Release Control

Software Version: 9.60
For the supported Windows® and UNIX® operating systems

Deployment Guide

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Contents

Welcome to This Guide

Welcome to the Release Control Deployment Guide, which explains how to install and deploy Release Control software and how to upgrade to the latest version. Release Control provides a common platform of decision support for Change Advisory Board members and implementation teams during the release life cycle. Release Control analyzes each change request in the system and provides real-time information and alerts during implementation. In addition, Release Control enables collaboration, feedback, and review throughout the release life cycle.

This chapter includes:

How This Guide Is Organized

This guide contains the following parts:

- "Installing and Deploying Release Control" on page 9

  Provides instructions on how to install and deploy Release Control.

- "Upgrading Release Control" on page 49

  Provides instructions on how to upgrade to the latest version of Release Control.

Who Should Read This Guide

This guide is intended for the service engineers who are responsible for installing and deploying or upgrading Release Control.

Release Control Documentation

Release Control comes with the following documentation:

Release Control Deployment Guide explains how to install and deploy Release Control. This guide is accessible in the following formats, from the following locations:

- in PDF format in the Release Control installation package
- in PDF format by selecting **Help > Documentation Library** from the Release Control application

Release Control User Guide explains how to use and configure the Release Control application. This guide is accessible in the following formats, from the following locations:

- in PDF format in the Release Control installation package
- in both PDF format and online HTML help format by selecting **Help > Documentation Library** from the Release Control application
- in HTML help format, from specific Release Control application windows, by clicking in the window and pressing **F1**, or by selecting **Help** from the main menu

Release Control API Reference explains how to work with Release Control's API. The API Reference is available in CHM format in the Release Control installation package, or from the Release Control application by selecting **Help > Documentation Library**.

Release Control Release Notes provides information on what's new in the current version of the product as well as comprehensive information on known problems and limitations. The Release Notes is available in HTML format in the Release Control installation package.

> **Note:** Anything published in PDF format can be read and printed using Adobe Reader, which can be downloaded from the Adobe Web site (http:/ /www.adobe.com).

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Installing and Deploying Release Control

This chapter provides instructions on how to install and deploy Release Control.

This chapter includes:

The Deployment Process: Basic Steps

This following diagram describes the basic steps involved in getting your Release Control environment up and running:

1. Review pre-installation information (see "Before You Install" on the next page)

2. Run the installation (see "Installing Release Control" on page 13)

3. Set up the database (see "Configuring the Database or User Schema" on page 14)

4. Launch (see "To configure your database on Linux")

5. Configure the server (see "Configuring the Release Control Server" on page 20)

6. Configure related settings (see "Configuring Universal CMDB" on page 21)

7. Configure the service desk (see "Configuring the Service Desk Integration" on page 26)

Before You Install

We strongly recommend you to review the *Release Control 9.60 Support Matrix* carefully before you install Release Control.

This section includes:

Server System Requirements

The following table describes the system requirements for the Release Control server:

CPU	Intel Pentium 4
Memory (RAM)	Minimum of 2 GB
Free Disk Space	Minimum of 5 GB

For more server system support information, including operating system, database, web server and so on, refer to the *Release Control Support Matrix*.

Client Requirements

The following table describes the client requirements for viewing Release Control:

Internet Protocol	IPv4, IPv6
Screen Resolution	Minimum 1024x768

	Recommended 1280x1024
Color Quality	Minimum of 16 bit
	Note: If you are logging on to the Release Control server through a remote connection, ensure that the Remote Desktop color display setting is set to a minimum of 16 bit.

For more client support information, including web browser, Flash Player browser plugin and so on, refer to the *Release Control Support Matrix*.

Release Control Advanced Deployment Options

In addition to the regular deployment, Release Control can also be deployed with the following options:

- Cluster deployment. Release Control can be deployed on multiple nodes. For details, refer to the section about setting up a cluster deployment in the *Release Control User Guide*.

- Web servers. You can configure Release Control to work with a Web server. For details, refer to the section about configuring a Web server in the *Release Control User Guide*.

- Identity management. You can configure Release Control to work with a third party identity management solution such as CA SiteMinder. For details, refer to the section about identity management in the *Release Control User Guide*.

Release Control Data Flow

The following diagram illustrates the data flow when running Release Control:
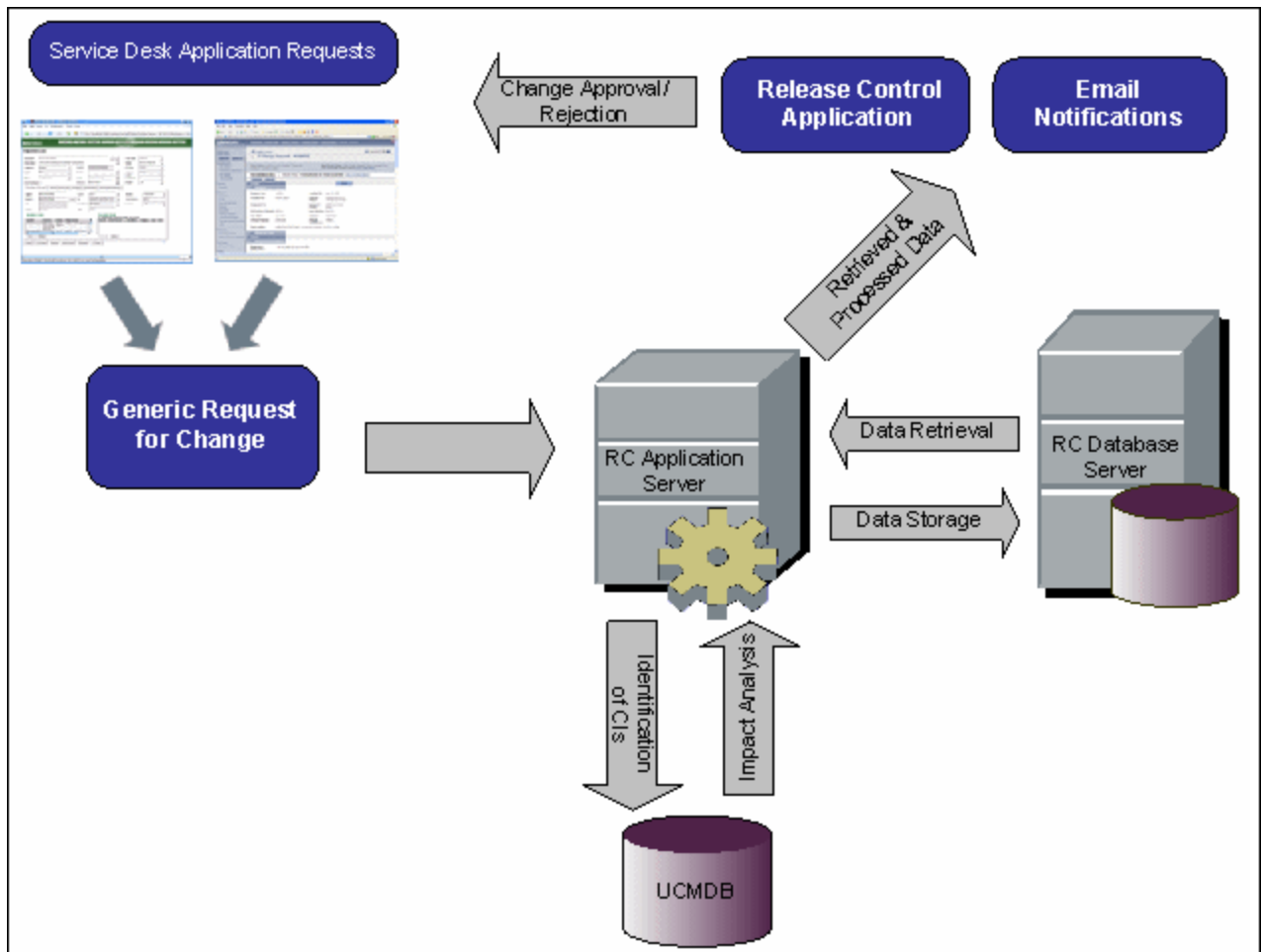
- Change requests originate in the Service Desk application and are converted into generic requests.

- Release Control sends the requests to Universal CMDB for analysis and to determine the relationships between configuration items (CIs).

- Release Control takes the data from Universal CMDB and performs impact analysis.

- Release Control further analyzes change requests, performing calculations such as risk and collision analysis.

- The information is stored on the Release Control Database Server.

- Email notifications are sent according to configuration settings to decision makers, and changes are approved or rejected.

System Architecture

Release Control is a 3-tier application which consists of following:

- Flash-based (fat) client, accessed using a Web browser
- Application servers
- Database servers

The database servers and the Release Control application servers must locate in high bandwidth and low latency network paths, which connect to the database server.

Installing Release Control

You can install Release Control using the InstallShield Wizard for Release Control on Windows. Or you can run a series of shell commands to install Release Control on Linux.

To install Release Control on Windows:

1. Click the setup-9.60.0001.exe file located in the Setup folder of your Release Control installation package. The InstallShield Wizard for Release Control opens. Click **Next**.

2. Accept the terms of the software license agreement that is displayed. Click **Next**.

3. Accept the default installation directory or click **Browse** to select a different directory.

   Note: The directory you select cannot contain spaces.

   Click **Next**.

4. Ensure that the information in the summary screen is correct.

   To review or change any settings, click **Back**. To accept the settings and begin installing Release Control, click **Next**.

5. When the installation process has successfully been completed, click **Finish** in the final InstallShield Wizard screen.

Note: If you are in the middle of performing the upgrade procedure, continue with .

To install Release Control on Linux:

1. Copy release-control-9.60.0001.x86_64.rpm.bin to the target computer. The file resides in the Setup folder of Release Control installation package.

2. Log in the Linux system as `root`.

3. Open a shell terminal and change the current working directory to where the rpm.bin file is located.

4. Execute the following command to ensure that the execute permission is set:

   chmod u+x release-control-9.60.0001.x86_64.rpm.bin

5. Execute the following command to begin installing Release Control:

   ./release-control-9.60.0001.x86_64.rpm.bin

   The End User License Agreement is displayed and you are prompted to agree to its terms.

   The default installation directory is /opt/MicroFocus/rc and the new user of `release-control` is created, which belongs to the `MicroFocus` group.

   The new system service of release-control is registered, which can be verified by running the following command:

   chkconfig --list|grep release-control

   This service will start automatically upon system reboot.

Configuring the Database or User Schema

> **Caution:** Upgrade is not supported if the Oracle Server user schema is created manually.

To work with Release Control, you must create either a Microsoft SQL Server database or an Oracle Server user schema. You can then configure connection properties for the Release Control database or user schema by updating the database.properties file.

> **Note:** For MS SQL Server and Oracle Server system requirements, see "Server System Requirements" on page 10.
>
> For information and guidelines about configuring and maintaining MS SQL and Oracle Server databases, see the section about database configuration and maintenance in the Release Control User Guide.

To configure your database on Windows:

1. Allocate a Microsoft SQL Server database or an Oracle Server user schema.

   - For Oracle: Grant the Oracle user only `Connect` and `Resource` roles. (Populate fails if the Oracle user has the `Select any table` privilege.)

> **Note:** From Oracle 12c, the `Resource` role no longer provides the `UNLIMITED TABLESPACE` system privilege. You must add the privilege manually.

2. Verify the following information, which you need during this configuration process:

   - DB host name and port

   - DB user name and password

   - For MS SQL: Database name

   - For Oracle: SID

3. Before you update the database.properties file, consider the following:

   - You may need to specify advanced database properties, such as minimum and maximum pool size. For more information about these options, see http://www.mchange.com/projects/c3p0/index.html#configuration_properties.

   - You may need to specify the connection URL of the JTDS MSSQL in the database.properties file. There are two types of authentication:

     - SQL authentication. Include a valid MS SQL server name and database name.

       For example:

       jdbc:jtds:sqlserver://myServer:1433/myDataBase;sendStringParametersAsUnicode=false

     - Windows (NTLM) authentication. To apply Windows authentication, add the domain property to your JTDS connection URL in the database.properties file. Specify the Windows domain to authenticate,

       For example:

       jdbc:jtds:sqlserver://myServer:1433/myDatabase;sendStringParametersAsUnicode=false;domain=myDomain

       You can use Windows (NTLM) authentication with or without Lightweight Single Sign-On Authentication Support (LW-SSO).

       Using Windows (NTLM) authentication without LW-SSO. If the domain property is present and the user name and password are provided, JTDS uses Windows (NTLM) authentication instead of the usual SQL Server authentication. This means that the user and password provided are the domain user and password. This allows non-Windows clients to log in to servers which are only configured to accept Windows authentication.

       Using Windows (NTLM) authentication with LW-SSO. If the domain parameter is present but no user name and password are provided, that is the user name and password

parameters use empty values, JTDS uses its own Single-Sign-On library and logs in with the logged Windows user's credentials. For this to work, you need to be using Windows, logged into a domain, and also have the LW-SSO library installed.

For details on how to install the LW-SSO library, refer to the readme.sso file, which can be download from the latest distribution package at http://jtds.sourceforge.net.

> **Note:** For details about configuring the jTDS URL format for MS SQL Server, see http://jtds.sourceforge.net/faq.html#urlFormat.

- You may need to specify the connection URL of the Oracle native driver. Include a valid Oracle server name and SID. Alternatively, if you are using Oracle RAC, specify the Oracle RAC configuration details.

  To configure Release Control to support Oracle RAC:

  i. Navigate to the <Release Control 9.60 installation directory>\conf directory, and then open the database.properties file with a text editor.

  ii. Enter URL in the following format:

  ```
  jdbc:oracle:thin:@(DESCRIPTION=(LOAD_BALANCE=on)(ADDRESS_LIST=(ADDRESS=
  (PROTOCOL=TCP)(HOST=host1)(PORT=1621))(ADDRESS=(PROTOCOL=TCP)
  (HOST=host2)(PORT=1621)))(CONNECT_DATA=(SERVICE_NAME=MYDB)))
  ```

  Each address points to a different cluster node. For example, if the previous URL is `jdbc.url=jdbc\:oracle\:thin\:@16.186.78.69\:1521\:orcl`. To support RAC, this URL should be `jdbc:oracle:thin:@(DESCRIPTION=(LOAD_BALANCE=on) (ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=16.186.78.69)(PORT=1521))) (CONNECT_DATA=(SERVICE_NAME=orcl)))`.

  iii. Click **Next** to verify the connection.

  For details about configuring the native Oracle JDBC URL format, see http://www.orafaq.com/wiki/JDBC#Thin_driver. For details about configuring the URL for Oracle RAC, see http://download.oracle.com/docs/cd/B28359_ 01/java.111/e10788/rac.htm.

- We recommend you to encrypt your password in the database properties file.

4. Navigate to the <Release Control 9.60 installation directory>\conf directory, and then update the database.properties file.

> **Note:** If you are in the middle of performing the upgrade procedure, continue with of "Stage 2: Install and Upgrade Release Control" on page 51.

5. When you complete the database configuration, populate the database as follows:

Change the command line directory to <Release Control installation directory>\bin and run the following command:

Populate.bat i

To configure your database on Linux:

1. Browse to <Release Control installation directory>/examples/database-config-examples. Based on you database type, copy database.properties.mssql, database.properties.oracle9i or database.properties.oracle10g to <Release Control installation directory>/conf. Rename this file to database.properties.

2. Open database.properties with a text editor. Change the strings in [] to correct value and save your changes.

3. When you complete the database configuration, populate the database as follows:

   a. Run the following command to log in to Release Control with the user name `release-control`:

      su - release-control

   b. Change the command line directory to /opt/MicroFocus/rc/bin and run the following command:

      ./Populate.sh i

Configuring JRE

As of version 9.50, Release Control adds support for Open Java Development Kit (OpenJDK).

Important: An OpenJDK is bundled with the Windows installation package so that you do not have to manually install a JRE for them. For the Linux installation package, you need to manually install either an OpenJDK or an Oracle JRE.

You have the option to use either Oracle JRE or OpenJDK with Release Control. For the supported versions, see the *Release Control Support Matrix*.

JRE bitness

For the Windows server: use 32-bit or 64-bit JRE.

For the Linux Server: use 64-bit JRE.

How to use OpenJDK with Release Control

Use OpenJDK with Release Control as described in the following table.

Installation Package	How to use OpenJDK
Windows	An OpenJDK (32-bit by default) folder is already bundled with the package. No installation is required. If you want to use 64-bit and you need: 1. Rename the <Release Control 9.60 installation directory>\java folder to create a backup copy. 2. Rename the <Release Control 9.60 installation directory>\java_x64 folder to java. 3. Run the **CreateNode.bat** command to create a new service and use this service to start Release Control windows server.
Linux	1. Before you proceed, make sure that OpenJDK is already installed on the corresponding system. 2. Update the `JAVA_HOME` environment variable to make it point to the OpenJDK folder.

How to use Oracle JRE with Release Control

Use Oracle JRE with Release Control as described in the following table.

Installation Package	How to use Oracle JRE
Windows	1. Rename the <Release Control 9.60 installation path>\java folder to create a backup copy. 2. Download an appropriate version of 32-bit/64-bit Oracle JRE from the Oracle website. 3. Copy the Oracle JRE folder to the <Release Control 9.60 installation path> and change its folder name to java. 4. Run the **CreateNode.bat** command to create a new service and use this service to start Release Control windows server.
Linux	1. Before you proceed, make sure that Oracle JRE is already installed on the corresponding system.

Installation Package	How to use Oracle JRE
	2. Update the `JAVA_HOME` environment variable to make it point to the Oracle JRE.

Launching Release Control

This section describes how to launch Release Control.

To launch Release Control on Windows:

1. If you are using an Apache Web server, restart your Web server.

2. Start the Release Control service.

   a. From the Windows menu, select **Start** > **Run** and type `services.msc`.

   b. In Services window, select **Release Control 9.60 <server name>** and click **Start Service**.

      It may take a few minutes for the server to complete the startup process.

3. Enter the appropriate URL to access Release Control (depends on the user authentication mode you are using). For example, http://server:8080/ccm.

4. Log in to Release Control with the user name `admin` and the password `admin`. Ensure that you change this password once you log in. For details on changing your password and creating Release Control users, see the section about configuring users in the Release Control User Guide.

   > **Note:** If you are working with Release Control's identity management solution or LDAP authentication, see the section about security configuration in the Release Control User Guide for details on adding an administrator and users to Release Control.

To launch Release Control on Linux:

1. Log in the Linux system as `release-control`.

2. Execute either of the following commands to start the Release Control daemon:

   /etc/init.d/release-control

   /opt/MicroFocus/rc/start.sh

3. Make sure port 8080 is open for INPUT in the firewall setting.

Configuring the Release Control Server

This section describes how to configure the Release Control server.

1. Log on to Release Control (See "Launching Release Control" on the previous page).

   > **Caution:** By default, Release Control 9.60 supports integration with Universal CMDB 10.20 and above.

2. Select **Module** > **Administrator** > **Configuration** > **Server** and define the following settings in the Server pane:

UI Elements	Description
Server name	Enter the server's Fully Qualified Domain Name (FQDN). **Note:** ○ Do not use the default value localhost or the IP address. ○ If you cluster two or more Release Control servers behind a load balancer, specify the domain name of the load balancer.
Server address	Specify the Release Control server address as follows: ○ If you install one Release Control server, specify the URL of this machine. > **Note:** If you are using a web server, use the port of the web server. ○ If you cluster two or more Release Control servers behind a load balancer, specify the URL of the load balancer.
SMTP host	Enter the host name of the SMTP mail server machine.
SMTP port	Specify the port to be used to connect to the SMTP mail server.
SMTP username	Specify the user name required to connect to the SMTP mail server, if one is required.
SMTP password	Enter the password required to connect to the SMTP mail server. If the password must be encrypted, see the section about password encryption in the Release Control User Guide.

3. Save a draft of your configuration set. (See "Saving a Draft Configuration Set" on page 47.)

4. When you are satisfied with your configuration changes, activate the draft. (See "Activating Configuration Changes" on page 47.)

5. Stop the Release Control service:

   a. From the Windows menu, select **Start** > **Run** and type `services.msc`.

   b. In Services window, select **Release Control 9.60 <server name>** and click **Stop Service**.

6. Start the Release Control service again.

Configuring Universal CMDB

This section contains mandatory configuration settings for configuring Release Control interaction with Universal CMDB.

For information on optional Universal CMDB configuration settings, see the section about Universal CMDB configuration in the Release Control User Guide.

> **Note:** If you are working without Universal CMDB (Standalone mode), see the section about configuring Release Control to work in Standalone mode in the Release Control User Guide.

To configure the Universal CMDB:

1. Deploy the rc_package.zip file in the Universal CMDB.

   The rc_package.zip file is located in the <Release Control installation directory>\uCmdb\ucmdb-<version>\extensions folder. For more information about deploying packages, see the Universal CMDB documentation.

2. Log in to Release Control.

3. Select the Universal CMDB version number.

   a. In Release Control, select **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Universal CMDB**.

   b. In the right pane, In the **Universal CMDB** version box, select the appropriate version.

4. Enter the Universal CMDB server details.

   a. Select **Integrations** > **Universal CMDB** > **Available Connections** > **Enter a valid CMDB server name**.

   b. In the right pane, in the **Universal CMDB server name** box, enter the DNS name of the

server on which Universal CMDB is installed.

   c. In the **Port** box, specify the port used by the Universal CMDB server.

5. Save a draft of your configuration set. (See "Saving a Draft Configuration Set" on page 47.)

6. When you are satisfied with your configuration changes, activate the draft. (See "Activating Configuration Changes" on page 47.)

Configuring Release Control to Work with a Different Version of Universal CMDB

By default, Release Control 9.60 supports integration with Universal CMDB 10.20 and above.

1. Log on to Release Control as a system administrator by using Internet Explorer.

2. In Release Control, go to the **Module** > **Administrator** > **Configuration** tab.

3. Click the **Import Configuration set** button and import the vanilla.zip file located in the <Release Control installation directory>\examples\configuration folder.

4. Go to **Integrations** > **Universal CMDB**, and then choose the required Universal CMDB version in the Universal CMDB version box.

5. In **Integrations** > **Universal CMDB** > **Available Connections** pane, update the relevant URL in the **Modeling Studio link** as follows:

```
${protocol}://${cmdb-server}:${port}/ucmdb-
ui/cms/directAppletLogin.do?ApplicationMode=UCMDB_
EDITOR&cmd=OpenModelingStudio&model_id=${model-id}&objectId=${ci-
id}&navigation=true&interfaceVersion=8.0.0&customerId=${customer-id}
```

6. Save a draft of the configuration set, as described in "Saving a Draft Configuration Set" on page 47.

7. Activate the configuration set, as described in "Activating Configuration Changes" on page 47.

8. Log out and then log in to Release Control.

9. In **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Universal CMDB** > **CIs analysis Lookup Directive** pane, and update the tables with the relevant CI types:

Universal CMDB CI types
business_elements
node
IP address

10. In the **CIs analysis Lookup Directive** pane, update the table with the relevant attributes for each CIT as follows.

Universal CMDB CI types	Relevant attributes
business_elements	name
node	smnp_sys_name; name; primery_dns_name
IP address	name; authoritative_dns_name

11. In the **CI Display** pane, update the table with the following CI types:

Universal CMDB CI types
node
ip_address

12. In **Integrations** > **Universal CMDB** > **Latent Changes** > **Change Type Matching CI Type** > **Added Hardware** pane, update the table with the relevant CI types:

Universal CMDB CI types
memory
node
logicaldisk
ip_address
file_system

13. In **Integrations** > **Fields** pane, make sure that the new analysis rules you configured in the previous steps apply to the relevant fields.

14. Save a draft of the configuration set, as described in "Saving a Draft Configuration Set" on page 47.

15. Activate the configuration set, as described in "Activating Configuration Changes" on page 47.

Configuring Web Server

You can deploy Release Control to work with a Web server. You can install one of the following Web servers on the same computer as Release Control:

- Microsoft Internet Information Services (IIS) 8.x

- Apache HTTP Server 2.2, 2.4

> **Note:** Release Control cannot be configured with an Apache server if a Microsoft IIS Web server is already installed and activated on the server because the default port of both web servers is 80. The Microsoft IIS Web server must be stopped first. After the installation you can configure the Apache web server to work with a different port (e.g. 90) and restart your IIS.

You may need to configure a Web server in the following cases:

- You are working with a third party identity management solution such as CA SiteMinder.

- You are deploying a software load balancer that cannot use the AJP protocol to communicate with Tomcat in a cluster deployment.

To configure the Web server, use the WebServerConfigurer utility.

> **Note:** After you install the Web server, ensure that the port of the Web server is specified inside the **Server address** box in the **Module** > **Administrator** > **Configuration** tab > **Server** pane. If the server address is not configured correctly, emails and reports may not work properly.

To use the Web server configure utility:

Run the following command:

<Release Control installation directory>\bin\WebServerConfigurer.bat <options>

Following are the command line <options>:

Option	Description
config apache <port> <apache home directory>	Configure an Apache Web server. Specify the Apache configuration options: - <port>. The port used by the Apache Web server. - <apache home directory>. The Apache Web server installation directory.
config IIS, <port>	Specify the configuration options for an IIS server:

Option	Description
<version> <RC Website>	<port>. The port used by the server. The default port is 80. <version>. Web server version. <RC Website>. The Web site defined for Release Control. In a new IIS installation, the Release Control default site is called `Default Web Site`.
--encrypted-password-file <file>	Use the encrypted password specified in <file>.
remove-config	Configures Release Control to work without a Web server. This command does not uninstall the Web server. **Note:** In the <Release Control installation directory>\conf\server.settings file, the Release Control port number in the `server-address` property is reset to the Tomcat default port (8080). Ensure that the Release Control and Tomcat port number are the same.

For example:

- To configure an Apache server, run:

  <Release Control installation directory>\bin\WebServerConfigurer.bat config apache "C:\Apache Software Foundation\Apache 2.4"

- To configure an IIS server version 8 for the default Web site, run:

  <Release Control installation directory>\bin\WebServerConfigurer.bat config IIS 8 "Default Web Site"

  Caution: After configuring an IIS Web server with the webServerConfigurer utility, the ISAPI filter that is responsible for the redirection from IIS to the Release Control Tomcat server, may have a status of `Unknown`. After the first user logs on to Release Control, the ISAPI filter status should be updated to `Ready`.

  It is not possible to configure an IIS Web server that has an existing ISAPI filter running in it already. To do this you must first remove the previous installation of the mod_jk ISAPI filter, then use the webServerConfigurer utility to configure IIS for Release Control.

- To remove the Web server configuration, run:

  <Release Control installation directory>\bin\WebServerConfigurer.bat remove-config

Configure Release Control to work with IIS 8:

1. Run the webServerConfigurer utility as configure IIS 8. For example:

   webServerConfigurer.bat config iis 8 "Default Web Site"

   Ignore the errors.

2. Download new tomcat connector from http://www.apache.org/dist/tomcat/tomcat-connectors/jk/binaries/windows/tomcat-connectors-1.2.40-windows-x86_64-iis.zip.

   Extract isapi_redirect.dll from the zip and copy it to the \webserver\bin\jakarta folder.

3. Modify \webserver\conf\redirector.reg by changing

   `"extension_uri"="/jakarta/isapi_redirector.dll"`

   to

   `"extension_uri"="/jakarta/isapi_redirect.dll"`

   Save your changes and double-click **redirector.reg**to execute.

4. Start the IIS manager. On the server node open "ISAPI and CGI Restrictions", add `isapi_redirect.dll` and allow this extension path to execute.

5. On the default web site add the new virtual directory and enter its alias (jakarta) and physical path the directory where isapi_redirect.dll resides (\webserver\bin\jakarta).

6. On the default web site open the "ISAPI Filters" and add isapi_redirect.dll naming the filter "jkfilter".

7. On the node of the "jakarta" virtual directory, open "Handler Mappings" and enable the "ISAP-dll" handler (disabled by default). Edit the "ISAPI-dll" handler permissions and enable "Read", "Script", and "Execute".

8. Restart IIS.

Configuring the Service Desk Integration

The configuration of your service desk differs depending on which service desk you are using:

Service Desk	Instructions
Service Manager	"Configuring Service Manager Integration" on page 28
Project and Portfolio Management / IT Governance Center	"Configuring Project and Portfolio Management / IT Governance Center Integration" on page 32
BMC Remedy Action Request System	"Configuring BMC Remedy Action Request System Integration" on page 34

Service Desk	Instructions
Database	"Configuring a Database as a Service Desk" on page 37
XML file	"Configuring an XML File as a Service Desk" on page 39
Server Automation	"Configuring Server Automation as Your Service Desk" on page 41
Aperture Vista DCIM	"Configuring Aperture Vista DCIM as a Service Desk" on page 43

Supported Service Desks

The Service Desk Integration module supports the following service desk applications:

Application	Version
Service Manager	9.3x, 9.4x, 9.5x, 9.6x
Project and Portfolio Management	9.x
Server Automation (SA)	Refer to the **Support Matrix** section on ID: 447 Jobs information collection from SA (RC - SA) on the Micro Focus Software Support website.
BMC Remedy Action Request System	7.x
Aperture Vista Data Center Infrastructure Manager (DCIM)	6.0

Feature Availability per Service Desk

Certain Release Control features are only available when you integrate with certain service desk applications. The following table describes these features and specifies their availability per service desk. Service desks that are not listed in this table do not include these features.

Feature	Service Manager	Project and Portfolio Management
Update Approval status. Approval of a change request in the Analysis module Collaborate > Resolution tab, results in an updated status of the request within the service desk.	Yes	Yes

Feature	Service Manager	Project and Portfolio Management
Retract approval. Retracting approval of a change request in the Analysis module Collaborate > Resolution tab, results in an updated status of the request within the service desk.	Yes	No
Update planned times. After you run a simulation in the Analysis module Change Planner, you can save the updated start and end times to the originating service desk.	Yes	No
Update actual times. In the Director and Implementor modules, you can update the actual start and end time of an activity. These times are automatically updated in the originating service desk ticket.	Yes	No
Update Post Implementation Review. The data that you update in the Post Implementation Review dialog box in the Review > Conclusions tab is updated in the origination service desk.	Yes	No
Closing Tickets from Release Control. You can close service desk tickets from the Analysis module Review > Conclusions tab.	Yes	No
Update analysis information. The originating service desk ticket is updated with analysis information from Release Control (for example risk level and impact analysis)	Yes (requires configuration)	No
Deny change request. Denying a change request in the Analysis module Collaborate > Resolution tab results in an updated status of the request within the service desk.	Yes	No

Configuring Service Manager Integration

This task describes how to configure Service Manager as your service desk and includes the following stages:

- "Stage 1: Prerequisites" on the next page

- "Stage 2: Run the Configuration Utility" on the next page

- "Stage 3: Apply Configuration Changes" on page 30

The server on which the Release Control and Service Manager servers reside must be running in the same time zone.

Stage 1: Prerequisites

1. Verify the following information, which you need during this configuration process:

   - Service Manager version

   - Is Lightweight Single Sign On (LW-SSO) used?

   - Service Manager user name, password, time zone, host name, and port

     > **Note:** Use the Java naming conventions for time zones.

   - Is HTTPS required in order to access Service Manager WSDL file?

     > **Note:** If Service Manager is configured using SSL, you need to import the SSL certificate from Service Manager to the Release Control server.

   - URL suffix for the Service Manager WSDL file (by default, `sc62server/PWS`)

   > **Note:** Service Manager's internal load balancer encounters technical problems when deploying Web services due to the fact that Web services do not support the HTTP Redirect in Service Manager. To enable Release Control to work with Service Manager configured with a load balancer, you need to configure a load balancer for Service Manager that is other than Service Manager's internal one. For example, Cisco CSS.

2. Users who access Service Manager from Release Control need to have SOAP API Execute Capabilities enabled. In Service Manager, ensure that this option is enabled for the relevant operators.

3. (Optional) As part of the SdiConfigurer.bat utility you run in the next stage, certain Service Manager fields are automatically mapped to Release Control fields. If you want to map any additional fields, expose these fields now in the Service Manager ChangeRC/ChangeTaskRC External Access object. You map these fields in conversion scripts in *step 3* of "Stage 3: Apply Configuration Changes" on the next page.

> **Note:** To expose and map fields, ensure that you are using `ChangeRC` and `ChangeTaskRC` external access objects that are dedicated to Release Control instead of using the default `Change` and `ChangeTask` external access objects.

Stage 2: Run the Configuration Utility

On the Windows System:

From the Windows command line, run the following command:

<Release Control installation directory>\bin\SdiConfigurer.bat

For each question, type your selection and press Enter. (Refer to the information you verified at the beginning of the Prerequisites section.) Where relevant, the default selection appears in square brackets at the end of the question.

> **Note:** If you press Enter without typing anything, the default answer is automatically selected.

Based on your selections, the configuration utility creates new configuration files, including a .zip file. To apply the configuration settings to Release Control, you use the **Import configuration set** button to upload the .zip file as described below.

On the Linux System:

1. Log in the Linux system as `root`.

2. Run the following command to log in to Release Control with the user name release-control:

   su - release-control

3. Run the **cd bin** command to enter the Release Control installation directory.

4. Run the following command:

   ./SdiConfigurer.sh

   For each question, type your selection and press Enter. (Refer to the information you verified at the beginning of the Prerequisites section.) Where relevant, the default selection appears in square brackets at the end of the question.

For each question, type your selection and press Enter. (Refer to the information you verified at the beginning of the Prerequisites section.) Where relevant, the default selection appears in square brackets at the end of the question.

Stage 3: Apply Configuration Changes

1. Log on to Release Control as a system administrator by using Internet Explorer.

2. In Release Control, go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Service Desk Adapters**, click the **Import configuration set** button.
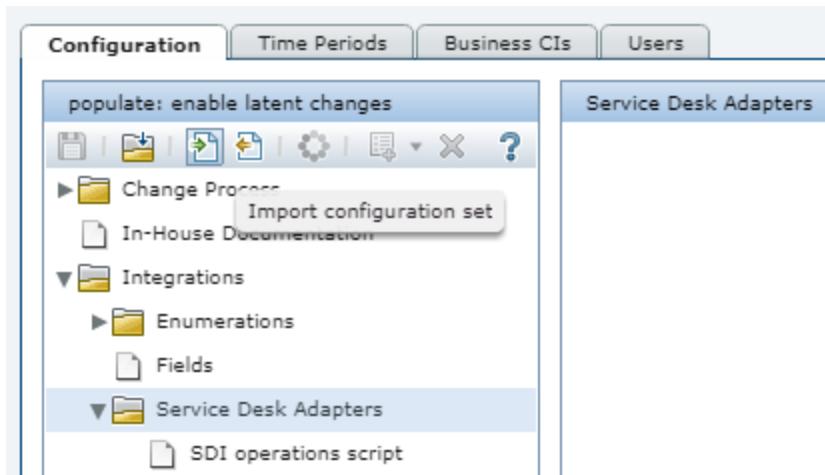
3. In the Select file to upload dialog box, go to <Release Control installation directory>\bin\result and open <adapter_name>.zip.

   A new node (with the name of the adapter) is added under the **Integrations** > **Service Desk Adapters** node. The node includes the new service desk configuration files, which are displayed independently in the left pane. Select a configuration file and its content is displayed in the right pane.

4. If you exposed additional fields in *step 4* of "Stage 1: Prerequisites" on page 29, map these fields in the relevant conversion scripts (convertChange.js/convertTask.js).

   ○ To view the conversion scripts, select the **Integrations** > **Service Desk Adapters** > **<adapter name>** node and select the relevant tab in the right pane that displays the file.

   ○ To make changes to the scripts, see "Modifying Configuration Files in the Configuration Tab" on page 46.

5. You can configure Release Control to update Service Manager with Analysis information. For details, see the relevant section in the Release Control User Guide.

6. Save a draft of your configuration set. (See "Saving a Draft Configuration Set" on page 47.)

7. When you are satisfied with your configuration changes, activate the draft. (See "Activating Configuration Changes" on page 47.)

   > **Note:** To modify your service desk settings after the initial configuration, see the section about advanced service desk configuration in the Release Control User Guide.

Configuring Project and Portfolio Management / IT Governance Center Integration

This task describes how to configure Project and Portfolio Management / IT Governance Center as your service desk and includes the following stages:

- "Stage 1: Prerequisites" below

- "Stage 2: Run the Configuration Utility" on the next page

- "Stage 3: Apply Configuration Changes" on the next page

Stage 1: Prerequisites

1. Verify the following information, which you need during this configuration process:

   - Project and Portfolio Management / IT Governance Center version

   - service desk user name, password, host name, and port

   - If you want to enable approval integration with Release Control whereby the approval of a change request in Release Control, results in an updated status of a workflow step within the service desk, you need to provide the following information:

     - Source Workflow Step. Decide which step in Project and Portfolio Management requires approval. This step is updated with the Release Control approval status.

     - Oracle DB SID (System ID)

     - Oracle DB host name

     - Oracle DB port

     - Oracle DB user name

     - Oracle DB password

   - Write down the workflow steps from Project and Portfolio Management. This information is found within the Project and Portfolio Management workbench. For more information, refer to the Project and Portfolio Management documentation.

2. For versions earlier than Project and Portfolio Management version 7.5: If your Project and Portfolio Management / IT Governance Center Web Services service desk application is synchronized with the CMDB server, add a new change request field in Release Control named mam-ticket-id of the text type. Apply the mam-ticket analysis rule to this field, with the analysis

rule level set to both Change and Task.

For information about creating new change request fields and applying analysis rules, see the section about creating or modifying change request fields in the Release Control User Guide.

Stage 2: Run the Configuration Utility

From the command line, run the following command:

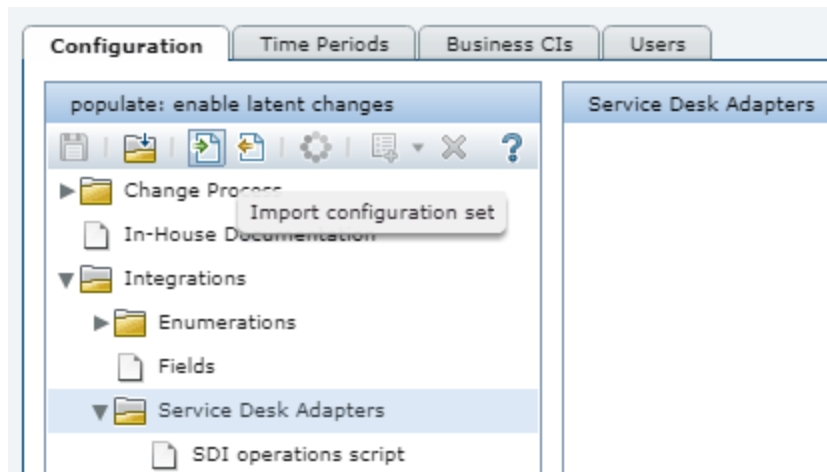**<Release Control installation directory>\bin\SdiConfigurer.bat**

For each question, type your selection and press Enter. (Refer to the information you verified at the beginning of the Prerequisites section.) Where relevant, the default selection appears in square brackets at the end of the question.

> **Note:** If you press Enter without typing anything, the default answer is automatically selected.

Based on your selections, the configuration utility creates new configuration files, including a .zip file. To apply the configuration settings to Release Control, you use the **Import configuration set** button to upload the .zip file as described below.

Stage 3: Apply Configuration Changes

1. In Release Control, go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Service Desk Adapters**, click the **Import configuration set** button.

2. In the **Select file to upload** dialog box, go to <Release Control installation directory>\bin\result and open <adapter_name>.zip.

A new node (with the name of the adapter) is added under the **Integrations** > **Service Desk Adapters** node. The node includes the new service desk configuration files, which are displayed independently in the left pane. Select a configuration file and its content is displayed in the right pane.

3. Map the workflow steps (that you wrote down earlier as part of the configuration prerequisites) from Project and Portfolio Management to status names in Release Control in the relevant conversion scripts (convertRelease.js/convertChange.js).

   ○ To view the conversion scripts, select the **Integrations** > **Service Desk Adapters** > **<adapter name>** node and select the relevant tab in the right pane that displays the file.

   ○ To make changes to the scripts, see "Modifying Configuration Files in the Configuration Tab" on page 46.

4. Save a draft of your configuration set. (See "Saving a Draft Configuration Set" on page 47.)

5. When you are satisfied with your configuration changes, activate the draft. (See "Activating Configuration Changes" on page 47.)

Note: To modify your service desk settings after the initial configuration, see the section about advanced service desk configuration in the Release Control User Guide.

Configuring BMC Remedy Action Request System Integration

This task describes how to configure BMC Remedy Action Request System as your service desk and includes the following stages:

- "Stage 1: Prerequisites" below
- "Stage 2: Run the Configuration Utility" on the next page
- "Stage 3: Copy BMC Remedy Files to Release Control" on the next page
- "Stage 4: Apply Configuration Changes" on page 36

Stage 1: Prerequisites

Verify the following information, which you need during this configuration process:

- BMC Remedy version

- BMC Remedy user name, password, and server name

Stage 2: Run the Configuration Utility

From the command line, run the following command:

<Release Control installation directory>\bin\SdiConfigurer.bat

For each question, type your selection and press Enter. (Refer to the information you verified at the beginning of the Prerequisites section.) Where relevant, the default selection appears in square brackets at the end of the question.

> **Note:** If you press Enter without typing anything, the default answer is automatically selected.

Based on your selections, the configuration utility creates new configuration files, including a .zip file. To apply the configuration settings to Release Control, you use the **Import configuration set** button to upload the .zip file as described below.

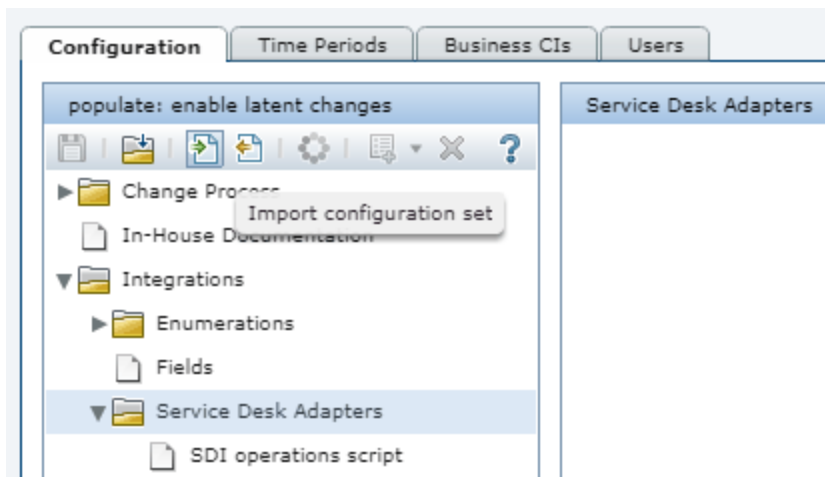# Stage 3: Copy BMC Remedy Files to Release Control

To connect to the BMC Remedy Action Request System service desk application, you must first ensure that certain BMC Remedy Action Request System files are accessible to the Release Control server.

1. Stop the Release Control service:

    ○ From the Windows menu, select **Start** > **Run** and type `services.msc`.

    ○ In Services window, select **Release Control 9.60 <server name>** and click **Stop Service**.

2. Copy BMC Remedy files to Release Control.

    ○ If you are working with BMC Remedy ARS 5.0:

        i. Copy arapi50.jar and arutil50.jar from the BMC Remedy Action Request System installation directory to the <Release Control installation directory>\tomcat\lib directory.

        ii. Copy arapi50.dll, arjni50.dll, arrpc50.dll, and arutl50.dll from the BMC Remedy Action Request System installation directory to the <Release Control installation directory>\apps\ccm\WEB-INF\os_lib\win32 directory on the Release Control server machine.

    ○ If you are working with BMC Remedy ARS 7.0:

     i.   Copy arapi70.jar and arutil70.jar from the BMC Remedy Action Request System installation directory to the <Release Control installation directory>\tomcat\lib directory.

     ii.   Copy all the Windows library files (*.dll) from the BMC Remedy Action Request System installation directory to the <Release Control installation directory>\apps\ccm\WEB-INF\os_lib\win32 directory on the Release Control server machine.

3. Start the Release Control service.

Stage 4: Apply Configuration Changes

1. In Release Control, go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Service Desk Adapters**, click the **Import configuration set** button.

2. In the Select file to upload dialog box, go to <Release Control installation directory>\bin\result and open <adapter_name>.zip.

A new node (with the name of the adapter) is added under the **Integrations** > **Service Desk Adapters**node. The node includes the new service desk configuration files, which are displayed independently in the left pane. Select a configuration file and its content is displayed in the right pane.

3. Save a draft of your configuration set. (See "Saving a Draft Configuration Set" on page 47.)

4. When you are satisfied with your configuration changes, activate the draft. (See "Activating Configuration Changes" on page 47.)

> **Note:** To modify your service desk settings after the initial configuration, see the section about advanced service desk configuration in the Release Control User Guide.

Configuring a Database as a Service Desk

This task describes how to configure a database as your service desk and includes the following stages:

- "Stage 1: Prerequisites" below

- "Stage 2: Run the Configuration Utility" on the next page

- "Stage 3: Apply Configuration Changes" on page 39

Stage 1: Prerequisites

Depending on which database you are using, verify the following connection information and database properties that you need during this configuration process:

Required Information	Description
For Oracle databases: Oracle SID, DB host name, port, user name, and password. For MS-SQL databases: DB name, DB host name, port, user name, and password.	Database connection properties
change id column name **Note:** In the Settings file, this field is called IdFieldName.	The name of the column in the result set that contains the ID field value.
Id selection query	The SQL query that returns the set of change request IDs according to the requests' `last-updated` field value. **Caution:** The query must not include the date of the last change request that was retrieved to avoid getting an infinite loop in which the same change requests are retrieved each time. Example of a correct query: The correct query does not include the date of the last change request that was retrieved. The date must be greater than the date of the last change request that was retrieved. For example, if the last change request was retrieved on February 1,

Required Information	Description

	2010, set the date the last change request was retrieved as follows:
	
	`select change_id from changes where last_updated > ?`
	
	Example of an incorrect query:
	
	An incorrect query includes the date of the last change request that was updated and might create an infinite loop in which the same change requests are retrieved each time:
	
	`select change_id from changes where last_updated >= ?`

change select by id query	The SQL query that returns all the required details of a specific change. Example of a correct query: `select * from changes where change_id=?`
change request ID	The SQL query that returns a set of change request according to the requestsÕ ID.
last updated field result column name **Note:** In the Settings file, this field is called `lastUpdatedFieldName`.	The name of the column in the result set that contains the `last-update` field value.

Stage 2: Run the Configuration Utility

From the command line, run the following command:

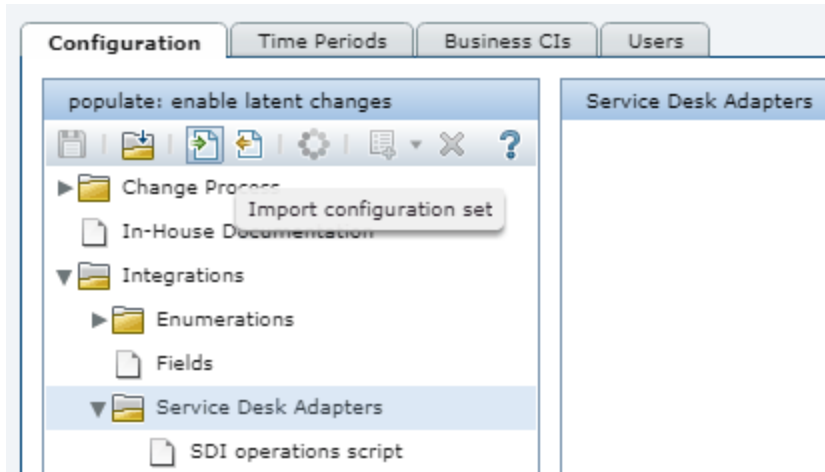**<Release Control installation directory>\bin\SdiConfigurer.bat**

For each question, type your selection and press Enter. (Refer to the information you verified at the beginning of the Prerequisites section.) Where relevant, the default selection appears in square brackets at the end of the question.

Note: If you press Enter without typing anything, the default answer is automatically selected.

Based on your selections, the configuration utility creates new configuration files, including a .zip file. To apply the configuration settings to Release Control, you use the **Import configuration set** button to upload the .zip file as described below.

Stage 3: Apply Configuration Changes

1. In Release Control, go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Service Desk Adapters**, click the **Import configuration set** button.

2. In the Select file to upload dialog box, go to <Release Control installation directory>\bin\result and open <adapter_name>.zip.

   A new node (with the name of the adapter) is added under the **Integrations** > **Service Desk Adapters** node. The node includes the new service desk configuration files, which are displayed independently in the left pane. Select a configuration file and its content is displayed in the right pane.

3. Save a draft of your configuration set. (See "Saving a Draft Configuration Set" on page 47.)

4. When you are satisfied with your configuration changes, activate the draft. (See "Activating Configuration Changes" on page 47.)

Note: To modify your service desk settings after the initial configuration, see the section about advanced service desk configuration in the Release Control User Guide.

Configuring an XML File as a Service Desk

This task describes how to configure and XML file as your service desk and includes the following stages:

- "Stage 1: Prerequisites" below

- "Stage 2: Run the Configuration Utility" below

- "Stage 3: Apply Configuration Changes" below

Stage 1: Prerequisites

1. Verify the folder in which XML files are placed and retrieved by Release Control. You need this information for the configuration utility that you will run in the next stage.

2. Ensure that the Release Control user has read permissions to the directory in which the service desk application requests are placed in XML file format.

Stage 2: Run the Configuration Utility

From the command line, run the following command:

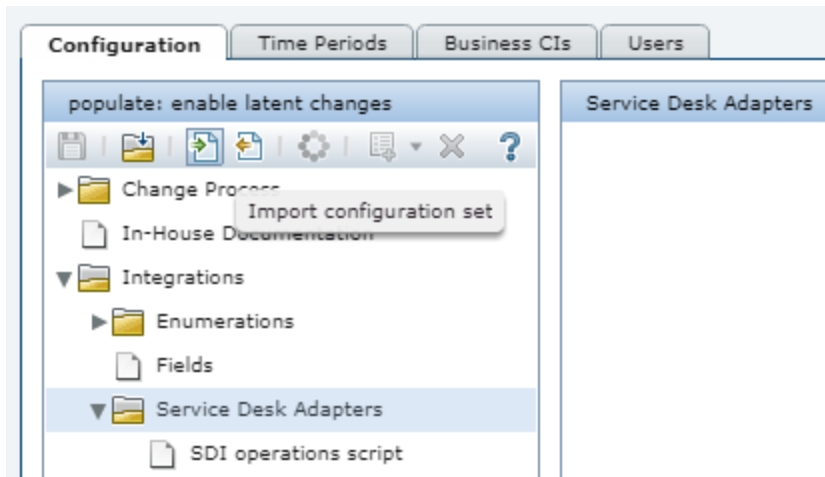**<Release Control installation directory>\bin\SdiConfigurer.bat**

For each question, type your selection and press Enter. (Refer to the information you verified at the beginning of the Prerequisites section.) Where relevant, the default selection appears in square brackets at the end of the question.

Note: If you press Enter without typing anything, the default answer is automatically selected.

Based on your selections, the configuration utility creates new configuration files, including a .zip file. To apply the configuration settings to Release Control, you use the **Import configuration set** button to upload the .zip file as described below.

Stage 3: Apply Configuration Changes

1. In Release Control, go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Service Desk Adapters**, click the **Import configuration set** button.

2. In the Select file to upload dialog box, go to <Release Control installation directory>\bin\result and open <adapter_name>.zip.

   A new node (with the name of the adapter) is added under the **Integrations** > **Service Desk Adapters** node. The node includes the new service desk configuration files, which are displayed independently in the left pane. Select a configuration file and its content is displayed in the right pane.

3. Save a draft of your configuration set. (See "Saving a Draft Configuration Set" on page 47.)

4. When you are satisfied with your configuration changes, activate the draft. (See "Activating Configuration Changes" on page 47.)

   Note: To modify your service desk settings after the initial configuration, see the section about advanced service desk configuration in the Release Control User Guide.

Configuring Server Automation as Your Service Desk

This task describes how to configure <service desk> as your service desk and includes the following stages:

- "Stage 1: Prerequisites" below

- "Stage 2: Run the Configuration Utility" on the next page

- "Stage 3: Apply Configuration Changes" on the next page

Stage 1: Prerequisites

Verify the following information, which you need during this configuration process:

For Server Automation: server name, user name, and password

Stage 2: Run the Configuration Utility

From the command line, run the following command:

<Release Control installation directory>\bin\SdiConfigurer.bat
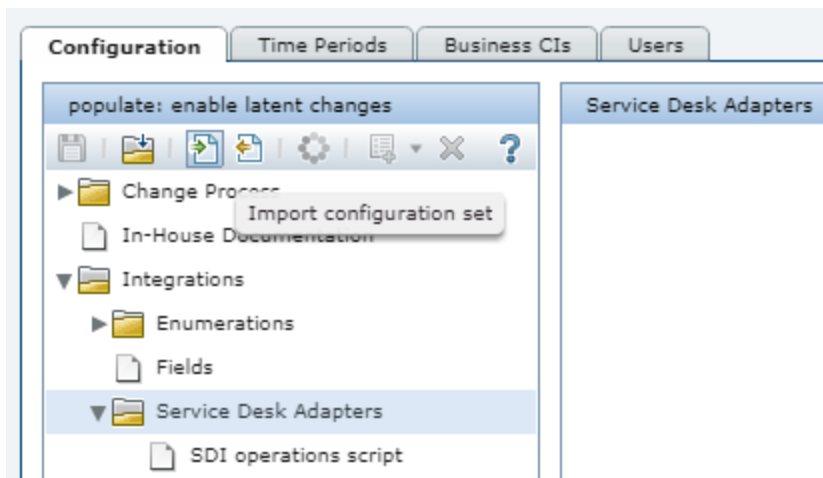
For each question, type your selection and press Enter. (Refer to the information you verified at the beginning of the Prerequisites section.) Where relevant, the default selection appears in square brackets at the end of the question.

> **Note:** If you press Enter without typing anything, the default answer is automatically selected.

Based on your selections, the configuration utility creates new configuration files, including a .zip file. To apply the configuration settings to Release Control, you use the **Import configuration set** button to upload the .zip file as described below.

Stage 3: Apply Configuration Changes

1. In Release Control, go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Service Desk Adapters**, click the **Import configuration set** button.

2. In the **Select file to upload** dialog box, go to <Release Control installation directory>\bin\result and open <adapter_name>.zip.

   A new node (with the name of the adapter) is added under the **Integrations** > **Service Desk Adapters** node. The node includes the new service desk configuration files, which are displayed

independently in the left pane. Select a configuration file and its content is displayed in the right pane.

3. Save a draft of your configuration set. (See "Saving a Draft Configuration Set" on page 47.)

4. When you are satisfied with your configuration changes, activate the draft. (See "Activating Configuration Changes" on page 47.)

> **Note:** To modify your service desk settings after the initial configuration, see the section about advanced service desk configuration in the Release Control User Guide.

Configuring Aperture Vista DCIM as a Service Desk

This task describes how to configure Aperture Vista DCIM as your service desk and includes the following stages:

- "Stage 1: Prerequisites" below

- "Stage 2: Run an SQL to create a Release Control view in the Aperture Vista DCIM database" below

- "Stage 3: Run the Configuration Utility" on the next page

- "Stage 4: Apply Configuration Changes" on the next page

Stage 1: Prerequisites

Verify the following information, which you need during this configuration process:

- Aperture Vista DCIM version 6 is supported.

- Aperture Vista DCIM database name, user name, password, host name, and port (default port is 1433)

Stage 2: Run an SQL to create a Release Control view in the Aperture Vista DCIM database

1. Connect to the Aperture Vista DCIM database. (Refer to the information you verified at the beginning of the Prerequisites section for the Aperture Vista DCIM database name.)

2. Run the <Release Control installation directory>\\examples\service-desk-examples\ApertureVista\CreateRcView.sql file.

Stage 3: Run the Configuration Utility

From the command line, run the following command:

**<Release Control installation directory>\bin\SdiConfigurer.bat**

Choose option 10 and for each question, type your selection and press Enter. (Refer to the information you verified at the beginning of the Prerequisites section.) Where relevant, the default selection appears in square brackets at the end of the question.

> **Note:** If you press Enter without typing anything, the default answer is automatically selected.

Based on your selections, the configuration utility creates new configuration files, including a .zip file. To apply the configuration settings to Release Control, you use the **Import configuration set** button to upload the .zip file as described below.

Stage 4: Apply Configuration Changes

1. In Release Control, go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Service Desk Adapters**, click the **Import configuration set** button.
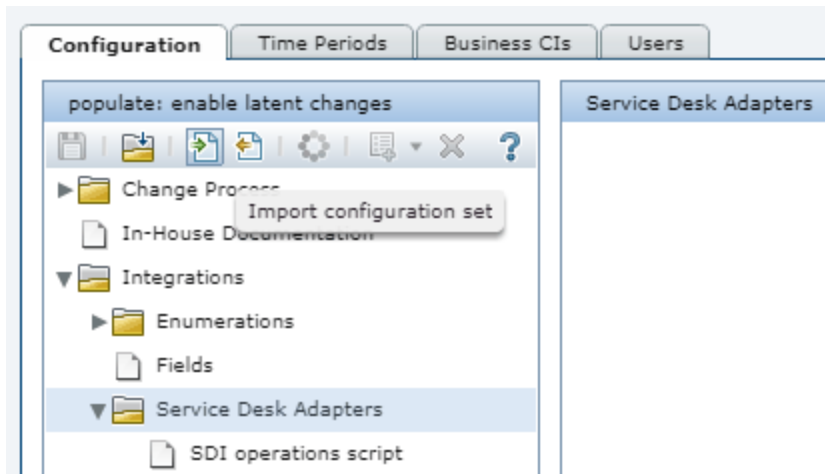
2. In the **Select file to upload** dialog box, go to <Release Control installation directory>\bin\result and open <adapter_name>.zip.

   A new node (with the name of the adapter) is added under the **Integrations** > **Service Desk Adapters** node. The node includes the new service desk configuration files, which are displayed independently in the left pane. Select a configuration file and its content is displayed in the right pane.

3. In the **EMAC_URL_part1** section of the convert.js file, enter the URL of the Aperture Vista server instead of the `aperture_vista_host` field (see "Modifying Configuration Files in the Configuration Tab" on the next page).

4. Save a draft of your configuration set. (See "Saving a Draft Configuration Set" on page 47.)

5. When you are satisfied with your configuration changes, activate the draft. (See "Activating Configuration Changes" on page 47.)

> **Note:** To modify your service desk settings after the initial configuration, see the section about advanced service desk configuration in the Release Control User Guide.

Accessing Release Control through Server Reverse Proxy

You can enable access to Release Control through Server Reverse Proxy (SRP).

To enable access to Release Control through SRP:

1. Map the paths for /ccm and /rcdocs to the URLs of the remote server where Release Control is installed.

   For example, if the reverse proxy is Apache server, add the following lines to the https.conf file:

   `ProxyPass /ccm http://<RC_HOST_NAME>:<RC_HTTP_PORT>/ccm`

   `ProxyPassReverse /ccm http://<RC_HOST_NAME>:<RC_HTTP_PORT>/ccm`

   `ProxyPass /rcdocs http://<RC_HOST_NAME>:<RC_HTTP_PORT>/rcdocs`

   `ProxyPassReverse /rcdocs http://<RC_HOST_NAME>:<RC_HTTP_PORT>/rcdocs`

   /rcdocs should be configured on the reverse proxy server as an additional application besides ccm.

2. Save the file and restart the Apache server for the configuration to take effect.

The Release Control access URL should refer to the reverse proxy host. For example:

`http://<proxy_host>/ccm` and `http://<proxy_host>/rcdocs` respectively.

> **Note:** Different types of reverse proxy may require different configuration steps. Refer to your proxy server documentation for more information.

To use HTTPS with SRP:

1. Configure Release Control to work with HTTPS protocol with a self-signed or CA certificate.

2. Export the security certificate from Release Control and import it to the truststore of your proxy server.

   Note: On the Apache server, the truststore (cacerts file) file is not a part of the installation. You may need to create a new PEM encoded cacerts file. Refer to your Apache documentation for details.

3. Follow the instructions in Step 1 and add the lines to the https.conf file if the Apache server is used.

Working with Release Control Configuration Settings

The Configuration tab in the Administrator module enables you to define the configuration settings needed to set up your environment. This section describes the following common tasks in the Configuration tab. These tasks are referred to during the configuration process.

- "Modifying Configuration Files in the Configuration Tab" below

- "Saving a Draft Configuration Set" on the next page

- "Activating Configuration Changes" on the next page

Modifying Configuration Files in the Configuration Tab

Certain configuration settings are defined in configuration files (for example, scripts and XML files) that are available in the Configuration tab. This task describes how to modify these files.

To modify configuration files:

1. In Release Control, go to **Module** > **Administrator** > **Configuration** tab and select the configuration file you want to modify. Content of this file is displayed in the right pane.

2. After making the required modifications to the file, click the **Save current editable configuration set** button to open the Save as Draft dialog box and save the modified configuration set as a draft.

Saving a Draft Configuration Set

A new configuration set is initially saved as a draft. A draft is a configuration set that has not yet been activated. Only after a draft is activated, are the new configuration properties applied to Release Control. (See "Activating Configuration Changes" below.)

To save a draft configuration set:

1. Select **Module** > **Administrator** > **Configuration** tab and make the required configuration changes.

2. In the left pane, click the **Save current editable configuration set** button 💾 to open the Save as Draft dialog box and save the modified configuration set as a draft.

3. In the Draft name box, enter the name of the draft and click **Save**.

Activating Configuration Changes

This section explains how to activate a draft configuration set and apply the configuration properties to Release Control.

To apply configuration changes

1. Select **Module** > **Administrator** > **Configuration** tab. In the left pane, click the **Open Configuration Set** button 📂 to open the Open Configuration Set dialog box.

2. Select the **Drafts** button to display only the existing drafts.

3. Select the required draft and click **Open**. The name of the currently selected configuration set appears at the top of the left pane.

4. In the left pane, click the **Activate current configuration set** button ⚙ to activate the selected draft and apply the new configuration properties to Release Control.

Uninstalling Release Control

You can remove Release Control from Windows using the Control Panel. Or you can run a series of shell commands to remove Release Control from Linux.

To remove Release Control from Windows:

1. Click **Start** > **Control Panel** > **Add or Remove Programs**.

2. Select Release Control in the program list and click **Remove**.

To remove Release Control from Linux:

1. Log in the Linux system as `root`.

2. Run the **/opt/MicroFocus/rc/stop.sh** command to stop the Release Control daemon.

3. Execute the following command to remove Release Control:

   rpm -e release-control

Upgrading Release Control

This chapter provides information on how to upgrade from Release Control 9.5x to version 9.60 on Windows and Linux.

To upgrade to version 9.60 from versions earlier than 9.5x:

- Upgrade to version 9.5x according to the instructions in the *Release Control 9.5x Deployment Guide*.

- Upgrade from version 9.5x to version 9.60 by following the instructions in this chapter.

This chapter includes:

Upgrading Release Control on the Windows System

The upgrade process includes the following stages:

- "Stage 1: Prerequisites" on the next page

- "Stage 2: Install and Upgrade Release Control" on page 51

- "Stage 3: Upgrade Service Desk Adapter to 9.60" on page 52

- "Stage 4: Post Upgrade Recommendations" on page 53

- "Stage 5: Regenerate the encrypted password" on page 53

Stage 1: Prerequisites

1. If you are using Release Control with Universal CMDB earlier than 10.20, do one of the following:

   ○ Set Universal CMDB to standalone mode.

     Go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Universal CMDB**, and in the **Universal CMDB version** box select **No Universal CMDB (standalone)**.

   or

   ○ Upgrade Universal CMDB to a later version.

2. Make sure that the change request queue is empty as follows:

   a. Go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Service Desk Adapters** and select the relevant service desk adapter node. The configuration file is displayed in the right pane. For information about how to edit the configuration file, see "Working with Release Control Configuration Settings" on page 46.

   b. In the adapter configuration file, switch the adapter into init-mode as follows:

      - Locate the following line:

        <!--initial-load-state><last polling time></initial-load-state-->

      - Uncomment the line and modify the date/time as follows:

        <initial-load-state>[last polling time]</initial-load-state>

        Where `[last polling time]` is any time before the last time Release Control polled the service desk. Polling occurs every thirty seconds by default.

        It is recommended to set the last polling time to a few hours earlier than the current time. For example, if today's date is 20 January 2016, set the last polling time as follows:

        <initial-load-state>1/20/2016 00:00:00 PST</initial-load-state>

   c. Restart Release Control and allow it to process all the change requests still in the queue.

   d. Make sure the queue is empty using the Queue Manager utility located in <old Release Control installation directory>\bin.

      For more information about using the Queue Manager utility, see the Release Control User Guide.

3. Download and save the adapter's settings and script (*.js) files.

4. Stop the Release Control service.

5. If you were using a Web server (Apache or IIS) with Release Control, remove the Web server configuration using the Web server configurer utility. To remove it, run the following command:

   <old Release Control installation directory>\bin\WebServerConfigurer.bat remove-config

   > **Note:** After you install the new version of Release Control, if you still want to work with a Web server, configure it using the Web server configurer utility in the new installation. For more information, refer to the utilities section in the Release Control User Guide.

6. Back up the database to protect your data in case of an error during the upgrade procedure.

7. Back up the configuration sets. You can back up any existing configuration sets by using the ExportCs.bat utility to export those configuration sets, or by clicking **Administrator** > **Configuration** > **Export configuration set to a zip file** in Release Control.

Stage 2: Install and Upgrade Release Control

1. Install Release Control version 9.60 (see "Installing Release Control" on page 13).

   Before you run the installation, review the pre-installation information (see "Before You Install" on page 10).

2. If you were using encrypted passwords in your Release Control configuration (for example, the database password), copy (and overwrite) the contents of <old Release Control installation directory>\security to <Release Control 9.60 installation directory>\security.

3. Configure the database that you want to use with the upgraded version of Release Control. Update the database.properties file as described in "Configuring the Database or User Schema" on page 14.

4. From the <Release Control 9.60 installation directory>\bin directory, run Upgrade.bat to perform the upgrade. When prompted, enter the full path of the old Release Control installation (for example, C:\RC950).

5. If you made any changes to the log levels in the ccmlog4j.properties file of your old installation, manually make the same changes again in the new ccmlog4j.properties file and the cmdblog4j.properties file.

6. Start the Release Control server.

Stage 3: Upgrade Service Desk Adapter to 9.60

Note: You need to perform the steps in this stage for each service desk adapter that you were using with your old version of Release Control.

1. From the <Release Control 9.60 installation directory>\bin directory, run SdiConfigurer.bat. When answering the questions, you must use the same values that existed in the adapter's settings file of the old Release Control version.

2. Add the adapter to the configuration set. For details, see "Stage 3: Apply Configuration Changes" on page 30.

3. Save your configuration set, but do not activate it. For details, see "Saving a Draft Configuration Set" on page 47.

4. If you had previously made changes to the .js files, upload the setting and script (*.js) files of the adapter that was used in the old Release Control version.

5. In the adapter configuration file, configure the adapter to fetch old tickets, thus covering the time in which the upgrade procedure took place:

   ○ For Service Manager and database adapters: locate the following property:

   `startFrom=`

   ○ For all other adapters: uncomment the following line and modify the date/time as follows:

   `<initial-load-state>[last polling time]</initial-load-state>`

   Where `[last polling time]` is earlier than the time the upgrade procedure started. Polling occurs every thirty seconds by default.

   For example, if today's date is 20 January 2016, and you started the upgrade process at 2:00 AM, then set the last polling time to midnight:

   `<initial-load-state>1/20/2016 00:00:00 PST</initial-load-state>`

6. If you are using Remedy as your service desk and you manually added .jar files to the <old Release Control Installation directory>\tomcat\webapps\ccm\WEB-INF\lib directory, copy the added files to <Release Control 9.60 Installation directory>\apps\ccm\WEB-INF\os_lib.

7. In the left pane, click the **Activate current configuration set** button to activate the selected draft and apply the new configuration properties to Release Control.

Stage 4: Post Upgrade Recommendations

1. If you did not make any changes to the change-flow.js script of your old installation, it is recommended to update the new change-flow.js script as follows:

    a. In Release Control, select the **Module** > **Administrator** > **Configuration** tab > **Change Process** > **change flow script** node. Content of this file is displayed in the right pane. Remove all content manually.

    b. Browse to the <Release Control 9.60 installation directory>\examples\scripts directory and open the change-flow.js file with text editing tools.

    c. Copy the content of change-flow.js and paste it to the right pane of the change flow script node.

    d. Save and activate the configuration changes (see "Working with Release Control Configuration Settings" on page 46).

2. After you install the new version of Release Control, and you still want to work with a Web server, you need to configure it using the Web server configurer utility in the new installation. For information on how to configure the Web server, refer to the utilities section in the Release Control User Guide.

3. If you were working in identity management mode before the upgrade, and want to continue to do so after the upgrade, you must reconfigure Release Control to work in identity management mode. For details, see "Use Identity Management Mode" in the Release Control User Guide.

4. If, previous to the upgrade, you defined time periods, go to **Module** > **Administrator** > **Time Periods** tab and click the **Save Settings** button.

Stage 5: Regenerate the encrypted password

If you have encrypted passwords, the old encrypted passwords are still valid after upgrade to version 9.60. We highly recommend you to re-encrypt the passwords by launching the GenerateKey and the EncryptPassword utilities again for higher security.

To replace the old Database password:

Go to <Release Control installation directory>\conf directory, open the database.properties file and then replace the old password with the re-encrypted one.

To replace the old Sdi password:

Go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Service Desk Adapters** > **<sm adapter>** > **settings file**, and then replace the old password with the re-encrypted one.

To replace the old UCMDB password:

Go to **Module** > **Administrator** > **Configuration** tab > **Integrations** > **Universal CMDB** > **Available Connections** > **<ucmdb server>**, and then replace the old password with the re-encrypted one.

To replace the old LDAP password:

Go to **Module** > **Administrator** > **Security** > **Authentication** > **LDAP mode** > **LDAP server properties**, and then replace the old password with the re-encrypted one.

For more information about the GenerateKey and the EncryptPassword utilities, see *Pasword Encryption* in the *Release Control User Guide*.

Upgrading Release Control on the Linux System

1. Copy the new Release Control rpm.bin package to the target computer.

2. Log in the Linux system as `root`.

3. Run the following command to enter the directory where the new rpm.bin package is stored:

   cd <directory where the new rpm.bin package is stored>

4. Run the following command to extract rpm package from the rpm.bin package:

   ./release-control-9.60-0001.x86_64.rpm.bin -x

   The End User License Agreement is displayed and you are prompted to agree to its terms.

   The release-control-9.60-0001.x86_64.rpm package is extracted to the same directory.

5. Execute the following command to ensure that the execute permission is set:

   chmod u+x release-control-9.60.0001.x86_64.rpm

6. Run the following command:

   rpm -Uvh release-control-9.60-0001.x86_64.rpm

7. Restart the Release Control daemon by running the following commands successively:

   /opt/MicroFocus/rc/stop.sh

   /opt/MicroFocus/rc/start.sh

FAQ

This chapter provides FAQ information about Release Control installation and configuration issues and provide solutions.

This chapter includes:

How to Use Two Change Adapters to Pull Change Tickets and How to Use Different Ways to Calculate the Risk Value

Issue

How to use two change adapters for pulling change tickets, one for the changes in Service Manager and another for the mainframe changes (for example, DB adapter)?

For these two kinds of changes, how to use different ways (uCMDB risk/specified Risk calculation) to calculate the risk value?

Solution

Though Release Control has no UI component for the aforementioned configuration currently, you can update the change script to accomplish these tasks.

Refer to the following steps as an example:

1. Import two Service Desk adapters: sd1 and sd2.

2. In Release Control, browse to **Administrator** > **Configuration** > **Integrations** > **Field** and add a customized field named `service-desk`.

3. Browse to **Administrator** > **Configuration** > **Integrations** > **sd1** > **convertChange.js**, and add a

code line to `function convert`:

```
function convert(sm_rfc, generic_rfc) {
......
generic_rfc.setField("service-desk", "sd1")
......
}
```

4. Apply the same configuration to **sd2** > **convertChange.js** as described in the previous step.

5. Browse to **Administrator** > **Configuration** > **Change Process** > **change flow script** and add the following code lines to `function overrideRisk`:

```
function overrideRisk(prevChange, newChange, analysis, result) {
//-----Example: maximize risk when change tickets from ìsd1î adapter
if (newChange.getField("service-desk")== "sd1"){
result.risk= 100;
}
}
```

6. Restart the Release Control service. Now changes from **sd1** will get risk calculation.

For more functions which can be invoked by a change flow script, refer to the RiskAnalysis, RawRiskFactorCalculationResult, and OverrideRulesResult classes in *Release Control API Reference*.

How to Set up Release Control and Service Manager Integration When SSL Is Used

Issue

How to set up Release Control and Service Manager integration when SSL is used?

Solution

Refer to the following steps as an example of the SSL configuration with Tomcat:

1. Generate the KeyStore file. (If you have the certificate file, you can skip this step.)

   a. Open the Windows command prompt. Change directories to the Java platform's bin folder by typing the following command:

cd %JAVA_HOME%/bin

b. Type the following command to create a private key and KeyStore for Release Control:

keytool -genkey -alias <rctracer> -keypass <rcadmin> -keystore <rctracer.bin> -storepass <rcadmin> -keyalg RSA

Replace the parameters in angle brackets according to your requirements. Note that both the **keypass** and **storepass** passwords should be the same. The **.bin** file is actually your KeyStore file.

c. When keytool prompts you for your first and last name, type your personal information as required.

d. When keytool prompts you for the organization unit, organization, city or locality, state or province, and two-letter country code, type the identification information for your company.

e. Verify the information you provided and type `yes` if it is correct.

f. Change directories to the Java platform's bin folder and verify the rctracer.bin file is created.

2. Configure Tomcat to use the KeyStore file.

a. Copy rctracer.bin to the webapps folder of Tomcat.

b. Browse to the servers/server-0/conf directory and open server.xml.

c. Find the `Connector port="8443"` element and uncomment it. And add two code lines under `clientAuth`:

```
<Connector port="8443" protocol="org.apache.coyote.http11.Http11NioProtocol"
maxThreads="150" SSLEnabled="true" scheme="https" secure="true"
clientAuth="false" sslProtocol="TLS"
keystoreFile="replace your keystore file path"
keystorePass="replace your keystore password" />
```

> **Note:** Alternatively, you can add the following codes for security configuration:
>
> ```
> <Connector port="8443"
> protocol="org.apache.coyote.http11.Http11NioProtocol"
> maxThreads="150" SSLEnabled="true" scheme="https" secure="true"
> clientAuth="false" sslProtocol="TLS"
> keystoreFile="replace your keystore file path"
> keystorePass="replace your keystore password"
> ciphers="TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA,TLS_ECDHE_RSA_WITH_AES_256_
> CBC_SHA,
> TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA,TLS_ECDH_ECDSA_WITH_AES_256_CBC_
> SHA,
> TLS_ECDH_RSA_WITH_AES_256_CBC_SHA,TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA,
> TLS_ECDH_ECDSA_WITH_AES_128_CBC_SHA,TLS_ECDH_RSA_WITH_AES_128_CBC_SHA,
> ```

```
TLS_ECDH_ECDSA_WITH_RC4_128_SHA,TLS_ECDH_RSA_WITH_RC4_128_SHA,
TLS_RSA_WITH_AES_256_CBC_SHA,TLS_RSA_WITH_AES_128_CBC_SHA" />
```

    d. Save and close the file.

> **Note:** If there are multiple nodes, you need to modify the server.xml file for every node.

3. Configure the web server application to work with SSL.

    a. Browse to the apps/ccm/WEB-INF directory of your web server application and open web.xml. Add the following XML fragments before `</web-app>`:

```
<security-constraint>
<web-resource-collection>
<web-resource-name>securedapp</web-resource-name>
<url-pattern>/*</url-pattern>
</web-resource-collection>
<user-data-constraint>
<transport-guarantee>CONFIDENTIAL</transport-guarantee>
</user-data-constraint>
</security-constraint>
```

    b. Save and close the file.

How to Set up Users in Release Control Without LDAP Group Mapping

Issue

How can users be set up in Release Control without LDAP group mapping?

Solution

If an organization does not use LDAP groups for applications, or not being able to authenticate via LDAP is unacceptable, an Release Control administrator can still set up users.
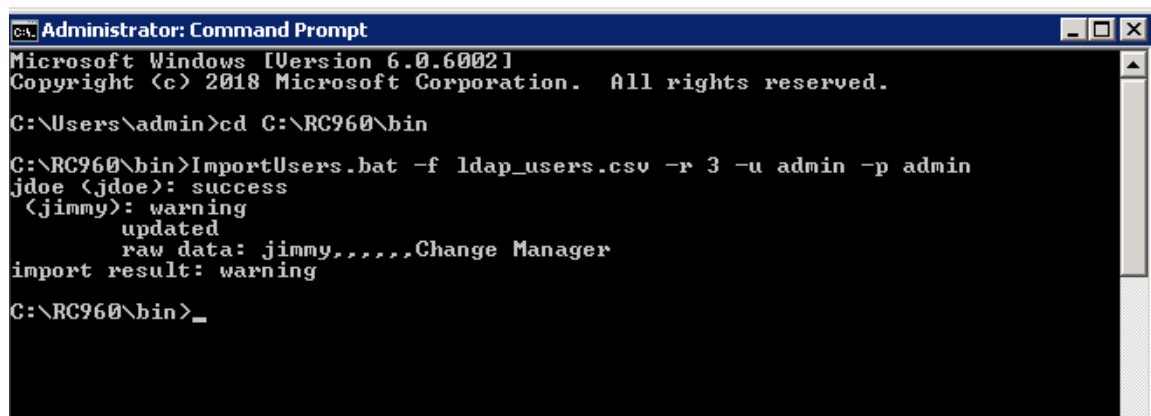
Refer to the following steps as an example:

1. Import Administrator users into Release Control database.

    a. Prepare a text file with the following format and save it as ldap_users.csv in the <Release Control installation directory>\bin\ directory.

```
USERNAME,PASSWORD,FIRST_NAME,LAST_NAME,EMAIL,BUSINESS_ID,ROLE
jdoe,,John,Doe,jon.doe@hpe.com,jdoe,System Administrator
jimmy,,,,,,Change Manager
```

- List the users to whom you want to grant a non-default role in this file. You must grant the System Administrator role to a user. Note that the administrator user you granted here refers to the Release Control administrator.

- Make sure that the users listed in the file also have access to the LDAP server. Otherwise, authorization issues will occur when LDAP is enabled.

- You can keep some fields empty except for the "USERNAME", which refers to the LDAP attribute to be specified for the usersUniqueIDAttribute property in ldap.properties in Step 2-c.

b. Open the Windows command prompt. Change directories to <Release Control installation directory>\bin\ and run the **ImportUsers.bat** command by using the default user admin:

In the screenshot, a Warning is shown because the user jimmy already exists in the Release Control database. This user profile will be updated.

2. In Release Control, configure LDAP to be used without group mapping.

a. Log in to Release Control as the administrator and set the Authentication mode to `LDAP`:
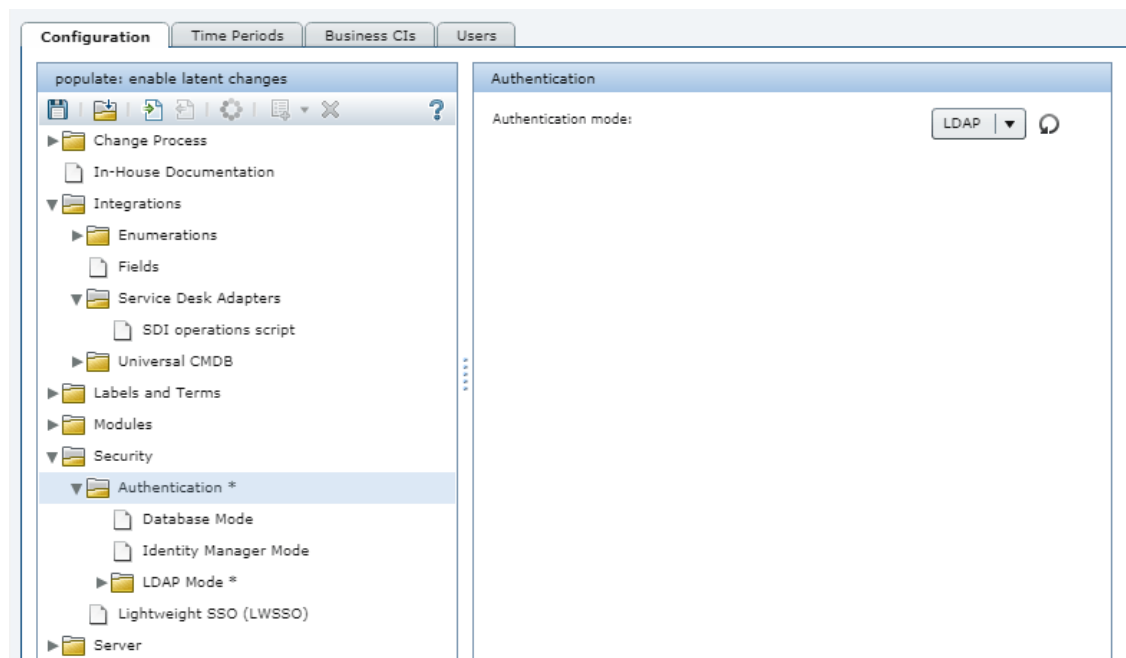
b. Configure LDAP mode details and pay attention to the following items:

- Select a role (for example, `User`) as the Default role. Refer to the following steps for how to update a user's role and grant access to the Administration module under LDAP mode.

- The roles are pre-defined in Release Control out-of-box system. To meet the actual requirement, run the ManageRoles.bat command to create your own roles. For example:

  ```
  <Release Control installation directory>\bin\ManageRoles.bat -c -r
  NewRole -a <permission name1> <permission name 2> .....
  ```

 Refer to the *Release Control User Guide > Appendices > Utilities > Role Manager* section for more details.

- `[Email header]`, `[First name header]` and `[Last name header]` refer to the corresponding LDAP attributes' names.

- Do NOT select the Role synchronized checkbox. After a user logs in for the first time, Release Control will get the user's role from the database instead of taking the Default

role.
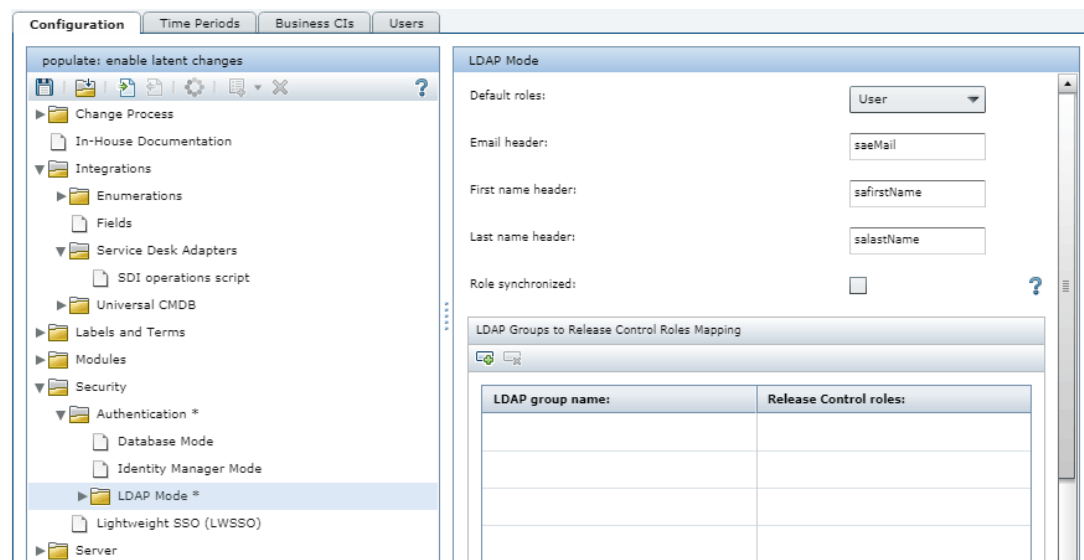
3. Configure LDAP Server Properties.

    a. Browse to the <Release Control installation directory>/examples/ldap-examples directory and select one properties template file according to your LDAP server type. For example, select **ldap.properties.SO** for the openDS LDAP server.

    b. Open the selected template file and update the properties besides the group-related ones.

    c. After the update is complete, save and rename this file to ldap.properties. Upload it to RC:
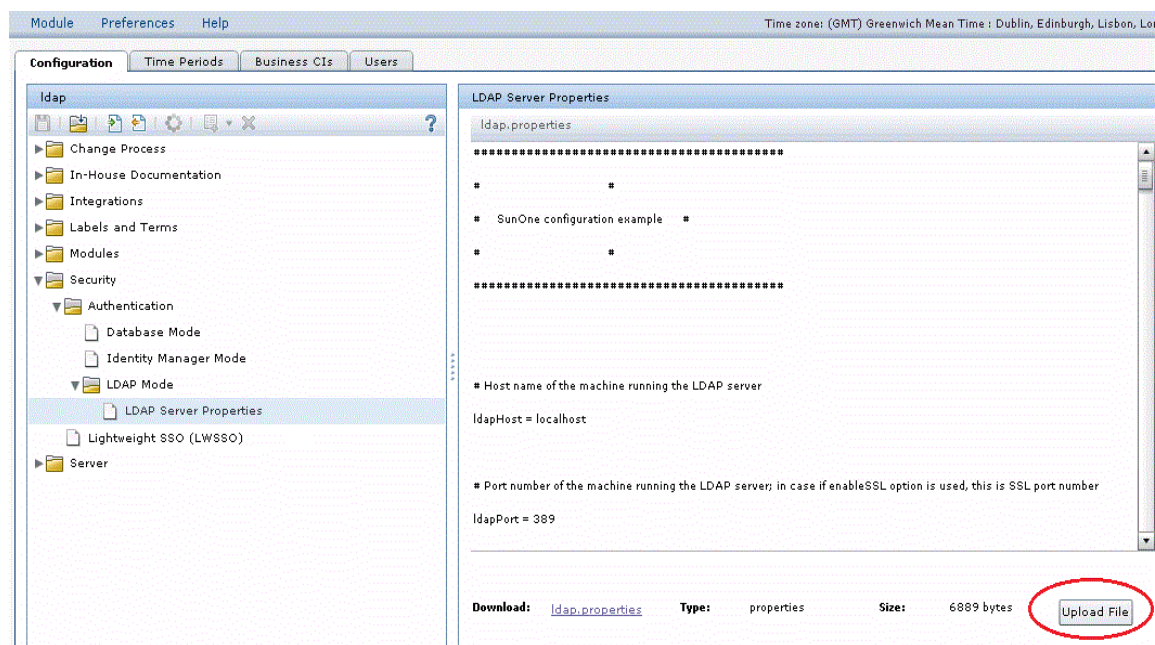
d. Save the configuration set with a new name. The following warning message might appear:

Problems		
Code	⚠	**Description**
RC-00802	⚠	No group mapped to a role containing the editConfiguration permission. This will make the LDAP configuration irreversible

This warning appears because no LDAP group is mapped to a role with administrator permission. Ignore this warning.

e. Activate the configuration set.

f. Log out of Release Control.

4. Log in to Release Control as a LDAP user.

a. Log in to Release Control as a LDAP user. Release Control will connect to the LDAP server for password authorization, and then it will check that if this user already exists in the database. If yes, Release Control will grant the role from database to this user. Otherwise, Release Control will grant the default role (User) and a new user will be created in RC database.

b. After the new LDAP user login with the default role, you can still update his role by running the **ImportUsers.bat** command (use `jdoe`, the new Release Control administrator in LDAP mode now).

How to Translate the Label for a Custom Field

Issue

When delivering Release Control in more than one language, how to translate the label (or other properties, such as toolTip, colHeader) for a custom field?

Solution

Refer to the following steps as an example:

1. Go to **Module** > **Administrator** > **Configuration** > **Integration** > **Fields** and select the custom field you added in the **Available Fields** list.

2. In the **Field Definition** tab, set the value of **Label** field to `properties-file`. This value will automatically change to `fields.<custom field name>.label` if this key does not exist in the

       `fields-labels.properties` file, or change to the value mapped to the key if it exists in the fields-labels.properties file.

3. In the **List Layout** tab, set the value of **Header** field and **Header tooltip** field to `properties-file`.

4. In the the **Details Layout** tab, set the value of **Label** field and **Tooltip** field to `properties-file`.

5. In the **Filter Layout** tab, set the value of **Label** field and **Tooltip** field to `properties-file`.

6. Add the required keys and value to the fields-labels.properties file.

    For example, if you add a new field "my-field" with the default lable "My field" and hope to translate this lable to French, add `Fields.my-field.lable=Mon libelle` to the language file fields-labels.properties (or fields-labels_fr_FR.properties).

7. Save and active the configuration set.

8. Restart the Release Control service.

Send documentation feedback

If you have comments about this document, you can contact the documentation team by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on Deployment Guide (Release Control 9.60)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to ovdoc-ITSM@microfocus.com.

We appreciate your feedback!