

HP EnterpriseView

For Windows

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Administration Guide

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Chapter 1

Welcome to This Guide

Welcome to the HP EnterpriseView Administration Guide. This guide provides you information about day to day administrator tasks. Installation and initial configuration information can be found in the EnterpriseView Deployment Guide.

This guide is intended for the EnterpriseView System Administrator. Readers of this guide should be knowledgeable about enterprise system administration and have familiarity with information security concepts.

This guide includes the following chapters:

"About EnterpriseView" on page 7

"Update your EnterpriseView License" on page 8

"EnterpriseView Workspace" on page 9

"Manage SAP BusinessObjects Report Settings" on page 17

"Job Management" on page 18

"Update the Vulnerability Dictionary" on page 21

"Audit Log" on page 22

"Archive Data" on page 23

"Restore Search Engine Indexes" on page 28

Chapter 2

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 EnterpriseView 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. EnterpriseView incorporates a holistic, enterprise approach, streamlining and integrating risk, compliance, threat and vulnerability information and providing a business context to executives. EnterpriseView 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.
- **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, as well as the ability 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.

Chapter 3

Update your EnterpriseView License

To update your license

1. Obtain a license for EnterpriseView from your support or sales representative and save a copy of the license on the EnterpriseView server.
2. Stop the EnterpriseView service.
3. On the EnterpriseView server, open the following folder from the command line:
<EnterpriseView installation folder>\bin
4. Run the following command:
upload-license.bat -f <full path to the location of the license file>
5. Start the EnterpriseView service.

Chapter 4

EnterpriseView Workspace

EnterpriseView comes with a variety of out-of-the-box dashboard pages, based on common needs of IT and GRE personas, such as system administrators, auditors, and senior management. EnterpriseView administrators can create role-based dashboards for different types of users by mixing and matching components from the component gallery to form a rich UI experience. For each page, the administrator can define the layout of components on the page, and their interaction with one another.

This section includes the following topics:

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Edit Page Layout	12
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Set Up Wiring Between Components	14
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Create a Customized Dashboard Page

In addition to the dashboards already defined in EnterpriseView, you can create a customized dashboards using the BusinessObjects Reports component. The BusinessObjects Reports component includes predefined SAP BusinessObjects reports, in addition to any existing user-created reports. For more information on creating EnterpriseView reports in SAP BusinessObjects, see the *Create a Report Using SAP BusinessObjects Web Intelligence* section in the *HP EnterpriseView User Guide*.

To create a customized dashboard page

Note: Before you begin, plan which components you want to use and how to arrange them on the page.

1. In EnterpriseView, click **Administration > Dashboard Builder**.

The **Dashboard Builder** opens in a new window.

2. In the **Dashboard Builder** window, click **New Page**  button.

3. Configure the page layout, as described in "Configure Page Layout" on next page.

4. In an empty layout area, click the **Add Component**  button.

5. In the **Component Gallery** dialog box, in the left pane, select the **Executive View** category.
6. From the right pane, drag the **BusinessObjects Reports** component to the empty layout space.
7. Close the **Component Gallery** dialog box.
8. In the BusinessObjects Reports component, from the **Reports** list, select the report you want to use in the dashboard that you are creating.
9. If the report requires parameters, select one of the following:

Note: If the report does not require parameters, skip this step.

- To create a report/dashboard for a specific asset/policy, select either **Select a Specific Asset** or **Select a Specific Policy**.
- To create a dynamic report/dashboard, that receives the asset/policy as a parameter using the wiring capability, select either **Set up wiring between this component and an Asset Selector component** or **Set up wiring between this component and a Policy and Asset Selector component**.

Note: If the report requires an **Asset** parameter and you selected **Set up wiring between this component and an Asset Selector component**, then you must add an **Asset Selector** component to the page. If the report requires a **Policy** parameter and an **Asset** parameter and you selected **Set up wiring between this component and a Policy and Asset Selector component**, then you must add a **Policy and Asset Selector** component to the page.

10. To remove a component from a page, select a component, and then click the **Remove Component**  button.
11. Click **Create Report**.
12. Save the page, as described in "Save Page" on next page.

Configure Page Layout

The layout refers to how components are arranged on a page. EnterpriseView enables you to define each layout as horizontal (components are displayed side by side), vertical (components are displayed one above the other), or in tabbed areas. When a layout is empty, the layout tools on the upper left area enable you to define the layout.

To configure page layout

On the new page, use the layout tools to configure the layout, as described in the following table.

Note: You can drag components from the Component Gallery to the required section on the page.

Layout tool	Description
	Split Click to divide a vertical layout into two layouts, one above the other.
	Split Click to divide a horizontal layout into two layouts, side by side.
	Switch to Horizontal Click to change the layout from vertical or tabbed to horizontal. Components placed in this area will be added side by side.
	Switch to Vertical Click to change the layout from horizontal or tabbed to vertical. Components placed in this area will be added one above the other.
	Switch to Tabs Click to change the layout from vertical or horizontal, to a tab layout. Components placed in this area will be added as tabs.
	Add Component Click to open the Component Gallery. You can then double-click a component to place it in the layout area.
	Remove Layout Click to remove a layout from the page.

Save Page

Save the page to the Page Gallery.

To save a page

1. On the EnterpriseView toolbar, click the **Save or Save as**  button.
2. In the **Save to Page Gallery** dialog box, do the following, and then click **OK**:
 - a. In the **Name** box, enter a name for the page. This is the name that is displayed in EnterpriseView.
 - b. If you are saving the page as a new page, select the **Save as new page** check box.
 - c. In the **Description** box, if necessary, enter a description. The description appears as a tooltip for the page, within the Page Gallery.
 - d. From the list of categories, select the category to which the page belongs. If you do not select a category, the page will be added to the **Not Categorized** group.

Note: Pages that are saved to a specific category are displayed under that category in the EnterpriseView Home page and in the navigation bar. Pages in the **Not Categorized** group are not displayed.

3. Refresh your browser.

Manage Pages

Pages are collections of components that are displayed together and that interact with one another.

Default pages are located in the Page Gallery, together with any pages you created and saved. Through the Page Gallery, you can select a page, open it in the EnterpriseView workspace, assign pages to categories, and clone or delete pages. You can delete only user-created pages.

To assign a page to a category

1. On the EnterpriseView toolbar, click the **Page Gallery**  button.
2. In the **Page Gallery** dialog box, select the category check box from the categories on the left side, and then select the page.
3. Click the **Categorize Page**  button. Select the category check box, and then click **OK**.

To clone a page

1. On the EnterpriseView toolbar, click the **Page Gallery**  button.
2. In the **Page Gallery** dialog box, select the category check box from the categories on the left side, and then select the page.
3. Click the **Clone Page**  button.

To delete a page

1. On the EnterpriseView toolbar, click the **Page Gallery**  button.
2. In the **Page Gallery** dialog box, select the category check box from the categories on the left side, and then select the page.
3. Click the **Delete Page**  button. A confirmation message is displayed. Click **Yes**.

Edit Page Layout

To edit page layout

1. Select the page that you want to lay out again from the **Select Page** list on the EnterpriseView toolbar.
2. Click the **Edit Page Layout**  button.

The components are hidden and the layout of the page is displayed.

3. Lay out the page again using the layout tools, as described in "Configure Page Layout" on page 10, and then click the **Edit Page Layout**  button to exit editing.
4. Save the page. For more information, see "Save Page" on page 11.

Manage Components

Components are areas on a page that display information relevant to EnterpriseView users' business tasks. The Component Gallery contains components that can be used within EnterpriseView, grouped by categories. You can add, edit and delete user-created component categories via the Component Gallery, as described in "Manage Component Categories" below. You can also create external components, as described in "Create an External Component" on next page.

Each component has permissions that are relevant to the function that it provides. When you create a new page, the components that you choose define which roles will be able to access the page. Only users with roles that include permissions for all of the components on the page are granted access to that page. For more information on the permissions of each page, see the *Roles and Permissions* section in the *EnterpriseView Deployment Guide*.

Manage Component Categories

You can add, rename, and delete user-created component categories via the Component Gallery.

To create a new component category

1. On the EnterpriseView toolbar, click the **Components**  button.
2. In the **Components Gallery** dialog box, click the **New Category**  button on the top left side.
3. In the **New Category** dialog box, in the **Name** field, enter a name for the category that you are creating, and then click **OK**.

To rename a component category

1. On the EnterpriseView toolbar, click the **Components**  button.
2. In the **Components Gallery** dialog box, from the list of categories on the left side, select the check box for the category that you want to rename, and then click the **Edit Category Name**  button.
3. On the **Edit Category Name** dialog box, in the **Name** field, enter a new name for the category, and then click **OK**.

To delete a component category

1. On the EnterpriseView toolbar, click the **Components**  button.

2. In the **Components Gallery** dialog box, from the list of categories on the left side, select the check box of the category you want to delete, and then click the **Delete Category**  button. A confirmation message is displayed. Click **Yes**.

Any components that belonged to this category are now in the **Not Categorized** group.

Create an External Component

The following procedure describes how to create a component using a URL. You must use a static URL, where the component simply opens the URL that you enter. The URL for an external component must begin with one of the following protocols:

- https://
- http://
- ftp://

To create an external component

1. On the EnterpriseView toolbar, click the **Components**  button.
2. In the **Components Gallery** dialog box, in the left pane, click the **Add External Component**  button.
3. In the **New Component** dialog box, do the following, and then click **OK**:
 - a. In the **Name** field, enter a name for the component.
 - b. In the **URL** field, enter the URL.
 - c. Click **Categorize Component** to expand the section. Select the check box of the category to which you want to add the component or click the **New Category**  button to create a new one.

Set Up Wiring Between Components

The interaction between components on a page in EnterpriseView is called wiring. After you place components on a page, you can define how components interact with one another. In addition, a component can send a wiring context to another component indicating what has changed in the first component, and the second component can respond to this change. For example, you can set up a page so that if you select an asset in one component (source), the other components on the page display information relating to that asset (target).

Default pages have predefined wiring. You can define wiring for user-created pages in addition to modifying default wiring definitions.

To set up wiring between components

1. Do one of the following:

- On the EnterpriseView toolbar, click the **Page Wiring**  button.
 - **To set up wiring from the source component**, on the top right side of the component, click the **Component Menu**  button, and then click **Wiring**. This option is only available when a component can function as a source component; if it only functions as a target component, then the Wiring option is disabled. The capability of a component as a source, target or both is defined within EnterpriseView and cannot be changed.
2. In the **Wiring** dialog box, do the following, and then click **OK**:
- a. If there is more than one potential source component, from the **Source Components** area, click the component that you want to set as the source. If you are setting up the wiring from the source component, then this area does not display.
 - b. In the **Target Components** area, select the check boxes of all the target components that you wire to the source. To remove wiring, clear the relevant check boxes.

Dashboard Builder Toolbar

The Dashboard Builder toolbar enables you to create customized dashboards.

The following table describes the toolbar's functionality.

UI Element	Description
	Select a page from this list to open the page in your workspace. The list contains the dashboards that are defined in the Page Gallery. The list is narrowed when you start typing a page name in this box.
	Refresh Click to refresh the page.
	Save or Save As Click to save the current page to the Page Gallery. A dialog box enables you to name the page, give the page a description, and select a category for the page. The description appears as a tooltip for the page in the Page Gallery. For more information, see "Save Page" on page 11 .
	Page Gallery Click to open the Page Gallery. The Page Gallery contains default pages, as well as pages you have saved. You can then edit page definitions, or open pages. For more information, see "Manage Pages" on page 12 .
	New Page Click to create a new page. After opening a new page, you can configure its layout and add components. For more information, see "Create a Customized Dashboard Page" on page 9 .

UI Element	Description
	<p>Edit Page Layout</p> <p>Click to modify the layout of an existing page. Use the Layout tools in the top left corner of each layout to modify the layout areas. For more information, see "Edit Page Layout" on page 12.</p> <p>Exit Editing</p> <p>When you are done, click this button to stop editing.</p>
	<p>Components</p> <p>Click to open the Component Gallery, which contains default components, as well as components you have added. You can edit component definitions, or add components to a page. For more information, see "Manage Component Categories" on page 13.</p>
	<p>Page Wiring</p> <p>Click to define the wiring between components; this determines how components interact with one another. For more information, see "Set Up Wiring Between Components" on page 14.</p>

Chapter 5

Manage SAP BusinessObjects Report Settings

The SAP BusinessObjects reports settings are configured during the installation of EnterpriseView.

Note: If these settings are changed in SAP BusinessObjects, then you must update this information manually in EnterpriseView.

To update SAP BusinessObjects reports settings

1. Click **Administration > Configuration**.
2. In the **Configuration** module, in the left pane, click **SAP BusinessObjects > Report Settings**.
3. In the right pane, make the necessary changes to the Shared Secret parameter.

Note: The Shared Secret parameter is located in the Authentication > Enterprise area of SAP Business Objects.

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

Chapter 6

Job Management

The EnterpriseView Job Management module is based on the Spring Batch framework. You can use the Job Management module to perform the following tasks:

- **Launch batch jobs manually**

Generally, batch jobs are scheduled to run automatically via the EnterpriseView Configuration module. However, you can also launch jobs manually when required, for example, in order to re-run a job that failed or in order to test a job in a test environment. For more information, see ["Launch Batch Jobs Manually" on page 20](#).

- **Troubleshoot batch jobs**

You can inspect the details of each step that comprises the job in order to identify where it failed. For more information, see ["Troubleshoot Batch Jobs" on page 20](#).

The following table includes all the batch jobs defined in EnterpriseView.

Batch Job	Description
CsvAssetSyncJob	CSV Asset Synchronization Job For more information, see the <i>About CSV Asset Synchronization Job</i> section in the <i>HP EnterpriseView Deployment Guide</i>
EsmAssetSyncJob	ArcSight ESM Asset Synchronization Job For more information, see the <i>About ArcSight ESM Asset Synchronization Job</i> section in the <i>HP EnterpriseView Deployment Guide</i>
EsmSecurityThreatImportJob	ArcSight ESM Security Threats Job For more information, see the <i>About ArcSight ESM Threats Job</i> section in the <i>HP EnterpriseView Deployment Guide</i>
UcmdbAssetSyncJob	UCMDB Asset Synchronization Job For more information, see the <i>About UCMDB Asset Synchronization Job</i> section in the <i>HP EnterpriseView Deployment Guide</i>
VulnerabilitiesImportJob	Vulnerability Import Job For more information, see the <i>About Import Vulnerability Job</i> section in the <i>HP EnterpriseView Deployment Guide</i>

Batch Job	Description
DictionaryInfoImportJob	<p>Dictionary Information Import Job</p> <p>For more information, see the <i>About the Dictionary Information Import Job</i> section in the <i>HP EnterpriseView Deployment Guide</i></p>
ArchiveAuditLogDataJob	<p>Archive Audit Log Job</p> <p>For more information, see "About Archive Audit Log Job" on page 26</p>
ExtractDataToArchiveJob	<p>Archive Trend Data Job</p> <p>For more information, see "Archive Trend Data" on page 23</p>
RestoreIndexesJob	<p>Restore Indexes Job</p> <p>For more information, see "Restore Search Engine Indexes" on page 28</p>
<External Risk Factor Name>ImportJob	<p><External Risk Factor Name> Import Job</p> <p>For more information, see "About External Risk Factor Import Job" on page 29</p>
<External Risk Factor Name>ArchiveJob	<p>Archive External Risk Factor Job</p> <p>For more information, see "Archive Trend Data" on page 23</p>

Launch Batch Jobs Manually

To launch batch jobs manually

1. In EnterpriseView click **Administration > Job Management**, and then, from the toolbar, click **Jobs**.
2. From the **Jobs Names Registered** table, click the job that you want to launch.
3. In the **Job Parameters** box, the timestamp that is displayed belongs to the last batch job that was run. Increment the timestamp by 1, and then click **Launch**.

Note: If the job is not scheduled or if this is the first time that you are running this job, then enter "**Key=n**", where n is a unique number.

The job instance is displayed in the **Job Instances for Job** table with a **Started** status.

4. To stop the batch job before it is completed, in the **Job Instances for Job** table, identify the job instance that you want to stop, click the **Started** status in the **LastJob Execution** column, and then click **Stop**.
5. To view the progress of the batch job and the status of each of its steps, in the **Job Instances for Job** table, identify the job instance, and click the status in the **LastJob Execution** column. A table with the job steps is displayed on the bottom of the page.

Troubleshoot Batch Jobs

You can inspect the details of each step that comprises the job in order to identify where it failed.

To troubleshoot batch jobs

1. In EnterpriseView click **Administration > Job Management**, and then, from the toolbar, click **Executions**.
2. From the **Recent and Current Job Executions** table, identify the job that you want to inspect and click on the **Executions** link in the **ID** column.

The **Details for Job Execution** page displays the following information:

- Details on the job level.
 - A table that includes all the job steps and their statuses.
3. From the job steps table, identify the step with the **Failed** status, and in the **Status** column click the **Failed** link.

The **Step Execution Progress** page displays detailed information on the step:

- **History for Step Execution for Step:** Displays the history of the execution of this step across all job executions.
- **Details for Step Execution:** Displays the meta data for this step, in addition to an extract of the stack trace from any exception that caused the failure of the step.

Chapter 7

Update the Vulnerability Dictionary

Note: To update the vulnerability dictionary, contact your EnterpriseView sales representative.

The EnterpriseView labs regularly release vulnerability dictionary updates. For more information about the vulnerability dictionary, see the *About the Vulnerability Dictionary* section in *HP EnterpriseView User Guide*.

The Dictionary Information Import Job parses and loads the updates to EnterpriseView. For more information, see "[About the Dictionary Information Import Job](#)" below.

To update the vulnerability dictionary

1. Obtain the **DictionaryInfo.zip** file from your EnterpriseView sales representative and copy it to the following location:

<EnterpriseView installation folder>\vm\import\dictionary

Note: Do not change the file name or content.

2. Run the **DictionaryInfoImportJob**, as described in "[Launch Batch Jobs Manually](#)" on page 20.

About the Dictionary Information Import Job

The Dictionary Information Import Job imports new and updated vulnerability data from files provided by the EnterpriseView labs into the EnterpriseView database, as follows:

1. The process extracts the **DictionaryInfo.zip** file.
2. The process checks the version of the package.
 - If the version of the package is lower than the version that exists in the EnterpriseView database, then no change is made in the database and the process proceeds to step 4.
 - If the version of the package is higher than the version that exists in the EnterpriseView database, then the process proceeds to the following step.
3. The process updates the vulnerability dictionary tables in the EnterpriseView database. The version of the vulnerability dictionary records is updated.
4. The **DictionaryInfo.zip** file is renamed to **DictionaryInfo<date>.zip.old**.

Chapter 8

Audit Log

The audit log allows you to track user initiated and automatic actions performed in EnterpriseView. You can view the audit log through the EnterpriseView user interface. The information presented in the log can be filtered according to different parameters, such as date and time, user name, or the page on which the action was performed. By default, the audit log records are sorted by date and time in descending order. You can sort the records according to any one of the parameters by clicking the parameter title.

Click the **Export to CSV File**  button to export the audit log to a csv file. The information included in the file is based on the filter that you set.

The following table includes a description of the parameters that comprise the audit log.

Parameter	Description
Date and Time	The date and time on which the action occurred.
Module	The module in which the action occurred. These include: Login, Policy and Compliance, Risk Modeling, Assets, Vulnerabilities, Settings, and Task Management.
User Name	The EnterpriseView user name of the user that performed the action. If the action was performed automatically, then the user name is empty.
Page	The page on which the user performed the action. For example, if the user logged on to EnterpriseView, then the page is Login.
Action	The action that the user performed.
Success	Indicates whether the action was successful or a failure, Yes or No .
Method	One of the following options: <ul style="list-style-type: none">• Manual: the action was initiated by a user. For example, logging on to EnterpriseView.• Automatic: the action was initiated by the system. For example, when a vulnerability is automatically closed or reopened.
Description	Specific information about the action. For example, if a new policy was created, then the description would include the new policy name.

Chapter 9

Archive Data

You can archive the following data:

- Trend data. For more information, see "Archive Trend Data" below.
- Audit log. For more information, see "Archive the Audit Log" on page 25.

Archive Trend Data

EnterpriseView dashboards include trend charts which are used to show a general pattern of change in data over time. Displaying data over time helps you understand performance and compare it to your organization's established objectives.

To support the trend charts, EnterpriseView archives data for all assets for the following measurements:

- Aggregate overall score
- Aggregate vulnerability score
- Number of open vulnerabilities
- Aggregate risk score
- Aggregate maturity score
- Aggregate compliance score
- And scores and aggregate scores for any external risk factor defined in EnterpriseView

The corresponding trend charts for these measurements are displayed in the following dashboards:

Measurement	Trend Chart	Dashboard Name
Aggregated overall score	Asset Overall Score Over Time	Risk Register
Aggregated vulnerability score	Aggregated Vulnerability Score Over Time	Vulnerability Dashboard
Number of open vulnerabilities	Number of Open Vulnerabilities Over Time	Vulnerability Dashboard
Risk	Aggregated Risk Score Over Time	Risk Modeling Dashboard
Maturity	Maturity Score Over Time	Compliance Dashboard and Compliance by Policy Dashboard

Measurement	Trend Chart	Dashboard Name
Compliance	Compliance Score Over Time	Compliance Dashboard and Compliance by Policy Dashboard
External risk factor	Aggregate Risk Factor Score Over Time	External Risk Factors Dashboard

Archiving internal risk factors and external risk factors is done differently.

- **Internal risk factors**

All internal risk factors data is archived by using the same job: **ExtractDataToArchiveJob**. You can configure EnterpriseView to archive trend data of internal risk factors on a weekly basis, as described in "[Schedule and Activate the Archive Trend Data Job](#)" below. You can also archive trend data at any time by manually running the **ExtractDataToArchiveJob**. To run a job manually, see "[Launch Batch Jobs Manually](#)" on page 20. If the job is run more than once a day, only the scores from the last job are reflected in the trend chart.

Note: When you complete an audit process and you perform a clear assessment, the aggregated maturity score and the aggregated compliance score are archived for all assets for the policies you cleared. The trend chart displays an indication that the snapshot is due to clear assessment.

- **External risk factors**

Each external risk factor has a separate archiving job. The job name is <External Risk Factor>ArchiveJob. You can configure EnterpriseView to archive trend data of external risk factors, as described in "[Configure the External Risk Factor Archive Settings](#)" on next page.

Schedule and Activate the Archive Trend Data Job

Note: The Archive Trend Data Job archives data for internal risk factor information; it does not archive information for external risk factors.

For information on archiving trend data, see "[Archive Trend Data](#)" on previous page.

To schedule and activate the job

1. Click **Administration > Configuration**.
2. In the left pane, click **Archive > Schedule Job**.
3. In the **Schedule Job** page, do the following:
 - Select the **Activate Job** check box.
 - From the **Day** list, select the day of the week on which you want to run the job.
 - From the **Hour** list, select the hour in the day on which to run the job.

Note: During the time that the job runs, you cannot make any changes in the system. Make sure to consider this when selecting the time of day.

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

The job is activated and will run according to the schedule that you have set.

Configure the External Risk Factor Archive Settings

Note: The <External Risk Factor> Archive Job archives data for external risk factor information; it does not archive information for internal risk factors.

For information on archiving trend data, see "[Archive Trend Data](#)" on page 23.

To configure the archive settings

1. Open the external risk factor folder. Click **Administration > Configuration**, expand the **External Risk Factor** folder, and then click the factor that you defined.
2. Under the folder of the external risk factor that you defined, click **Archive**.
3. In the **Archive** page, do the following:
 - If you want to archive scores immediately after information is imported into EnterpriseView, then select the **Archive immediately after import** check box. Selecting this option adds another snapshot to the archive and affects this factor's trend charts.
 - Select the **Activate Job** check box.
 - **Job Schedule:** Enter a Cron expression.

For example, to run the job once every hour, every day, enter the following:

0 0 0/1 * * ?

Note: We recommend that you schedule the job to run no more than once a day. If you import information more than once a day, only the last import information will be saved.

For more information, see the *Learn About Cron Expression* section as described in *HP EnterpriseView Deployment Guide*.

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

The job is activated and will run according to the schedule that you have set.

Archive the Audit Log

You can archive the EnterpriseView audit log in order to keep it in a manageable size. You can either schedule the Archive Audit Log Job to run at a certain time or you can run it manually through the Job Management module. For information on scheduling the job, see "[Schedule and Activate the Archive Audit Log Job](#)" on page 27. For information on running the job manually, see "[Launch Batch Jobs Manually](#)" on page 20.

The archived data is kept in EnterpriseView database in the **RC_EV_AUDIT_LOG_ARCHIVE** table. You can choose to delete the data in the archive table. For more information, see "[Configure Archive Audit Log Job Settings](#)" below.

For more information on the Archive Audit Log Job, see "[About Archive Audit Log Job](#)" below.

About Archive Audit Log Job

The Archive Audit Log job periodically archives the audit log as follows:

1. Data from the audit log table (RC_EV_AUDIT_LOG) is extracted and written to the audit log archive table (RC_EV_AUDIT_LOG_ARCHIVE). You can determine the scope of data in the Configuration module. For more information, see "[Configure Archive Audit Log Job Settings](#)" below.
2. The archived data is deleted from the audit log table (RC_EV_AUDIT_LOG).
3. Depending on how you configured the job settings, data is deleted from the archive table (RC_EV_AUDIT_LOG_ARCHIVE).

Configure Archive Audit Log Job Settings

You can configure the scope of the data that you want to archive.

To configure the job settings

1. Click **Administration > Configuration**.
2. In the left pane, click **Audit Log > Archiving Settings**.
3. To archive data, select one of the following options:
 - **Archive All**: Select this check box if you want to archive the entire audit log table. This means that the entire audit log table will be deleted after the archiving is complete.
 - **Archive Data Older Than (Days)**: Enter the number of days for which you want to save data in the audit log table. Older data will be archived.

Note: If you selected **Archive All** then it overrides any value entered in **Archive Data Older Than (Days)**. If neither of these options are selected, then the audit log will not be archived.

4. To delete archived data, select one of the following options:
 - **Delete All Archived Data**: Select this check box if you want to delete the entire archive table.
 - **Delete Data Older Than (Days)**: Enter the number of days for which you want to save data in the archive table. Older data will be deleted permanently from EnterpriseView.

Note: If you select **Delete All Archived Data** then it overrides any value entered in **Delete Data Older Than (Days)**. If neither of these options are selected, then the archive table will not be deleted.

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

Schedule and Activate the Archive Audit Log Job

After you define the job settings, you can schedule and activate the Archive Audit Log job.

For more information on the flow of the job, see "About Archive Audit Log Job" on previous page.

To schedule and activate the job

1. Click **Administration > Configuration**.
2. In the left pane, click **Audit Log > Archiving Settings**.
3. In the right pane, do the following:
 - Select the **Activate Job** check box.
 - **Job Schedule:** Enter a Cron expression.
For example, to run the job once every hour, every day, enter **0 0 0/1 * * ?**
For more information , see the *Learn About Cron Expressions* section in the *HP EnterpriseView Deployment Guide*.
4. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section as described in *HP EnterpriseView Deployment Guide*.

The job is activated and will run according to the schedule that you have set.

Chapter 10

Restore Search Engine Indexes

The search engine used in the vulnerability dictionary is based on indexing. EnterpriseView includes an index restoration job in case the index files become corrupted or in case the entire file system becomes corrupted. If the search functionality in the vulnerability dictionary does not work properly, then it might indicate that the index files are corrupted. In this case, we recommend running the **RestoreIndexesJob**.

The job retrieves vulnerability data from the EnterpriseView database, creates indexes, and writes them to the relevant files in EnterpriseView.

To restore search engine indexes

1. Stop the EnterpriseView service.
2. Delete the following folder:
<EnterpriseView Installation Folder>/Indices
3. Start the EnterpriseView service.
4. Run the **RestoreIndexesJob** from the Job Management module, as described in "[Launch Batch Jobs Manually](#)" on page 20.

Chapter 11

Import Risk Information from External Sources

EnterpriseView enables you to import information on risk factors from any external source. For more information on external risk factors, see the *External Risk Factors* section in the *HP EnterpriseView User Guide*.

Information is imported by using a connector. EnterpriseView supports the following connector types:

- CSV connector: Create an add-on data connection allowing you to load data directly from a comma separated files (CSV) into EnterpriseView.
- ESM connector: Create and ESM connector allowing you to load data from and ESM report into EnterpriseView.
- Custom connector: Create a JAR file connector allowing you to load data from any source into EnterpriseView.

Following are the steps for importing risk information into EnterpriseView:

1. Create a connector.
 - To create a CSV connector, see "[Create a CSV Connector](#)" on next page.
Put the CSV connector file anywhere on the EnterpriseView server or on a different server that can be accessed by EnterpriseView.
 - To create an ESM connector, see "[Create an ESM Connector](#)" on page 31.
 - To create a custom connector, see "[Create a Custom Connector](#)" on page 31.
Put the custom connector JAR file in the following folder:
<EnterpriseView Installation Folder>/Plugins
2. Define the external risk factor and configure the connector. For more information, see "[How to Configure External Risk Factors](#)" on page 32.

Note: For optimal performance, schedule the import jobs for each of the external risk factors to run at different times, with at least a 30-minute difference between runs.

About External Risk Factor Import Job

The External Risk Factor Import Job periodically imports risk information from external sources. For each external risk factor that you define and configure in EnterpriseView, a specific job is created with the name: *<external risk factor name>*ImportJob. The job is created only after the new configuration is saved and activated.

Following is the process:

1. The process checks whether the data was already imported into EnterpriseView. If it was, then the process completes without import.

If the data is invalid, for example if one of the columns is missing, then the job fails.

2. The process reads the data from the data source.
3. The process reconciles the assets by matching the Asset Identifier parameter to one of the asset properties defined in Configuration. For more information, see ["Configure Asset Reconciliation Parameters" on page 35](#).
4. The process writes the new data to the scores table in the database.
 - If a score is out of range, then the record is skipped.
 - If there are duplicate records, then the last record found overrides the previous record.
 - If EnterpriseView has more than one asset defined in the business matches the Asset Identifier in the data source, then the first one found is updated.

Note: In all of these cases, a warning is written to the error log.

5. If there is data in the scores table in the database, then the process deletes it.
6. The process aggregates the scores and writes them to the database.
7. If you selected the Archive immediately after import check box in Configuration, then both scores and aggregate scores are archived. If you are using a CSV connector, then the timestamp is the Date Time from the CSV file.

Create a CSV Connector

View the sample CSV file:

<EnterpriseView Installation Folder>/Samples/sampleRiskFactorCsvFile

Create a CSV connector with the following format:

Parameter	Format	Description
SnapshotDate	dd/mm/yyyy	Optional This parameter represents the timestamp of the score, for archiving purposes. If this parameter is empty, then the import date is used as the timestamp. If a value exists but is different from the required format, then the job fails.
Asset Identifier	Maximum 255 characters	Mandatory If the asset identifier is empty, then the record is skipped.

Parameter	Format	Description
Score	Rational number	Mandatory If the score is empty, then the record is skipped.
Comment	Free text	Optional A maximum of 1024 characters can be displayed in EnterpriseView. A comment that exceeds the maximum length is truncated.

Create an ESM Connector

Note: Before you create an ESM connector, you must first integrate with ArcSight ESM in order to synchronize the EnterpriseView business model with ArcSight ESM assets. Only assets that are imported from ArcSight ESM can be updated with risk factor scores from ArcSight ESM. For more information on integrating with ArcSight ESM, see the *Integrate with ArcSight Enterprise Security Manager* section in the *HP EnterpriseView Deployment Guide*.

Create an ESM Report, in the form of a .csv file, with the following format:

Parameter	Format	Description
Asset Identifier	Maximum 255 characters	Mandatory If the asset identifier is empty, then the record is skipped.
Score	Rational number	Mandatory If the score is empty, then the record is skipped.

For instructions on creating an ESM report, see the *ArcSight ESM User Guide*.

Create a Custom Connector

The following table includes general information about the methods that you need to implement when creating a custom connector. For further instructions and assistance in creating a custom connector, contact your HP Support representative.

Return Value	Method Name and Parameters	Description
void	init (Map<String, String> params)	This method is called to initialize the connector. It is the first method that is called. It can be called several times during one import process. This method passes the connection parameters.

Return Value	Method Name and Parameters	Description
String	get-Source-VersionString()	This method is called to get the version of the latest source read. If the version is equal to the previously read version, then the process completes without import. If it returns NULL, then the import is always carried out.
Date	getTimestamp ()	This method is called to get the timestamp of the scores currently being received. The timestamp is used for archiving purposes.
List<ScoreRecord>	readRecords()	This method is called several times to retrieve all scores. When this method returns an empty list, then it is no longer called.
List<String>	readWarnings()	This method is called after all scores are read. All warnings returned are written into the error log. This method can return an empty list or NULL if there are no warnings.

How to Configure External Risk Factors

In order to import risk information from external sources you must first define and configure the external risk factors in EnterpriseView.

The following procedure outlines the steps for defining and configuring external risk factors:

1. Define a new external risk factor in EnterpriseView. For more information, see ["Define a New External Risk Factor"](#) on next page.
2. Configure the connection parameters, depending on the connector that you created. For more information see ["Configure the External Risk Factor Connector Parameters"](#) on page 34.
3. Configure the external risk factor import job. For more information see ["Configure the External Risk Factor Import Job"](#) on next page.
4. Configure the normalization settings for the risk factor. For more information, see ["Configure the External Risk Factor Normalization Settings"](#) on page 35.
5. Configure the asset reconciliation parameters. For more information, see ["Configure Asset Reconciliation Parameters"](#) on page 35.

Note: Skip this step if you are creating an ESM connector.

6. Configure the external risk factor score aggregation method. For more information, see ["Configure the External Risk Factor Aggregation Method"](#) on page 36.
7. Configure the archive settings. For more information, see ["Configure the External Risk Factor Archive Settings"](#) on page 25.
8. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section as described in *HP EnterpriseView Deployment Guide*.

9. Configure external risk factor ranges in order to display the risk factor scores with the appropriate score severity. For more information, see "[Configure External Risk Factor Ranges](#)" on page 37.

Define a New External Risk Factor

You can define any number of external risk factors in EnterpriseView.

After you define the risk factor you can configure its connection parameters, as described in "[Configure the External Risk Factor Connector Parameters](#)" on next page.

To define a new external risk factor

1. Click **Administration > Configuration**.
2. On the **Configuration** page, in the left pane, click **External Risk Factor**.
3. Click the **Add configuration to configuration set**  button, and select the type of connector that you want to create:
 - **CSV Connector**
 - **Custom Connector**
 - **ESM Connector**
4. In the left pane, expand the **External Risk Factor** folder, and then click the empty folder.
5. In the left pane, enter the following information:
 - a. **Risk Factor Name:** enter the name of the external risk factor for which you want to import risk information.

Note: This is also the display name of the external risk factor. It will be displayed in the folder name, Risk Register, Risk Indicators, External Risk Factor Dashboard, and any other report that includes this risk factor.

- b. **Description:** this field is optional. You can include information about the external source.

Configure the External Risk Factor Import Job

After the connector parameters are configured, you need to schedule and activate the External Risk Factor Import Job. For each external risk factor that you define and configure in EnterpriseView, a specific job is created with the name: *<external risk factor name>*ImportJob. The job is created only after the new configuration is saved and activated. For more information on the job, depending on the connector you are using, see "[About External Risk Factor Import Job](#)" on page 29 or .

To schedule and activate the import job

1. Open the external risk factor folder. Click **Administration > Configuration**, expand the **External Risk Factor** folder, and then click the factor that you defined.
2. Under the folder of the external risk factor that you defined, click **Import Job**.

3. In the **Import Job** window, in the right pane, do the following:
 - a. Select the **Activate Job** check box.
 - b. In the **Job Schedule** box, enter a Cron expression.
For example, to run the job at 02:00, every day, enter the following:
0 0 2 * * ?
For more information, see the *Learn About Cron Expression* section as described in *HP EnterpriseView Deployment Guide*.
4. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section as described in *HP EnterpriseView Deployment Guide*.

Configure the External Risk Factor Connector Parameters

You need to configure the connection parameters to the external source from which you are importing the external risk factor information.

The connection parameters depend on the type of connector that you defined.

The connection parameters for a custom connector are user-defined. For example, if the external source is a database, then the connection parameter may be the database user credentials.

To configure connection parameters

1. Open the external risk factor folder. Click **Administration > Configuration**, expand the **External Risk Factor** folder, and then click the factor that you defined.
2. Under the folder of the external risk factor that you defined, click **Connector Parameters**.
3. If you are configuring a CSV connector, enter the path to the CSV file.
4. If you are configuring a custom connector, do the following:
 - a. In **Connector JAR File Name**, enter the name of the connector file.
 - b. For each connection parameter that you want to add, click the **Add configuration to configuration set**  button.
 - c. In the **Parameter Name** box, enter the name of the connection parameter exactly as defined in the connector file.
 - d. In the **Parameter Value** box, enter the value expected by the external source.
5. If you are configuring an ESM connector, do the following:
 - a. In **Resource ID**, enter the resource ID that you defined when you created the report in ESM.
 - b. In **Host**, enter the ESM server IP address or domain name.
 - c. In **Port**, enter the ESM server port.
 - d. In **Username**, enter the username for connecting to ESM.
 - e. In **Password**, enter the password for connecting to ESM.

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

Configure Asset Reconciliation Parameters

Reconciliation is the process of identifying and matching entities from different data repositories. In this case, matching assets from external sources to assets in EnterpriseView. This process is designed to assure unique identification of assets in EnterpriseView.

You must select at least one property for asset reconciliation. The reconciliation process tries to match the parameter passed from the external source to one of the asset properties that you select, starting with the first asset property. If an asset is not found, then the second property is used, and so forth.

Note: If there is more than one asset defined in EnterpriseView with the same identification, such as name or external ID, then the first asset found is matched.

To configure asset reconciliation parameters

1. Open the external risk factor folder. Click **Administration > Configuration**, expand the **External Risk Factor** folder, and then click the factor that you defined.
2. Under the folder of the external risk factor that you defined, click **Asset Reconciliation**.
3. On the **Asset Reconciliation** page, for each reconciliation parameter that you want to add, do the following:
 - a. Click the **Add configuration to configuration set**  button.
 - b. Under **Parameter**, expand the list and select a property.
4. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section as described in *HP EnterpriseView Deployment Guide*.

Configure the External Risk Factor Normalization Settings

In order to be included in the asset overall score calculation, all risk factors must be:

- Normalized to a score between 0 and 100 (inclusive). In order to normalize the score, you must set the score range for the external risk factor.
- The directionality of the score severity. For example, a low score is considered low risk while a high score is considered high risk.

These settings affect the definition of the severity ranges reflected in **Settings > External Risk Factors**. For more information, see "[Configure External Risk Factor Ranges](#)" on page 37.

To configure normalization settings

1. Open the external risk factor folder. Click **Administration > Configuration**, expand the **External Risk Factor** folder, and then click the factor that you defined.
2. Under the folder of the external risk factor that you defined, click **Normalization**.

3. In the **Normalization** page, do the following:
 - **Minimum Score:** enter the first number in the score range.
 - **Maximum Score:** enter the last number in the score range.

Note: The score range is inclusive.

- **Display score with this number of digits after the decimal point:** to define the score display precision level, enter the number of digits after the decimal point that you want to display.
 - To define the directionality of the score severity, select or clear the **Lower Score is Best** check box.
4. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section as described in *HP EnterpriseView Deployment Guide*.

Configure the External Risk Factor Aggregation Method

You can configure the aggregation method for each of the external risk factors defined in EnterpriseView.

To configure aggregation method

1. Click **Administration > Configuration**.
2. In the left pane, click **External Risk Factors > <Risk Factor Name> > Aggregation Method**.
3. In the right pane, from the **Aggregation Method** list, select one of the following options:
 - **Average** (default)

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

$$\frac{\sum(\text{Aggregate Score Children} * \text{CriticalityLevel}) + \text{Asset Score} * \text{CriticalityLevel}}{\sum(\text{CriticalityLevel})}$$

- **Override Children**

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

Asset score or
$$\frac{\sum(\text{Aggregate Score Children} * \text{CriticalityLevel})}{\sum(\text{CriticalityLevel})}$$

- **Average of Children**

The weighted average of aggregate scores of an asset's children, excluding the score of the asset itself. The aggregate score of the children takes precedence over the asset's own score.

$$\frac{\sum(\text{Aggregate Score Children} * \text{CriticalityLevel})}{\sum(\text{CriticalityLevel})}$$

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 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 risk factor. These settings are defined during the configuration process of the external risk factor. For more information, see "[Configure the External Risk Factor Normalization Settings](#)" on page 35.

External risk factor 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 Register page in the Asset Summary component.

To configure external risk factor ranges

1. On the EnterpriseView toolbar, click **Settings**.
2. On the **Settings** dialog box, click **External Risk Factors**.
3. In the left pane, click the external risk factor for which you want to configure ranges.
4. Drag the slider to define the ranges.
5. Click **Save**.

Delete an External Risk Factor

You can delete an external risk factor from EnterpriseView when it is no longer relevant.

When you delete an external risk factor all of the data pertaining to this factor in the database is deleted, as well.

The job that is created when you create a new external risk factor (*<external risk factor name>*ImportJob) is not deleted and can be viewed in the Job Management module.

To delete an external risk factor

1. Click **Administration > Configuration**.
2. On the **Configuration** page, in the left pane, expand **External Risk Factor**.
3. Click the risk factor that you want to delete, and then click the **Remove configuration from configuration set**  button.
4. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section as described in *HP EnterpriseView Deployment Guide*.

Chapter 12

Email Notifications

EnterpriseView supports email notifications for different events that occur in the system. For example, every time a workflow is completed, the workflow owner receives an email notification. To activate email notifications, follow the instructions in "[Configure Email Notifications](#)" on page 40.

In order to get email notifications, you need to make sure that:

- All EnterpriseView users have an email address defined in SAP BusinessObjects.
- The EnterpriseView server has network access to the email server.

Email notifications are sent in one of the following ways:

- Immediately after the event takes place.
- By using a batch job. EnterpriseView includes the following jobs for sending notifications:
 - Task Management Notifications Job
 - Treatment Notifications Job

For more information on scheduling the job, see "[Schedule Notification Jobs](#)" on page 40.

The following table includes all the events that trigger alerts, whether the notification sent immediately or by the Notifications Job, and the recipients of the notifications.

Event Name	Description	When	Recipients
Workflow Complete	After a workflow is complete (the last task in the workflow is complete), EnterpriseView automatically sends an email notification to the workflow owner.	Immediately	Workflow owner

Event Name	Description	When	Recipients
Workflow Warnings	<p>The Task Management Notifications Job sends the workflow owner an email that summarized the following:</p> <ul style="list-style-type: none"> • Task exceeds workflow due date - A workflow is considered overdue if one of its tasks has a due date that is later than the workflow due date. • Overdue Task - A task is considered overdue when it is passed it's due date and its status is In Progress (meaning that it was not completed). • Task Approaching Due Date - A task is considered to be approaching its due date on the day before the due date and on the day that it is due, if it is in progress. This means that this notification will be sent twice. 	Scheduled - Task Management Notifications Job	Workflow owner
Overdue Task	A task is considered overdue when it is passed it's due date and it is not completed.	Scheduled - Task Management Notifications Job	Task assignee
Task Approaching Due Date	Approaching Due Date - A task is considered to be approaching its due date on the day before the due date and on the day that it is due. This means that this notification will be sent twice.	Scheduled - Task Management Notifications Job	Task assignee
Expired Treatment Activity	<p>The Risk Management Notifications Job sends the activity owner an email for the following treatment activities: Accept, Defer, Transfer, Avoid.</p> <p>When the following conditions occur:</p> <ul style="list-style-type: none"> • Avoid/Transfer: When they are passed their expiration date and their status is not completed. • Accept/Defer: When they are passed their expiration date. 	Scheduled - Risk Management Notifications Job	Activity owner
Overdue Mitigation Action	The Risk Management Notifications Job sends the action owner an email when the action is passed its due date and the action is not completed.	Scheduled - Risk Management Notifications Job	Action owner

Configure Email Notifications

You can configure email notifications to be sent automatically by EnterpriseView.

Note: EnterpriseView supports only Simple Mail Transfer Protocol (SMTP).

To configure email notifications

1. Click **Administration > Configuration**.
2. In the left pane, expand **Notifications**, and then click **Email Notifications**.
3. In the **Email Notifications** page, select **Activate Email Notifications**.
4. In the **Sender Address** box, enter an email address that indicates to the recipient that the email is a notification from EnterpriseView. This is the email address that appears in the 'From' line in the email.
5. In the **Sender Name** box, enter the name that is displayed next to the sender address in the 'From' line in the email.



From: HP EnterpriseView [mailto:ev-do-not-reply@hp.com]
Sent: Wednesday, 10 January 2012 10:25 AM
To: Glimberg, Alex
Subject: HP EnterpriseView - Workflow Completed - Test 1

6. In the **Port** box, enter the port for the email server.
7. In the **SMTP Server** box, enter the IP address or the domain name.
8. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section as described in *HP EnterpriseView Deployment Guide*.

Schedule Notification Jobs

Some notifications are sent by using batch processes. EnterpriseView includes the following jobs for sending notifications:

- Task Management Notifications Job
- Treatment Notifications Job

For more information on the events that trigger these notifications, see ["Email Notifications" on page 38](#). For more information on the jobs, see .

To schedule notification jobs

1. Click **Administration > Configuration**.
2. In the left pane, click **Notifications > Notification Jobs**, and then click one of the following:
 - **Schedule Risk Management Notifications**
 - **Schedule Task Management Notifications**

3. On each page, do the following:

- Select the **Activate Job** check box.
- In the **Job Schedule** box, enter a Cron expression.

For example, to run the job once every hour, every day, enter the following:

0 0 0/1 * * ?

For more information, see the *Learn About Cron Expression* section as described in *HP EnterpriseView Deployment Guide*.

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

The jobs are activated and will run according to the schedule that you have set.

Chapter 13

Configure the Group Population Job

The Group Population Job updates the groups that are displayed in EnterpriseView in the User Management module and in Activiti Modeler according to the groups defined in SAP BusinessObjects. The job is scheduled to run once a day, but you can schedule it to run at any frequency you require. You can also run this job manually, as described in "Launch Batch Jobs Manually" on page 20.

Note: Groups that are deleted in SAP BusinessObjects are not deleted in EnterpriseView.

To configure the group population job

1. Click **Administration > Configuration**.
2. In the left pane, click **Task Management > Schedule Group Population Job**.
3. On the **Schedule Group Population Job** page, do the following:
 - Select the **Activate Job** check box.
 - In **Job Schedule**, enter a Cron expression.

For example, to run the job once every hour, every day, enter the following:
0 0 0/1 * * ?

For more information, see the *Learn About Cron Expression* section as described in *HP EnterpriseView Deployment Guide*.
4. Save and apply the configuration changes. For more information, see the *Save and Apply Configuration Changes* section as described in *HP EnterpriseView Deployment Guide*.