child asset to a parent asset only for controls that are applied to both child and parent assets.

Compliance Score

A parent asset gets the average compliance score of all its children, on a specific control.

$$\frac{\sum(Total\ Compliance Scores)}{\sum(Number\ of\ Children)}$$

For example:

For control X

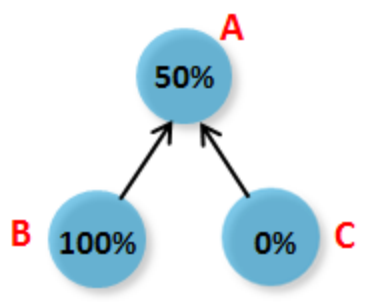
If

Compliance score for child asset B= **100%**

Compliance score for child asset C=**0%**

Then

Compliance score for parent asset A=**50%**



Control Maturity Score

Aggregation is done in two steps:

1. A parent asset gets the average score for each P5 maturity factor of all its children.
2. The final control maturity score is the weighted average of the P5 maturity factor scores.

For example:

For control X

If

Child asset A has the following scores on its P5 maturity factors:

People=5, Policy/Procedure=5, Process=5, Product=3, Proof=3

Child asset B has the following scores on its P5 maturity factors:

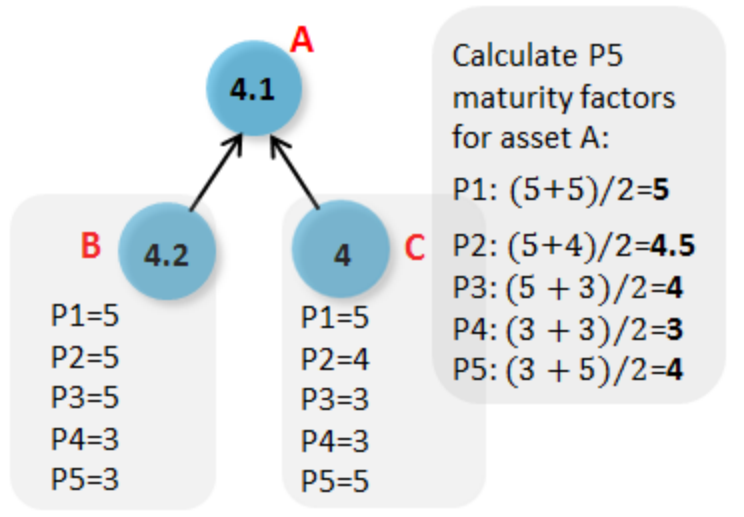
People=5, Policy/Procedure=4, Process=3, Product=3, Proof=5

Then

The parent asset will inherit the following P5 maturity factor scores:

People=5, Policy/Procedure=4.5, Process=4, Product=3, Proof=4

and the overall control maturity score will be **4.1**



Aggregation on Policy Level

The following diagram shows the flow of aggregation between policy elements:

Meaning:

1. The assessment parameters of all controls under a specific security category are aggregated to that security category.
2. The assessment parameters of all security categories under a specific main security category are aggregated to that main security category.
3. All assessment parameters for the main security categories are aggregated to the policy.

In the following examples, Policy A has the following format:

1 Main Security Category

1.1 Security Category

1.1.1 Control A

1.1.2 Control B

Compliance Score

A policy element gets the average compliance score of all its contained elements, for a specific asset.

For example:

If

Compliance score for Control A (1.1.1)= **100**

Compliance score for Control B (1.1.2) =**0**

Then

Security Category (1.1), Main Security Category (1) and Policy A inherit the average score of **50**.

Control Maturity Score

Aggregation is done in two steps:

1. A policy element gets the average score for each P5 maturity factor of all its contained policy elements.
2. The final control maturity score is the weighted average of the P5 maturity factor scores.

For example:

If

Control A (1.1.1) has the following scores on its P5 maturity factors:

P1=5, P2=5, P3=5, P4=3, P5=3

Control B (1.1.2) has the following scores on its P5 maturity factors:

P1=5, P2=4, P3=3, P4=3, P5=5

Then

Security Category (1.1), Main Security Category (1) and Policy A inherit a control maturity score of **4.1.**

Note: Some dashboards display the score on the P5 control maturity factor level. In this example, the following scores will be displayed:

P1=5, P2=4.5, P3=4, P4=3, P5=4

Maturity/Compliance Assessment Progress

A policy element inherits the average maturity/compliance assessment progress of all its contained policy elements, on a specific asset.

For example:

If

Maturity assessment progress
for Control A (1.1.1) = **100%** (fully assessed)

Maturity assessment progress
for Control B (1.1.2)= **0%** (not assessed)

Then

Security Category (1.1), Main Security Category (1) and Policy A is **50%**

Weights and Criticality Level

Aggregation of assessment scores is affected by the following factors:

- **Criticality Level**. One of the asset properties; it is determined when an asset is created in the business model, but can be modified at any time. For more information, see "Criticality Level" on page 33.The criticality level determines the weight of an asset's scores when it is aggregated on the business model level; it does not affect aggregation on the policy level.

  For example:

  If

  For child asset A: Compliance Score= **100**, Criticality Level=**1**

  For child asset B: Compliance Score =**10**, Criticality Level=**2**

  Then

  Compliance Score for parent asset=**40**

  Calculation: $\frac{(100 * 1) + (10 * 2)}{(1 + 2)}$

- **Control Weight**. One of the policy properties, configurable through the control template. It is determined when a control is defined in a policy. It can be modified until the assessment process on a policy begins. The control weight determines the weight of a specific control in regard to other controls within a specific policy when it is aggregated on the policy level; it does not affect aggregation on the business model level. For more information, see "Control Weight" on page 66.

  For example:

  If

Compliance Score for Control A (1.1.1)= **10**, Control Weight=**100**

Compliance Score for Control B (1.1.2) =**100**, Control Weight=**50**

Then

Security Category (1.1), Main Security Category (1) and Policy A inherit the weighted average score of **40**.

Calculation: $\frac{(10 * 100) + (100 * 50)}{(100 + 50)}$

Chapter 4: Risk Management

Risk management is the continuous process of identifying, assessing, mitigating, and monitoring risk. EnterpriseView supports self-directed information security risk evaluation that enables you to make information protection decisions based on risks to your critical information-technology assets.

EnterpriseView offers you the following capabilities for managing risk in your organization:

1. Create a threat library.

   The Threat Library Builder is the foundation of the Risk Modeling module. The Threat Library Builder offers ready-to-use threats that are common to most organizations. Threats, made up of an initiator (referred to as Actor in EnterpriseView) and the threatening incident (referred to as Operation in EnterpriseView), can be added, modified or deleted, according to the requirements of the organization. An actor can be anything from a hacker to a technical failure and operations may range from natural disasters to malicious actions. EnterpriseView provides simple drag and drop capabilities to create threats, which are displayed as visual threat trees. For more information, see "Create a Threat Library" on the next page.

2. Identify potential risks to your organization.

   The Risk Modeling module supports scenario-based risk identification. By associating a certain threat with an asset, you create a threat scenario which can later be assessed. For more information, see "Assign Threats to Assets" on page 89.

3. Assess risk on threat scenarios.

   Risk assessment directly affects the business strategy and the objectives of the organization. EnterpriseView supports risk analysis and evaluation by applying a qualitative value (such as low, medium, or high) to relevant impact areas and defining the likelihood of the threat scenario occurring. The risk scores are calculated from these parameters and are used to prioritize risks for mitigation. Risk acceptance levels are based on the risk tolerance level that you define for each risk individually. For more information, see "Assess the Risk on an Asset" on page 92.

4. Create a risk treatment plan.

   The treatment plan should coincide with your organization's risk management strategy and the risk tolerance level (the amount of risk that your organization is willing to accept). For more information on creating a treatment plan, see "Create a Treatment Plan" on page 98.

   Risk can be mitigated, accepted, avoided, deferred, or transferred. For more information on each of these methods, see "About Risk Treatment Methods" on page 93.

   You can use policy controls to mitigate risk by using EnterpriseView's control to threat mapping capabilities to automatically correlate controls to threats and reduce the risk score. For more information, see "Mitigate Risk Automatically Using Policy Controls" on page 95.

5. Monitor risk.

Risk monitoring is a constant process that can be done throughout the risk life cycle. EnterpriseView includes dashboards and printable reports that help you analyze the origin of the risk in your organization. For example, the Risk Register provides an overview of all the status of the risk factors that affect your organization, Risk Indicators helps you quickly locate high risk assets in your organization, and the Risk Modeling Dashboard displays detailed information on modeled risk. Use the drill down functionality to navigate the different dashboards and pages and find the root cause of the risks in your organization. For more information, see "Dashboards and Reports" on page 174 and "Root Cause Analysis" on page 177.

In addition, EnterpriseView offers flexible risk score configuration. You can assign weights to the impact areas that comprise the impact score, configure risk score and probability thresholds for defining risk severity, select the risk aggregation method that best reflects your organization's strategy, and determine the thresholds of risk KPIs. For more information, see "Risk Settings" on page 106.

Create a Threat Library

A threat is a potential cause of an unwanted incident which may result in harm to the organization. For example, someone could initiate a denial-of-service attack against an organization's mail server, or a fire or natural disaster could damage an organization's IT hardware. A threat is created when a threat actor exploits a vulnerability.

In EnterpriseView, threats consist of an actor and an operation.

Relative weights can be ascribed to the different actors or to actor categories, and to the various factors that are affected by the threat (such as financial, reputation, productivity, fines/legal, and safety and health), known in EnterpriseView as impact areas. For more information, see "Configure Risk Assessment Settings" on page 107.

The Threat Library Builder offers ready- to-use threats that are common to most organizations. You can add, modify, or delete threats, operations, and actors according to the requirements of your organization. For more information on maintaining threats, actors and operations, see "Threat Library Builder Window" on page 115.

To create a new threat

1. If the actor required for this threat does not exist in the threat library, follow the instructions in "Create an Actor" on the next page.
2. If the operation required for this threat does not exist in the threat library, follow the instructions in "Create an Operation" on page 88.
3. Connect an actor to an operation, as described in "Connect Actor to Operation" on page 88.

Create an Actor

An actor is a potential initiator of a violation of the security requirements (confidentiality, integrity, availability) of an asset in your organization.

Actors are divided into categories. EnterpriseView includes the following categories.

Category	Description
End Users	This category represents threats to the asset that are caused by users authorized by the organization. Threats in this category require direct action by a person and can be deliberate or accidental in nature.
External Users	This category represents threats to the asset that result from physical access to the asset. Threats in this category require direct action by a person and can be deliberate or accidental in nature.
IT Users	This category represents threats to the asset through the organization's technical infrastructure. Threats in this category require direct action by a person and can be deliberate or accidental in nature.
Physical Threats	This category includes problems or situations that are outside the control of an organization. This category of threats includes natural disasters (such as floods or earthquakes) and interdependency risks. Interdependency risks include the unavailability of critical infrastructures (such as power supply).
Technical Failures	This category includes problems with an organization's information technology and systems. Examples include hardware defects, software defects, malicious code (such as viruses), and other system-related problems.

You can create an actor under an existing category or create a new category.

To create an actor

1. Click **Risk Modeling > Threat Library Builder**.
2. On the **Actors** tab, from the actor tree, click the category to which you want to add a new actor, and then click the **New Actor**  button.
3. On the **Actors** dialog box, do the following, and then click **Save**:

a. **Name**: Enter a unique name for the actor.

b. **Description**: Enter a description for the actor, which will appear as a tooltip.

The new actor is displayed in the actor tree.

To create a new actor category

1. Click **Risk Modeling > Threat Library Builder**.
2. On the **Actors** tab, click the **New Category**  button.
3. On the **New Category** dialog box, do the following, and then click **Save**:

   a. **Name**: Enter a unique name for the category.

   b. **Description**: Enter a description for the category, which will appear as a tooltip.

   The new category is displayed in the actor tree.

Create an Operation

An operation is the violation of the security requirements of an asset performed by an actor.

EnterpriseView includes numerous predefined operations.

To create an operation

1. Click **Risk Modeling > Threat Library Builder**.
2. On the **Operations** tab, click the **New Operation**  button.
3. On the **Operations** dialog box,do the following, and then click **Save**.

   a. **Name**: Enter a unique name for the operation.

   b. **Information Security Threat Type**: If the threat is an information security threat, then select the type.

   c. **Description**: Enter a description. This description will appear as a tooltip for the operation.

   The new operation is displayed in the operations tree. Operations are sorted alphabetically.

Connect Actor to Operation

You can create a threat by connecting an actor and an operation.

To connect an actor and an operation

1. Click **Risk Modeling > Threat Library Builder**.
2. On the **Actors** tab, from the actors tree, locate the required actor. To expand the actors tree, click ▶ next to the category. Drag the actor to which you want to connect an operation to the map area. If the actor already has operations that are connected to it, they are displayed in the map area.
3. Click the **Operations** tab. From the list of operations, locate the operation that you want to attach to the actor, and drag it onto the actor icon in the map area.

   The operation is connected to the actor and is displayed in the **Operations** section in the map area.
4. To disconnect an operation from an actor, click the operation in the graph, and then press **DELETE**.

Disconnect Actor from Operation

You can delete a threat by disconnecting an actor from an operation.

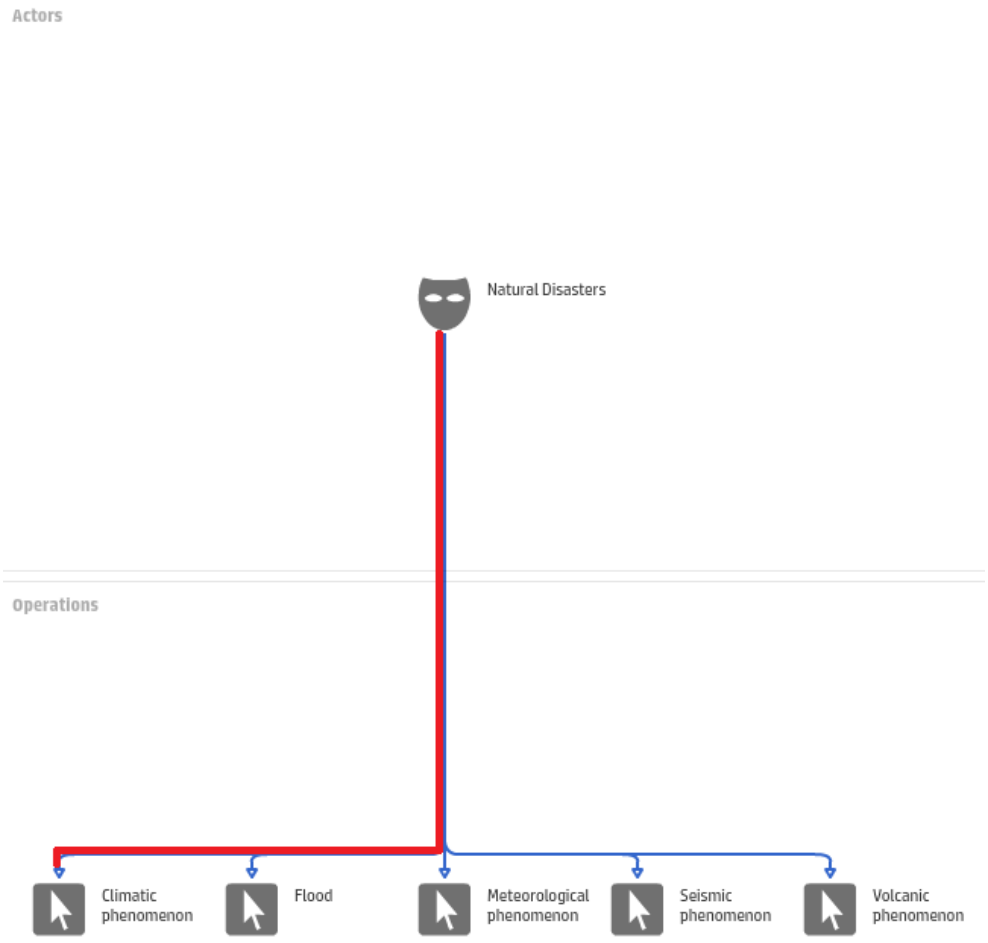
To disconnect an actor from an operation

1. Click **Risk Modeling > Threat Library Builder**.
2. On the **Actors** tab, from the actors tree, locate the required actor. To expand the actors tree, click ▶ next to the category. Drag the actor to the map area.
3. Click the operation in the map are, and then press **DELETE**.

Assign Threats to Assets

When you assign a threat to an asset you create a Threat Scenario. A threat scenario is a situation in which an asset can be compromised. It generally consists of a threat (an actor and an operation), and an asset. Threat scenarios provide a simple way to determine if a risk exists that could affect your asset. An asset can have many threats associated with it.

The following diagram shows an asset that has several threat scenarios. The path marked in red is a single threat scenarion.



To create a threat scenario, connect a threat to an asset. You can connect threats to assets from both the **Graph** view and the **Table** view.

After you assign threats to assets, you can assess the risk for the assets. For more information, see "Assess the Risk on an Asset" on page 92.

To assign a threat to an asset (Graph view)

1. Click **Risk Modeling > Threat Assignment**.
2. In the **Threat Assignment** window, from the **Asset** list, select the asset to which you want to assign threats.
3. Click the **Graph** button.

   The left pane is divided into two areas:

   - **Associated Threats** displays all the threats that are already associated with the asset
   - **Unassociated Threats** displays all the threats that are not associated with the asset

All threats are grouped by actor and category.

4. To expand the threats tree, click  next to the category/actor.
5. From the **Unassociated Threats** area, click the threat that you want to assign to the asset, and then click **Add** or drag the threat to the map area. You can also assign an entire group of threats, either grouped by actor or by category, by clicking the category or actor. To multi-select threats, press **CRTL** and click the threats you want to assign.

   The threat is displayed in the **Associated Threats** area and in the map area.
6. To disconnect a threat from an asset, from the **Associated Threats** area, click the threat that you want to remove, and then click **Remove**.

   Caution: If you disconnect a threat that has risk scores applied, then all the data on this threat is deleted and cannot be restored.

   The threat is displayed in the **Unassociated Threats** area and is removed from the map area.

   You can also drag and drop threats between the **Unassociated Threats** and **Associated Threats** areas.

To assign a threat to an asset (Table view)

1. Click **Risk Modeling > Threat Assignment**.
2. In the **Threat Assignment** window, from the **Asset** list, select the asset to which you want to assign threats.
3. Click the **Table**  button.
4. From the **Show Threats** drop-down list, select **Unassociated to Asset** or **All Threats**.
5. From the table, select the **Associated** check box for all the relevant threats, and then click **Save**.
6. To disconnect a threat from an asset, from the **Show Threats** drop-down list, select **Associated to Asset** or **All Threats**, from the table, clear the **Associated** check box for all the relevant threats, and then click **Save**.

   Caution: If you disconnect a threat that has risk scores applied, then all the data on this threat is deleted and cannot be restored.

Assess the Risk on an Asset

After you assign threats to assets, you can assess the risk for the assets.

To assess risk on an asset

1. Click **Risk Modeling > Risk Assessment and Treatment**.
2. In **Risk Assessment and Treatment** window, from the **Asset** list, select the asset that you want to assess.

   All threats assigned to this asset are displayed in the left pane.

   Note: Make sure that you are in the Assessment and Treatment view by clicking the **Assessment and Treatment** button on the toolbar.
3. From the list of threats in the left pane, click the threat that you want to assess. To expand the threats tree, click next to the category/actor.
4. In the right pane, in the **Assessment** section, click the **Edit Assessment** button.
5. In the **Risk Tolerance Level** box, enter the maximum level of risk exposure that you are willing to accept for this asset in this threat scenario.
6. In the **Impact Areas** table, click the **Value** cell of each impact area and select a value.

   The values are configurable, as described in "Configure Risk Assessment Settings" on page 107.

   The impact score is automatically calculated and displayed on the screen. For more information on how the score is calculated, see "Impact Score Calculation" on page 112.
7. In the **Probability** box, enter a number between 0 and 1, up to two places after the decimal point. For example, 0.5.

   The **Inherent Risk Score** is automatically calculated as the *Impact Score X Probability*.

   If the inherent risk score exceeds the risk tolerance level, then you receive the warning "Exceeds the tolerance level".
8. Change the **Risk Status** to **Assessed**.
9. Click **Save**.

   The impact score and the inherent risk score are applied to the operation, actor, and actor category and the inherent risk score is aggregated to the asset, as described in "Residual Risk Score Calculation" on page 112. All scores are copied to the Treatment section.

The date and time of this assessment is updated in the **Last Updated On** field.

Risk Treatment

Risk treatment is the process of selecting and implementing a course of action to reduce risk. After you identify and assess the risk, you need to evaluate which treatment method is most suitable for handling the risk. EnterpriseView supports the following methods for handling risk: mitigation, acceptance, transference, avoidance, and deferral. For more information on these methods, see "About Risk Treatment Methods" below.

You can use policy controls to mitigate risk by using EnterpriseView's control to threat mapping capabilities to automatically correlate controls to threats and reduce the risk score. For more information, see "Mitigate Risk Automatically Using Policy Controls" on page 95.

After you have decided how to handle the risk, create a treatment plan, as described in "Create a Treatment Plan" on page 98.

About Risk Treatment Methods

EnterpriseView includes the following methods for handling risk:

- **Mitigation**

  Also referred to as Risk Reduction.

  Mitigating risk means that you take action to reduce the impact or the likelihood of a risk. For example, installing fire extinguishers in your office buildings can reduce the impact of a fire, if it occurs. In this example, the impact is reduced while the probability does not change.

  For more information, see "Mitigate Risk" on page 99.

  EnterpriseView allows you to mitigate risk in the following ways:

  - **Control Action**

    By using control-based actions. This is the most common methods for reducing risk.

    Optimally, your Statement of Applicability will always be up-to-date, all controls will be as compliant as they possibly can, and all relevant controls will be mapped to the appropriate threat. In this case, risk will be mitigated automatically, as described in "Mitigate Risk Automatically Using Policy Controls" on page 95. If this is not the case, though, you may need to create a control action in order to either add controls to your Statement of Applicability or to make the controls more compliant (increasing their compliance score). For more information, see "Add a Control Action" on page 100.

- **Manual Action**

  By creating manual actions when controls are insufficient. For more information, see "Add a Manual Action" on page 102.

In any case, both impact score and probability can be reduced manually to create the residual risk score.

- **Acceptance**

  Also referred to as Risk Retention.

  Accepting risk means that you acknowledge that the risk can happen without doing anything to prevent it. Typically, this method is used when a risk is low or is less than the risk tolerance level. You may decide that the cost of reducing this risk is too high compared to accepting it.

  This treatment activity can be limited in time. If it is, then the owner is required to evaluate and address the risk after the expiration date passes. The owner receives an email notification when the expiration date passes.

  For more information on accepting risk, see "Accept Risk" on page 104.

- **Transference**

  Also referred to as Risk Sharing.

  Transferring risk means that you transfer the responsibility of reducing the risk exposure from your organization to a third party. For example, a common third party is an insurance company. If one of the risks in your organization is laptop theft, then insuring all company laptops against theft is a means of transferring the risk to the insurance company.

  This treatment activity is limited in time and the owner is required to evaluate and address the risk after the expiration date passes. The owner receives an email notification when the expiration date passes.

  For information on transferring risk, see "Transfer Risk" on page 105.

- **Avoidance**

  Avoiding risk means that you do not perform a certain activity so that the risk does not occur. For example, if one of the entry doors to your office building is not secure and poses a high risk for unwanted intruders, then you can decommission that entry door, allowing employees entry through other doors. This course of action will help you avoid the risk.

  This treatment activity is limited in time and the owner is required to evaluate and address the risk after the expiration date passes. The owner receives an email notification when the expiration date passes.

  For information on avoiding risk, see "Avoid Risk" on page 106

- **Deferral**

  Deferring risk means that you decide to postpone handling the risk to a future date, when the risk is less likely to happen. Typically, this method is used when the initial risk is low.

  This treatment activity can be limited in time. If it is, then the owner is required to evaluate and address the risk after the expiration date passes. The owner receives an email notification when the expiration date passes.

  For information on deferring risk, see "Defer Risk" on page 104.

Mitigate Risk Automatically Using Policy Controls

There is an inherent correlation between policy controls and risks; controls are used to mitigate risk in a risk treatment plan, and, in turn, the output of the risk treatment process facilitates in identifying security requirements or controls that need to be added to the statement of applicability.

EnterpriseView includes control to threat mapping capabilities that enable you to automatically reduce the risk scores by using the controls that are part of your Statement of Applicability. This capability saves you the trouble of repeatedly calculating the potential affect of a control on a threat every time you conduct a risk audit. A formula is used to calculate the affect of the controls. The output of this formula is an adjusted probability. The adjusted probability is used to calculate the residual risk.

EnterpriseView includes out-of-the-box mappings for the threats and controls that are included in EnterpriseView, and enables you to add additional mappings for any new control or threat introduced into the system. For more information, see "Map Controls to Threats" on the next page, "Edit Control to Threat Mapping" on page 97, and "Delete Control to Threat Mapping" on page 97.

Controls automatically affect the probability of a threat scenario when the following conditions occur:

- The control is mapped to the threat.
- The control is applied to an asset and a threat is attached to the same asset.
- The control has a compliance score resulting from a manual assessment, an automatic assessment, or affecting vulnerabilities.

The compliance score of the control is entered into a formula that recalculates the probability of the risk, creating a new Adjusted Probability. The direction of the relationship (positive/negative) between the compliance score of the control and the probability of the risk depends on whether the compliance score is higher or lower than 85:

- If the control's compliance score is higher than the 85, then the compliance score reduces the probability of the risk.
- If the control's compliance score is lower than the 85, then the compliance score increases the probability of the risk.

The following formulas are used:

If higher than the 85

$$NewTempProbability = TreatedProbability - \alpha * TreatedProbability * \frac{ControlScore - \beta}{100 - \beta}$$

If lower than the 85

$$NewTempProbability = TreatedProbability + \alpha * TreatedProbability * \left(1 - \frac{ControlScore}{\beta}\right)$$

Note: If the calculation result is higher than 1, then the NewTempProbability will be 1.

If there is more than one control mapped to the threat, the probability for each is calculated separately and then averaged to the adjusted probability. The adjusted probability is:

$$AdjustedProbability = \frac{\sum NewTempProbability}{Number\ of\ Controls}$$

EnterpriseView includes mappings of controls from the following policies:

- Payment Card Industry (PCI) Data Security Standard (DSS) Version 2.0
- HIPAA Security Rule – NIST
- NIST Special Publication (SP) 800 53, Revision 3
- ISO 27002:2005
- Unified Compliance Framework (UCF) 2013 Q1 release

Map Controls to Threats

You can add new control to threat mappings.

To map controls to threats

1. Click **Risk Modeling** > **Control to Threat Mapping**.
2. On the **Control to Threat Mapping** page, click **Add Mapping**.
3. On the **Select a Threat** page, expand the tree and select an operation.
4. On the **Select Controls for Mapping** page, from the **Policy** list, select a policy.
5. From the list of controls, select the controls that you want to map to the threat, and then click the **Add to Mapping**  button.

   To remove controls from the mapping, click the **Remove from Mapping**  button.

6. Click **Finish**.

Edit Control to Threat Mapping

You can edit existing control to threat mappings.

To edit a mapping

1. Click **Risk Modeling** > **Control to Threat Mapping**.
2. On the **Control to Threat Mapping** page, select the mapping that you want to edit, and then click **Edit Mapping**.

   You can search for specific mappings by using free text search.

   Note: You can perform wildcard searches. For example, if you type **ser***, the results will contain words beginning with ser (such as server and service). An asterisks cannot be placed before a string (*ser).

3. To add controls, do the following:
   a. On the **Edit Mapping** dialog box, from the policy list, select a policy.
   b. From the list of controls, select the controls that you want to map to the threat, and then click the **Add to Mapping**  button.
4. To remove controls from the mapping, click the **Remove from Mapping**  button.
5. Click **Finish**.

Delete Control to Threat Mapping

You can delete both user-created and out-of-the-box mappings.

Note: If you delete a mapping then any affect that control has on a threat scenario is eliminated.

To delete a mapping

1. Click **Risk Modeling** > **Control to Threat Mapping**.
2. On the **Control to Threat Mapping** page, select the mapping that you want to delete, and then click the **Delete Mapping**

 button.

You can search for specific mappings using free text.

Note: You can perform wildcard searches. For example, if you type **ser***, the results will contain words beginning with ser (such as server and service). An asterisks cannot be placed before a string (*ser).

3. Click **Yes** to confirm the action.

Create a Treatment Plan

A risk treatment plan is necessary in order to describe how you respond to potential risk. The treatment plan is comprehensive and provides all the information required about the proposed actions, time plans, resource requirements, and roles and responsibilities.

EnterpriseView supports the following methods for handling risk: mitigation, acceptance, transference, avoidance, and deferral. For more information on these methods, see "About Risk Treatment Methods" on page 93. You can incorporate any combination of methods in your treatment plan. For example, you can take action, such as applying controls, to reduce the risk of a threat scenario until it is well below the risk tolerance level and then accept the residual risk.

You can create a treatment plan only after you have assessed the risk of a threat scenario. For more information on assessing risk, see "Assess the Risk on an Asset" on page 92.

Note: Initially, all risk scores: impact area values, impact score, and probability that are displayed in the **Treatment** area, are the same as the scores that are displayed in the **Assessment** area. This is because you did not begin treatment. Until you begin treatment, whenever you change assessment scores, they will be reflected in the **Treatment** area. But at the moment you begin treatment, if you change the scores in the **Assessment** area, they are no longer reflected in the **Treatment** area.

To create a treatment plan

1. Click **Risk Modeling** > **Risk Assessment and Treatment**.
2. In the **Risk Assessment and Treatment** window, from the **Asset** list, select an asset.

   All threats assigned to this asset are displayed in the left pane.

   Note: Make sure that you are in Assessment and Treatment view by clicking the **Assessment and Treatment**  button on the toolbar.

3. From the list of threats in the left pane, click the threat that you want to handle. To expand the threats tree, click  next to the category/actor.
4. In the right pane, in the **Treatment** section, click the **Edit Treatment**  button.
5. From the **Select a treatment method** list, select the method that you want to use, and then click **Add**.
6. According to the method that you selected, follow the instructions in one of the following procedures:
   - Mitigate risk, as described in "Mitigate Risk" below.
   - Accept risk, as described in "Accept Risk" on page 104.
   - Transfer risk, as described in "Transfer Risk" on page 105.
   - Avoid risk, as described in "Avoid Risk" on page 106.
   - Defer risk, as described in "Defer Risk" on page 104.
7. You can use any number of methods in your treatment plan.
8. To delete a treatment activity, under the treatment activity that you want to delete, click the **Delete**  button.
9. Change the **Risk Status** to reflect the treatment status.

Mitigate Risk

When you mitigate risk you take action to reduce the impact or the likelihood of the risk. A mitigation treatment activity can include one or more action plans for reducing risk. You can create the following types of actions:

- Control action
- Manual action

For more information, see "Mitigation" on page 93.

To mitigate risk

1. In the **Risk Assessment and Treatment** window, in the **Treatment** area, from the **Select a treatment method list**, select **Mitigate**, and then click **Add**.
2. In the **Description** field, enter necessary information about this treatment activity.

3. In the **Owner** field, enter the name of the owner of this treatment activity. The owner of this activity is responsible for managing all the actions required to carry out this treatment activity.

4. In the **Due Date** field, enter the date on which all actions for mitigating the risk should be completed. If this date passes and not all actions are completed, then the owner of this treatment activity receives an email notification that the treatment activity is overdue.

5. Create an action. Select one of the following options:

   - Create a control action, as described in "Add a Control Action" below.
   - Create a manual action, as described in "Add a Manual Action" on page 102.

6. Add as many actions as necessary.

7. After you complete an action or at any time during the treatment process, update the impact score and probability according to the treatment that you implemented, as follows:

   a. In the **Treatment** section, click the **Edit Treatment**  button.

   b. If the impact was reduced due to treatment, then update the values in the **Impact Areas**, as necessary.

   c. If the probability of this risk was reduced due to treatment, then in the **Treated Probability** box, enter a new value.

      The **Adjusted Probability** is modified according to any control to threat mapping and to the treated probability. For more information on control to threat mapping, see "Mitigate Risk Automatically Using Policy Controls" on page 95.

      The residual score is calculated as follows:

      Residual Risk Score = **Adjusted/Treated Probability** X **Impact Score** (as defined in the **Treatment** section).

   d. In the **Treatment** section, click **Save**.

   e. To delete the mitigation treatment activity, under the actions table, click **Delete the mitigation treatment activity**  button.

Add a Control Action

You can add one or more control actions to your mitigation treatment activity. After you create the action, you can create a workflow for carrying out the action plan. The workflow that is created is based on the template that is set in Settings. EnterpriseView includes a default template for creating a workflow for a control action, but you can change these settings, as described in "Configure Risk Mitigation Workflow Templates" on page 265.

To add a control action

1. In the **Risk Assessment and Treatment** window, in the **Treatment** section, click **Add Action** and select **Control**.

2. In the **New Control Action** dialog box, enter the information described in the following table:

Property	Description
Name	Enter a short, descriptive name for this action. If you create a workflow from the action, then the workflow name will be: "Action ID + Action Name"
Owner	Enter the name of the user who is responsible for handling this action. If you create a workflow from this action, then this user will also be the owner of the workflow that is created. The owner of this workflow will be responsible for carrying out the workflow.
Due Date	Enter the date on which this action should be completed. If you publish this action, then this due date will also be the due date of the workflow that is created. After an action is published, and a workflow is created, then the due date can be changed on the workflow from **Task Management > Workflow Management**, as described in "Edit Workflow Properties" on page 247. If the workflow is not completed by the due date, then an email notification is sent to the workflow owner who is also the action owner.
Status	The initial status of the action is **New**. If you publish this action, then after the workflow is created, the status of the action is automatically updated to **In Progress**. After the workflow is completed, it is automatically updated to **Completed**.If you do not publish this action, then you can change the status of this action manually.

3. In the **New Control Action** dialog box, review the controls in the table. The controls that are displayed in this table are all controls that are mapped to the threat. For more information on control to threat mapping, see "Mitigate Risk Automatically Using Policy Controls" on page 95.

> **Note:** Controls can only be selected once in a treatment plan. If you already created a control action and selected controls, they will not be displayed again in a different control action.

The controls are either already applied to the asset (in your Statement of Applicability) or not yet applied. Select the following controls, and then click **OK**:

- **Controls applied to asset**: Select controls that are already applied to the asset if you think that their compliance score can be improved (increased). If the compliance scores of these controls are improved, then they will automatically reduce the risk. Selecting these controls means that they will be reassessed.
- **Controls not applied to asset**: Select controls that are not applied to the asset, but that you think should be applied to the asset in order to reduce the risk. Selecting these controls means that they will be added to the statement of applicability and reassessed.

If you publish this action, then the list of controls and instructions will be displayed in the **Controls** tab in the **Workflow** properties in the **Workflow Management** window and in the **My Tasks** dialog box.

4. In the **Risk Assessment and Treatment** window, click **Save**.
5. To publish the action, click the **Create a workflow from this action**  button.

   A workflow is created. The name and due date of the workflow are the same as the action's.
6. To delete an action, click the **Delete Action**  button.
7. To edit the action properties, click the **Edit Action**  button.

Add a Manual Action

You can add one or more manual actions to your mitigation treatment activity. After you create the action, you can create a workflow for carrying out the action plan. The workflow that is created is based on the template that is set in Settings. EnterpriseView includes a default template for creating a workflow for a manual action, but you can change these settings, as described in "Configure Risk Mitigation Workflow Templates" on page 265.

To add a manual action

1. In the **Risk Assessment and Treatment** window, in the **Treatment** section, click **Add Action** and select **Manual**.
2. In the **New Manual Action** dialog box, enter the information described in the following table, and then click **OK**:

Property	Description
Name	Enter a short, descriptive name for this action. If you create a workflow from the action, then the workflow name will be: "Action ID + Action Name"
Owner	Enter the name of the user who is responsible for handling this action. If you create a workflow from this action, then this user will also be the owner of the workflow that is created. The owner of this workflow will be responsible for carrying out the workflow.
Due Date	Enter the date on which this action should be completed. If you create a workflow from this action, then this due date will also be the due date of the workflow that is created. After a workflow is created, then the due date can be changed on the workflow from **Task Management > Workflow Management**, as described in "Edit Workflow Properties" on page 247. If the workflow is not completed by the due date, then an email notification is sent to the workflow owner who is also the action owner.
Status	The initial status of the action is **New**. If you publish this action, then after the workflow is created, the status of the action is automatically updated to **In Progress**. After the workflow is completed, it is automatically updated to **Completed**.If you do not publish this action, then you can change the status of this action manually, as you see fit.
Action Plan	Enter a step by step description of how this action should be carried out. If you create a workflow for this action, then this information will be displayed in the workflow **Description** property.
Resources	Enter any necessary resources required to carry out the action plan. If you create a workflow for this action, then this information will be displayed in the workflow **Description** property.
Budget/Cost	Enter any necessary monetary information. If you create a workflow for this action, then this information will be displayed in the workflow **Description** property.

3. In the **Risk Assessment and Treatment** window, click **Save**.
4. To publish the action, click the **Create a workflow from this action**  button.

   A workflow is created. The name and due date of the workflow are the same as the action's.
5. To delete an action, click the **Delete Action**  button.
6. To edit the action properties, click the **Edit Action**  button.

Accept Risk

When you accept risk you acknowledge the risk without doing anything to prevent it. For more information, see "Acceptance" on page 94.

To accept a risk

1. In the **Risk Assessment and Treatment** window, in the **Treatment** area, from the **Select a treatment method list**, select **Accept**, and then click **Add**.
2. From the **Reason** list, select the reason for accepting the risk. If the reason is not listed, select **Other** and enter a detailed description.
3. If you want to reevaluate the risk after a period of time, then select the **Accept this risk for a limited time** check box.

   If you selected this check box, then the **Description**, **Owner**, and **Expiration Date** fields are mandatory.
4. In the **Description** box, enter information necessary for reevaluating this treatment activity.
5. In the **Owner** box, enter the name of the owner of this treatment activity. The owner of this activity is responsible for reevaluating this treatment activity after the expiration date. On the expiration date, the owner will receive an email notification about this activity.
6. In the **Expiration Date** box, enter the date after which the Accept treatment activity is no longer valid.
7. Click **Save**.

Defer Risk

When you defer a risk you decide that you don't want to handle it in the present and you want to postpone handling it at a later date. For more information, see "Deferral" on page 95.

To defer a risk

1. In the **Risk Assessment and Treatment** window, in the **Treatment** area, from the **Select a treatment method list**, select **Defer**, and then click **Add**.
2. From the **Reason** list, select the reason for deferring the risk. If the reason is not listed, select **Other** and enter a detailed description.
3. Select the **Accept this risk for a limited time** check box.
4. In the **Description** box, enter information necessary for reevaluating this treatment activity.
5. In the **Owner** box, enter the name of the owner of this treatment activity. The owner of this activity is responsible for handling the risk after the expiration date. On the expiration date, the owner will receive an email notification about this activity.
6. In the **Expiration Date** box, enter the date to which you want to postpone handling this risk.
7. Click **Save**.

Transfer Risk

When you transfer risk, you transfer the responsibility of reducing the risk exposure from your organization to a third party. For more information, see "Transference" on page 94.

To transfer a risk

1. In the **Risk Assessment and Treatment** window, in the **Treatment** area, from the **Select a treatment method list**, select **Transfer**, and then click **Add**.
2. In the **Description** box, enter information necessary for reevaluating this treatment activity.
3. In the **Owner** box, enter the name of the owner of this treatment activity. The owner of this activity is responsible for reevaluating this treatment activity after the expiration date.
4. In the **Expiration Date** box, enter the date after which the Transfer treatment activity is no longer valid.

   On the expiration date, if this activity is not completed (status Completed), then the owner will receive an email notification about this activity.
5. From the **Status** list, select the status for this treatment activity.
6. In the **Action Plan** box, enter the course of action that you are taking for transferring this risk.
7. In the **Resources** box, enter the resources required for transferring this risk. For example, details about the third party employed to handle this risk.

8. In the **Budget/Cost** box, enter monetary information. For example, the price of annual insurance.

9. Click **Save**.

Avoid Risk

When you avoid risk you avoid performing a specific activity so that the risk is nullified. For more information, see "Avoidance" on page 94.

To avoid risk

1. In the **Risk Assessment and Treatment** window, in the **Treatment** area, from the **Select a treatment method list**, select **Avoid**, and then click **Add**.

2. In the **Description** box, enter information necessary for reevaluating this treatment activity.

3. In the **Owner** box, enter the name of the owner of this treatment activity. The owner of this activity is responsible for reevaluating this treatment activity after the expiration date.

4. In the **Expiration Date** box, enter the date after which the avoid treatment activity is no longer valid.

   On the expiration date, if this activity is not completed (status Completed), then the owner will receive an email notification about this activity.

5. From the **Status** list, select the status for this treatment activity.

6. In the **Action Plan** box, enter the course of action that you are taking for avoiding this risk.

7. In the **Resources** box, enter the resources required for avoiding this risk, if necessary.

8. In the **Budget/Cost** box, enter monetary information, if necessary.

9. Click **Save**.

Risk Settings

You can configure the following risk settings:

- Decide how the risk score is aggregated, as described in "Configure Risk Score Aggregation Method" on the next page.
- Define impact areas and actor and category weights, as described in "Configure Risk Assessment Settings" on the next page.

- Define the thresholds that indicate the severity of your risk scores, as described in "Configure Risk Score Ranges" on page 109.
- Override the general threshold definitions for a specific asset, as described in "Configure Asset Risk Settings" on page 110.

Configure Risk Score Aggregation Method

Before you can begin working with the Risk Modeling module, you need to select a risk score aggregation method. For more information on the risk score aggregation methods and mechanism, see the *Risk Score Aggregation Mechanism* section in the *HP EnterpriseView User Guide*.

To configure risk score aggregation method

1. Click **Administration > Configuration**.
2. In the **Configuration** module, in the left pane, click the **Risk Aggregation Method** folder, and then click the **Risk Aggregation Method** page.
3. In the right pane, from the **Risk Aggregation Method** list, select an option:
   - **Average** (default)
   - **Override Children**
   - **Average of Children**

   For more information on the different methods, see "Risk Score Aggregation Mechanism" on page 110.
4. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section in the *HP EnterpriseView Deployment Guide.*

Configure Risk Assessment Settings

Risk assessment settings include applying weights to actors and their categories, creating or deleting impacts, and selecting the number of ranks for the impact area values.

To apply weights to categories and actors

1. On the EnterpriseView toolbar, click **Settings**.
2. On the **Settings** dialog box, click **Risk Modeling > Actor Weights**.
3. On the **Actor Weights** page, locate the category/actor for which you want to change the weight. To expand the category and display actors, click  next to the category. Click the weight to make it editable.

4. Enter a weight between 0 and 100.
5. Click **Save**.

> **Note:** You can override these settings for a specific asset, as described in "Configure Asset Risk Settings" on page 110.

To manage impact area settings

1. On the EnterpriseView toolbar, click **Settings**.
2. On the **Settings** dialog box, click **Risk Modeling > Impact Area**.
3. Do one of the following:
   - To add an impact area, click the **Create new impact area** button. In the **Name** cell, enter a name for the impact area. Click the weight to make it editable and enter a weight between 0 and 100.
   - To delete an impact area, click the **Delete impact area** button.

     > **Caution:** Deleting an impact area results in the reassessment of all assets.

   - To apply a weight to an impact area, click the weight to make it editable, and enter a weight between 0 and 100.
4. Click **Save**.

To select the number of impact area values

> **Note:** You cannot change the number of ranks while there are risk assessments.

1. On the EnterpriseView toolbar, click **Settings**.
2. On the **Settings** dialog box, click **Risk Modeling > Impact Area Values**.
3. Select the number of values for the impact areas.

   The following table includes the score for each of the values, depending on the number of ranks

you select:

Number of Ranks	Low	Medium	High	Very High	Urgent
Three	33	66	100	-	-
Four	25	50	75	100	-
Five	20	40	60	80	100

4. Click **Save**.

Configure Risk Score Ranges

You can configure the ranges for the score severity indication for the impact score, risk scores, and threat probability.

Risk scores are displayed with one of the following icons:

Low score

Medium score

High score

This configuration is reflected throughout the application, wherever these measurements are displayed. For example, on the Risk Modeling Assessment page, wherever an impact score, inherent, or residual risk score is displayed.

To configure risk score ranges

1. On the EnterpriseView toolbar, click the **Settings** button.
2. On the **Settings** dialog box, click **Risk Modeling > Risk Score Ranges**.
3. Under **Risk Score Ranges**, drag the slider to define the impact score, and inherent and residual risk score ranges.
4. Click **Save**.

To define probability ranges

1. On the EnterpriseView toolbar, click **Settings**.
2. On the **Settings** dialog box, click **Risk Modeling > Risk Score Ranges**.
3. Under **Probability Ranges**, drag the slider to define the probability ranges.
4. Click **Save**.

Configure Asset Risk Settings

You can override the default weights applied to categories and actors for a specific asset.

To override default weights for categories and actors

1. Click **Risk Modeling > Threat Assignment**.
2. On the **Threat Assignment** window, click the **Asset Risk Settings** button.
3. On the **Asset Risk Settings** dialog box, locate the category/actor for which you want to change the weight. To expand the category and display actors, click next to the category. Click the weight to make it editable.
4. Enter a weight between 0 and 100.
5. Click **Save**.

Risk Score Aggregation Mechanism

The aggregate risk score is generally defined as the weighted average of aggregate risk scores of the asset's children, but is dependant on the calculation method selected, as described below. This score is applied to an asset automatically. It is not displayed in the Risk Modeling Assessment window, but is one of the parameters in various reports and dashboards, such as the Risk Register. For more information, see "Risk Register" on page 178.

There are three methods available for calculating the aggregate risk score:

Note: If an asset does not have children, then the risk score is used instead of the aggregate risk score.

- **Average**: The weighted average of aggregate risk scores of an asset's children including the risk score of asset itself. This is the default method. The asset's risk score and the aggregate risk score of its children is taken into account.

$$\frac{\sum(AggregateRiskScoreChildren * CriticalityLevel) + AssetRiskScore * CriticalityLevel}{\sum(CriticalityLevel)}$$

- **Override Children**: If the asset already has a risk score, then its aggregate risk score receives the value of the risk score. If the asset does not have a risk score, then its aggregate risk score is calculated according to the Average formula. The asset's risk score takes precedence over its children's aggregate risk score.

  Asset risk score or $\frac{\sum(AggregateRiskScoreChildren * CriticalityLevel)}{\sum(CriticalityLevel)}$

- **Average of Children**: The weighted average of aggregate risk scores of an asset's children, excluding the risk score of the asset itself. The aggregate risk score children takes precedence over the asset's risk score.

$$\frac{\sum(AggregateRiskScoreChildren * CriticalityLevel)}{\sum(CriticalityLevel)}$$

For instructions on how to configure the risk score aggregation method, see "Configure Risk Score Aggregation Method" on page 107.

Residual Risk Score Calculation

The residual risk score that is applied to a threat scenario is also calculated and applied separately on the actor, actor category, and asset.

The following table describes how the risk scores are calculated for each of these elements.

Threat Element	Risk score calculation
Threat Scenario	The residual risk score is calculated as the Treated Impact Score multiplied by the Adjusted Probability or Treated Probability (depending on whether there are control to threat mappings). For detailed information on how the impact score is calculated, see "Impact Score Calculation" below.
Actor	The actor receives the score of the threat scenario with the highest risk.
Actor Category	The weighted average of all actor scores. $\frac{\sum(Actor\ Score * Actor\ Weight)}{\sum(Actor\ Weights)}$
Asset	The weighted average of all actor category scores. $\frac{\sum(Category\ Score * Category\ Weight)}{\sum(Category\ Weights)}$

Impact Score Calculation

The impact score of an identified risk is a calculation of the values associated with the impact areas of a specific threat scenario and its weight.

Impact areas and their weights are defined on the organization level in Settings. For more information, see "Configure Risk Assessment Settings" on page 107.

The following steps outline the formula for calculating the *Impact Score*:

1. For each impact area, a score is calculated separately:

   $$\frac{Impact\,Area\,Value * Impact\,Area\,Weight}{100} = Impact\,Area\,Score$$

2. *Impact Area Scores* are aggregated in a way that each additional impact area has relative influence on the final *Impact Score*.

a. The first *Impact Area Score* serves as a base for the *Impact Score*, which we will call the *Temporary Impact Score*.

b. The second *Impact Area Score* is multiplied by $\frac{100 - TemporaryImpactScore}{100}$ and then added to the first *Impact Area Score*. The resulting score is the new *Temporary Impact Score*.

c. Each of the consecutive *Impact Area Scores* is multiplied by $\frac{100 - TemporaryImpactScore}{100}$ creating a new *Temporary Impact Score*. After all the *Impact Area Scores* are aggregated, then the *Temporary Impact Score* = *Impact Score*.

Example:

Weight	Impact Area	Value	Impact Area Score
50	Financial	High	$\frac{50*100}{100} = 50$
50	Reputation	High	$\frac{50*100}{100} = 50$
50	Productivity	Low	$\frac{50*33}{100} = 16.5$
50	Fines/Legal	Low	$\frac{50*33}{100} = 16.5$
50	Safety and Health	Medium	$\frac{50*66}{100} = 33$

Financial = 50

$$\text{Financial + Reputation} = 50 + 50*\frac{(100-50)}{100} = 75$$

$$\text{Financial + Reputation + Productivity} = 50 + 50*\frac{(100-50)}{100} + 16.5*\frac{(100-75)}{100} = 79.125$$

$$\text{Financial +Reputation + Productivity + Fines/Legal} = 50 + 50*\frac{(100-50)}{100} + 16.5*\frac{(100-75)}{100} + 16.5*\frac{(100-79.125)}{100} = 82.569$$

$$\text{Financial +Reputation + Productivity + Fines/Legal + Safety and Health} = 50 + 50*\frac{(100-50)}{100} + 16.5*\frac{(100-75)}{100} + 16.5*\frac{(100-79.125)}{100} + 33*\frac{(100-82.569)}{100} = 88.321$$

3. Because the formula cannot yield a maximum score of 100, the result is normalized to 100, in order to align with impact score ranges (0-100).

In the example above, the result is 88.321 and the highest possible score is 96.875 (for five impact areas, when all impact area values are High). The score, in this case, is $\frac{(88.321 * 100)}{96.875}$ =91.17.

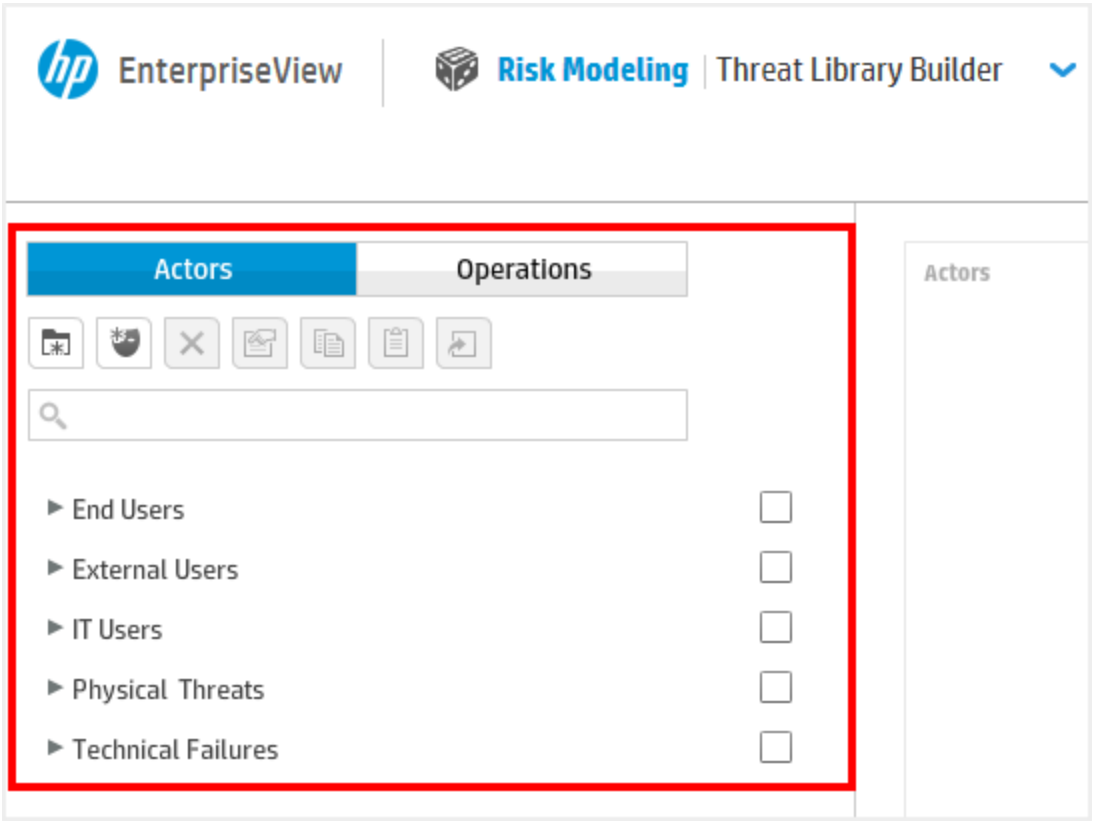
4. The *Impact Area Scores* are summed and compared to the result from the formula. The lowest score of the two is the final *Impact Score*. In the example above, the sum of all *Impact Area Scores* is 50+50+16.5+16.5+33=166, which means that the final *Impact Score* is 91.17.

   This final step is done in order to make sure that the *Impact Score* distribution is optimal.

Threat Library Builder Window

The Threat Library Builder enables you to create and manage threats and their building blocks (actors and operations). The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

Left Pane

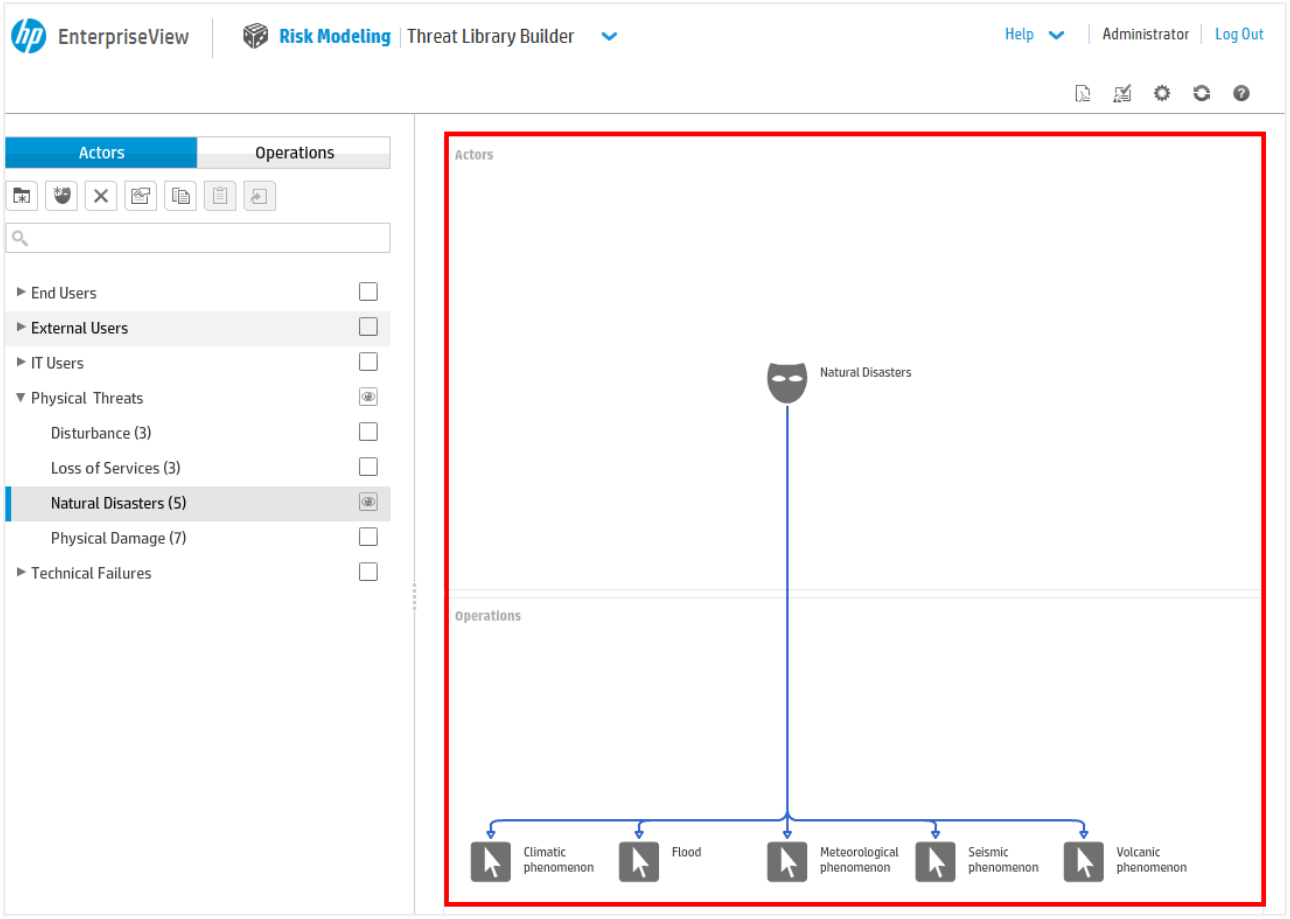


UI Element	Description
<Search box>	**Search** Search for a category, actor, or operation. Enter a name, full or partial. All matches are displayed.
Actors tab	The Actors tab displays all of the actors that are defined in EnterpriseView in a tree view, grouped by categories.
	**New Category** Click this button to create a new actor category. For more information, see "Create an Actor" on page 87.

UI Element	Description
	**New Actor** Click this button to create a new actor. For more information, see "Create an Actor" on page 87.
	**Delete** (category or actor) Select the category or actor from the actor tree, and then click this button. Deleting a category automatically deletes all of its actors. **Note:** Deleting an actor that is associated with a threat, automatically deletes the threat. Moreover, if the threat is already assessed, then the impact is also deleted.
	**Edit** (category or actor) Select the category or actor from the actor tree, and then click this button to edit the name and description of a category or an actor.
 	**Copy** and **Paste** (actor) You can duplicate actors using the copy/paste functionality. Select an actor from the actor tree, and then click the **Copy**  button. On the actor tree, click the category to which you want to copy the actor, and then click the **Paste**  button. You can copy the actor under the same category. A new actor is created with the following name: **Copy of <original actor name>** You can rename the actor by clicking the **Edit**  button. If the actor is connected to operations, then associations are also copied.
	**Connect Actor to Operation** Select an actor from the actors tree, click an operation on the graph, and then click this button. This button is enabled only when the actor and operation are not yet connected.
Operations tab	The Operations tab displays a list of all the operations defined in EnterpriseView.

UI Element	Description
	**New Operation** Click this button to create a new operation. For more information, see "Create an Operation" on page 88.
	**Edit Operation** Select the operation from the operation list, and then click this button to edit the name and description of the operation.
	**Delete Operation** Select the operation from the operation list, and then click this button. **Note:** Deleting an operation that is associated with a threat, automatically deletes the threat. Moreover, if the threat is already assessed, then the impact is also deleted.
	**Connect Operation to Actor** Select an operation or operations (press **CTRL** to multi-select) from the operations list, click the actor in the graph, and then click this button. The operation/operations that you selected are connected to the actor and displayed in the map area.

Graph Area



The graph area displays a graphic depiction of the threats in the threats library. You can choose to display one threat or multiple threats.

- To display threats: On the **Actors** tab, open the category, select the actors that you want to display, and drag them to the map area.
- To display a category's actors and their connected operations: On the **Actors** tab, select the categories that you want to display and drag them to the map area.
- To disconnect an operation from an actor, in the graph area, click the operation that you want to disconnect, and then press **DELETE**.

Mini-Map

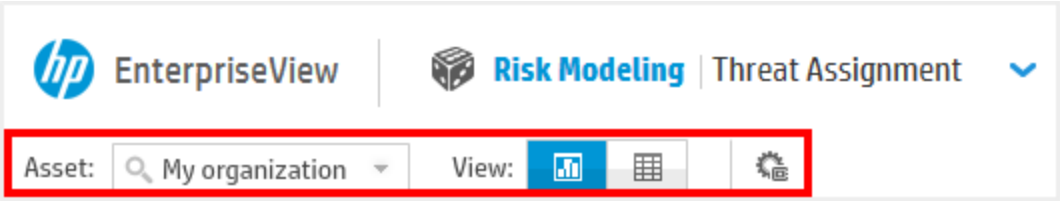
When a threat includes multiple operations and is larger than the graph area, you can navigate it by clicking and dragging in the mini-map area.

To expand or collapse the mini-map, click the **Expand/Collapse** button.

Threat Assignment Window

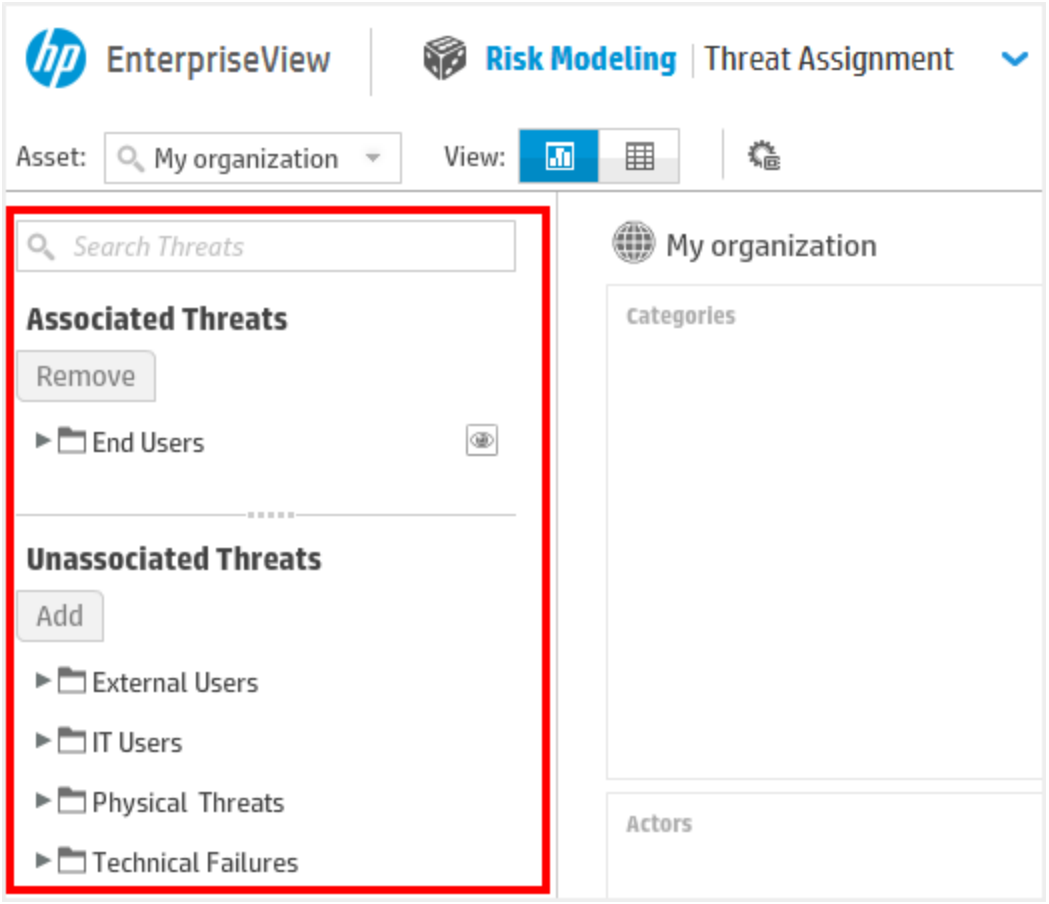
The Threat Assignment window enables you to create threat scenarios by assigning threats to assets. The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

Toolbar



UI Element	Description
<Asset Selector>	Select the asset for which you want to create threat scenarios. Select an asset from the list or search for an asset by entering its name.
	**Graph** (view) In this view the window is divided into the following sections: • Toolbar • Left pane • Map area • Properties pane • Mini-map This is the default view.
	**Table** (view) In this view, all threats are displayed in a table. You can associate a threat with an asset or unassociate a threat from an asset.
	**Asset Risk Settings** Override the default weights applied to categories and actors for a specific asset.

Left Pane



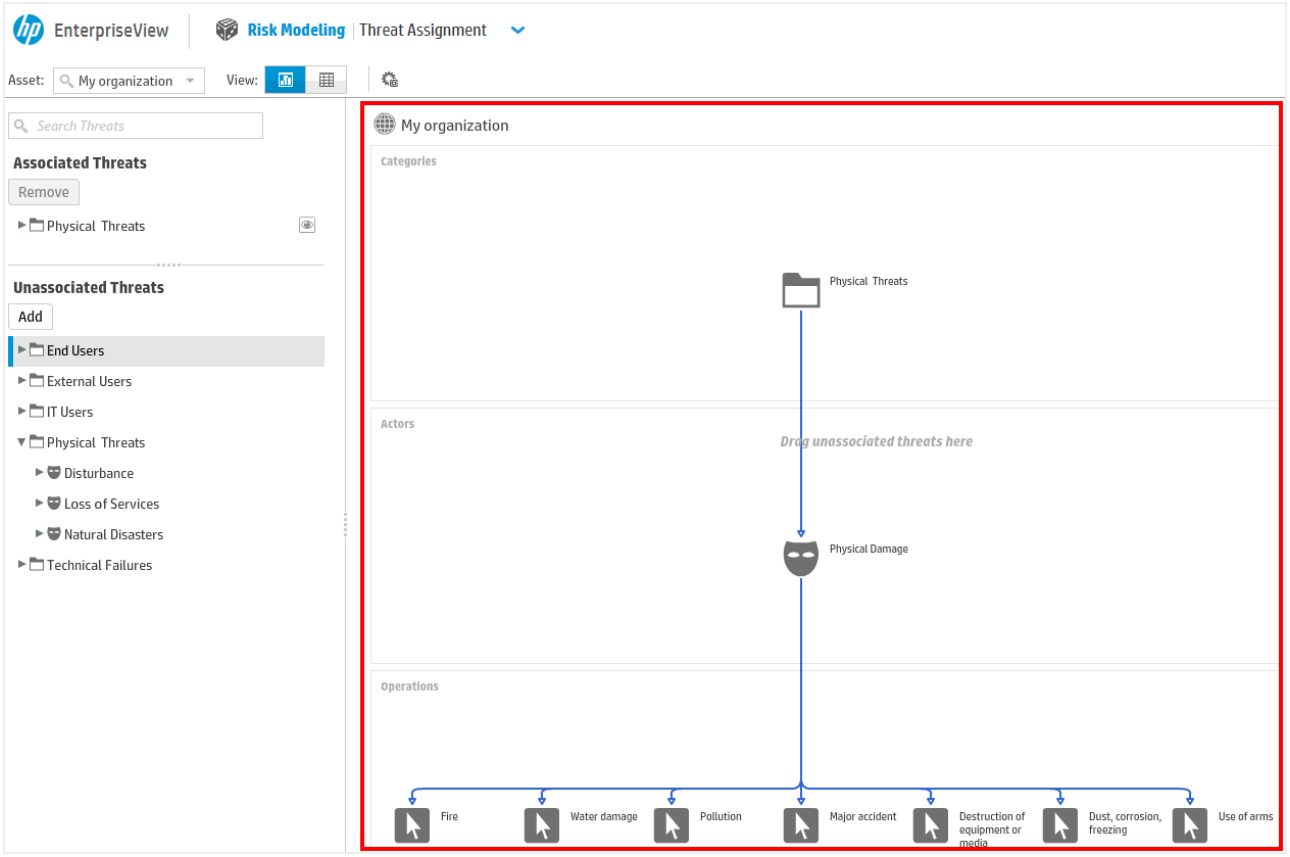
The left pane is divided into two areas:

- **Associated Threats**: The top area displays all the threats that are associated with the asset.
- **Unassociated Threats**: The bottom area displays all the threats that are not associated with the asset.

UI Element	Description
<Search Threats>	Search for threats by operation. Start typing an operation name to filter the list of associated and unassociated threats.
<Threats tree>	The threats tree displays all of the actors and their associated operations, grouped by category. The category is the first level, the actor is the second level, and its associated operations is the third level, displayed in alphabetical order.

UI Element	Description
Add	**Add threats to asset** From the **Unassociated Threats** area, select the threats that you want to assign to an asset, and then click this button. The threat scenario is displayed in the map area. For more information, see "Assign Threats to Assets" on page 89.
Remove	**Remove the selected threat from the asset** From the **Associated Threats** area, select the threats that you want to remove from the asset, and then click this button. The threat scenario is removed from the graph area. For more information, see "Assign Threats to Assets" on page 89.

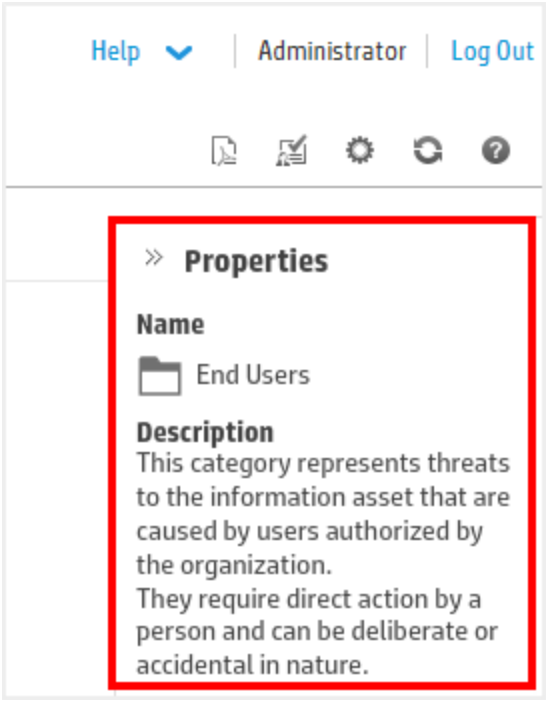
Graph Area



The graph area displays the following information:

- **Asset name**: Appears in the upper left side.
- **Threat scenario graph**: Displays (from top to bottom) the category, actor, and operation. Clicking the graph entity displays its properties in the **Properties** pane on the right.

Properties Pane



UI Element	Description
Category Properties	Includes the name and description of the threat category.
Actor Properties	Includes the name and description of the threat actor.
Operation Properties	Includes the name and description of the threat operation.

Mini-map

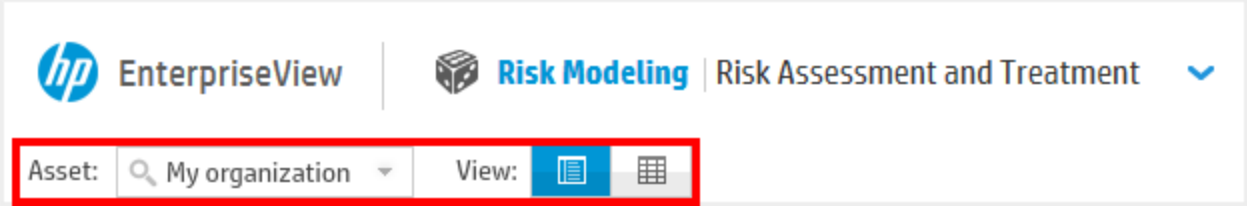
When a threat includes multiple operations and is larger than the graph area, you can navigate it by clicking and dragging in the Mini-map area.

To expand or collapse the mini-map, click the **Expand/Collapse** button.

Risk Assessment and Treatment Window

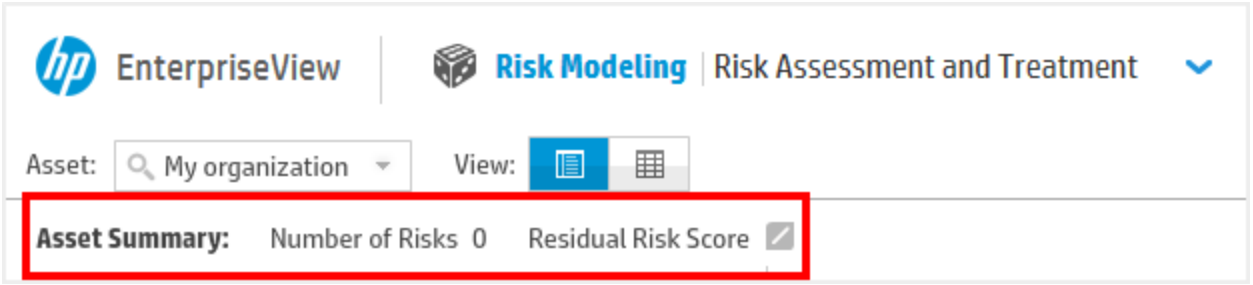
The Risk Assessment and Treatment window enables you to assess risks on assets and treat them. The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

Toolbar



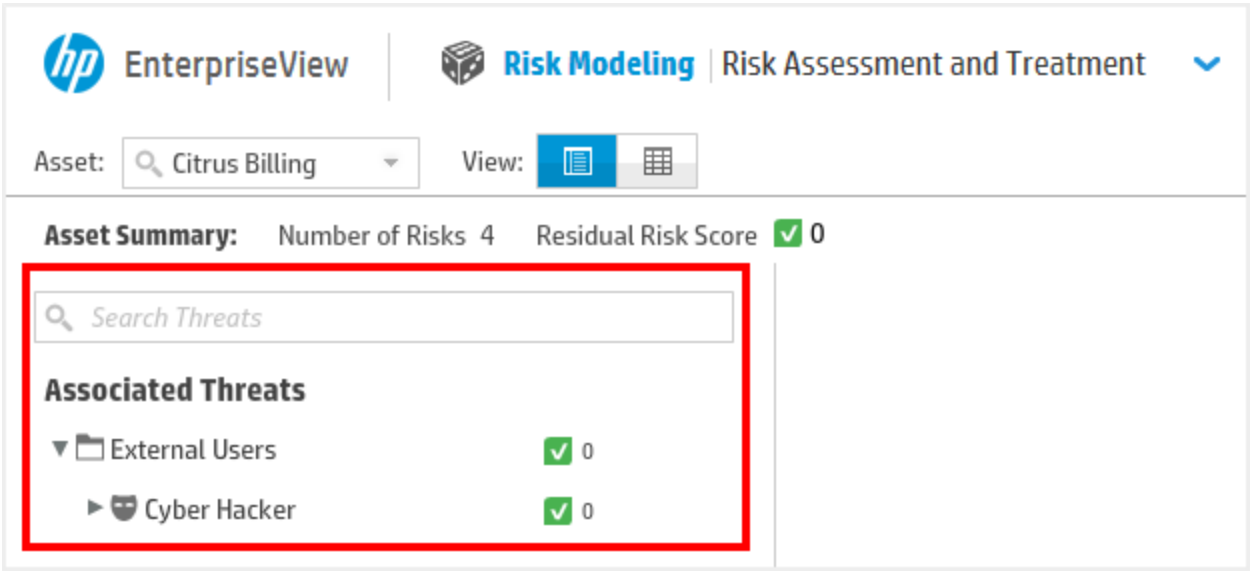
UI Element	Description
<Asset Selector>	Select the asset that you want to assess or treat from this list or search for an asset by entering its name.
	**Assessment and Treatment** In this view, the window is divided into the following sections: • Toolbar • Asset Summary • Left pane • Assessment Area • Treatment Area This view allows you to both assess and treat risks. It is the default view.
	**Assessment View** In this view, the window is divided into the following sections: • Toolbar • Asset Summary • Table This view provides assessment information on each threat scenario.

Asset Summary



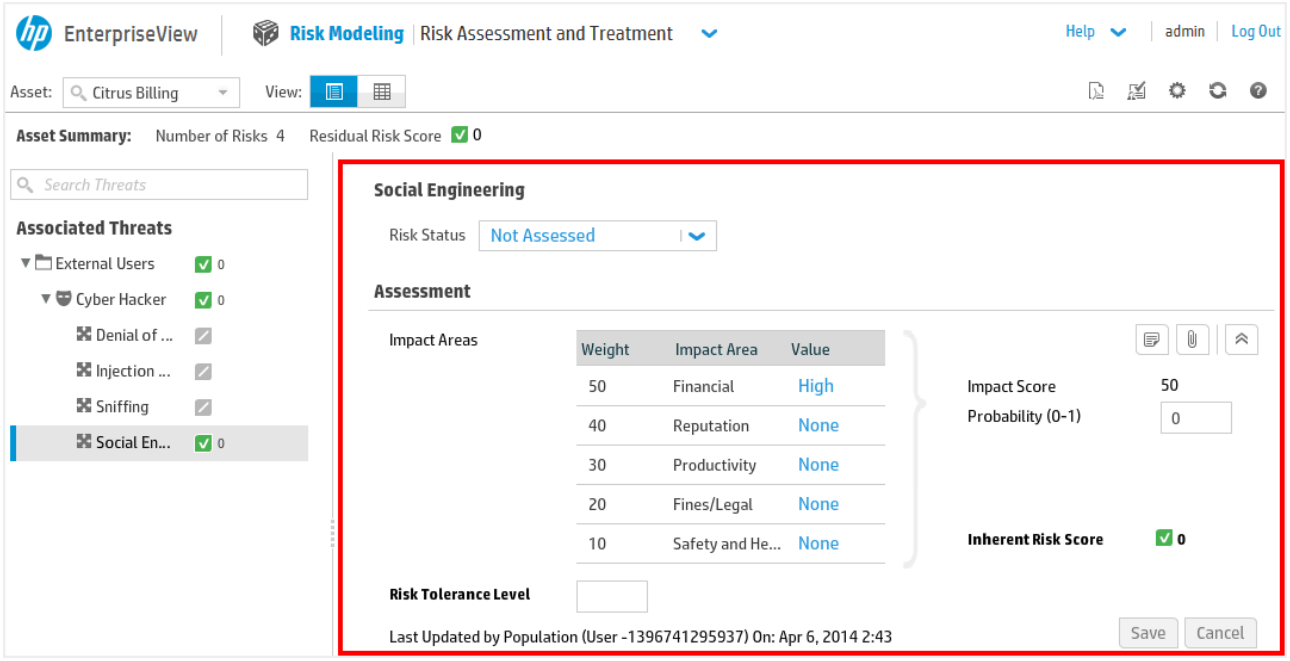
The asset summary includes the number of risks that the asset has and the residual risk score of the asset. For information on how the residual risk score of the asset is calculated, see "Residual Risk Score Calculation" on page 112.

Left Pane



UI Element	Description
<Search Threats>	Search for threats by operation. Start typing an operation name to filter the list of associated and unassociated threats.
<Associated Threats>	The threats tree displays all of the actors and their associated operations, grouped by category. The category is the first level, the actor is the second level, and its associated operations is the third level, displayed in alphabetical order. These threats are assigned to the asset and need to be assessed and treated. You can select a threat by expanding the tree.

Assessment Area



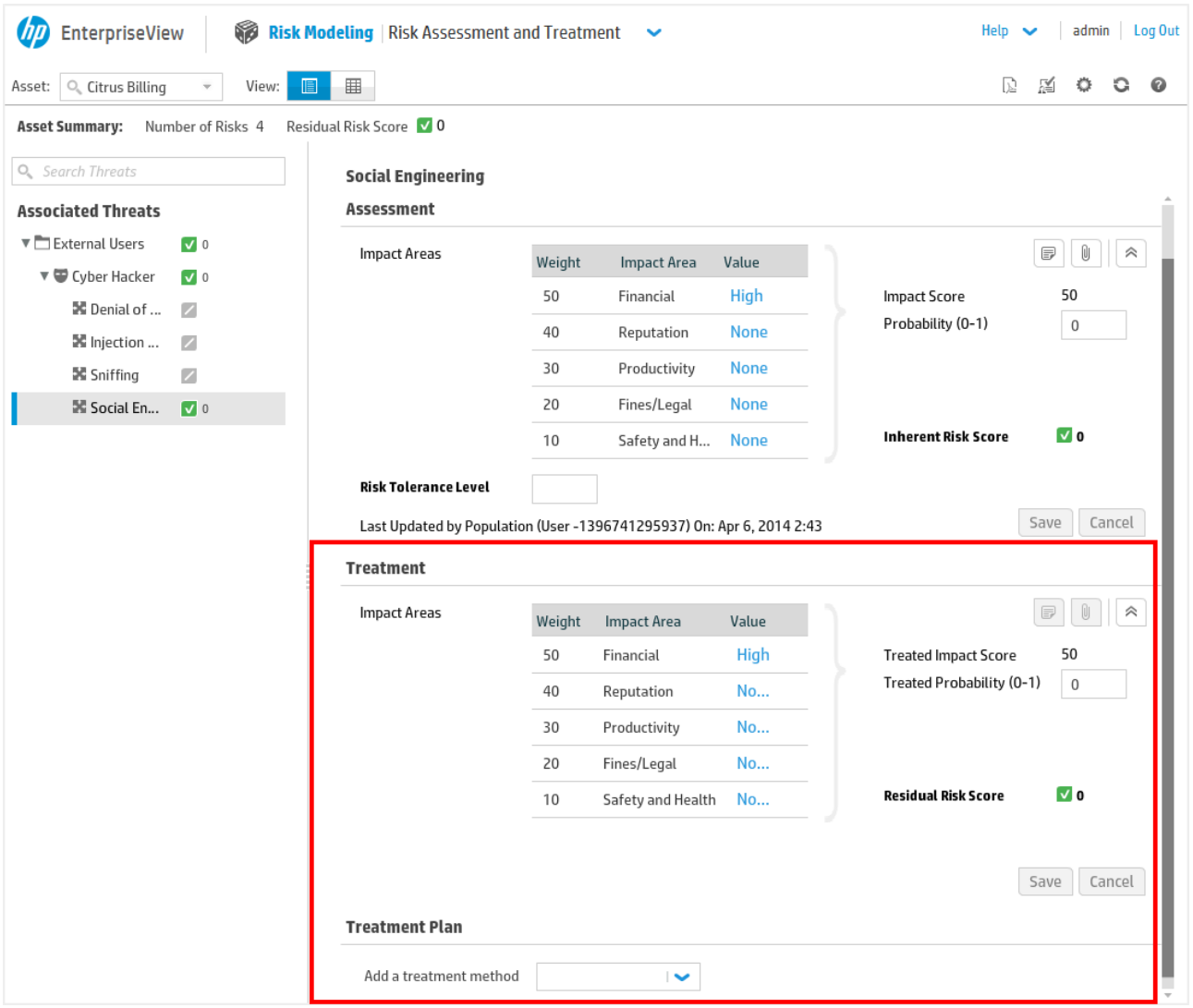
The assessment area enables you to assess the risk for a specific threat scenario.

When you open this page, then this area is displayed in a summary view. To perform an assessment, click the **Edit Assessment** button.

UI Element	Description
Risk Status	Change the status of the risk in order to reflect the life cycle of the risk. The statuses are: • **Not Assessed**: This status means that the threat is assigned to the asset, but that it has not been assessed yet. • **Assessed**: This status means that the risk on the threat scenario has been assessed, but has not been treated. • **Treatment in Progress**: This status means that you have created a treatment plan, but that it has not yet been carried out fully. • **Treatment Completed**: This means that the risk has been treated and that the treatment plan and all the action plans derived from the treatment plan have been carried out.

UI Element	Description
	**Notes** Click this button to add or view notes. To add a note, on the **Notes** dialog box, enter a note, and then click **Add**.
	**Attachments** Click this button to upload, delete, or download attachments.
Impact Areas	Impact areas comprise the impact of a risk. You can add, edit, delete impact areas, and change their weights as described in "Configure Risk Assessment Settings" on page 107. To assign an impact area value, click in the **Value** cell and select the appropriate value. For information on the score behind each value, see "Configure Risk Assessment Settings" on page 107.
Risk Tolerance Level	The maximum level of risk exposure that you are willing to accept for this asset in this threat scenario. Enter a number between 0 and 100. If the inherent risk score and residual risk score are higher that the risk tolerance level, then a warning is displayed below these scores.
Impact Score	The impact score is a calculation of all the values of the impact areas. For information on how this score is calculated, see "Impact Score Calculation" on page 112.
Probability	The probability that this threat will occur. Enter a number between zero and one.
Inherent Risk Score	The risk to an asset, for a specific threat scenario, in the absence of any actions you might take to alter either the probability or impact. This is the risk before treatment. This score is calculated as the impact score multiplied by the probability (**Inherent Risk Score** = **Impact Score** X **Probability**).

Treatment Area



The treatment area enables you to handle the risk for a specific threat scenario.

When you open this page, then this area is displayed in a summary view. To perform view and edit treated risk score, click the **Edit Treatment** button.

UI Element	Description
	Notes Click this button to add or view notes. To add a note, on the **Notes** dialog box, enter a note, and then click **Add**.

UI Element	Description
	**Attachments** Click this button to upload, delete, or download attachments.
Impact Areas	See "Impact Areas" on page 126. Before you begin treatment, the values of the impact areas are the same as those presented in the **Assessment** area. After you carry out your treatment plan, you can manually modify the impact areas to reflect the reduced risk.
Treated Impact Score	See "Impact Score" on page 126. Before you begin treatment, the treated impact score is the same as the impact score presented in the **Assessment** area. After you carry out your treatment plan, and you modify the impact areas to reflect the reduced risk, then a new impact score is calculated.
Treated Probability	See "Probability" on page 126. Before you begin treatment, the treated probability is the same as the probability presented in the **Assessment** area. After you carry out your treatment plan, you can manually modify the probability to reflect the reduced risk.
This threat scenario is affected by <n> controls.The probability is reduced/increased by m%.	This indication is displayed only if the controls that are mapped to the threat are also attached to the asset that is being assessed. Click the "n controls" link to view information about these controls. For more information on control to threat mapping, see "Mitigate Risk Automatically Using Policy Controls" on page 95. In this case, control compliance scores can either reduce or increase the treated probability. The result is the **Adjusted Probability**.
Adjusted Probability	The adjusted probability is the treated probability after it has been reduced or increased by control compliance scores. See explanation above.
Residual Risk Score	The residual score is the risk that remains after you have attempted to mitigate the inherent risk. It is calculated as the treated impact score multiplied by the adjusted probability (**Residual Score** = **Treated Impact Score** X **Adjusted Probability**).

Chapter 5: Vulnerability Management

In EnterpriseView, a vulnerability is a flaw or a weakness in a software application or a system configuration issue that can be exploited by an attacker and used to gain access to a system or a network or impact the confidentiality, integrity, and availability of a system or a network. For example, a user account that does not have a password, or an input validation error, such as SQL injection.

EnterpriseView supports three types of vulnerabilities:

- Network
- Application
- Configuration

For more information on each type, see "Vulnerability Types" on the next page.

The Vulnerabilities module enables you to manage the life cycle of vulnerabilities in your organization including collection, aggregation, prioritization, and remediation. For more information on the vulnerability life cycle, see "About the Vulnerability Life Cycle" on page 133. You can manage the vulnerability's life cycle by applying statuses aiding you in managing remediation, as described in "Manage the Vulnerability Life Cycle" on page 135.

The Vulnerabilities module enables you to view vulnerabilities that affect an asset and its children in a summarized view or a detailed view. Both views offer filtering capabilities so that, for example, vulnerabilities can be viewed within a specific score range or a specific location.

EnterpriseView assigns vulnerabilities to specific assets in your business model, but you can also attach or remove vulnerabilities to assets manually, as described in "Attach a Vulnerability to an Asset" on page 135. Asset vulnerability scores are derived from vulnerability scores (see "Common Vulnerability Scoring System" on page 131) and the asset's criticality level (see "Criticality Level" on page 33) and are trickled up and aggregated to top-level assets, providing business context to the state of your organization's security.

EnterpriseView imports vulnerability information from output generated by the following vulnerability assessment tools:

- Tenable Nessus Vulnerability Scanner
- McAfee Vulnerability Manager (Foundscan)
- Qualys Guard
- Rapid7 Nexpose
- HP WebInspect

The vulnerability information is imported into EnterpriseView using ArcSight SmartConnectors. For information on deploying ArcSight SmartConnectors, see the *Import Vulnerabilities From Vulnerability Assessment Tools* section in the *HP EnterpriseView Deployment Guide*.

EnterpriseView is CVE (Common Vulnerabilities and Exposures) and CCE (Common Configuration Enumeration) compliant, aligned with most established dictionary of common names for publicly known information security vulnerabilities. However, EnterpriseView also supports management of vulnerabilities from sources that do not have a CVE or a CCE classification.

The same vulnerability can be reported numerous times and by numerous vulnerability assessment tools. EnterpriseView aggregates these reports into a single vulnerability, in order to eliminate duplication of data, allowing you to manage the vulnerability only once.

You can archive closed application and network vulnerabilities, as described in the *Archive Vulnerabilities* section in the *HP EnterpriseView Administration Guide*.

Vulnerability Types

EnterpriseView distinguishes between three vulnerability types:

- Web Application (referred to as "Application" in the user interface)
- Network
- Configuration

Following is a description of each type of vulnerability:

Web Application

Web application vulnerabilities are vulnerabilities that are found by Web application vulnerability scanners. A Web application vulnerability scanner communicates with a Web application (a 3rd party application or a custom application) through the application's URL in order to identify vulnerabilities in the application and its architecture. The scanner searched for security flaws based on a database of known flaws. Examples of Web application vulnerabilities include: cross-site scripting, SQL injection, and remote file inclusion.

Network

Network vulnerabilities are vulnerabilities that are found by network vulnerability scanners. A network vulnerability scanner scans all the network elements (such as operating system, ports, services, and firewalls) and runs tests applicable to each host. An example of a network vulnerability is include: TCP/IP stack buffer overflow.

Configuration

Configuration vulnerabilities are actually misconfigurations in network elements, such as servers, applications, and firewalls. Configuration checks are defined in a configuration file provided in OVAL (Open Vulnerability and Assessment Language) format and are entered into the scanner. Examples of configuration checks include: port numbers that are higher than 2000 must be closed

to communication, and all users defined in an Active Directory must have a password with over X characters and must include special characters.

The scanner provides information for both correct configurations and misconfigurations, as opposed to Web application and network vulnerabilities, which only report weaknesses.

Most vulnerability properties are shared between the different types, but there are also some differences. For more information on the various vulnerability properties. see "Vulnerability Properties" on page 140.

Common Vulnerability Scoring System

The Common Vulnerability Scoring System (CVSS) is an industry standard vulnerability scoring system for assessing the severity IT vulnerabilities. It is widely adopted by commercial and open-source products, such as McAfee, National Vulnerability Database, Qualys, and Tenable network Security.

EnterpriseView uses CVSS v2 as the scoring system for the network and application vulnerabilities defined in the vulnerability dictionary. For more information on the vulnerability dictionary, see "Vulnerability Dictionary" on page 156.

The score defined in the vulnerability dictionary is based on the following metrics:

- Base: Represent the intrinsic qualities of a vulnerability.
- Temporal: Represent the characteristics of a vulnerability that change over time but are not related to your organization's environment.

Because temporal metrics are dynamic by nature, the vulnerability score is regularly updated by EnterpriseView labs. Every time you update the vulnerability dictionary in EnterpriseView, you receive the most updated vulnerability scores. In addition to the vulnerability score, EnterpriseView displays the scoring vector, providing you a breakdown of the score calculation. For more information on the vulnerability score, see "Vulnerability Properties" on page 140.

After a vulnerability is attached to an asset, the vulnerability score on that asset is recalculated to include environmental metrics. Therefore, the vulnerability score defined in the vulnerability dictionary will usually be different than the vulnerability score on a specific asset.

Configuration Vulnerabilities Scoring Method

Configuration vulnerabilities utilize a different scoring method than network and application vulnerabilities. For more information on the network and application vulnerability scoring method, see "Common Vulnerability Scoring System" above

The score of configuration vulnerabilities depends on a combination of the vulnerability status and the configuration check results provided by the scanner. Common check result values include: Pass, Fixed, Error, Failed, Unknown, Not Applicable, Not Checked, not Selected, and Warning. These results can be divided into the following categories:

Check Result Categories

Category	Check Results	Referred to in EnterpriseView As
Configured correctly	Pass and Fixed	Passed
Misconfigured	Failed and Error	Failed
Correct configuration could not be determined	Unknown, Not Applicable, Not Checked, not Selected, and Warning	Unknown

Any check result that you receive will fall into one of these three categories, even if it is a different value that the values listed above.

When a configuration vulnerability enters EnterpriseView, it automatically receives a score:

- Vulnerabilities that are configured correctly are given the status Closed and receive the score 0.
- Vulnerabilities that are misconfigured are given the status Open and receive the score 10.
- Vulnerabilities for which correct configuration could not be determined are given the status Open and receive the score 5.

Because you have the ability to change the vulnerability status manually, there can be other combinations. The following table includes all combinations and their score.

Configuration Vulnerabilities Scoring Method

Vulnerability Status	Category	Score
Closed	All	0
Open	Misconfigured	10
Open	Correct configuration could not be determined	5
Open	Configured correctly	10

About the Vulnerability Life Cycle

In EnterpriseView, the vulnerability life cycle is managed by using the vulnerability's status (see "Status" on page 143) and the vulnerability's remediation status (see "Remediation Status" on page 142). For more information about managing the vulnerability life cycle, see "Manage the Vulnerability Life Cycle" on page 135. Vulnerability remediation has both manual and automatic aspects. For more information on the automatic aspects, see the *About the Vulnerability Import Job* section in the *EnterpriseView Deployment Guide*.

The following example outlines how to manage the vulnerability life cycle:

1. When a vulnerability occurrence is first imported into EnterpriseView, it can have one of the following status combinations:

   - A **New** remediation status and an **Open** status. Remediation status **Reopened** is handled the same as remediation status **New**.
   - A **Passed** remediation status and a **Closed** status, relevant only for configuration vulnerabilities. Does not require further handling.

2. A user with an appropriate role assigns **New** and **Reopened** vulnerabilities to users for handling.

   Note: Users can use the **Notes** parameter to communicate information to one another or for any other comments that the user wants to document.

3. The user to whom the vulnerability is assigned must first determine whether the vulnerability is an actual problem.

   - If the vulnerability is not found to be significant, then the user can close it, and change its remediation status to **Not an Issue**. Cases in which vulnerabilities are identified as non-issues include vulnerabilities that have very low scores, when the organization uses security tools that provide virtual patching to solve security issues in the network, and any other case in which insignificant reports unnecessarily overload the system.
   - If the vulnerability is found to be significant, then the user investigates methods for solving the problem. The user can use the Solution parameter (see "Solution" on page 146 to help solve the problem. When the solution is found, the user changes the remediation status to **Awaiting Remediation**.

4. After the vulnerability is fixed, the user changes the vulnerability's remediation status to **Awaiting Verification**.

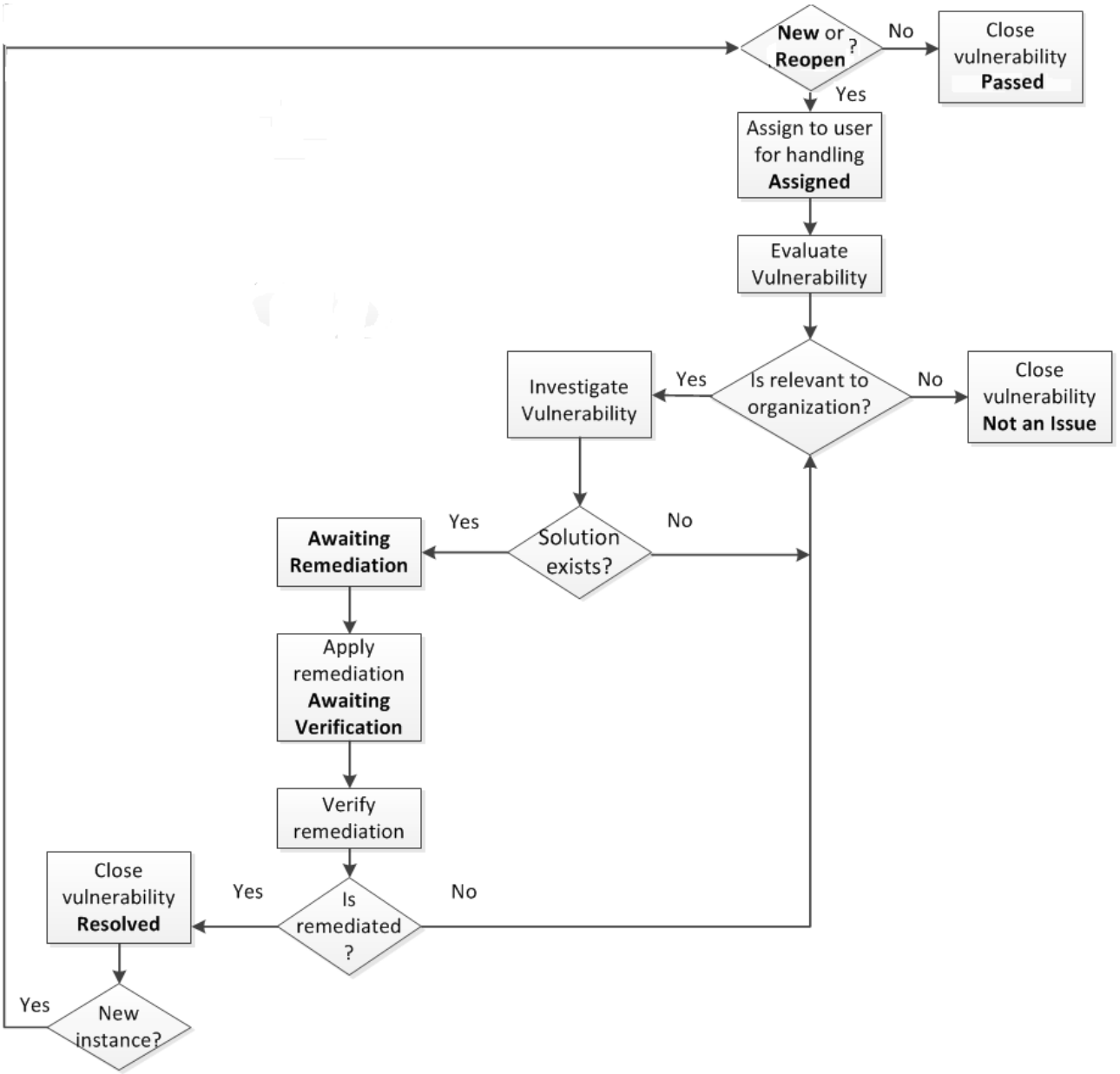
5. The user verifies that the vulnerability is fixed by rescanning the network.

6. If the vulnerability is not reported, then the user changes the vulnerability status to **Closed** and the remediation status to **Resolved**.

7. If a new vulnerability instance is reported for a closed and resolved vulnerability, then the vulnerability status is changed to **Open** and the remediation status is changed to **Reopened**, automatically.

8. **Closed** network and application vulnerabilities can be archived if they have not been updated or reported for certain (configurable) amount of time. For more information, see the *Archive Vulnerabilities* section in the *HP EnterpriseView Administration Guide*.

The following flowchart depicts the process described above.



Manage the Vulnerability Life Cycle

You can change vulnerability statuses, as described in the following procedure. For information on the vulnerability life cycle, see "About the Vulnerability Life Cycle" on page 133.

To manage the vulnerability life cycle

1. Click **Vulnerabilities > Management**.
2. From the grid, select the relevant vulnerability, and then click the **Details View**  button.
3. In the **Status Management**, perform the following steps, and then click **Save**:
   a. If required, change the **Status** field.
   b. From the **Remediation Status** list, select the relevant status.
   c. If required, use the **Notes** parameter to communicate information with other users or for any other comments that you want to document.

Attach a Vulnerability to an Asset

During the Vulnerability Import Job, vulnerabilities are mapped and attached to assets. For more information, see the *About the Vulnerability Import Job* section in the *HP EnterpriseView Deployment Guide*. In some cases, vulnerabilities cannot be mapped to assets, which results in unattached vulnerabilities. You can manually attach vulnerabilities to assets through the Vulnerability Assignment window. You can also detach vulnerabilities from one asset and reattach them to a another asset. Users with VIEW VULNERABILITIES permissions can view unattached vulnerabilities, regardless of their asset access rights. After a vulnerability is attached to an asset, only users with access rights to that asset can see the vulnerabilities.

Note: In order to put vulnerabilities in a business context, it is important to attach all vulnerabilities to assets. The more vulnerabilities are attached to assets the more accurate the overall asset risk score will be.

To attach a vulnerability to an asset

1. Click **Vulnerabilities > Assignment**.
2. On the **Vulnerability Assignment** window, in the **Assets** pane, select the asset to which you want to attach a vulnerability/vulnerabilities using either of the following methods:
   - In the **Organization** tab, expand the organization tree.
   - In the **Search** tab, enter the asset name or a partial name.

The **Unattached Vulnerabilities** pane displays all the vulnerabilities that have been imported into EnterpriseView that are not currently attached to an asset.

3. If necessary, you can filter the vulnerabilities according to the vulnerability score or status, or by clicking **More Filters**. For more information on the vulnerability properties in the **Filter Vulnerabilities** dialog box, see "Summary View Grid" on page 140.

4. From the **Unattached Vulnerabilities**, select the vulnerability that you want to attach to the asset, and then click 

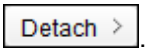
. You can also select multiple vulnerabilities by pressing CTRL and selecting the vulnerabilities from the list.

   The vulnerability/vulnerabilities are displayed in the **Attached Vulnerabilities** pane.

To detach a vulnerability from an asset

1. Click **Vulnerabilities > Assignment**.

2. On the **Vulnerability Assignment** window, in the **Assets** pane, select the asset from which you want to detach the vulnerabilities.

3. From the **Attached Vulnerabilities** pane, select the vulnerability or vulnerabilities that you want to detach from the asset, and then click 

.

   The vulnerability/vulnerabilities are displayed in the **Unattached Vulnerabilities** pane.

Vulnerability Settings

You can configure the following vulnerability settings:

- Decide how the asset vulnerability score should be aggregated, as described in "Configure Asset Vulnerability Score Aggregation Parameters" below
- Define the thresholds that indicate the severity of your vulnerability scores, as described in "Configure Vulnerability Score Ranges" on the next page
- Decide how to determine the asset vulnerability score, as described in "Configure Asset Vulnerability Score Formula" on the next page

Configure Asset Vulnerability Score Aggregation Parameters

You can configure the asset vulnerability score aggregation parameters to better suit your business needs and your organization's structure. For more information on these parameters, see "Asset Vulnerability Score Aggregation Mechanism" on page 147.

To configure asset vulnerability score aggregation parameters

1. On the EnterpriseView toolbar, click the **Settings** button.
2. In the **Settings** dialog box, click **Vulnerabilities > Asset Vulnerability Score Aggregation**.
3. In the **Asset Vulnerability Score Aggregation** page, enter the following information:
   - **Maximum Children in Calculation**. Lower the impact of the children severity on the score.
   - **Children Multiplier**. Lower the impact of the children on the score.

   Note: This change recalculates scores for the entire business model, therefore it might take some time until the updated scores are apparent.
4. Click **Save**.

Configure Vulnerability Score Ranges

You can configure the ranges for the score severity indication for vulnerability scores.

Vulnerability scores are displayed with one of the following icons:

Low score

Medium score

High score

This configuration is reflected throughout the application, wherever these scores are displayed. For example, on the Vulnerability Management page, in the Score column in the grid.

To configure vulnerability score ranges

1. On the EnterpriseView toolbar, click the **Settings** button.
2. In the **Settings** dialog box, click **Vulnerabilities > Vulnerability Ranges**.
3. Under **Vulnerability Score Ranges**, drag the slider to define the score ranges.
4. Click **Save**.

Configure Asset Vulnerability Score Formula

The asset vulnerability score is affected by all the vulnerabilities that are attached to the asset.

You can select one of the following methods for calculating the asset vulnerability score:

- **Max score**: The asset vulnerability score is the score of the vulnerability with the highest score out of all the vulnerabilities attached to the asset.

  With this method, all vulnerability types are equal.

  For example:

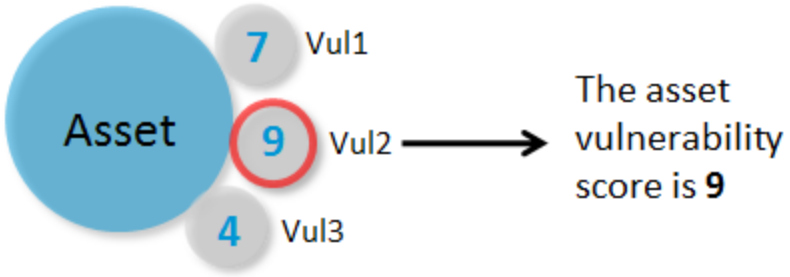
  An asset has three vulnerabilities attached. The vulnerabilities have the following scores:

  Vul1=7

  Vul2=9

  Vul3=4

  In this case, the asset vulnerability score is 9.



- **Weighted average**: The asset vulnerability score is the weighted average of the highest vulnerability score out of each vulnerability type.

  The formula is: $\frac{\Sigma Highest\ Score For\ Vulnerability\ Type * Weight}{\Sigma Weights}$.

  With this method, you can decide whether one vulnerability type is more influential than another type.

  For example:

  An asset has four vulnerabilities attached; two configuration vulnerabilities and two network vulnerabilities. The vulnerabilities have the following scores:

  - Network

    Vul1=7

    Vul2=4

  - Configuration

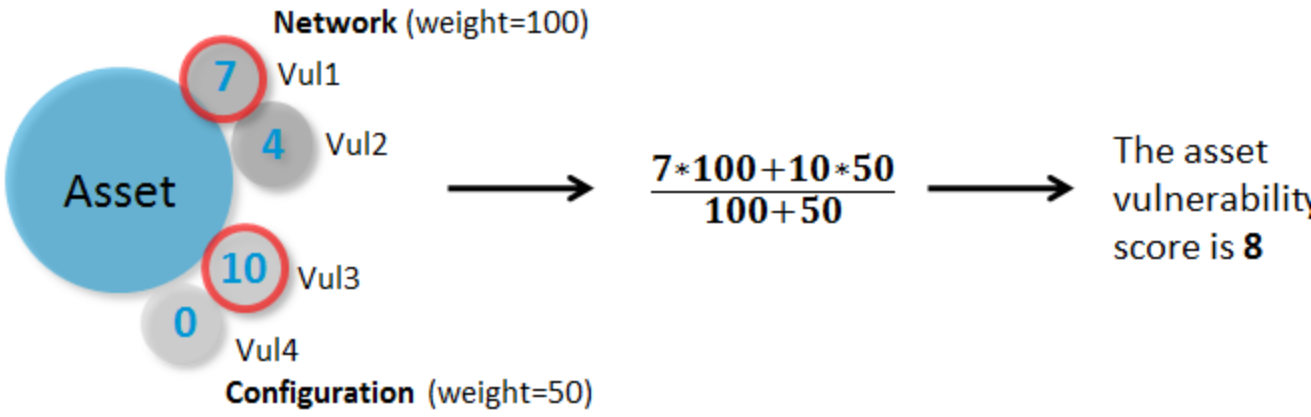
    Vul3=10

    Vul4=0

Network vulnerabilities have a weight of 100, while configuration vulnerabilities have a weight of 50.

Out of the network vulnerabilities , the highest score is 7. Out of the configuration vulnerabilities, the highest score is 10.

The calculation is: (100*7+50*10)/(100+50) and the asset vulnerability score is 8.



The method that you select for calculating the asset vulnerability score affects the aggregate asset vulnerability score. The aggregation method is also configurable, as described in "Configure Asset Vulnerability Score Aggregation Parameters" on page 136.

To configure the asset vulnerability score formula

1. On the EnterpriseView toolbar, click the **Settings** button.
2. In the **Settings** dialog box, click **Vulnerabilities > Asset Vulnerability Score Formula**.
3. Select one of the following options:
   - **The score of the vulnerability with the highest score out of all the vulnerabilities attached to the asset**
   - **The weighted average of the highest vulnerability score out of each vulnerability type**
4. If you selected **The weighted average of the highest vulnerability score out of each vulnerability type**, set the weights for each of the vulnerability types by dragging the slider. If you set the weight to zero, then all the vulnerabilities of that type will not affect the vulnerability asset score.
5. Click **Save**.

Vulnerability Properties

The following tables describe all the vulnerability properties according to where they are displayed in the Vulnerabilities module.

Some properties are relevant only to specific vulnerability types.

Summary View Grid

The Summary View is available from the Vulnerability Management window.

Each record in the summary view grid is an occurrence of a vulnerability in a specific location.

Property	Description
ID	A common classification ID. This ID can be defined in the vulnerability dictionary or not. It can be a CVE, CCE, or identification provided by the scanner. CVE IDs are linkable to the NVD website.
Type	See "Vulnerability Types" on page 130.
Score	The vulnerability score is the severity level of the vulnerability expressed as a number between 0 and 10. It is calculated by EnterpriseView labs. The scoring system varies between the different vulnerability types: • **Network and Web application vulnerabilities** The score is CVSS version 2.0 compliant. For more information, see "Common Vulnerability Scoring System" on page 131. Scores of new vulnerabilities that do not exist in the dictionary are imported from the scanner and are normalized to the EnterpriseView scoring system. • **Configuration vulnerabilities** The score is determined according to the vulnerability status and the check results from the scanner. For more information, see "Configuration Vulnerabilities Scoring Method" on page 131.

Property	Description
Location	The location displayed depends on the type of the vulnerability. Each type has the following location formats: • Network and configuration: **<Hostname>:<Network Port>**. Hostname and IP address are interchangeable. • Application: **<Normalized URI>:<Vulnerable Parameter>**. The original URI indicating the location of the vulnerability is normalized by the Vulnerability Import Job. The vulnerable parameter is isolated from the query string passed in the original URI.

Property	Description
Remediation Status	The remediation status depends on the vulnerability status, meaning that a vulnerability with status Open has different remediation status options than a vulnerability with status Closed. Some statuses can be applied manually and some are applied automatically by EnterpriseView. The following options are available: • **New**: The default remediation status for open vulnerabilities. • **Passed**: Applicable to only for configuration vulnerabilities. The remediation status for vulnerabilities that have passed the configuration check. This remediation status is given automatically by the system, according to the check status reported by the scanner. For more information, see Last Scan Status. Because the configuration is correct, the vulnerability status is Closed. • **Reopened**: A closed vulnerability can be automatically reopened by EnterpriseView if a new instance of the same vulnerability occurrence is found. • **Assigned**: An open vulnerability is assigned to a system user. • **Awaiting Remediation**: Remediation for an open vulnerability was found, but has not been applied. • **Not an Issue**: A closed vulnerability that was identified as irrelevant to the organization, due to its severity, to the probability of an attack using this vulnerability or for any other reason defined by the organization. A vulnerability with this status will not be reopened. • **Awaiting Verification**: Remediation was applied to a vulnerability, but was not verified. • **Resolved**: The vulnerability was fixed. • **Automatically Closed**: Applicable only for network and application vulnerabilities. This status is assigned automatically when a vulnerability has been open for more than N days and none of its properties have been changed (based on the Last Updated On property). The number of days is configurable in the Configuration module. For more information, see the *Schedule and Activate Vulnerabilities Import Job* section in the *HP EnterpriseView Deployment Guide*.

Property	Description
Status	The following options are available: • **Open**: The default status of all vulnerabilities that are imported into EnterpriseView. As long as the vulnerability exists, its status is open. A vulnerability can be reopened automatically by EnterpriseView if a new instance of the same vulnerability occurrence is found. • **Closed**: You can manually change the status to Closed. Open vulnerabilities are automatically closed by EnterpriseView if they have been open for more than N days. The number of days is configurable in the Configuration module.For more information, see the *Schedule and Activate Vulnerabilities Import Job* section in the *HP EnterpriseView Deployment Guide*. Closed vulnerabilities do not affect the vulnerability scores of assets in the business model.
Attached to Asset	The asset name in the EnterpriseView business model to which the vulnerability is attached. Vulnerabilities can be attached automatically to IP assets according to their host, IP address or MAC address. Vulnerabilities can also be attached manually to assets. If a vulnerability is not attached to an asset, then this field is empty. For more information, see "Attach a Vulnerability to an Asset" on page 135.
Times Reported	The number of instances of a vulnerability occurrence. Imported vulnerabilities can be reported more than once, either by different vulnerability assessment tools or due to multiple scans from the same tool.
First Reported On	The date that the vulnerability occurrence was first reported, as recorded by the external source from which the vulnerability was imported. Format: Mon Day, Year Example: Jan 16, 1970
Last Reported On	The date that the vulnerability occurrence was last reported, as recorded by the external source from which the vulnerability was imported.
Title	A short description of the vulnerability.

Details View

The Details View is available from the Vulnerability Management window. The Details View displays information on a single vulnerability occurrence.

Category	Property	Description
General	**ID**	See "ID" on page 140
	Type	See "Vulnerability Types" on page 130.
	Score	See "Score" on page 140.
	Related CVEs	Not relevant for configuration vulnerabilities. The CVE identifiers of related vulnerabilities. Defined by EnterpriseView labs. CVE IDs are linkable to the NVD website.
	References	The identifiers defined by various sources for vulnerabilities that are similar or related to the vulnerability defined in the EnterpriseView vulnerability dictionary. CVE IDs are linkable to the NVD website.
	Groups	Vulnerabilities are grouped according to different vulnerability categories. EnterpriseView adopted the Common Weakness Enumeration (CWE) system for identifying most vulnerability groups. Other vulnerability groups are internal and can be identified by an "EVG" prefix. CWE IDs are linkable to the NVD website.
	Details	A detailed description of the vulnerability.
	Location	See "Location" on page 141.
	Attached to Asset	See "Attached to Asset" on the previous page
	Times Reported	See "Times Reported" on the previous page.
	First Reported On	See "First Reported On" on the previous page
	Last Updated On	The last time that one of the properties of the vulnerability occurrence was changed. This property is not updated if a vulnerability is attached or detached from an asset or if a new note has been added.

Category	Property	Description
	Last Scan Status	Relevant only for configuration vulnerabilities. Typically, scanners provide a status for configuration vulnerability checks. Common values include: Pass, Fixed, Error, Unknown, Not Applicable, Not Checked, not Selected, and Warning. If a scanner provides such a status, then it is displayed as this property. If the last scan status is Passed or Fixed, then the remediation status is Passed. For more information, see "Remediation Status" on page 142.
	Host	The host where the vulnerability was found.
	Port	Relevant only for network vulnerabilities. The port where the vulnerability was found.
	Vulnerable Parameter	Relevant only for application vulnerabilities. The parameter from the URI that is used to exploit the vulnerability. For example, User ID can be the vulnerable parameter in case of an SQL injection vulnerability.
	Platform	Relevant only for configuration vulnerabilities. The application or operating system where the vulnerability was found.
	Associated Technical Mechanism	Relevant only for configuration vulnerabilities. The method by which the configuration is implemented.
	Conceptual Parameters	Relevant only for configuration vulnerabilities. A list of valid values of the field or property that needs to be configured.

Note: the following properties are relevant only for network and application vulnerabilities; they are not relevant for configuration vulnerabilities.

Category	Property	Description
CVSS	**Base Score**	Represents the intrinsic qualities of a vulnerability. This score is static. For more information on CVSS, see "Common Vulnerability Scoring System" on page 131.
	Temporal Score	Represent the characteristics of a vulnerability that change over time but are not related to the organization's environment. This score is updated when the vulnerability dictionary content is updated, as described in the *About the Dictionary Information Import Job* section in the *HP EnterpriseView Administration Guide*. For more information on CVSS, see "Common Vulnerability Scoring System" on page 131.
	Vector	The components from which the score was calculated and their values. Both base and temporal metrics. Click the **Show** link to see how the score was derived.
Remediation	**Solution**	A recommended solution for fixing the vulnerability, as provided from the vulnerability assessment tool.
	Filter (TippingPoint)	The signature number of the TippingPoint filter.

Instances

The Instances tab is available from the Details View page.

The Instances tab includes all the instances reported for a single vulnerability occurrence. The data displayed is provided by the connectors.

Property	Description
Reported On	The date and time that the vulnerability instance was reported by the connector.
Source Rule ID	The identifier of the rule that corresponds to the vulnerability defined in the vulnerability assessment tool.
CVEs	A list of CVEs that correspond to the scanner rule, as provided by the connector.
Scanner	The name of the vulnerability assessment tool.
Scanner Type	Network or Application.
Scanner Version	The version of the vulnerability assessment tool.

Property	Description
Origin	Information on the instance origin. A concatenation of the following parameters separated by a dash: • Source name: Nessus, Qualys, McAfee, or WebInspect. • The output of the scanner, either file name or URL • CSV file name (connector output) • The line number where the vulnerability was reported in the CSV file Example, Nessus-/home/Credit Card Vulns/Visa/nessus_report_ WebTrends.nessus- 2011-09-06-17-42-19.done.csv-555
IP	Relevant for network and configuration vulnerabilities. IP address where the vulnerability was found.
MAC	Relevant for network and configuration vulnerabilities. MAC address where the vulnerability was found.

Asset Vulnerability Score Aggregation Mechanism

The aggregate asset vulnerability score is calculated as the higher score out of the following:

- The direct asset vulnerability score, which is the highest score out of all the vulnerability scores of open vulnerabilities that are associated with the asset.
- $$\mathbf{m} * \frac{\sum(Aggregated\,Asset\,Vulnerability\,Score * Criticality\,Level)\ of\ top\,\mathbf{n}\,Children}{\sum(Criticality\,Level)}$$
  - **m=Children Multiplier**: This variable is a number between 0 and 1 (inclusive) that is typically used to decrease the impact of the children on the aggregate asset vulnerability score; the lower the number, the smaller the effect. Consider the structure of your business model when configuring this variable. For example, if you have a flat organizational structure, then the children will have a bigger impact then if you have a structure with many levels of hierarchy.
  - **n=Maximum Children in Calculation**: Sorted primarily by aggregate asset vulnerability score and secondarily by criticality level. This variable is used to decrease the impact of the children severity on the aggregate asset vulnerability score; the higher the number, the smaller the impact. Consider the structure of your business model when configuring this variable. For example, if assets in your business model have a maximum of five children each, then it would be meaningless if this variable is configured to six.

For more information on configuring these variables, see the *Configure Vulnerability Score Aggregation Parameters* section in the *HP EnterpriseView Deployment Guide*.

Vulnerability Error Handling

Vulnerability assessment tools generate reports in a variety of formats, such as an XML file or into a database. The information is converted to CSV format using connectors. The Vulnerability Import Job retrieves the CSV files, processes the information and writes it to the EnterpriseView database. For more information on the Vulnerability Import Job, see the *About the Vulnerability Import Job* section in the *HP EnterpriseView Deployment Guide*.

The connectors write the CSV file to the **<EnterpriseView Installation folder>\vm\import\pending\<connector ID>** folder. The Vulnerability Import Job processes the files and does the following:

- Successfully processed files are moved to the **<EnterpriseView Installation folder>\vm\import\done\<connector ID>** folder. When vulnerabilities are not defined in the vulnerability dictionary, their records might contain data that was not fully imported into EnterpriseView due to format constraints. In these cases, the data is truncated, and only partial information is displayed.

  For example,the **Description** field in EnterpriseView can be a maximum of 4000 characters, but the field in the file holds a value of 5000 characters. In this case, only the first 4000 characters are imported and displayed.

  If a record is modified then a notification, indicated by "INFO", is entered into the redcat-vulnerability-admin.log file that is located in the <**EnterpriseView Installation folder>\logs** folder.

- Files containing erroneous records are moved to the **<EnterpriseView Installation folder>\vm\import\errors\<connector ID>** folder. If an erroneous record exists, then the record is skipped and an error message is entered into the redcat-vulnerability-admin.log file that is located in the <**EnterpriseView Installation folder>\logs** folder.

In either case, vulnerability information is displayed in the Vulnerability Management window. The **Last Imported On** field on the toolbar of the Vulnerability Management window displays the date and time of the most recent import update. If there are any ERROR or INFO messages in the redcat-vulnerability-admin.log file, an icon informing the user of errors or notifications is displayed right next to the **Last Imported On** field.

The redcat-vulnerability-admin.log file is updated with each import. The maximum size of this file is 4MB. When the maximum size is reached, a backup copy of the file is created with the following suffix:

redcat-vulnerability-admin.log **.1**

Whenever a new backup file is created, the suffix is incremented by 1. Up to 19 backup files can be created. After the maximum number of files is reached, the oldest file is deleted.

Because the log file generally includes multiple imports, you can use the Job Execution ID to locate the latest job. Check the Job Management module for the last job executed. For more information, see the *Troubleshoot Batch Jobs* section in the *HP EnterpriseView Administration Guide*.

File Format

Following is the format of a log file record:

<timestamp> ERROR/INFO "The file <file name> for job execution ID <ID> has the following issues in line number <line number>

<error/info message1>

<error/info message2>"

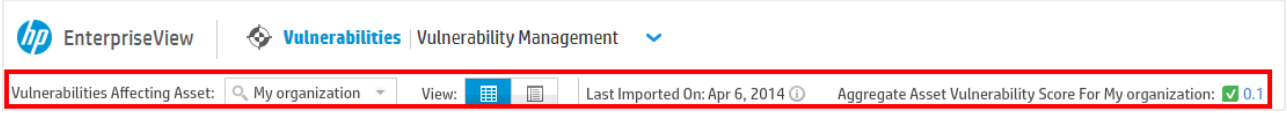
Example:

```
2012-01-31 18:07:43,801 ERROR The file '6_error-handling.done.csv' for job e
xecution ID '36' has the following issues in line number 3

The values in the following fields exceed the maximum length:

Description (event.flexString1),  maximum length: 4000

These fields were truncated to the maximum length.

The following fields are mandatory and are missing from the record:

Host (event.destinationHostName)

This record was skipped.
```

Vulnerability Management Window

The Vulnerability Management window enables you to filter the vulnerabilities found in your organization's network using various criteria, creating views that help you manage the vulnerability life cycle. The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

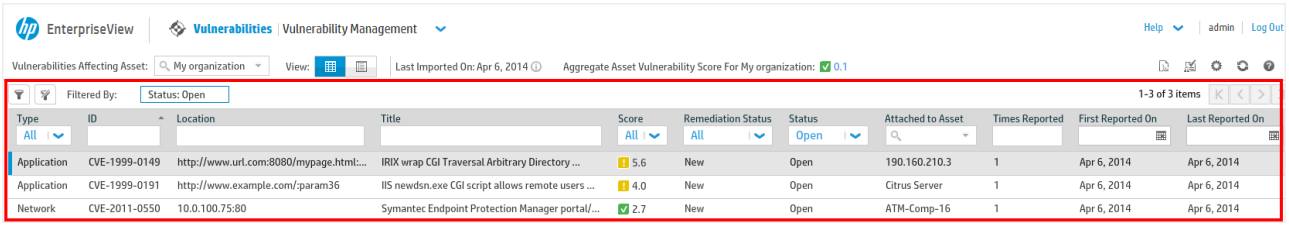
Toolbar



UI Element	Description
Vulnerabilities Affecting Asset	Filter the vulnerabilities in the grid using one of the following options: • **All Vulnerabilities**: View all vulnerabilities, both attached to assets and unattached assets. • **Unattached Vulnerabilities**: Select this option to view vulnerabilities that are not attached to an asset. • **My Organization**: Expand the business model and select an asset. View all vulnerabilities that affect this asset; meaning all vulnerabilities that are directly attached to this asset or that are attached to any of its children.
	**Summary View** This is the default view. For more information, see "Summary View" on the next page. Filters are retained when passing from one view to another.
	**Details View** To open this view, select a vulnerability from the grid, and then select this view. For more information, see "Details View" on page 152. Filters are retained when passing from one view to another.
Reports	**Generate Report** Click this button to generate a report. Select a report from the list of reports. If you are prompted, select to always allow pop-ups from the EnterpriseView server. You can save the report as a PDF. You can generate a report for an asset or for an asset and its children.

UI Element	Description
Last Imported On	Displays the date of the most recent import update. If any ERROR or INFO messages are in the redcat-vulnerability-admin.log file, one of the following icons is displayed: Errors. Hovering over this icon displays the following message: "Last update completed with errors." Notifications (INFO). Hovering over this icon displays the following message: "Last update completed with notifications." For more information or error handling, see "Vulnerability Error Handling" on page 148.
Aggregate Asset Vulnerability Score For <asset>	You can click the score to open the Vulnerability Dashboard page and view more information about the vulnerabilities attached to the asset. For more information on how this score is calculated, see "Asset Vulnerability Score Aggregation Mechanism" on page 147.
	**Filter Vulnerabilities** Click this button to open the **Filter Vulnerabilities** dialog box. You can filter the vulnerabilities in the grid according to the vulnerability properties that are displayed in the grid, described in "Summary View Grid" on page 140. To remove a filter, you can either open the **Filter Vulnerabilities** dialog box and change the filter, or you can close the filter indicators that display on the toolbar.
	**Clear Filter** Click this button to clear all the filters that you set.

Summary View

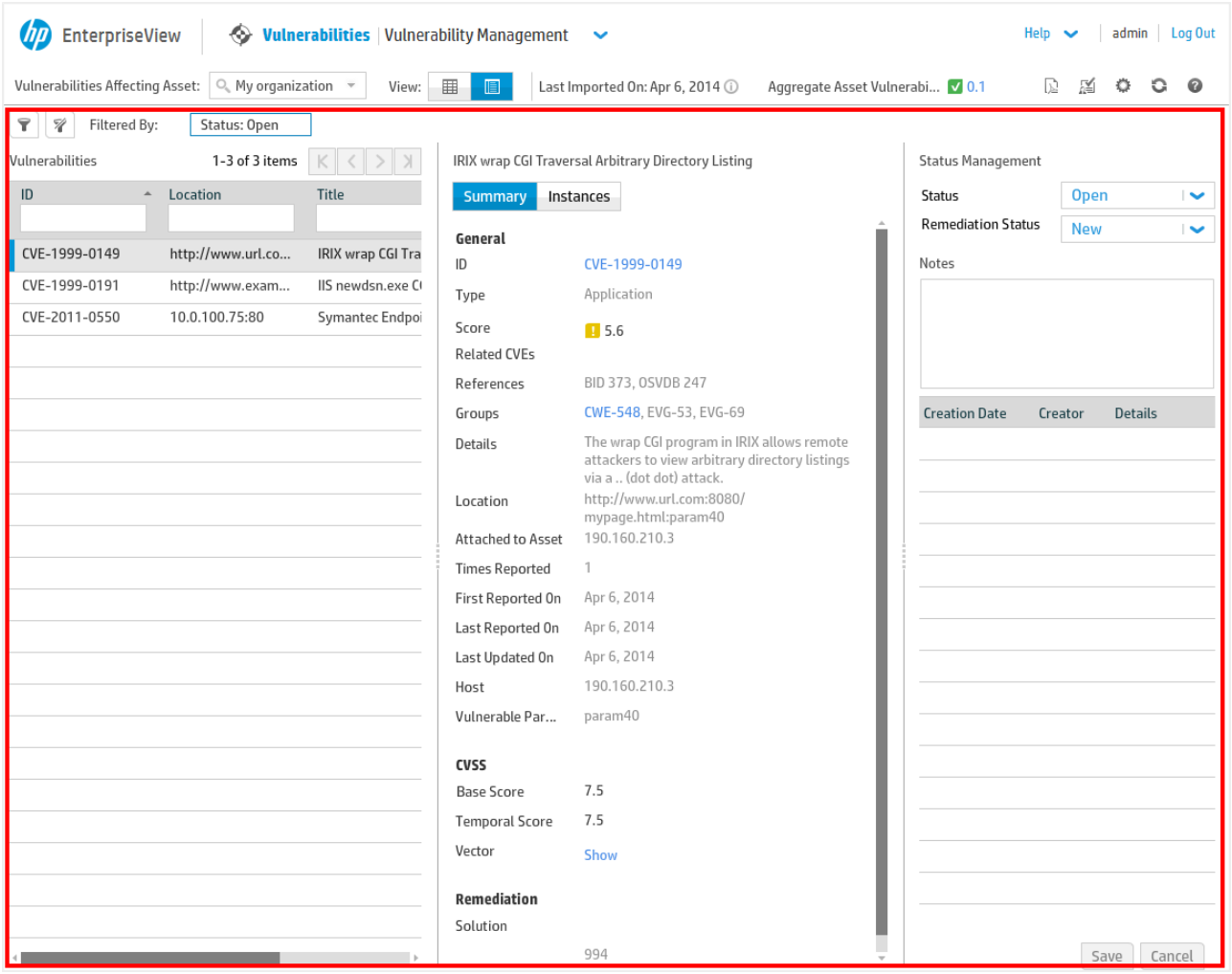


Each record in the summary view grid is an occurrence of a vulnerability in a specific location.

You can filter vulnerabilities using the grid column headers. If the filter string that you enter exceeds 200 characters, only the first 200 characters are used.

The Summary View includes the vulnerability properties describes in "Summary View Grid" on page 140.

Details View



The Details View includes the following areas:

Left Pane

This area displays a minimized version of the vulnerabilities grid that is displayed in the Summary View. It includes the vulnerability ID, Location and Title. Clicking on a vulnerability in this grid displays its details in the other panes,allowing you to navigate through the vulnerabilities without changing the view. Vulnerabilities can be filtered using the grid column headers.

Details (middle pane)

This area displays the vulnerability properties described in "Details View" on page 143.

Instances (tab)

This tab displays the vulnerability properties described in "Instances " on page 146.

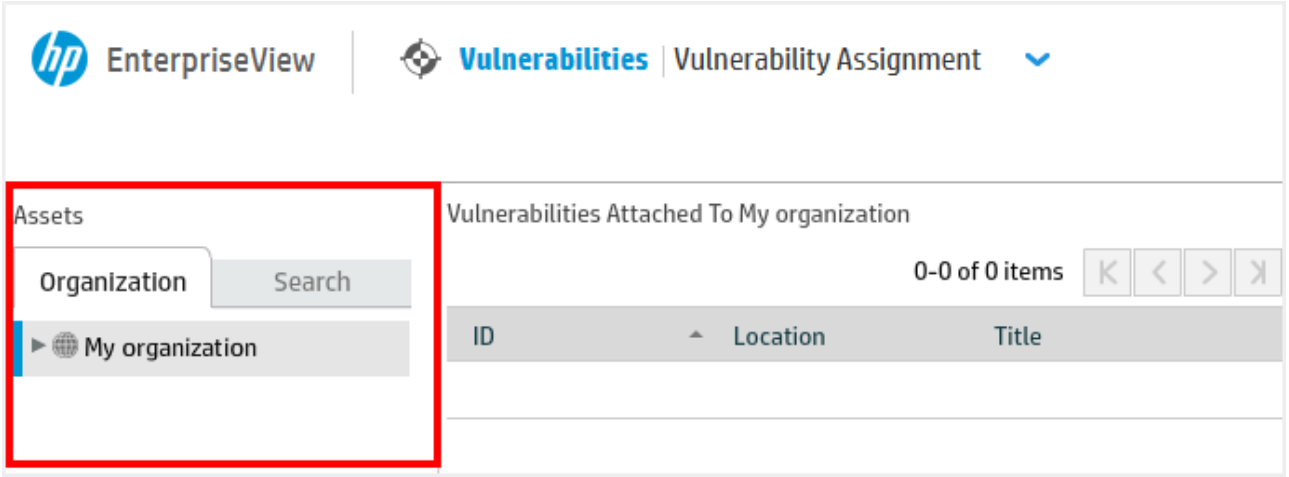
Status Management

UI Element	Description
Status	Assign a status to the vulnerability (**Open** or **Closed**).
Remediation Status	Assign a remediation status to the vulnerability. For more information on the different statuses, see "Remediation Status" on page 142.
Notes	Use Notes to communicate with other users that are involved in remediating the vulnerability and to document anything regarding the vulnerability. Notes cannot be deleted or edited.
Save	Click to save changes.
Cancel	Click to clear changes. Reverts any change that you have made to the statuses.

Vulnerability Assignment Window

The Vulnerability Assignment window enables you to attach vulnerabilities to assets or detach vulnerabilities from assets. The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

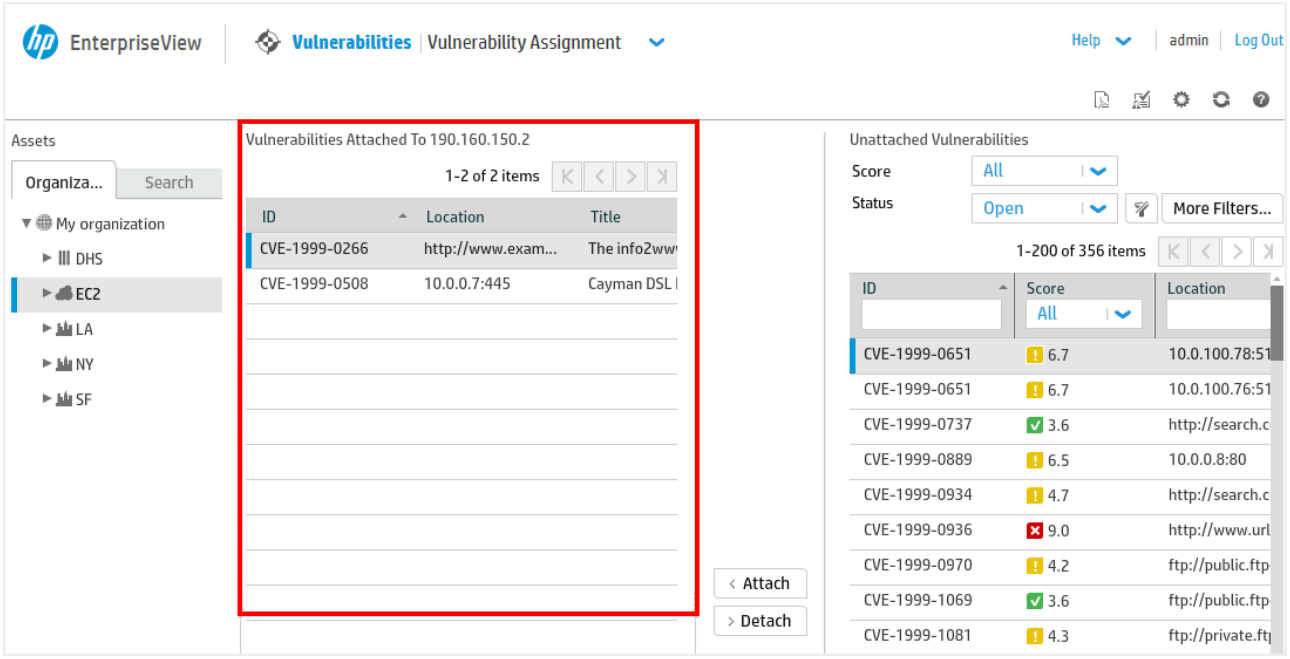
Assets



This pane enables you to select the asset to which you want to attach a vulnerability.

UI Element	Description
Organization tab	Displays the EnterpriseView business model. Expand the business model to select the asset that you want to display.
Search tab	Enables you to search for a name or a partial name of any asset in EnterpriseView, connected to the business model.

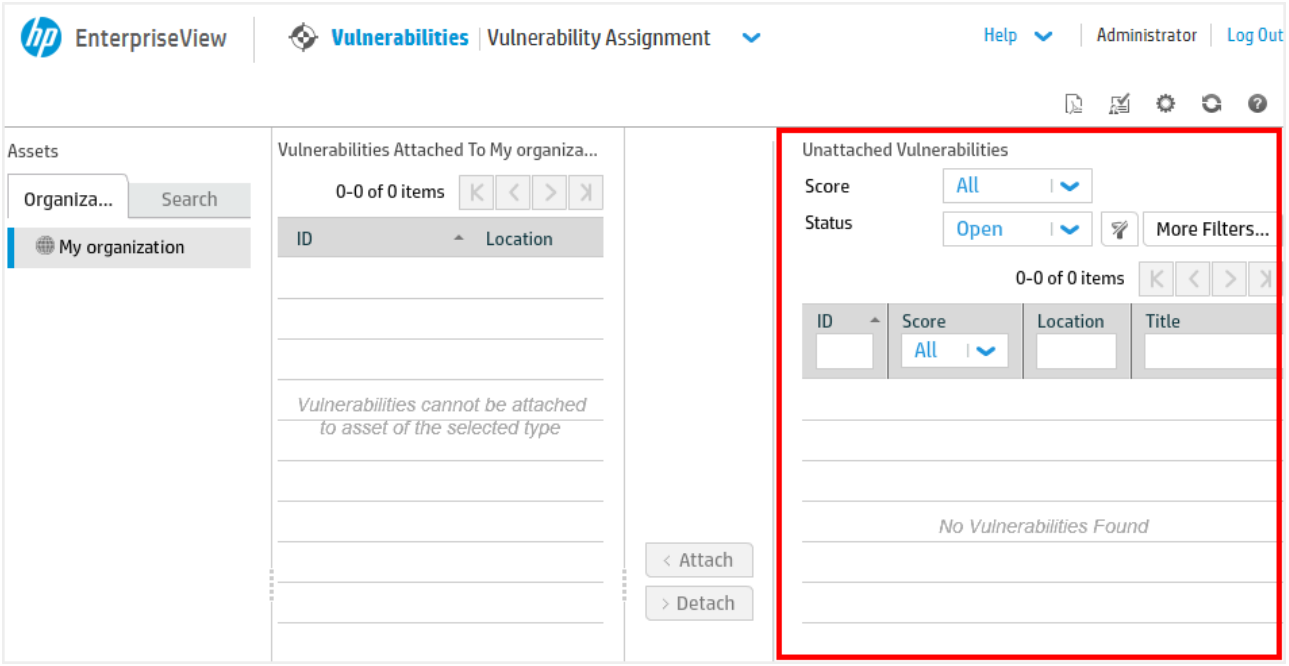
Attached Vulnerabilities



This pane displays all the vulnerabilities that are attached to a selected asset. When an asset is selected, the title of this pane displays the asset name.

UI Element	Description
Attach	**Attach Vulnerabilities to Asset** From the grid, select or multi-select (CTRL+click) the vulnerabilities that you want to attach to the asset, and then click this button. For more information, see "Attach a Vulnerability to an Asset" on page 135.
Detach	**Detach Vulnerabilities from Asset** From the grid, select or multi-select (CTRL+click) the vulnerabilities that you want to detach from the asset, and then click this button. For more information, see "To detach a vulnerability from an asset" on page 136.
<Vulnerability Grid>	A grid with the details of the vulnerabilities that are directly attached to the asset in the **Assets** pane.

Unattached Vulnerabilities



This pane displays vulnerabilities that are not attached to an asset. It includes the following methods for filtering unattached vulnerabilities:

- Quick filters accessible from the screen
- Header filters
- The Filter Vulnerabilities dialog box

UI Element	Description
Score	Filter according to the vulnerability score severity: Low Medium High The ranges are determined in the *Configure Vulnerability Score Ranges* section in the *HP EnterpriseView Deployment Guide*.
Status	Filter according to **Open** or **Closed**.

UI Element	Description
More Filters	**Filter Vulnerabilities** Click this button to open the **Filter Vulnerabilities** dialog box. You can filter the vulnerabilities in the grid according to the vulnerability properties that are displayed in the grid, described in "Summary View Grid" on page 140. To remove a filter, click More Filters to open the **Filter Vulnerabilities** dialog box and change the filter.
	**Clear Filter** Click this button to clear all the filters that you set through the **Filter Vulnerabilities** dialog box.
<Vulnerability Grid>	A minimized version of the vulnerabilities grid that is displayed in the Summary View. It includes the vulnerability ID, Location, Title, and Score. You can filter vulnerabilities using the grid column headers.

Vulnerability Dictionary

Many information security tools and resources, both commercial and non-commercial, include a vulnerability database. Each has a different methodology for naming and identifying vulnerabilities. This means that the same vulnerability can be defined differently in each of these sources. Because the Vulnerabilities module receives vulnerability information from various sources, the disparity would make it difficult to identify duplicate reports, provide additional information about the vulnerabilities, and efficiently associate them with remediation actions.

To solve this problem, EnterpriseView labs created and maintains a comprehensive vulnerability dictionary that includes all vulnerabilities, regardless of whether they have been recognized by an industry standard source. EnterpriseView labs compiles, correlates, processes and enriches these vulnerabilities, and creates a single point of reference for each vulnerability.

The vulnerability dictionary is continually expanded by the labs and can be updated in EnterpriseView, as described in the *Update the Vulnerability Dictionary* section in the *HP EnterpriseView Administration Guide* . As time goes by, some vulnerability properties can change. In such cases, these changes are reflected in the dictionary.

EnterpriseView labs sources are varied. Some of the leading industry standard sources from which information is derived are:

- National Vulnerability Database (NVD), for Common Vulnerabilities and Exposures (CVE) and Common Configuration Enumeration (CCE)
- Open Source Vulnerability Database (OSVDB)
- BugTraq

You can view the vulnerabilities in the dictionary through the EnterpriseView user interface. To access the vulnerability dictionary, click **Vulnerabilities > Dictionary**.

The Vulnerability Dictionary window includes two panes:

- **Left pane**: Displays the vulnerabilities and includes the properties: Vulnerability ID, Title, Modified Date (either date of creation or the last date it was updated), and score.
- **Right pane**: Displays the properties of the vulnerability that is selected and Common Platform Enumerations (CPEs) that are associated with the vulnerability. For more information on CPEs, see "Common Platform Enumeration" on page 20.

  To view the properties of a vulnerability, click the vulnerability record in the left pane. The **Properties** tab is displayed. To view CPEs associated with the vulnerability, click the **CPEs** tab.

You can search for vulnerabilities using their ID, title, details, or group or partial strings from these properties.

Note: You can perform wildcard searches. For example, if you type **ser***, the results will contain words beginning with ser (such as server and service). An asterisks cannot be placed before a string (*ser).

Chapter 6: Key Performance Indicators

EnterpriseView includes key performance indicators (KPIs) that are used to measure the progression of your organization towards its objectives. In EnterpriseView, KPIs are used to monitor and improve upon the different aspects that comprise risk in your organization. EnterpriseView includes quantitative KPIs for risk factors, such as modeled risk, vulnerabilities, policy compliance, and control maturity.

Simple KPIs enable you to define the ranges for the score severity of various risk factors, according to your business needs. For example, asset vulnerability scores are displayed along with an icon that represents a low, medium or high score throughout the application. The color indication is also reflected in the trend charts and heat maps.

More complex KPIs include the percentage of assets with scores that are above or below a certain threshold. For example, the vulnerability KPI indicates the percentage of assets with an aggregate vulnerability score that is higher than a certain threshold. The higher the percentage the farther the organization is from its vulnerability objectives.

EnterpriseView includes out-of-the-box KPIs, as described in "Out-of-the-Box KPIs" on the next page as well as a corresponding KPI for any external risk factor added to EnterpriseView. In addition, custom KPIs can be created by an Administrator for any risk factor defined in EnterpriseView. For more information, see the *Create a KPI* section in the*HP EnterpriseView Administration Guide*.

All KPIs, both custom and out-of-the-box, are configurable. You can change the KPI parameter or threshold, as described in "Configure KPI Settings" below.

Configure KPI Settings

You can configure KPI settings in order to reflect the tolerance of your organization to the risk factor. For example, if you lower the High threshold of a KPI, then the KPI will reflect more tolerance towards the risk factor.

To configure KPI settings

1. Click the **Settings**  button, and then select the module to which the KPI belongs.
2. In the left pane, select the KPI that you want to configure.
3. KPIs can have one or both of the following options. Edit these options as necessary:
   - **KPI Parameter**: enter the threshold that indicates a desirable or an undesirable result.

     For example, in a KPI that displays the percentage of assets with an overall score higher than 20, then “20” is the KPI Parameter. In this case, scores that are higher than 20 are not desirable.

- **Thresholds**: drag the sliders to define the severity of the percentage ranges, for low, medium, and high thresholds.

  These thresholds are reflected in the gauge that represents the KPI and they define whether the KPI is acceptable or not.

4. Click **Save**.

Out-of-the-Box KPIs

EnterpriseView includes out-of-the-box KPIs described in the following table. You can configure the settings for out-of-the-box KPIs as well as custom KPIs, as described in "Configure KPI Settings" on the previous page.

Name	Description
Overall Score KPI	The overall score KPI is used to determine how close or far the organization is from it's overall risk objectives. The KPI indicates the percentage of assets, out of both direct and indirect children including the asset itself, with an overall score that is higher than a certain threshold (KPI parameter). The higher the percentage the farther the organization is from its overall risk objectives. This KPI reflects the tolerance of your organization to its overall risk. It is configurable and should be derived from your organization's strategic plans. The overall score KPI is displayed in the Risk Register page. For more information, see "Risk Register" on page 178.
Compliance Score KPI	The compliance Key Performance Indicator (KPI) is used to determine how close or far the organization is from it's compliance objectives. The KPI indicates the percentage of assets, out of both direct and indirect children including the asset itself, with an aggregate compliance score that is lower than a certain threshold (KPI parameter). The higher the percentage the farther the organization is from its compliance objectives. This KPI reflects the tolerance of your organization to lack of compliance. It is configurable and should be derived from your organization's strategic plans. The compliance score KPI is displayed in the Risk Register page. For more information, see "Risk Register" on page 178.

Name	Description
Risk Score KPI	Indicates the percentage of assets, out of both direct and indirect children and the asset itself, with an aggregate risk score that is higher than a certain threshold (KPI parameter). The higher the percentage the farther the organization is from its risk objectives. This KPI reflects the tolerance of your organization to risk. It is configurable and should be derived from your organization's strategic plans. The risk score KPI is displayed in the Risk Register page. For more information, see "Risk Register" on page 178.
Unassessed Risk KPI	Indicates the percentage of assets, out of both direct and indirect children and the asset itself, that have not been assessed. The higher the percentage the farther the organization is from its risk assessment objectives. This KPI reflects your organization's approach to the risk assessment process. It is configurable and should be derived from your organization's strategic plans. The unassessed risk KPI is displayed in the Risk Modeling Dashboard page. For more information, see "Risk Modeling Dashboard" on page 187.
Vulnerability Score KPI	The vulnerability score KPI is used to determine how close or far the organization is from it's vulnerability objectives. The KPI indicates the percentage of assets, out of both direct and indirect children and the asset itself, with an aggregate vulnerability score that is higher than a certain threshold (KPI parameter). The higher the percentage the farther the organization is from its vulnerability objectives. This KPI reflects the tolerance of your organization to vulnerabilities. It is configurable and should be derived from your organization's strategic plans. The vulnerability score KPI is displayed in the Risk Register page. For more information, see "Risk Register" on page 178.
Completed Workflows KPI	The completed workflows KPI indicates the percentage of workflows that have been completed by the workflow due date. This KPI helps you monitor EnterpriseView workflows. The completed workflows KPI is displayed in the Task Management Dashboard page. For more information, see "Task Management Dashboard" on page 197.

Chapter 7: External Risk Factors

The risk posture of the assets in your organization can be affected by various risk factors. EnterpriseView includes the following inherent risk factors: policy compliance, control maturity, risk, and vulnerabilities. In addition to the risk factors already included in EnterpriseView, you can import risk information from external sources for any risk factor that you deem significant and that impact the overall risk score of your organization. For example, the score of IPS security alerts resulting from security attacks on a segment of your network. For more information on importing risk information from external sources, see the *Import Risk Information from External Sources* section in the *EnterpriseView Administration Guide*.

The scores of all risk factors, both internal and external, are consolidated into one score—asset overall score—that reflects the overall risk posture of the assets in your organization. For more information on how the overall score is calculated, see "Configure Overall Score Formula Weights" on page 263.

External risk factors must fulfill the following conditions:

- A risk factor must be associated with an asset defined in EnterpriseView. Information that does not relate to a particular asset is discarded.
- The information must be numeric. Only numeric information can be aggregated, included in the overall score, and reflected in trend charts.

External risk factors are centralized in the **External Risk Factor Management** page. The management page allows you to do the following:

- See the score of each external risk factor, for each asset, on top of the business model.
- Capture a snapshot in time that reflects the state of your business model—both assets and their scores. For more information on capturing a snapshot, see "Capture Snapshot" on the next page.
- Edit score manually, as described in "Edit External Risk Factor Score" on page 163.
- Compare snapshot scores to current scores and analyze score trends.
- Locate high risk assets according to critical external risk factors.
- Filter data using advanced filtering capabilities, for example, according to score ranges.

For more information on the External risk factor Management page, see "External Risk Factor Management Window" on page 164.

Whenever you add a risk factor to EnterpriseView, a corresponding KPI is created automatically. KPIs are managed in the KPI Management page. You can configure the external risk factor KPI settings, as described in "Configure External Risk Factor KPI Settings" on page 164.You can also configure external risk factor ranges (like you can for all risk factors), as described in "Configure External Risk Factor Ranges" on page 163.

External risk factors, like internal risk factors, are reflected in:

- **Risk Register**: Aggregate scores for risk factors are displayed in the Asset Summary component and in the First-Level Children Summary component. For more information, see "Risk Register" on page 178.
- **Risk Indicators**: External risk factors are regarded as risk indicators. For more information, see "Risk Indicators" on page 182.

External risk factors have a dedicated dashboard—**External Risk Factor Dashboard**—that displays information on all the external risk factors that are imported into EnterpriseView. For more information, see "External Risk Factors Dashboard" on page 185. You can also incorporate external risk factor scores, aggregate scores and any other information into user created reports. For more information on creating reports, see the *Create a Report Using SAP BusinessObjects WebIntelligence* in the *HP EnterpriseView Administration Guide*.

Capture Snapshot

The External Risk Factor Management page allows you to save a snapshot of external risk factor scores and aggregate scores for each of the assets in the business model. You can save only one snapshot at a time. You can recapture a snapshot at any time. Assets that do not have scores are not saved in the snapshot.

The main purpose of the snapshot is to compare the state of your current business model to the state of a previous business model (the snapshot). For example, you can use the snapshot as a baseline that reflects a positive state of your business model. You can see the difference between the current score and the snapshot score according to the icon displayed next to the asset in the map.

In the following example, the current score for **My organization** is lower than the snapshot score. In this case, the arrow is green, meaning that a lower score is better.

You can use snapshot scores to filter the assets displayed in the map.

To capture a snapshot

1. Click **External Risk Factor** > **Management**.
2. From the risk factor selector on the top left side of the page, select the risk factor that you want to display.
3. Click **Capture Snapshot**.

   The date and time are displayed in the **Last Snapshot Updated On** field.

Edit External Risk Factor Score

Typically, external risk factor scores are imported from an external source. However, there might be cases where a score cannot be imported for a specific asset. In such cases, you can enter the external risk factor score manually. You can enter a score only for an asset that does not have a score imported from an external source. If, at some point, the score is imported for that asset, then you will no longer be able to edit the score.

To edit the score

1. Click **External Risk Factor** > **Management**.
2. From the risk factor selector on the top left side of the page, select the risk factor that you want to display.
3. Click an asset on the map. (You can search for an asset, as described in "Search for an Asset" on page 29, and then click the **Show on Map**  button.)
4. On the asset card, click the **Edit Asset Score**  button.
5. On the **Edit Asset Score** dialog box, drag the slider to sent the score, and then click **OK**.

Configure External Risk Factor Ranges

You can configure the ranges for the score severity indication for any external risk factor defined in EnterpriseView.

Score ranges and the directionality of the score severity may differ between external risk factors. These settings are defined during the configuration process of the external risk factor. For more information, see the *Configure the External Risk Factor Normalization Settings* in the *HP EnterpriseView Administration Guide*.

External risk factor scores are displayed with one of the following icons:

 Better score (high or low, depending on the directionality)

 Medium score

 Worse score (high or low, depending on the directionality)

This configuration is reflected throughout the application, wherever these measurements are displayed. For example, on the Risk Register page in the Asset Summary component.

To configure external risk factor ranges

1. On the EnterpriseView toolbar, click the **Settings**  button.

2. On the **Settings** dialog box, click **External Risk Factors**.
3. In the left pane, click the risk factor for which you want to configure ranges.
4. Drag the slider to define the ranges.
5. Click **Save**.

Configure External Risk Factor KPI Settings

You can configure KPI settings in order to reflect the tolerance of your organization to the risk factor. For example, if you lower the High threshold of a KPI, then the KPI will reflect more tolerance towards the risk factor.

You can also configure the KPI settings in the KPI Management page, as described in the *Edit a KPI* section in the *HP EnterpriseView Administration Guide*.

To configure KPI settings

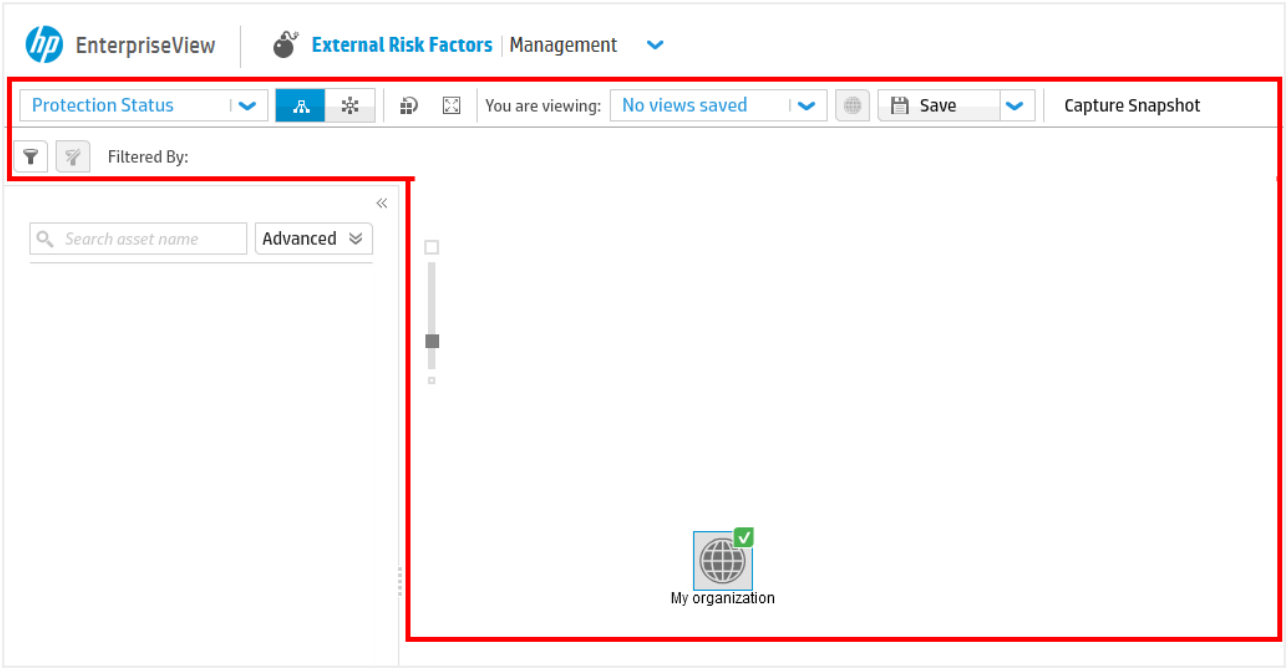
1. Click the **Settings**  button, and then, in the Settings dialog box, click **External Risk Factor**.
2. In the left pane, select the risk factor that you want to configure.
3. Edit the following options as necessary:
   - **KPI Parameter**: Enter the threshold that indicates a desirable or an undesirable result.
   - **Thresholds**: Drag the sliders to define the severity of the percentage ranges, for low, medium, and high thresholds.

     These thresholds are reflected in the gauge that represents the KPI and they define whether the KPI is acceptable or not.
4. Click **Save**.

External Risk Factor Management Window

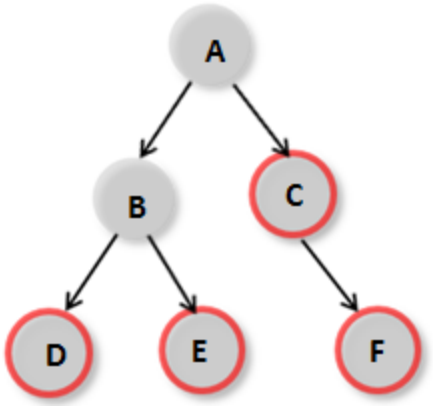
The External Risk Factor Management window is a centralized area for managing external risk factors.The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

Map Area

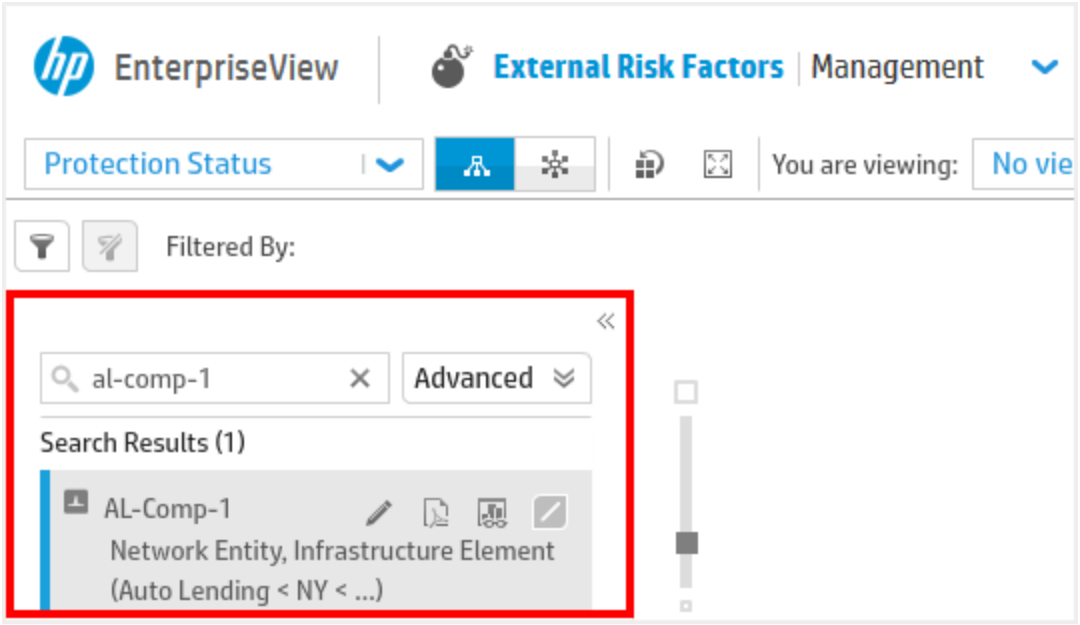


UI Element	Description
<Risk Factor Selector>	Displays information pertaining to a particular external risk factor. You can work on one external risk factor at a time.
(Layout)	**Display the business model in a tree layout** Displays the business model in a tree structured graph.
(Layout)	**Display the business model in a circular layout** Displays the business model in an interconnected ring and star topology.
You are Viewing	The name of the view that is displayed. If there are multiple views, you can select a different view from the list. Views on this page include asset composition, the risk factor, the filter, and the score type.

UI Element	Description
Save New View	Creates a new view based on the current business model view displayed in the map. Access this option by clicking the arrow next to the **Save** button. After you save the view, when you reopen the External Risk Factor Management page, the business model displayed in the map area is resized to the default zoom and to fit to window. **Note:** Assets that were disconnected from the business model are not displayed in the view. Views are user-specific; you cannot see views that other users created. For more information, see "Create a Business Model View" on page 24.
Save	Saves the changes that you made to the view displayed on the map.
	**Clear View** Click this button to clear the view (including the risk factor, the filter, and the score type) and display only the My Organization asset.
Capture Snapshot	Click this button to capture a snapshot of external risk factor scores and aggregate scores for each of the assets in the business model. For more information, see "Capture Snapshot" on page 162.
Last Snapshot Update On	The date and time of the last snapshot that you captured.

UI Element	Description
	**Filter Assets** Click this button to open the **Filter Assets** dialog box. You can filter the assets in the map according to different asset properties and scores. For example, you can set a filter to display only assets that have a good snapshot score (in the green range) but a bad current score (in the red range). There might be situations in which some of the assets displayed do not fulfill the filter conditions. These assets are displayed because they have children assets that do fulfill the filter conditions. In the following diagram, assets A and B do not fulfill the filter conditions, but they must be displayed so that assets C,D,E, and F, which fulfill the filter conditions, are displayed in the map. 
	**Clear Filter** Click this button to clear all the filters that you set.
	**Zoom** Zooms the business model in and out.

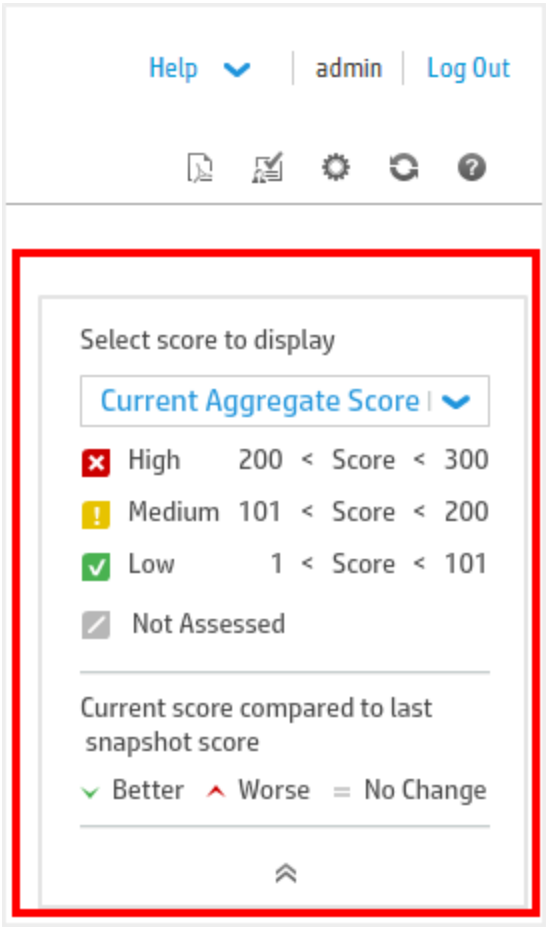
Search Pane



UI Element	Description
<Search box>	Enables you to search for a name or a partial name of any asset in EnterpriseView, connected to the business model.
Advanced	Enables you to search for an asset according to **Type** and **Category**.
	**Show on Map** Displays the asset in the business model in the map area.
	**Edit Asset Score** Opens the **Edit Asset Score** dialog box. You can edit the score, as described in "Edit External Risk Factor Score" on page 163.
	**Generate Report** Click this button to generate a report. Select a report from the list of reports. If you are prompted, select to always allow pop-ups from the EnterpriseView server. You can save the report as a PDF. The report will include only information for the asset from which you are generating it, and its children.

UI Element	Description
«	**Collapse** Collapses the left pane.
»	**Expand** Expands the left pane.

Legend

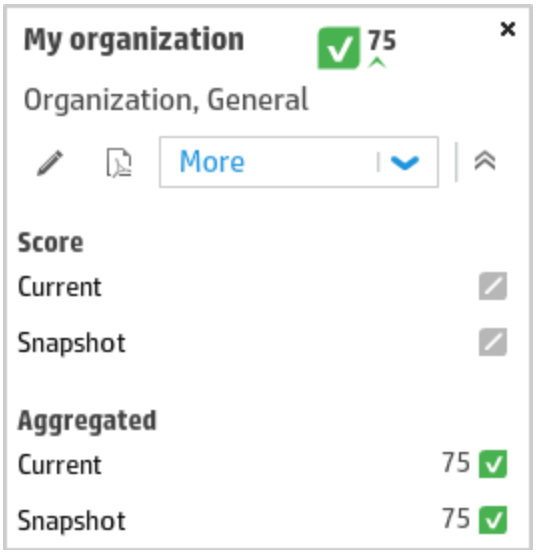


UI Element	Description
Select score to display	Select one of the following scores to display on the assets on the business model map: • **Current Aggregate Score** • **Current Score** • **Snapshot Aggregate Score** • **Snapshot Score**
<Score severity>	Score ranges and the directionality of the score severity may differ between external risk factors. External risk factor scores are displayed with one of the following icons: Better score (High or Low, depending on the directionality) Medium score Worse score (High or Low, depending on the directionality) The ranges for each severity are displayed, as well.
Current score compared to last snapshot score	Indicates whether the current score is better or worse or unchanged since the last snapshot score. The **Better** and **Worse** icons depend on the directionality of the score severity. If a lower score is better, then the following icons will be displayed in the legend: •  The current score is better than the snapshot score. •  The current score is worse than the snapshot score. •  The current score has not changed since the last snapshot. The icons change according to the score severity directionality.

Asset Card

You can open the asset card by clicking on the asset in the business model map.

The following is an example of an expanded asset card.



The asset card includes the asset name, category, type, trend, and score (the score type selected in the legend). The following table includes the functionality available from the asset card.

UI Element	Description
	**Edit Asset Score** Opens the **Edit Asset Score** dialog box. You can edit the score, as described in "Edit External Risk Factor Score" on page 163.
	**Generate Report** Click this button to generate a report. Select a report from the list of reports. If you are prompted, select to always allow pop-ups from the EnterpriseView server. You can save the report as a PDF. The report will include only information for the asset from which you are generating it, and its children.

UI Element	Description
Expand	Displays the direct children of the asset in the business model map. Click **More > Expand**. If the asset has more than 20 children, then the assets are not displayed automatically in order not to overload the business model. In this case, the **Show Children on Map for Asset** dialog box is displayed, enabling you to select the children you want to display. The number of direct children that an asset has is displayed in the business model map by the asset name. You can also expand by double-clicking the asset. **Note:** You cannot expand an asset that has more than 1000 children in the business model. If you attempt to expand such an asset, you will receive an error message.
Collapse	Hides the direct children of the asset in the business model map. Click **More > Collapse**. You can also collapse by double-clicking the asset.
Show Parents	Displays the parent assets of the asset in the business model map. Click **More > Show Parents**.
Hide Parents	Hides the parent assets of the asset in the business model map. Click **More > Hide Parents**.
	**Display Scores** Displays the following scores: • **Current score** • **Snapshot score** • **Aggregate current score** • **Aggregate snapshot score**

UI Element	Description
	**Hide Scores** Hides the following scores: • **Current score** • **Snapshot score** • **Aggregate current score** • **Aggregate snapshot score**

Mini-map

When the business model is expanded to a larger size than the map area, you can navigate it by clicking and dragging in the mini-map area.

To expand or collapse the mini-map, click the **Expand/Collapse**  button.

Out-of-the-Box Risk Factors

EnterpriseView includes out-of-the-box risk factors that are based on ESM reports. The reports are imported into ESM during the integration process.

Risk Factor	Description	Data Source
Antivirus	Shows whether the antivirus installed on the asset is updated or not.	Assets
Brute Force Attempt	Shows the brute force attempts events for assets that have been targeted in the last hour.	Active List
DoS Attacks	Shows the denial of service score for assets that have been targeted in the past day.	Active List
Events Priority	Shows the average priority for assets that have been targeted in the last hour.	Events
Dropped Events by Firewall	Shows events dropped by the firewall, for assets that have been targeted in the last hour.	Active List
Failed Login	Shows the number of failed login events for assets that have been targeted in the last hour.	Active List
IP Scanning	Shows the IP scanning events for assets that have been targeted in the last hour.	Active List
Port Scanning	Shows the port scanning events for assets that have been targeted in the last hour.	Active List

Chapter 8: Dashboards and Reports

EnterpriseView comes with a variety of out-of-the-box dashboards and printable reports, based on common needs of specific IT and risk management roles, such as system administrators, auditors, and executives. EnterpriseView administrators can create customized role-based dashboards for different types of users, as described in the *Create a Customized Dashboards Page* in the *HP EnterpriseView Administration Guide*. The dashboards can be created from predefined reports or from user-created reports.

There are two types of reports that you can create:

- **Printable**

  These reports are available from any page that is associated with a report. These reports are generated as print-friendly PDF documents by clicking the **Generate Report**  button. For more information on the reports included in EnterpriseView, see "Printing Reports" on the next page.

- **Dashboard**

  These reports are used as data analysis components and can be grouped together with other components in order to create comprehensive dashboards, such as the Risk Register, for the various roles. For more information, see "Risk Register" on page 178

You can create reports that belong to both categories. For more information on creating reports, see the *Create a Report Using SAP BusinessObjects WebIntelligence* in the *HP EnterpriseView Administration Guide*.

Printing Reports

Out-of-the-box printable reports are available from the Risk Factor Dashboard, Risk Register, Risk Assessment and Treatment, Policy Assessment, Statement of Applicability, and Vulnerability Management pages. Custom reports are available from the page that you associated with them when you created the report. From each window, only reports that are specific to that module are available. These reports are generated as print-friendly PDF documents by clicking the **Generate Report**  button.

In addition to the various reports provided by EnterpriseView, you can create your own customized reports using BusinessObjects Web Intelligence, as described in *Create a Report Using SAP BusinessObjects WebIntelligence* in the *HP EnterpriseView Administration Guide*.

The following table includes all of the out-of-the-box reports in EnterpriseView.

Page	Report Name	Description
Risk Register	Overall Score Trend	This report includes overall scores for the asset selected and its children, for the following times: • Current date • The date on which the last score was archived (within the last week) • Within the last month This reports shows a general pattern of change in data over time.
Risk Factor Dashboard	Risk Factor Score Trend	This report includes risk factor scores for the asset selected and its children, for the following times: • Current date • The date on which the last score was archived (within the last week) • Within the last month This reports shows a general pattern of change in data over time.

Page	Report Name	Description
Risk Modeling	Risk Score Summary	This report includes the selected asset's risk score and aggregate risk score, as well as risk information for each threat imposed on a selected asset.
	Risk Score Details	This report includes risk score information on all actors and operations that comprise the threats that are posed on a selected asset, in conjunction with their name and description.
Statement of Applicability	Statement of Applicability Details	This report includes all the controls from policies that are applied to a selected asset and their details.
Policy Assessment	Policy Compliance Summary	This report includes compliance scores, control maturity scores and assessment progress information on controls, security categories the policy applied to a selected asset.
	Policy Compliance Details	This report includes compliance scores, control maturity scores and assessment progress information on all policy elements (security categories and controls) that are applied to a selected asset, in conjunction with the policy content.
Policy Builder	Activated Mapped Controls	This report includes mappings between a source policy and a target policy for all controls in policies that are activated, for a selected policy.
	Policy Details	This report includes the policy content for a selected policy.
Vulnerability	Open Vulnerabilities Summary	This report includes the vulnerability score and the number of locations that the vulnerability was found for all open vulnerabilities for a selected asset and all of its children. **Note:** If the vulnerability is attached to more than one asset, then the score for each vulnerability, displayed in the Score column, may be different. In this case, the highest score is displayed.
	Product Vulnerability Details	This report reflects the degree of vulnerability of products that are connected to assets in the business model according to the number of occurrences, the highest vulnerability score, and the average vulnerability score.

Page	Report Name	Description
Task Management	Workflow Details	This report includes details on workflows and their tasks (in progress or completed). Information on workflows that are in progress is displayed separately from completed workflows.
	Workflow Details - Last 30 Days	This report is the same as Workflow Details report, but displays completed workflows only from the last 30 days.

Root Cause Analysis

Root cause analysis (RCA) is a structured approach for identifying the underlying causes of problems or events. RCA is based on the assumption that problems should be solved by addressing their root causes rather than their obvious symptoms. You can use RCA to mitigate, eliminate, or prevent risk in your organization.

EnterpriseView dashboards support RCA. The dashboards include a drill-down functionality, strategically placed links, allowing you to trace root problems by navigating the various dashboards and EnterpriseView pages. These links are available depending on your role and permissions. In addition, the EnterpriseView Risk Indicators is an RCA tool that offers you the quickest way to identify risk sources in your organization's business model. It provides you with graphical risk indication on top of your business model map.

There are two main approaches for RCA in EnterpriseView:

- Identifying the underlying asset or assets that are responsible for increasing the overall risk in your organization.

  To follow this approach, you can track the source asset by drilling down in the business model.

  Example:

  a. Start by opening the **Risk Register** (Executive View > Risk Register) for your root asset.

  b. Identify the asset with the highest risk in the **First-Level Children Summary** component, and click its name.

     The **Risk Register** is updated with information on the asset that you selected.

  c. Continue drilling down until you identify the underlying problematic asset.

- Identifying the risk element (vulnerability score, risk score, compliance score, and maturity score) that is responsible for increasing the overall risk in an asset.

  To follow this approach, you can track the risk element by investigating it specifically.

Example:

a. Start by opening the **Risk Register** for your root asset.

b. Identify the risk element that appears to be problematic the in the **Asset Summary**, and click its name.

   EnterpriseView navigates to the dashboard that corresponds with the risk element that you chose. For example, if the problematic risk element is the vulnerability score, then when you click **Vulnerability**, the **Vulnerability Dashboard** opens.

c. Continue drilling down until you identify the underlying problematic risk element.

Regardless of the approach you take, after you have identified the problematic asset or risk element, you can navigate to the relevant EnterpriseView page through which you can mitigate the problem.

Example:

1. Identify an asset with a high aggregate asset vulnerability score in the **Risk Register**.
2. Click the **Aggregate Asset Vulnerability Score** label in the **Vulnerability Dashboard**.

   The **Vulnerability Management** page opens with information about the specific asset.
3. Continue investigating the vulnerabilities using the tools available in the **Vulnerability Management** page. For example, you can filter vulnerabilities according to their score.
4. Handle the vulnerabilities attached to the asset to lower the asset vulnerability score.

Risk Register

The EnterpriseView Risk Register is a comprehensive dashboard that provides you with all the risk-related information identified by your organization.

To open the Risk Register, click **Executive View > Risk Register**.

The Risk Register includes the following components:

- **Asset Selector**

  This component enables you to select the asset that you want to display in the Risk Register.

  The **Organization** tab displays the EnterpriseView business model. Expand the business model to select the asset that you want to display.

The **Search** tab enables you to search for a name or a partial name of any asset connected to the business model.

After you have selected the asset, you can collapse the **Asset Selector** by clicking the **Collapse** button. To expand the Asset Selector, click the **Expand Asset Selector** button.

The asset that you selected is saved for when you next log on.

- **Asset Summary**

This component displays the overall asset score. The asset overall score reflects the total risk of the asset. It is composed of the weighted average of the aggregate scores of all risk factors. There are five risk factors that are inherent in EnterpriseView, they include: policy compliance, the control maturity, risk, asset vulnerability, and ESM threat. In addition to these factors, any external risk factor that has been defined in EnterpriseView is also included in the asset overall score calculation. The three scores that represent the highest risk are displayed. For more on external risk factors, see "External Risk Factors" on page 161.

The inherent risk factors are:

- **Risk**: The aggregate risk score of the asset. For more information on how this score is calculated, see "Risk Score Aggregation Mechanism" on page 110.
- **Compliance**: The aggregate compliance score of the asset. For more information on how this score is calculated, see "Control Scores Aggregation Mechanism" on page 77.
- **Maturity**: The aggregate control maturity score of the asset. For more information on how this score is calculated, see "Control Scores Aggregation Mechanism" on page 77.
- **Vulnerability**: The aggregate asset vulnerability score of the asset. For more information on how this score is calculated, see "Asset Vulnerability Score Aggregation Mechanism" on page 147.

The following formula is used for calculating the asset overall score:

$$\frac{\sum(normalized\,aggregated\,risk\,factor\,scores * weight)}{\sum weights}$$

Note: You can edit the weights of these scores in **Settings > Executive View > Overall Score Formula Weights**. For more information, see "Configure Overall Score Formula Weights" on page 263.

To analyze the scores, click on the label of the score that you want to analyze. You will be redirected to the corresponding page:

- Risk: Risk Modeling Dashboard
- Compliance: Compliance Dashboard
- Maturity: Compliance Dashboard
- Vulnerability: Vulnerability Dashboard

- **First-Level Children Summary**

  This component displays the information provided in the **Asset Summary** for the highest risk, first level children of the asset that you selected (up to five are displayed).

  To analyze a specific child asset, click the asset in the **Asset Name** column. The page is reloaded with information on the asset that you chose.

- **Asset Overall Score Over Time**

  This component displays the asset overall score over time. Asset overall scores are archived on a weekly basis. These scores, as well as the most updated score, are displayed in a graph in order to reveal trends in the overall score. If you hover over the round icons in the graph, you can see the exact score and the date on which it was calculated.

  For more information on archiving, see the *Archive Trend Data* section in the *HP EnterpriseView Administration Guide*.

- **Risk Score KPI**

  This component displays a Key Performance Indicator (KPI) that indicates the percentage of assets, out of both direct and indirect children, with an aggregate risk score that is higher than a certain threshold (KPI parameter). The higher the percentage the farther the organization is from its business objectives. You can configure the KPI parameter and thresholds, as described in "Configure KPI Settings" on page 158.

  The KPI score percentage is dynamic and is displayed in the center of the gauge.

- **Vulnerability Score KPI**

  This component displays a KPI that indicates the percentage of assets, out of both direct and indirect children, with an aggregate vulnerability score that is higher than a certain threshold (KPI parameter). The higher the percentage the farther the organization is from its business objectives. You can configure the KPI parameter and thresholds, as described in "Configure KPI Settings" on page 158.

  The KPI score percentage is dynamic and is displayed in the center of the gauge.

- **Compliance Score KPI**

This component displays a KPI that indicates the percentage of assets, out of both direct and indirect children, with an aggregate compliance score that is lower than a certain threshold (KPI parameter). The higher the percentage the farther the organization is from its business objectives. You can configure the KPI parameter and thresholds, as described in "Configure KPI Settings" on page 158.

The KPI score percentage is dynamic and is displayed in the center of the gauge.

- **Overall Score KPI**

  This component displays a KPI that indicates the percentage of assets, out of both direct and indirect children, with an aggregate overall score that is higher than a certain threshold (KPI parameter). The higher the percentage the farther the organization is from its business objectives. You can configure the KPI parameter and thresholds, as described in "Configure KPI Settings" on page 158.

  The KPI score percentage is dynamic and is displayed in the center of the gauge.

Overall Score Heat Map

The Overall Score Heat Map enables you to view the overall score of Business and Location assets according to their criticality level.

To open the Overall Score Heat Map, click **Executive View > Overall Score Heat Map**.

The colors in the heat map reflect the severity of the scores, as follows:

- Low = green
- Medium = yellow
- High = red

The criticality level ranges are configurable. For more information, see "Configure Criticality Level Ranges" on page 264.

The overall score is composed of the aggregate scores of all the risk factors. For more information on the how this score is calculated, see "Configure Overall Score Formula Weights" on page 263.

The assets displayed in the graph are first and second level children of the asset that you select. If the asset that you select does not contain Business or Location assets, the graph remains empty.

The Overall Score Heat Map includes the following components:

- **Asset Selector**

  The **Organization** tab displays the EnterpriseView business model. Expand the business model to select the asset that you want to analyze.

The **Search** tab enables you to search for a name or a partial name of any asset connected to the business model.

After you have selected the asset, you can collapse the **Asset Selector** by clicking the **Collapse** button. To expand the Asset Selector, click the **Expand Asset Selector** button.

- **Overall Score Heat Map**

The name of the asset that you selected is displayed above the graph along with its overall asset score and its criticality level, if it is defined.

Note: Only assets that have been assessed are displayed on the graph.

The assets that are displayed in the legend are sorted alphabetically and are numbered accordingly. Hover over the asset on the graph to display the name of the asset, the criticality level and the overall asset score. Click the icon of the asset in the graph to highlight the asset in the legend and vice versa. If two or more assets have the same criticality level and overall asset score, then they both appear as a single point on the graph and the icon is displayed with an ellipsis (...). Hover over the ellipsis icon to display information on all the assets that have the same overall asset score and criticality level.

Risk Indicators

The Risk Indicators page is a root cause analysis tool that helps you identify risk sources in your organization's business model. It provides you with graphical risk indication on top of your business model map.

There are four quantitative factors that are inherent to EnterpriseView. These factors include risk, policy compliance, control maturity, and vulnerability. In addition to these factors, you can import risk information from external sources for any risk factor that you deem significant and that impact the overall risk score of your organization. For more information on external risk factors, see "External Risk Factors" on page 161. All of these scores are formulated into the overall score of the asset.These factors, together with the asset overall score, are risk indicators. For more information on how the asset overall score is calculated, see "Configure Overall Score Formula Weights" on page 263.

You can select the risk indicator that you want to display on the business model map from the indicator menu. When you select an indicator from the indicator menu, information is updated in the business model map, in the asset card, and in the search pane. The name of the indicator that you selected appears at the top of the indicator menu. For example, if you chose the Overall indicator then the indicator menu appears as follows:

Every asset in the map has an icon that depicts the severity of the indicator score that you chose to display. The severity ranges for these scores are defined in Settings. For more information, see "Settings" on page 261. In the following example My organization has a low severity score.

If you click an asset in the map, the asset card opens displaying information on the asset,including the scores for all the indicators. For more information, see "Asset Card" below.

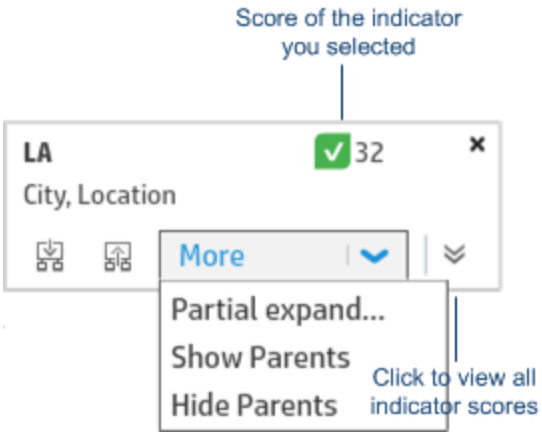
The Risk Indicators page includes the following areas:

- **Left Pane**
  - **Search**. You can search for a name or a partial name of any asset connected to the business model. You can also search by asset category or type by clicking **Advanced**. Click the **Show on Map**  button to display the asset in the business model map.
  - **Toolbar**. The toolbar includes map-related actions that are similar to the Asset Profiling page, such as changing the map layout. All actions are view-only. For more information on these actions, see "Map Area" on page 35.
- **Map Area**

  The map area provides a graphical display of the business model. The indicator menu can be found in the upper right side of the map area. You can select a risk indicator to display in the business model map.
- **Asset Card**

  You can open the asset card by clicking on the asset in the business model map.

Example:



Note: The My Organization asset does not include the **Show Parents** and **Hide Parents** options because it is the root asset in the business model.

The following table includes the functionality available from the asset card.

UI Element	Description
	**Expand** Show the direct children of the asset in the business model map. If the asset has more than 20 children, then the assets are not displayed automatically in order not to overload the business model. In this case, the **Show Children on Map for Asset** dialog box is displayed, enabling you to select the children you want to display. The number of direct children that an asset has is displayed in the business model map by the asset name. You can also expand by double-clicking the asset.
	**Collapse** Hide the direct children of the asset in the business model map. You can also collapse by double-clicking the asset.
Show Parents	Show the parent assets of the asset in the business model map. Click **More > Show Parents**.

UI Element	Description
Hide Parents	Hide the parent assets of the asset in the business model map. Click **More > Hide Parents**.
	**Open Indicator Scores** Click to view all indicator scores. To analyze the scores, click on the label of the score that you want to analyze. You will be redirected to the corresponding page: ▪ Overall Score: Risk Register ▪ Risk Score: Risk Modeling Dashboard ▪ Compliance Score: Compliance Dashboard ▪ Maturity Score: Compliance Dashboard ▪ Vulnerability Score: Vulnerability Dashboard
	**Close Indicator Scores** Close indicator scores.

- **Mini-Map**

  When the business model is expanded to a larger size than the map area, you can navigate it by clicking and dragging in the mini-map area.

  To expand or collapse the mini-map, click the **Expand/Collapse**  button.

  High-risk assets that are displayed with a red severity indication in the map are also marked in red in the mini-map.

External Risk Factors Dashboard

The External Risk Factors Dashboard is a comprehensive dashboard that provides you with information on risk factors that have been imported into EnterpriseView from external sources. For more information on external risk factors, see "External Risk Factors" on page 161.

To open the External Risk Factors Dashboard, click **Executive View > External Risk Factors Dashboard**.

- **Risk Factor and Asset Selector**

  This component enables you to select an asset and an external risk factor and display risk information on that asset and its children.

  You must first select a risk factor from the list.

  The **Organization** tab displays the EnterpriseView business model. Expand the business model to select the asset that you want to display.

  The **Search** tab enables you to search for a name or a partial name of any asset connected to the business model.

  After you have selected the asset, you can collapse the **Risk Factor and Asset Selector** by clicking the **Collapse Risk Factor and Asset Selector**  button. To expand the**Risk Factor and Asset Selector**, click the **Expand Risk Factor and Asset Selector**  button.

- **Summary**

  This component displays the score and aggregate score for a specific external risk factor for the asset that you have selected. For more information on how the aggregate score is calculated, see "Risk Score Aggregation Mechanism" on page 110.

- **First level Children Summary**

  This component displays the information provided in the **Summary** component for the highest risk first-level children of the asset that you selected (up to five are displayed).

- **Aggregate Risk Score Over Time**

  Asset aggregate risk factor scores are archived on a regular basis. The archived scores and the current score are displayed in a graph in order to reveal trends in risk. Hover over the round icons in the graph to see the exact risk factor score and the date on which it was calculated.

  For more information on archiving, see the *Archive Trend Data* section in the *HP EnterpriseView Administration Guide*.

- **Risk Factor KPI**

  Indicates the percentage of assets, out of both direct and indirect children and the asset itself, with an aggregate external risk factor score that is higher or lower than a certain threshold (KPI parameter). The percentage indicates how near or far the organization is from its risk objectives.

  This KPI reflects the tolerance of your organization to risk. It is configurable and should be derived from your organization's strategic plans.

Risk Modeling Dashboard

The Risk Modeling Dashboard is a comprehensive dashboard that provides you with general information on modeled risk for a specific asset.

To open the Risk Modeling Dashboard page, click **Risk Modeling > Risk Modeling Dashboard**.

Risk Modeling Dashboard includes the following components:

- **Asset Selector**

  The **Organization** tab displays the EnterpriseView business model. Expand the business model to select the asset that you want to analyze.

  The **Search** tab enables you to search for a name or a partial name of any asset in EnterpriseView, connected to the business model.

  After you have selected the asset, you can collapse the **Asset Selector** by clicking the **Collapse**  button. To expand the Asset Selector, click the **Expand Asset Selector**  button.

- **Risk Scores**

  This component displays the residual risk and aggregate risk scores for the asset that you have selected. For more information on how these scores are calculated, see "Residual Risk Score Calculation" on page 112 and "Risk Score Aggregation Mechanism" on page 110.

  To analyze the residual risk, click on **Residual Risk**. The Risk Modeling Assessment page opens, displaying risk information for the asset that you have chosen.

- **First-Level Children Summary**

  This component displays the information provided in the **Risk Scores** component for the highest risk first-level children of the asset that you selected (up to five are displayed).

  To analyze a specific child asset, click the asset in the **Asset Name** column. The page is reloaded with information on the asset that you chose.

- **Children Assessment Breakdown**

  This component displays the breakdown of risk severity (high, medium, low) of all the children of the asset that you selected, both direct and indirect. Only children that have a risk assessment are included in this breakdown.

- **Aggregate Risk Score Over Time**

  Asset aggregate risk scores are archived on a weekly basis. These scores, as well as the most updated score, are displayed in a graph in order to reveal trends in risk. Hover over the round icons in the graph to see the exact risk score and the date on which it was calculated.

For more information on archiving, see the *Archive Trend Data* section in the *HP EnterpriseView Administration Guide*.

- **Risk Status Breakdown**

  This component presents a breakdown of risks according to their status. Because risk status is set manually, then the accuracy of this information depends on how accurately you manage the risk status.

- **Unassessed Risk KPI**

  A Key Performance Indicator (KPI) that indicates the percentage of business-critical assets (Business and Location assets), out of both direct and indirect children, that have not been assessed. The higher the percentage the farther the organization is from its objectives.

  For more information. see "Unassessed Risk KPI" on page 160.

Risk Heat Map and Scorecard

The Risk Scorecard and Heat Map includes information on risk assessment that is performed on a specific asset.

To open the Risk Scorecard and Heat Map page, click **Risk Modeling > Risk Scorecard and Heat Map**.

Risk Scorecard and Heat Map includes the following components:

- **Asset Selector**

  The **Organization** tab displays the EnterpriseView business model. Expand the business model to select the asset that you want to analyze.

  The **Search** tab enables you to search for a name or a partial name of any asset connected to the business model.

  After you have selected the asset, you can collapse the **Asset Selector** by clicking the **Collapse**  button. To expand the Asset Selector, click the **Expand Asset Selector**  button.

- **Risk Heat Map**

  The Risk Heat Map displays threat scenarios according to their impact scores and probability. If the asset that you select does not have any threats attached to it, then the graph remains empty. The colors in the heat map reflect the severity of the scores.

  If the risk has been treated, then the impact score that is displayed is the treated impact score and the probability that is displayed is the treated probability. If the risk has not been treated, then the impact score that is displayed is the impact score and the probability that were set during the assessment process. If there are controls mapped to the threat, then the adjusted probability is displayed.

  Hover over the threat on the graph to display the probability, impact score, operation, and actor. Clicking the icon in the graph selects the threat in the legend and vice versa. If two or more threats have the same probability and impact score, then they both appear as a single point on the graph and the icon is displayed with an ellipsis (...). Hover over this icon to display information on all the threats that have the same probability and impact score.

- **Risk Scorecard**

  The Risk Scorecard table includes detailed risk assessment and treatment information. If the risk has been treated, then the impact score and the probability that are displayed represent the treated data. If the risk has not been treated, then the impact score and the probability that are displayed represent the assessment data.

  The name of the asset that you selected is displayed above the table along with its residual risk score.

Compliance Dashboard

The Compliance Dashboard is a comprehensive dashboard that provides you with general compliance information identified by your organization for a specific asset. If there is more than one policy that applies to the asset, then information is displayed for the least compliant policy (based on the aggregate compliance score on the policy level). For more in-depth information on compliance of a specific policy, see "Compliance by Policy Dashboard" on the next page.

To open the Compliance Dashboard, click **Policy and Compliance > Compliance Dashboard**.

The Compliance Dashboard includes the following components:

- **Asset Selector**

  This component enables you to select an asset and display compliance information on that asset and its children.

  The **Organization** tab displays the EnterpriseView business model. Expand the business model to select the asset that you want to display.

  The **Search** tab enables you to search for a name or a partial name of any asset connected to the business model.

  After you have selected the asset, you can collapse the **Asset Selector** by clicking the **Collapse** button. To expand the **Asset Selector**, click the **Expand Asset Selector** button.

- **Compliance Summary**

  This component includes the aggregate compliance score and progress, in addition to the maturity assessment score and progress for the asset that you have selected. For more information on the aggregation mechanism, see "Control Scores Aggregation Mechanism" on page 77.

- **First-Level Children Summary**

  Displays the information provided in the **Compliance Summary** for the least compliant first level children of the asset that you selected (up to five are displayed).

  To analyze a specific child asset, click the asset in the **Asset Name** column. The page is reloaded with information on the asset that you chose.

- **Compliance Score Over Time**

  Asset compliance scores are archived on a weekly basis and when a clear assessment has been performed. These scores, as well as the most updated score, are displayed in a graph in order to reveal trends in compliance. If you hover over the round icons in the graph, you can see

the compliance score, the assessment progress, and the date on which it was calculated. If the scores were archived due to a clear assessment, then the tooltip includes an "Audit Complete" indication.

For more information on archiving, see the *Archive Trend Data* section in the *HP EnterpriseView Administration Guide*.

- **Maturity Score Over Time**

  Control maturity scores are archived on a weekly basis and when a clear assessment has been performed. These scores are displayed in a graph in order to reveal trends in compliance. If you hover over the round icons in the graph, you can see the maturity score, the assessment progress, and the date on which it was calculated. If the scores were archived due to a clear assessment, then the tooltip includes an "Audit Complete" indication.

  For more information on archiving, see the *Archive Trend Data* section in the *HP EnterpriseView Administration Guide*.

- **Policy Compliance**

  Includes the aggregate score and assessment progress for both asset compliance and control maturity for each policy that is applied to the asset that you selected.

  To analyze a specific policy, click the policy in the **Policy Name** column. The **Compliance by Policy Dashboard** opens and displays information about the policy that you chose.

Compliance by Policy Dashboard

The Compliance by Policy Dashboard is a comprehensive dashboard that provides you with all the compliance-related information identified by your organization for each policy associated with a specific asset.

To open the Compliance by Policy Dashboard, click **Policy and Compliance > Compliance by Policy Dashboard**.

The Compliance by Policy Dashboard includes the following components:

- **Policy and Asset Selector**

  This component enables you to select an asset and one of the policies that applies to it and display compliance information on that asset and its children.

  You must first select a policy from the policy list.

  The **Organization** tab displays the EnterpriseView business model. Expand the business model to select the asset that you want to display.

The **Search** tab enables you to search for a name or a partial name of any asset connected to the business model.

After you have selected the asset, you can collapse the **Policy and Asset Selector** by clicking the **Collapse** button. To expand the Policy and Asset Selector, click the **Expand Policy and Asset Selector** button.

- **Compliance Summary**

  This component includes the aggregate compliance score and progress,and the maturity assessment score and progress for the asset that you have selected, in relationship to the policy that you have selected.

  To analyze the policy assessment of specific asset, click **Compliance** or **Maturity**. The **Policy Assessment** page opens and displays information on the compliance assessment or maturity assessment of the asset that you selected.

  For more information on the aggregation mechanism, see "Control Scores Aggregation Mechanism" on page 77.

- **First-Level Children Summary**

  Displays the information provided in the **Compliance Summary** for the least compliant first level children of the asset that you selected (up to five are displayed).

  To analyze a specific child asset, click the asset in the **Asset Name** column. The page is reloaded with information on the asset that you chose.

- **P5 Score Breakdown**

  A breakdown of the aggregate score of P5 control maturity factors of the asset and the policy that you selected.

  The graph displays only P5 control maturity factors that have been assessed.

- **Maturity Score Over Time**

  Control maturity scores are archived on a weekly basis and when a clear assessment has been performed. These scores are displayed in a graph in order to reveal trends in compliance. If you hover over the round icons in the graph, you can see the exact maturity score, the assessment progress, and the date on which it was calculated. If the scores were archived due to a clear assessment, then the tooltip includes an "Audit Complete" indication.

  For more information on archiving, see the *Archive Trend Data* section in the *HP EnterpriseView Administration Guide*.

- **Compliance Score Over Time**

Asset compliance scores are archived on a weekly basis and when a clear assessment has been performed. These scores, as well as the most updated score, are displayed in a graph in order to reveal trends in compliance. If you hover over the round icons in the graph, you can see the exact compliance score, the assessment progress, and the date on which it was calculated. If the scores were archived due to a clear assessment, then the tooltip includes an "Audit Complete" indication.

- **Score Details**

  The aggregate maturity and compliance scores on the security category level. For more information on the aggregation mechanism, see "Control Scores Aggregation Mechanism" on page 77.

Policy Compliance Map

The Policy Compliance Map enables you to view all of the policies and their security categories that are applied to a specific asset along with their assessment information, in a graphic view.

To open the Policy Compliance Map, click **Policy and Compliance > Compliance Map**. The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

Left Pane (Asset Selector)

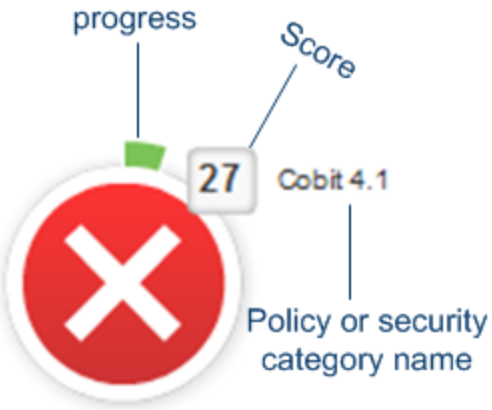
UI Element	Description
Organization tab	The Organization tab displays the EnterpriseView business model. Expand the business model and select the asset that you want to view.
Search tab	You can search for a name or a partial name of any asset connected to the business model.

Map Area

The Policy Compliance Map area has two tabs. The **Compliance** tab displays compliance assessment information and the **Maturity** tab displays control maturity information. Select that tab that has the information you require.

The policy and security categories are displayed according to their hierarchy, in a circular layout, each represented by an icon. Each icon includes the following information:

- Policy or security category name
- Control maturity/compliance score
- Assessment progress (provides a visual indication of how much the policy element is assessed)



The graph area also includes the following functionality and information.

UI Element	Description
	**Optimize Layout** Refreshes the layout of the business model in the graph.
	**Fit to Window** Resizes and displays the entire business model in the Graph Area.
	Zoom in/zoom out business model.
<Score Range>	The score range for a specific policy element: High score Medium score Low score The ranges are determined in "Configure Compliance and Maturity Score Ranges" on page 63

Mini-map

When an asset has multiple policies/security categories applied to it and is larger than the map area, you can navigate it by clicking and dragging in the Mini-map area. To expand or collapse the mini-map, click the **Expand/Collapse**  button.

Vulnerability Dashboard

The Vulnerability Dashboard provides you with an overview of your organization's vulnerability state for a specific asset and its children.

To open the Vulnerability Dashboard, click **Vulnerabilities > Vulnerability Dashboard**.

The Vulnerability Dashboard includes the following components:

- **Asset Selector**

  This component enables you to select the asset that you want to display in the Vulnerability Dashboard.

  The **Organization** tab displays the EnterpriseView business model. Expand the business model to select the asset that you want to display.

  The **Search** tab enables you to search for a name or a partial name of any asset in EnterpriseView, connected to the business model.

  After you have selected the asset, you can collapse the **Asset Selector** by clicking the **Collapse**  button. To expand the Asset Selector, click the **Expand Asset Selector**  button.

  Vulnerability Summary

  This component includes the aggregate asset vulnerability score for the asset that you selected. For more information on asset vulnerability score aggregation, see "Asset Vulnerability Score Aggregation Mechanism" on page 147. It also displays the percentage of vulnerabilities that have not been handled yet out of all the open vulnerabilities that belong to this asset and its children.

  To analyze the aggregate asset vulnerability score, click the score. The Vulnerability Management page opens, displaying vulnerability information for the asset that you have chosen.

- **First-Level Children Summary**

  Displays the following information for the most vulnerable first level children of the asset that you selected (up to five are displayed):

  - Aggregate asset vulnerability score.
  - The number of open vulnerabilities and the percentage of open vulnerabilities that have not been handled yet, meaning, with a remediation status of New or Reopened.

  To analyze a specific child asset, click the asset in the **Asset Name** column. The page is reloaded with information on the asset that you chose.

- **Open Vulnerabilities by Type**

  Displays a breakdown of all the open vulnerabilities that are attached to the asset that you have selected or to any of its children, according to their type.

- **Vulnerabilities with the Highest Scores**

  Displays the vulnerabilities with the highest scores that affect the asset that you have selected, meaning that they are either attached directly to the asset or to the asset's children. Each record represents a vulnerability (ID).

  The **Assets Impacted** column displays the number of assets that this vulnerability (open or closed) affects, either by being directly attached to the asset or by being attached to a child asset. The percentage of open vulnerabilities is displayed in parenthesis.

- **Aggregate Vulnerability Score Over Time**

  Aggregate vulnerability scores are archived on a weekly basis. These scores, as well as the most updated score, are displayed in a graph in order to reveal trends in vulnerability scores. If you hover over the round icons in the graph, you can see the exact vulnerability score and the date on which it was calculated.

  For more information on archiving, see the *Archive Trend Data* section in the *HP EnterpriseView Administration Guide*.

- **Number of Open Vulnerabilities Over Time**

  The number of open vulnerabilities are archived on a weekly basis. These scores, as well as the most updated score, are displayed in a graph in order to reveal trends in risk. If you hover over the round icons in the graph, you can see the exact risk score and the date on which it was calculated.

  For more information on archiving, see the *Archive Trend Data* section in the *HP EnterpriseView Administration Guide*.

Task Management Dashboard

The Task Management Dashboard is a comprehensive dashboard that provides you with information on the status of the workflows in EnterpriseView. For more information on task management, see "Task Management" on page 238.

To open the Task Management Dashboard, click **Executive View > Task Management Dashboard**.

- **Workflows in Progress**

  This component displays a table of the workflows with the nearest due date. This information allows you to quickly identify the workflows that require your immediate attention.

- **Number of Overdue Completed Workflows by Template**

This component displays the number of workflows that have not been completed on time according to their template. This information enables you to identify problematic processes and handle them accordingly.

- **Task Management KPI**

  A Key Performance Indicator (KPI) that indicates the percentage of workflows that have been completed by the workflow due date.

- **Due Date Breakdown**

  A breakdown of all workflows that are in progress according to their due date.

  - **Overdue**:If the due date of the workflow has passed.
  - **Approaching**: If the workflow due date is in seven days or less.
  - **Future**: If the workflow due date is in more than seven days.

EnterpriseView Universe

In BusinessObjects, a universe is an abstraction of a data source that contains data in non-technical terms with which users can create queries and run them against a database. These queries are then used to perform data analysis and create reports using entities in the universe called objects. For more information, see BusinessObjects documentation. The EnterpriseView system includes an EnterpriseView universe that contains the classes and objects described in the following tables. You can use these objects to create a customized report, as described in *Create a Report Using SAP BusinessObjects WebIntelligence* in the *HP EnterpriseView Administration Guide*.

Asset

An asset is an entity that represents a physical or logical resource in the system. For example, assets can represent hardware, software, services, or business units.

Object	Description
Asset ID	The unique ID of the asset.
Asset Category	The category of the asset. Includes: Organization, Location, Business, IP, Infrastructure Elements, Running Software. For more information, see "Manage Asset Types" on page 21.
Asset Name	The name of the asset.
Asset Type	The asset type is a subset of the asset category.
Asset Description	Additional information on the asset.
Business Value	A numeric, monetary value.
Criticality Level	A numeric index, between 0 and 10, indicating the severity of a potential catastrophe and the probability of its occurrence. The default criticality level of all assets is 1. The criticality level of an asset affects the weight of its scores when policy assessment aggregation, risk aggregation and vulnerability score aggregation is done. For more information, see "Weights and Criticality Level" on page 83.
Latitude	Geographical coordinates of the asset's location.
Longitude	Geographical coordinates of the asset's location.
Address	Street address of the asset.
ZIP Code	Asset location ZIP code.
City	City of the asset.

Object	Description
State	State of the asset.
Country	Country of the asset.
OS Name	The operating system that is installed on the infrastructure element.
OS Version	The version of the operating system that is installed on the infrastructure element.
Application Name	The name of the application.
Application Version	The version of the application.
DNS Name	The server name as defined in the network DNS.
MAC Address	The server MAC address.
IP Address	The server IP address.
Role	For people or groups, their role in the organization.
Owner	The person responsible for the asset and who is contacted in situations requiring manual intervention. The asset owner is automatically authorized to work with the asset.
Version	For documents, its version.
Purpose	The purpose for which the document was created.
Classification	The type of document, such as legal or technical.
Release Date	The date on which the document was published.
Is Attached	Indicates whether the asset is attached to the business model.

Archived Data (subclass of Asset)

This class includes information about scores that are archived in EnterpriseView. A dedicated job is run periodically to extract and store a snapshot of these scores in the database. This data is used to create history and trend reports.

Overall Score Archive (subclass of Archived Data)

This class includes archived data about the overall score of the asset.

Object	Description
Overall Score	The overall score of the asset. For more information on how this score is calculated, see "Configure Overall Score Formula Weights" on page 263
Snapshot Time	The date and time that the overall score was archived.

Asset Vulnerability Archive (subclass of Archived Data)

This class includes archived data on asset vulnerabilities and aggregate asset vulnerability scores.

Object	Description
Aggregated Open Vulnerability Count	The number of all open vulnerabilities that are attached to an asset and its direct and indirect children.
Aggregated Asset Vulnerability Score	See "Aggregate Asset Vulnerability Score" on page 215.
Snapshot Time	The date and time that the aggregate asset vulnerability score was archived.

Risk Assessment Archive (subclass of Archived Data)

This class includes archived data on the risk score of an asset.

Aggregated Score (subclass of Risk Assessment Archive)

This class includes archived data on the aggregate risk score of an asset.

Object	Description
Aggregated Asset Risk Score	See "Aggregate Asset Risk Score" on page 205.
Snapshot Time	The date and time that the aggregate risk score was archived.

Asset Risk Score (subclass of Risk Assessment Archive)

This class includes archived data on the residual risk score of an asset.

Object	Description
Asset Risk Score	The aggregate residual risk score of all of the threats applied to the asset.
Snapshot Time	The date and time that the residual risk score was archived.

Policy Assessment Archive (subclass of Archived Data)

This class includes archived data on the maturity and compliance score of an asset.

Asset Score Archive (subclass of Policy Assessment Archive)

This class includes archived data on the aggregate maturity and compliance score of an asset on the business model level.

Object	Description
Snapshot Time	The date and time that the maturity and compliance data were archived.

Object	Description
Compliance Score	Indicates how compliant the asset is with the control. Measured as a percent.
Compliance Score Severity	Low, Medium or High, depending on the score range.
Compliance Progress	The percentage of overall asset compliance with a policy.
Maturity Score	The evolutionary state of a control when it is applied to a specific asset, comprised by the weighted average of five factors: People, Procedure, Process, Product, and Proof (also known in EnterpriseView as P5 maturity factors).
Maturity Score Severity	Low, Medium or High, depending on the score range.
Maturity Progress	The percentage of the overall control maturity within a policy, for a specific asset.

Policy Score Archive (subclass of Policy Assessment Archive)

This class includes archived data on the aggregate maturity and compliance score of an asset on the policy level.

Object	Description
Policy ID	The unique ID of the policy.
Snapshot Time	The date and time that the maturity and compliance data were archived.
Compliance Score	Indicates how compliant the asset is with the control. Measured as a percent.
Compliance Score Severity	Low, Medium or High, depending on the score range.
Compliance Progress	The percentage of overall asset compliance with a policy.
Maturity Score	The evolutionary state of a control when it is applied to a specific asset, comprised by the weighted average of five factors: People, Procedure, Process, Product, and Proof (also known in EnterpriseView as P5 maturity factors).
Maturity Score Severity	Low, Medium or High, depending on the score range.
Maturity Progress	The percentage of the overall control maturity within a policy, for a specific asset.

Policy P5 Score Archive (subclass of Policy Score Archive)

This class includes archived data on P5 maturity scores of an asset on the policy level.

Object	Description
People Score	Maturity score for People factor.
Procedure Score	Maturity score for Procedure factor.
Process Score	Maturity score for Process factor.
Product Score	Maturity score for Product factor.
Proof Score	Maturity score for Proof factor.

External Risk Factor Archive (Subclass of Archived Data)

This class includes archived data on the score and aggregate score for and external risk factor of an asset.

Aggregated Asset External Risk Factor Archive (subclass of External Risk Factor Archive)

This class includes archived data on the aggregate score for and external risk factor of an asset.

Object	Description
External Risk Factor ID	The unique ID of the external risk factor.
Aggregated Asset External Risk Factor Score	The aggregate score of the external risk factor for a specific asset.
Snapshot Time	If the risk information is from a CSV file, then this is the date and time from the file. If not, then it is the date of the import.

Asset External Risk Factor Archive (subclass of Archived Data)

This class includes archived data on the score of an external risk factor of an asset.

Object	Description
External Risk Factor ID	The unique ID of the external risk factor.
Rank Snapshot Time by Asset and Risk Factor	Use this object to sort combinations of Asset IDs and Risk Factor IDs according to their snapshot time. The records are displayed in descending order (from the most recent date to the oldest date).
Current Score Duration (Days)	The number of days that an asset has a certain external risk factor score (without change).
Asset External Risk Factor Score	The score of the external risk factor for a specific asset.

Object	Description
Asset External Risk Factor Previous Score	The previous score of the external risk factor for a specific asset.
Snapshot Time	If the risk information is from a CSV file, then this is the date and time from the file. If not, then it is the date of the import.

Asset Source (subclass of Asset)

The origin of the asset.

Object	Description
Source ID	The unique ID of the source.
Source Name	• If assets are created in EnterpriseView, then the source name is empty. • If assets are imported from an external asset repository, then the source name is the same as the connector name defined in the **Configuration** module. • For the Organization asset the source name is **System**.
External ID	The ID of the asset in the source (such as UCMDB and ArcSight ESM).

Overall Asset Score (subclass of Asset)

Object	Description
Overall Asset Score	The overall asset score is composed of the aggregate scores of all risk factors. The following formula is used for calculating the overall asset score: $\frac{\sum(\textit{normalized aggregated risk factor scores} * \textit{weight})}{\sum \textit{weights}}$

Risk Assessment (subclass of Asset)

The process of attaching threats to assets, evaluating the likelihood of their occurrence, and estimating the potential impact.

Object	Description
Asset Risk Score	The aggregate residual risk score of all of the threats applied to the asset.

Object	Description
Asset Risk Score Severity	The severity level of the risk on an asset, expressed as one of the following values: Low, Medium, or High. This value depends on the risk score ranges defined.
Aggregate Asset Risk Score	Generally defined as the weighted average of aggregate risk scores of the children of an asset, but depends on the calculation method configured. For more information, see "Risk Score Aggregation Mechanism" on page 110.

Associated Category (subclass of Risk Assessment)

An associated category is a category in a threat that is applied to an asset.

Object	Description
Category ID	The unique ID of the category.
Category Weight	A numeric value between 0 and 100, associated with a specific asset. Is used when calculating the asset risk score.
Category Risk Score	The weighted average of all actor scores. $\frac{\sum(Actor\,Score * Actor\,Weight)}{\sum(Actor\,Weights)}$ For more information, see "Residual Risk Score Calculation" on page 112.

Associated Actor (subclass of Associated Category)

An associated actor is an actor in a threat that is applied to an asset.

An actor is a potential initiator of a violation of the security requirements (confidentiality, integrity, availability) of an asset in your organization.

Object	Description
Actor ID	The unique ID of the actor.
Actor Weight	A numeric value between 0 and 100, associated with a specific asset. Is used when calculating the category risk score.
Actor Risk Score	The actor receives the score of the threat scenario (impact) with the highest risk. For more information, see "Residual Risk Score Calculation" on page 112.

Impact (subclass of Associated Actor)

The severity of an event, if it occurred.

Object	Description
Operation ID	The unique ID of the operation.
Impact Description	Notes and comments used to document the risk assessment process.
Risk Status	One of the following values: • Not Assessed • Assessed • Treatment in Progress • Treatment Completed
Risk Tolerance Level	The maximum level of risk exposure that you are willing to accept for an asset in a threat scenario.
Impact Score	The impact score is a calculation of all the values of the impact areas. For information on how this score is calculated, see "Impact Score Calculation" on page 112.
Inherent Risk Score	The risk to an asset, for a specific threat scenario, in the absence of any actions you might take to alter either the likelihood or impact. It is calculated as the impact score multiplied by the probability.
Probability	The probability that a threat will occur on a specific asset. A number between 0 and 1.
Residual Risk Score	The risk that remains after you have attempted to mitigate the Inherent Risk.
Last Updated	The last date and time on which the probability values, impact area values, or both were updated.

Treatment (subclass of Impact)

This class includes risk score after the risk has been treated.

Object	Description
Treated Impact Score	See "EnterpriseView Universe" on page 199. Before you begin treatment, the treated impact score is empty. After you begin treatment, the default score is the same as the impact score calculated during the assessment process. After you carry out your treatment plan, and you modify the impact areas to reflect the reduced risk, then a new impact score is calculated.
Treated Probability	See "EnterpriseView Universe" on page 199. Before you begin treatment, the treated probability is empty. After you begin treatment, the default treated probability is the same as the probability calculated during the assessment process. After you carry out your treatment plan, you can manually modify the probability to reflect the reduced risk.
Adjusted Probability	The adjusted probability is the treated probability after it has been reduced or increased by control compliance scores.
Residual Risk Score	The residual risk score is the risk that remains after you have attempted to mitigate the inherent risk. It is calculated as the treated impact score multiplied by the adjusted probability (**Residual Score** = **Treated Impact Score** X **Adjusted Probability**). If there is no treatment, it is calculated by the assessment impact score multiplied by the adjusted probability.

Treatment method (subclass of Treatment)

This class includes information about the methods used to treat the risk.

Object	Description
Type	The type of method used to handle the risk: Mitigation, Acceptance, Transference, Deferral, or Avoidance.
Description	The description entered for each treatment activity.
Expiration Date/Due Date	• Expiration Date: For all other treatment methods, the date on which the treatment activity is no longer valid and the treatment plan must be reevaluated. • Due Date: If the treatment method is mitigation, then the date on which the mitigation activity must be completed.

Object	Description
Reason	The reason for choosing the treatment method. Not applicable to all treatment methods.
Status	The status of the treatment activity. Not applicable to all treatment methods.
Action Plan	A step by step description of the actions that should be carried out for this treatment activity. Not applicable to all treatment methods.
Resources	The resources required for handling the risk. Not applicable to all treatment methods.
Budget/Cost	The budget or the cost of handling the risk. Not applicable to all treatment methods.

Treatment Impact Area values (subclass of Treatment)

A treatment impact area value can be **Low**, **Medium**, or **High**.

Object	Description
Impact Area ID	The unique ID of the impact area.
Impact value	Low, Medium, or High

Impact Area Value (subclass of Impact)

An impact area value can be **Low**, **Medium**, or **High**.

Object	Description
Impact Area ID	The unique ID of the impact area.
Impact value	Low, Medium, or High

SoA (subclass of Asset)

The Statement of Applicability (SoA) identifies the controls chosen for the assets in the organization.

Policy - SoA (subclass of SoA)

The policies that include controls are applied to an asset.

Object	Description
Policy ID	The unique ID of the policy.

Policy Security Category - SoA (subclass of Policy - SoA)

The policy security categories that include controls that are applied to an asset.

Object	Description
Policy Security Category ID	The unique ID of the policy security category.
Not Applied Controls Count	The number of controls for a specific security category that are not applied to an asset.
Applied Controls Count	The number of controls for a specific security category that are applied to an asset.

Control - SoA (subclass of Policy Security Category - SoA)

The controls that are applied to an asset.

Object	Description
Control ID	The unique ID of the control.
Is Control Applied	Indicates whether the control is applied to an asset.
Assignment Type	Indicates one of the following values for a control that is applied to an asset: • **Inherited**: From a parent asset. • **Inheritance Exception**: Control applicability has been overridden. • **Applied Manually**: A regular control assignment.

Inherited From Asset (subclass of Control - SoA)

Controls that are inherited from a parent asset.

Object	Description
Asset ID	The unique ID of the parent asset.
Asset Category	The category of the parent asset.
Asset Name	The name of the parent asset.
Asset Type	The type of the parent asset.

Policy Assessment (subclass of Asset)

The process of assessing policy compliance and control maturity for all assets that comprise your organization's business model.

Asset Scores (subclass of Policy Assessment)

Scores of assets that have been assessed.

Object	Description
Compliance Score	Indicates how compliant the asset is with the control. Measured as a percent.
Compliance Progress	The percentage of overall asset compliance with a policy.
Compliance Score Severity	Low, Medium or High, depending on the score range, determined in Settings.
Maturity Score	The evolutionary state of a control when it is applied to a specific asset, comprised by the weighted average of five factors: People, Procedure, Process, Product, and Proof (also known in EnterpriseView as P5 maturity factors).
Maturity Progress	The percentage of the overall control maturity within a policy, for a specific asset.
Maturity Score Severity	Low, Medium or High, depending on the score range, determined in Settings.

Policy Scores (subclass of Asset Scores)

Scores of an asset that has been assessed for a specific policy.

Object	Description
Policy ID	The unique ID of the policy.
Compliance Score	Indicates how compliant the asset is with the policy. Measured as a percent.
Compliance Score Severity	Low, Medium or High, depending on the score range, determined in Settings.
Compliance Progress	The percentage of overall asset compliance with a policy.
Maturity Score	The evolutionary state of a policy when it is applied to a specific asset, comprised by the weighted average of five factors: People, Procedure, Process, Product, and Proof (also known in EnterpriseView as P5 maturity factors).
Maturity Score Severity	Low, Medium or High, depending on the score range, determined in Settings.
Maturity Progress	The percentage of the overall control maturity within a policy, for a specific asset.

Policy P5 Scores (subclass of Policy Scores)

Assessment scores on specific control maturity factors aggregate to the policy.

Object	Description
People Score	Maturity score for People factor.
Procedure Score	Maturity score for Procedure factor.
Process Score	Maturity score for Process factor.
Product Score	Maturity score for Product factor.
Proof Score	Maturity score for Proof factor.

Policy Security Category Scores (subclass of Policy Scores)

Scores of an asset that has been assessed for a specific security category.

Object	Description
Policy Security Category ID	The unique ID of the policy security category.
Compliance Score	Indicates how compliant the asset is with the security category. Measured as a percent.
Compliance Progress	The percentage of overall asset compliance with a policy.
Maturity Score	The evolutionary state of a control when it is applied to a specific asset, comprised by the weighted average of five factors: People, Procedure, Process, Product, and Proof (also known in EnterpriseView as P5 maturity factors).
Maturity Progress	The percentage of the overall control maturity within a policy, for a specific asset.

Policy Security Category P5 Scores (subclass of Policy Security Category Scores)

Assessment scores on specific control maturity factors aggregate to the security category.

Object	Description
People Score	Maturity score for People factor.
Procedure Score	Maturity score for Procedure factor.
Process Score	Maturity score for Process factor.
Product Score	Maturity score for Product factor.
Proof Score	Maturity score for Proof factor.

Control Audit Data (subclass of Policy Security Category Scores)

Information on a specific assessment.

Object	Description
Control ID	The unique ID of the control.
Implementation Details	Details on how the control was implemented.

Control Notes (subclass of Control Audit Data)

Object	Description
Note ID	The unique ID of the note.
Note Time	The date and time on which the note was created.
Note Text	Any type of additional information related to the assessment.

Control Scores (subclass of Control Audit Data)

Assessment scores on a specific control.

Object	Description
Compliance Score	Indicates how compliant the asset is with the control. Measured as a percent.
Compliance Score Severity	Low, Medium or High, depending on the score range, determined in Settings.
Compliance Progress	The percentage of overall asset compliance with a policy.
Maturity Score	The evolutionary state of a control when it is applied to a specific asset, comprised by the weighted average of five factors: People, Procedure, Process, Product, and Proof (also known in EnterpriseView as P5 maturity factors).
Maturity Score Severity	Low, Medium or High, depending on the score range, determined in Settings.
Maturity Progress	The percentage of the overall control maturity within a policy, for a specific asset.
Compliance Applied Manually	Indicates that a score was applied manually. It is applied only to the specific scores that have been changed.
Last Updated	The last date and time on which the control compliance and/or maturity score was updated.

Control P5 Scores (subclass of Control Scores)

Assessment scores on specific control maturity factors.

Object	Description
People Score	Maturity score for People factor.
People Applied Manually	Score for People factor applied manually.
Procedure Score	Maturity score for Procedure factor.
Procedure Applied Manually	Score for Procedure factor applied manually.
Process Score	Maturity score for Process factor.
Process Applied Manually	Score for Process factor applied manually.
Product Score	Maturity score for Product factor.
Product Applied Manually	Score for Product factor applied manually.
Proof Score	Maturity score for Proof factor.
Proof Applied Manually	Score for Proof factor applied manually.

Policy Compliance (subclass of Asset)

This class enables you to create a policy compliance report for assets on a policy that has not been directly assessed (Compliant Policy), but are mapped in EnterpriseView to a policy that has been assessed (Assessed Policy). For more information, see "Policy Mapping" on page 59.

Object	Description
Assessed Policy ID	The unique ID of the assessed policy.
Assessed Policy Name	The unique name of the assessed policy.
Compliant Policy ID	The unique ID of the compliant policy.
Compliant Policy Name	The unique name of the compliant policy.

Mapped Controls (subclass of Policy Compliance)

This class includes information on mapped control parameters.

Object	Description
Assessed Control ID	The unique ID of the assessed control.
Assessed Policy Security Category Paragraph Number	An alphanumeric string that indicates the paragraph number.
Assessed Policy Security Category Title	The title of the policy security category.
Compliant Control ID	The unique ID of the compliant control.

Object	Description
Compliant Policy Security Category Title	The title of the policy security category.
Compliant Policy Security Category Paragraph Number	An alphanumeric string.
Compliant Policy Security Category Order Key	Used to display the policy security categories according to their order in the policy.

Mapped Control Scores (subclass of Mapped Controls)

This class includes information on mapped control scores.

Object	Description
Compliance Score	Indicates how compliant is the asset with the control. Measured as a percent.
Compliance Progress	The percentage of overall asset compliance with a policy.
Maturity Score	The evolutionary state of a control when it is applied to a specific asset, comprised by the weighted average of five factors: People, Procedure, Process, Product, and Proof (also known in EnterpriseView as P5 maturity factors).
Maturity Progress	The percentage of the overall control maturity within a policy, for a specific asset.

Mapped Control P5 Scores (subclass of Mapped Control Scores)

Assessment scores on specific control maturity factors that belong to a mapped control.

Object	Description
People Score	The maturity score for People factor.
Procedure Score	The maturity score for Procedure factor.
Process Score	The maturity score for Process factor.
Product Score	The maturity score for Product factor.
Proof Score	The maturity score for Proof factor.

Asset Vulnerability (subclass of Asset)

This class includes different types of asset vulnerability scores.

Object	Description
Asset Vulnerability Score	The highest score out of all the vulnerability scores of open vulnerabilities that are associated with the asset.
Aggregate Asset Vulnerability Score	The highest score of the following: Asset vulnerability score Or $\mathbf{m} * \frac{\sum(AggregatedAssetVulnerabilityScore * CriticalityLevel) of top\,\mathbf{n}\,Children}{\sum(CriticalityLevel)}$ ***m***=*Children Multiplier* ***n***=*Maximum Children in Calculation. Sorted primarily by aggregate asset vulnerability score and secondarily by criticality level.*
Aggregate Open Vulnerability Count	The number of open vulnerabilities for an asset and its children.

Top Open Vulnerabilities (subclass of Asset Vulnerability)

Use this class to create a report that displays the vulnerabilities with the highest scores out of the vulnerabilities with status Open. Up to 100 vulnerabilities can be displayed.

Object	Description
Vulnerability ID	The unique ID of the vulnerability.
Max Score	The highest score out of all vulnerability occurrence scores.
Asset Count	The number of assets with this vulnerability.
Vulnerability Count	The number of vulnerability instances.

Asset External Risk Factors (subclass of Asset)

Use this class to create reports on external risk factors. For more information on external risk factors, see "External Risk Factors" on page 161.

Object	Description
External Risk Factor ID	The unique ID of the external risk factor.
External Risk Factor Comment	Additional information to the risk factor score imported from the external risk source.

Object	Description
External Risk Factor Score	The score for a specific asset for a risk factor imported from an external source.
Aggregated External Risk Factor Score	The aggregate score for a specific asset for a risk factor imported from an external source.

Snapshot (subclass of Asset External Risk Factors)

This class includes information on external risk factor snapshots.

Object	Description
External Risk Factor Score	The individual external risk factor score of the asset at the time the snapshot was captured.
Aggregate External Risk Factor Score	The aggregate external risk factor score of the asset at the time the snapshot was captured.
Snapshot Time	The date and time on which the snapshot was captured.
Current Score Duration (Days)	The number of days that an asset has a certain external risk factor score (without change).

Asset CPE (subclass of Asset)

This class includes information on CPEs that are associated with the assets in the business model.

Object	Description
CPE ID	The unique ID of the CPE.
CPE Name	The name of the CPE is composed of the vendor name, the product name, and the version of the product, in the following format: vendor:product:version.

Asset Product (subclass of Asset CPE)

This class includes information on products that are included in the CPE definitions, for CPEs that are associated with assets in the business model.

Object	Description
Product ID	The unique ID of the product.
Product Name	The name of the product as it appears in the CPE.

Asset Vendor (subclass of Asset Product)

This class includes information on vendors that are included in the CPE definitions, for CPEs that are associated with assets in the business model.

Object	Description
Vendor ID	The unique ID of the vendor.
Vendor Name	The name of the vendor as it appears in the CPE.

Asset Children

Use this class to create reports on an asset's children.

Object	Description
Parent Asset ID	Parent asset unique ID. This asset is the starting point for the asset hierarchy.

Children (subclass of Asset Children)

Use this class to create reports on an asset's children.

Object	Description
Child Asset ID	Child asset unique ID.
Hierarchy Level	The position of the asset in the hierarchical tree, in reference to the parent asset (Parent Asset ID object).

Asset Profiling

This class includes information that is relevant to asset properties.

Criticality Level Ranges (subclass of Asset profiling)

This class includes color indication for the criticality level ranges.

Object	Description
Medium	Criticality level within a medium range is displayed in yellow. Score below the medium range is displayed in green.
High	Criticality level within the high range is displayed in red.

Policies

This class includes all the information that is relevant to active policies.

General Policy Settings (subclass of Policies)

This class includes information on policy settings that is relevant to all policies.

Maturity Score Range (subclass of General Policy Settings)

This class includes color indication for the maturity score ranges.

Object	Description
Medium	Scores within a medium range are displayed in yellow. Scores below the medium range are displayed in green.
High	Scores within the high range are displayed in red.

Compliance Score Range (subclass of General Policy Settings)

This class includes color indication for the compliance score ranges.

Object	Description
Medium	Scores within a medium range are displayed in yellow. Scores below the medium range are displayed in green.
High	Scores within the high range are displayed in red.

Policy (subclass of Policies)

This class includes information that is specific to a policy.

A policy includes legal, statutory, regulatory, and contractual requirements to which the organization is bound.

Object	Description
Policy ID	The unique ID of the policy.
Policy Name	The name of the policy.
Policy Description	A description of the policy.

Policy Security Category (subclass of Policy)

A policy security category is group of controls with common characteristics.

Object	Description
Policy Security Category ID	The unique ID of the policy security category.
Policy Security Category Paragraph Number	An alphanumeric string.
Policy Security Category Title	The title of the policy security category.
Policy Security Category Text	Any additional text explaining the policy security category.

Object	Description
Policy Security Category Level	Policy security categories can be nested. This object indicates the level of the policy security category in the policy security category hierarchy.
Policy Security Category Order Key	Used to display the policy security categories according to their order in the policy.
Policy Security Category Controls Count	The number of controls under a specific policy security category.

Policy Security Category Hierarchy (subclass of Policy Security Category)

This class enables you to create a report for a specific security category and is generally used for drill-down capability.

Object	Description
Policy Security Category Parent ID	The ID of the security category that contains the policy elements that you want to display.
Policy Security Category Grandparent ID	The ID of the security category that contains the security category that contains the policy elements that you want to display.
Has Children	Indicates whether the policy element is the last level in the policy hierarchy.

Control (subclass of Policy Security Category)

Controls are the guidelines and rules that form the foundation of a policy.

Object	Description
Control ID	The unique ID of the control.
Control Text	Control text.
Control Additional Information	Control additional information.
Guideline Introduction	Guideline introduction.
Guideline Additional Text	Guideline additional text.
Control Type	One of the following values: **Management**, **Technical**, or **Operations**.
Control GRC Designation	One of the following values: **Regulation**, **Legal Status**, **Standards** or **Threats**.

Object	Description
Control Purpose	One of the following values: **Confidentiality**, **Integrity**, **Availability**, **Audit**, or **Privacy**.
Control Weight	A numeric value between 0 and 100. The control weight affects the aggregation calculation on the policy level. For more information, see "Weights and Criticality Level" on page 83.
Control Priority	One of the following values: **Low**, **Medium**, or **High**.
People Applicable to Control	Indicates whether the People control maturity factor is applicable to a specific control.
Procedure Applicable to Control	Indicates whether the Procedure control maturity factor is applicable to a specific control.
Process Applicable to Control	Indicates whether the Process control maturity factor is applicable to a specific control.
Product Applicable to Control	Indicates whether the Product control maturity factor is applicable to a specific control.
Proof Applicable to Control	Indicates whether the Proof control maturity factor is applicable to a specific control.

Control Guidelines (subclass of Control)

Guidelines or rules of the control.

Object	Description
Guideline ID	The unique ID of the guideline.
Guideline Text	Guideline text.
Guideline Order Key	Used to display the guidelines according to their order in the control.

Tag (subclass of Controls Guidelines)

Short descriptive texts that are applied to guidelines.

Object	Description
Tag ID	The unique ID of the tag.
Tag Name	The tag name.

Control Template (subclass of Policy)

This class enables you to create a report that displays only the objects that are in the control template.

Object	Description
Control Text in Template	Indicates whether this parameter is in the template.
Control Additional Information in Template	Indicates whether this parameter is in the template.
Control Guidelines in Template	Indicates whether this parameter is in the template.
People in Template	Indicates whether this parameter is in the template.
Procedure in Template	Indicates whether this parameter is in the template.
Product in Template	Indicates whether this parameter is in the template.
Process in Template	Indicates whether this parameter is in the template.
Proof in template	Indicates whether this parameter is in the template.
Guideline Introduction in Template	Indicates whether this parameter is in the template.
Guideline Additional Text in Template	Indicates whether this parameter is in the template.
Control Type in Template	Indicates whether this parameter is in the template.
Control GRC Designation in Template	Indicates whether this parameter is in the template.
Control Purpose in Template	Indicates whether this parameter is in the template.
Control Weight in Template	Indicates whether this parameter is in the template.
Control Priority in Template	Indicates whether this parameter is in the template.
People Weight	The weight applied to this maturity factor.
Procedure Weight	The weight applied to this maturity factor.
Process Weight	The weight applied to this maturity factor.
Product Weight	The weight applied to this maturity factor.
Proof Weight	The weight applied to this maturity factor.
Attachments	Attachments related to this control.

Policy Mapping

This class enables you to create a report that displays mappings between policies.

Object	Description
Source Policy ID	The unique ID of the source policy.
Source Policy Name	The name of the source policy.
Target Policy ID	The unique ID of the target policy.
Target Policy Name	The name of the target policy.
Is Target policy Active	Indicates whether the target policy is active in EnterpriseView. For more information, see "Activate a Policy" on page 47.

Policy Mapped Controls (subclass of Policies)

This class includes information on the mapped source and target controls.

Object	Description
Source Control ID	The unique ID of the control in the source policy.
Source Policy Security Category Paragraph Number	The source policy security category paragraph number.
Source Policy Security Category Title	The source policy security category title.
Target Control ID	The unique ID of the control in the target policy.
Target Control Text	The control text in the target control.
Target Policy Security Category Paragraph Number	The target policy security category paragraph number.
Target Policy Security Category Title	The target policy security category title.

Vulnerability

A vulnerability is a flaw or a weakness in the software (in the network layer or the application layer) or a system configuration issue that can be exploited by an attacker and used to gain access to a system or a network.

Object	Description
Count (Distinct Vulnerability ID)	Counts vulnerability IDs. This means that if two records have the same vulnerability ID, then they will count as one. This object only works when you query a table that has an Vulnerability ID field.

Object	Description
Vulnerability ID	A common classification ID. This ID can be defined in the vulnerability dictionary or not. It can be a CVE, CCE, or identification provided by the scanner. It is displayed in the User Interface.
Vulnerability Internal ID	The unique ID of the vulnerability. It is not displayed in the User Interface.
Vulnerability Title	A descriptive name of the vulnerability.
Vulnerability Type	**Network**, **Application**, and **Configuration**
Vulnerability Score	The vulnerability score is the severity level of the vulnerability expressed as a number between 0 and 10. It is calculated by EnterpriseView labs. The scoring system varies between the different vulnerability types: • **Network and Web application vulnerabilities** The score is CVSS version 2.0 compliant. For more information, see "Common Vulnerability Scoring System" on page 131. Scores of new vulnerabilities that do not exist in the dictionary are imported from the scanner and are normalized to the EnterpriseView scoring system. • **Configuration vulnerabilities** The score is determined according to the check results: ▪ **Passed** (the configuration is correct): the score is 0. ▪ **Failed** (the configuration is incorrect): the score is 10. ▪ **Unknown** (there is not enough information to determine if the check failed or passed): the score is 5.
Vulnerability Details	A detailed description of the vulnerability.
Vulnerability Status Name	Indicates the values **Open** or **Closed**.
Vulnerability Remediation Name	Indicates the values **New, Passed, Reopened, Assigned, Awaiting Remediation, Not an Issue, Awaiting Verification, Resolved,** or **Automatically Closed**.

Object	Description
Vulnerability Last Update On	The last time that one of the properties of the vulnerability occurrence was changed. This property is not updated if a vulnerability is attached or detached from an asset or if a new note has been added.
Vulnerability Last Update On (Days)	The number of days since the vulnerability was last updated.
Vulnerability Last Reported Status	Relevant only for configuration vulnerabilities. Typically, scanners provide a status for configuration vulnerability checks. Common values include: Pass, Fixed, Error, Unknown, Not Applicable, Not Checked, not Selected, and Warning. If a scanner provides such a status, then it is displayed as this property. If the last scan status is Passed or Fixed, then the remediation status is Passed.
Vulnerability Location	The location displayed depends on the type of the vulnerability. Each type has the following location formats: • Network and configuration: **<Hostname>:<Network Port>**. Hostname and IP address are interchangeable. • Application: **<Normalized URI>:<Vulnerable Parameter>**. The original URI indicating the location of the vulnerability is normalized by the Vulnerability Import Job. The vulnerable parameter is isolated from the query string passed in the original URI.
Vulnerability Number of Times Reported	The number of times that a specific vulnerability is reported from various sources.
Vulnerability First Reported On	The date and time of the first report of the vulnerability, as recorded by the external source from which the vulnerability was imported.
Vulnerability Last Reported On	The date and time of the last report of the vulnerability, as recorded by the external source from which the vulnerability was imported.

Archived Vulnerability (subclass of Vulnerability)

This class includes information on archived vulnerabilities. Only network and application vulnerabilities are archived.

Object	Description
Asset ID	The ID of the asset that the vulnerability is attached to.
Archived Vulnerability ID	A common classification ID. This ID can be defined in the vulnerability dictionary or not. It can be a CVE or identification provided by the scanner. It is displayed in the User Interface.
Archived Vulnerability Internal ID	The unique ID of the vulnerability. It is not displayed in the User Interface.
Archived Vulnerability Title	A short description of the vulnerability.
Archived Vulnerability Type	**Network** and **Application**
Archived Vulnerability Details	A detailed description of the vulnerability.
Archived Vulnerability Score	For network and application vulnerabilities. The vulnerability score is the severity level of the vulnerability expressed as a number between 0 and 10. It is calculated by EnterpriseView labs. The score is CVSS version 2.0 compliant. For more information, see "Common Vulnerability Scoring System" on page 131. Scores of new vulnerabilities that do not exist in the dictionary are imported from the scanner and are normalized to the EnterpriseView scoring system.
Archived Vulnerability Location	The location displayed depends on the type of the vulnerability. Each type has the following location formats: • Network and configuration: **<Hostname>:<Network Port>**. Hostname and IP address are interchangeable. • Application: **<Normalized URI>:<Vulnerable Parameter>**. The original URI indicating the location of the vulnerability is normalized by the Vulnerability Import Job. The vulnerable parameter is isolated from the query string passed in the original URI.
Archived Vulnerability Number of Times Reported	The number of times that a specific vulnerability is reported from various sources.
Archived Vulnerability First Reported On	The date and time of the first report of the vulnerability, as recorded by the external source from which the vulnerability was imported.

Object	Description
Archived Vulnerability Last Reported On	The date and time of the last report of the vulnerability, as recorded by the external source from which the vulnerability was imported.
Archived Vulnerability Status Name	Indicates the values **Open** or **Closed**.
Archived Vulnerability Remediation Name	Indicates the values **New**, **Passed**, **Reopened**, **Assigned**, **Awaiting Remediation**, **Not an Issue**, **Awaiting Verification**, **Resolved**, or **Automatically Closed**.
Archived Vulnerability Snapshot Time	The date and time that the vulnerability was archived.
Archived Vulnerability Groups	Vulnerabilities are grouped according to different vulnerability categories. EnterpriseView adopted the Common Weakness Enumeration (CWE) system for identifying most vulnerability groups. Other vulnerability groups are internal and can be identified by an "EVG" prefix.
Archived Vulnerability Solution	A recommended solution for fixing the vulnerability, as provided from the vulnerability assessment tool.
Archived Vulnerability Parameter	Relevant only for application vulnerabilities. The parameter from the URI that is used to exploit the vulnerability. For example, User ID can be the vulnerable parameter in case of an SQL injection vulnerability.
Archived Vulnerability Host	The host where the vulnerability was found.
Archived Vulnerability Port	The port where the vulnerability was found.
Archived Vulnerability IP	Relevant for network vulnerabilities. IP address where the vulnerability was found.
Archived Vulnerability MAC	Relevant for network vulnerabilities. MAC address where the vulnerability was found.
Archived Vulnerability Related CVEs	The CVE identifiers of related vulnerabilities. Defined by EnterpriseView labs.
Archived Vulnerability References	The identifiers defined by various sources for vulnerabilities that are similar or related to the vulnerability defined in the EnterpriseView vulnerability dictionary.

Object	Description
Archived Vulnerability Last Updated On	The last time that one of the properties of the vulnerability occurrence was changed. This property is not updated if a vulnerability is attached or detached from an asset or if a new note has been added.

Archived Vulnerability Note (subclass of Archived Vulnerability)

This class includes information on the notes attached to the vulnerabilities.

Object	Description
Vulnerability Note ID	The unique ID of the note.
Archived Vulnerability Note Creation Date	The date and time on which the note was created.
Archived Vulnerability Note Creator ID	The user ID of the user who added the note.
Archived Vulnerability Note Creator	The user name of the user who added the note.
Archived Vulnerability Note Message	The message of the note.

Vulnerability Statuses (subclass of Vulnerability)

This class includes the names and ID of all types of vulnerability statuses.

Vulnerability Status (subclass of Vulnerability Statuses)

This class includes the names and ID for all vulnerability statuses.

Object	Description
Vulnerability Status ID	The unique ID of the vulnerability status.
Vulnerability Status Name	Indicates the values **Open** or **Closed**.

Vulnerability Remediation Status (subclass of Vulnerability Statuses)

This class includes the names and ID for all remediation statuses.

Object	Description
Vulnerability Remediation Status ID	The unique ID of the vulnerability remediation status.
Vulnerability Remediation Status Name	Indicates the values **New**, **Reopened**, **Assigned**, **Awaiting Remediation**, **Not an Issue**, **Awaiting Verification**, **Resolved**, or **Automatically Closed**.

Vulnerability Score Ranges (subclass of Vulnerability)

This class includes color indication for the vulnerability score ranges.

Object	Description
Medium	Scores within a medium range are displayed in yellow. Scores below the medium range are displayed in green.
High	Scores within the high range are displayed in red.

Vulnerability Dictionary

This class includes information on vulnerabilities in the vulnerability dictionary.

Object	Description
Vulnerability ID	The unique ID of the vulnerability.
Vulnerability Type	**Network**, **Application**, and **Configuration**
Vulnerability Details	A detailed description of the vulnerability.
Vulnerability Title	A short description of the vulnerability. For configuration vulnerabilities, the title and the details are identical.
Vulnerability Score	The vulnerability score is the severity level of the vulnerability expressed as a number between 0 and 10. The score of a vulnerability is calculated by EnterpriseView labs. It is CVSS version 2.0 compliant. For more information, see "Common Vulnerability Scoring System" on page 131. Scores of new vulnerabilities that do not exist in the dictionary are imported from the scanner and are normalized to the EnterpriseView scoring system.

CPE (subclass of Vulnerability Dictionary)

This class includes information on CPEs that are associated with the vulnerabilities in the vulnerability dictionary.

Object	Description
CPE ID	The unique ID of the CPE.
CPE Name	The name of the CPE is composed of the vendor name, the product name, and the version of the product, in the following format: vendor:product:version.

Product (subclass of CPE)

This class includes information on products that are included in the CPE definitions, for CPEs that are associated with vulnerabilities in the vulnerability dictionary.

Object	Description
Product ID	The unique ID of the product.
Product Name	The name of the product as it appears in the CPE.

Vendor (subclass of Product)

This class includes information on vendors that are included in the CPE definitions, for CPEs that are associated with vulnerabilities in the vulnerability dictionary.

Object	Description
Vendor ID	The unique ID of the vendor.
Vendor Name	The name of the vendor as it appears in the CPE.

Threat Library

The threat library includes predefined threats, common to most organizations, in addition to user-defined threats.

Threat Library Settings (subclass of Threat Library)

This class includes information on threat library settings that are relevant to all threat scenarios.

Probability Ranges (subclass of Threat Library Settings)

This class includes color indication for the probability ranges.

Object	Description
Medium	Scores within a medium range are displayed in yellow. Scores below the medium range are displayed in green.
High	Scores within the high range are displayed in red.

Risk Score Ranges (subclass of Threat Library Settings)

This class includes color indication for the risk score ranges.

Object	Description
Medium	Scores within a medium range are displayed in yellow. Scores below the medium range are displayed in green.
High	Scores within the high range are displayed in red.

Impact Area (subclass of Threat Library)

The area or areas in the organization that are affected by a threat on an asset.

Object	Description
Impact Area ID	The unique ID of the impact area.
Impact Area Name	The name of the impact area.
Impact Area Weight	A numeric value between 0 and 100.

Category (subclass of Threat Library)

The category of an actor.

Object	Description
Category ID	The unique ID of the category.
Category Default Weight	A numeric value between 0 and 100. The weight of a category defined on the threat library level.
Category Description	Category description.
Category Name	Category name.

Actor (subclass of Category)

An actor in the threat library.

An actor is a potential initiator of a violation of the security requirements (confidentiality, integrity, availability) of an asset in your organization.

Object	Description
Actor ID	The unique ID of the actor.
Actor Default Weight	A numeric value between 0 and 100. The weight of an actor defined on the threat library level.
Actor Description	Actor description.
Actor Name	Actor name.

Operation (subclass of Actor)

An operation in the threat library.

An operation is the violation of the security requirements of an asset preformed by an actor.

Object	Description
Operation ID	The unique ID of the operation.
Operation Description	Operation description.

Object	Description
Operation Name	Operation name.
Operation Information Security Threat Type	Possible values are Integrity, Confidentiality, or Availability.

Overall Score

This class includes overall score settings.

Overall Score Ranges (subclass of Overall Score)

This class includes color indication for the overall score ranges.

Object	Description
Medium	Scores within a medium range are displayed in yellow. Scores below the medium range are displayed in green.
High	Scores within the high range are displayed in red.

Overall Score Weights (subclass of Overall Score)

This class includes the weights for all the factors used to calculate the overall asset score. This value can be edited in **Settings > Executive View > Overall Score formula Weights**.

Object	Description
Risk Weight	The weight applied to an asset's aggregate risk score when calculating the asset's overall score.
Compliance Weight	The weight applied to an asset's aggregate compliance score when calculating the asset's overall score.
Maturity Weight	The weight applied to an asset's aggregate control maturity score when calculating the asset's overall score.
Vulnerability Weight	The weight applied to an asset's aggregate vulnerability score when calculating the asset's overall score.

External Risk Factor Weights (subclass of Overall Score Weights)

This class includes the weights for all the external risk factors used to calculate the overall asset score . This value can be edited in **Settings > Executive View > Overall Score formula Weights**

Object	Description
External Risk Factor ID	The unique ID of the external risk factor.
External Risk Factor Weight	The weight applied to an asset's aggregate external risk factor score when calculating the asset's overall score.

External Risk Factors

General information about the external risk factors and settings.

External Risk Factor (Subclass of External Risk Factors)

Information about an external risk factor.

Object	Description
External Risk Factor ID	The unique ID of the external risk factor.
External Risk Factor Name	The name of the external risk factor as defined in EnterpriseView.
External Risk Factor Description	The description of the external risk factor as defined in EnterpriseView.
External Risk Factor Date	The timestamp of the import job.
External Risk Factor KPI ID	The unique ID of the KPI of the external risk factor.

External Risk Factor Ranges (Subclass of External Risk Factors)

This class includes external risk factor settings.

Object	Description
Medium	Scores within a medium range are displayed in yellow. Score below the medium range are displayed in green or red, depending on the directionality of the severity.
High	Scores within the high range are displayed in red or green, depending on the directionality of the severity.
Minimum	The first number in the score range.
Maximum	The last number in the score range.
Precision	The number of digits after the decimal point that you want to display. Limited to five digits.
Lower score is best	The directionality of the score severity. For example, a low score is considered low risk while a high score is considered high risk.

Workflow

This class includes information on workflow templates and tasks.

Object	Description
Workflow ID	The unique ID of the workflow.
Workflow Name	The name of the workflow.

Object	Description
Workflow Description	The description of the workflow.
Workflow Owner	The person responsible for managing the workflow.
Workflow Start Date	The date on which the workflow was created. The status of the workflow is In Progress.
End Date	The date on which the workflow is actually completed, meaning that the last task in the workflow has been completed.
Due Date	The expected completion date of the workflow.
Workflow Status	Either In Progress or Completed.
Workflow Due Date Status	Returns the following values: Overdue, Approaching, Future

Template (Subclass of Workflow)

This class includes information on templates

Object	Description
Template ID	The unique ID of the template.
Template Name	The name of the template.

Task (Subclass of Workflow)

This class includes information on tasks.

Object	Description
Task ID	The unique ID of the task.
Task Name	The name of the task.
Task Description	Includes the instructions for carrying out the task.
Task Start Date	The date on which the task status is changed from Inactive to In Progress.
Task Due Date	The date on which the task is due and should be completed.
Task End Date	The date on which the task is actually completed.
Task Assignee	The person responsible for carrying out the task.
Task Group	The group of users to which the task belongs.

Object	Description
Task Status	One of the following values: • **Inactive**: The status of a task that is not active after a workflow has been created. At this stage, the task is not available to the assignee. Inactive tasks are accessible only from the Task Management page, but are not displayed in My Tasks. • **In Progress**: A task receives this status only after its preceding task is completed. If there is more than one task before it, then at least one of the preceding tasks must be completed. Tasks that are in progress are displayed in My Tasks displayed in the Home page and in the My Tasks dialog box accessible from the EnterpriseView toolbar. These tasks need to be carried out by an assignee. • **Completed**: The task status is automatically updated to **Completed** after the user selects the **Complete Task** check box or the **Reject** or **Approve** options (for approval tasks) and clicks **Save**.

Comments (Subclass of Task)

This class includes information on comments.

Object	Description
Comment ID	The unique ID of the comment.
Comment Text	The comment text.
Comment Author	The name of the user who created the comment.
Comment Date	The date on which the comment was created.

KPIs

This class includes properties of key performance indicators (KPIs).

Object	Description
KPI ID	The unique ID of the KPI.
KPI Name	The display name of the KPI. This name is displayed as the title in the KPI component. The KPI name is defined in the KPI Management page.

Object	Description
KPI Description	The description of the KPI is displayed in the KPI component. The KPI parameter can be embedded in the KPI description. The KPI name is defined in the KPI Management page.
KPI High Threshold	A KPI score percentage within the high range is displayed in red.
KPI Medium Threshold	A KPI score percentage within a medium range is displayed in yellow. A KPI score percentage below the medium range is displayed in green.
KPI Lower is Better	The directionality of the score severity. For example, a low score is considered low risk while a high score is considered high risk.
KPI Parameter	The KPI Parameter is a threshold that indicates a desirable or an undesirable result. For example, in a KPI that displays the percentage of assets with an overall score higher than 20, then “20” is the KPI Parameter. In this case, scores that are higher than 20 are not desirable.

Generic Prompts

This class can be used to easily create a query filter without inputting the prompt value.

Object	Description
@KPIPrompt	Can be used to create a query filter without the need to input the value "kpiId".
@CPEPrompt	Can be used to create a query filter without the need to input the value "cpeId".
@AssetPrompt	Can be used to create a query filter without the need to input the value "assetId".
@PolicyPrompt	Can be used to create a query filter without the need to input the value "policyId".
@RiskFactorPrompt	Can be used to create a query filter without the need to input the value "riskFactorId".

Generic Objects

This class includes miscellaneous classes and objects.

Object	Description
Current Time	The date that the report is generated.

Aggregate Functions (subclass of Generic Objects)

This class includes objects that are used to count entities (such as assets). Using these objects for

counting entities helps reduce performance problems. These objects can be used only within a query. For example, you can create a query that counts all the assets with asset type IP, but you cannot use these objects to count all the assets in the system.

Object	Description
Count(*)	Counts records in a table.
Count(Distinct Asset ID)	Counts asset IDs. This means that if two records have the same asset ID, then they will count as one. This object only works when you query a table that has an Asset ID field.

Score Severity (subclass of Generic Objects)

This class includes the values for score severity.

Object	Description
Score Severity	Displays one of the following values: Low, Medium, or High.

Scores Rank (subclass of Generic Objects)

The objects in this class are used to rank asset scores using a weighted average in order to display "top #" assets in reports. The rank itself is not displayed in the report.

Object	Description
Asset Risk Score Rank	Used for ranking risk scores.
Aggregated Asset Risk Score Rank	Used for ranking aggregate risk scores.
Aggregated Asset Vulnerability Score Rank	Used for ranking aggregate vulnerability scores.
Asset Compliance Score Rank	Used for ranking compliance scores.
Asset Maturity Score Rank	Used for ranking P5 maturity factor scores.
Overall Asset Score Rank	Used for ranking the overall asset score.
Asset Vulnerability Score Rank	Used for ranking the direct asset vulnerability scores.
Vulnerability Score Rank	Used for ranking the vulnerability scores.
Aggregated External Risk Factor Score Rank	Used for ranking the aggregate external risk factor scores.

P5 Names (subclass of Generic Objects)

Use the objects in this class to return the names of the P5 maturity factors to be displayed in a report.

Object	Description
People	Indicates that the maturity factor name "People" should be displayed in the report.
Procedure	Indicates that the maturity factor name "Procedure" should be displayed in the report.
Process	Indicates that the maturity factor name "Process" should be displayed in the report.
Product	Indicates that the maturity factor name "Product" should be displayed in the report.
Proof	Indicates that the maturity factor name "Proof" should be displayed in the report.

Risk Status (subclass of Generic Objects)

This object returns all the risk statuses.

Object	Description
Risk Status	Returns the following values: Associated to Asset, Assessed, Treatment in Progress, Treatment Completed.

Workflow Status (subclass of Generic Objects)

This object returns all the workflow due date status.

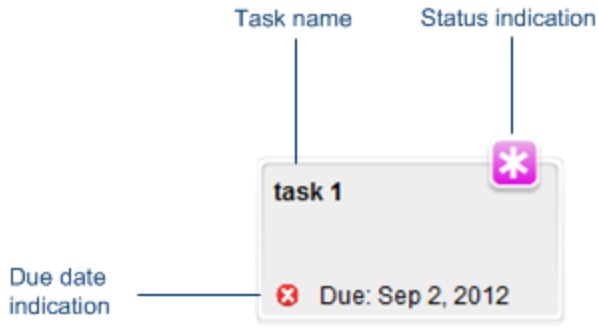
Object	Description
Workflow Due Date Status	Returns the following values: Overdue, Approaching, Future.

Chapter 9: Task Management

A workflow is a sequence of connected tasks that produce a final outcome. Tasks are consecutive, creating a flow in the work process. Each task in the workflow belongs to a group and is assigned to the individual who is most suitable to perform the task. After a task is complete, the next task becomes available to the responsible group or individual. For more information on managing tasks, see "Manage Your Tasks" on page 248.

The Workflow module enables managers to oversee, approve, and follow up on tasks that were not completed. EnterpriseView provides you with a graphic display of each workflow. The status and due date of each task are visible on the workflow map. Overdue tasks include an explicit indication.

Example:



Workflows are based on templates. EnterpriseView includes out-of-the-box workflow templates, such as EnterpriseView Vulnerability Assessment for New Asset. You can create additional templates that represent the workflows in your organization. For more information on creating templates, see "Create a Workflow Template" on the next page. You can also edit and delete workflow templates, as described in "Edit a Workflow Template" on page 243 and "Delete a Workflow Template from EnterpriseView" on page 244, respectively.

The Workflow module includes filtering capabilities to help you locate your workflows quickly. For more information on filtering, see "Filter Workflows" on page 255. By default, the list is filtered to display only workflows that are in progress.

Note: You must be an owner or a stakeholder in order to see a workflow. To edit a workflow you must have Edit Task Management permissions. Only users with a View All Workflows permission (such as Workflow Administrator role) can see and edit all the workflows.

Workflows are presented according to the following logic:

- Workflows that are in progress are displayed first and workflows that are completed are displayed last.
- Out of the workflows that are in progress, the workflows with an earlier due date are displayed first.

- Out of the workflows that are completed, the workflows with the latest end date are displayed first.

Manage Workflow Templates

EnterpriseView includes out-of-the-box workflow templates, such as EnterpriseView Vulnerability Assessment for New Asset. You can create additional templates that represent the workflows in your organization.

Note: Because every task must be assigned to a group, all the tasks in the out-of-the-box workflow templates are assigned to a group called 'Everyone'. If you are planning to use out-of-the-box workflow templates, we recommend that you assign the appropriate group to each of the tasks. For more information on editing a template, see "Edit a Workflow Template" on page 243.

This section includes the following topics:

Create a Workflow Template

EnterpriseView includes out-of-the-box workflow templates, such as EnterpriseView Vulnerability Assessment for New Asset. You can create additional templates that represent the workflows in your organization. You can create workflow templates in Activiti Modeler.

Note: Activiti Modeler works only with Chrome or Firefox browsers; it does not work with Internet Explorer.

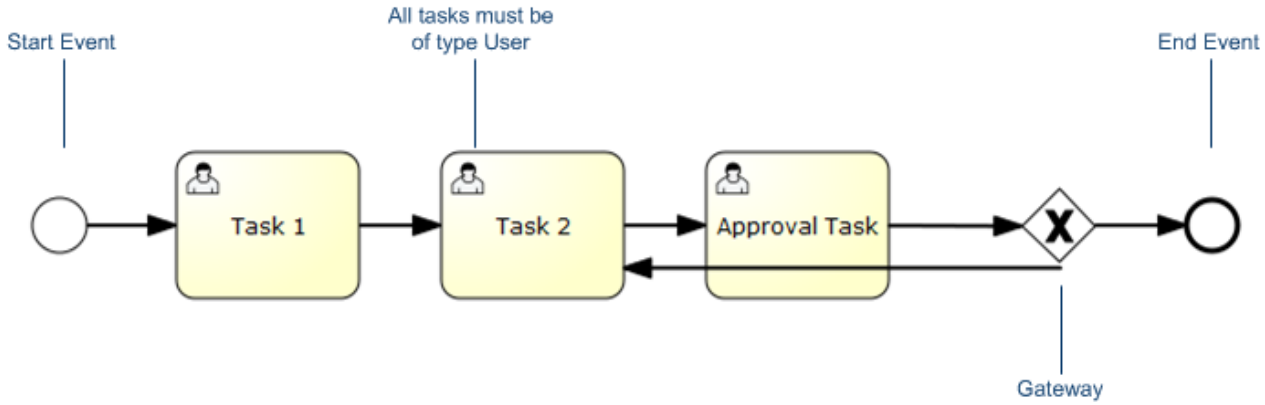
Activiti Modeler includes a set of elements (shapes) that are used to create templates. For more information, see "Workflow Template Shape Repository" on page 260.

All workflow templates must fulfill the following conditions:

- A template must have a name.
- A template must begin with a start event.
- Each task must have a name.
- All tasks must be of type **User**.

- All tasks must be assigned to an EnterpriseView page. When the task is ready to be carried out by the user, it is displayed on the Home page and on the page assigned to it in the template.
- All tasks must be assigned to a group.

The following diagram is an example of a workflow template.



After you create a template you need to upload it to EnterpriseView in order to use it. For more information, see "Upload a Workflow Template to EnterpriseView" on page 243.

To create a workflow template

1. Click **Task Management** > **Workflow Management**.
2. In the **Workflow Management** page, click **Manage Templates**.
3. In the **Manage Templates** dialog box, click **Template Editor**.
4. In **Activiti Modeler**, click **New > Business Process Diagram (BPMN 2.0)**.
5. In the **New Process** window, expand the **Attributes** pane.

   Note: If required, enable your browser to allow pop-ups.

6. In the **Properties** pane, under **Main Attributes**, click in the **Name** field, and enter a name for the template.

   Note: The template name must be unique. it cannot contain the following characters: - * %

7. In the **New Process** window, in the **Shape Repository**, drag the **Start Event** to the canvas.
8. To create a task, do the following:

a. From the **Shape Repository**, drag a **Sequence Flow** to the canvas and attach it to the shape before it.

b. From the **Shape Repository**, drag a **User Task** to the canvas and attach it to the **Sequence Flow**.

c. In the **Name** field, enter a name. The name of the task should be short and should reflect the main idea of the task.

d. In the **Documentation** field, enter a detailed description of the task. This information is displayed in Description in the task properties.

9. To assign an EnterpriseView page to the task, do the following:

   a. Under **More Attributes**, click in the **Properties** field, in the **Value** column.

   b. On the **Editor for a Complex Type** dialog box, click **Add**.

   c. In the **Name** field, enter **page=n**, where n is the page ID. For example, if you want to assign the task to the Vulnerability Management page, enter **page=4** (case-sensitive). For the list of page IDs, see "EnterpriseView Page IDs" on page 259.

   d. Click **OK**.

10. To assign the task to a group, do the following:

    a. Under **More Attributes**, click the **Value** cell next to **Resources**, and then click the ellipses button.

    b. On the **Editor for a Complex Type** dialog box, do the following:

       - Click **Add**.
       - In the **Type** box, select **PotentialOwner**.
       - In the **Resource assignment expression** box, from the list of groups, select the group to which you want to assign this task.
       - Click **OK**.

11. Repeat steps 8-11 for each task in the workflow.

12. To create an approval task, follow the instruction in "To create an approval task" on the next page.

13. Add an end event or end events to your template (optional). The end event indicates that there are no more tasks. To add an end event, after you have added all the required tasks, click on the task in the canvas that does not have any tasks after it, and then, from the floating toolbar, click the **End Event**  button.

14. To validate the template, click the **Check Syntax**  button. If the template has errors, then a red cross is displayed next to the problematic area. Hover over the cross icon to see the error message.

15. Click **Save**.

16. On the **Save** dialog box, in the **Title** box, enter the file name for the template, and then click **Save**.

    The file name that you enter is the name that will be displayed when you upload the template into EnterpriseView.

    Note: A template name cannot be more than 200 characters and cannot contain any of the following characters: * _ %

To create an approval task

Note: You can create more than one approval task in a workflow template.

1. Create a user task, as described in the previous procedure, and give it a meaningful name. For example, "Approve Audit".

2. Click the approval task in the canvas, and then click the **Data-based exclusive (XOR) gateway** button.

3. From the gateway, create two outbound sequence flows:

   - In case of approval: One leading to the next task in the flow.
   - In case of rejection: The second leading to a different task, for example, a task that needs to be redone.

4. Click the sequence flow that represents the approved flow, and then do the following:

   a. In the **Properties** pane, expand **More Attributes**.

   b. Invent a variable name to use for this specific approval task. The variable must be alphanumeric. You must use the same variable for the approval flow and for the rejection flow. The rejection flow variable is precedes by an **!**.

      Note: You cannot use this variable for another approval task; each approval task must have a unique variable.

   c. Click in the **Condition expression** field, and enter **${<variable>}**.

5. Click the sequence flow that represents the rejection flow, and then do the following:

a. In the **Properties** pane, expand **More Attributes**.

b. Click in the **Condition expression** field, and enter **${!<variable>}**.

Upload a Workflow Template to EnterpriseView

You can upload a template created in Activiti Modeler to EnterpriseView.

For more information on creating a template, see "Create a Workflow Template" on page 239.

Note: Before you begin working with a template, you must first validate that it works properly. After you upload the template, test the template by creating a workflow that is based on it. Perform all possible workflow scenarios from start to finish in order to verify the template validity.

To upload a template

1. Click **Task Management > Workflow Management**.
2. In the **Workflow Management** window, click **Manage Templates**.
3. In the **Manage Workflow Templates** dialog box, click **Upload Template**.
4. In the **Upload Template** dialog box, select the file of the template that you want to upload, and then click **Upload**.

   EnterpriseView validates the template. If the template is not valid, a message is displayed indicating the problem. To create a valid template, see "Create a Workflow Template" on page 239.

   The template is added to the list of templates displayed in the **Manage Workflow Templates** dialog box.
5. In the **Manage Workflow Templates** dialog box, click **Close**.

Edit a Workflow Template

Editing a workflow template means changing a template in Activiti Modeler, saving it under the same file name, and reloading it to EnterpriseView.

If you created a workflow and then changed the template, the workflow that is based on the previous version does not change.

To edit a workflow

1. Click **Task Management** > **Workflow Management**.

2. In the **Workflow Management** page, click **Manage Templates**.
3. In the **Manage Templates** dialog box, click **Template Editor**.
4. In the Activiti Modeler workspace, click the template that you want to edit.
5. Make the required changes and save the template. For more information on how to edit the template, see "Create a Workflow Template" on page 239.

   Note: EnterpriseView recognizes the template by its name and not by its file name. If you change the template name, then it will no longer be considered the same template in EnterpriseView. When you edit a template, we recommend saving it under the same file name.

6. Upload the updated template to EnterpriseView. For more information, see "Upload a Workflow Template to EnterpriseView" on the previous page.

Delete a Workflow Template from EnterpriseView

You can delete a template from EnterpriseView as long as there are no workflows based on that template.

To delete a template

1. Click **Task Management > Workflow Management**.
2. In the **Workflow Management** window, click **Manage Templates**.
3. Select the template from the list, and then click **Delete Template**.

   You can reload the template at any time, as described in "Upload a Workflow Template to EnterpriseView" on the previous page

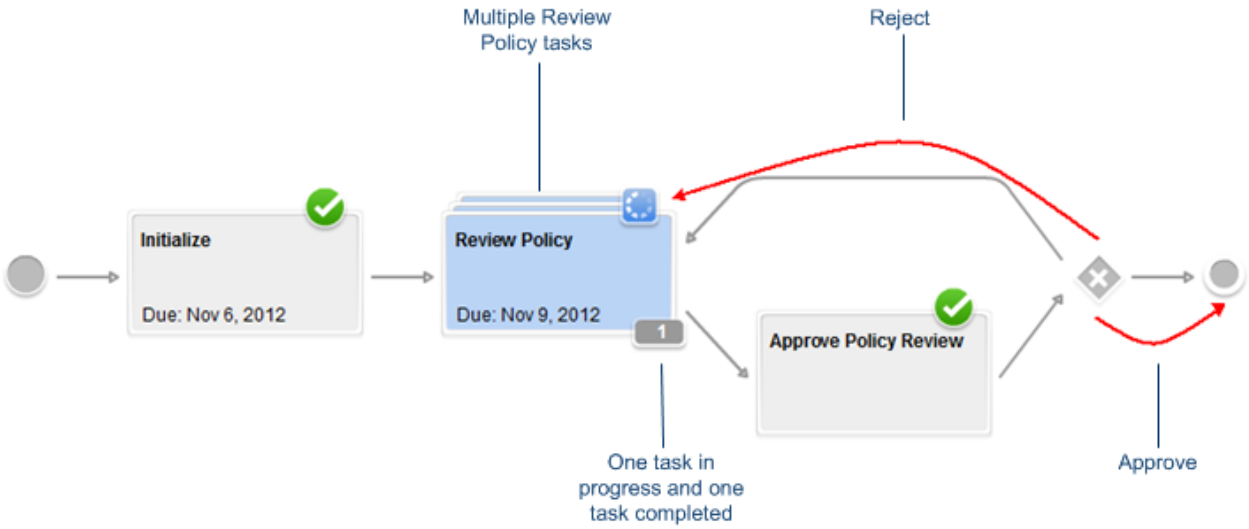
Manage Workflows

You can manage workflows in the Workflow Management window.

The workflow life cycle consists of two modes: In Progress and Completed. When they are created, their status is **In Progress** and after the last active task in the workflow is completed, their status changes to **Completed**.

Each workflow has an owner, but any user with suitable permissions can create, edit, or delete workflows. For more information on how to create, edit, or delete a workflow, see "Create a New Workflow" on the next page, "Edit Workflow Properties" on page 247, and "Delete a Workflow" on page 246, respectively.

The following figure is an example of a simple workflow created from one of the out-of-the-box templates (EnterpriseView Policy Review) included in EnterpriseView.



This workflow includes an approval task, meaning that the tasks performed prior to the approval task, must be approved by a designated user. In this case, the workflow is rejected. This means that a new Review Policy task is created. The cascading task shape in the workflow map indicates that there is more than one Review Policy task.

Multiple tasks include the following logic:

- The number at the bottom indicates that one task is in progress. In case of multiple tasks, if there is at least one task with an in progress status, then the In Progress icon is displayed.
- The due date displayed is the earliest due date of all tasks that are in progress. If all of the tasks are completed, then the latest due date is displayed.

Create a New Workflow

You can create a workflow based on the templates in EnterpriseView (user-defined or out-of-the-box). Workflow tasks belong to groups. After a workflow is created, the first task in the workflow can be assigned to a user or claimed by a user.

To create a workflow

1. Click **Task Management > Workflow Management**.
2. In the **Workflow Management** window, click **New**.
3. In the **New Workflow** dialog box, select a template from the list.
4. Enter the following information:

- **Name**: Enter a meaningful name for the workflow. The name of the workflow must be unique.

  Note: A workflow name cannot contain any of the following characters: * _ %

- **Owner**: Select an owner for the workflow.
- **Due Date**: Select the date on which the workflow should be complete.
- **Description** (optional): Enter additional information.

5. Click **Save**.

   The workflow is created with the status **In Progress**. It is displayed in the **Workflows** list in the left pane of the **Workflow Management** window and the workflow diagram in the map area.

   The first task or tasks are in status **In Progress** and all the other tasks are in status **Inactive**.

   The first task or tasks are displayed in **My Tasks** for all users that belong to the group to which the task is assigned.

6. In the **Properties** pane, under **Workflow**, click the **Stakeholders** tab, and then do the following:

   a. In the search box, enter the name or a partial name of the user or the group that you want to add as a stakeholder in this workflow.

   b. Click **Add**.

7. Enter task information (optional). Click the task in the map area, and then, in the **Properties** pane, do the following:

   a. In the **Assigned To** box, enter the user name of the person responsible for carrying out the task.

   b. In the **Due Date** box, enter a due date for the task.

   c. In the **Description** box, if required, edit the description.

   d. Click **Save**.

   Repeat this process for each task, as required.

Delete a Workflow

You can delete a workflow that is in progress. When you delete a workflow you delete all of its related tasks. You cannot delete a workflow that is completed.

To delete a workflow

1. Click **Task Management > Workflow Management**.
2. In the **Workflow Management** window, from the **Workflows** list in the left pane, click the workflow that you want to delete.
3. Click the **Delete** button.

   The workflow is removed from the list. All related tasks are deleted.

Edit Workflow Properties

You can edit the workflow properties when the workflow is in progress. After you complete a workflow, you cannot edit any of its properties or its task properties.

To edit workflow properties

1. Click **Task Management > Workflow Management**.
2. In the **Workflow Management** window, from the **Workflows** list in the left pane, click the workflow that you want to edit.
3. In the **Properties** pane, make the necessary changes, and then click **Save**. For information on workflow properties, see "Workflow Properties" on page 250.

Change the Task Group

The group to which the task belongs to is defined when the workflow template is created. The task group can be changed as long as the task is not completed.

To change the task group

1. Click **Task Management > Workflow Management**.

   Note: You can also change the group from **My Tasks**.

2. In the **Workflow Management** window, from the **Workflows** list in the left pane, click the workflow that you want to modify.
3. In the workflow graph, click the task that you want to modify.
4. In the **Properties** pane, in the **Group** box, enter a new group name.

Note: If there was an assignee for this task, it is deleted.

5. Click **Save**.

Manage Your Tasks

The **Task List** pane on the EnterpriseView home page displays the following tasks:

- Tasks that are assigned to you.
- Tasks that are assigned to the group that you belong to but are not assigned to a specific user. This includes groups that you belong to directly as well as indirectly (a group within a group).

  These tasks have the **The task belongs to a group**  icon next to them.

Unless you have suitable permissions, you cannot see tasks that do not belong to your group.

The tasks that are displayed are ready to be carried out, which means that they have the status **In Progress**. **Inactive** tasks are not displayed in the **Task List** because they are not yet available to users. After they are activated, meaning that their status is In Progress, they are displayed in the **Task List**. Completed tasks can only be viewed from the Workflow Management window. For more information, see "Workflow Management Window" on page 253.

You can access tasks in one of the following ways:

- You can access the page on which you need to perform a task directly from the **Task List** pane on the home page, by clicking the page name link.

  To refresh the tasks that are displayed in My Tasks, click the **Refresh**  button.

- You can access your tasks by clicking the **My Tasks**  button on the EnterpriseView toolbar.

  Accessing your tasks from the **My Tasks**  button on the toolbar while you are on the home page, displays the same list of tasks as in the **My Tasks** pane. If you click the **My Tasks**  button from the toolbar while any other page is open, then only the tasks that are relevant to that page are displayed.

A task can be assigned to you in one of the following ways:

- You claim the task.

  You can claim a task from the **My Tasks** dialog box. After you claim a task, the other users in your group will no longer see it in their task list.

- Another user assigns the task to you.

A task can be assigned to you by your manager or by the workflow owner. It can also be reassigned to you by a user that belongs to the same group to which you belong.

If you are assigned a task, then you can see its workflow from **My Tasks** even if you are not a workflow owner or stakeholder. You cannot, however, see the workflow of the task in the Workflow Management page.

You can release a task back to the group's task pool, which means that it is no longer assigned to you and can be claimed by any other user in your group.

The following procedures describe how to manage your tasks.

To claim a task

1. Click the **My Tasks**  button on the toolbar.
2. In the left pane, from the list of tasks, click the task that you want to claim.

   Tasks that have the **The task belongs to a group**  icon next to them are not yet assigned to you.
3. In the right pane, next to the **Assigned To** box, click the **Claim Task**  button.
4. In the **Add Comment** box, enter information pertaining to the task, and then click **Save**.

To complete a task

1. After you successfully performed your task, click the **My Tasks**  button on the toolbar.
2. In the left pane, from the list of tasks, click the task that you want to complete.
3. To complete the task, do one of the following:
   - Select the **Complete Task** checkbox.
   - If this is an approval task, select either **Approve** or **Reject**.
4. In the **Add Comment** box, enter information pertaining to the task, and then click **Save**.

   The task is removed from your task list.

To release a task

1. Click the **My Tasks**  button on the toolbar.
2. In the left pane, from the list of tasks, click the task that you want to release.

3. In the right pane, next to the **Assigned To** box, click the **Release Task** button.
4. In the **Add Comment** box, enter information pertaining to the task, and then click **Save**.

To reassign a task

1. Click the **My Tasks** button on the toolbar.
2. In the left pane, from the list of tasks, click the task that you want to reassign.
3. In the **Assigned To** box, enter the name of the user to which you want to assign the task.
4. In the **Add Comment** box, enter information pertaining to the task, and then click **Save**.

Workflow Properties

The following table describes all the workflow properties.

Property	Description
Name	The name of the workflow must be unique. You can change the name of a workflow when it is in progress. After it is completed, the name cannot be changed.
Template	The template on which the workflow is based. For more information, see "Manage Workflow Templates" on page 239. You cannot change the template of a workflow.
Owner	The person or group responsible for managing the workflow. The owner of the workflow can be changed as long as the workflow is not completed.
Due Date	The expected completion date of the workflow. The due date is the date on which the workflow is expected to be completed. It is configured when you create a workflow. The due date is displayed for workflows that are in progress. If the due date of the last task is later than the workflow due date, it means that the workflow is past its due date. The following indication is displayed: Task exceeds workflow due date.

Property	Description
End Date	The actual completion date of the workflow. The date on which the workflow is actually completed, meaning that the last task in the workflow has been completed. The end date is displayed for workflows that have a **Completed** status.
Last Task Due Date	The due date of the last task in the workflow. This date serves as a threshold indicating whether the workflow due date is on schedule or at risk of not being met.
Description	A general description of the workflow.
Status	•  **In Progress**: The status of a workflow after it is created. Users have started working on their tasks. •  **Completed**: The status of a workflow after all its tasks have been completed.

Task Properties

The following table describes all the task properties.

Note:

- You cannot edit task properties that are defined in the workflow template.
- You cannot edit task properties after the task is completed.

Property	Description
Page	The page that the task is related to as defined in the template. When creating a template, the user must assign the task to a specific page in EnterpriseView. For more information, see "Create a Workflow Template" on page 239.
ID	A task identifier used mainly to distinguish between task instances.
Name	The name of the task as defined in the template.

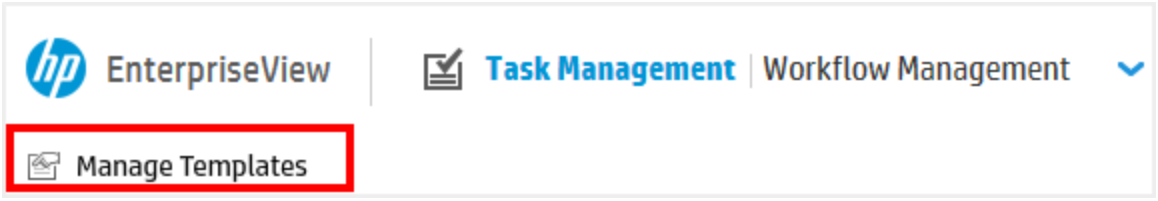
Property	Description
Description	A general description of the task defined in the template. The description originates from the Documentation field in the Activiti Modeler. You can edit the description as long as the task is not completed or belongs to a completed workflow.
Status	The status of the task: • **Inactive**  : The status of a task that is not active after a workflow has been created. At this stage, the task is not available to the assignee. Inactive tasks are accessible only from the Task Management page, but are not displayed in My Tasks. • **In Progress**  : A task receives this status only after its preceding task is completed. If there is more than one task before it, then at least one of the preceding tasks must be complete. Tasks that are in progress are displayed in My Tasks displayed in the Home page and in the My Tasks dialog box accessible from the EnterpriseView toolbar. These tasks need to be carried out by an assignee. • **Completed**  : The task status is automatically updated to **Completed** after the user selects the **Complete Task** check box or the **Reject** or **Approve** options (for approval tasks) and clicks **Save**.
Group	The group to which the task is assigned.
Assigned To	The user (assignee) to which the task is assigned. The assignee is responsible for carrying out the task. The assignee must belong to the group to which the task is assigned, or to any group within that group.

Property	Description
Due Date	The expected completion date of the task. Tasks in the workflow graph in the Workflow Management window includes the following indicators: • Past the due date. This indicator is displayed after the due date passes, meaning on the day after the due date. • Approaching the due date. This indicator is displayed on the day before the due date and until the due date is passed.
Reference	Enter information pertaining to an external system. For example, a ticket ID from a ticketing system.
Complete Task	Select this check box if you want to mark the task as completed, and then click **Save**. The status of the task is changed to **Completed** and cannot be changed back to **In Progress**.
Approve/Reject	Displayed for approval tasks. Select one of the options to approve or reject the tasks in the workflow, and then click **Save**. If you approve, then the workflow proceeds to the following task. If you reject, then the workflow proceeds to a different task.
Add Comment	Comments are shared by all the tasks that are related to a specific workflow. Both the owner and the various task assignees can enter a comment. Use comments to communicate with your colleagues, convey information, and mitigate problems related to the workflow. When you enter a comment and click **Save**, all users related to the specific workflow can view your comment. This field is mandatory.

Workflow Management Window

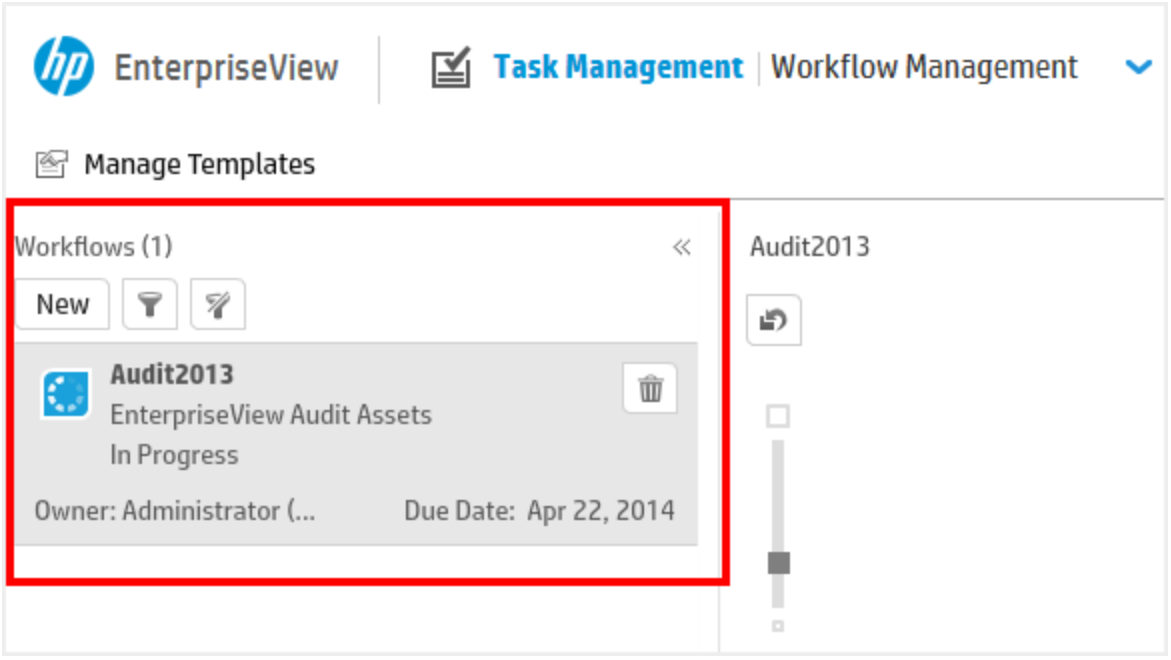
The Workflow Management window enables you manage workflows and workflow templates. For more information, see "Task Management" on page 238. The different areas and the functionalities available in each area are described in the following sections. For information on the EnterpriseView toolbar, see "Toolbar Description" on page 17.

Toolbar



UI Element	Description
Manage Templates	Click this button to open the **Manage Workflow Templates** dialog box. The **Manage Workflow Templates** dialog box includes all the actions that are related to template: • Upload template. For more information, see "Upload a Workflow Template to EnterpriseView" on page 243. • View template. Click the template name to display the workflow graph on the map. You can reset the layout, zoom in/out, or navigate the mini-map to better display the template. • Delete template. For more information, see "Delete a Workflow Template from EnterpriseView" on page 244.

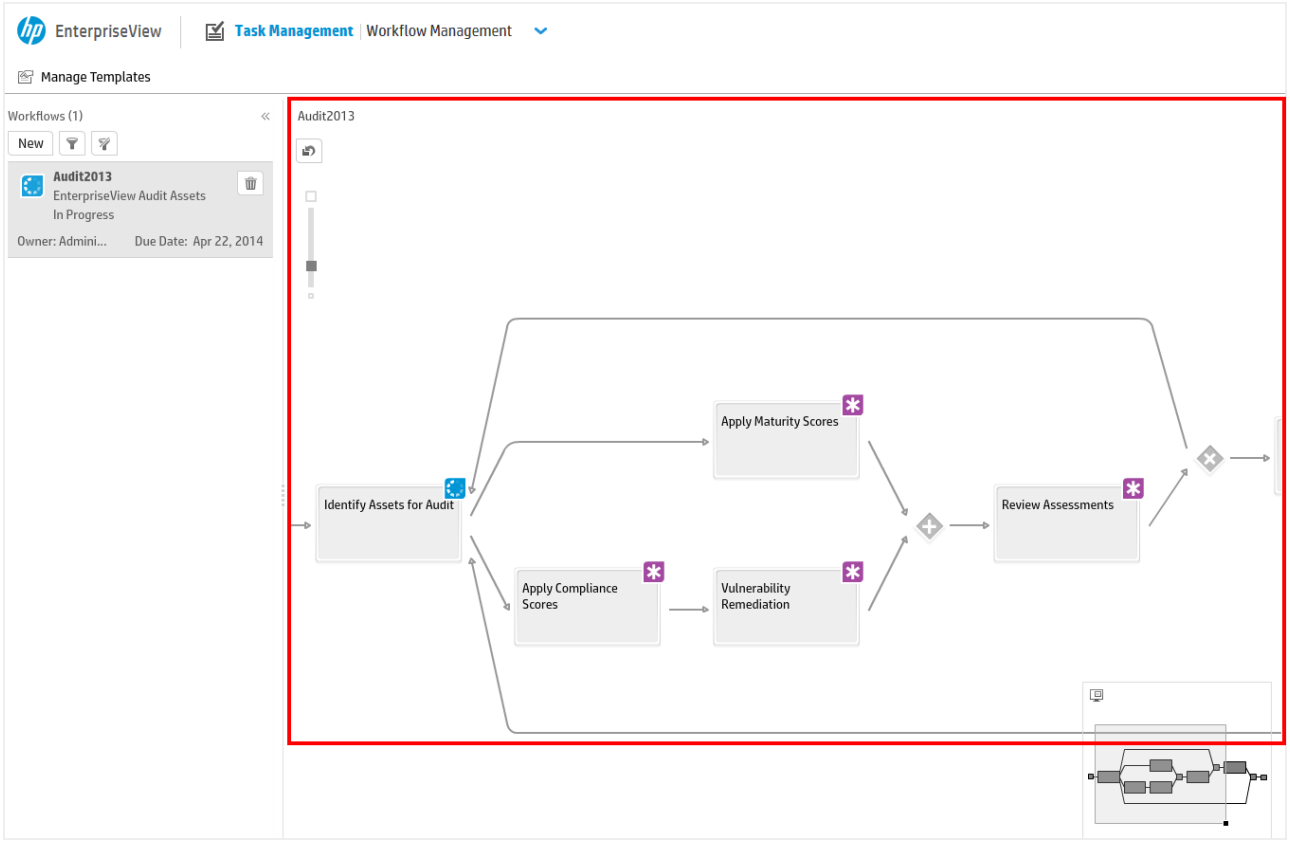
Left Pane



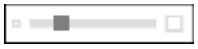
The left pane displays all the workflows that are in the system. Completed workflows are displayed at the bottom of the list. Workflows in progress are sorted by due date; the workflow with the earliest due date is displayed first.

UI Element	Description
New	**Create a New Workflow** Click this button to create a new workflow. For more information, see "Create a New Workflow" on page 245.
	**Filter Workflows** Click this button to open the **Filter Workflows** dialog box. You can filter the workflows that are displayed in the left pane by template name, workflow name, owner, and status. To remove a filter, you can either open the **Filter Workflows** dialog box and change the filter, or you can click the **Clear Filter**  button. By default, the list is filtered to display only workflows that are in progress.
	**Clear Filter** Click this button to clear all the filters that you set through the **Filter Workflows** dialog box.
	**Delete** Click this button to delete the workflow. All related tasks are deleted regardless of their status. you cannot delete a workflow that has been completed. For more information, see "Delete a Workflow" on page 246.
<Status>	One of the following values is displayed: • **In Progress**  : The status of a workflow after it is created. Users have started working on their tasks. • **Completed**  : The status of a workflow after all its tasks have been completed.
Due Date	See "Due Date" on page 250.
End Date	See "End Date" on page 251.

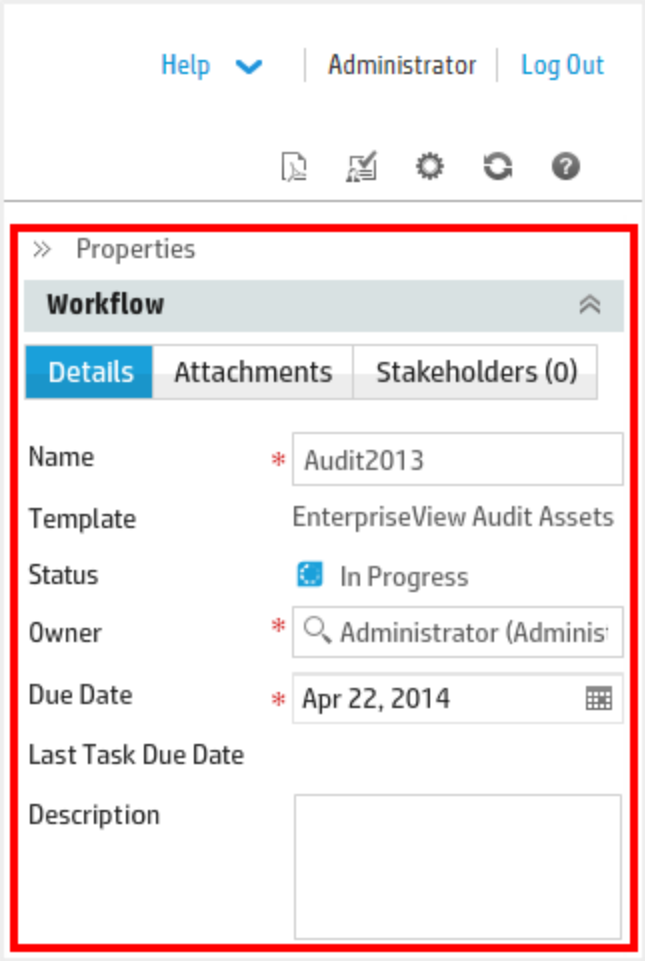
Map Area



The map area includes the workflow graph.

UI Element	Description
	**Reset Layout** Optimizes the workflow graph in the map area.
	Zoom in/zoom out workflow graph.

Properties Pane



The **Properties** pane displays the properties for the workflow that is selected in the workflow list in the left pane and for the task selected in the map area. The properties are displayed in two sections:

Workflow

To open the workflow properties, click **Workflow**.

Details Tab

This tab includes the workflow properties. For more information, see "Workflow Properties" on page 250.

Attachments Tab

UI Element	Description
Upload	Click this button to attach a file to this workflow. The maximum file size is 5.00 MB.

UI Element	Description
Delete	To delete a file from this workflow, click the file that you want to delete, and then click this button.
Download	To download a file to your local computer, click the file that you want to download, and then click this button.

Stakeholders

This tab includes a list of users and groups that have an interest in the workflow. A stakeholder can be any person who's role is connected to the workflow, but is not the owner of the workflow. Stakeholders receive the same email notifications that the workflow owner receives. For more information on email notifications, see the *Email Notifications* section in the *HP EnterpriseView Administration Guide*. For example, if the workflow owner's manager is a stakeholder, then the manager will receive a notification when the workflow is overdue or completed.

The list of stakeholders can be edited as long as the workflow is in progress. The tab displays the number of stakeholders in parenthesis.

To add a stakeholder, enter the name of the user or group in the search box, and then click **Add**.

To delete a stakeholder, click the stakeholder in the list, and then click the **Delete**  button.

Controls Tab

This tab is displayed only if the workflow was triggered by a control action that was created for mitigating a risk. For more information on control actions, see "Control Action" on page 93. It includes the controls that need to be handled in this workflow. These controls need to be applied to an asset or reassessed.

Task

To open the task properties, click **Task**. For more information on task properties, see "Task Properties" on page 251.

In addition to the task properties, this pane included the following functionality.

UI Element	Description
	**Next Task** This button helps you navigate between tasks of the same type. For example, if a workflow is rejected by the owner, then one or more tasks need to be repeated. In this case, new, duplicate tasks are created for each task that was rejected. You can navigate between these tasks by using this button.
	**Previous Task** See "Next Task" above.
Save	Save the changes that you made to the task properties.
Cancel	Cancel the changes that you made to the task properties.

Mini-map

When the workflow is too large to be entirely displayed in the map area, you can navigate it by dragging in the mini-map area.

To expand or collapse the mini-map, click the **Expand/Collapse**  button.

EnterpriseView Page IDs

Page IDs are required for creating workflow templates. The following table includes the page IDs for all EnterpriseView pages.

Page ID	Page Display Name
1	Risk Indicators
2	Threat Library Builder
3	Risk Assessment and Treatment
4	Vulnerability Management
5	Vulnerability Assignment
6	Vulnerability Dictionary
7	Policy Builder
8	Policy Mapping
9	Statement of Applicability
10	Policy and Compliance Assessment
11	Vulnerability to Control Mapping
12	Control to Threat Mapping
13	Asset Profiling
14	Workflow Management
15	Configuration
16	User Management
17	Job Management
18	Audit Log
19	Dashboard Builder
20	Threat Assignment

Page ID	Page Display Name
21	External Risk Factor Management
22	KPI Management

Workflow Template Shape Repository

You can create workflow templates in Activiti Modeler. For more information on creating templates, see "Create a Workflow Template" on page 239.

Activiti Modeler includes a set of elements (shapes) that are used to create templates. The shapes are described in the following table.

Icon	Name	Description
	Data-based Exclusive (XOR) Gateway	When splitting, it routes the sequence flow to exactly one of the outgoing branches, based on conditions. When merging, it awaits one incoming branch to complete before triggering the outgoing flow.
	Parallel Gateway	When used to split the sequence flow, all outgoing branches are activated simultaneously. When merging parallel branches, it waits for all incoming branches to complete before triggering the outgoing flow.
	Start Event	Use this shape to start a workflow.
	End Event	Use this shape to end a workflow.
	Sequence Flow	Use this shape to define the execution order of activities.
	User Task	Use this shape to model work that needs to be done by a human actor. This included approval tasks.

Chapter 10: Settings

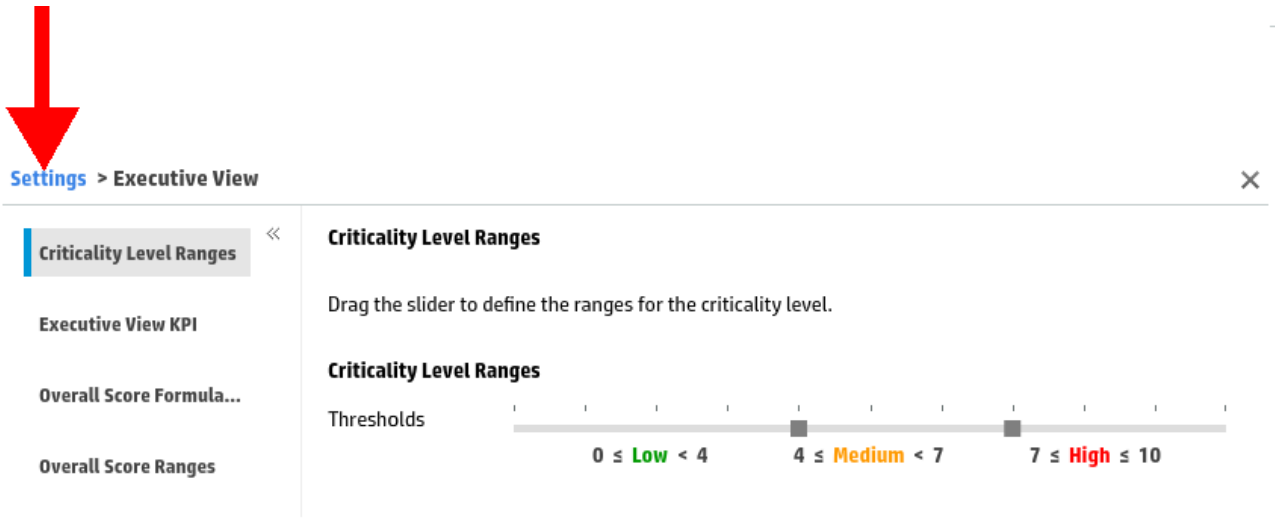
EnterpriseView includes a centralized settings module, through which you can configure all internal settings.

To access the settings module, on the EnterpriseView toolbar, click the **Settings** button. When the **Settings** dialog box opens, it displays one of the following:

- Links to every module that has specific settings. This display appears when the EnterpriseView page that is currently open does not have specific settings. Click the module name in order to access the configuration options for that module.

  Note: You have access only to modules for which you have the required permissions.

- The settings for a specific module. This display appears when the EnterpriseView page that is currently open has specific settings. For example, if the Vulnerability Management page is open, when you click the **Settings** button, then the **Settings** dialog box opens on the **Vulnerabilities** page. To return to the **Settings** main page, click **Settings** on the title bar.



After you make a change in settings, you need to refresh the page in order to apply the changes.

The following table includes all the configuration options available through the **Settings** dialog box, for each module.

Module	Setting Page
Executive View	Overall Score Formula For more information, see "Configure Overall Score Formula Weights" on the next page.
	Overall Score Ranges For more information, see "Configure Asset Overall Score Ranges" on page 264.
	Criticality Level Ranges For more information, see "Configure Criticality Level Ranges" on page 264.
	Executive View KPI For more information, see "Overall Score KPI" on page 159.
Vulnerabilities	Asset Vulnerability Score Aggregation For more information, see "Configure Asset Vulnerability Score Aggregation Parameters" on page 136.
	Vulnerability KPI For more information, see "Vulnerability Score KPI " on page 160.
	Vulnerability Ranges For more information, see "Configure Vulnerability Score Ranges" on page 137
Policy and Compliance	Compliance KPI For more information, see "Compliance Score KPI" on page 159.
	Compliance and Maturity Score Ranges For more information, see "Configure Compliance and Maturity Score Ranges" on page 63.
	Policy Administration For more information, see "Activate a Policy" on page 47.

Module	Setting Page
Risk Modeling	Actor Weights For more information, see "Configure Risk Assessment Settings" on page 107.
	Impact Area For more information, see "Configure Risk Assessment Settings" on page 107.
	Risk Score Ranges For more information, see "Configure Risk Score Ranges" on page 109.
	Risk KPIs For more information, see "Risk Score KPI" on page 160 and "Unassessed Risk KPI" on page 160.
Task Management	Risk Mitigation Template For more information, see "Configure Risk Mitigation Workflow Templates" on page 265.
	Task Management KPI For more information, see "Completed Workflows KPI" on page 160.
External Risk Factor	*<External Risk Factor Name>* For more information, see the *Configure External Risk Factor Ranges* section in the *HP EnterpriseView Deployment Guide* and "Configure External Risk Factor KPI Settings" on page 164.

Configure Overall Score Formula Weights

The asset overall score reflects the total risk of the asset. It is composed of the weighted average of the aggregate scores of all risk factors. There are five risk factors that are inherent in EnterpriseView, they include: policy compliance, the control maturity, risk, and asset vulnerability. In addition to these factors, any external risk factor that has been defined in EnterpriseView is also included in the asset overall score calculation. For more on external risk factors, see "External Risk Factors" on page 161.

Following is the formula for calculating the asset overall score:

$$\frac{\sum(\textit{normalized aggregated risk factor scores} * \textit{weight})}{\sum \textit{weights}}$$

Note: For compliance and control maturity, the complementary number to the normalized aggregated risk factor score is used.

You can edit the weights of each of the variables in the formula.

To configure the overall score formula weights:

1. On the EnterpriseView toolbar, click the **Settings**  button.
2. In the **Settings** dialog box, click **Executive View > Overall Score Formula Weights**.
3. In the **Overall Score Formula Weights** page, enter the weight for each variable in the formula.
4. Click **Save**.

Configure Asset Overall Score Ranges

You can configure the ranges for the score severity indication for asset overall scores.

Asset overall scores are displayed with one of the following icons:

 Low score

 Medium score

 High score

This configuration is reflected throughout the application, wherever these scores are displayed. For example, on the Risk Register page, in the Asset Summary component and in the Overall Score Heat Map page.

To configure vulnerability score ranges

1. On the EnterpriseView toolbar, click the **Settings**  button.
2. In the **Settings** dialog box, click **Executive View > Overall Score Ranges**.
3. Under **Overall Score Ranges**, drag the slider to define the score ranges.
4. Click **Save**.

Configure Criticality Level Ranges

You can configure the ranges for the severity indication for the criticality levels. Severity is indicated by color:

- Low = green
- Medium = yellow

- High = red

This configuration is reflected in the Overall Score Heat Map.

To configure criticality level ranges

1. On the EnterpriseView toolbar, click the **Settings**  button.
2. In the **Settings** dialog box, click **Executive View > Criticality Level Ranges**.
3. Under **Criticality Level Ranges**, drag the slider to define the ranges.
4. Click **Save**.

Configure Risk Mitigation Workflow Templates

A mitigation treatment activity can include one or more action plans for reducing risk. You can create the following types of actions:

- Control action
- Manual action

After you create the action, you can create a workflow for carrying out the action plan. EnterpriseView includes a default template for creating a workflow for a manual action, but you can change these settings, as described in the following procedure.

Note: You must select a template in order to create a workflow from the action.

To configure the template for the treatment action workflow

1. On the EnterpriseView toolbar, click **Settings**.
2. In the **Settings** dialog box, click **Task Management > Risk Mitigation Templates**.
3. From the **Template for manual action** list, select the template that the workflow is based on when you create a workflow from a manual action.
4. From the **Template for control action** list, select the template that the workflow is based on when you create a workflow from a control action.
5. Click **Save**.