SERENA™

SERENA®

RELEASE MANAGER

Installation and Configuration Guide

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Table of Contents

Welcome to Serena Release Manager

Thank you for choosing Serena Release Manager, the orchestrated solution for application release management that enables you to plan, manage, and automate the deployment of applications into test, pre-production, and production environments across mainframe and distributed systems with start-to-finish traceability and end-to-end visibility.

Audience and Scope

This manual is intended for personnel who are responsible for installing and configuring Serena Release Manager.

Each product in the Serena Release Manager integrated suite has full documentation. This book is not meant to replace that documentation, but will serve as a master document to guide you through the process of installing and configuring the entire suite.

Before You Begin

See the Readme for the latest updates and corrections for this document.

Procedures and figures in this documentation are examples based on the default implementation of Serena Release Manager. The details may not match your implementation of Serena Release Manager exactly, but provide a reference to get you started with your implementation and use of Serena Release Manager.

Guide to Serena Release Manager Documentation [page 9]

Accessing the Documentation [page 12]

Guide to Serena Release Manager Documentation

The Serena Release Manager documentation set includes the following manuals and demonstrations.

Manual or Tutorial	Description
Serena Release Manager Getting Started Guide	Describes how to use the default implementation of Serena Release Manager to manage application releases.
Serena Release Manager Installation and Configuration Guide	Describes how to install and configure the Serena Release Manager suite of products.
Getting Started with Serena Release Manager	A web-based demonstration that shows you how to get started with Serena Release Manager.
Serena Release Manager Web Services Reference	Provides information on the Web services provided for Serena Release Manager.
Serena Release Manager ZMF ERO for RLM Web Services Reference	Provides information on the ChangeMan ZMF Extended Release Option (ERO) Web services provided for Serena Release Manager.

The following installation and configuration manuals are referenced in this document.

Manual or Tutorial	Description
Serena Business Manager Installation and Configuration Guide	Provides information on installing SBM and creating a database. Database and Web server configuration information is also provided.
Serena Business Manager SBM Composer Guide	Provides details on using SBM Composer to create the tables, fields, workflows, forms, and other design elements comprised in process apps. Information about saving, versioning, importing, and exporting process apps is also provided. This document is intended for individuals who want to design and maintain process apps.
Serena Business Manager SBM Application Administrator Guide	Explains how to configure deployed applications. Instructions for managing projects, user and group accounts, and notifications are included.
Serena Business Manager SBM Application Repository Guide	Provides information on using SBM Application Repository to deploy process apps to runtime environments and to promote configured applications from one environment to another.
Serena Business Manager System Administrator Guide	Provides information on administering the SBM Application Engine. Instructions for database utilities, system settings, and authentication are included.
Serena Business Manager Licensing Guide	Explains how to manage licenses for Serena Business Manager. License types are discussed, along with instructions for installing and using the Serena License Manager. This guide is intended for administrators who will install and implement Serena Business Manager.
Serena Business Manager User's Guide	Provides information about the SBM User Workspace and is intended for end users. Instructions on using the SBM User Workspace, including the robust reporting feature in SBM, are included. To ease the process of providing a copy for every user in your system, the Serena Business Manager User's Guide is provided in PDF and can be accessed from the Product Information tab of the About page in the SBM User Workspace.
Serena Release Automation User's Guide	Describes how to install, configure, and use Serena Release Automation.

Manual or Tutorial	Description
Serena Release Automation, Powered by Nolio, Installation and Administration Guide	Describes how to install and configure Serena Release Automation, powered by Nolio.
Serena Dimensions CM Installation Guide	Describes how to install and configure Dimensions CM for the respective platforms.
Serena Dimensions CM Administrator's Guide	Describes how to administer the Dimensions CM tool.
Serena Dimensions CM Installing the Serena License Manager	Describes installing the Windows version of SLM.
Serena Dimensions CM User's Guide	A user guide to the Dimensions CM Client Tools.
Serena Dimensions CM Process Modeling Guide	Describes how to configure the process model using the Administration Console.
Serena ChangeMan ZMF Administrator's Guide	Describes ChangeMan ZMF features and functions with instructions for choosing options and configuring global and application administration parameters.
Serena ChangeMan ZMF Installation Guide	Provides step-by-step instructions for initial installation of ChangeMan ZMF. Assumes that no prior version is installed or that the installation will overlay the existing version.
SER10TY User's Guide	Gives instructions for applying licenses to enable ChangeMan ZMF and its selectable options.

Manual or Tutorial	Description
Serena Orchestration Ops Installation and Configuration Guide	Provides information on installing and configuring Serena Service Manager.
Serena Service Manager ITIL Guide	Provides information about the Serena Service Manager default implementation user interface and is intended for end users.

Accessing the Documentation

You can access all documentation and demonstrations for the current release of the Serena Release Manager suite through the Serena Release Manager Help system.

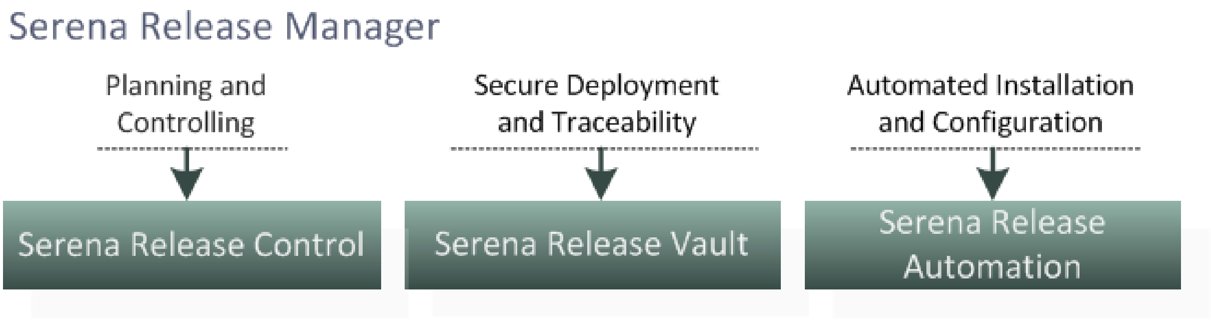
When you click the **Help** link in Serena ALM, the Serena Release Manager online Help appears. You can navigate the contents, search, and view the glossary for information on installing, configuring, and using the product. To view and download Serena Release Manager readme files and PDFs for all supported releases, select **Demos & All Doc** in the online Help menu.

Installation Prerequisites and Planning

This section tells you what you must do before installing Serena Release Manager. It provides you with information to help guide you through the Serena Release Manager installation.

What is Serena Release Manager?

Serena Release Manager is an integrated suite that helps you with your release management by enabling you to control, secure, and automate your processes.

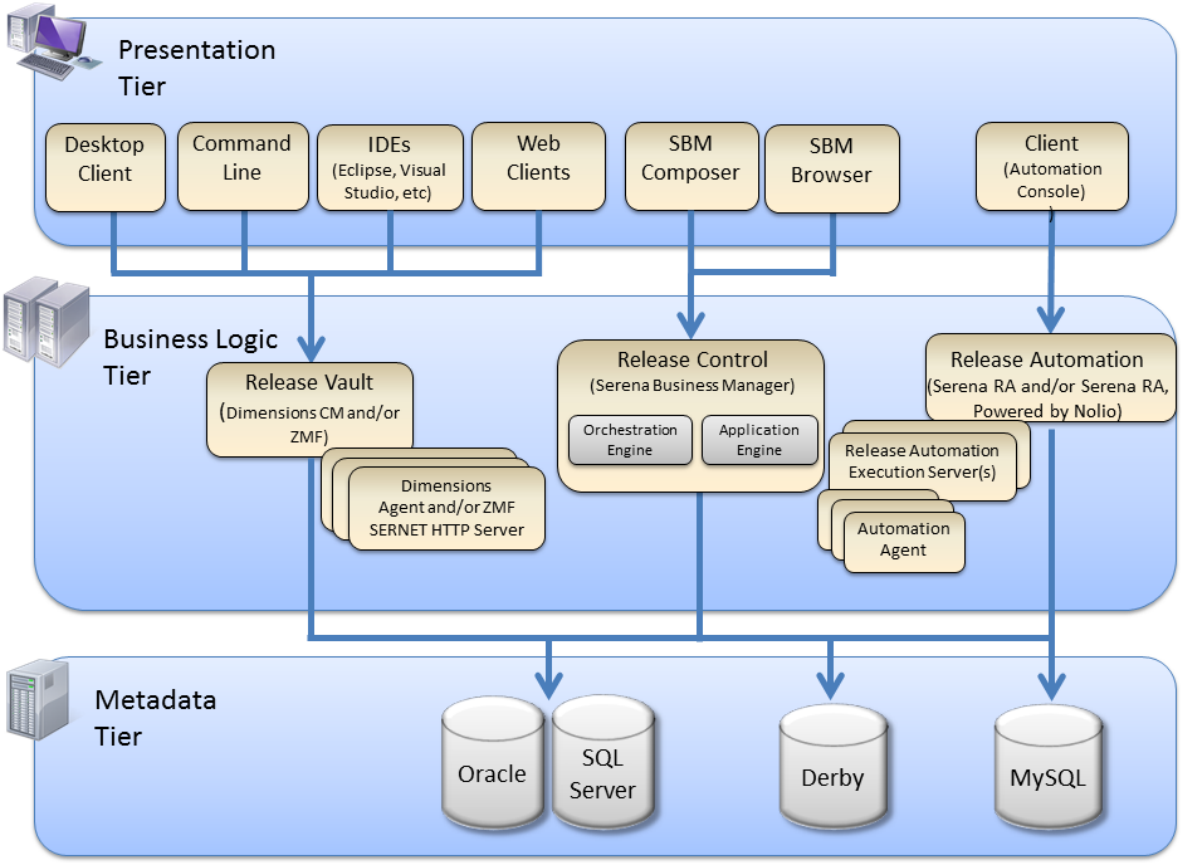

Serena Release Manager
Planning and Controlling
Secure Deployment and Traceability
Automated Installation and Configuration
Serena Release Control
Serena Release Vault
Serena Release Automation

- **Serena Release Control**, powered by Serena Business Manager, helps you plan and control your application release processes across your enterprise, from definition to deployment.
- **Serena Release Vault**, powered by Dimensions CM for distributed systems and ChangeMan ZMF for IBM z/OS systems, ensures a secure and auditable path to production.
  - Secures source for multiple releases
  - Prevents unauthorized changes
  - Enables full traceability and audit trail
- **Serena Release Automation** and **Serena Release Automation, powered by Nolio,** automate application installation and configuration tasks.
  - Handle a high volume of tasks
  - Cut deployment time and cost
  - Reduce deployment errors
  - Handle the complexity of multiple release destinations and configurations

For a full description of the use of Serena Release Manager, see the *Serena Release Manager Getting Started Guide*.

Serena Release Manager Architecture

The architecture of the Serena Release Manager suite integrates Release Control, Release Vault, and Release Automation as shown in the following figure.


Presentation Tier
Desktop Client
Command Line
IDEs (Eclipse, Visual Studio, etc)
Web Clients
SBM Composer
SBM Browser
Client (Automation Console)
Business Logic Tier
Release Vault (Dimensions CM and/or ZMF)
Dimensions Agent and/or ZMF SERNET HTTP Server
Release Control (Serena Business Manager)
Orchestration Engine
Application Engine
Release Automation (Serena RA and/or Serena RA, Powered by Nolio)
Release Automation Execution Server(s)
Automation Agent
Metadata Tier
Oracle
SQL Server
Derby
MySQL

The integrated power of Release Control, Release Vault, and Release Automation are brought together through the Serena ALM user interface and its underlying SBM infrastructure.

The default architecture is shown in the preceding figure. Each organization's implementation may vary depending on which Serena and non-Serena products and solutions participate as the foundation of and providers of information into the release management processes.

If you have Serena Development Manager (DVM) installed as part of the Serena ALM suite, your implementation of Dimensions CM is shared between Serena Release Manager and Serena Development Manager. For more information on the Serena ALM suite and Serena Development Manager, see *Introduction to Serena Orchestrated ALM* and *Introduction to Serena Development Manager* documentation.

Preparing for the Installation

For a smooth and successful installation and configuration of the Serena Release Manager suite, prepare by gathering the information specified in the following sections.

- Installation Prerequisites [page 15]
- Database Requirements [page 15]
- Software Compatibility Requirements [page 16]
- System Requirements [page 16]
- Planning Checklists and Worksheets [page 16]

Installation Prerequisites

Before installing any of the products in the Serena Release Manager suite, please see their respective installation and configuration guides.

Preparing for Serena Product Installation

Before you install the Serena Release Manager suite of products, make sure you have completed the prerequisites as follows:

- **Serena Business Manager**

  Before you install Serena Business Manager, please see the “Pre-installation Checklist” section of the *Serena Business Manager Installation and Configuration Guide*.

- **Serena Release Control**

  You must complete the installation for Serena Business Manager before beginning the installation for Serena Release Control.

- **Dimensions CM**

  Before you install Dimensions CM, please see the “Fresh Installations Checklist” section of the *Serena Dimensions CM Installation Guide* for your operating system.

- **Serena License Manager**

  If you are evaluating Serena Release Manager, Serena License Manager is not required.

- **Common Supporting Files**

  The installer for Serena ALM automatically installs additional supporting software, such as a common Tomcat Web server.

NOTE If you are using ChangeMan ZMF for your vault, you will need a supported installation of ChangeMan ZMF.

Database Requirements

Before beginning the installation, you must have database systems installed and ready as follows:

- **Serena Business Manager**

  Serena Business Manager requires one of the following databases: Oracle or SQL Server.

- **Dimensions CM**

  Dimensions CM requires one of the following databases: Serena-Supplied Runtime, Oracle, or SQL Server.

- **Serena Release Automation**

  Serena Release Automation requires a database to be pre-installed. Supported database systems include Microsoft SQL Server, Oracle, MySQL, and Derby.

- **Serena Release Automation, powered by Nolio**

  Serena Release Automation, powered by Nolio, requires a database to be pre-installed. Supported database systems include Microsoft SQL Server, Oracle, and MySQL.

Software Compatibility Requirements

For details of supported versions of the products in the Serena Release Manager suite, supported platforms, and third party integrations, see the Serena Release Plan for your version of Serena Release Manager on the `Serena Support Product Roadmap`.

NOTE This link requires that you are logged into the Customer Support website. If the link fails, enter `http://support.serena.com` in your Web browser, sign in, and select **Support > Product Roadmap** from the toolbar menu. On the high-level timeline, select **Release Manager** and then select your version.

System Requirements

This section includes references to the system requirements for each of the products installed as part of the Serena Release Manager suite.

You should determine your organization’s specific needs using the detailed documentation for SBM, Dimensions CM, and Serena Release Automation as follows:

Product	System Requirements Location
Serena Business Manager	"Hardware Requirements" in *Serena Business Manager Installation and Configuration Guide.*
Serena Release Control	Your SBM requirements address the requirements for Serena Release Control.
Serena Dimensions CM	• See the `Dimensions ;CM Release Plan` page for the supported version. • See the Dimensions CM Readme
Serena Release Automation	"System Requirements" in *Serena Release Automation Installation and Administration Guide.*
ChangeMan ZMF (Optional)	"System Requirements" in *Serena ChangeMan ZMF Installation Guide.*

Server Requirements

For optimal performance, Serena recommends that SBM and Dimensions CM be installed on separate physical servers.

Planning Checklists and Worksheets

Checklists and worksheets that you can use to collect and document required information for the installation and configuration are provided in the Serena Business Manager and Dimensions CM documentation. These include port numbers, IP addresses and hostnames of various servers, and database names and information.

For a checklist of the installation and configuration activities for Serena Release Manager, see Provider Configuration [page 93].

Installing and Configuring Serena Development Manager

Serena Development Manager is a separately licensed option. For pre-requisites, installation and configuration details, see the *Serena Development Manager Installation and Configuration Guide.*

Installation Planning for SBM Connector for HP Quality Center / ALM Integration

For pre-requisites for the Quality Center integration, see the *Development Manager Connector for HP Quality Center / ALM Implementation Guide.* For HP Quality Center ALM consult your product documentation.

If you are using the Development Manager Connect for Quality Center, you will need to have HP Quality Center installed, and download and install the Quality Center modules on the SBM Server before running the Development Control Installer. For details, see Installing and Registering Quality Center Modules in the *Development Manager Connector for HP Quality Center / ALM Implementation Guide*. There are also some post-installation steps you will need to carry out.

Installing and Configuring Serena Requirements Manager

Serena Requirements Manager is a separately licensed option. For pre-requisites, installation and configuration details, see the *Serena Requirements Manager Installation Guide.*

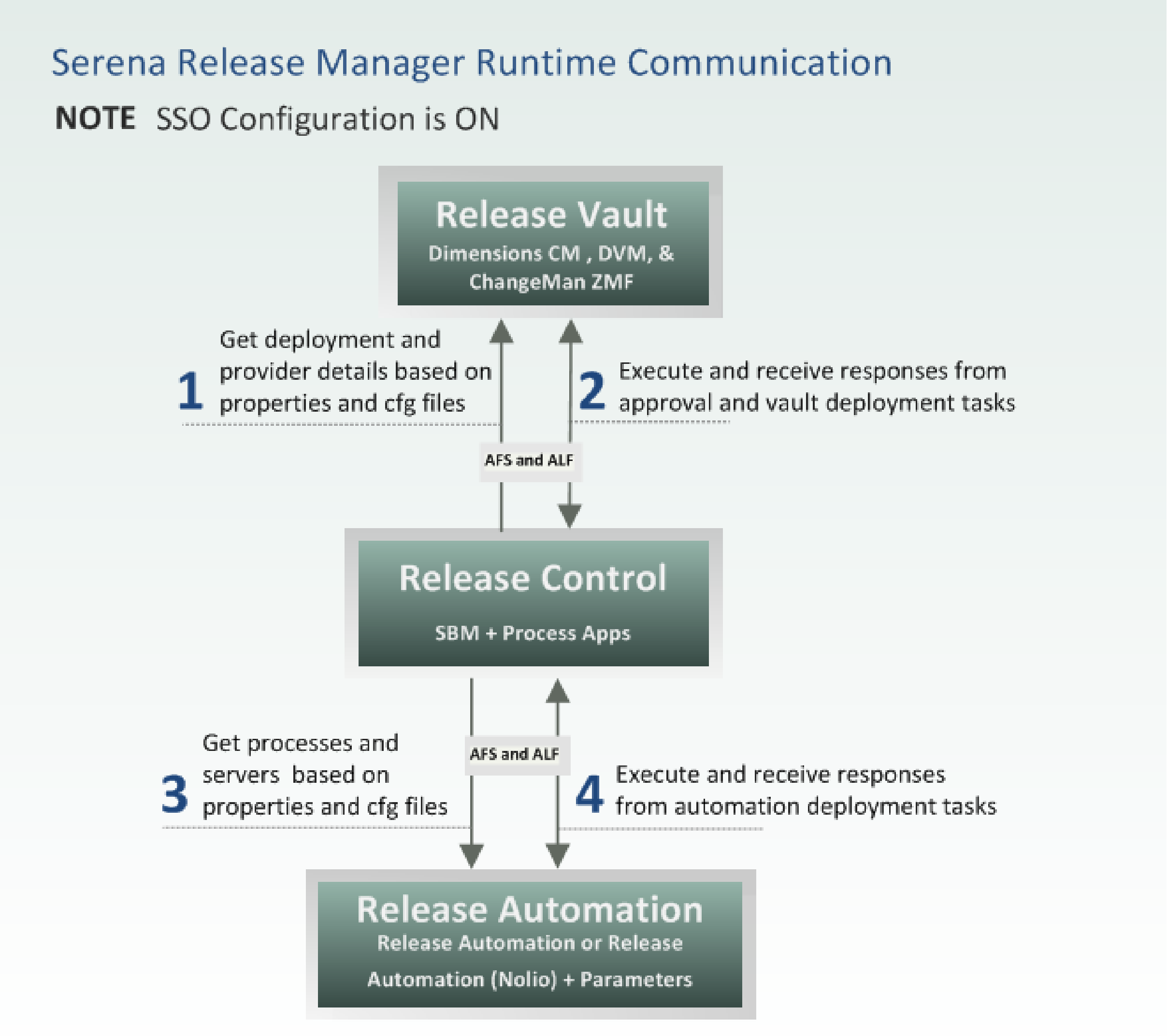
Installing and Configuring the Serena Dashboard

The Serena Dashboard is a separately licensed option. For pre-requisites, installation and configuration details, see the *Serena Dashboard Installation and Configuration Guide*

Serena Release Manager Runtime Communication

A high-level understanding of the flow of communication between the products in the Serena Release Manager suite will help you better understand the system information that you are required to configure.

The flow of communication between products in the Serena Release Manager suite is shown in the following figure.


Serena Release Manager Runtime Communication
NOTE SSO Configuration is ON
Release Vault
Dimensions CM , DVM, & ChangeMan ZMF
1 Get deployment and provider details based on properties and cfg files
2 Execute and receive responses from approval and vault deployment tasks
AFS and ALF
Release Control
SBM + Process Apps
3 Get processes and servers based on properties and cfg files
AFS and ALF
4 Execute and receive responses from automation deployment tasks
Release Automation
Release Automation or Release Automation (Nolio) + Parameters

All communication for Serena Release Manager goes through the Serena Release Manager Web services and supporting programmatic layers, collectively referred to as ALM Foundation Services (AFS), and SBM, with support from Application Lifecycle Framework (ALF) events for Dimensions CM, ChangeMan ZMF, and Serena Release Automation or Serena Release Automation (Nolio) communication.

AFS and ALF are Serena frameworks that provide the communication layer between integrating products.

NOTE SSO configuration is ON to allow the communication to flow between SBM and Dimensions CM without prompting for additional sign-on information. This is required for the communication between SBM and Dimensions CM to work correctly.

System Configuration Overview

In the system configuration, you must:

- Put the user interface templates into your SBM database.
- Put the Serena Release Manager process apps into your SBM application engine environment.
- Map the end points of the Serena Release Manager Web services to the server where the Serena Common Tomcat server is running.

- Configure required objects in Serena Release Control, such as users, privileges, and roles.
- Configure required objects in Serena Release Vault, such as DCRs and release baselines in Dimensions CM and change packages in ChangeMan ZMF.
- Configure required objects in your Serena Release Automation, such as applications and components in Serena Release Automation or processes and servers in Serena Release Automation, powered by Nolio.
- Configure the connection information and other details for other integrating clients through the Serena ALM Configurator and various configuration files.

Installation and Configuration Quickstart

This section gives a concise high-level procedure for the installation and configuration activities.

Installation and Configuration Checklist

You can use this checklist to guide you through the installation and configuration, referring to more detailed procedures in the related sections as needed.

Step	Action
1: Installation	Install the products you plan to use in the suite and apply licenses to the products as needed. See Serena Release Manager Installation [page 26].
2: Serena ALM UI Shell	Put the Serena ALM user interface files into the SBM database to ensure the UI elements appear as designed. See Installing the UI Files [page 33].

Step	Action
3: Process Apps	Import the Serena ALM SBM solution and promote the snapshots of the process apps. • Import the Serena ALM solution, which contains snapshots of the process apps and other supporting data. • Create a new application server environment for the process apps if needed. • Promote each of the snapshots, creating and selecting endpoints as needed. Use Security Token authentication for the endpoints. • Configure hostname in each of the ZMF deployment task form Web page widgets. • If needed, select the SSO Authentication option in forms with RESTgrid widgets. • Publish and deploy the process apps to upgrade the structure of the RESTGrid widgets. See Importing and Promoting Serena Release Control [page 33].
4: Release Control	Configure required objects in Serena Release Control as follows: • Create an administrative user and set all privileges for that user to the Serena Release Control objects, such as projects, reports, and auxiliary tables. For example, `almadmin`. • Enable roles for Serena Release Control projects and verify that Serena Release Control is activated. • Configure the integrating application objects that are accessed by or provided to Serena Release Control during the release management process. These may include but aren’t limited to the following: ◦ Release Control (SBM) users, reports, and notifications ◦ Applications and environments (servers) (specific to your organization; add to the respective auxiliary tables) See Configuring Required Objects in Serena Release Control [page 42].
5: Release Vault: Dimensions CM Server	For an overview of the integration communication with Dimensions CM (Windows/UNIX systems release vault), see Dimensions CM Communication Configuration Overview [page 60]. Configure Dimensions CM communication on the Dimensions CM server. • Specify ALF event configuration information in the `dm.cfg` file. • Specify selection criteria for the Dimensions CM events and objects by updating the ALF event configuration file, `ALF_EVENTS_CONFIG.XML`. Specify your Dimensions CM database name, project name, baseline type, and deploy event. See Configuring Communication on the Dimensions CM Server [page 61].

Step	Action
6: Release Vault: Dimensions CM in Release Manager	Configure Dimensions CM communication in Serena Release Manager. • Specify the connection information through the Serena ALM Configurator Dimensions CM page. See Configuring Dimensions CM Communication in Release Manager [page 64].
7: Dimensions CM Integrating Objects	Configure the integrating application objects that are accessed by or provided to Serena Release Manager during the release management process. These may include but aren't limited to the following: • Dimensions CM process model (GSL), projects and streams, baselines, and requests See Configuring Objects in Dimensions CM [page 64].
8: Release Vault: ZMF on the Mainframe	Configure communication with ChangeMan ZMF (z/OS systems release vault). For an overview of the integration, see ZMF Communication Configuration Overview [page 67]. Configure ChangeMan ZMF communication on the z/OS mainframe. • Configure the NTFYURL; this is the URL Serena Release Manager uses to send information to SERNET through the server. • Configure the SERNET HTTP server; this is the server Serena Release Manager uses to populate the UI widgets with ZMF information. • Configure a proxy user ID for each mainframe host, or LPAR, that Serena Release Manager uses to log in to ChangeMan ZMF. • Configure TSO user IDs that match the SBM user IDs. • Configure approvers. See Configuring ZMF Communication on the Mainframe [page 68].
9: Release Vault: ZMF in Release Manager	Configure ChangeMan ZMF communication in Serena Release Manager. • Specify the connection information through the Serena ALM Configurator ZMF page. • Specify ALF event manager information for ChangeMan ZMF in the Serena Release Manager common Tomcat Web server `webapps\almzmfalf\WEB-INF\conf` folder `alfzmf_resource.properties` file. • Specify other ZMF client-specific information in the Serena Release Manager common Tomcat Web server `classes` folder `zmf-client.properties` file. See Configuring ZMF Communication in Release Manager [page 78].
10: ChangeMan ZMF Integrating Objects	Configure the integrating application objects that are accessed by or provided to Serena Release Manager during the release management process. These may include but aren't limited to the following: • ChangeMan ZMF applications, sites, promotion levels, approvals, and change packages See Configuring Objects in ChangeMan ZMF [page 77].

Step	Action
11: Release Automation Server	Configure communication with Serena Release Automation. For an overview of the integration, see Release Automation Communication Configuration Overview [page 81]. Configure your Serena Release Automation communication according to which provider you are using. For example: **On the Serena Release Automation server:** • Ensure that the Release Automation server and agents are configured and available for access. See Configuring Communication on the Release Automation Server [page 82] . **On the Serena Release Automation (Nolio) server:** • Specify the Serena Release Automation (Nolio) server to notify when an event occurs in the Serena Release Automation (Nolio) `rest.integration.properties` file. If the file does not exist, create it. • Update the Serena Release Automation (Nolio) environment notifications for each application to tell Serena Release Automation (Nolio) the events about which to notify Serena Release Manager. See Configuring Communication on the Release Automation (Nolio) Server [page 86] .
12: Release Automation in Release Manager	Configure your Serena Release Automation communication in Serena Release Manager according to which provider you are using. For example: **For Serena Release Automation:** • Update the ALF sign-on credentials through the Serena ALM Configurator ALF page. • Specify the Serena Release Automation client-specific information in the Serena Release Manager common Tomcat Web server `classes` folder `ra-client.properties` file. See Configuring Release Automation Communication in Release Manager [page 82]. **For Serena Release Automation (Nolio):** • Update the Serena Release Automation (Nolio) ALF sign-on credentials through the Serena ALM Configurator ALF page. • Specify the Serena Release Automation (Nolio) client-specific information in the Serena Release Manager common Tomcat Web server `classes` folder `nolio-client.properties` file. • Specify the Serena Release Automation (Nolio) client query information in the Serena Release Manager common Tomcat Web server `classes` folder `nolio-client-queries.properties.properties` file. See Configuring Release Automation (Nolio) Communication in Release Manager [page 88].

Step	Action
13: Release Automation Integrating Objects	Configure the integrating application objects that are accessed by or provided to Serena Release Manager during the release management process. These may include but aren't limited to the following: • Release Automation applications, components, environments, and processes. See Configuring Objects in Serena Release Automation [page 84]. • Release Automation (Nolio) environments, applications, processes, and servers See Configuring Objects in Release Automation (Nolio) [page 90].
14: Client Connections	Configure the connections to each of the integrating clients using the Serena ALM Configurator. Select the corresponding tab and fill out the form to specify connection information for each of the following: • ALF • SBM (Required!) • BCR • RFC • Dimensions CM • Release Automation • Release Automation (Nolio) • ZMF See Configuring Connections Using the Configurator [page 93].
15: Provider Properties	Configure the provider properties as needed in the common Tomcat Web server `webapps\alm\WEB-INF\classes` folder. These may include but aren't limited to the following: • Serena Service Manager (SSM) request for change (RFC) properties (for example: `itsm.properties` and `providers.properties`) • Serena Business Manager (SBM) business change request (BCR) properties (for example: `bcr.properties` and `providers.properties`) • Serena Business Manager (SBM) development change request (DCR) properties (for example: `sbm-issues.properties` and `providers.properties`) • Dimensions CM deployment unit (DU) properties (for example: `dm_qlarius.properties` and `providers.properties`) • ChangeMan ZMF deployment unit (DU) properties (for example: `rlmzmf_packages.properties` and `providers.properties`) See Provider Configuration [page 93] for details.

Step	Action
16: SBM and SSM Integrating Objects	Configure objects in SBM and SSM process apps if either or both are used to provide RFC, BCR, or DCR information. See Configuring Objects in Serena Business Manager [page 114] and Configuring Objects in Serena Service Manager [page 114].
17: Customization	Complete customization and additional configuration as needed. See Serena Release Manager Customization [page 125].

IMPORTANT! You must restart the appropriate services after updating the properties files, such as Serena Common Tomcat, Serena Common JBOSS, and IIS Admin Services.

TIP Clear your browser cache if Serena Release Control has been run from your browser on this machine before to ensure that your user interface is displaying the most current shell elements.

Serena Release Manager Installation

This section leads you through an installation of all of the components of Serena Release Manager.

Installation Overview

Make sure you have completed your planning and performed the installation prerequisites documented in the preceding section. Use the installation checklist and worksheets to help guide you through the installation processes.

You must install each of the systems included in the Serena Release Manager suite that you plan to use and that you do not already have installed. SBM, Serena Release Control, and a Serena release vault, such as Dimensions CM or ChangeMan ZMF, are required components of the default implementation of Serena Release Manager.

You should install or verify existing installation settings for each of the systems that will participate in your Serena Release Manager solution. After you have completed installing or verifying each of the systems, you must complete the system configuration to make Serena Release Manager ready to use.

Installing Serena License Manager

You must make sure you have a valid installation of Serena License Manager so that you can license and run Serena Business Manager and Dimensions CM.

Existing Serena License Manager Systems

If you already have an installation of Serena License Manager, you do not need to install a new system for Serena Release Manager. However, you must do the following:

- Ensure that you are running a supported version of Serena License Manager as indicated on the Serena Support download page for your version of Serena Release Manager.
- After installing the rest of the products in the suite, apply the licenses as needed. See Applying Licenses [page 31].

New Serena License Manager Systems

Follow the instructions on installing Serena License Manager in either the Dimensions CM or Serena Business Manager documentation.

Documentation References

Complete documentation on installing Serena License Manager is in the following documents:

- *Serena Business Manager Licensing Guide*

- *Serena Dimensions CM Installing the Serena License Manager*

Installing Serena Business Manager

Serena Business Manager must be installed before you can install Serena Release Control. After you install Serena Business Manager, you must install and configure Serena Release Control, which is a Serena Business Manager application.

Existing Serena Business Manager Systems

If you already have an installation of Serena Business Manager to which you plan to add Serena Release Control, you do not need to install a new system for Serena Release Manager. However, you must do the following:

- Ensure that you are running a supported version of SBM as indicated on the Serena Support website roadmap and download pages for your version of Release Manager.
- After installing the rest of the products in the suite, follow the post-installation system configuration instructions for SBM.

Please continue to Installing Serena Release Control [page 28].

New Serena Business Manager Systems

Before you install Serena Business Manager, please see the “Pre-installation Checklist” section of the *Serena Business Manager Installation and Configuration Guide*.

Documentation References

Complete documentation on installing Serena Business Manager is in the *Serena Business Manager Installation and Configuration Guide*.

Installing Dimensions CM

Dimensions CM must be installed to use the deployment capabilities of Serena Release Manager. You can use both Dimensions CM and ChangeMan ZMF as release vaults from within Serena Release Control.

If you have Serena Development Manager (DVM) installed as part of the Serena ALM suite, your implementation of Dimensions CM is shared between Serena Release Manager and Serena Development Manager. Information that applies to Dimensions CM here also applies to Serena Development Manager. For information on installing Serena Development Manager, see *Serena Development Manager Installation and Configuration*.

Existing Dimensions CM Systems

If you already have an installation of Dimensions CM that you plan to use with Serena Release Manager, you do not need to install a new system. However, you must do the following:

- Ensure that you are running a supported version of Dimensions CM as indicated on the Serena Support website roadmap and download pages for your version of Release Manager.
- Ensure that Single Sign On (SSO) is enabled for Dimensions CM. For configuring SSO if not already enabled, see "Dimensions CM Support for SSO" in the *Dimensions CM Administrator’s Guide*.
- After installing the rest of the products in the suite, follow the post-installation system configuration instructions for Dimensions CM.

Please continue to Installing Serena Release Automation [page 30].

New Dimensions CM Systems

Before you install Dimensions CM, please see the “Fresh Installation Checklist” section of the *Dimensions CM Installation Guide for Windows* or the *Dimensions CM Installation Guide for Unix*.

You must enable Single Sign On (SSO) for the communication between Dimensions CM and SBM to work successfully in Serena Release Manager. You should install SBM and the SSO server and then enable SSO during the installation of Dimensions CM to point Dimensions CM to the SSO server.

Documentation References

- Complete documentation on installing Dimensions CM is in the *Dimensions CM Installation Guide for Windows* and the *Dimensions CM Installation Guide for Unix*.

- Complete documentation on configuring SSO is in the *Dimensions CM Administrator's Guide* in "Dimensions CM Support for SSO".

Installing Serena Release Control

Serena Release Control provides the user interface and the infrastructure that integrates the components of Serena Release Manager. You can upgrade from an existing Release Control system or use a new installation.

Existing Serena Release Control Systems

If you already have an installation of Serena Release Control and are upgrading, see Serena Release Manager Upgrade [page 118].

New Serena Release Control Systems

Before you install Serena Release Control, make sure you have the required installation of SBM. See Installing Serena Business Manager [page 27].

The Serena ALM installer copies necessary files to the SBM installation directory path. The files copied include the Java war files, the SBM solution file, and user interface files. After the installation, you must import and configure the SBM solution to complete the Serena Release Control installation as documented in Release Control Configuration [page 33].

Serena ALM runs using the Serena Common Web server, which is an Apache Tomcat Web server. The installer detects whether the Serena Common Web server is already installed, and if so, will use the existing occurrence.

The installer automatically installs and configures the Serena Common Apache Tomcat Web server to run on the default port of 8080. If this port is already in use by another application on your server, or if you already have an instance of the Serena Common Web server running on a different port on this server, please see Configuring Release Manager to Use a Different Port [page 144] for port customization options.

To install Serena Release Control:

1. On the SBM Server, run the Serena ALM installer executable, `ALM.exe` or `ALM 64-bit.exe` depending on your server type.

   You may be asked to install Windows Installer 4.5, in which case:

   a. Click **Install**.

   b. When asked if you want to reboot your machine, reply **Yes**.

   The **Serena ALM Welcome** page appears.

2. Click **Next**.

   The **License Agreement** page appears.

3. Confirm and click **Next**.

   The **Destination Folder** page appears.

4. Optionally click Change to change the target location for the installation.

5. Click **Next**.

   The **Custom Setup** page appears.

   a. Click to select or deselect components to install. An X on the installation tree entry icon indicates the component is not selected. To select any deselected components, expand the entry and select one of the feature installation options.

      - **ALM Foundation Services 4.0**: Common services to enable the Serena ALM solution.
      - **Configurator SSO Support**: Configure the connection to the Serena Single Sign-on server to enable login to the Configurator through SSO.
      - **Connectors | Quality Center Connector**: Integrate Development Control with external tools such as Quality Center.
      - **Providers**: Common Framework for all ALM Suites for configuration of supported Serena and non-Serena tools.
      - **ALM Workbench**: Common role-based User Interface across the ALM Suites to optimize user experience.
      - **ALM Process Application**: SBM-based process application snapshot. The snapshot must be promoted to an SBM runtime environment.

   b. Click **Next**.

      If you selected **Configurator SSO Support**, the **Serena Single Sign On** page appears.

      > **CAUTION!** You should configure the Configurator SSO Support only once. If you run the installer again to install additional options, you must deselect this option. Otherwise, SSO may not function correctly.
      >
      > Also you should not use localhost for the server name but should specify the name of the actual server.

   c. Specify the host name and port for an existing installation of a Serena SSO server.

   d. If you want the connection to use HTTPS, select **Secure (HTTPS) Connection**.

   e. Click **Next**.

   The **Configuration Details** page appears.

6. Click **Next**.

   The **Ready to Install the Program** page appears.

7. Click **Install**.

   A page appears informing you files are being copied. After a short time, a **Completed** page appears with the installation summary.

   > **NOTE** The installer is shared with other Orchestrated ALM suites so some products may appear in this list as not required. Some of the products may be required to be installed separately, such as Dimensions CM.

8. Optionally select **Show the Windows Installer log** and click **Finish**.

   The installation log file appears. You can navigate to this file later to view installation details, for example for troubleshooting purposes. The default location for the file is:

   `%Temp%\Install_SUITE_comp.log` or

`%Temp%\Install_SUITE_comp64.log`

The installer creates the following file and folders under the Serena Solutions installation directory path. For example:

..\Program Files\Serena\Solutions

`com.serena.alm.sbm.shell-4.0.zip`

`\solution` (contains the solution file)

`\war` (contains the `war` files)

The installer does the following automatically:

- Copies the `war` files to the Tomcat Web server and restarts Tomcat.
- Puts the user interface files in the appropriate SBM folder.

Installing Serena Release Automation

Serena Release Automation or Serena Release Automation, powered by Nolio, may be installed to provide the release automation capabilities of Serena Release Manager. This extends the deployment functionality of Serena Release Manager to enable automated installation and configuration processes for your applications.

Installing Serena Release Automation Systems

You can use an existing Release Automation system with Serena Release Manager or use a new installation.

Existing Release Automation Systems

If you already have an installation of Serena Release Automation that you plan to use with Serena Release Manager, you do not need to install a new system. However, you must do the following:

- Ensure that you are running a supported version of Serena Release Automation as indicated on the Serena Support website roadmap and download pages for your version of Release Manager.
- Ensure that the database you are using for your Serena Release Automation system is supported. Supported database systems include Microsoft SQL Server, Oracle, MySQL, and Derby.
- After installing the rest of the products in the suite, follow the post-installation system configuration instructions for Serena Release Automation.

New Release Automation Systems

Before you install Serena Release Automation, please see the *Serena Release Automation* documentation. You must do the following:

- Ensure that you are installing a supported version of Serena Release Automation as indicated on the Serena Support website roadmap and download pages for your version of Release Manager.
- After installing the rest of the products in the suite, follow the post-installation system configuration instructions for Serena Release Automation.

Documentation References

- Complete documentation on installing Serena Release Automation is in the *Serena Release Automation User’s Guide*.
- Complete documentation on installing Serena Release Automation, powered by Nolio, is in the *Serena Release Automation, Powered by Nolio, Installation and Administration Guide*.

Installing Release Automation (Nolio) Systems

You can use an existing Release Automation (Nolio) system with Serena Release Manager or use a new installation.

Existing Release Automation (Nolio) Systems

If you already have an installation of Release Automation (Nolio) that you plan to use with Serena Release Manager, you do not need to install a new system. However, you must do the following:

- Ensure that you are running a supported version of Release Automation (Nolio) as indicated on the Serena Support website roadmap and download pages for your version of Release Manager.

- Ensure that the database you are using for your Release Automation (Nolio) system is supported. Supported database systems for the Nolio solution include Microsoft SQL Server, Oracle, and MySQL.

- After installing the rest of the products in the suite, follow the post-installation system configuration instructions for Release Automation (Nolio).

New Release Automation (Nolio) Systems

Before you install Release Automation (Nolio), please see the *Serena Release Automation* documentation. You must do the following:

- Ensure that you are installing a supported version of Release Automation (Nolio) as indicated on the Serena Support website roadmap and download pages for your version of Release Manager.

- After installing the rest of the products in the suite, follow the post-installation system configuration instructions for Release Automation (Nolio).

Documentation References

- Complete documentation on installing Serena Release Automation is in the *Serena Release Automation User's Guide*.

- Complete documentation on installing Serena Release Automation, powered by Nolio, is in the *Serena Release Automation, Powered by Nolio, Installation and Administration Guide*.

Installing Other Integrating Serena Products

ChangeMan ZMF can optionally be used as the release vault for your z/OS mainframe applications. You can use both Dimensions CM and ChangeMan ZMF as release vaults from within Serena Release Control.

Serena Service Manager can optionally be used as the provider for your RFCs and other change request associations.

Documentation References

- Complete documentation on installing ChangeMan ZMF is in the *ChangeMan ZMF Installation Guide.*

- Complete documentation on installing SSM is in the *Serena Service Manager Installation and Configuration Guide.*

Applying Licenses

Before you can use the products in a production environment, you must apply licensing. If you are evaluating the products, temporary licensing is available.

Use the following methods to apply licenses for the Serena Release Manager suite of products.

- **Serena Release Control**: Use Serena License Manager to apply licenses for Serena Release Control.

- **Dimensions CM**: Use Serena License Manager to apply licenses for Dimensions CM.

- **Serena ChangeMan ZMF**: Use Serena SER10TY to apply licenses for ChangeMan ZMF.
- **Serena Release Automation**: Use Serena License Manager to apply licenses for Serena Release Automation.
- **Serena Release Automation, Powered by Nolio**: Enter license keys for Serena Release Automation, Powered by Nolio, from the Help menu of Serena Release Automation, Powered by Nolio.

Documentation References

- Complete documentation on applying licenses for Serena Release Control, which runs in SBM, is in the *Serena Business Manager Licensing Guide* in "Licensing Serena Business Manager".
- Complete documentation on applying licenses for Dimensions CM is in the *Serena Dimensions CM Administrator's Guide* in "Administering Your Licenses and the License Server".
- Complete documentation on applying licenses for ChangeMan ZMF is in the *SER10TY User's Guide*.
- Complete documentation on applying licenses for Serena Release Automation, Powered by Nolio, is in the *Serena Release Automation, Powered by Nolio, Installation and Administration Guide* in "Updating Serena Release Automation License".

Release Control Configuration

This section tells you how to configure and administer objects in Serena Release Control. You must complete the required configuration in Serena Release Control before the people who participate in release management in your organization begin using Serena Release Manager.

Installing the UI Files

To fully install the UI files, you must put the user interface files and other ALM data into the SBM database to ensure Serena Release Control elements appear and execute as designed.

To install the UI files:

1. From SBM System Administrator, select **File | Put Files Into Database**. Confirm when prompted.

   This puts the UI files and other ALM data into the SBM database.

NOTE This step must be done before you promote the snapshots so that SBM will promote and deploy the correct template files.

Importing and Promoting Serena Release Control

Serena Release Control includes a bundle of process apps that run in SBM. To bring those process apps into SBM and activate them, you must do the following:

- Import the Serena ALM solution, which contains snapshots of the process apps and other supporting data.
- Create a new application engine server environment for the process apps if needed.
- Promote each of the snapshots into your application engine server environment, creating and selecting endpoints as needed. Use Security Token authentication for the endpoints.
- If using ChangeMan ZMF: Configure hostname in each of the ZMF deployment task form Web page widgets.
- If needed, select the SSO Authentication option in forms with RESTgrid widgets.
- Publish and deploy the process apps to upgrade the structure of the RESTGrid widgets.

NOTE It is a prerequisite for SBM to be installed with Single Sign-on (SSO). See Installing Serena Business Manager [page 27]. For the communication between SBM and Dimensions CM to work correctly through SSO, the products must share an SSO server and you must have same user ID for both SBM and Dimensions CM.

Importing the Serena ALM Solution

The Serena Release Control application is part of the Serena ALM suite, which is packaged as an SBM solution. Included in the solution are the following:

- Process apps for Serena ALM
- Runtime configuration information
- Reports
- Notifications
- Auxiliary table information

The following procedures are included to guide you through the Serena Release Manager-specific configuration process. For complete documentation on process apps, see the *Serena Business Manager SBM Application Repository Guide.*

To use the application, you must import the solution into SBM as follows:

1. Select **Start | All Programs | Serena | Serena Business Manager | SBM Application Repository**.
2. Enter your login details.
3. In the navigation pane, click **Solutions**.
4. The Serena Release Manager solution pack is listed. For example:

   ```
   ALM_Solution_Pack 4.0.0.0.122
   ```

5. Click **Import**.

   The **Import Solution** dialog box appears, explaining which snapshots will be imported with the solution.

6. Click **OK**.

   The solution is now listed under **Imported solutions**.

7. Select the solution name and then click **Open Snapshots** to verify that the following process app snapshots are listed:

   - Application Release

- Deployment
- Environment
- Release Package
- ReleaseTemplate
- Release Train
- Vault_Request
- RLM_AUX

Creating an Environment for Serena Release Manager

You must create an SBM application engine server environment for your Serena Release Control process applications unless you are promoting them into an existing environment. After you create the environment, you must set up a BPEL engine and SBM event manager for that environment.

> **TIP** Understanding SBM: An environment describes the runtime server to which you deploy process apps. An environment requires an SBM Application Engine server.
>
> After you create the environment, you must add other target servers (such as a BPEL engine or Event Manager server) as well as any Web service end points that are required to support the process app.

If you are putting your Serena Release Control process apps into an existing environment, continue to Promoting the Snapshots [page 37].

Create the environment and supporting target servers as follows:

- Creating the Environment [page 35]
- Specifying the BPEL Server for SBM Orchestrations [page 36]
- Specifying the SBM System Event Manager [page 36]

Creating the Environment

To create the environment:

1. From the SBM Application Repository Solutions content pane, click **Environments**.
2. Click New.

   The **New Environment** dialog box appears.
3. Fill out the form for the new environment as follows:
   a. Enter a name and description. For example, RLM Environment.
   b. In the **Composer** field, select **Enable Deployment**.
   c. Under **Application Engine Server**, enter a name and description. For example: RLM Application Engine Server.
   d. In the URL, change the server to the host name for your application engine server and specify the port number for the server. For example:

   ```
   http://sbmaehost:80/gsoap/gsoap_ssl.dll?sbminternalservices72
   ```
4. Click **Test Connection** to test the connection.
5. Click **OK**.

Specifying the BPEL Server for SBM Orchestrations

For new SBM environments, you must specify the target server for the SBM orchestrations, or BPEL engine.

To set up the target server for SBM orchestrations:

1. Select the environment you just created and then select the **Target Servers** tab.
2. Click **New**.

   The **New Target Server** dialog box appears.
3. Fill out the form to create the BPEL server as follows:
   a. In the **Type** field, select **BPEL Server (JBPM)**.

   b. Name the BPEL server. For example: SBM Orchestration Server.

   c. Enter the URL using the host name for your orchestration engine server as the hostname.

      Port 8085 is the default, unless you specified a different port in the SBM Configurator for your JBOSS server. For example:

      ```
      http://sbmoehost:8085/jbpm-bpel/services/DeployService
      ```

      > **TIP** Above the URL field, click **View Examples** and select from the examples. In the URL field, overtype the hostname and port.

   d. Click **Test Connection** to test the connection.

   e. Click **OK**.

Specifying the SBM System Event Manager

For new SBM environments, you must specify the target server for the SBM system event manager.

To set up the SBM system event manager:

1. Select the environment you just created and then select the **Target Servers** tab.
2. Click **New**.

   The **New Target Server** dialog box appears.
3. Fill out the form to create the event manager server as follows:
   a. In the **Type** field, select **System Event Manager**.

   b. Name the event manager server. For example: SBM Event Manager.

   c. Enter the URL using the host name for your system event server as the hostname. For example:

      ```
      http://sysevnthost:8085/eventmanager/services/ALFAdmin
      ```

   d. Click **Test Connection** to test the connection.

e. Click **OK**.

NOTE

- You do not need to create a target server for the SBM Common Services. This target server is created automatically when a process app snapshot associated with SSM or SLA is promoted.
- SBM Common Services are not the same as the Serena Common Tomcat Services used by Serena Release Manager.

Promoting the Snapshots

You must promote the Serena Release Manager snapshots and define the destination endpoints for each. When promoting the snapshots, make sure to create and select the endpoints as needed, and make sure the endpoints are authenticated with Security Token.

Promote the snapshots in any order.

1. Release Train
2. Application Release
3. Release Package
4. RLM_AUX
5. Deployment
6. Vault_Request
7. Environment
8. ReleaseTemplate

To promote a snapshot:

1. In the SBM Application Repository navigation pane, click **Solutions** and then select the **Solutions** tab.
2. Select the solution and click **Open Snapshots**.

   The list of snapshots appears.
3. Select a snapshot that you have not yet promoted and click **Promote**.

   The **Summary** page appears.
4. Click the **Destination** field.

   The **Destination** page appears.
5. Select the environment that you created for Serena Release Manager.
6. Click **Next**.

   The **Entities** page appears.
7. Click **Next**.

   The **Mapping** page appears.
8. Select any Source that does not have a Destination Endpoint and click the **Choose Destination Endpoint** button.

9. Select the endpoint from the list, or if the Destination Endpoint has not yet been defined for the selected Source, click **Create a new endpoint**.

   To create and select an endpoint:

   a. Name the endpoint.

      TIP Name the new endpoint the same as the Source Endpoint for which it is being created for ease of identification when selecting it as the Destination Endpoint later.

   b. In the URL field, enter the following:

      ```
      http://localhost:<tomcat port>/alm/services/<service name>
      ```

      where `<tomcat port>` is the port under which you are running the Serena Common Tomcat Web server.

      This specifies the path to the Web services, which are deployed under the `alm/services` directory of the common Tomcat Web server.

      Example endpoints with the default port number are shown in the following table.

Source	Destination Endpoint
RLMUtilService	http://almhost:8080/alm/services/RLMUtilService
ReleaseRequestService	http://almhost:8080/alm/services/ReleaseRequestService

   c. In the **Authentication** field, select **Security Token**.

   d. Click **Test Connection** to test the connection.

   e. Click **OK**.

   f. Select the Source Endpoint again and click **Choose Destination Endpoint**. Select the endpoint you just created.

10. Click **Done**.

    The **Summary** page appears.

11. Click **Promote**.

    The **Promotion Started** page appears.

12. Click **View Log** or **Show Activities** to see results.

13. Repeat the procedure for each snapshot.

PRIVILEGE Privileges for deleting or modifying the Serena Release Manager process applications must be set in the SBM Application Repository. If you need to do these activities, click **Privileges** in the navigation pane and set the privileges according to the SBM documentation.

Setting Authentication for Added Endpoints

SBM automatically generates endpoints for selections that use RESTgrid widgets. You must update each of these to use Security Token authentication, so that SSO is used for these widgets.

To update the automatically-generated endpoints:

1. Select the RLM environment and then select the **Endpoints** tab.

In the resulting list of endpoints you'll see endpoints with default names that have a prefix of `<hostname><port>-`. The hostname and port are those specified in the related endpoints during the promotion of the snapshots.

2. Select an endpoint and click **Edit**.
3. In the **Authentication** field, select **Security Token**.
4. Click **OK**.
5. Repeat for each of the automatically-generated endpoints.

Promoting the Snapshots Again to Resolve References

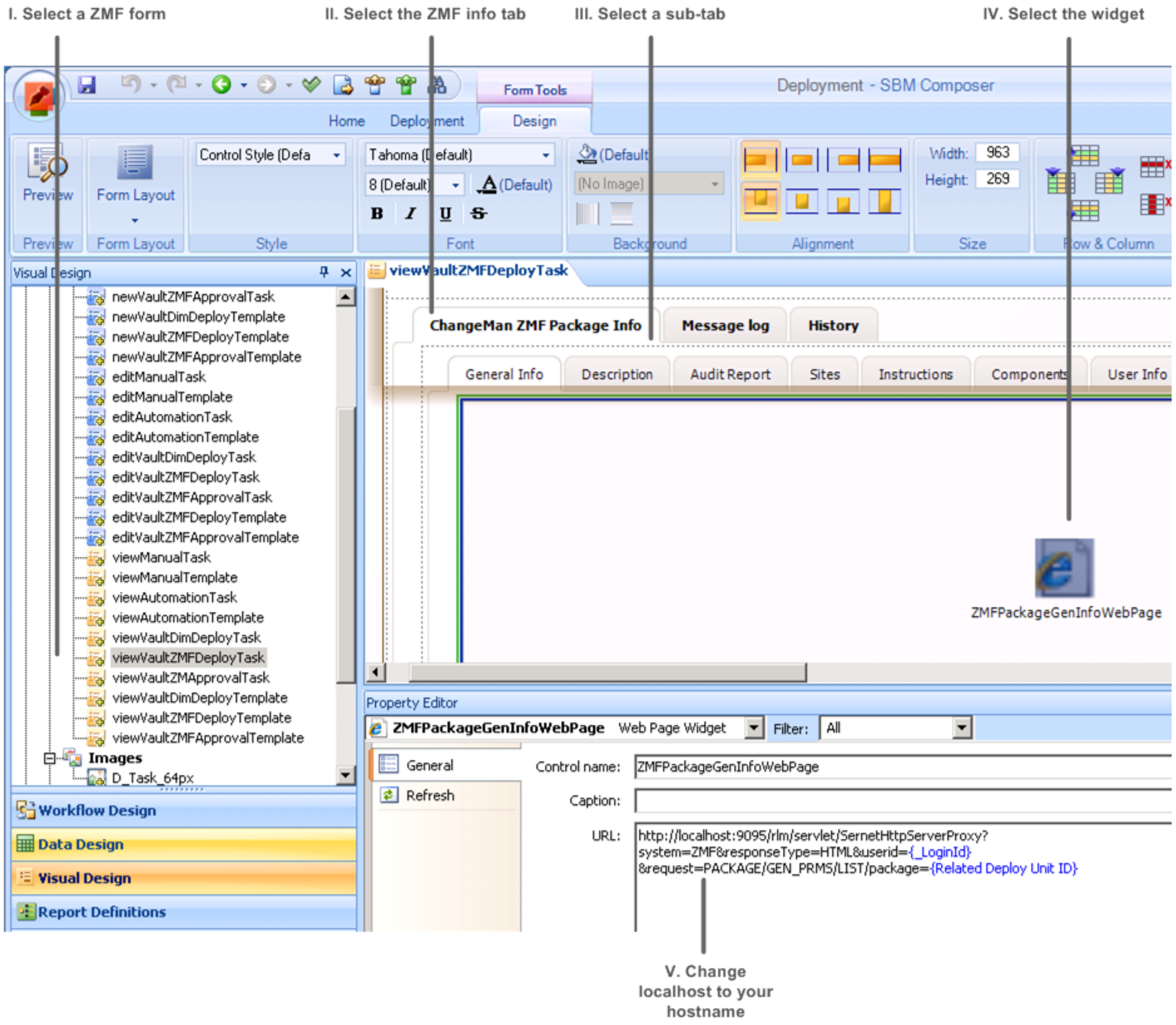
To resolve warnings for unresolved references in the snapshots, you must promote each of them again. Follow the steps in Promoting the Snapshots [page 37], except you won't need to create and choose endpoints this time.

Configuring the ChangeMan ZMF Web Page Widgets

If you are using ChangeMan ZMF for z/OS mainframe release management, you must configure your Serena Release Manager hostname in the ZMF deployment task forms that display ZMF change package information. Otherwise, the ZMF information will not appear when you view ZMF deployment tasks. Change the forms in the SBM Composer as shown in the following figure and procedure.

> **CAUTION!** The following procedure assumes that you have just promoted each of the process apps to the repository. If you have checked out components of the process apps and made changes locally since promoting the process apps, please check in your changes before continuing to ensure you don't overwrite any of your changes.

ZMF Widget Form Updates



ZMFPackageGenInfoWebPage Web Page Widget Filter: All

Control name: ZMFPackageGenInfoWebPage

Caption:

URL: http://localhost:9095/rlm/servlet/SernetHttpServerProxy?system=ZMF&responseType=HTML&userid={_LoginId}&request=PACKAGE/GEN_PRMS/LIST/package={Related Deploy Unit ID}

To update the hostname in the ZMF form widgets:

1. In SBM Composer, open the **Deployment** process app from the **Repository**. Choose **Overwrite** if prompted.
2. In **Visual Design**, check out and update the `viewVaultZMFDeployTask` and `viewVaultZMFApprovalTask` forms as follows:
   a. Select the form and then select the ZMF Info tab, such as `ChangeManZMFPackageInfo`.
   b. For each of the sub-tabs, **General**, **Description**, **AuditReport**, **Sites**, **Instructions**, **Components**, and **User Info**, select the Web page widget, such as `ZMFPackageGenInfoWebPage`.
   c. In the Property Editor, in the URL for the widget, change `localhost` to your server hostname.
3. Save and check in the forms.

TIP If you are not using ChangeMan ZMF in your implementation, consider hiding the ZMF-specific form elements using SBM Composer.

Configuring SSO in RESTgrid Widgets

If they are not already set automatically, you must select the **Use SSO authentication** check box for each RESTgrid widget to enable the security token to be included in the URL.

The form controls in which you must update the check box are shown in the following table. The rest have the **Use SSO Authentication** option selected by default. This list is based on the default implementation of Serena Release Manager and may not be an exhaustive list in your implementation, so it is good practice to look at each form that uses RESTgrid widgets to see if **Use SSO Authentication** is selected.

Process App	Forms	Controls
Deployment	newAutomationTask, newAutomationTemplate, editAutomationTask, editAutomationTemplate, retryAutomationTask,	gridApps, gridEnv, gridProc
	newReleaseAutomationTask, newReleaseAutomationTemplate, editReleaseAutomationTask, editReleaseAutomationTemplate, retryReleaseAutomationTask	gridApp, gridEnv, gridProc, gridComp

Publishing and Deploying the Process Apps

After promoting the snapshots twice in SBM Application Repository and completing any form configuration necessary, you must then publish and deploy the process apps from SBM Composer. This is required to publish any changes and upgrade the structure of the RESTGrid widgets.

CAUTION! The following procedure assumes that you have checked in any changes to the process apps. Please check in if needed before continuing to ensure you don’t overwrite any of your changes.

To publish and deploy the process apps in SBM:

For each of the process apps:

- Application Release
- Deployment
- Environment
- Release Package
- ReleaseTemplate
- Release Train
- Vault_Request
- RLM_AUX

1. In SBM Composer, do the following:
    a. Select **Open** from the Composer menu and open one of the above process apps from the repository.
    b. From the **Deployment** tab, click **Publish**.
    c. Close the process app; check in to the repository when prompted.
    d. Repeat for each process app.
2. In the SBM Application Repository, do the following:
    a. Click **Process Apps** in the navigation pane and then select a process app.
    b. Click **Deploy**.
    c. Map endpoints as needed as you did when you promoted the snapshots and click **Deploy**.
    d. Repeat for each process app.

Documentation References

- Complete documentation on promoting and deploying process apps in SBM Application Repository is in the *Serena Business Manager SBM Application Repository Guide* in "Promoting Process Apps" and "Deploying Process Apps".
- Complete documentation on publishing process apps in SBM Composer is in the *Serena Business Manager SBM Composer Guide* in "Working with Process Apps".

Configuring Required Objects in Serena Release Control

Before you can use Serena Release Manager, you must configure required objects in Serena Release Control as follows:

1. Create an administrative user.
2. Set all privileges for the administrative user to the Serena Release Control objects, such as projects, reports, and auxiliary tables. For example, `almadmin`.
3. Enable roles for Serena Release Control projects and verify that Serena Release Control is activated.

> **NOTE** Terminology and user interface names and elements may differ from release to release of SBM. Make sure you are using the SBM documentation that matches your version of SBM.

Creating an Administrative User

The Serena Release Manager administrative user is used to execute many Serena Release Manager background activities and is used for communication with integrating products.

If you don’t already have an administrative user that you want to use with Serena Release Manager, create one now using SBM Application Administrator.

To create the administrative user in SBM:

1. Navigate to SBM Application Administrator and its **Administrator portal** as follows:
    a. Login to the SBM User Workspace as an administrative user who has privileges to update users.
    b. Click the **Administrator** icon in the SBM User Workspace.

2. In the **Administrator portal**, click the **Users** icon.
3. Create the user according to SBM Application Administrator documentation.

> **TIP** A quick way to create an administrative user is to select an existing administrative user, such as `admin`, and copy that user to a new user name, such as `almadmin`. Edit `almadmin` to give the additional unique privileges needed for Serena Release Manager.

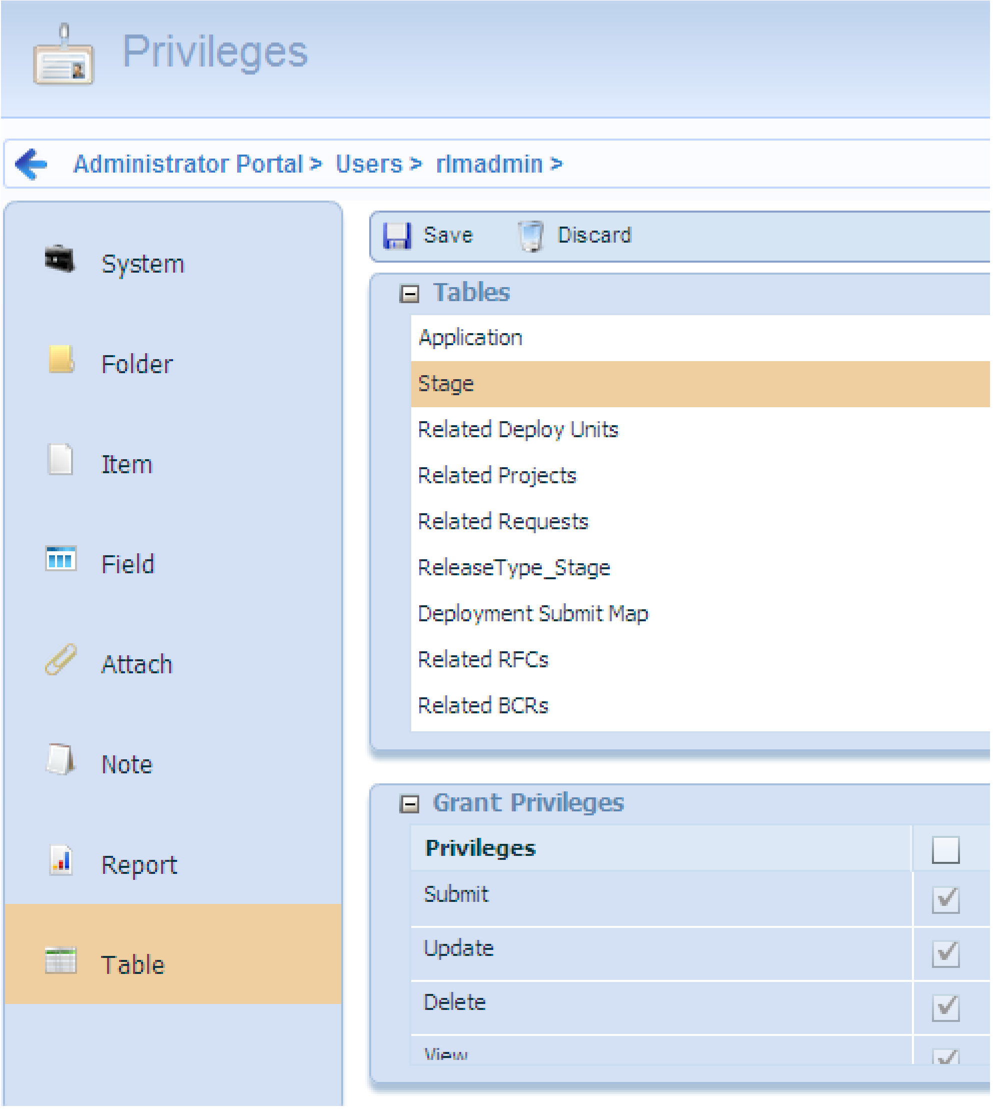
> **NOTE** A matching administrative user ID must be set up in Dimensions CM, because single sign-on is required for the communication to work. A similar TSO user ID is required if you are implementing ChangeMan ZMF with Serena Release Manager.

Configuring the Administrative User Privileges

In SBM Application Administrator, you must give the administrative user all privileges to the Serena Release Control objects, such as projects, reports, and tables.

Example

The privilege settings for the Stage table are shown in the following figure.



Documentation References

Complete documentation on managing user privileges in SBM is in the *Serena Business Manager SBM Application Administrator Guide* in "About User Privileges".

Enabling Serena Release Control Project Roles

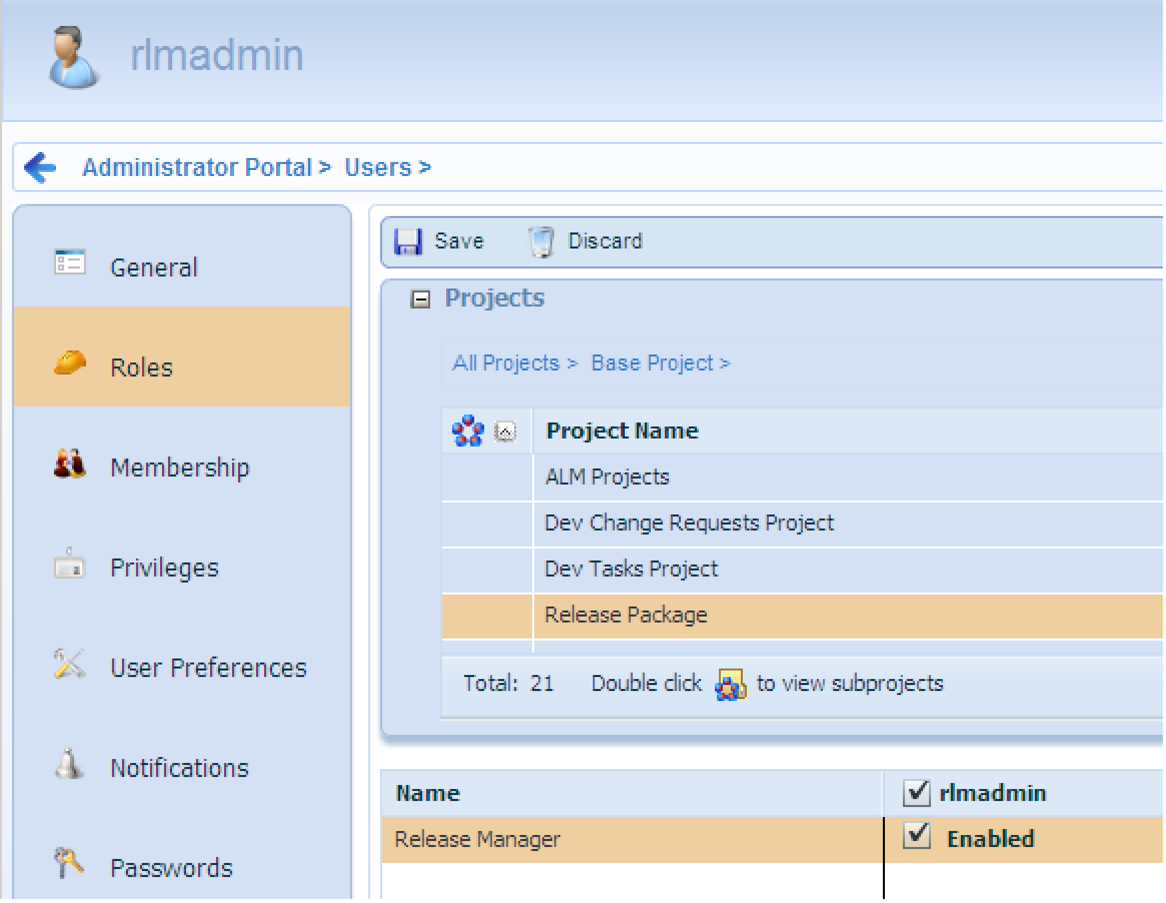
The administrative user must be enabled for all the roles that may have ownership within each of the Serena Release Control projects.

To enable the role for each Serena Release Control project:

1. In SBM Application Administrator, edit the administrative user. For example, `almadmin`.
2. In the navigation pane, select **Roles**.
3. In the Project tree, expand the sub-projects.
4. For each project and role that is not enabled for this user, select the user name beside the role which you want to enable for this user. The user name and the **Enabled** selection boxes are shown. Select **Enabled** if it is not already selected.
5. Repeat for each Serena Release Control project and role.

Example

An example of project role assignments for the Release Manager is shown in the following figure.



Project Name
ALM Projects
Dev Change Requests Project
Dev Tasks Project
Release Package

Total: 21 Double click to view subprojects

Name	☑ rlmadmin
Release Manager	☑ Enabled

Documentation References

Complete documentation on managing role assignments in SBM is in the *Serena Business Manager SBM Application Administrator Guide* in "About Roles".

Accessing the Standard SBM User Interface

Serena Release Control runs in a shell UI on top of the standard SBM user interface of the SBM Web client. However, you will do most of your custom configurations using the standard SBM user interface.

To display the Serena Release Control standard SBM user interface:

1. Login to the Serena Release Control Web client.
2. Remove the shell parameter from the URL.

   For example, if your Serena Release Manager URL is:

   ```
   http://almhost/tmtrack/tmtrack.dll?shell=alm
   ```

   your Serena Release Control standard SBM user interface URL would be:

   ```
   http://almhost/tmtrack/tmtrack.dll?
   ```

Adding Your Application Names in Serena Release Control

Before you start releasing applications using Serena Release Control, you must pre-populate Serena Release Control with the names of your applications that you plan to release over time using Serena Release Manager. This enables you to associate those applications with the release information that you enter in Serena Release Control.

What Can You Change in Serena Release Control?

You can change the following application information:

- Add application name and description.
- Update application name and description.

What is the Impact?

The application names appear in the **Application Release** dialog box in the **Associate to application** selection field. If you change the names or add names, this impacts the list of names the users see when they select applications for an application release.

How Do You Change It?

You add and change application information in the Application auxiliary table.

To change the Application table entries:

1. In SBM Application Administrator, click **Auxiliary Data**.
2. In the **Table** field, select **Application**.
3. Click **New** and enter the application name and description.
4. You may select from existing deployment process templates here or add them from the user interface.
5. Click **OK** to save.

Documentation References

Complete documentation on adding data to SBM auxiliary tables is in the *Serena Business Manager SBM Application Administrator Guide* in "About Auxiliary Data".

Adding Your Server Names in Serena Release Control

Before you start using environments in Serena Release Control, you must pre-populate Serena Release Control with the names of your servers that you plan to manage over time using Serena Release Manager. This enables you to associate those servers with environments that you manage in Serena Release Control.

An environment represents one or more servers associated to a specific stage a release train or release package is going through. For example, you may have one or more UAT environments available that are used in parallel for different purposes, where different applications are installed on each for different testing scenarios. You may also have more than one INT environment available, more than one pre-PROD environment available, and so forth.

You can create environments in Serena Release Control and manage their availability through the associated workflow actions. You can report on the availability and schedule release trains and release packages accordingly.

In the default implementation of Serena Release Manager, there is not yet an active connection to the Serena Release Control objects, but you may choose to extend and customize this functionality. For example, you could customize the system to use the environment server configuration to store parameters in specific field values, which could then be passed to Serena Release Automation.

What Can You Change in Serena Release Control?

You can change the following server information:

- Add server name and description.

What is the Impact?

The server names appear in the **Create Environment** dialog box in the **Servers** selection field. If you change the names or add names, this impacts the list of names the users see when they select servers for environments.

How Do You Change It?

You add and change server information in the **Server** auxiliary table.

To change the Server table entries:

1. In SBM Application Administrator, click **Auxiliary Data**.
2. In the **Table** field, select **Server**.
3. Click **New** and enter the values into the following fields:
   - Name
   - Description
   - IP Address
   - Hostname
4. Click **OK** to save.

Documentation References

Complete documentation on adding data to SBM auxiliary tables is in the *Serena Business Manager SBM Application Administrator Guide* in "About Auxiliary Data".

Enabling Scheduling of Deployment Tasks

If you want to be able to schedule execution time of either vault or automation deployment tasks, you must first configure notifications and escalations in SBM.

To enable scheduling of deployments tasks:

1. In the SBM Configurator, enable the mail server as follows:

    a. On the navigation pane, select **Mail Services**.

    b. In the **Notification Server** tab, select **Enable Notification Server**.

    c. Click **Apply**.

2. In the SBM Administrator Portal, configure the **Schedule automation deployment task** notification for the **Automation Task** workflow as follows:

    a. On the Process apps/applications tree, select **Deployment**.

    b. Under **Workflow name**, double-click **Deployment** to expand the workflow name tree.

    c. In the expanded tree, select **Automation Task**.

    d. In **Notifications**, select **Schedule automation deployment task**.

    e. In the navigation pane, select **Subscriptions**.

    f. For the Serena Release Manager administrative user ID that is defined in the SBM tab of the ALM Configurator, select **Notify** and **Allow to Subscribe**.

    g. In the navigation pane, select **Escalation**.

    h. In **Delay Parameters**, select **Delay**.

    i. In the navigation pane, select **General**.

    j. Click **Save** to save the configuration settings.

3. In the SBM Administrator Portal, configure the **Schedule DimCM deployment task** notification for the **Vault Task** workflow as follows:

    a. On the Process apps/applications tree, select **Deployment**.

    b. Under **Workflow name**, double-click **Deployment** to expand the workflow name tree.

    c. In the expanded tree, select **Dim Deployment Task**.

    d. In **Notifications**, select **Schedule DimCM deployment task**.

    e. In the navigation pane, select **Subscriptions**.

    f. For any user who will submit automation deployment tasks, such as your Release Managers and Release Engineers, select **Notify** and **Allow to Subscribe**.

    g. In the navigation pane, select **Escalation**.

    h. In **Delay Parameters**, select **Delay**.

    i. In the navigation pane, select **General**.

    j. Click **Save** to save the configuration settings.

Managing Release Control Users

Before your Serena Release Manager users begin logging into Serena Release Control, you must configure the user information in SBM, which is used to:

- Login and access Serena Release Control functionality through the Serena Release Control user interface

- Assign ownership in the process workflow, to the SBM workflow states

- Access SBM reports and notifications used by Serena Release Control

Adding Users and Groups

You add users and groups as you would normally do in SBM.

What Can You Change in Release Manager?

User and group changes are done in native SBM.

What Can You Change in SBM?

You can change the following user information:

- Add users and groups
- Add new roles
- Modify roles
- Change ownership in existing states
- Change privileges of roles that are assigned to states
- Assign roles in projects

What is the Impact?

If an individual user is selected as a primary owner of a release item, and that user is removed, you must select another user as owner before the item can be progressed in the workflow.

If you add a role in SBM, If you change or add roles, you must also:

- Enable roles in projects for any workflows in which this role may be assigned ownership.
- Change privileges of roles that are assigned to states.
- You may need to change or add related roles that are needed in Dimensions CM for performing the necessary actions, as they won't be in the default process model. To define roles, see "Users and Roles" in the *Dimensions CM Process Modeling User's Guide*.

How Do You Change It?

You should manage users according to the SBM documentation.

- You can create the roles with privileges in SBM Composer.
- You can add users and groups to roles in SBM Application Administrator.
- You can grant privileges not related to roles, such as administrative privileges, in SBM Application Administrator.

Documentation References

- Complete documentation on managing roles in SBM is in the *Serena Business Manager SBM Composer Guide* in "Creating Roles".
- Complete documentation on managing users in SBM is in the *Serena Business Manager SBM Application Administrator Guide* in "Managing Users".

Example

The default roles defined in Serena Release Control are Release Manager and Release Engineer. Typical release management roles are shown in the following table.

Role Name	Description
Application Owner	The business owner of an application. An application owner is responsible for approving an application release during the planning stage and receives notifications of application release status.
Build Manager	The role that performs builds for a release. This role may also be the Installation Manager [page 49] in some organizations.
Change Manager	The role that is responsible for the IT Operations for the systems where the pre-production and production release environments reside. A change manager approves deployment into pre-production and production environments.
Development Manager	The role that is responsible for and approves development activities for a release. A development manager would typically be consulted during the release management process and provide approval on the content of a release package.
Installation Manager	The role that ensures that the deployment, or installation, of a release is done correctly and completely. An installation manager is assigned manual deployment tasks in Serena Release Control and is responsible for deployment of request packages into environments. This role may also be the Build Manager [page 49] in some organizations.
QA Manager	The role that is responsible for and approves testing activities for a release.
Release Engineer	The role that is responsible for the automating the release deployment and resolving any deployment failures. A release engineer creates deployment tasks for release packages using Serena Release Automation. This role may be the Installation Manager [page 49] or Build Manager [page 49] in some organizations.
Release Manager	The role that is responsible for releases within a particular organization. A release manager manages and monitors releases, plans releases in collaboration with development managers, and responds to successes, failures, and other statuses.

Managing Release Control User Interface Reports

Reports help keep release management stakeholders informed of status, history, and other release information. Serena Release Control provides a default set of reports that are used to populate the user interface panes.

In addition to reports provided, you can configure custom reports to provide the information you need for your organization's release control. The default reports configured for Serena Release Control are shown in the following sections.

What Can You Change in SBM?

You can change the following report information:

- Add reports
- Modify reports
- Delete reports
- Manage access to reports

What is the Impact?

- If you add a report, you must give users access to the report. Any users that do not have access or the assigned role will not see the report when they log in to the UI.
- If you do not use the proper naming convention, the report will not be listed in the drop-down list. For the report to appear in the UI and to be listed in the drop-down menu that filters the view, you must use one of the required report prefixes.
- If you change report criteria, the results that appear in the UI will change.
- You can change existing reports to add columns in your UI, but you should be careful when changing the title or reference name. If you change either of these, the report may no longer appear in the **View All** drop-down list or in the work area view itself, or underlying behaviors may be impacted. Make sure you understand the use of the report you are changing before you implement a change.
- If you delete a report that populates the UI, the name of the report no longer appears in the **View All** drop-down menu.

How Do You Change It?

You can manage reports from the Serena Release Control standard SBM user interface according to the SBM documentation.

You can create new reports for the UI if you need a report that represents something other than the default reports included in Serena Release Manager.

Changing Existing Reports

You can change existing reports to add columns, but you should not change the title or reference name. If you change either of these, the report may no longer be listed in the **View All** drop-down menu or the results may not appear in the work area pane.

To change the reports:

1. From the native SBM interface, select the process app for the report you want to change.
2. Change the report to add or remove fields that you want to appear or to change the selection criteria for the report data.

The changes you make to the report automatically appear in the UI if you save with the same name and reference name.

CAUTION! Do not change the title or reference name of the report. If you need a different report name, see Creating New Reports [page 50].

Creating New Reports

You can create new reports and register them in the UI if you need a report that represents something other than the default reports included in Serena Release Manager.

Reports that appear in the UI must be created with a specific title and reference name naming convention. The UI logic parses the name to determine whether the report should appear in the page and associated drop-down list, and on which page it should appear.

The UI logic uses the first node or nodes to determine the process app and associated page for the report and the second or middle node to determine the display name.

To create the reports:

1. From the native SBM interface, select the process app for the report you want to add.
2. Create the report with a specific name for the process app under which you want it to appear.
3. Make sure the users who need to see the report have the correct role and privileges.

4. Register the report.

Naming Convention and Reference Rules

The SBM reports that you create for Serena Release Manager must have title and reference names that follow a specific naming convention, and they must be referenced in the associated JavaScript file according to specific reference rules. These naming conventions and rules are documented as follows:

- Report Naming Convention [page 51]
- Report Reference Rules [page 51]

Report Naming Convention

Syntax

`<category title>.<view title>.<view description>`

or

`<category-specific-prefix>.<view title>.<view description>`

Spaces should be included in `<view title>` as needed, since this is the display name for the report in associated drop-down menus.

`<view description>` is optional, and is not displayed in the shell UI in the default implementation of Serena Release Manager. This is useful for documentary purposes, and could be used for tooltips in custom or future releases of the UI.

Example

DevTasks.View.In Progress.All Tasks That Are Currently In Progress

In this example,

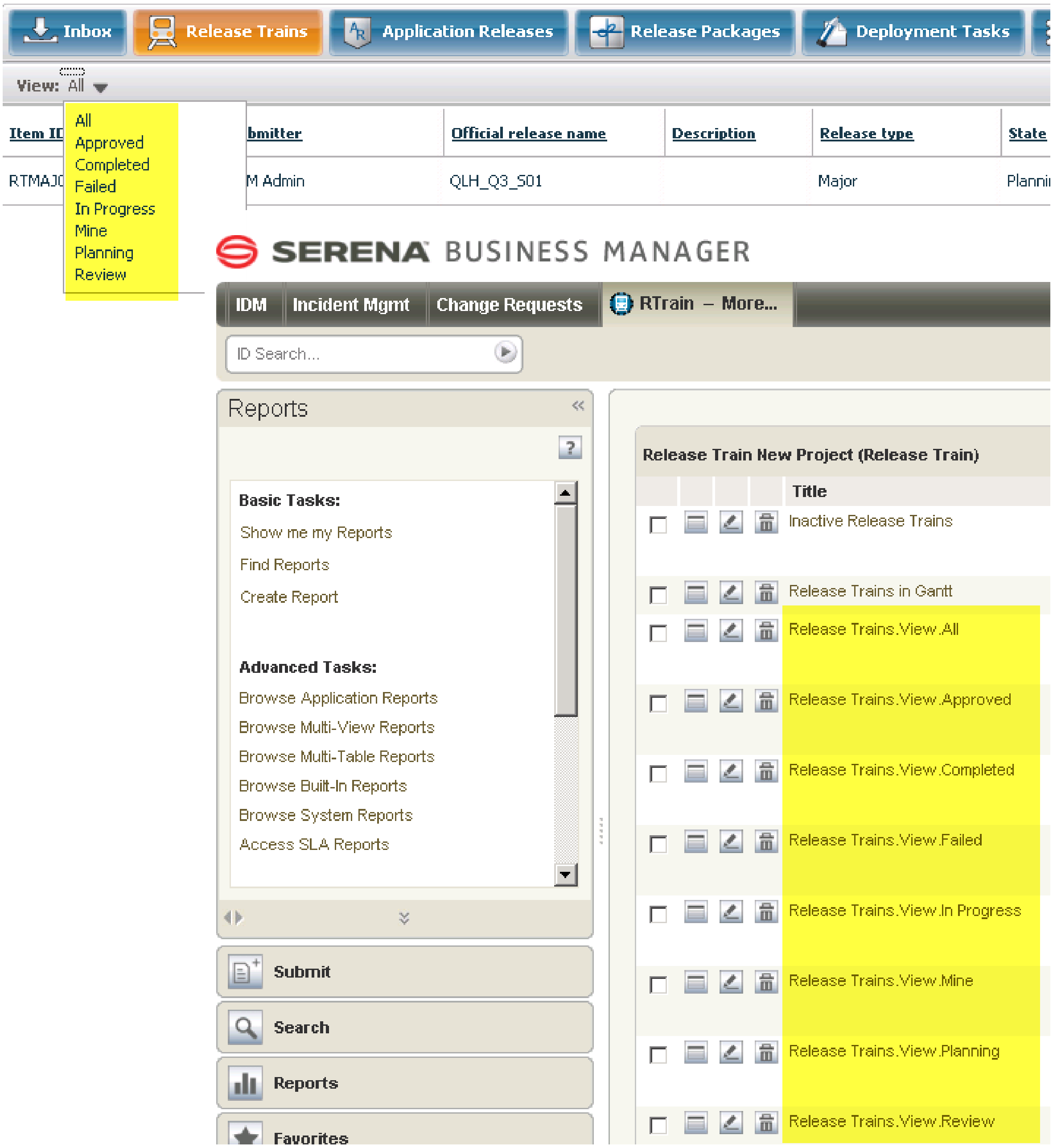
`<category-specific-prefix>` = DevTasks.View

`<view title>` = In Progress (visible in the shell UI)

`<view description>` = All Tasks That Are Currently In Progress

Report Reference Rules

- The report name used in the UI is the report title. For example, the reports shown in the **Release Trains | View All** menu and the corresponding report names are as follows:



- The report itself should not include filtering or sorting. The reference name syntax provides the information used by the UI code to filter and sort the reports.
- Reports may be referenced by the reference name, and may appear as "category view".
- Category Definitions Categories are defined in `..\Serena\SBM\Application Engine\template\shell\alm\config/views.jsvar`.
- Each category can have the following defined:

  name: a code-name, to be used internally

  title: to be shown as a section-button caption

  url: the page URL to be shown; currently, the same page with parameters is displayed

  description: documentary only

  report_prefix: a prefix for reports to be shown as a views. Category title or name is considered a prefix if it was not configured exactly.

demand_permission: the privileges to be checked for access the category

List of Reports

The default reports for the Serena Release Manager UI are shown in the following table.

Objects	Report Title	Description
Inbox	RLM.MyWork.Inbox.RelTrain.AppRel	Release trains assigned to the current user.
	RLM.MyWork.Inbox.DepTask.DepTemplate	Deployment tasks assigned the current user.
	RLM.MyWork.Inbox.Env.RelPackage	Release packages assigned the current user.
Release Trains	Release Trains.View.All	All release trains in active status.
	Release Trains.View.Mine	Release trains assigned to the current user.
	Release Trains.View.Planning	All release trains in the Planning state.
	Release Trains.View.Approved	All release trains in the Approved state.
	Release Trains.View.In Progress	All release trains in the In Progress state.
	Release Trains.View.Review	All release trains in the Review state.
	Release Trains.View.Completed	All release trains in the Completed state.
	Release Trains.View.Failed	All release trains in the Failed state.
Application Releases	Application Releases.View.All	All application releases in active status.
	Application Releases.View.Mine	Application releases assigned to the current user.
	Application Releases.View.Planning	All application releases in the Planning state.
	Application Releases.View.In Progress	All application releases in the In Progress state.
	Application Releases.View.Review	All application releases in the Review state.
	Application Releases.View.Completed	All application releases in the Completed state.

Objects	Report Title	Description
Release Packages	Release Packages.View.All	All release packages in active status.
	Release Packages.View.Mine	Release packages assigned to the current user.
	Release Packages.View.Ready for UAT	All release packages in the Ready for UAT state.
	Release Packages.View.UAT	All release packages in the UAT state.
	Release Packages.View.Ready for Production	All release packages in the Ready for Production state.
	Release Packages.View.Production	All release packages in the Production state.
	Release Packages.View.Ready for Deployment	All release packages in the Ready for Deployment state.
	Release Packages.View.Failed Testing	All release packages in the Failed Testing state.
	Release Packages.View.Failed Deployment	All release packages in the Failed Deployment state.
Deployment Tasks	Deployment Tasks.View.All	All deployment tasks in active status.
	Deployment Tasks.View.Mine	All deployment tasks assigned to the current user.
	Deployment Tasks.View.Planned	All deployment tasks in the Planned state.
	Deployment Tasks.View.In Progress	All deployment tasks in the In Progress state.
	Deployment Tasks.View.Failed	All deployment tasks in the Failed state.
Environments	Environments.View.All	All environments in active status.
	Environments.View.Mine	All environments assigned to the current user.
	Environments.View.Commissioned	All environments in the Commissioned state.
	Environments.View.Decommissioned	All environments in the Decommissioned state.

Objects	Report Title	Description
Deployment Process Templates	Release Templates.View.All	All deployment process templates in active status.
	Release Templates.View.Mine	All deployment process templates assigned to the current user.
	Release Templates.View.Available	All deployment process templates in the Available state.
	Release Templates.View.Failed	All deployment process templates in the Failed state.
Vault Requests	Vault Requests.View.All	All vault requests in active status.
	Vault Requests.View.Mine	All vault requests assigned to the current user.
	Vault Requests.View.Ready for Delivery	All vault requests in the Ready for Delivery state.
Vault Templates	Vault Request Templates.View.All	All vault templates in active status.
	Vault Request Templates.View.Mine	All vault templates assigned to the current user.
	Vault Request Templates.View.Available	All vault templates in the Available state.

Privileges Required for UI Reports

For users to see a particular UI report's results when they select a page in Serena ALM, they must have one of the following item privileges within the related process app:

- View All Items
- View Item if Owner
- View Item if Secondary Owner
- View Item if Submitter

Managing Release Control Notifications

Notifications help keep release management stakeholders informed of release status information. If subscribed, e-mail notifications are sent to Serena Release Control users to alert them of actions requiring their attention and to provide important release status information.

Serena Release Control provides a default set of notifications, and you can configure these as needed to support your organization. The notifications configured by default for Serena Release Control are shown in the following table.

Workflow	Notifications
Release Train	RTN - Any Release Train changes owner
	RTN - Any Release Train changes state
	RTN - Any Release Train changes to inactive
	RTN - Any Release Train I submitted changed state
	RTN - Any Release Train I submitted changed to inactive
	RTN - Any Release Train is submitted
	RTN - I become the owner of any Release Train
Application Release	AR - Any Application Release changes owner
	AR - Any Application Release changes state
	AR - Any Application Release changes to inactive
	AR - Any Application Release I submitted changed state
	AR - Any Application Release I submitted changed to inactive
	AR - Any Application Release is submitted
	AR - I become the owner of any Application Release
Release Package	RP - Any Release Package changes owner
	RP - Any Release Package changes state
	RP - Any Release Package changes to inactive
	RP - Any Release Package I submitted changed state
	RP - Any Release Package I submitted changed to inactive
	RP - Any Release Package is submitted
	RP - I become the owner of any Release Package

Workflow	Notifications
Deployment Task (and sub-workflows)	D - Any Automation Task fails for Release Engineer or Manager
	D - Any Vault Task fails for Release Engineer or Manager
	D - Any Deployment changes owner
	D - Any Deployment changes state
	D - Any Deployment changes to inactive
	D - Any Deployment I submitted changed state
	D - Any Deployment I submitted changed to inactive
	D - Any Deployment is submitted
	D - I become the owner of an In Progress Automation Task
	D - I become the owner of an In Progress Manual Task
	D - I become the owner of an In Progress Vault Task
	D - I become the owner of any Deployment
Release Template (Deployment Process Template)	RT - Any Release Template changes owner
	RT - Any Release Template changes state
	RT - Any Release Template changes to inactive
	RT - Any Release Template I submitted changed state
	RT - Any Release Template I submitted changed to inactive
	RT - Any Release Template is submitted
	RT - I become the owner of any Release Template

Workflow	Notifications
Rlm Aux (Auxiliary)	RA - Any Rlm Aux changes owner
	RA - Any Rlm Aux changes state
	RA - Any Rlm Aux changes to inactive
	RA - Any Rlm Aux I submitted changed state
	RA - Any Rlm Aux I submitted changed to inactive
	RA - Any Rlm Aux is submitted
	RA - I become the owner of any Rlm Aux
Environment	E - Any Environment changes owner
	E - Any Environment changes state
	E - Any Environment changes to inactive
	E - Any Environment I submitted changed state
	E - Any Environment I submitted changed to inactive
	E - Any Environment is submitted
	E - I become the owner of any Environment
Vault Request	VR - Any Vault_Request changes owner
	VR - Any Vault_Request changes state
	VR - Any Vault_Request changes to inactive
	VR - Any Vault_Request I submitted changed state
	VR - Any Vault_Request I submitted changed to inactive
	VR - Any Vault_Request is submitted
	VR - I become the owner of any Vault_Request

Workflow	Notifications
Vault Template	VT - Any Vault_Request changes owner
	VT - Any Vault_Request changes state
	VT - Any Vault_Request changes to inactive
	VT - Any Vault_Request I submitted changed state
	VT - Any Vault_Request I submitted changed to inactive
	VT - Any Vault_Request is submitted
	VT - I become the owner of any Vault_Request

What Can You Change in Release Manager?

Notification changes are done in native SBM.

What Can You Change in SBM?

You can modify the provided notifications and configure additional notifications as needed to support your release management processes.

Notifications in SBM are e-mail messages sent to users when certain events or conditions occur in the system. Notifications can also be used to automatically add and remove items from folders and to execute scripts.

You can change the following notification information:

- Add notifications
- Modify notifications
- Subscribe users to notifications

What is the Impact?

If you add a notification, you should subscribe users to it so that the notification is sent to them when the associated event occurs.

How Do You Change It?

You can manage notifications in SBM Application Administrator according to the SBM documentation.

Documentation References

Complete documentation on configuring SBM notifications is in the *Serena Business Manager SBM Application Administrator Guide* in "Managing Notifications".

Release Vault Configuration: Dimensions CM

This section tells you how to configure and administer objects for communication and integration a Dimensions CM Serena Release Vault. You must complete the following configuration before the people who participate in release management in your organization begin using Serena Release Manager.

Dimensions CM Communication Configuration Overview [page 60]

ZMF Communication Configuration Overview [page 67]

Configuring Dimensions CM Communication in Release Manager [page 64]

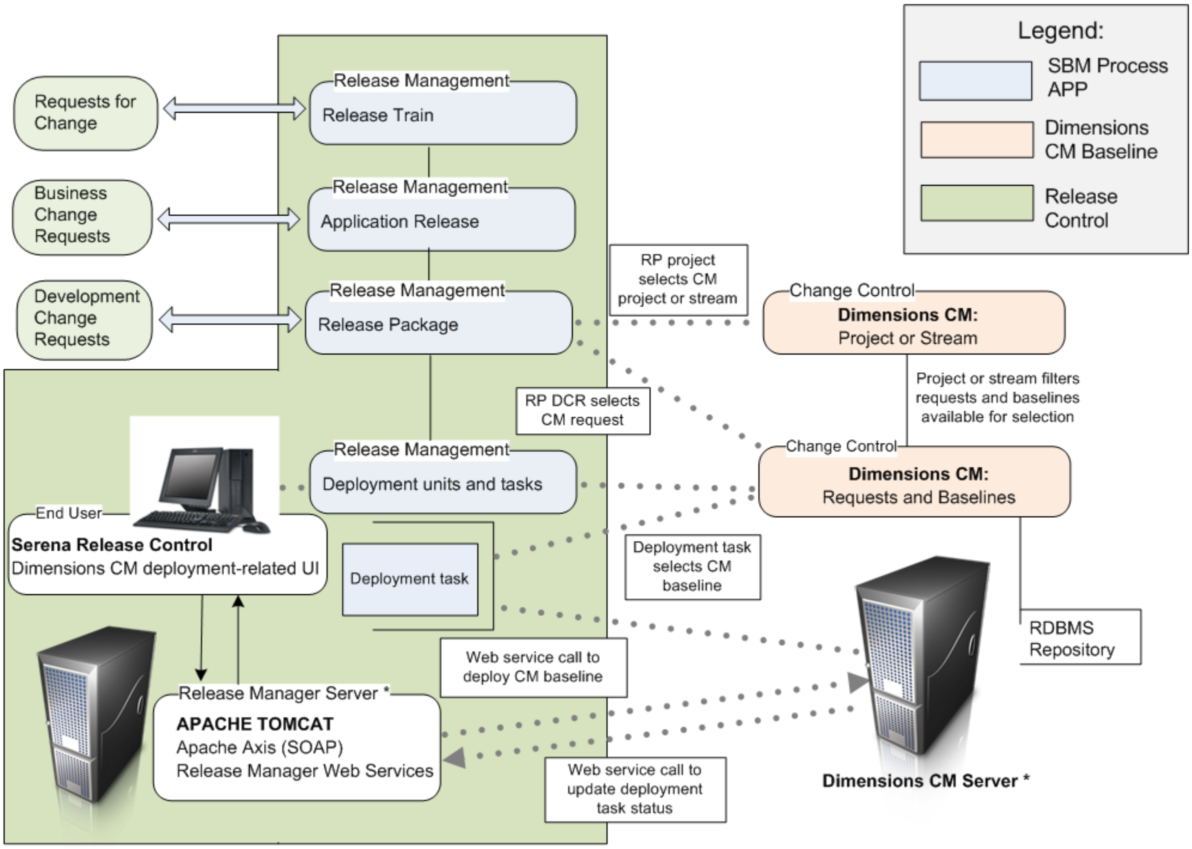
Configuring Objects in Release Automation (Nolio) [page 90]

Dimensions CM Communication Configuration Overview

You must configure Dimensions CM communication on the Dimensions CM server and on the Serena Release Manager server to activate the integration.

If you have Serena Development Manager (DVM) installed as part of the Serena ALM suite, your implementation of Dimensions CM is shared between Serena Release Manager and Serena Development Manager. Information that applies to Dimensions CM here also applies to Serena Development Manager. For information on installing and configuring Serena Development Manager, see *Serena Development Manager Installation and Configuration*.

The architecture that supports the Dimensions CM integration with Serena Release Manager is shown in the following figure.



* This represents a logical server. Dimensions CM and Release Manager may share physical and Web servers.

Configuring Communication on the Dimensions CM Server

You must configure Dimensions CM communication on the Dimensions CM server, the Windows/ UNIX systems release vault, so that Serena Release Control can access the correct server and instance of Dimensions CM and sign on to Dimensions CM. You must do the following:

- Specify ALF event configuration information in the `dm.cfg` file.

- Specify selection criteria for the Dimensions CM events and objects by updating the ALF event configuration file, ALF_EVENTS_CONFIG.XML. Specify your Dimensions CM database name, project name, baseline type, and deploy event.

For details, see the following:

- Specifying Dimensions CM ALF Event Configuration Information [page 62]
- Specifying Selection Criteria for Dimensions CM Events and Objects [page 63]

Specifying Dimensions CM ALF Event Configuration Information

The connection of SBM with Dimensions CM is implemented using ALF events. You must update the dm.cfg file on the Dimensions CM server with the ALF event configuration information, which includes the endpoints and sign-on credentials SBM uses for the connection, the location of the ALF XML file that tells ALF which Dimensions CM information to look for, and which product instance to use.

To update the ALF events configuration for Dimensions CM:

1. On the Dimensions CM server, navigate to the Dimensions CM installation directory. For example:

   ```
   C:\Program Files\Dimensions 12.2\CM
   ```

2. Update the dm.cfg file to add or update ALF variables as follows:

   ```
   #######################################
   # ALF Events Configuration
   #######################################
   DM_ALF_ENDPOINT http://<sbmserver>:<port#>/eventmanager/services/
       ALFEventManager
   DM_ALF_USER <user>
   DM_ALF_PASSWORD <password>
   DM_ALF_EVENT_CONFIG %DM_DFS%alf_events_config.xml
   DM_ALF_PRODUCT_INSTANCE DimensionsUnderOrchestratedApps
   ```

   where

   - DM_ALF_ENDPOINT is pointing to the SBM server and port number and the ALF Event Manager for that SBM server
   - DM_ALF_USER is a valid SBM and Dimension CM user with administrative privileges

3. Restart the Dimensions CM Listener service.

Example

dm.cfg

```
#######################################
# ALF Events Configuration
#######################################
DM_ALF_ENDPOINT http://sbmhost:8085/eventmanager/services/ALFEventManager
DM_ALF_USER almadmin
DM_ALF_PASSWORD almadmin_pswd
DM_ALF_EVENT_CONFIG %DM_DFS%alf_events_config.xml
DM_ALF_PRODUCT_INSTANCE DimensionsUnderOrchestratedApps
```

Specifying Selection Criteria for Dimensions CM Events and Objects

If you plan to use Dimensions CM to provide requests for your development change requests or baselines as your deployment units, you must configure the ALF events to filter the information to be sent to Serena Release Manager.

If you are using Dimension CM as your DCR or DU provider, you must also configure the Dimensions development change request and deployment unit provider information as documented in Provider Configuration [page 93].

To specify selection criteria for the Dimensions CM events and objects:

1. Navigate to the Dimensions CM installation directory. For example:

   ```
   C:\Program Files\Dimensions\12.2\CM\dfs
   ```

2. Update the `ALF_EVENTS_CONFIG.XML` file to specify your Dimensions CM database name, project name, baseline type, and deploy event.

3. Restart the Dimensions CM Listener service.

Example

ALF_EVENTS_CONFIG.XML

```
<!-- Specify a specific database
<Database>
<!-- Example database name specification
<base_database_id>@<server>-<db_connection
(using the wildcard character
<Name>CM_TYPICAL@*-Dim12</Name>
<!--Specify one or more projects-->
<Projects>
<!--Specify a specific project-->
<Project
<!-- Example project name specification
<project-spec> - <product-id>:<project-id>
(using the wildcard character "*")-->
<Name>*</Name>
<!--Specify one or more object classes-->
<Objects>
<!-- Specify a specific object class -->
<Object>
<Type>Baseline</Type>
<!-- Example events to support for above object class-->
</Events>
<Event>Deploy</Event>
</Events>
</Object>
</Objects>
</Project>
</Projects>
</Database>
```

Configuring Dimensions CM Communication in Release Manager

You must configure Dimensions CM properties on the Serena Release Manager server so that Serena Release Manager can connect to and communicate with Dimensions CM. To do this, you must specify the connection information through the Serena ALM Configurator **Dimensions CM** page.

Configuring Objects in Dimensions CM

Before you begin using the Serena Release Manager features that integrate with Dimensions CM, you must configure the Dimensions CM objects needed.

The following sections explain the configuration and administration needed for Serena Release Manager:

- Configuring the Dimensions CM Global Stage Lifecycle [page 64]
- Managing Dimensions CM Users [page 64]
- Configuring Dimensions CM Projects and Streams [page 65]
- Available Selection of Requests and Baselines [page 66]

Configuring the Dimensions CM Global Stage Lifecycle

To make the deployment stages in Serena Release Control easy for users to understand, it is recommended that you match the Global Stage Lifecycle (GSL) stages in the Dimensions CM process model to the Serena Release Control stages for major, minor, and emergency release types. You can also configure Serena Release Control stages to match the GSL stages if you have already established GSL stages that users are familiar with.

You must define the deployment areas and assign them to each project you are using for each stage in the GSL. See "Area Definitions" in the *Dimensions CM Process Modeling User’s Guide.*

Documentation References

- Complete documentation on configuring the GSL in Dimensions CM is in the *Dimensions CM Process Modeling User’s Guide* in the "Lifecycle Management" chapter.
- Complete documentation on configuring the deployment areas in Dimensions CM is in the *Dimensions CM Process Modeling User’s Guide* in the "Area Definitions" chapter.

Managing Dimensions CM Users

Serena Release Manager uses the user information that you configure as part of the ongoing use of Dimensions CM.

Typically, Serena Release Control users do not need to log into the Dimensions CM client. The interaction most Serena Release Control users have with Dimensions CM is through system functions, and access to Dimensions CM information and actions requested through those functions are executed through the administrative user through which Serena Release Control communicates with Dimensions CM.

Information passed from Dimensions CM to Serena Release Manager through the underlying administrative login includes:

- Development Change Request provider: Dimensions CM projects, streams, and requests (optional)
- Deployment Unit provider: Dimensions CM projects, streams, and baselines
- Vault Deployment Tasks: Dimensions CM projects, streams, baselines, and deployment areas

There are two main types of Dimensions CM users that interact with Serena Release Manager:

- An administrative user that is specified in the system configuration files and that Serena Release Manager uses to sign on to Dimensions CM through SBM and Web services. This user must be set up for single sign-on and have privileges for the following in Dimensions CM:
    - Access to all project and stream information for applications to be deployed from Serena Release Manager through Dimensions CM.
    - Access to all request information for applications that will be tracked from Serena Release Manager through Dimensions CM as the Development Change Request provider.
    - Access to all baseline information for applications that will be deployed from Serena Release Manager through Dimensions CM as the Deployment Unit provider.
    - Ability to deploy baselines for applications that will be deployed from Serena Release Manager through Dimensions CM.
- Any users that have roles in both Dimensions CM and Serena Release Manager, such as Serena Release Control power users or Serena Release Manager administrators.

What Can You Change in Release Manager?

Dimensions CM object changes are done in Dimensions CM.

What Can You Change in Dimensions CM?

- You can change user and role information in Dimensions CM as needed for the users' roles in Dimensions CM.
- Use caution when changing the administrative user that is used to sign on from Serena Release Control and execute the underlying integrative functions in Dimensions CM. You must use single sign-on for the communication between Serena Release Manager and Dimensions CM to work.

What is the Impact?

- When a user is signed on through single sign-on to either SBM or Dimensions CM and accesses the other client through the Web interface, that user is automatically logged into the other product.
- If you don't use single sign-on for the administrative user used for the Serena Release Manager communication to Dimensions CM, the Serena Release Manager integration to Dimensions CM will not work as designed.

How Do You Change It?

Dimensions CM administrators should configure user and role information in Dimensions CM according to the Dimensions CM documentation.

Documentation References

- Complete documentation on configuring users in Dimensions CM is in the *Dimensions CM Process Modeling User's Guide* in "Users and Roles".

Configuring Dimensions CM Projects and Streams

Serena Release Manager uses the projects and streams that you configure as part of the ongoing use of Dimensions CM.

Serena Release Manager uses projects in integrating products to filter lists of requests or issues to associate with Development Change Requests and to filter lists of baselines or other deployment-ready components to associate with Deployment Units. The default implementation of Serena Release Manager integrates with SBM and Dimensions CM projects.

Dimensions CM project association with Release Packages is used for the following purposes in Serena Release Manager:

- To filter the development change requests available for creating the association between release packages and development change requests.
- To filter the deployment units, or baselines, available for creating the association between release packages and deployment units.

What Can You Change in Release Manager?

Dimensions CM object changes are done in Dimensions CM.

What Can You Change in Dimensions CM?

You can change the following project and stream information:

- Add projects and streams.
- Delete projects and streams.
- Modify projects and streams.
- Associate components to projects and streams.
- Associate projects and streams to Dimensions CM requests.
- Create baselines from projects and streams.

What is the Impact?

- The project and stream names appear in the project selection table in the Release Package dialog box. If you change the names or add names, this impacts the list of names the users see when they select projects or streams for a release package.
- The associations with the projects and streams affect the record of change requests and the set of components to be deployed, so changes to these affect release package DCRs and DUs.

How Do You Change It?

You can change project and stream information in the Dimensions CM user clients according to the Dimensions CM documentation.

Documentation References

Complete documentation on configuring Dimensions CM projects and streams is in the *Serena Dimensions CM User's Guide* in "Managing Projects".

Available Selection of Requests and Baselines

If Dimensions CM is used as one of your development change request providers, requests are displayed for selection in Serena Release Control only if they are in one of the statuses defined by your Serena Release Manager administrator.

If Dimensions CM is used as one of your deployment unit providers, baselines are displayed for selection in Serena Release Control only if they are in release mode and are in one of the statuses defined by your Serena Release Manager administrator.

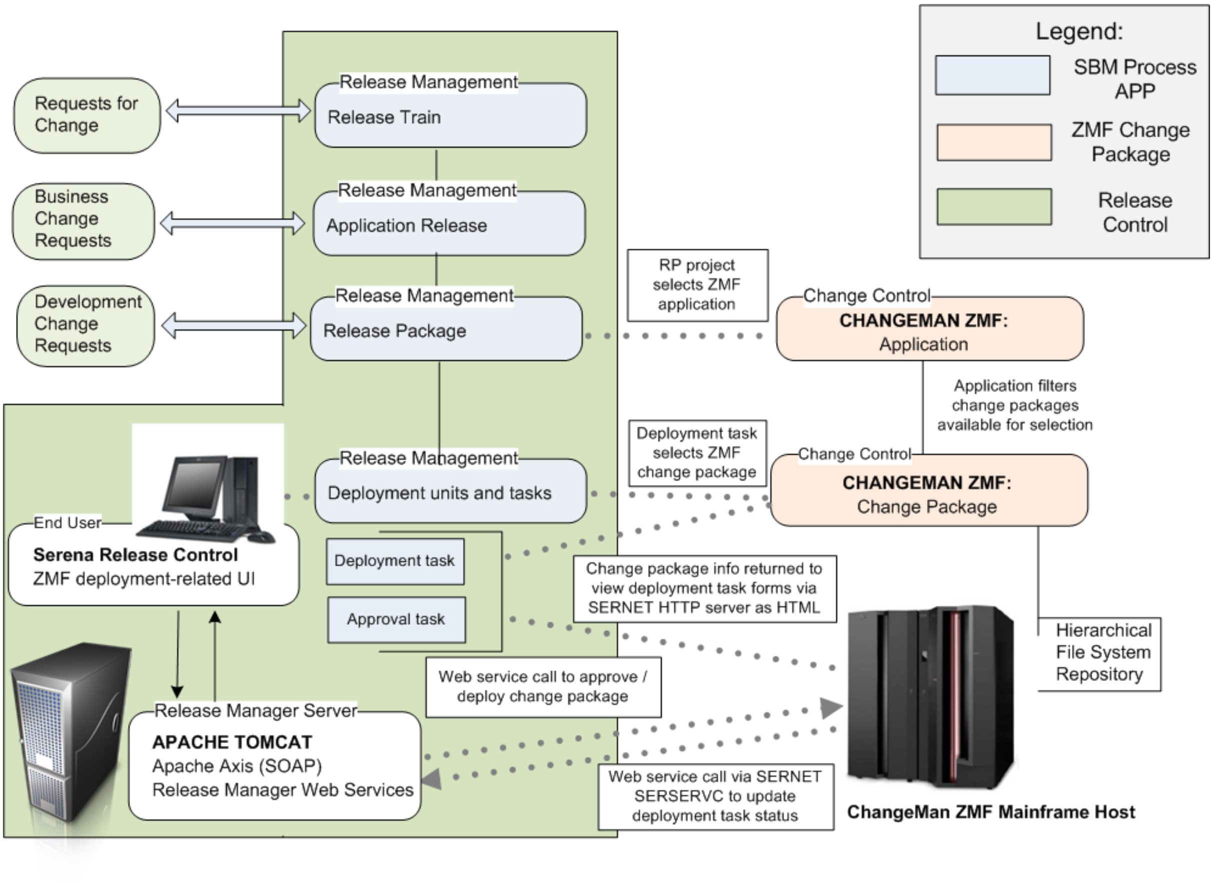
For more information, see Provider Configuration [page 93].

Release Vault Configuration: ChangeMan ZMF

This section tells you how to configure and administer objects for communication and integration with Serena Release Vault. You must complete the following configuration before the people who participate in release management in your organization begin using Serena Release Manager.

ZMF Communication Configuration Overview

You must configure ChangeMan ZMF communication on the z/OS mainframe and on the Serena Release Manager server to activate the integration. The architecture that supports the ZMF integration is shown in the following figure.


Legend:
SBM Process APP
ZMF Change Package
Release Control
Requests for Change
Business Change Requests
Development Change Requests
Release Management
Release Train
Release Management
Application Release
Release Management
Release Package
Release Management
Deployment units and tasks
Deployment task
Approval task
End User
Serena Release Control
ZMF deployment-related UI
Release Manager Server
APACHE TOMCAT
Apache Axis (SOAP)
Release Manager Web Services
RP project selects ZMF application
Change Control
CHANGEMAN ZMF:
Application
Application filters change packages available for selection
Deployment task selects ZMF change package
Change Control
CHANGEMAN ZMF:
Change Package
Change package info returned to view deployment task forms via SERNET HTTP server as HTML
Web service call to approve / deploy change package
Web service call via SERNET SERSERVC to update deployment task status
Hierarchical File System Repository
ChangeMan ZMF Mainframe Host

Configuring ZMF Communication on the Mainframe

You must configure ChangeMan ZMF communication on the z/OS mainframe as follows:

- Configure the NTFYURL; this is the URL Serena Release Manager uses to send information to SERNET through the server.
- Configure the SERNET HTTP server; this is the server Serena Release Manager uses to populate the UI widgets with ZMF information.
- Configure a proxy user ID for each mainframe host, or LPAR, that Serena Release Manager uses to log in to ChangeMan ZMF.
- Configure TSO user IDs that match the SBM user IDs.
- Configure approvers for each promotion level to be used with Serena Release Manager.

Configuring the Notification URL

You must give ChangeMan ZMF a way to tell Serena Release Manager when ChangeMan ZMF has completed a requested task. Since information from ZMF is sent through ALF and SERNET, you must configure the notification URL parameter for the SERNET started task on z/OS.

The NTFYURL parameter is a keyword option used with the SERNET started task. This parameter is required for notifying Serena Release Manager when an ALF event is emitted from ChangeMan ZMF.

There are three different ways of passing the NTFYURL parameter to SERNET.

Whichever method you choose to pass this parameter, it must be specified as follows:

```
NTFYURL=’hostname:port/almzmfalf/services/ZMFALFEventRouter’
```

where hostname is the server name where Serena Release Manager Web Services are installed and port is the port number for that server.

This parameter is case-sensitive; the non-variable text must be entered exactly as shown. Be sure to include the quotes around the variable string.

Example

```
NTFYURL='alm_host:8080/almzmfalf/services/ZMFALFEventRouter'
```

CAUTION! If your site is a DP site, you must specify the same hostname and port for the DP site and the P site. If not, the P site will continue to wake up looking for work and will fill up the JESMSGLG (JES message log).

Documentation References

- Complete documentation on passing parameters to SERNET is in the *Passing Parameters to SERNET* in the *Serena ChangeMan ZMF Installation Guide*.

Configuring the SERNET HTTP Server

The ChangeMan ZMF UI widget for Serena Release Manager is populated using a native mainframe HTTP server, SERSERVC, that runs under SERNET. See Configuring the SERNET HTTP Server [page 69] for installation, operation, and runtime considerations for SERSERVC.

IMPORTANT!

- For the UI widgets to populate the forms with information from ZMF, the ZMF forms must be updated so that the widgets point to the correct hostname. See Configuring the ChangeMan ZMF Web Page Widgets [page 39].

- The URL to this server is specified in the zmf-client-connection.properties file, which can be updated using the Serena ALM Configurator. See Provider Configuration [page 93].

To support communications with Serena Release Manager, ChangeMan ZMF users require SERSERVC, a native mainframe HTTP server than runs under SERNET. SERSERVC is written in REXX and runs under IBM's Unix System Services (USS) on the host. It supports UTF-8 character encoding only.

SERSERVC Prerequisites

SERSERVC has the following general requirements:

- A dedicated TCP/IP port ID must be assigned to the HTTP server.

- A version of ChangeMan ZMF that supports Serena Release Manager must be installed.

Refer to the Serena product software compatibility matrix for information on versions of ChangeMan ZMF that integrate with Serena Release Manager.

NOTE SERSERVC works with versions of ChangeMan ZMF that may not be certified to work with Serena Release Manager and may be installed independently of Serena Release Manager.

SERNET User ID

To run the SERSERVC HTTP server under z/OS Unix System Services (USS), SERNET requires a RACF userid with the following features:

- *OMVS segment* Establish this segment to manage USS privileges in RACF.

- *User privileges* In the OMVS segment assigned to the SERNET user ID, set the Unix user ID number to a value that will give SERNET the highest user privilege level allowable in your shop. Superuser privileges (that is, `UID(0)`) are not required.

- Unix home directory Assign a home directory in the OMVS segment for the user ID. By convention, the home directory path name takes the form

  `/u/`*userid*

  where `userid` is the SERNET user ID you assign in RACF.

In the examples below, we will use a SERNET user ID of `sernet` and a Unix home directory path name of `/u/sernet`.

PRIVILEGE Serena recommends that SERNET be assigned the same user ID as the ChangeMan ZMF started task class.

Verifying SERNET User ID Privileges

If you are already using TCP/IP for communications with ChangeMan ZMF, SERNET will already have a user ID with an OMVS segment assigned. For example, you may use SERNET to communicate with ChangeMan ;ZDD or use the ChangeMan ZMF Load Balancing Option (LBO). However, user privileges and/or a Unix home directory may not be established.

To verify privileges for an existing SERNET user ID:

1. Find the current SERNET user ID.

   a. Use SDSF to examine a running ChangeMan ZMF task or the JESMSGLG of the job output from a previous execution of ChangeMan ZMF.

   b. At the top of the message log, usually next to the message

   ```
   $HASP373 STARTED
   ```

   find message `IEF695I`. This message includes an `ASSIGNED` message line that identifies the SERNET user ID.

2. Retrieve the OMVS segment for the SERNET user ID.

   a. At the TSO command line, issue the following command:

   `LU` *userid* `OMVS`

   where `userid` is the SERNET user ID found above, such as `sernet`.

   b. If no OMVS segment is returned, ask your systems programmer or security administrator to add one. (See SERNET User ID [page 69] for required privileges.)

   c. If an OMVS segment exists for the user ID, verify that the `UID` is set to zero and note the Unix home directory (for example, `/u/sernet`). If either are missing, ask your security administrator to add it to the OMVS segment.

PRIVILEGE

- UID(0) is not required for the HTTP server.

- UID(0) is recommended but not required for the SERNET server. The SERNET server already runs as APF-authorized. The server must have read, execute, and write privileges to the HFS file system, and in particular, anything that starts with the home directory of the server's user ID.

Installing SERSERVC

To install SERSERVC perform the following steps.

1. Create the SERSERVC runtime directory with a path name of the form

   `/u/userid/serservc`

   where `userid` is your actual SERNET user ID. (In our examples, this is `sernet`.)

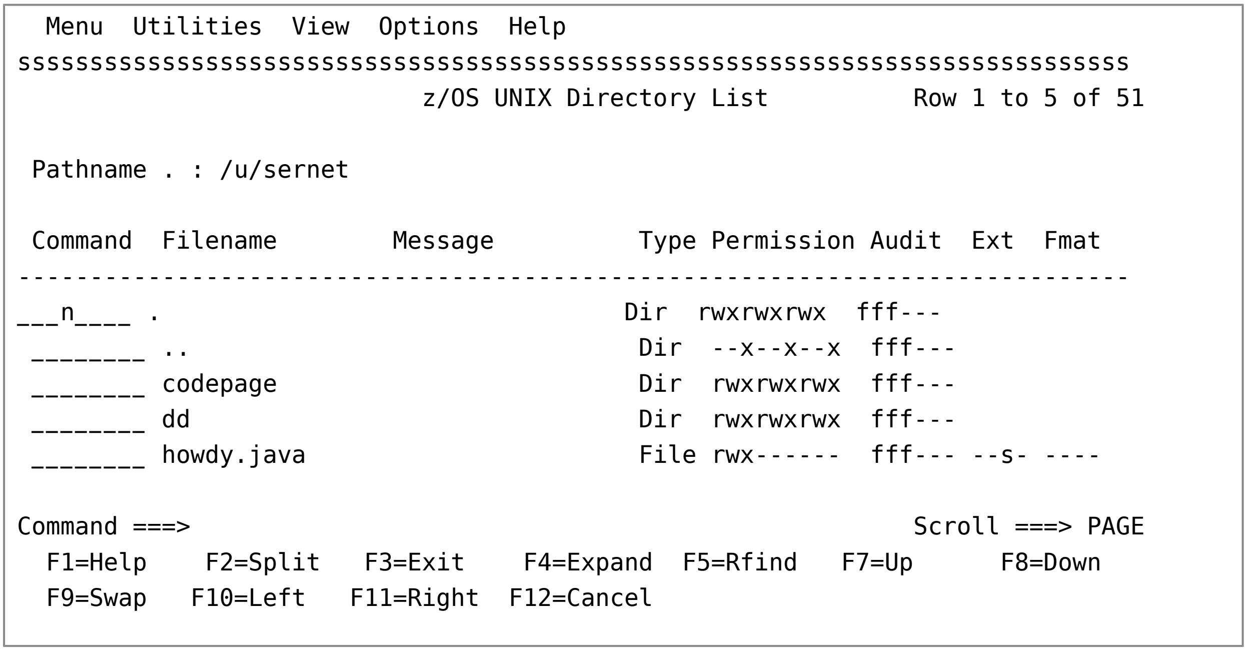
   a. Select ISPF option `3.17` to invoke the UNIX directory list utility.

   b. In the **Pathname** field of the **z/OS Unix Directory List Utility** panel, type the SERNET home directory path (for example, `/u/sernet`). Leave the **Option==>** prompt blank to request a display of directory contents and press Enter.

   The directory list for the SERNET home directory displays.

   c. In the **Unix Directory List** panel for the SERNET home directory, type the **N ;(New)** line command at the root level of the file hierarchy. The **Filename** for this level is listed as a single period (`.`) and the **Type** is "Directory" (`Dir`).

   For example:



```
  Menu  Utilities  View  Options  Help
sssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
                            z/OS UNIX Directory List          Row 1 to 5 of 51

 Pathname . : /u/sernet

 Command  Filename        Message          Type Permission Audit  Ext  Fmat
-----------------------------------------------------------------------------
___n____ .                                Dir  rwxrwxrwx  fff---
 ________ ..                               Dir  --x--x--x  fff---
 ________ codepage                         Dir  rwxrwxrwx  fff---
 ________ dd                               Dir  rwxrwxrwx  fff---
 ________ howdy.java                       File rwx------  fff--- --s- ----

Command ===>                                                  Scroll ===> PAGE
  F1=Help    F2=Split   F3=Exit    F4=Expand  F5=Rfind   F7=Up      F8=Down
  F9=Swap   F10=Left   F11=Right  F12=Cancel
```

   Press Enter.

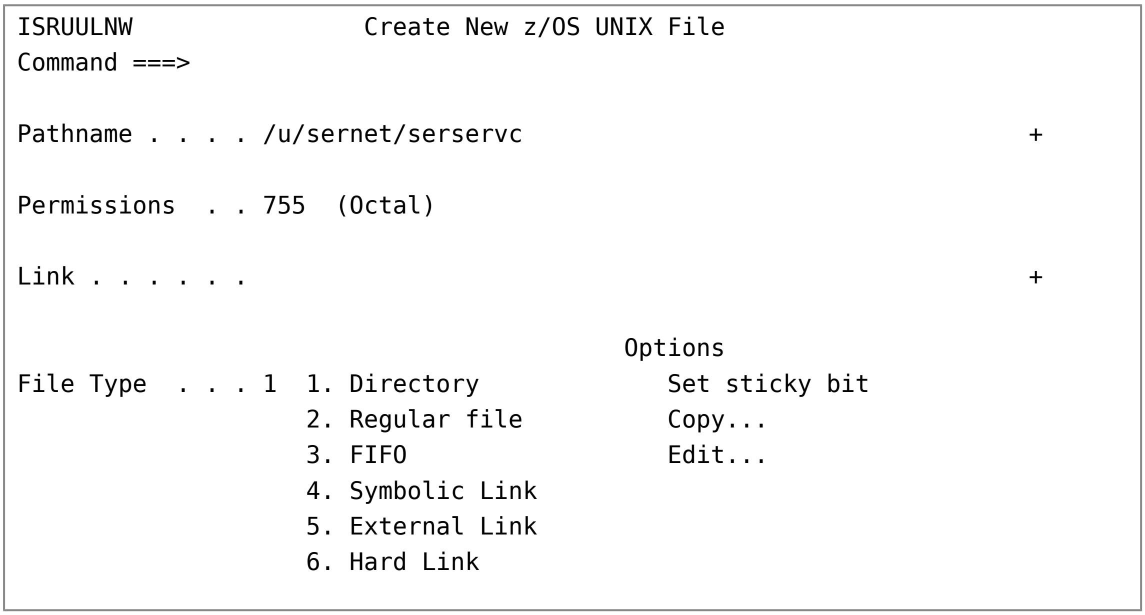
   d. When the **Create New z/OS UNIX File** window displays, create a new directory called `serservc` with permission level 755. Required field values are:

   - **Pathname:** Give the full path name for the new directory `serservc`.
     For example: `/u/sernet/serservc`

   - **Permissions:** Type 755 to assign read, write, and execute permissions
     over the directory to the directory owner, the owner's
     security group, and all others.

   - **File Type:** Type 1 to identify the new data object as a directory.

   For example:



```
ISRUULNW               Create New z/OS UNIX File
Command ===>

Pathname . . . . /u/sernet/serservc                                  +

Permissions  . . 755  (Octal)

Link . . . . . .                                                     +

                                          Options
File Type  . . . 1  1. Directory             Set sticky bit
                    2. Regular file          Copy...
                    3. FIFO                  Edit...
                    4. Symbolic Link
                    5. External Link
                    6. Hard Link
```

Press Enter and then exit the utility with PF3.

NOTE The creation of the UNIX directory `/u/userid/serservc` must be done by a user with the proper authority, such as a systems programmer. Some user IDs may not have access to ISPF 3.17.

2. Copy the sample runtime JCL module SERSERVC to your actual installation PROCLIB. Member SERSERVC resides in the CNTL library where you unloaded the ChangeMan ZMF SERCOMC installation libraries.

3. Customize the runtime JCL for SERSERVC.

   The following model SERSERVC JCL segment is supplied for your reference when making these changes. The actual downloaded JCL may vary from this example.

```
//SERSERVC PROC OUTC=H,                            * CLASS
//             PORT=6657,                          * PORT
//             PATH='/u/sernet/serservc', * PATH
//             PROCLIB='USER.PROCLIB' * PROCLIB
//*============================================================*
//*        JCL TO EXECUTE SERSERVC SDSF SERVER                 *
//*============================================================*
//SERSERVC EXEC PGM=BPXBATCH,
//         PARM='sh &PATH./serserv &PORT'
//*
//SYSEXEC  DD  PATH='&PATH/'
//SYSPRINT DD  SYSOUT=&OUTC
//SYSTSPRT DD  SYSOUT=&OUTC
//STDOUT   DD  PATH='&PATH./stdout',
//             PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
//             PATHMODE=SIRWXU
//STDERR   DD  PATH='&PATH./stderr',
//             PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
//             PATHMODE=SIRWXU
//MSGLOG   DD  PATH='&PATH./msglog'
//STDENV   DD  DUMMY
//*============================================================*
```

a. For the PORT parameter, change the sample port number to the actual IP port assigned for the exclusive use of the SERSERVC HTTP server.

b. In the PATH parameter, replace the sample home directory, `/u/sernet`, with the actual Unix home directory you created for SERNET.

> **CAUTION!** The home directory is the top-level directory for SERNET. Do not change the name of the `serservc` subdirectory in this path.

c. For the PROCLIB parameter, replace the sample value USER.PROCLIB with the name of your actual installation PROCLIB.

4. Customize the JCL for the SERSERVI install job. Member SERSERVI resides in the CNTL library where you unloaded the ChangeMan ZMF SERCOMC installation libraries.

   The following sample SERSERVI JCL segment is supplied for your reference when making these changes. The actual downloaded JCL may vary from this example.

```
//jobcard  JOB ,'USS JOB',CLASS=A,
//         NOTIFY=userid
//*
//STEP1   EXEC PGM=IKJEFT01,DYNAMNBR=200,COND=EVEN
//SYSTSPRT DD  SYSOUT=*
//HFSOUT   DD  PATH='/u/sernet/serservc/stdout',
//             PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
//             PATHMODE=(SIRWXU,SIRWXG,SIRWXO)
//HFSERR   DD  PATH='/u/sernet/serservc/stderr',
//             PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
//             PATHMODE=(SIRWXU,SIRWXG,SIRWXO)
//EMPTY    DD  *
/*
//NEWLOG   DD  PATH='/u/sernet/serservc/msglog',
//             PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
//             PATHMODE=(SIRWXU,SIRWXG,SIRWXO)
//NEWHDR   DD  PATH='/u/sernet/serservc/headers',
//             PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
//             PATHMODE=(SIRWXU,SIRWXG,SIRWXO)
//MSGARCH  DD  *
******** ******** SerServ *------------------ Archive Restart ---*
/*
//NEWSRV   DD  PATH='/u/sernet/serservc/serserv',
//             PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
//             PATHMODE=(SIRWXU,SIRWXG,SIRWXO)
//NEWTSK   DD  PATH='/u/sernet/serservc/sertask',
//             PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
//             PATHMODE=(SIRWXU,SIRWXG,SIRWXO)
//SERSERV  DD  DISP=SHR,DSN=CMNPRD.CMN.SE56.#000031.REX(SERSERV)
//SERTASK  DD  DISP=SHR,DSN=CMNPRD.CMN.SE56.#000031.REX(SERTASK)
//SERCMD   DD  DISP=SHR,DSN=CMNPRD.CMN.SE56.#000031.CLS(SERCMD)
//NEWCMD   DD  DISP=SHR,DSN=USER.SYS1.CLIST(SERCMD)
//SERVA    DD  DISP=SHR,DSN=USER.PROCLIB(SERSERVA)
//SERVP    DD  DISP=SHR,DSN=USER.PROCLIB(SERSERVP)
//SYSPRINT DD  SYSOUT=*
. . .
```

a. Copy the SERSERVI JCL sample to a work library for editing.

b. Edit the job card as needed.

c. In each occurrence of the PATH parameter that is supplied to various job steps in this job, change the sample home directory name, `/u/sernet`, to the actual name of the Unix home directory you defined for SERNET.

> **CAUTION!** The home directory is the top-level directory for SERNET. Do not change the name of the `serservc` subdirectory or any lower-level directories or files in the PATH parameter value.

d. For jobs SERSERV and SERTASK, change the dataset names in the sample DD statements to point to the CEXEC library where you unloaded the ChangeMan ZMF SERCOMC installation libraries.

e. For the `SERCMD` job, change the dataset name in the sample DD statement to point to the CLIST library where you unloaded the ChangeMan ZMF SERCOMC installation libraries.

f. For the `NEWCMD` job, change the CLIST library in the sample DD statement to point to the actual REXX execution library where SERSERVC will reside at runtime.

> **TIP** This may be either a SYSEXEC or SYSPROC library, depending on your installation standards. Run ISRDDN from TSO if you are uncertain about how your REXX execution libraries are handled.

g. In the SERVA and SERVP sample DD statements, change the name of the library containing members SERSERVA and SERSERVP from `USER.PROCLIB` to your actual installation PROCLIB dataset name.

5. Run `SERSERVI`.

   This job installs the HTTP server software in the REXX execution library where it will reside at runtime.

6. Modify REXX EXEC module `SERCMD` to use the actual IP address and port number assigned to `SERSERVC`.

   `SERCMD` is copied to the actual REXX execution library where SERSERVC resides by the `SERSERVI` install job.

Verifying the Installation of SERSERVC

To verify the installation of SERSERVC, do the following:

1. Start the server by issuing the `/S` (Start) console command in SDSF:

```
/S SERSERVC
```

2. Ping SERSERVC locally to verify that it is operational.

   a. At the TSO command line, enter:

```
SERCMD PING
```

   b. You should receive the response ok.

3. Ping SERSERVC from a Web browser to verify network connectivity.

   a. From any Web browser, type

   `http://`*ip:port*`/?PING`

where

ipis the IP address assigned to the LPAR where SERNET resides

port is the port number assigned to the exclusive use of SERSERVC

b. You should receive the response ok.

SERSERVC Runtime Considerations

Runtime considerations for SERSERVC include the following startup, shutdown, and timing synchronization issues.

Startup and Shutdown

Console Commands

The SERSERVC HTTP server can be started and stopped using standard console commands in SDSF. To start the server, enter:

```
/S SERSERVC
```

The server can be stopped (cancelled) from SDSF at any time. To stop the server, enter:

```
/C SERSERVC
```

IPL Startup

However, SERSERVC is designed for high availability. When testing is complete, consider adding SERSERVC to the list of started tasks that are brought up at IPL time.

Orderly Shutdown

It does no harm to cancel SERSERVC with a console command, but orderly shutdown is the preferred method. To initiate an orderly shutdown of the server, type

```
SERCMD SHUTDOWN
```

at the TSO command line. You should receive the response ok.

During an orderly shutdown, SERSERVC copies its message log (msglog), error log (stderr), and standard output (stdout) to SYSOUT * before terminating execution.

Network Synchronization

SERSERVC requires the local network time to be synchronized with server time on the host. Time zone differences of an integer number of hours are acceptable. However, the minutes and seconds (mm:ss) on the local network clock may not differ by more than 59 seconds from the minutes and seconds on the host clock.

Verifying Host Clock Time

To verify that local network time is synchronized with server time on the host, do the following:

1. From a Web browser running on the local network, type

   http://*ip:port*/?TIME

   where

   ipis the IP address assigned to the LPAR where SERNET resides

   port is the port number assigned to the exclusive use of SERSERVC

2. You should receive the response hh:mm:ss, which is the time on the mainframe where SERSERVC is running.

3. Discard the hours and compare the minutes and seconds on the host with the minutes and seconds reported on your local network. If a difference greater than 59 seconds is found, your local network time must be synchronized to the host.

   The mainframe time is considered correct because its clock is built in at manufacture and cannot be changed.

Running Multiple Instances of SERSERVC

You can run multiple instances of SERSERVC if needed. For example, you may want to run a development HTTP server and a production HTTP server. Each instance must have its own directory and a unique port.

To run another instance of the HTTP server:

- Follow the installation instructions in Installing SERSERVC [page 71], substituting another name for this instance, such as SERSERVD, in place of SERSERVC.
- Specify a different directory and port for this instance according to your company's installation standards.

Here are examples of JCL segments for a production system and a development system.

- Production SERSERVC example:

```
//SERSERVC JOB MSGLEVEL=1
//STARTING EXEC SERSERVC
XXSERSERVC PROC OUTC=H,                            * CLASS
XX             PORT=8188,                          * PORT
XX             PATH='/u/serstart/serservc', * PATH
XX             PROCLIB='USER.PROCLIB' * PROCLIB
```

- Development SERSERVC example:

```
//SERSERVD JOB MSGLEVEL=1
//STARTING EXEC SERSERVD
XXSERSERVD PROC OUTC=H,                            * CLASS
XX             PORT=6157,                          * PORT
XX             PATH='/u/sernet/serservc', * PATH
XX             PROCLIB='USER.PROCLIB' * PROCLIB
```

Documentation References

- Documentation on passing parameters to SERNET is in the *Passing Parameters to SERNET* in the *Serena ChangeMan ZMF Installation Guide*.

Configuring a ZMF Proxy User ID

A proxy user ID, or trusted user ID, is required for each ChangeMan ZMF host server, or LPAR. You specify these in the `zmf.properties` configuration file when you configure ZMF communication on the Serena Release Manager server.

The purpose of the trusted user ID is to allow users to automatically access ChangeMan ZMF through Serena Release Manager without logging on. The trusted ChangeMan ZMF user ID connects to the host server on behalf of the user.

Consider an example where a user wants to freeze a release unit. The orchestration invoked for the Freeze function requires access to the ChangeMan ZMF host server. The user's TSO user ID is on his SBM contact record and is associated with the trusted user ID; however, there is no password stored in the user's contact record. The trusted user ID (which does have a password) logs on to the ChangeMan ZMF host server on behalf of the user. The trusted user ID impersonates the user, but does not have access to other resources (such as performing ChangeMan ZMF functions). The authority levels of the user are in effect for the transaction.

The trusted user ID can be any SAF-defined user ID. No specific attributes are required. It is not necessary that this user ID be allowed to access TSO. This user ID must be given READ (or higher) access to the "trusted resource". The trusted resource is a SAF resource, by default SERENA.SERNET.AUTHUSR in the FACILITY class. The resource and class are user-modifiable by changing the names in the SERLCSEC CSECT, which is delivered as source code with ChangeMan ZMF. This CSECT is used for customizing a variety of security-related functions.

NOTE It is not necessary to alter SERLCSEC to support Serena Release Manager in the default fashion, as the latest version is already coded for the above resource name and class. Be sure to use the latest version of this CSECT. If you have previously modified it, you will need to re-apply your customizations.

IMPORTANT! The Serena Release Manager *trusted resource* is not related to the RACF user ID TRUSTED attribute.

Configuring TSO User IDs and Permissions

All Serena Release Manager users should have a TSO user ID with the appropriate permissions. A user may not have needed a TSO user ID prior to using Serena Release Manager; however, when using Serena Release Manager, the user may initiate a transition in a workflow that orchestrates an action in ChangeMan ZMF (such as a promotion of a change package) which requires that his user ID be passed to ChangeMan ZMF.

These user IDs must have access to every resource required by ChangeMan ZMF functions that Serena Release Manager uses.

NOTE Serena Release Manager extracts the SBM user ID from the SSO certificate and uses it when invoking the ZMF Web services. The `loginAsUserID` sent to ZMF through the ZMF XML services is the SBM user ID.

Configuring ZMF Approvers

You must configure approvers in ZMF as needed to initiate the installation and baselining of change packages.

For example, if you configure just one approver, once the approval is given by the approver, the change package will go into ‘APR” status and the installation will be initiated. The Serena Release Manager ZMF approval deployment task will go into “In Progress” state and will wait for the ZMF package to be installed and baselined. After the ZMF package goes into “BAS” status, the Serena Release Manager ZMF approval deployment task will go into “Complete” state.

An example of how a release engineer might specify approval deployment tasks for the default release stages of Serena Release Manager is given in the *Serena Release Manager Getting Started Guide* in "Creating Approval Deployment Tasks".

NOTE In ChangeMan ZMF, specify approvers on the Planned Approvals panel in option A.A.5. Approvers must have approval authority.

Configuring Objects in ChangeMan ZMF

Serena Release Manager uses several objects that your ChangeMan ZMF administrators configure as part of the ongoing use of ChangeMan ZMF in addition to some that must be configured specifically to support Serena Release Manager.

Objects that you will ordinarily already have set up as part of your normal administration and use of ChangeMan ZMF are as follows:

- Applications (Projects)

- Sites (Environments)
- Change Packages
- Approver lists
- Promotion levels
- Audit return code rules

What Can You Change?

You can change any of the above information in ChangeMan ZMF, but not in Serena Release Manager. The only things that change in ZMF should be a result of ZMF vault and approval deployment tasks initiated by deploying a release package in Serena Release Manager.

What is the Impact?

If you update information in ZMF for the change packages for which you have initiated the installation from Serena Release Manager, you may impact the result in Serena Release Manager.

How Do You Change It?

ChangeMan ZMF administrators should change ZMF objects in ZMF according to the ZMF documentation.

Documentation References

- Complete documentation on configuring ZMF objects is in the *Serena ChangeMan ZMF Administrator Guide*.

Configuring ZMF Communication in Release Manager

You must configure ChangeMan ZMF properties on the Serena Release Manager server so that Serena Release Manager can connect to and communicate with ChangeMan ZMF. To do this, you must do the following:

- Specify the connection information. You do this through the Serena ALM Configurator **ZMF** page.
- Specify ALF event manager information for ChangeMan ZMF in the Serena Release Manager common Tomcat Web server `webapps\almzmfalf\WEB-INF\conf` folder `alfzmf_resource.properties` file.
- Specify other ZMF client-specific information in the Serena Release Manager common Tomcat Web server `classes` folder `zmf-client.properties` file.

Specifying ALF Event Manager Connection Information for ZMF

So that Serena Release Manager can receive information from ChangeMan ZMF through the ALF event manager, you must update the ALF event properties file used by the ZMF integration with sign-on credentials SBM uses for the connection.

NTFYURL sends information to the ALF event service URL, which then sends the events to the ALF event manager. The user ID and password of the SBM user that initiated the event must have access to all the SBM Serena Release Manager objects and must also be a valid user ID in ChangeMan ZMF.

To update the ZMF ALF connection information:

1. Navigate to the Serena Release Manager common Tomcat Web server `webapps\almzmfalf\WEB-INF\conf` folder. For example:

   ..\Program Files\Serena\common\tomcat\6.0\webapps\almzmfalf\WEB-INF\conf

2. Open the `zmfalf_resource.properties` file.

3. Set the `AE_USERID` and `AE_PASSWORD` variables with the user ID and password of your Serena Release Manager administrative user.

4. Set the properties for the connection to the ALF event manager as follows:

Parameter	Value
`ALF_EVENTMANAGERURL`	URL to the SBM server where the ALF event manager Web services are installed, in the form of: `http://<hostname>:<port>/eventmanager/services/ALFEventManager`
`AE_USERID`	User ID with access to the appropriate SBM projects and tables and ZMF applications controlled by Serena Release Manager. This user ID must exist in both SBM and ZMF.
`AE_PASSWORD`	Password for the SBM user ID.
`AE_VERSION`	Version of SBM. This is for documentary purposes only.

5. Restart the Serena Common JBOSS and IIS Admin Service services.

Example

`zmfalf_resource.properties`

```
# Property resource bundle file for Axi2 ZMF Service
# Used to configure Axis2 ZMF Service system properties.
ALF_EVENTMANAGERURL = http://sbmhost:8085/eventmanager/services/ALFEventManager
# The AE userid must have access to the appropriate SBM projects/tables and it
    must also have access to ZMF applications controlled by RLM.
AE_USERID = almadmin
AE_PASSWORD = almadmin_test
AE_VERSION = SBM 2009 R3
```

Specifying Client-Specific Information for ChangeMan ZMF

So that Serena Release Manager knows which status to expect for successful and failed responses from ChangeMan ZMF, you must specify this information in the appropriate properties file.

To specify the ZMF response status information:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   `..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes`

2. Open the `zmf-client.properties` file.

3. Set the properties for the connection as follows:

Parameter	Value
`JOB_STATE_SUCCESS`	State that indicates success.

Parameter	Value
JOB_STATE_FAILURE	State that indicates failure.

4. Restart the Serena common Tomcat service.

Example

This example sets the values needed to connect to ChangeMan ZMF.

`zmf-client.properties`

```
# Specify ZMF promotion success and failed state.
JOB_STATE_SUCCESS = Completed
JOB_STATE_FAILED = Failed
```

Release Automation Configuration

This section tells you how to configure and administer objects for communication and integration with Serena Release Automation. You must complete the following configuration before the people who participate in release management in your organization begin using Serena Release Manager.

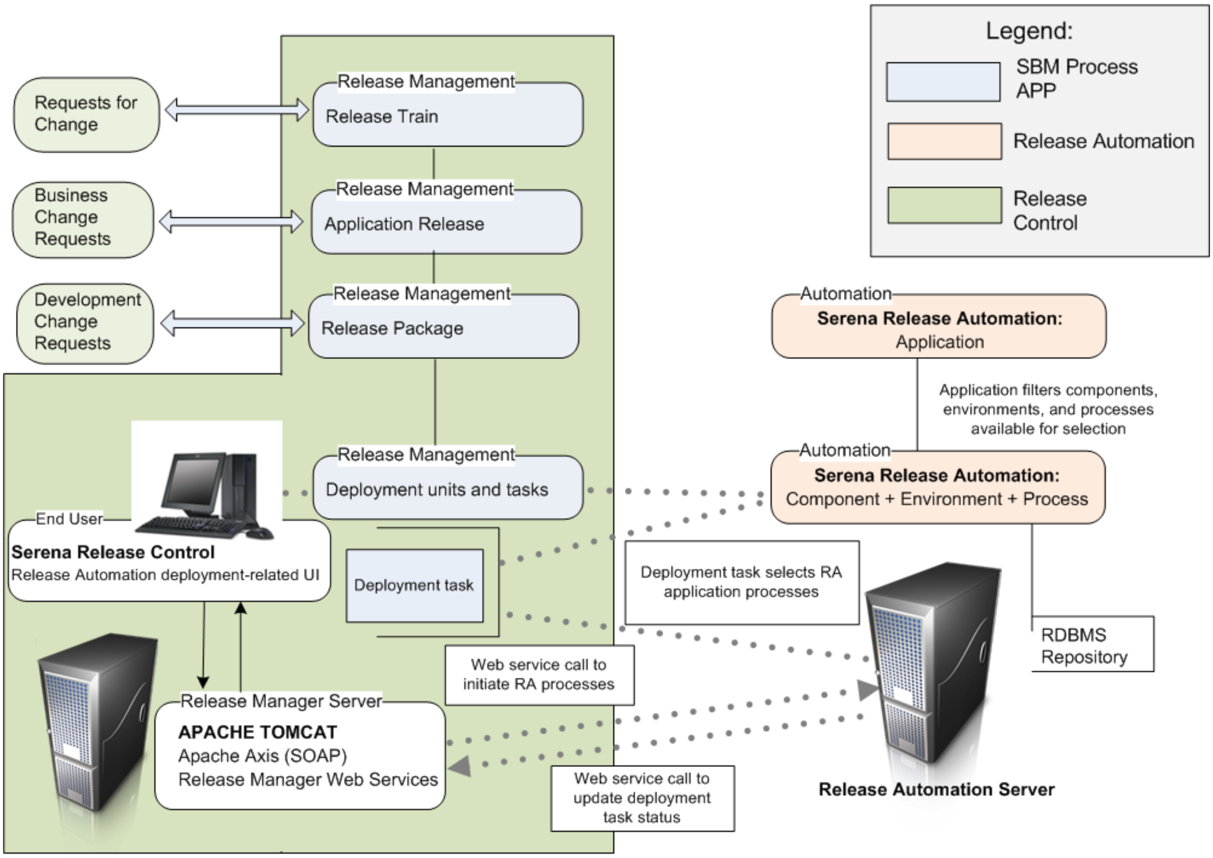
Release Automation Communication Configuration Overview

You must configure Serena Release Automation communication on the Serena Release Automation server and on the Serena Release Manager server to activate the integration.

Two Serena Release Automation options are available, Serena Release Automation and Serena Release Automation, powered by Nolio.

Release Automation Architecture

The architecture that supports the Serena Release Automation integration is shown in the following figure:

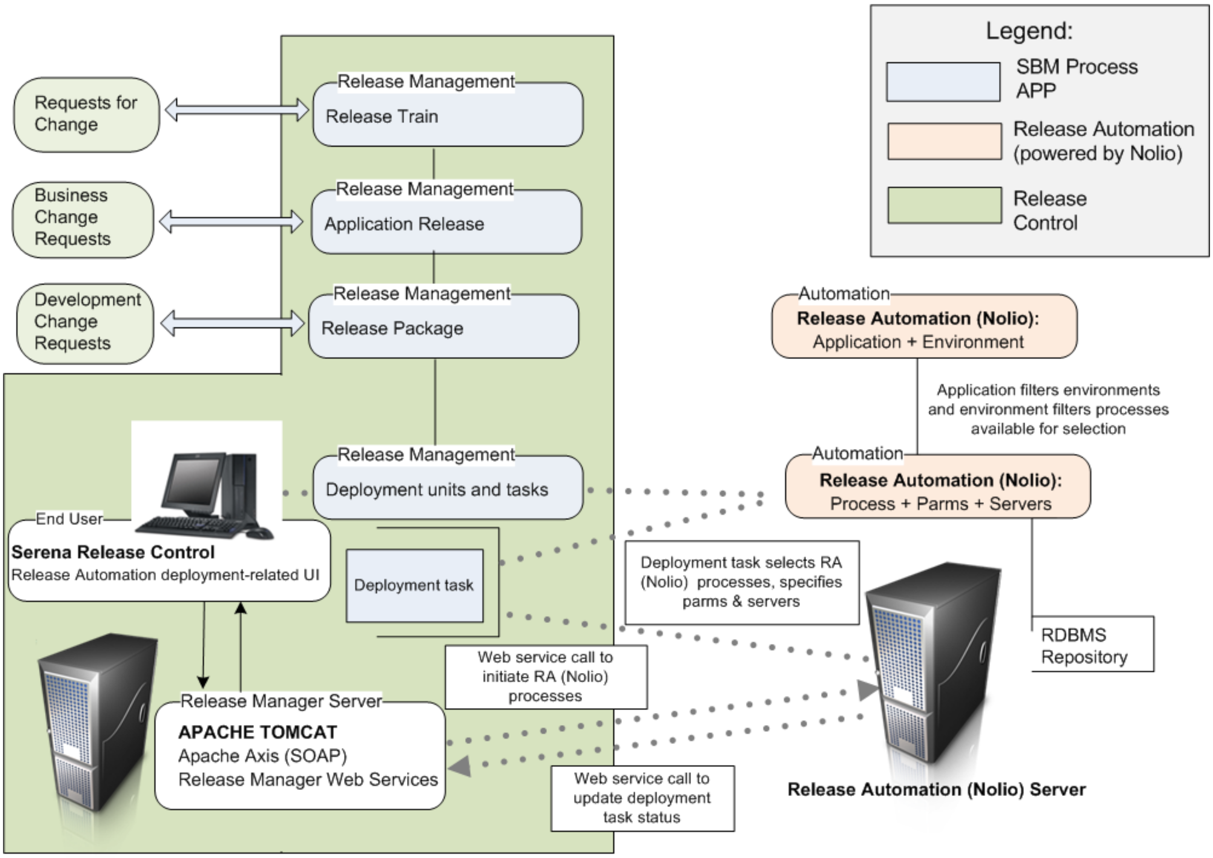


Legend:
SBM Process APP
Release Automation
Release Control
Requests for Change
Business Change Requests
Development Change Requests
Release Management
Release Train
Release Management
Application Release
Release Management
Release Package
Release Management
Deployment units and tasks
End User
Serena Release Control
Release Automation deployment-related UI
Deployment task
Release Manager Server
APACHE TOMCAT
Apache Axis (SOAP)
Release Manager Web Services
Automation
Serena Release Automation:
Application
Application filters components, environments, and processes available for selection
Automation
Serena Release Automation:
Component + Environment + Process
Deployment task selects RA application processes
Web service call to initiate RA processes
Web service call to update deployment task status
RDBMS Repository
Release Automation Server

This figure shows how Serena Release Automation communicates with Serena Release Manager through automation deployment tasks and Web services calls. The automation deployment tasks workflows and forms are configured in the Deployment Tasks process app. Additional connection and client information are specified in the ALM Configurator and the client configuration files.

Release Automation (Nolio) Architecture

The architecture that supports the Serena Release Automation, powered by Nolio, integration is shown in the following figure:


Legend:
SBM Process APP
Release Automation (powered by Nolio)
Release Control
Requests for Change
Business Change Requests
Development Change Requests
Release Management
Release Train
Release Management
Application Release
Release Management
Release Package
Release Management
Deployment units and tasks
End User
Serena Release Control
Release Automation deployment-related UI
Deployment task
Release Manager Server
APACHE TOMCAT
Apache Axis (SOAP)
Release Manager Web Services
Web service call to initiate RA (Nolio) processes
Web service call to update deployment task status
Deployment task selects RA (Nolio) processes, specifies parms & servers
Automation
Release Automation (Nolio):
Application + Environment
Application filters environments and environment filters processes available for selection
Automation
Release Automation (Nolio):
Process + Parms + Servers
RDBMS Repository
Release Automation (Nolio) Server

This figure shows how Serena Release Automation communicates with Serena Release Manager through automation deployment tasks and Web services calls. The automation deployment tasks workflows and forms are configured in the Deployment Tasks process app. Additional connection and client information are specified in the ALM Configurator and the client configuration files.

Configuring Communication with Release Automation

If you are using Serena Release Automation, follow the documentation in this section to configure your Release Automation communication with Serena Release Manager.

Configuring Communication on the Release Automation Server

So that Serena Release Manager can get the information from Serena Release Automation, you must configure the communication on the Serena Release Automation server. This information is accessed through the Serena Release Automation Web services, and the Serena Release Automation server and agents must be installed and configured properly so that Serena Release Manager can access them across the network.

For details on installing and configuring Serena Release Automation, see the *Serena Release Automation User's Guide*.

Configuring Release Automation Communication in Release Manager

You must configure Serena Release Automation properties on the Serena Release Manager server so that Serena Release Manager can connect to and communicate with Serena Release Automation. To do this, you must do the following:

- Update the ALF sign-on credentials through the Serena ALM Configurator **ALF** page. Serena Release Automation uses these to send information to Serena Release Manager.
- Specify the Serena Release Automation client-specific information in the Serena Release Manager common Tomcat Web server `classes` folder `ra-client.properties` file.

Specifying Client-Specific Information for Release Automation

You must specify the client-specific information for Serena Release Automation to set time out and wait values and states that indicate success or failure.

To specify the Serena Release Automation client-specific information:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
   ```

2. Open the `ra-client.properties` file.

3. Set the properties for the client as follows:

Parameter	Value
`ra.server.postDeployUrl`	URL to the server where Release Automation Web services are running. These are used to initiate the processes. The URL is specified in the form of: `http://rahost:8080/alm/servlet/ranotification/`
`ra.server.postDeployMessage`	Expressions for the process status message, in the form of: `${p:request.id}:${p:finalStatus}`
`ra.server.childStatusPutUrl`	URL to the server where Release Automation Web services are running. These are used to post notification of the status of the processes. The URL is specified in the form of: `http://rahost:8080/alm/servlet/ranotification/`
`ra.server.childStatusMessage`	Child status messages, in the form of: `requestId:${p:parentRequest.id} component:${p:component.name} resource:${p:resource.name} status:${p:status} result:${p:result}`
`ra.request.state.success`	List of Serena Release Automation request states that indicate success, delimited by commas.
`ra.request.states.failure`	List of Serena Release Automation request states that indicate failure, delimited by commas.

Example

This example points to the Release Automation Web services and sets the values needed to retrieve successful and failed status notification.

`ra-client.properties`

```
ra.server.postDeployUrl=http://sbmhost:8080/alm/servlet/ranotification/
ra.server.postDeployMessage=${p:request.id}:${p:finalStatus}
ra.server.childStatusPutUrl=http://sbmhost:8080/alm/servlet/ranotification/
ra.server.childStatusMessage=requestId:${p:parentRequest.id}
    component:${p:component.name} resource:${p:resource.name} status:${p:status}
    result:${p:result}
ra.server.execution.status=EXECUTING,CLOSED
ra.server.execution.result=NONE,CANCELED,SUCCESSFUL,FAULTED
ra.request.state.success=success
ra.request.states.failure=failed
```

Configuring Objects in Serena Release Automation

Before you begin using the Serena Release Manager features that integrate with Serena Release Automation, you must configure the Serena Release Automation objects needed.

The following sections explain the configuration and administration needed for Serena Release Manager:

- Configuring Serena Release Automation Users [page 84]
- Configuring Serena Release Automation Processes and Servers [page 85]

Configuring Serena Release Automation Users

Typically, Serena Release Control users do not need to log into the Serena Release Automation client. The interaction most Serena Release Control users have with Serena Release Automation is through system functions, and access to Serena Release Automation information and actions requested through those functions are executed through the administrative user through which Serena Release Manager communicates with Serena Release Automation.

There are two main types of Serena Release Automation users that interact with Serena Release Manager:

- An administrative user that is specified in the system configuration files and that Serena Release Manager uses to sign on to Serena Release Automation through Web services. This user must have privileges for the following in Serena Release Automation:
  - Accessing applications
  - Accessing environments
  - Accessing processes
  - Accessing components
- Any Serena Release Manager users that have roles in both Serena Release Automation and Serena Release Manager, such as power users or administrators.

What Can You Change?

- You can change user information in Serena Release Automation as needed for the users’ roles in Serena Release Automation.
- Use caution when changing the administrative user ID that is used to sign on from Serena Release Control as this user ID is used to execute the underlying integrative functions in Serena Release Automation.

What is the Impact?

- When you create an automation deployment task in Serena Release Control, the administrative user credentials specified in the configuration files are used to sign on to Serena Release Automation.

- If the administrative user used to sign on to Serena Release Automation does not have proper privileges, the automation deployment tasks will fail.

How Do You Change It?

Serena Release Automation administrators should configure users in Serena Release Automation according to the Serena Release Automation documentation.

Documentation References

- Complete documentation on configuring users in Serena Release Automation is in the *Serena Release Automation User's Guide*.

Configuring Serena Release Automation Processes and Servers

If you use Serena Release Automation to install and configure deployment units on the servers, or environments, to which you deploy, you must configure the required information in Serena Release Automation. This includes:

- Accessing applications
- Accessing environments
- Accessing processes
- Accessing components

Serena Release Manager uses the objects that you configure as part of the ongoing use of Serena Release Automation. Serena Release Manager filters the rest of the objects based on your selection of application.

Serena Release Automation automation deployment task association with Release Packages is used for the following purposes in Serena Release Manager:

- To automate the initiation of and complete the installation and configuration of components on designated environments after the deployment units are deployed by Dimensions CM.

What Can You Change?

- Serena Release Automation administrators can change objects in Serena Release Automation according to the Serena Release Automation documentation.

What is the Impact?

- When you create an automation deployment task in Serena Release Control, you must select from the Serena Release Automation applications, environments, processes, and components that you have predefined in Serena Release Automation.
- When a release package is deployed, the automation deployment task is initiated, and the processes you have selected for that task are executed according to the configuration in Serena Release Automation.

How Do You Change It?

Serena Release Automation administrators should configure objects according to the Serena Release Automation documentation.

Documentation References

- Complete documentation on configuring objects in Serena Release Automation is in the *Serena Release Automation User's Guide*.

Configuring Communication with Release Automation (Nolio)

If you are using Serena Release Automation, powered by Nolio, follow the documentation in this section to configure your Release Automation (Nolio) communication with Serena Release Manager.

Configuring Communication on the Release Automation (Nolio) Server

So that Serena Release Manager can get the information from Serena Release Automation, powered by Nolio, you must configure the communication on the Release Automation (Nolio) server.

For Release Automation (Nolio), configure the files as follows:

- Specify the Release Automation (Nolio) server to notify when an event occurs in the Serena Release Automation `rest.integration.properties` file. If the file does not exist, create it.
- Update the Release Automation (Nolio) environment notifications for each application to tell Serena Release Automation the events about which to notify Serena Release Manager.

Specifying the Release Automation (Nolio) Server to Notify

You must update the `rest.integration.properties` file to tell Release Automation (Nolio) what server to notify when an event occurs.

To specify the Release Automation (Nolio) server:

1. On the Release Automation (Nolio) server, navigate to the Release Automation (Nolio) installation directory. For example:

   ```
   C:\Program Files\Serena\Serena Release Automation\conf
   ```

2. Open the Release Automation (Nolio) `rest.integration.properties` file.

   If the file does not exist, create it.

3. Set the `target.url` variable to point to the AFS `NolioNotification` servlet as follows:

   ```
   target.url=http://<AFS_server>:<tomcat_port>/alm/servlet/NolioNotification
   ```

   For example:

   ```
   target.url=http://almhost:8080/alm/servlet/NolioNotification
   ```

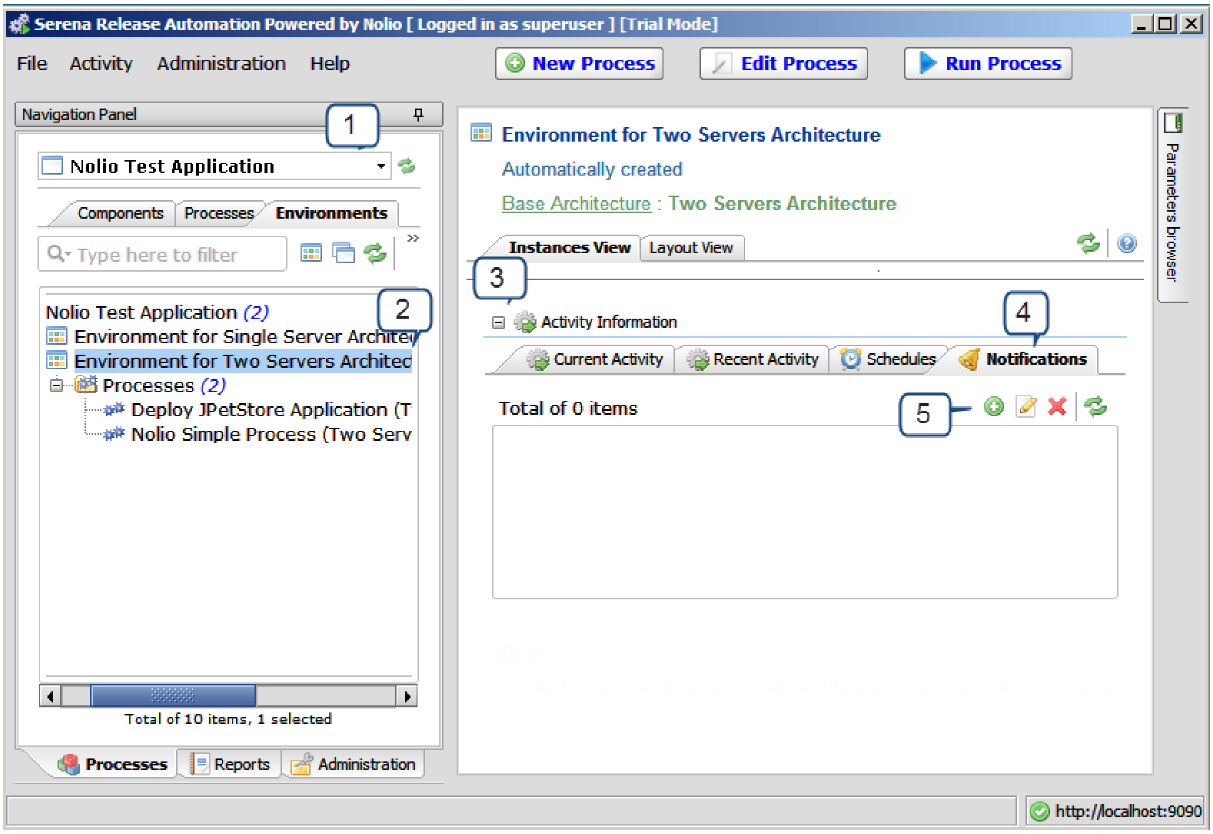
4. Restart the Nolio Server and Nolio Agent services.

IMPORTANT! Make sure to use the exact case given in Step 3 [page 86] for the NolioNotification servlet.

Telling Release Automation (Nolio) Which Event Notifications to Send

You must update the Release Automation (Nolio) environment notifications for each application to tell Release Automation (Nolio) the events about which to notify Serena Release Manager.

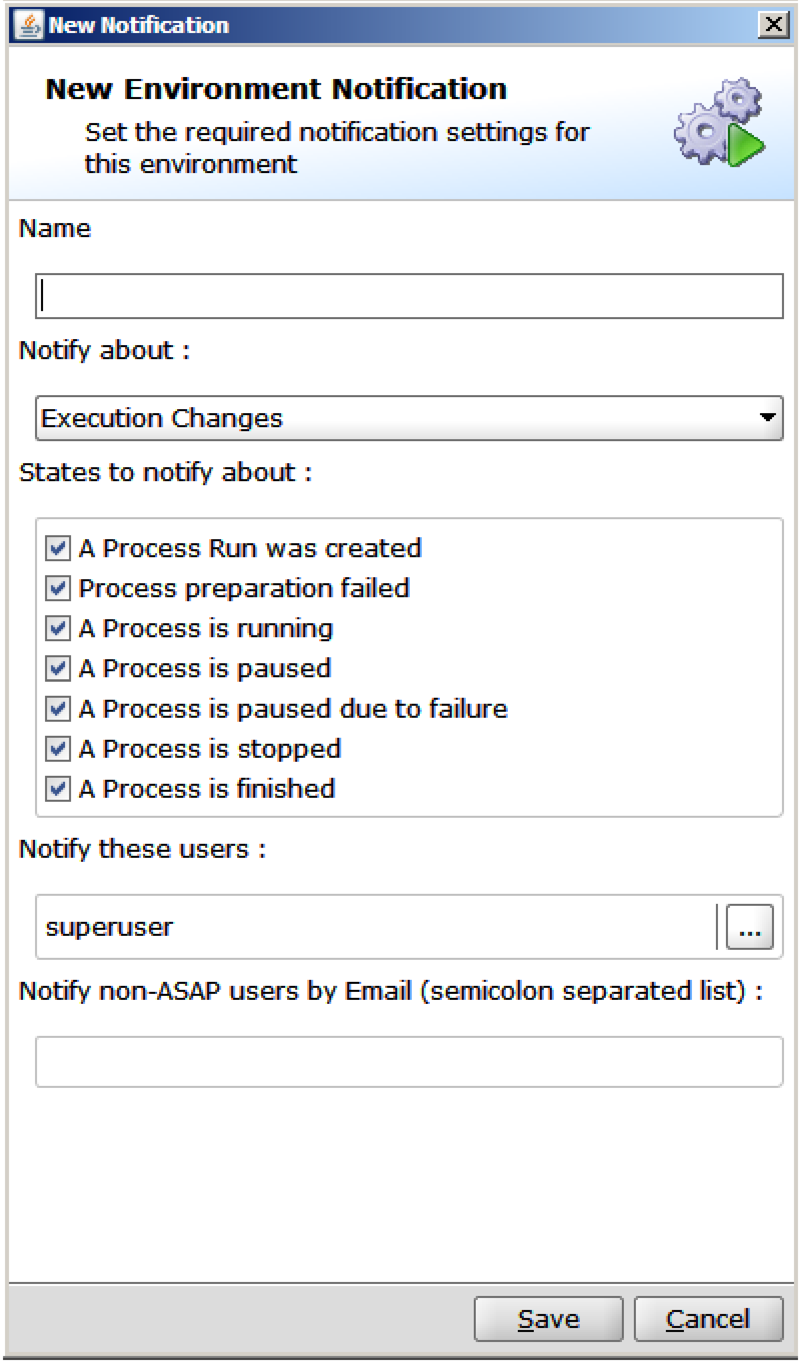
Release Automation (Nolio) is shown in the following figure.



To configure Release Automation (Nolio) environment notification:

1. From Serena Release Automation, powered by Nolio, for each application, select the application.
2. For each environment, select the environment.
3. Expand the **Activity Information** section.
4. Select the **Notifications** tab.
5. Click the **Add or modify notification settings** button.

   The **Edit Environment Notification** dialog box appears.



New Environment Notification

Set the required notification settings for this environment

Name

Notify about :

Execution Changes

States to notify about :

☑ A Process Run was created
☑ Process preparation failed
☑ A Process is running
☑ A Process is paused
☑ A Process is paused due to failure
☑ A Process is stopped
☑ A Process is finished

Notify these users :

superuser

Notify non-ASAP users by Email (semicolon separated list) :

6. Select the **States to notify about** as shown in the preceding figure.

7. Click **Save**.

Configuring Release Automation (Nolio) Communication in Release Manager

You must configure Release Automation (Nolio) properties on the Serena Release Manager server so that Serena Release Manager can connect to and communicate with Release Automation (Nolio). To do this, you must do the following:

- Update the ALF sign-on credentials through the Serena ALM Configurator **ALF** page. Release Automation (Nolio) uses these to send information to Serena Release Manager.

- Specify the Release Automation (Nolio) client-specific information in the Serena Release Manager common Tomcat Web server `classes` folder `nolio-client.properties` file.

- Specify the Release Automation (Nolio) client query information in the Serena Release Manager common Tomcat Web server `classes` folder `nolio-client-queries.properties.properties` file.

Specifying Client-Specific Information for Release Automation

You must specify the client-specific information for Release Automation (Nolio) to set time out and wait values and states that indicate success or failure.

To specify the Serena Release Automation client-specific information:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
   ```

2. Open the `nolio-client.properties` file.

3. Set the properties for the client as follows:

Parameter	Value
`nolio.job.runprocess.timeout`	Indicates how long to wait until a timeout message is received.
`nolio.job.runprocess.wait`	Indicates whether to run the Release Automation (Nolio) process in wait mode. Values are true and false.
`nolio.job.state.success`	List of Release Automation (Nolio) job states that indicate success, delimited by commas.
`nolio.job.states.failure`	List of Release Automation (Nolio) job states that indicate failure, delimited by commas.

Example

This example sets the values needed to retrieve successful and failed job notifications from Release Automation (Nolio).

`nolio-client.properties`

```
nolio.job.runprocess.timeout=0
nolio.job.runprocess.wait=false
nolio.job.state.success = FLOW_FINISHED
nolio.job.states.failure = BLOCKED,CREATION_FAILED,FILES_DISTRIBUTION_FAILED,
FILES_PROPAGATION_FAILED,FLOW_FAILED_PAUSED,PRE_FAILED,FLOW_STOPPED
```

Specifying Release Automation (Nolio) Queries

You may specify SQL queries for the information you want returned from Release Automation (Nolio).

To specify the Release Automation (Nolio) connection information:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
   ```

2. Open the `nolio-client-queries.properties` file.

3. Set the properties for the queries as follows:

Parameter	Value
query.get.applications	SQL queries to return the set of applications, environments, processes, and servers you want for the automation deployment tasks. For the default queries, see the example.
query.get.environments	
query.get.processes	
query.get.servers	
query.find.application	
query.get.job.status	
message.application.not.found	Message to send if applications aren’t found.
message.environment.not.found	Message to send if environments aren’t found.

Example

This example shows the default SQL queries for Release Automation (Nolio).

nolio-client-queries.properties

```
query.get.applications = select app_name from applications where id!=1
query.get.environments = select name from environments where id!=1 and
    applicationId = ?
query.get.processes = select process_name from process_container pc,
    process_in_env pe where pc.id = pe.process_id and pe.environment_id = ? order
    by process_name
query.get.servers = select s.server_name, st.server_type_name from servers s,
    server_types st, server_type_instance sti where s.id = sti.mapped_server and
    st.id = sti.server_type and sti.environment_id = ?
query.find.application = select id from applications where app_name = ?
query.find.environment = select id from environments where name = ? and
    applicationId = ?
query.get.job.status = select step_title,step_state from step_events where id in
    (select MAX(id) from step_events where job_id=?)
message.application.not.found = Could not find specified application: {0}
message.environment.not.found = Could not find specified environment: {0}
```

Configuring Objects in Release Automation (Nolio)

Before you begin using the Serena Release Manager features that integrate with Release Automation (Nolio), you must configure the Release Automation (Nolio) objects needed.

The following sections explain the configuration and administration needed for Serena Release Manager:

- Configuring Release Automation (Nolio) Users [page 91]
- Configuring Release Automation (Nolio) Processes and Servers [page 91]

Configuring Release Automation (Nolio) Users

Typically, Serena Release Control users do not need to log into the Serena Release Automation, powered by Nolio, client. The interaction most Serena Release Control users have with Release Automation (Nolio) is through system functions, and access to Release Automation (Nolio) information and actions requested through those functions are executed through the administrative user through which Serena Release Manager communicates with Release Automation (Nolio).

There are two main types of Release Automation (Nolio) users that interact with Serena Release Manager:

- An administrative user that is specified in the system configuration files and that Serena Release Manager uses to sign on to Serena Release Automation, powered by Nolio, through Web services and remote database access. This user must have privileges for the following in Release Automation (Nolio):
  - Accessing applications
  - Accessing environments
  - Accessing processes
  - Accessing servers
- Any users that have roles in both Release Automation (Nolio) and Serena Release Manager, such as Serena Release Manager power users or Serena Release Manager administrators.

What Can You Change?

- You can change user and role information in Release Automation (Nolio) as needed for the users' roles in Release Automation (Nolio).
- Use caution when changing the administrative user that is used to sign on from Serena Release Control and execute the underlying integrative functions in Release Automation (Nolio).

What is the Impact?

- When you create an automation deployment task in Serena Release Control, the super user credentials specified in the configuration files are used to sign on to Release Automation (Nolio).
- If the super user used to sign on to Release Automation (Nolio) does not have proper privileges, the automation deployment tasks will fail.

How Do You Change It?

Release Automation (Nolio) administrators should configure users in Release Automation (Nolio) according to the Release Automation (Nolio) documentation.

Documentation References

- Complete documentation on configuring users in Release Automation (Nolio) is in the *Serena Release Automation, Powered by Nolio, Installation and Administration Guide*.

Configuring Release Automation (Nolio) Processes and Servers

If you use Release Automation (Nolio) to install and configure deployment units on the servers, or environments, to which you deploy, you must configure the required information in Release Automation (Nolio). This includes:

- Applications
- Environments
- Processes
- Servers

Serena Release Manager uses the processes and servers that you configure as part of the ongoing use of Release Automation (Nolio). Serena Release Manager filters the processes based on your selection of environment, application, and server.

Release Automation (Nolio) process and server association with Release Packages is used for the following purposes in Serena Release Manager:

- To automate the initiation of processes defined in Release Automation (Nolio) to complete the installation and configuration of files on designated servers after the deployment units are deployed by Dimensions CM.

What Can You Change?

- Release Automation (Nolio) administrators can change objects in Release Automation (Nolio) according to the Release Automation (Nolio) documentation.
- You can pass application parameters to invoke desired operations on target servers defined in Release Automation (Nolio).

> **NOTE** You cannot pass server parameters in the default implementation; you can pass only application parameters.

What is the Impact?

- When you create an automation deployment task in Serena Release Control, you must select from the Release Automation (Nolio) applications, environments, processes, and servers that you have predefined in Release Automation (Nolio).
- When a release package is deployed, the automation deployment task is initiated, and the processes you have selected for that task are executed according to the configuration in Release Automation (Nolio) for that process and server.

How Do You Change It?

Release Automation (Nolio) administrators should configure application, environment, process, and server information according to the Release Automation (Nolio) documentation.

Documentation References

- Complete documentation on configuring objects in Release Automation (Nolio) is in the *Serena Release Automation, Powered by Nolio, Installation and Administration Guide*.

Provider Configuration

This section tells you how to configure existing provider connections. Provider connections enable the integration between products internal and external to the Serena Release Manager suite. See the following sections for details.

Provider Configuration Overview

Serena Release Manager providers are products that integrate, or interface, with Serena Release Manager to provide access to information that you want to include as part of your release management solution.

The default implementation includes connections to the following default providers:

- Request for Change (RFC) provider connections for Serena Business Manager (SBM) and Serena Service Manager (SSM)
- Business Change Request (BCR) provider connections for SBM and SSM
- Development Change Request (DCR) provider connections for SBM and Dimensions CM
- Deployment Unit (DU) provider connections for Dimensions CM and ChangeMan ZMF

NOTE This section tells how to configure connections to providers for which underlying integration layers have been implemented using the Serena Release Manager provider mechanism. For information on how to implement a new provider using this mechanism, see Adding Provider Connections [page 139] .

Configuring Connections Using the Configurator

The Serena ALM Configurator provides a graphical interface in which you configure the connections to clients that participate in your Serena Release Manager solution. You can run the Serena ALM Configurator anytime after initial configuration to re-configure your implementation.

If you run the Serena ALM Configurator, the client connection properties files are configured through your entries in the Configurator forms. Properties files with names that include `-connection.properties` are configured through the Configurator. The rest of the files must be manually configured.

Configuring Access to the Configurator

Before anyone can log into the Serena ALM Configurator, you must add user IDs to the authorized list in the `rlm.properties` file. Typically this list would include only your Serena Release Manager administrators or users with similar roles.

To update the authorized list of users:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
   ```

2. Open the `rlm.properties` file.

3. Set the properties for the connection as follows:

   ```
   alm.config.service.authdUsers=<list of user IDs>
   ```

   where `<list of user IDs>` is a list of Serena Release Manager (SBM) user IDs delimited by commas. For example:

   ```
   alm.config.service.authdUsers=admin,almadmin
   ```

4. Restart the Serena common Tomcat service.

Invoking the Serena ALM Configurator

You should have received a Serena ALM Configurator URL, username, and password from your Serena Release Manager administrator.

To invoke and log in to Serena ALM Configurator:

1. Enter the Serena ALM Configurator URL you received from your Serena Release Manager administrator. It will look similar to the following:

   ```
   http://almhost:8080/alm
   ```

   The login dialog box appears unless you are already logged in on a shared single sign-on client.

2. Enter your username and password and then click Log In.

   Upon successful login, your Serena ALM Configurator appears.

   If your login is not successful, please contact your Serena Release Manager administrator.

Entering Information in the Serena ALM Configurator

You can use the Serena ALM Configurator to configure the client connections.

To add or update the client connection properties:

1. In the Serena ALM Configurator, select the **CONFIG** page.

2. Enter the connection information in the forms for each of the following tabs:

   - **ALF**: Application Lifecycle Foundation for communication between systems
   - **SBM**: Serena Business Manager for the core system as well as deployment change request (DCR) or other provider
   - **BCR**: Business Change Request provider (default SBM Incidents)
   - **RFC**: Request for Change provider (default SSM, Serena Service Manager)
   - **Dimensions CM**: Release vault, deployment unit (DU) and optionally DCR provider

- **Release Automation**: for installing and configuring into target environments
- **Release Automation (Nolio)**: powered by Nolio, for installing and configuring into target environments
- **ZMF**: ChangeMan ZMF: Release vault and DU provider

The information is saved in separate files in the Serena Release Manager common Tomcat Web server `classes` folder.

3. Restart the Serena Common JBOSS and IIS Admin Service services.
4. Restart the Serena common Tomcat service.

ALF Client Connection Information

Specify the connection to Application Lifecycle Framework (ALF), which is used by Serena Release Automation, powered by Nolio, to communicate with Serena Release Manager.

NOTE Dimensions CM and ChangeMan ZMF have ALF connection information stored in other files as they use different mechanisms to communicate through ALF.

To update the ALF client connection information:

1. On the **ALF** tab, make sure the variables are set to the correct connection information for your installation of the SBM event manager as follows:

Parameter	Value
`ALF_EVENTMANAGERURL`	URL to the SBM server where the ALF event manager Web services are installed, in the form of: `http://<sbm_hostname>:<port>/eventmanager/services/ALFEventManagerDocLit`
`AE_USERID`	User ID with access to the appropriate SBM projects and tables controlled by Serena Release Manager. This user ID must exist in SBM.
`AE_PASSWORD`	Password for the SBM user ID.

Example

`alf-client-connection.properties`

```
ALF_EVENTMANAGERURL = http://sbmhost:8085/eventmanager/services/
    ALFEventManagerDocLit
AE_USERID = almadmin
AE_PASSWORD = almadmin_test
```

SBM Application Connection Information

Specify the instance of SBM if you are using SBM as a provider for Development Change Requests (DCRs). These must reside in the same SBM system as Serena Release Manager, as some of the functions implemented in Serena Release Manager use the Web services to implement the calls and use the provider to determine the instance of SBM.

IMPORTANT! The `sbm-client-connection.properties` file must have valid connection information to enable the creation of objects in Serena Release Control. If this connection is not configured properly, you will receive a `checkuniqusness` error.

To update the SBM connection information:

1. On the **SBM** tab, make sure the variables are set to the correct connection information for your installation of SBM as follows:

Parameter	Value
`SBM_APPWS_URL`	URL to the SBM server that provides the DCRs, in the form of: `http://<sbm_hostname>:<port>/gsoap/gsoap_ssl.dll?sbmappservices72`
`sbm.service.user`	User ID with access to the appropriate SBM projects and tables controlled by Serena Release Manager. This user ID must exist in SBM.
`sbm.service.password`	Password for the SBM user ID.

Example

Set the SBM provider connection for DCRs. This example gives Serena Release Manager the URL to connect to the SBM application server on port 80 of host `almhost`.

`sbm-client-connection.properties`

```
SBM_APPWS_URL = http://almhost:80/gsoap/gsoap_ssl.dll?sbmappservices72
sbm.service.user = almadmin
sbm.service.password = almadmin_test
```

BCR Provider Connection Information

Specify the instance of SBM if you are using SBM as a provider for Business Change Requests (BCRs). These may reside in an SBM system other than the SBM system where Serena Release Manager resides.

To update the BCR provider connection information:

1. On the **BCR** tab, make sure the variables are set to the correct connection information for your installation of SBM that provides BCRs as follows:

Parameter	Value
`bcr.ws.app.url`	URL to the SBM server that provides the BCRs, in the form of: `http://<sbm_hostname>:<port>/gsoap/gsoap_ssl.dll?sbmappservices72`

Parameter	Value
`bcr.user`	User ID with access to the appropriate SBM projects and tables controlled by Serena Release Manager. This user ID must exist in SBM.
`bcr.password`	Password for the SBM user ID.

Example

Set the provider connection for BCRs. This example sets the values needed to retrieve BCRs from the SBM application services running at on port 80 of host `almhost`.

`bcr-connection.properties`

```
bcr.ws.app.url=http://almhost:80/gsoap/gsoap_ssl.dll?sbmappservices72
bcr.user=almadmin
bcr.password=almadmin_test
```

RFC Provider Connection Information

Specify the instance of SBM if you are using SSM as a provider for Requests for Change (RFCs). These may reside in an SBM system other than the SBM system where Serena Release Manager resides. Other systems may also be used as the RFC provider depending on your implementation details.

NOTE The default implementation of SSM expects Serena Release Manager to be installed in the same instance of SBM as SSM.

To update the RFC provider connection information:

1. On the **RFC** tab, make sure the variables are set to the correct connection information for your installation of SBM that provides RFCs as follows:

Parameter	Value

`itsm.ws.app.url`	URL to the SBM server that provides the RFCs, in the form of:
	`http://<sbm_hostname>:<port>/gsoap/`
	`gsoap_ssl.dll?sbmappservices72`

`itsm.user`	User ID with access to the appropriate SBM projects and tables controlled by Serena Release Manager. This user ID must exist in SBM.
`itsm.password`	Password for the SBM user ID.

Example

Set the SSM provider details for RFCs. This example sets the values needed to retrieve RFCs from the SSM, with the SBM application services running at on port 80 of host `almhost`.

`itsm-connection.properties`

```
itsm.ws.app.url=http://almhost:80/gsoap/gsoap_ssl.dll?sbmappservices72
itsm.user=almadmin
itsm.password=almadmin_test
```

Dimensions CM Client Connection Information

Specify the connection to Dimensions CM if it is used as a provider for your Development Change Requests (DCRs) or Deployment Units (DUs).

To update the Dimensions CM client connection information:

1. On the **Dimensions** tab, make sure the variables are set to the correct connection information for your installation of Dimensions CM as follows:

Parameter	Value
`DIM_WS_URL`	URL to the server where the Dimensions CM Web services are installed, in the form of: `http://<cm_hostname>:<port>/dmwebservices2/services/dmwebservices/`
`DIM_DBNAME`	The Dimensions CM base database name to which you want to connect.
`DIM_DBCONN`	The Dimensions CM network instance to which you want to connect.
`DIM_SERVER`	Hostname where the Dimensions CM server is running.
`DIM_SERVICEUSER`	User ID used by DVM to sign on to the Dimensions CM service.
`DIM_SERVICEUSERPASSWORD`	Password used by DVM to sign on to the Dimensions CM service.

Example

`dm-client-connection.properties`

```
DIM_WS_URL = http://dimcm_host:8080/dmwebservices2/services/dmwebservices/
DIM_DBNAME = cm_typical
DIM_DBCONN = Dim12
DIM_SERVER = dimcm_host
DIM_SERVICEUSER = serviceuser
DIM_SERVICEUSERPASSWORD = serviceuserpassword
```

Serena Release Automation Client Connection Information

Specify the connection to Serena Release Automation if it is used to install and configure your deployed files.

To update the Release Automation client connection information:

1. On the **Release Automation** tab, make sure the variables are set to the correct connection information for your installation of Release Automation as follows:

Parameter	Value
`ra.server.url`	The URL that points to Web services on the Serena Release Automation execution server, in the form of: `http://<ra_hostname>:<port>/serena_ra/rest/deploy/`
`ra.server.username`	The Serena Release Automation execution server user name.
`ra.server.password`	The Serena Release Automation execution server password.
`useSso`	Set this to `true`. Serena Release Manager uses SBM Single Sign On to login to Serena Release Automation.

Example

`ra-client-connection.properties`

```
ra.server.url=http://srahost:9095/serena_ra/rest/deploy/
ra.server.username=rlmadmin
ra.server.password=rlmadmin
useSso=true
```

Serena Release Automation (Nolio) Client Connection Information

Specify the connection to Serena Release Automation, powered by Nolio, if it is used to install and configure your deployed files.

To update the Release Automation (Nolio) client connection information:

1. On the **Release Automation (Nolio)** tab, make sure the variables are set to the correct connection information for your installation of Release Automation (Nolio) as follows:

Parameter	Value

`nolio.ws.openapi.uri`	The URI that points to Web services on the Release Automation (Nolio) execution server, in the form of:
	`http://<nolio_hostname>:<port>/datamanagement/ws/`
	`    OpenAPIService?wsdl`

`nolio.username`	The Release Automation (Nolio) execution server user name.
`nolio.password`	The Release Automation (Nolio) execution server password.

Example

`nolio-client-connection.properties`

```
nolio.ws.openapi.uri=http://sranolio_host:8080/datamanagement/ws/OpenAPIService
nolio.username=superuser
nolio.password=suser
```

NOTE The `nolio-client-connection.properties` file contains additional system settings that are not set in the Serena ALM Configurator. These should be changed only with advice from Serena experts.

ZMF Client Connection Information

Specify the connection to ChangeMan ZMF if it is used as a provider for your Deployment Units (DUs).

To update the ChangeMan ZMF connection information:

1. On the **ZMF** tab, make sure the variables are set to the correct connection information for your installation of ZMF as follows:

Parameter	Value

`ZMF_WS_URL`	URL to the ALM server where the ALMZMF Web services are installed, in the form of:
	`http://<alm_hostname>:<port>/almzmf/services/`
	`    ZMFPackageServices/`

`ZMF_SERVER_HOSTADDRESS`	Hostname or IP address for the z/OS mainframe server where the ZMF started task, or ZMF application, is running.
`ZMF_SERVER_HOSTPORT`	Port number for the z/OS mainframe server.
`ZMF_SERVER_PROXYID`	Mandatory proxy user ID used to log into the z/OS mainframe server on behalf of a SBM user to ZMF. See Configuring a ZMF Proxy User ID [page 76] .
`ZMF_SERVER_PROXY_PASSWORD`	Password for the proxy user ID.
`SERNET_HTTPSERVER`	URL to the z/OS mainframe SERNET HTTP server instance, in the form of: `http://<sernet_hostname>:<port>` This is required to populate the ZMF UI widgets in Release Manager. See Configuring the SERNET HTTP Server [page 69].

Example

`zmf-client-connection.properties`

```
ZMF_WS_URL = http://almhost:8080/almzmf/services/ZMFPackageServices/
ZMF_SERVER_HOSTADDRESS = zmf_host
ZMF_SERVER_HOSTPORT = 5035
ZMF_SERVER_PROXYID = ALMMAN
ZMF_SERVER_PROXY_PASSWORD = ALMPWD1
SERNET_HTTPSERVER = http://zmf_host:5083
```

Configuring Access to Requests for Change

Requests for Change (RFCs) represent operational changes that may affect multiple applications or implement system infrastructure changes within an enterprise. These are associated with release trains and are typically associated with tickets from service management systems such as Serena Service Manager.

The default RFC provider connection provides an integration between an RFC in Serena Release Manager and a related change request in Serena Service Manager.

Designate RFC provider information as follows:

1. Designating the Details for Each RFC Provider [page 101]
2. Telling Release Manager Which Providers to Use [page 112]

Designating the Details for Each RFC Provider

You should give the connection details for each RFC provider in a separate properties file for each instance. This keeps the details separate from the selection, and helps with maintenance and security.

To designate details for each RFC provider:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
   ```

2. Open one of your provider properties files. For example:

   ```
   itsm.properties
   ```

3. Specify the details in the properties file, leaving entries blank that you do not want to specify. Do NOT delete or mark entries as comments, as that may cause the provider communication to fail.

   The details are unique for each properties file, and variables and parameters are defined in the implementation for the provider. See the example following this procedure.

4. After updating the provider properties files, restart the Serena common Tomcat service.

Designating RFC Provider Details for *Serena Service Manager (SSM)*

Example

Set the SSM provider details for RFCs. This example sets the values needed to retrieve requests for change from the SSM sample database.

```
itsm.properties
```

```
# rfc provider definitions
itsm.provider.name=Itsm
itsm.provider.description=ITSM Request Provider for Change system
itsm.table.tableName=TSM_CHANGEREQUEST
itsm.transition.update=CHANGE_MANAGEMENT.UPDATE1
itsm.transition.assignedRlm=CHANGE_MANAGEMENT.ASSIGNED_VIA_RLM
itsm.transition.implementedRlm=CHANGE_MANAGEMENT.IMPLEMENTED_VIA_RLM
itsm.transition.assignedRlm.type=Execute
itsm.transition.implementedRlm.type=Close
# rfc item fields
itsm.table.field.issueId=ISSUEID
itsm.table.field.state=STATE
itsm.table.field.relatedReleaseTrainId=LINKED_RELEASE
itsm.table.field.related=LINKED_TO_RELEASE
# rfc item states
itsm.defaultState=Approved Changes, Approved
```

> **NOTE** If you are using SSM as your RFC provider, see the following related documentation:
>
> - Customizing the SSM Integration [page 148]
> - In the *Serena Service Manager User's Guide,* "Serena Release Manager Integration".

Configuring Access to Business Change Requests

Business Change Requests (BCRs) represent customer or business unit change requests that affect specific application releases. They are associated with application releases and are typically associated with tickets from help desk or incident management systems such as Serena Service Manager and other SBM solutions.

The default BCR provider connection provides an integration between a BCR in Serena Release Manager and a related issue in the SBM Issue Defect Management (IDM) solution.

Designate BCR provider information as follows:

1. Designating the Details for Each BCR Provider [page 102]
2. Telling Release Manager Which Providers to Use [page 112]

Designating the Details for Each BCR Provider

You should give the connection details for each BCR provider in a separate properties file for each instance. This keeps the details separate from the selection, and helps with maintenance and security.

To designate details for each BCR provider:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
   ```

2. Open one of your provider properties files. For example:

   ```
   bcr.properties
   ```

3. Specify the details in the properties file, leaving entries blank that you do not want to specify. Do NOT delete or mark entries as comments, as that may cause the provider communication to fail.

The details are unique for each properties file, and variables and parameters are defined in the implementation for the provider. See the example following this procedure.

4. After updating the provider properties files, restart the Serena common Tomcat service.

Designating BCR Provider Details for *Serena Business Manager (SBM)*

Example

Set the SBM provider details for BCRs. This example sets the values needed to retrieve business change requests from the SBM sample database.

`bcr.properties`

```
# bcr provider definitions
bcr.provider.name=Business Change Request system
bcr.provider.description=Business Change Request system
bcr.table.tableName=TSM_CHANGEREQUEST
bcr.table.field.issueId=ISSUEID
bcr.table.field.state=STATE
bcr.defaultState=Approved Changes, Approved
```

Configuring Access to Development Change Requests

Development Change Request (DCRs) represent delivered changes from the development process. They are associated with release packages and are typically associated with change requests from systems used to manage development processes, such as Serena Service Manager, the SBM Incident Management solution, Serena Development Manager, and Serena Dimensions CM.

The default DCR provider connections are:

- For SBM:
  - An integration between a DCR in Serena Release Manager and a related incident in the SBM Incident Management solution.
  - An integration between a DCR in Serena Release Manager and a related issue in the SBM Issue Defect Management (IDM) solution.
- For Dimensions CM:
  - An integration between a DCR in Serena Release Manager and a related request in Dimensions CM.

Designate DCR provider information as follows:

1. Designating the Details for Each DCR Provider [page 103]
2. Telling Release Manager Which Providers to Use [page 112]

NOTE You must configure Dimensions CM communication with Serena Release Manager and configure the relevant SBM process apps to enable them to provide the DCRs.

Designating the Details for Each DCR Provider

You should give the connection details for each DCR provider in a separate properties file for each instance. This keeps the details separate from the selection, and helps with maintenance and security.

To designate details for each DCR provider:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   `..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes`

2. Open one of your provider properties files. For example:

   `dm_qlarius.properties`

3. `sbm_issues.properties`

4. `sbm_incidents.properties`

5. Specify the details in the properties file, leaving entries blank that you do not want to specify. Do NOT delete or mark entries as comments, as that may cause the provider communication to fail.

   The details are unique for each properties file, and variables and parameters are defined in the implementation for the provider. See the example following this procedure.

6. After updating the provider properties files, restart the Serena common Tomcat service.

Examples

- Designating DCR Provider Details for Dimensions CM Requests [page 104]
- Designating DCR Provider Details for SBM Issues [page 105]
- Designating DCR Provider Details for SBM Incidents [page 105]

Designating DCR Provider Details for *Dimensions CM Requests*

Example

Set the Dimensions CM provider details for DCRs. This example sets the values needed to retrieve requests from the Dimensions CM sample database, which has sample data based on a fictitious company called Qlarius.

`dm_qlarius.properties`

```
# requests provider definitions
requests.provider.name = DCR_QLARIUS
requests.provider.description = Dimensions Requests Provider for QLARIUS product
# vault provider definitions
vault.provider.name = DIM_QLARIUS
vault.provider.description = Dimensions Vault Provider for QLARIUS product
# filter requests by statuses
FILTER_REQUEST_BY_STATUSES = IN QA,IN PROGRESS,UNDER WORK,IN TEST
# filter vault baselines by statuses
FILTER_VAULT_BASELINES_BY_STATUSES = CREATED
#
VAULT_TARGET_PRODUCT = VAULT
#
VAULT_TARGET_PROJECT = VAULT:V1
#
VALT_DML_STAGE = LIVE
```

The text following the keys, `requests.provider.name`, may be used in related UI report search filters. In this example, `DCR_QLARIUS` simply describes the database from which the requests are being retrieved. The actual connection to the Dimensions CM database is defined in the `dimensions.properties` file. See ZMF Communication Configuration Overview [page 67].

This example tells Dimensions CM to return only requests in a specified list of statuses.

Designating DCR Provider Details for *SBM Issues*

Example

Set the SBM provider details for DCRs. This example sets the values needed to retrieve requests from the SBM Issues process app.

`sbm_issues.properties`

```
# requests provider definitions
requests.provider.name = DCR_Issues
requests.provider.description = SBM Requests Provider based on Issues solution
REQUESTS_TABLE_DBNAME=UBG_ISSUES
REQUESTS_FIELD_STATUS=STATE
REQUESTS_FIELD_LINK=URL
REQUESTS_FIELD_OWNER=OWNER
REQUESTS_FIELD_PROJECTNAME=PROJECTID
REQUESTS_QUERY_WHERE_CLAUSE =
REQUESTS_ORDER_BY_CLAUSE =
# possible values
# SUBMIT_PROJECTS
# REPORT_PROJECTS
REQUESTS_PROJECTS_TYPE= SUBMIT_PROJECTS
# valid only for REQUESTS_PROJECTS_TYPE = REPORT_PROJECTS
PROJECTS_REPORT_NAME=
PROJECTS_FIELD_TITLE=
PROJECTS_FIELD_STATUS=
PROJECTS_FIELD_OWNER=
PROJECTS_FIELD_TYPE=
# end of properties specific for REQUESTS_PROJECTS_TYPE = REPORT_PROJECTS
```

The text following the key `requests.provider.name` may be used in related UI report search filters. In this example, `Issues` simply describes the SBM primary table from which the issues, or requests, are being retrieved. The REQUESTS_TABLE_DBNAME key specifies the primary table from which to retrieve the issues.

This example shows a number of filters that can be used to restrict the list of issues to associate with DCRs in a release package.

Designating DCR Provider Details for *SBM Incidents*

Example

Set the SBM provider details for DCRs. This example retrieves incidents from the Incidents process app. This process app must be on the same SBM application server as your Serena Release Manager process app.

`sbm_incidents.properties`

```
# requests provider definitions
requests.provider.name=Incidents
requests.provider.description=SBM Requests Provider based on Incidents solution
REQUESTS_TABLE_DBNAME=UIM_INCIDENTS
REQUESTS_FIELD_STATUS=STATE
REQUESTS_FIELD_LINK=URL
REQUESTS_FIELD_OWNER=OWNER
REQUESTS_FIELD_PROJECTNAME=PROJECT_FOR_INCIDENT
REQUESTS_QUERY_WHERE_CLAUSE=
REQUESTS_ORDER_BY_CLAUSE=
# possible values
# SUBMIT_PROJECTS
# REPORT_PROJECTS
REQUESTS_PROJECTS_TYPE=REPORT_PROJECTS
# all properties below are valid only for REQUESTS_PROJECTS_TYPE =
    REPORT_PROJECTS
PROJECTS_REPORT_NAME=Projects for Incidents
PROJECTS_FIELD_TITLE=TITLE
PROJECTS_FIELD_STATUS=STATE
PROJECTS_FIELD_OWNER=OWNER
PROJECTS_FIELD_TYPE=ISSUETYPE
# end of properties specific for REQUESTS_PROJECTS_TYPE = REPORT_PROJECTS
```

The text following the key `requests.provider.name` may be used in related UI report search filters. In this example, `Incidents` simply describes the SBM primary table from which the incidents, or requests, are being retrieved. The REQUESTS_TABLE_DBNAME key specifies the primary table from which to retrieve the incidents.

This example shows a number of filters that can be used to restrict the list of incidents to associate with DCRs in a release package.

Configuring Access to Deployment Units

Deployment Units (DUs) represent a set of deployable components. DUs are associated with release packages, and are typically associated with deployable components held in systems used to manage development processes, such as Serena Dimensions CM, Serena Development Manager, and Serena ChangeMan ZMF.

The default DU provider connections are:

- For Dimensions CM:
    - An integration between a DU in Serena Release Manager and a related baseline with build outputs in Dimensions CM.
- For ChangeMan ZMF:
    - An integration between a DU in Serena Release Manager and a related change package in ChangeMan ZMF.

The designation of DU provider information is divided into two steps as follows:

1. Designating the Details for Each DU Provider [page 107]
2. Telling Release Manager Which Providers to Use [page 112]

> **NOTE** You must configure Dimensions CM or ChangeMan ZMF communication with Serena Release Manager to enable them to provide the deployment units.

> **NOTE** If you have Serena Development Manager (DVM) installed as part of the Serena ALM suite, your implementation of Dimensions CM is shared between Serena Release Manager and Serena Development Manager. Information that applies to Dimensions CM deployment unit provider configuration also applies to Serena Development Manager. For information on installing and configuring Serena Development Manager, see *Serena Development Manager Installation and Configuration*.

Designating the Details for Each DU Provider

You should give the connection details for each DU provider in a separate properties file for each instance. This keeps the details separate from the selection, and helps with maintenance and security.

The properties include provider name, which points to an associated file with connection information, and filters by status, so that users see only relevant information about the deployment units in Serena Release Manager.

To designate details for each DU provider:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
   ```

2. Open one of your provider properties files. For example:

   ```
   dm_qlarius.properties
   ```

   ```
   rlmzmf_packages.properties
   ```

3. Specify the details in the properties file, leaving entries blank that you do not want to specify. Do NOT delete or mark entries as comments, as that may cause the provider communication to fail.

   The details are unique for each properties file, and variables and parameters are defined in the implementation for the provider. See the examples following this procedure.

4. After updating the provider properties files, restart the Serena common Tomcat service.

Designating Dimensions CM Deployment Unit Selection Criteria

Set the Dimensions CM provider details for deployment units, or baselines, using the example `dm_qlarius.properties` file or a custom Dimensions CM provider properties file.

Parameter	Value
`vault.provider.name`	Deployment unit provider name. Default value = `DIM_QLARIUS`
`vault.provider.description`	Deployment unit provider description. Default value = Dimensions Vault Provider for QLARIUS product

Parameter	Value
FILTER_VAULT_BASELINES_BY_STATUSES	Filter the vault baselines by statuses. Default value = CREATED
VAULT_TARGET_PRODUCT	Specify the product ID in which to create vault request and vault template target baselines. This parameter must be in upper case. Default value = VAULT
VAULT_TARGET_PROJECT	Specify the project ID in which to create vault request and vault template target baselines. This parameter must be in upper case. Default value = VAULT:V1
VALT_DML_STAGE	Specify the Dimensions CM or DVM stage that upon reaching this stage, a baseline is to be automatically flagged as definitive media. This parameter must be in upper case. Default value = LIVE

Example

Set the Dimensions CM provider details for DUs. This example sets the values needed to retrieve deployment units (baselines) from the Dimensions CM sample database, which has sample data based on a fictitious company called Qlarius.

dm_qlarius.properties

```
# requests provider definitions
requests.provider.name = DCR_QLARIUS
requests.provider.description = Dimensions Requests Provider for QLARIUS product
# vault provider definitions
vault.provider.name = DIM_QLARIUS
vault.provider.description = Dimensions Vault Provider for QLARIUS product
# filter requests by statuses
FILTER_REQUEST_BY_STATUSES = IN QA,IN PROGRESS,UNDER WORK,IN TEST
# filter vault baselines by statuses
FILTER_VAULT_BASELINES_BY_STATUSES = CREATED
#
VAULT_TARGET_PRODUCT = VAULT
#
VAULT_TARGET_PROJECT = VAULT:V1
#
VALT_DML_STAGE = LIVE
```

The text following the key vault.provider.name may be used in related UI report search filters. In this example, DIM_QLARIUS describes the database from which the deployment units are being retrieved. The actual connection to the Dimensions CM database is defined in the dimensions.properties file. See ZMF Communication Configuration Overview [page 67].

This example tells Dimensions CM to return only requests and deployment units in a specified list of statuses.

IMPORTANT! You must enter the VAULT parameters in upper case as shown in the example.

Designating ChangeMan ZMF Deployment Unit Selection Criteria

If you plan to use ChangeMan ZMF to deploy change packages as your deployment units, you must specify the selection criteria for the change packages. Set the ChangeMan ZMF provider details for deployment units, or change packages, using the example `rlmzmf_packages.properties` file or a custom ZMF provider properties file.

Set the properties for the ZMF filters as follows:

Parameter	Value
`vault.rlm.baseline.provider.` `name`	Deployment unit provider name. Default value = RLMZMF_PACKAGES
`vault.rlm.baseline.provider.` `description`	Deployment unit provider description. Default value = `ChangeMan ZMF packageS Vault Baseline Provider for RLM`
`FILTER_ZMF_PACKAGES_IN_` `DEVELOPMENT_STATUS`	Change packages that are in frozen status are typically selected as deployment units that are ready to install, but you may include change packages in development status if your processes require that. Setting this to Y will list all packages that are in FRZ and DEV status. Setting this value to N will list all packages that are in FRZ status. Default value = N
`FILTER_ZMF_PACKAGES_BY_WORKREQNO`	Setting this to Y will list only packages that have an empty or null work request number value. Default value = Y If you want to update the ZMF change package work request number value with the associated Serena Release Manager deployment unit's SBM item ID, you should set this value to Y. See RELATE_RLM_DU_ITEMID_TO_ZMF_PACKAGE_WORKREQNO [page 111].
`FILTER_PLANNED_PERMANENT_` `ZMF_PACKAGES`	Include change packages with package type planned permanent. (Values Y or N) Default value = Y
`FILTER_PLANNED_TEMPORARY_` `ZMF_PACKAGES`	Include change packages with package type planned temporary. (Values Y or N) Default value = Y

Parameter	Value
FILTER_UNPLANNED_PERMANENT_ ZMF_PACKAGES	Include change packages with package type unplanned permanent. (Values Y or N) Default value = Y
FILTER_UNPLANNED_TEMPORARY_ ZMF_PACKAGES	Include change packages with package type unplanned temporary. (Values Y or N) Default value = Y
FILTER_SIMPLE_ZMF_PACKAGES	Include change packages with the level of simple. (Values Y or N) Default value = Y
FILTER_PARTICIPATING_ ZMF_PACKAGES	Include change packages with the level of participating. (Values Y or N) Default value = Y
FILTER_ZMF_PACKAGES_BY_ PROMOTION_LEVEL	Include change packages with this promotion level and above. The last promotion level must be *greater than or equal to* the promotion level filter. For example, if you have the following promotion levels in ZMF, setting this value to 10 returns change packages in these promotion levels: 10 – INT Integration Test 20 – UAT User Acceptance Test 30 – PAT Production Acceptance Test Default value = 10
FILTER_ZMF_PACKAGES_BY_ AUDIT_LEVEL	Include audit return code. The audit return code must be *less than or equal to* the audit level filter. Default value = 04

Parameter	Value
RELATE_RLM_DU_ITEMID_TO_ ZMF_PACKAGE_WORKREQNO	Choose whether to fill in the ZMF change package work request number with the development change request value from Serena Release Manager. (Values Y or N) Default value = Y **Note:** Whatever the setting is for this parameter, you will need to make sure that the value of: RELATE_DVM_DU_ITEMID_TO_ZMF_PACKAGE_WORKREQNO in the dvmzmf_packages.properties file is set to the opposite value if you are using both providers, otherwise they will overwrite each other's values in this field. For example, if RELATE_DVM_DT_ITEMID_TO_ ZMF_PACKAGE_WORKREQNO = Y then set RELATE_RLM_DU_ITEMID_TO_ ZMF_PACKAGE_WORKREQNO = N
RELATE_RLM_RP_PROD_ DEPLOY_DATE_TO_ ZMF_PACKAGE_INSTALL_DATE	Choose whether to fill in the ZMF change package installation date with the release package stage end date from Serena Release Manager. (Values Y or N) Default value = Y

Example

This example sets the values needed to retrieve deployment units (change packages) from a ChangeMan ZMF sample system.

```
rlmzmf_packages.properties
```

```
# RLM Vault baseline provider name and description.
vault.rlm.baseline.provider.name = RLMZMF_PACKAGES
vault.rlm.baseline.provider.description = ChangeMan ZMF packageS Vault Baseline
    Provider for RLM
# Include ZMF change packages in FRZ and DEV statuses (Y/N). Set this to Y to
    list packages that are in FRZ and DEV statuses. Set this value to N to list
    only packages that are in FRZ status.
FILTER_ZMF_PACKAGES_IN_DEVELOPMENT_STATUS = N
# Retrieve only ZMF change packages that have an empty or null work request
    numbers (Y/N). Use in conjunction with
    RELATE_DU_ITEMID_TO_ZMF_PACKAGE_WORKREQNO.
FILTER_ZMF_PACKAGES_BY_WORKREQNO = Y
# Include ZMF change packages with designated package types (Y/N).
FILTER_PLANNED_PERMANENT_ZMF_PACKAGES = Y
FILTER_PLANNED_TEMPORARY_ZMF_PACKAGES = Y
FILTER_UNPLANNED_PERMANENT_ZMF_PACKAGES = Y
FILTER_UNPLANNED_TEMPORARY_ZMF_PACKAGES = Y
# Include ZMF change packages with designated package levels (Y/N).
FILTER_SIMPLE_ZMF_PACKAGES = Y
FILTER_PARTICIPATING_ZMF_PACKAGES = Y
# Include ZMF change packages with this promotion level and above. The last
    promotion level must be greater than or equal to the designated promotion
    level value.
FILTER_ZMF_PACKAGES_BY_PROMOTION_LEVEL = 10
# Include ZMF change packages with this audit return code or below. The audit
    return code must be less than or equal to the designated audit level value.
FILTER_ZMF_PACKAGES_BY_AUDIT_LEVEL = 04
# Fill in the ZMF change package work request number with the Release Management
    deployment unit\u2019s SBM item ID.
RELATE_RLM_DU_ITEMID_TO_ZMF_PACKAGE_WORKREQNO = Y
# Fill in the ZMF change package installation date with the release package stage
    end date from Release Management.
RELATE_RLM_RP_PROD_DEPLOY_DATE_TO_ ZMF_PACKAGE_INSTALL_DATE = Y
```

The text following the keys, `vault.provider.name`, is documentary, and is also used in the related UI report search filter. In this example, RLMZMF_PACKAGES simply describes the kind of data being retrieved. The actual connection to the ChangeMan ZMF system is defined in the `zmf-client-connection.properties` file. See Configuring ZMF Communication in Release Manager [page 78].

This example tells ChangeMan ZMF to return only deployment units, or change packages, that are in FRZ status, have a blank work request number, are in promotion level 10 or above, and have passed audit with a return code of 04 or less. The relationship filters are set so that the work request number and installation dates will be updated in ChangeMan ZMF based on information stored in Serena Release Manager.

You should set your selection criteria based on your organization’s release management practices related to ChangeMan ZMF.

Telling Release Manager Which Providers to Use

After you have defined the login information for the providers in separate properties files, you tell Serena Release Manager which providers you want to use by specifying those properties file names in the provider properties file.

You can select one or more providers for each of the types of objects.

To specify the providers:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   `..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes`

2. Open the `providers.properties` file.

Set appropriate provider keys variable to the provider value or values that you want Serena Release Manager to use. This is the first node of the file name you used for the properties file you updated in Designating the Details for Each DU Provider [page 107].

NOTE

- Only one provider can be specified for RFCs and BCRs; more than one can be specified for DCRs and DUs.
- Dimensions CM is NOT implemented as a provider for RFCs and BCRs in the default implementation of Serena Release Manager; it is only implemented as a provider for DCRs and DUs.

IMPORTANT! If you do not want to use one or more of the provider types, simply leave the provider key value blank. Do NOT comment it out or delete it, or Serena Release Manager will no longer function properly.

Example

This example shows providers selected for each of the object types, RFCs, BCRs, DCRs (requests), and DUs. The bold text indicates the specific provider key for deployment units.

`providers.properties`

```
# requests provider keys
requests.providers.keys=sbm_issues, dm_qlarius
# vault provider keys
vault.providers.keys=dm_qlarius, rlmzmf_packages, dvmzmf_packages
# rfc provider keys
rfc.providers.keys=itsm
# bcr provider keys
bcr.providers.keys=bcr
```

In the preceding example,

`requests.providers.keys = sbm_issues`

tells Serena Release Manager to use the `sbm_issues.properties` file for DCRs

`vault.providers.keys = dm_qlarius`, rlmzmf_packages, dvmzmf_packages

tells Serena Release Manager to use the `dm_qlarius.properties` file, the `rlmzmf_packages.properties` file, and the dvmzmf_packages.properties file for release vault providers of deployment units

`rfc.providers.keys=itsm`

tells Serena Release Manager to use the `itsm.properties` file for RFCs

`bcr.providers.keys=bcr`

tells Serena Release Manager to use the `bcr.properties` file for BCRs

Configuring Objects in Serena Business Manager

In addition to the objects you configure in SBM to support Serena Release Control, Serena Release Manager may rely on other SBM information.

If you use SBM process apps, such as Issue Defect Management, Incident Management, or Change Request Management, to provide requests for change (RFCs), business change requests (BCRs), or development change requests (DCRs), you must configure the required information in SBM. That information includes:

- Projects
- Items, such as issues or incidents

What Can You Change?

You can add or change the above information in the SBM process apps you are using, but not in Serena Release Manager. The only things that change in the SBM process apps from Serena Release Manager should be a result of automations built into the release train workflow in relation to associated RFCs, application releases in relation to associated BCRs, or release packages in relation to DCRs.

What is the Impact?

- SBM items, such as approved incidents, appear in the Application Release dialog box. If you change or add items, this may impact the list of items the users see when they select BCRs for an application release.
- Project names for DCRs appear in the project selection table in the Release Package dialog box. If you change the names or add names, this may impact the list of names the users see when they select projects for a release package.
- SBM items, such as approved issues, appear in the Release Package dialog box. If you change or add items, this may impact the list of items the users see when they select DCRs for a release package.

How Do You Change It?

SBM administrators should change information in SBM according to the SBM documentation.

Documentation References

- Complete documentation on configuring SBM projects is in the *Serena Business Manager SBM Application Administrator Guide* in "About Projects".
- Complete documentation on submitting items into SBM projects is in the *Serena Business Manager System User’s Guide* in "Working with Primary Items".

Configuring Objects in Serena Service Manager

If you use Serena Service Manager (SSM) to provide requests for change (RFCs), you must configure the required information in SSM. That information includes:

- Projects
- Items, such as change requests

What Can You Change?

You can add or change the above information in SSM, but not in Serena Release Manager. The only things that change in SSM from Serena Release Manager should be a result of automations built into the release train workflow in relation to associated RFCs.

What is the Impact?

- SSM items, such as change requests, appear in the Release Train dialog box. If you change or add items, this may impact the list of items the users see when they select RFCs for an application release.

How Do You Change It?

SSM administrators should change information in SSM according to the SSM and SBM documentation.

Documentation References

- Complete documentation on submitting and actioning SSM change requests is in the *Serena Service Manager ITIL Guide* in "Change Management".

- Complete documentation on configuring SBM projects is in the *Serena Business Manager SBM Application Administrator Guide* in "About Projects".

- Complete documentation on submitting items into SBM projects is in the *Serena Business Manager System User's Guide* in "Working with Primary Items".

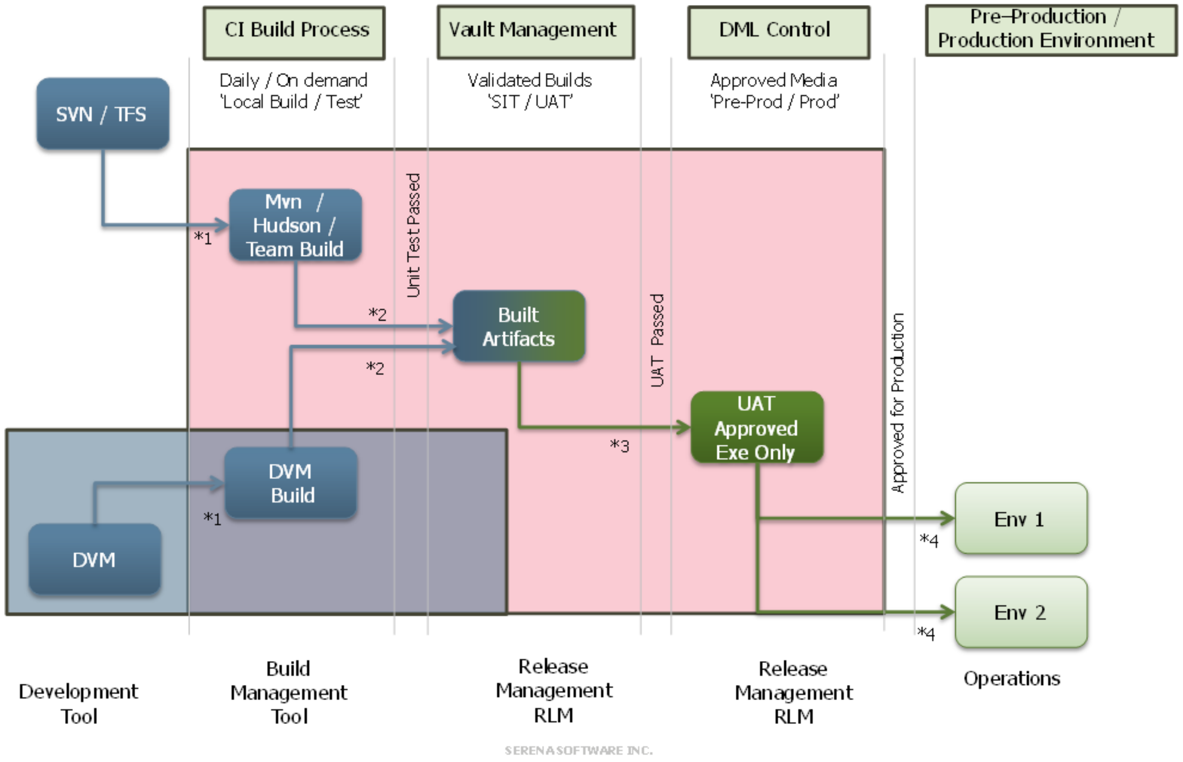
Vault Request Configuration

This section tells you how to configure vault requests and vault templates. Vault requests and vault templates enable you to bring component sets from external systems into the Serena Release Manager suite. See the following sections for details.

Vault Request Purpose

Serena Release Manager users, such as Release Managers or Release Engineers, use the vault request to add component sets to the Serena Release Manager release vault from external sources, such as other development tools, build management tools, and from existing baselines within the same instance of Dimensions CM or Serena Development Manager that they are using with Serena Release Manager.

The process of adding component sets, or built artifacts, into Serena Release Manager from external sources is shown in the following figure.



This figure shows how configuration items (CI) that have been built into sets of build artifacts are introduced into Serena Release Manager (RLM) from development tools and build managements tools, in this example Serena Development Manager (DVM) and Hudson / Team Build respectively.

After the built artifacts are tested through the Serena Release Manager release management stages and pass to the final stage, such as **Approved Exe**, **Production**, or **Live**, they are flagged as definitive media. Built artifacts can also brought directly in as definitive media, such as when you want to bring pre-tested vendor software into your Definitive Media Library (DML). Once the definitive media is in the vault, it is considered part of your DML and is ready for IT operations to distribute or release as part of the IT operations processes in your organization.

Vault Request Architecture

The vault request implementation in Serena Release Manager is done through integration with the Dimensions CM system that provides the release vault functionality.

NOTE If you have Serena Development Manager (DVM) installed as part of the Serena ALM suite, your implementation of Dimensions CM is shared between Serena Release Manager and Serena Development Manager. Information that applies to Dimensions CM deployment unit provider configuration also applies to Serena Development Manager. For information on installing and configuring Serena Development Manager, see *Serena Development Manager Installation and Configuration*.

The Vault in a Vault Request

The "vault" in this context is a Dimensions CM product that must be pre-defined and specified your release vault provider configuration file. It is a special use of the Dimensions CM release vault that stores those built artifacts that are considered release or distribution-ready. These may need to be sent through the final testing process or may be ready to store as definitive media.

In the default implementation of Serena Release Manager, the example product ID defined in the `dm_qlarius.properties` file is `VAULT`, but you can name the product ID whatever makes sense for your implementation of the Vault Request functionality.

A source baseline either already exists in Dimensions CM or must be created temporarily in Dimensions CM when items are introduced from a work area. Once a source baseline exists, this baseline is copied to the target baseline based on the criteria specified in the vault request.

Definitive Media Library (DML)

The Definitive Media Library (DML) in Serena Release Manager is a set of release vault baselines that are flagged as definitive media. Any baselines flagged as definitive media are considered ready for IT operations to release or distribute according to your organization’s processes.

Vault requests are used to introduce production-ready component sets into Serena Release Manager either directly as definitive media or to be tested as part of your organization’s defined testing stages and then flagged as definitive media.

In the default implementation of Serena Release Manager, baselines tested through the release vault in Serena Release Manager are automatically marked as definitive media upon deployment to the Production, or Live, stage.

Vault Template Purpose

Serena Release Manager users, such as Release Managers or Release Engineers, set up the vault templates in Serena Release Manager and Serena Development Manager users, such as Development Managers, use the vault template to add component sets, or built artifacts, to the Serena Release Manager release vault directly from Serena Development Manager Development Packages.

The creation of a vault template in Serena Release Manager is very similar to that of the vault request, except that it doesn’t have the source information filled in. It has only the target and options filled in, and the source is filled in from the Serena Development Manager side.

The process of adding component sets, or built artifacts, into Serena Release Manager from Serena Development Manager using vault templates is documented in *Serena Development Manager Getting Started Guide*.

See the Vault Template process app and its related workflow and form to see the Serena Release Manager side of the Vault Template implementation.

Serena Release Manager Upgrade

This section leads you through an upgrade of Serena Release Manager.

Upgrading from Serena Release Manager v3.5 to v4.0

This section gives the manual instructions for upgrading from Serena Release Manager version 3.5 to 4.0. There is no automated upgrade path.

If you need to upgrade Serena Release Manager from and to earlier versions, please see the documentation for your version of Serena Release Manager for recommended steps.

IMPORTANT! If you upgrade SBM to a version that is not supported by your version of Serena Release Manager, Serena Release Manager will no longer function properly. Please see the supported platforms for your version of Serena Release Manager as instructed in Software Compatibility Requirements [page 16].

NOTE Path names in these instructions are examples. The names on your system may be slightly different, in particular for drive, operating system level and 32 or 64-bit choices, and build numbers.

Step	Actions
1: Document Custom Changes	If you have a customized version of Release Manager, you should carefully document the changes you made in each process app before beginning your upgrade so that you can reapply the changes as needed after the upgrade.

2: Backup	Back up data and product files. (Optional)
	It is a good practice to snapshot your system or back up existing files and data before beginning the upgrade.
	1. At minimum, you should back up the data as follows:
	a. Copy the files from the Serena Common Web services `alm\WEB-INF\classes` folder to a temporary folder.
	For example:
	`..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes`
	b. Backup your SBM database.
	2. For an easier restoration if necessary, back up the product directories:
	a. Copy the Serena Common Web services webapps folder to a temporary folder.
	For example:
	`..\Program Files\Serena\common\tomcat\6.0\webapps`
	b. Copy the `Serena\Solutions` folder to a temporary folder.
	For example:
	`..\Program Files\Serena\Solutions`

Step	Actions
3: Copy the Upgrade Package	Prepare for and extract the upgrade package as follows: 1. Delete the `Serena\Solutions` folder. For example: `C:\Program Files\Serena\Solutions` 2. Copy the upgrade package, for example `ALM4.0_Win32_and_Win64_Upgrade.zip`, to a temporary folder. 3. Extract the upgrade package to the `Serena\Solutions` folder. 4. The following files should now appear under the `Solutions` folder: • `com.serena.alm.sbm.shell-4.0.zip` • `solution` file: for example, `ALM_Solution_Pack-4.0.0.0.122.sln` • `war` files ◦ `alm.war` ◦ `almzmf.war` ◦ `almzmfalf.war` ◦ `almzmfws.war` **NOTE** You can ignore any other files in the `ALM` folder for now.

Step	Actions

4: Configure Web Services	Configure the Web services files in the Serena Common Tomcat Web server.
	1. Stop the Serena Common Tomcat service in Windows. For example, select **Start | Administrative Tools | Services**, select the service, and click **Stop.**
	2. Navigate to the Serena Common Tomcat `webapps` folder. For example:
	`..\Program Files\Serena\common\tomcat\6.0\webapps`
	3. Delete the following folders under the `webapps` folder:
	`alm`
	`almzmf`
	`almzmfalf`
	`almzmfws`
	4. Delete the following `war` files under the `webapps` folder, if present:
	`alm.war`
	`almzmf.war`
	`almzmfalf.war`
	`almzmfws.war`
	5. From the `ALM` folder where you extracted them in a preceding step, copy all of the following `war` files to the Serena Common Tomcat `webapps` folder:
	`alm`
	`almzmf`
	`almzmfalf`
	`almzmfws`
	6. Start the Serena Common Tomcat service.
	This war file contents are automatically extracted to new directories in that location. You should now see the following directories under `webapps`:
	alm
	`almzmf`
	`almzmfalf`
	`almzmfws`

5: Copy the Solution File	Copy the solution file that contains the Serena Release Manager process apps and all related orchestrations, reports, and tables.
	1. From the `ALM` folder, copy the solution pack `.sln` file, such as `ALM_Solution_Pack-4.0.0.0.122`, to the `SBM WEB-INF\solutions` folder. For example:
	`C:\Program Files\Serena\SBM\Common\jboss405\server\`
	`default\deploy\mashupmgr.war\WEB-INF\solutions`

Step	Actions
6: Install the User Interface Files and Report Templates	Install the user interface files and report templates. 1. Extract the `com.serena.alm.sbm.shell-4.0.zip` file directly to the SBM Application Engine folder. For example: `C:\Program Files\Serena\SBM\Application Engine\` The files in the `zip` file should extract to the appropriate directory structure. For any conflicts, select the option to replace with the newer versions. Verify the extraction by looking at the dates of the files in the `template\shell\alm folder`, for example `C:\Program Files\Serena\SBM\Application Engine\template\shell\alm`. The files should have the date close to that of the upgrade package you used. 2. From SBM System Administrator, select **File | Put Files Into Database**. Confirm when prompted. This puts the UI files and other ALM data into the SBM database.
7: Import the Solution	Import the Release Manager solution. 1. Log into the SBM Application Repository as an SBM administrative user. 2. Navigate to the **Solutions** tab and import the solution. For example: `ALM_Solution_Pack-4.0.0.0.122` For detailed instructions see Importing the Serena ALM Solution [page 34].
8: Promote the Snapshots	Promote the snapshots. 1. Navigate to the **Process App Snapshots** tab. 2. In SBM Application Repository, promote the snapshots. When promoting the snapshots, make sure to select the endpoints as needed, and make sure the endpoints are authenticated with Security Token. • Release Train • Application Release • Release Package • RLM_AUX • Deployment • Environment • Vault_Request • ReleaseTemplate **IMPORTANT!** Make sure to check for any warnings after you have promoted the snapshots. For information on analyzing warnings or errors, see Snapshot Promotion Errors [page 156]. For detailed instructions see Promoting the Snapshots [page 37].

Step	Actions
9: Deploy the Process Apps	Deploy the process apps. 1. After the Serena Release Manager process apps are promoted to the correct environment, you must deploy the process apps from within SBM Composer. This validates the target endpoints prior to deployment to ensure that your environment is correctly configured. To redeploy the process apps: a. In SBM Composer, publish each of the Serena Release Manager process apps. b. After successfully publishing each process app, deploy each of the process apps. For detailed instructions see Publishing and Deploying the Process Apps [page 41]. **NOTE** Follow the guidelines in the SBM documentation to deploy the Serena Release Manager process apps.
10: Reconfigure the Port	If you are changing the port on which the Serena Common Tomcat runs, reconfigure Serena Release Manager to use the new port number. For detailed instructions see Configuring Release Manager to Use a Different Port [page 144].
11: Set Privileges	Set privileges for the administrative user to the Serena Release Control objects, such as projects, reports, and tables. See Configuring the Administrative User Privileges [page 43].
12: Enable Roles	Enable roles for Serena Release Control projects and verify that Serena Release Manager is activated. 1. Ensure roles are enabled for all Serena Release Control projects. See Enabling Serena Release Control Project Roles [page 44]. 2. Verify that Serena Release Manager is activated by entering the URL in your Web browser. For example: `http://<hostname>/tmtrack/tmtrack.dll?shell=alm` where `hostname` is your Serena Release Manager host server name.

13: Refresh the Web browser data	Clear and refresh your Web browser cache to ensure that out-of-date UI shell elements are no longer saved in your Web browser.
	1. To clear the cache, choose the option in your browser to delete history and select cache from the options given.
	2. To refresh the template cache, enter the following URL in your browser:
	`http://<hostname>/tmtrack/`
	`tmtrack.dll?AdminPage&command=ClearTemplateCache`
	where `hostname` is your Serena Release Manager host server name.

Step	Actions

14: Update the Registry	Update the registry to ensure the proper version of Serena Release Control is registered for future reference. (Optional)
	1. Manually update the key as follows:
	a. Edit the registry with a program such as `Regedit`.
	b. If you are upgrading from Serena Release Control versions prior to 3.3, view the following key:
	`HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{1F0B02EF-2F1D-48EF-B397-DF5488FC7D27}`
	If you are upgrading from Serena Release Control version 3.5, view the following key:
	`HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{37AA8300-7D82-42E7-A139-F7B49D0CF3DC}`
	c. Modify **DisplayVersion** by changing the **Value data** entry to `4.0.0`.
	NOTE This registry location has all the information that you will see in Windows **Add/Remove programs** and **Programs and Features**.

15: Configure Release Control	Configure Release Control as needed. For detailed instructions see Release Control Configuration [page 33].
16: Configure Release Vault	Configure Release Vault as needed. For detailed instructions see Release Vault Configuration: Dimensions CM [page 60] and/or Release Vault Configuration: ChangeMan ZMF [page 67].
17: Configure Release Automation	Configure the Release Automation objects as needed. For detailed instructions see Release Automation Configuration [page 81].
18: Configure Connections and Providers	Configure the connections using the ALM Configurator and specify details in provider properties files as needed. For detailed instructions see Provider Configuration [page 93]. For a summary of changes to the configuration files for this release, see the Serena Release Manager Readme. **CAUTION!** If you choose to restore values from configuration files you backed up, you should copy only your implementation-specific values into specific parameters to ensure that you don’t introduce errors. These files have changed significantly in this release, so restoring by copying and replacing entire files is not recommended.

Serena Release Manager Customization

This section gives an overview of advanced configuration, or customization, in Serena Release Manager.

Serena Release Manager is designed as a flexible, extensible system that you can customize to match the best Release Control, Release Vault, and Release Automation for your organization's release processes. You can modify key elements of the system to match the way your organization manages releases, such as the release control processes and release types and stages.

CAUTION! Modification of transitions and states in Serena Release Manager must be done by personnel who have a strong understanding of SBM orchestrations and SBM Composer. Some of the transitions and states in Serena Release Manager are used by the underlying Web services and are referenced by JavaScript, and if these are modified without additional system changes, Serena Release Manager will no longer function.

We strongly recommend that you contact Serena Services for assistance in customizing your Serena Release Manager system.

This section includes the following topics.

Customizing Release Control Workflows

Before the people who participate in the release management processes in your organization begin using Serena Release Manager, you can customize the workflow states and transitions in SBM that support your organization's release control processes.

Serena Release Manager workflow states are defined in the underlying Serena Business Manager system. If your organization uses different states within the release management workflow, you can change the Serena Release Manager workflow accordingly.

What Can You Change?

- Add workflow state and transition information
- Change workflow state and transition information

IMPORTANT! The Release Package workflow contains logic that is integrated with the Release Type and Stage implementation. Information on changing the Release Package workflow is included in context in Modifying Release Types and Stages [page 126].

What is the Impact?

When you change the workflow, the following impacts are made.

- If you add states, you must add owners and transitions.
- If you add transitions, you must add any functionality required to support the associated action and change the form if needed to support this.
- If you change state names, you may need to change the associated entries in the auxiliary table.
- If you change transition names, different actions appear on the related UI for progressing the items through their workflows. You may need to change the related JavaScript so that the UI shell displays the new name properly.
- Ownership relates to SBM projects, so you must add ownership for any new roles for each project and workflow.

How Do You Change It?

- Change the workflow and related objects in SBM Composer according to the SBM documentation.
- Change the auxiliary table entries in SBM System Administrator according to the SBM documentation.

Documentation References

- Complete documentation on configuring workflows in SBM is in the *Serena Business Manager SBM Composer Guide* in "Managing Workflows".
- Complete documentation on configuring tables in SBM is in the *Serena Business Manager System Administrator Guide* in "Table Configuration".

Modifying Release Types and Stages

Serena Business Manager release types are used to determine the stages, or environments, that release packages move through on their path into production.

The default release types are major, minor, and emergency, and default stages include Integration Test, User Acceptance Testing (UAT), and Production Deployment.

Stages are implemented in the Release Train and the Release Package, so any changes to one must be made in the other.

What Can You Change?

You can change the following release type and stage information:

- Change release types
- Change stages
- Add release types
- Add stages
- Delete release types
- Delete stages

What is the Impact?

- Release types and stages are interrelated, and if you change one aspect, you must change all related information in both release train and release package primary and auxiliary tables, forms, workflows, and UI JavaScript.
- You must be careful when changing the Release Package system field definitions because they are used by Serena Release Manager to deploy release packages. These include the following:
    - **Package type**: Controls the release package staging process sequence.
    - **Deploy state**: Controls the re-deployment process.
    - **Next Deploy Transition**: The update transition name to use when a release package is successfully deployed. The default release package workflow value is set to **Deployed**.
    - **Failed Deploy Transition**: The update transition name to use when the release package deployment process fails. The default release package workflow value is set to **Fail Deployment**.
- You must be careful when changing the Release Package process app not to adversely affect the implementation of the Deployment Task execution. Deployment Task field dependencies are as follows:
    - Deployment Task Status Single Selection control field:

The task status single selection field, TASK_STATUS, controls when a deployment task can be executed for deployment, when to execute the task deployment process, and when to execute the fail deployment process.

- Default settings:

To indicate when a deployment task can be executed for deployment, the task status value must be set to **Planned**. This is currently set in the **Create** transition.

- The automation transition actions associated to the **Task Update** transition are mapped to the value set in **Task Status**. Currently the default actions are set as follows:

Transition Action	Task Status
Invoke Execute Deployment transition of Manual, Automation, and Vault Task	In Progress
Invoke Fail Deployment transition of Automation and Vault Task	Failed
Invoke Complete Deployment transition of Automation and Vault Task	Completed

How Do You Change It?

You add or change most stage information in SBM Composer.

The summary and example given here are for adding a stage. From this you should also gain the knowledge you need to change or delete a release type or stage.

Before you add a stage, it is recommended that you look at the implementation of an existing stage, such as INT, as the new stage should be implemented in a very similar manner.

Summary of Adding a Stage

Adding a Stage for the Release Train Process App

1. Add new Start and End Date fields in the primary table Release Train.
2. Add the field controls in the related forms:
    - createReleaseTrain
    - viewReleaseTrain

3. Edit **Attributes visibility** in the Visual Design JavaScripts to specify when to show or hide the new date fields.

4. Include the new Start and End Date fields in the report All Release Train.

Adding the Stage for the Release Package Process App

1. Add the new stage name value in the primary table Release package.

2. Create a new swim lane for the new stage process.

3. Create required states for the new stage process.

4. Add From and To transitions with all associated forms, mappings, and overrides for the new states.

5. Map a new deployment transition action.

6. Add a new re-deploy transition action.

7. Configure the Stage auxiliary table to relate the new stage to the Release Train Start and End Dates and the Release Package Deploy state.

8. Optionally add a new deploy decision rule to the Release Package stage process.

   a. Add the decision to the workflow.

   b. Add a **Package type** single-selection field value.

   c. Add a rule for the single-selection field.

   d. Add a transition for the deploy decision.

   e. Add the new rule to the deploy decision box.

Example of Adding a Stage

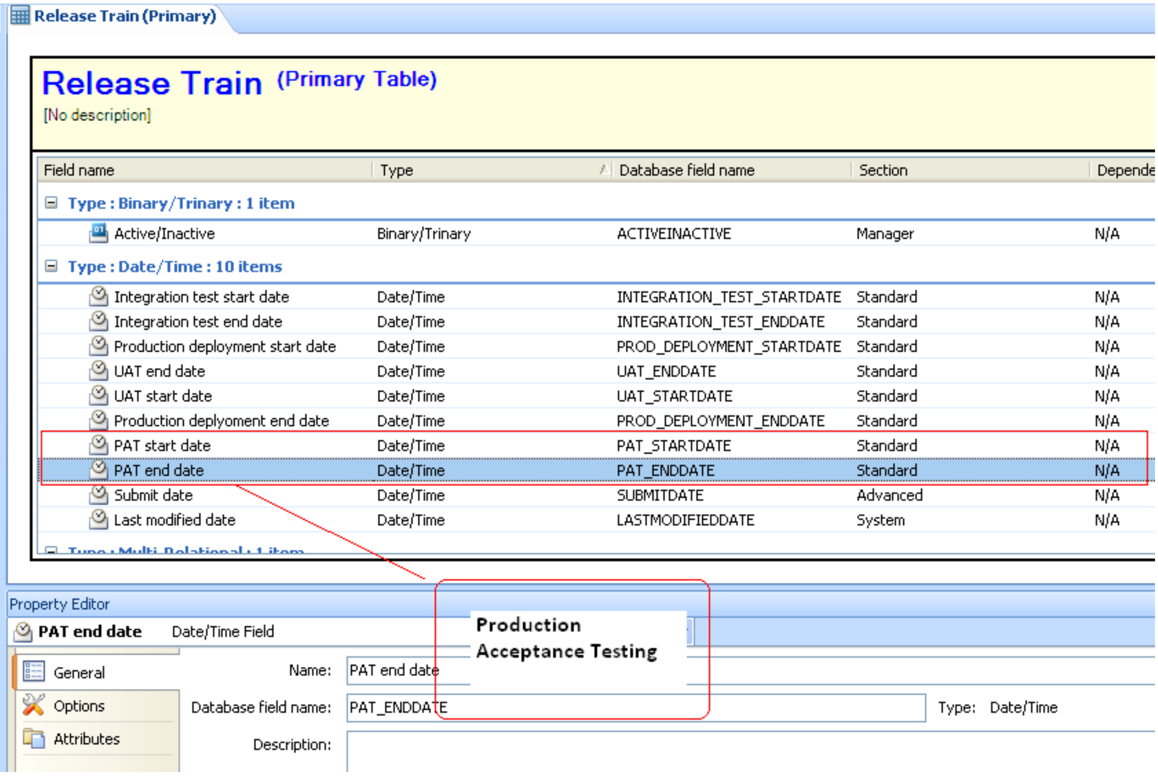
This example shows how to add a new stage that's associated with a new Release Train Start and End Date and a new Release Package stage process. This example adds a stage of PAT, PAtch Test. This stage is defined to be used only when the release type is Patch.

Adding a Stage for the Release Train Process App

To add a stage for the Release Train process app:

1. Add new Start and End Date fields in the primary table Release Train.

   In the Release Train table, add PAT start and end dates, as shown in the following figure.



Release Train (Primary)

Release Train (Primary Table)

[No description]

Field name	Type	Database field name	Section	Depende
⊟ Type : Binary/Trinary : 1 item				
Active/Inactive	Binary/Trinary	ACTIVEINACTIVE	Manager	N/A
⊟ Type : Date/Time : 10 items				
Integration test start date	Date/Time	INTEGRATION_TEST_STARTDATE	Standard	N/A
Integration test end date	Date/Time	INTEGRATION_TEST_ENDDATE	Standard	N/A
Production deployment start date	Date/Time	PROD_DEPLOYMENT_STARTDATE	Standard	N/A
UAT end date	Date/Time	UAT_ENDDATE	Standard	N/A
UAT start date	Date/Time	UAT_STARTDATE	Standard	N/A
Production deplyoment end date	Date/Time	PROD_DEPLOYMENT_ENDDATE	Standard	N/A
PAT start date	Date/Time	PAT_STARTDATE	Standard	N/A
PAT end date	Date/Time	PAT_ENDDATE	Standard	N/A
Submit date	Date/Time	SUBMITDATE	Advanced	N/A
Last modified date	Date/Time	LASTMODIFIEDDATE	System	N/A

Property Editor

PAT end date Date/Time Field

Name: PAT end date

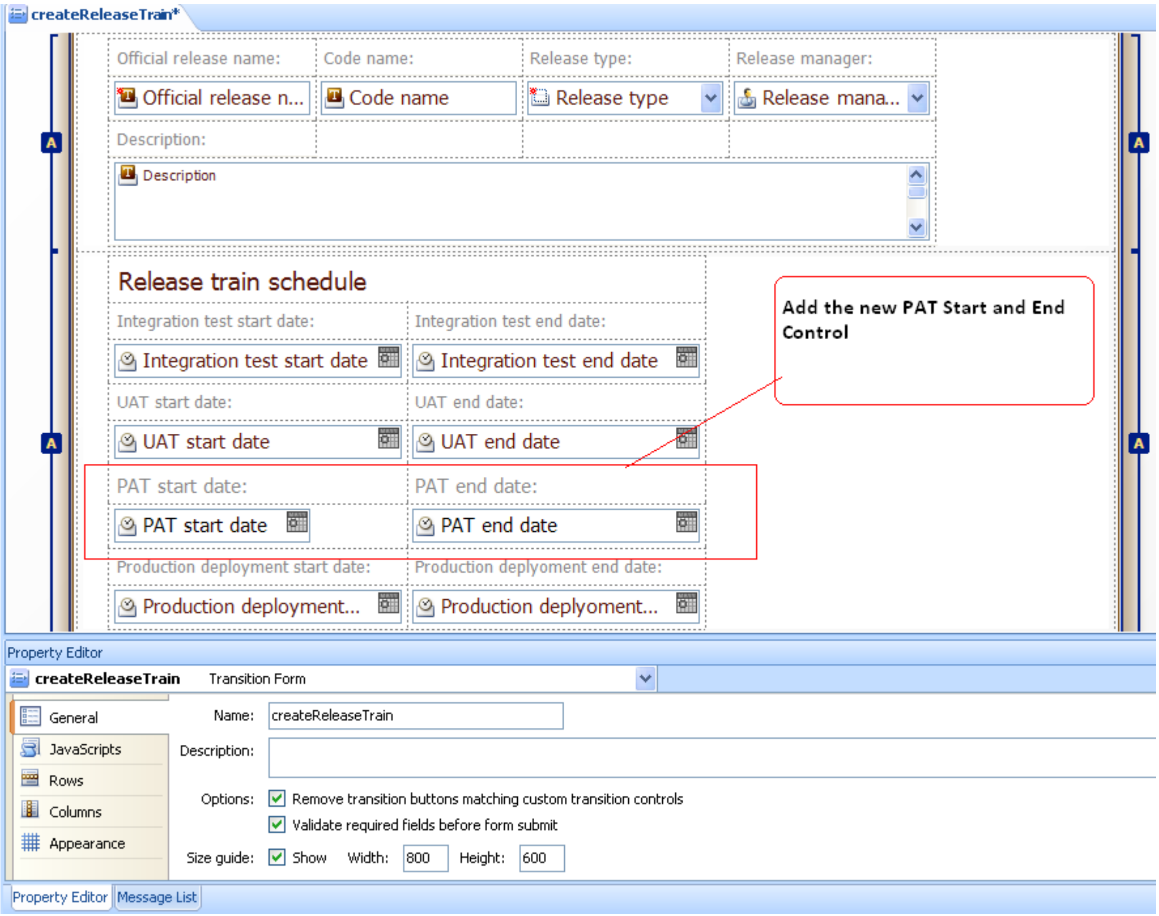
Database field name: PAT_ENDDATE

Type: Date/Time

Description:

Production Acceptance Testing

2. Add the Start and End field controls in the related forms, **createReleaseTrain** and **viewReleaseTrain**. The changes for **createReleaseTrain** are shown in the following figure.



createReleaseTrain*

Add the new PAT Start and End Control

Property Editor

createReleaseTrain Transition Form

Name: createReleaseTrain

Description:

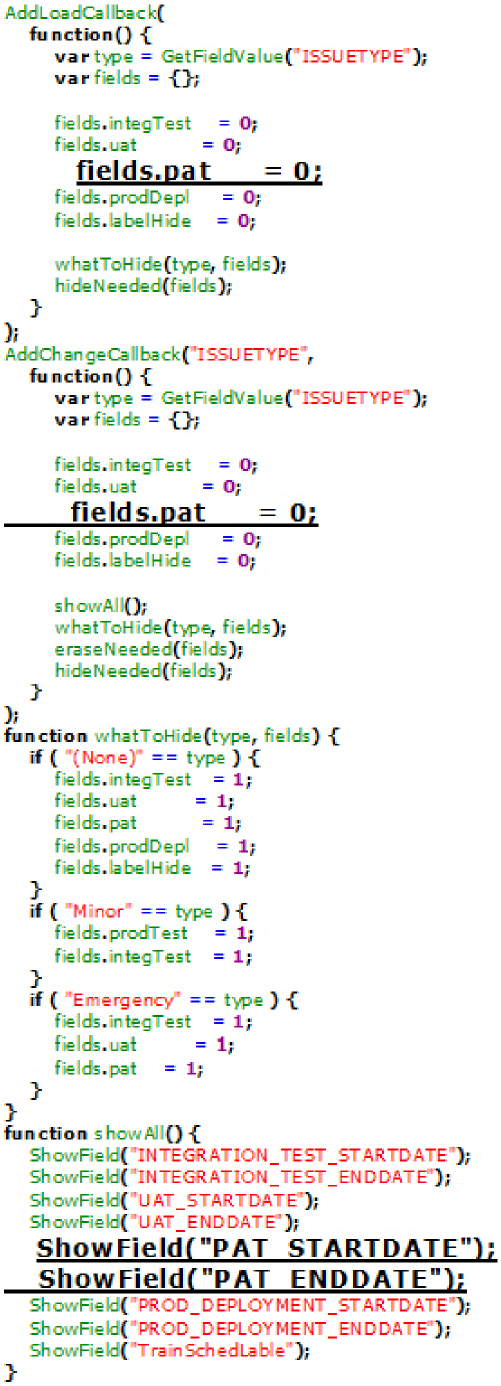
Options: ☑ Remove transition buttons matching custom transition controls

☑ Validate required fields before form submit

Size guide: ☑ Show Width: 800 Height: 600

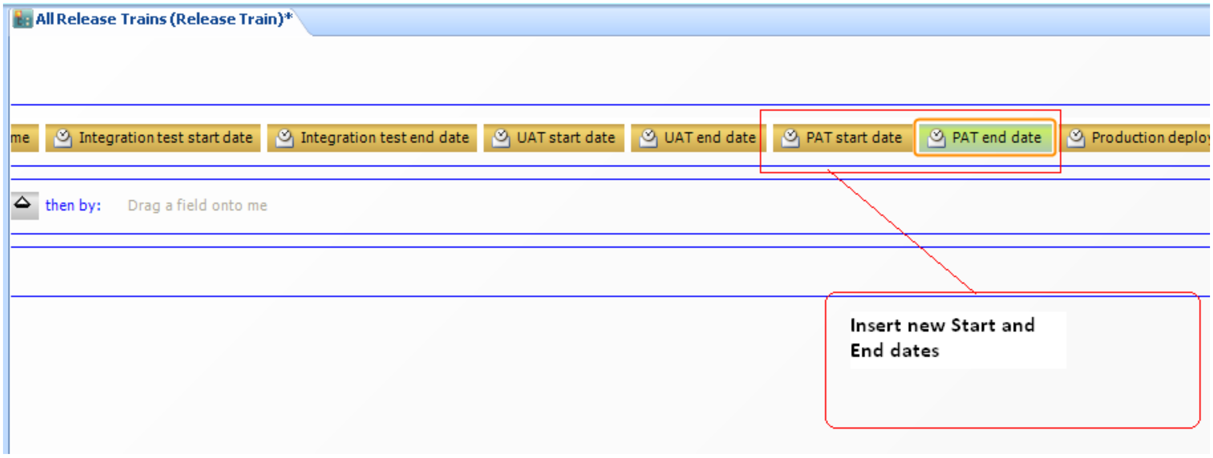
3. Edit **Attributes visibility** in the Visual Design JavaScripts to specify when to show or hide the new date fields.

The dates are shown or hidden based on release train type (**ISSUETYPE** table field). The lines to change in the JavaScript are shown in bold in the following figure.



```
AddLoadCallback(
  function() {
    var type = GetFieldValue("ISSUETYPE");
    var fields = {};

    fields.integTest    = 0;
    fields.uat          = 0;
     fields.pat       = 0;
    fields.prodDepl     = 0;
    fields.labelHide    = 0;

    whatToHide(type, fields);
    hideNeeded(fields);
  }
);
AddChangeCallback("ISSUETYPE",
  function() {
    var type = GetFieldValue("ISSUETYPE");
    var fields = {};

    fields.integTest    = 0;
    fields.uat          = 0;
     fields.pat       = 0;
    fields.prodDepl     = 0;
    fields.labelHide    = 0;

    showAll();
    whatToHide(type, fields);
    eraseNeeded(fields);
    hideNeeded(fields);
  }
);
function whatToHide(type, fields) {
  if ( "(None)" == type ) {
    fields.integTest   = 1;
    fields.uat         = 1;
    fields.pat          = 1;
    fields.prodDepl     = 1;
    fields.labelHide   = 1;
  }
  if ( "Minor" == type ) {
    fields.prodTest    = 1;
    fields.integTest   = 1;
  }
  if ( "Emergency" == type ) {
    fields.integTest   = 1;
    fields.uat         = 1;
    fields.pat     = 1;
  }
}
function showAll() {
  ShowField("INTEGRATION_TEST_STARTDATE");
  ShowField("INTEGRATION_TEST_ENDDATE");
  ShowField("UAT_STARTDATE");
  ShowField("UAT_ENDDATE");
   ShowField("PAT_STARTDATE");
   ShowField("PAT_ENDDATE");
  ShowField("PROD_DEPLOYMENT_STARTDATE");
  ShowField("PROD_DEPLOYMENT_ENDDATE");
  ShowField("TrainSchedLable");
}
```

4. Include the new Start and End Date fields in the report **All Release Trains** as shown in the following figure.

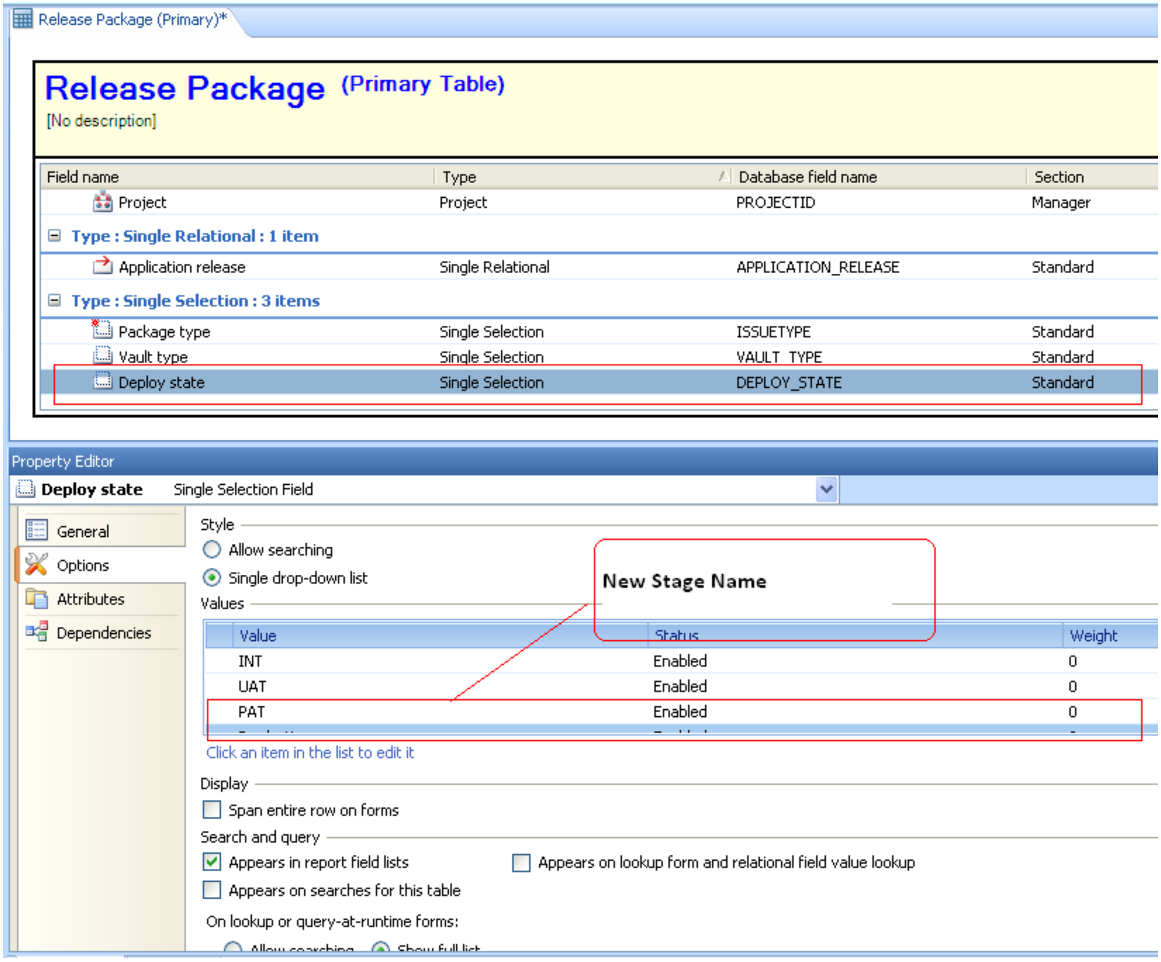


Insert new Start and End dates

Adding the Stage for the Release Package Process App

To add the stage for the Release Package process app:

1. Add the new stage name value in the primary table Release Package, in the **DEPLOY_STATE** single selection field as shown in the following figure.



Release Package (Primary Table)

[No description]

Field name	Type	Database field name	Section
Project	Project	PROJECTID	Manager
Type : Single Relational : 1 item			
Application release	Single Relational	APPLICATION_RELEASE	Standard
Type : Single Selection : 3 items			
Package type	Single Selection	ISSUETYPE	Standard
Vault type	Single Selection	VAULT_TYPE	Standard
Deploy state	Single Selection	DEPLOY_STATE	Standard

Deploy state Single Selection Field

Style

○ Allow searching

● Single drop-down list

Values

Value	Status	Weight
INT	Enabled	0
UAT	Enabled	0
PAT	Enabled	0

Click an item in the list to edit it

Display

□ Span entire row on forms

Search and query

☑ Appears in report field lists □ Appears on lookup form and relational field value lookup

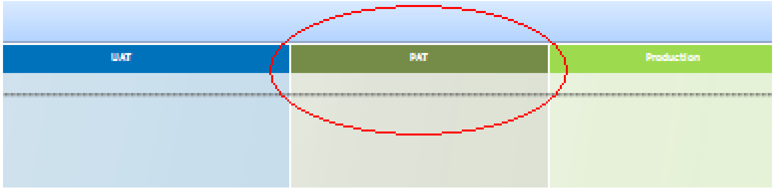
□ Appears on searches for this table

On lookup or query-at-runtime forms:

○ Allow searching ● Show full list

New Stage Name

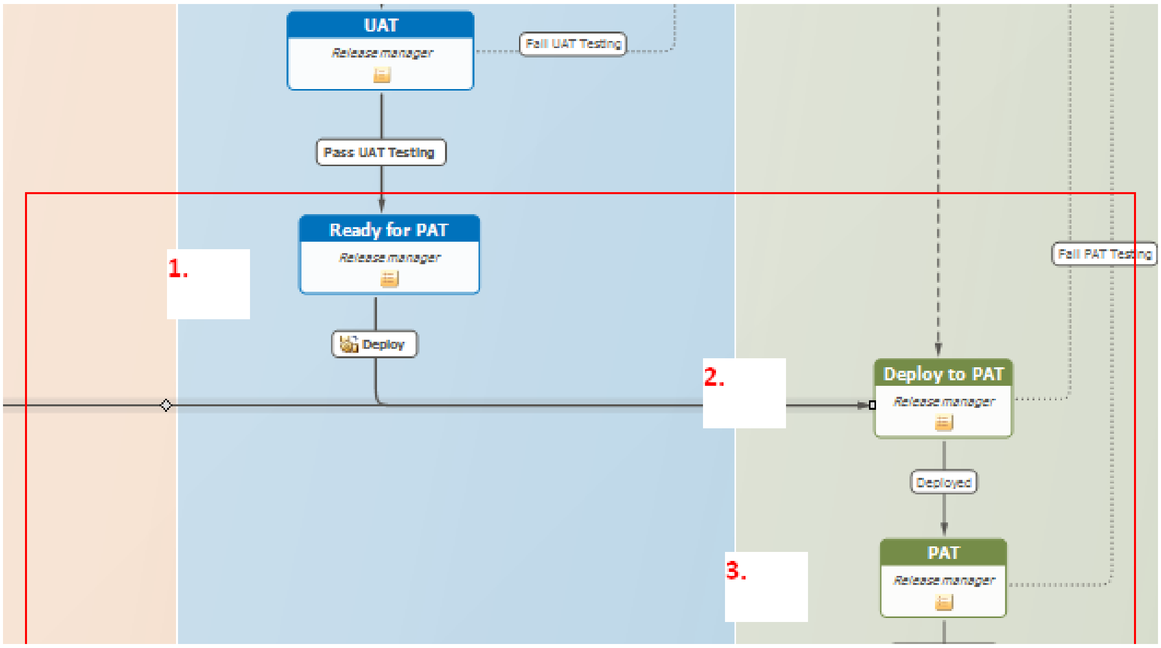
2. Create a new swim lane for the new stage process and arrange it according to the Release Package staging process sequence as shown in the following figure.



3. Create required states for the new stage process. For this example, those are:

   - Ready for PAT
   - Deploy to PAT
   - PAT

   The added states are shown in the following figure.



4. Add From and To transitions with all associated forms, mappings, and overrides for the new states as shown in the following table.

State	Transition	Option	Selection
Ready for PAT	From Transition: Pass UAT Testing		
	To Transition: Deploy	Options	Quick transition
		Form	None
		Field Privileges	default values
		Field Overrides	Failed Deploy Transition • Read Only • Set to default: Fail Deployment
		Actions	Invoke deployReleasePackage Orchestration workflow
		Restrict by Type	default values
		Restrict by Role	default values

State	Transition	Option	Selection
Deploy to PAT	From transition: Deploy		
	To transition: Deployed	Options	Quick transition
		Form	None
		Field Privileges	default values
		Field Overrides	None
		Actions	None
		Restrict by Type	default values
		Restrict by Role	default values
	To transition: Fail Deployment	Options	Quick transition
		Form	None
		Field Privileges	default values
		Field Overrides	Deploy state • Read only • Set to default: PAT
		Actions	None
		Restrict by Type	default values
		Restrict by Role	default values

State	Transition	Option	Selection
PAT state	From transition: Deployed		
	To transition: Pass PAT Testing	Options	Quick transition
		Form	None
		Field Privileges	default values
		Field Overrides	None
		Actions	None
		Restrict by Type	default values
		Restrict by Role	default values
	To transition: Fail PAT Testing	Options	Quick transition
		Form	None
		Field Privileges	default values
		Field Overrides	None
		Actions	None
		Restrict by Type	default values
		Restrict by Role	default values

5. Map a new deployment transition action based on the **Deploy** state single selection field. To do so, create a new **Deploy** transition from the state **Failed Deployment** to the state **Deploy to PAT** as shown in the following table.

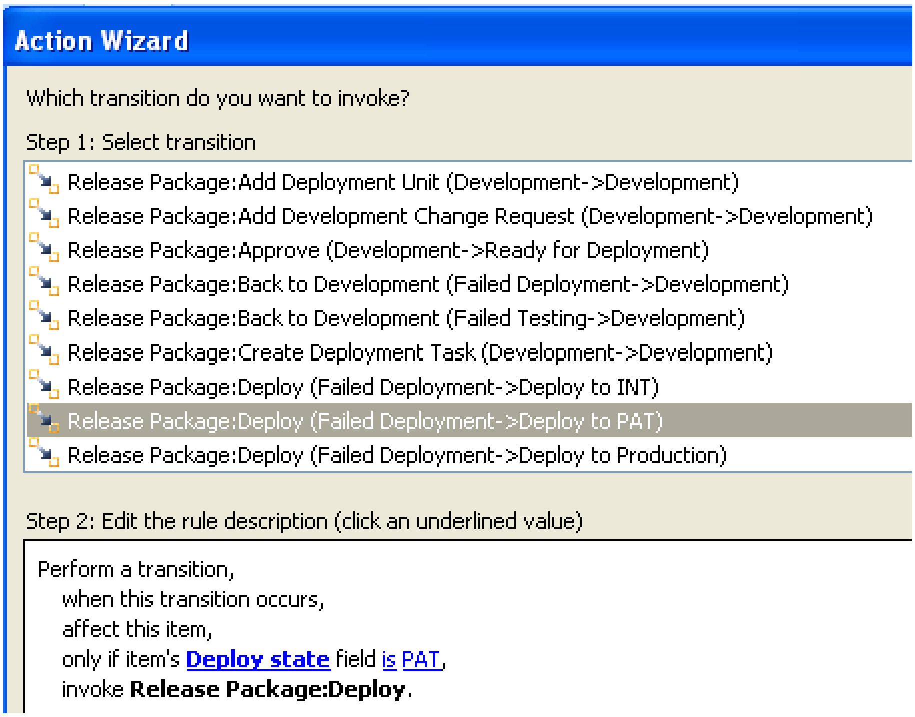
State	Transition	Option	Selection
From state: Failed Deployment To state: Deploy to PAT	Deploy	Options	Quick transition and Hide button on form
		Form	None
		Field Privileges	default values
		Field Overrides	Failed Deploy Transition • Read Only • Set to default: Fail Deployment
		Actions	Invoke deployReleasePackage Orchestration workflow
		Restrict by Type	default values
		Restrict by Role	default values

6. Add a new re-deploy transition action.

   Set the rule as follows:

   `Perform a transition > when this transition occurs > affect this item > only if item's Deploy state field is PAT > invoke Release Package:Deploy`

   The rule settings are shown in the following figure.



Which transition do you want to invoke?

Step 1: Select transition

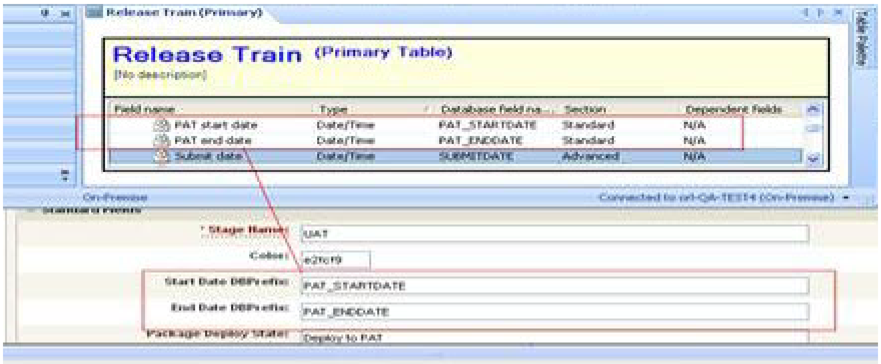
- Release Package:Add Deployment Unit (Development->Development)
- Release Package:Add Development Change Request (Development->Development)
- Release Package:Approve (Development->Ready for Deployment)
- Release Package:Back to Development (Failed Deployment->Development)
- Release Package:Back to Development (Failed Testing->Development)
- Release Package:Create Deployment Task (Development->Development)
- Release Package:Deploy (Failed Deployment->Deploy to INT)
- Release Package:Deploy (Failed Deployment->Deploy to PAT)
- Release Package:Deploy (Failed Deployment->Deploy to Production)

Step 2: Edit the rule description (click an underlined value)

Perform a transition,
when this transition occurs,
affect this item,
only if item's **Deploy state** field is PAT,
invoke **Release Package:Deploy**.

7. Configure the **Stage** auxiliary table to relate the new stage to the Release Train Start and End Dates and the Release Package **Deploy** state.

- Relate the PAT Start and End date fields in the Release Train table. This relationship is indicated in the following figure.



Release Train (Primary)

Release Train (Primary Table)

[No description]

Field name	Type	Database field na...	Section	Dependent fields
PAT start date	Date/Time	PAT_STARTDATE	Standard	N/A
PAT end date	Date/Time	PAT_ENDDATE	Standard	N/A
Submit date	Date/Time	SUBMITDATE	Advanced	N/A

On-Premise

Connected to srl-QA-TEST4 (On-Premise)

Standard Fields

* Stage Name:	UAT
Color:	e2fcf9
Start Date DBPrefix:	PAT_STARTDATE
End Date DBPrefix:	PAT_ENDDATE
Package Deploy State:	Deploy to PAT

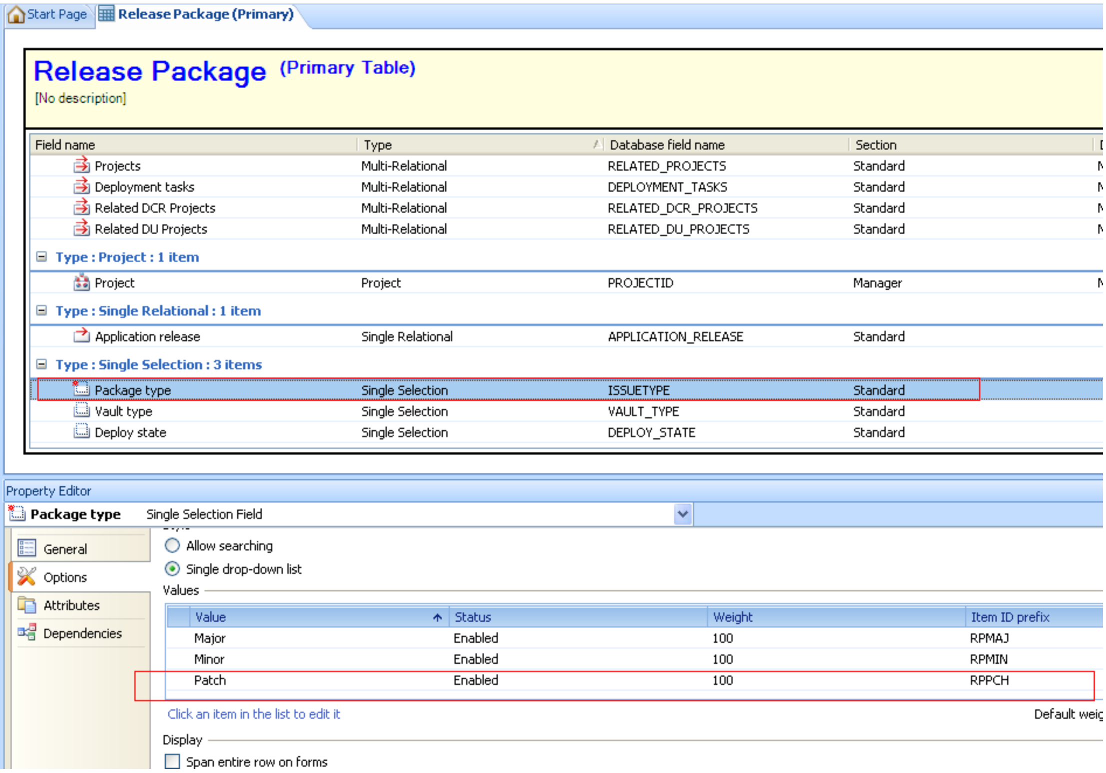
- Relate the new Release Package **Deploy** state to the Stage **Package Deploy State** text field. This will allow any deployment tasks that are associated to this new stage to execute when the **Deploy** transition is executed in the Release Package for the new stage process.

8. Optionally add a deploy decision rule to the Release Package stage process.

   In our example, the new stage process execution is controlled by Release Package release type, so we will add a decision rule. Stages that are used for every release type do not require a decision rule.

   a. Add the decision in the workflow as shown in the following figure.

   b. Add a **Package type** single-selection field value as shown in the following figure.



Start Page | Release Package (Primary)

Release Package (Primary Table)

[No description]

Field name	Type	Database field name	Section
Projects	Multi-Relational	RELATED_PROJECTS	Standard
Deployment tasks	Multi-Relational	DEPLOYMENT_TASKS	Standard
Related DCR Projects	Multi-Relational	RELATED_DCR_PROJECTS	Standard
Related DU Projects	Multi-Relational	RELATED_DU_PROJECTS	Standard
Type : Project : 1 item			
Project	Project	PROJECTID	Manager
Type : Single Relational : 1 item			
Application release	Single Relational	APPLICATION_RELEASE	Standard
Type : Single Selection : 3 items			
Package type	Single Selection	ISSUETYPE	Standard
Vault type	Single Selection	VAULT_TYPE	Standard
Deploy state	Single Selection	DEPLOY_STATE	Standard

Property Editor

Package type — Single Selection Field

○ Allow searching

● Single drop-down list

Values

Value	Status	Weight	Item ID prefix
Major	Enabled	100	RPMAJ
Minor	Enabled	100	RPMIN
Patch	Enabled	100	RPPCH

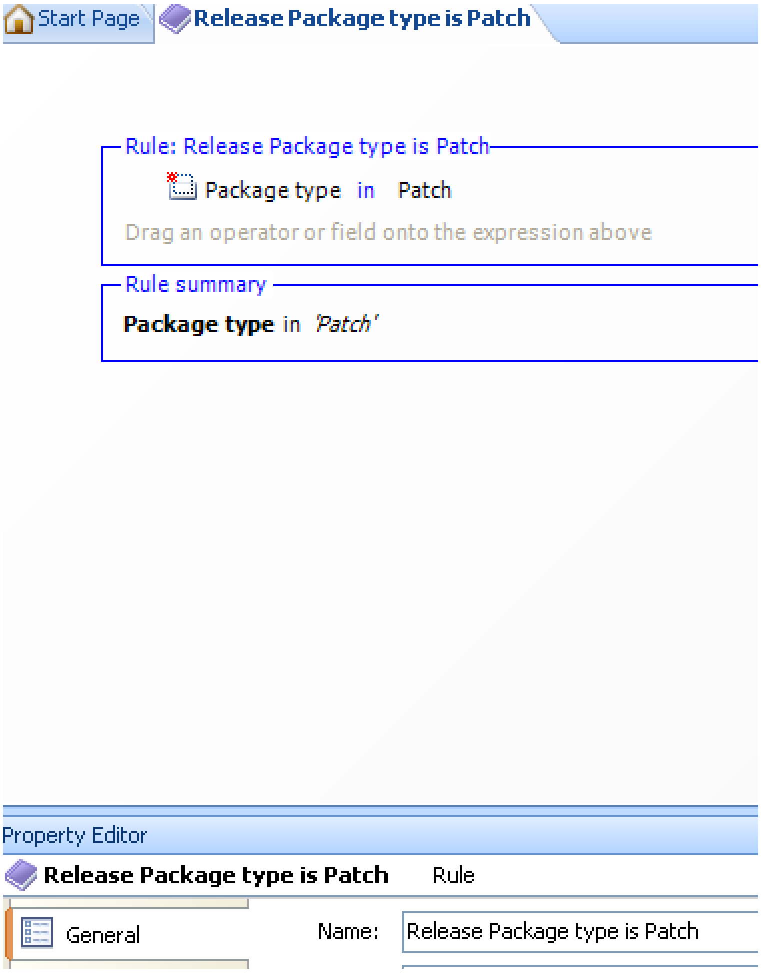
Click an item in the list to edit it

Default weig

Display

□ Span entire row on forms

   c. Add a rule for the selection, **Package type** in ’Patch’, as shown in the following figure.



Rule: Release Package type is Patch

Package type in Patch

Drag an operator or field onto the expression above

Rule summary

Package type in *'Patch'*

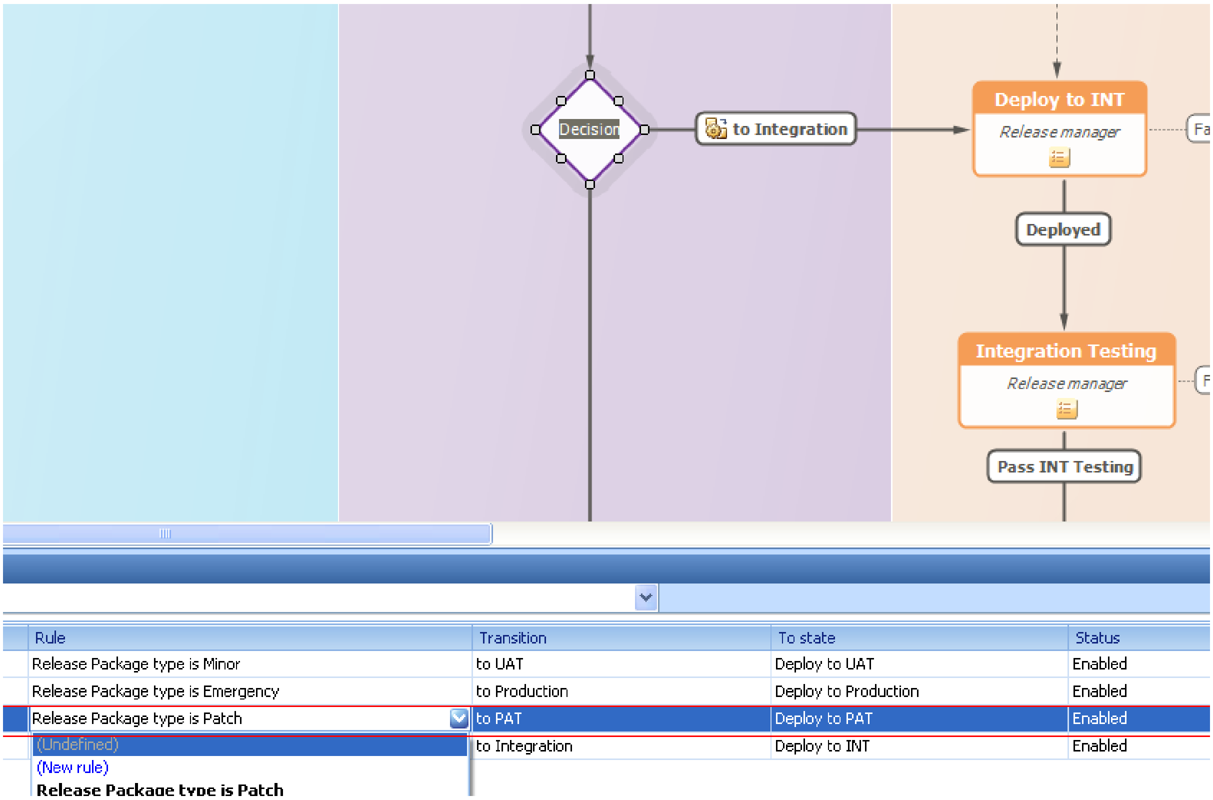
Release Package type is Patch Rule

Name: Release Package type is Patch

d. Add a transition for the deploy decision: add a transition **to PAT** from the Deploy Decision box to the state **Deploy to PAT** as shown in the following table.

To and From	Transition	Option	Selection
From decision box: Deploy To state: Deploy to PAT	to PAT	Options	Quick transition and Hide button on form
		Form	None
		Field Privileges	default values
		Field Overrides	Failed Deploy Transition • Read Only • Set to default: Fail Deployment
		Actions	Invoke deployReleasePackage Orchestration workflow
		Restrict by Type	default values
		Restrict by Role	default values

e. Add the new rule to the deploy decision box. Specify the To transition and state as shown in the following figure.



Rule	Transition	To state	Status
Release Package type is Minor	to UAT	Deploy to UAT	Enabled
Release Package type is Emergency	to Production	Deploy to Production	Enabled
Release Package type is Patch	to PAT	Deploy to PAT	Enabled
	to Integration	Deploy to INT	Enabled

Documentation References

- Complete documentation on configuring workflows in SBM is in the *Serena Business Manager SBM Composer Guide* in "Managing Workflows".
- Complete documentation on configuring tables in SBM is in the *Serena Business Manager System Administrator Guide* in "Table Configuration".

Adding Provider Connections

Serena Release Manager uses provider connections to make it easier to extend the product integrations with the suite. You can extend the integration to use other systems as providers using the Serena Release Manager configurable provider connection method.

In Serena Release Manager, a provider is any Java implementation of a product interface or integration that is implemented and registered following the procedures described in this section.

To see if a provider connection you want is already implemented for Serena Release Manager, please check the most current Serena Release Manager documentation and the online knowledgebase on the Serena Customer Support website.

To implement the providers, see the following sections:

- Creating a Class for Your Provider [page 140]
- Creating Properties Files for Your Providers [page 140]
- Building and Packaging [page 143]
- Telling Serena Release Manager to Use This Provider [page 143]

NOTE For documentation on configuring existing provider connections, see Provider Configuration [page 93].

Creating a Class for Your Provider

Create a class file that implements the IRequestsProvider interface or the IDeployUnitsProvider interface.

Authentication information is kept inside the ISessionData structure and is populated before each initialization of providers. You can keep session-sensitive data using setAttribute and getAttribute methods in ISessionData.

See the Java documentation for more information about methods.

Examples

A snippet of the Java code that creates a simple file system class by implementing the IRequestsProvider interface is shown in the following figure.

com.serena.alm.provider.fs.FSRequestsProvider

```
public class FSRequestsProvider extends FSCustomProvider implements
    IRequestsProvider {
private String requestsFile;
```

A snippet of the Java code that creates a simple file system class by implementing the IDeployUnitsProvider interface is shown in the following figure.

com.serena.alm.provider.fs.FSDeployUnitsProvider

```
public class FSDeployUnitsProvider extends FSCustomProvider implements
    IDeployUnitsProvider {
private String depunitsFile;
private String stagesFile;
private String depareaFile;
```

Creating Properties Files for Your Providers

Using the recommended spring dependency injection mechanism, as shown in the included examples, create separate properties files for provider definition and provider instance-specific parameters as follows:

- Define your provider’s class and its parameter definition, but not values, in an XML definition file. See Designating the Details for Each Provider [page 140].
- Define all instance-specific values for parameters in a properties file. See Telling Serena Release Manager to Use This Provider [page 141].

Designating the Details for Each Provider

Using the spring dependency injection mechanism, you define your provider’s class and its parameter definition, but not values, in an XML definition file.

For example, Serena provides the provider-dm.xml file for Dimensions CM, a potential provider of DCRs and DUs and provider-sbm.xml file for SBM, a potential provider of RFCs, BCRs, and DCRs.

The following example implements the spring dependency injection mechanism for a simple file system provider.

Example

provider-fs.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:context="http://www.springframework.org/schema/context"
xmlns:util="http://www.springframework.org/schema/util"
xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans-3.0.xsd
http://www.springframework.org/schema/context
http://www.springframework.org/schema/context/spring-context-3.0.xsd
http://www.springframework.org/schema/util
http://www.springframework.org/schema/util/spring-util-3.0.xsd"
default-lazy-init="true">
<!-- enable processing of annotations such as @Autowired and @Configuration -->
<context:annotation-config/>
<context:component-scan base-package="com.serena.alm.provider.fs"/>
<bean
    class="org.springframework.beans.factory.config.PropertyPlaceholderConfigurer">
<property name="ignoreUnresolvablePlaceholders" value="true"/>
<property name="order">
<value>1</value>
</property>
</bean>
<bean id="requestsProvider" class="com.serena.alm.provider.fs.FSRequestsProvider">
<property name="providerName" value ="${requests.provider.name}"/>
<property name="providerDescription" value ="${requests.provider.description}"/>
<property name="requestsFile" value ="${provider.fs.requests.file}"/>
</bean>
<bean id="deployUnitsProvider"
    class="com.serena.alm.provider.fs.FSDeployUnitsProvider">
<property name="providerName" value ="${vault.provider.name}"/>
<property name="providerDescription" value ="${vault.provider.description}"/>
<property name="depunitsFile" value ="${provider.fs.depunits.file}"/>
<property name="stagesFile" value ="${provider.fs.stages.file}"/>
<property name="depareaFile" value ="${provider.fs.deparea.file}"/>
</bean>
</beans>
```

Telling Serena Release Manager to Use This Provider

Using the spring dependency injection mechanism, you define all instance-specific values for parameters in a properties file.

It is not required to use a properties file separate from the XML file in the provider implementation. However, use of a properties file is a good practice and is included in the example provided. Using a properties file allows you to define several possible configurations, enabling you to change details without code modification. Without a properties file, you must hard code name, description, and other specific parameters for your provider.

Examples

`fs_example.properties`

```
# requests provider definitions
requests.provider.name = filesystem
requests.provider.description = Simple file-system Request Provider
# vault provider definitions
vault.provider.name = filesystem
vault.provider.description = Simple file-system Deployment Unit Provider
#
provider.fs.requests.file=requests.txt
provider.fs.depunits.file=depunits.txt
provider.fs.stages.file=stages.txt
provider.fs.deparea.file=areas.txt
```

The text files referenced in the preceding example, `requests.txt`, `depunits.txt`, `stages.txt`, and `areas.txt` are shown in the following examples. This is a simple file-system example where the content of these could be populated by any mechanism you implement, such as JDBC, Web services, and other protocols.

`requests.txt`

```
# list of mocked requests should be defined here
# use the following format
# <request_id>|<request_name>|<request_status>|<request_url>
ECR0001|Old delete icon in POA toolbars|Assigned to
    QA|http://almmashups.serena.com/tmtrack/
    tmtrack.dll?IssuePage&RecordId=78506&Template=view&TableId=1000
ECR0002|WEB-Cannot set owner for a project|Closed|http://almmashups.serena.com/
    tmtrack/tmtrack.dll?IssuePage&RecordId=78501&Template=view&TableId=1000
ECR0003|Approved dialog from Project node inconsistent to the same functionality
    on Area|Code & Unit Test|http://almmashups.serena.com/tmtrack/
    tmtrack.dll?IssuePage&RecordId=11531&Template=view&TableId=1000
```

`depunits.txt`

```
# list of mocked deployment units should be defined here
# use the following format
# <depunit_id>|<depunit_name>|<depunit_project_name>
DEP0001|Deployment unit 1|FS:RLM_TEST_1
DEP0002|Deployment unit 2|FS:RLM_TEST_2
DEP0002|Deployment unit 3|FS:RLM_TEST_3
```

`stages.txt`

```
# list of mocked stages should be defined here
# use the following format
# <stage_id>|<stage_name>|<stage_projects>
ST0001|SIT|QLARIUS:Q1S,QLARIUS:Q2S,QLARIUS:RLM_TEST
```

`areas.txt`

```
# list of mocked areas should be defined here
# use the following format
# <area_id>|<area_name>|<area_dir>|<area_stage_id>|<area_status>|<depunit_proj_name>
AR0001|Dev area|c:\work\|SIT|Open|QLARIUS:RLM_TEST
AR0002|Dev area|c:\work2\|SIT|Open|QLARIUS:RLM_TEST2
```

Building and Packaging

After you have created the Java class and supporting files as described in the preceding sections, you should build and package your provider `jar` file to be distributed to your Serena Release Manager server.

The compilation and packaging should be compliant with Java 6 and Tomcat 6.x.

1. Compile your sources. For example, use `ant` to compile and create a file with a name similar to the following:

   ```
   com.serena.alm.provider.fs.jar
   ```

2. Create a `zip` file with all the folders and properties files for the new provider. For example:

   ```
   provider_fs.zip
   ```

3. Copy the `zip` file to the folder structure under the `webapps` folder. For example:

   ```
   ..\Program Files\Serena\common\Tomcat\6.0\webapps\alm
   ```

Telling Serena Release Manager to Use This Provider

After you have built and packaged your new provider, you tell Serena Release Manager to use this provider, or register it, as instructed in the following procedure.

Add provider instructions (replace `provider_fs.zip` with your archive `zip` file).

To add provider instructions:

1. Copy your archive `zip` file to your target server. For example, `provider_fs.zip`.

2. Back up your Serena Release Manager common Tomcat Web server `alm` folder. For example:

   ```
   ..\Program Files\Serena\common\Tomcat\6.0\webapps\alm
   ```

3. Stop the Serena Common Tomcat service.

4. Unzip your archive `zip` file, such as `provider_fs.zip`, to your `*\Tomcat 6.0` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0
   ```

5. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
   ```

6. Open `providers.properties` in your text editor.

7. Add providers:

   a. Add your new development change request provider to `requests.providers.keys`. For example:

      ```
      requests.providers.keys = sbm_issues,fs_example
      ```

b. Add your new deployment units provider to `vault.providers.keys`. For example:

```
vault.providers.keys = dm_qlarius,fs_example
```

8. Save `providers.properties`.

9. Start the Serena Common Tomcat service.

Example

In the following example, the DCR provider `fs_example` has been added to the `requests.providers.keys` and the DU provider `fs_example` has been added to the `vault.providers.keys`. In this example, Serena Release Manager would retrieve requests from the `sbm_issues` provider and the `fs_example` provider, and would retrieve deployment units from the `dm_qlarius` provider and the `fs_example` provider.

`providers.properties`

```
# requests provider keys
requests.providers.keys = sbm_issues,fs_example
# vault provider keys
vault.providers.keys = dm_qlarius,fs_example
```

Configuring Release Manager to Use a Different Port

Serena Release Manager runs using the Serena Common Web server, which is an Apache Tomcat Web server. The Serena Release Control installer automatically installs and configures the Serena Common Web server to run on the default port of 8080. If this port is already in use by another application on your server, or if you already have an instance of the Serena Common Web server running on a different port on this server, you will need to decide how you want to proceed.

- Serena Release Manager is configured to use port 8080 by default, but changing the Web server to use port 8080 may impact other Serena products if they rely on a previously configured port. Make sure all Serena products using the same Serena Common Web server are configured to use the same port number, or install the products on separate servers so that they can use different Serena Common Web servers with different port numbers.

- Use the default installation and configuration procedures on the Serena Release Manager server in the following scenarios:

    - There is a non-Serena Tomcat, IIS, or other Web server installed on this server on a port other than 8080, and port 8080 is free.

    - There is a Serena Common Tomcat Web server already installed on this server on port 8080.

    - There is not a Web server on this server.

- If you want to use a different port for Serena Release Manager, you must change the port number as shown in Checklist for Changing the Port Number [page 145].

> **IMPORTANT!** The port change procedures do NOT replace or supersede the required installation and configuration procedures. Although it is possible to do the port changes as you are installing, these procedures assume that you have already completed the installation and system configuration procedures elsewhere in this document before beginning the port change procedures.

Checklist for Changing the Port Number

Procedure	Reference
Install and configure the Serena Common Tomcat Web server and Serena Release Control as usual. If you have already done this, you do not need to do this again.	See Installing Serena Release Control [page 28] and Release Automation Configuration [page 81].
Rerun the Serena Release Control installer at the command line with parameters to change the port the Serena Common Tomcat Web server runs on.	See Changing the Port on Which the Common Web Server Runs [page 145].
Configure the endpoints for the snapshots to point to the non-default port, and then promote the snapshots and deploy the process apps.	See Promoting the Snapshots [page 37].
Configure all RESTgrid widgets in the process app forms to point to the non-default port and then redeploy the process apps.	See Configuring a Non-Default Web Server Port in the Process Apps [page 146].
Change the port to which the Web Services WSDLs point and re-import the WSDLs.	See Changing the Web Services to Point to a Different Port [page 147].
When you are finished, publish and redeploy the process apps. As you deploy, verify that the endpoints of the process application destinations are pointing to the port number you specified during the installation rather than the default port number of 8080. If they are not, update them as needed before deploying.	See Publishing and Deploying the Process Apps [page 41].

Changing the Port on Which the Common Web Server Runs

The default port on which this is configured to run is 8080. If you want to use a different port, you must first install the Common Web server and Serena Release Control, and then change the port number as follows:

To change the Serena Release Manager Web server port number:

1. Invoke the Command Prompt, or command line interface, for your Windows environment. For example, from the Start menu, run `cmd.exe`.

2. At the command prompt, navigate to the folder where you downloaded the Serena Release Control installation file executable, `ALM.exe`. For example:

   ```
   cd Users\<username>\Downloads\ALMBuild\Win64
   ```

3. Depending on your operating system, enter the following command at the prompt:

   ```
   "ALM 32-bit.exe" /V"/L*v "%TEMP%\<logfilename>.log" TC_PORT=<port#>"
   ```

   or

   ```
   "ALM 64-bit.exe" /V"/L*v "%TEMP%\<logfilename>.log" TC_PORT=<port#>"
   ```

   For example, here is the command for a 64-bit installation to log the install and change the Tomcat Web server port to 1234:

   ```
   "ALM 64-bit.exe" /V"/L*v "%TEMP%\test_install.log" TC_PORT=1234"
   ```

The Serena Release Control installer appears.

4. Deselect all features except for **Provider** and click **Next**.

   The installer reconfigures the Serena Common Tomcat port to which Serena ALM is connected.

5. Continue with the next checklist item in Checklist for Changing the Port Number [page 145].

Configuring a Non-Default Web Server Port in the Process Apps

If you want to run the Serena Common Web server on a port other than 8080, you must change the port numbers in the Serena Release Manager process apps that have RESTgrid widgets. After you change the process apps, you need to redeploy them.

Changing the Port Number in the Forms

You must find the RESTgrid widgets in the forms, and update each occurrence of the default port number, 8080, to the port number for your Web server installation.

To change and redeploy the process apps:

1. Open the process app you want to change in SBM Composer. For example, open Release Package from the Application Repository.

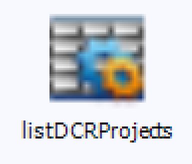
2. Display the **Visual Design** view.

3. Under **Forms**, select one of the forms. For example, select `createRelPackage`. For a list of forms that you should update, see Forms with RESTgrid Widgets [page 147].

   The selected form displays.

4. Verify that the form is checked out. If the message "This item is not checked out. Click here to check it out." displays at the top, click to check it out.

5. Scroll until you see a control that contains a RESTgrid widget and select it. For example, you'll see the RESTgrid widgets icon and the name of the control, such as:



6. Update the control as follows:

   a. In the **Property Editor** view, select the **General** tab.

   b. Click the **Configure URL** button.

   c. In the URL displayed at the top, change the port value of 8080 to the non-default port number you specified during your common Tomcat installation. For example, your modified URL would look something like this:

   ```
   http://localhost:8088/alm/services/ReleaseRequestService/getRequestProjects
   ```

   You should leave the host name pointing to `localhost`, since all Web services communication goes through `localhost` and Serena Release Manager uses configuration files to resolve the host names for integrating systems.

   d. Click **Update outputs**.

   > **NOTE** If you receive the error "Unable to Configure Service", you may need to change **designMode** to `true` and then retry.

   e. Click **OK**.

7. Save and check in your changes.
8. Continue for each RESTgrid widget control in each process app. See Forms with RESTgrid Widgets [page 147] for the list of default controls to change.
9. Continue with the next checklist item in Checklist for Changing the Port Number [page 145].

Forms with RESTgrid Widgets

The form controls in which you need to update the Web server port number are shown in the following table. This list is based on the default implementation of Serena Release Manager and may not be an exhaustive list in your implementation, so it is good practice to look at each form to see if it uses RESTgrid widgets.

Process App	Forms	Controls
Release Package	addDCRProjects	listDCRProjects
	addDepUnit	listDimCMBaseline, listZMFPackages
	addDevChgRequest	listRequests
	addDimCM_Projects	listDimCMProjects
	addZMF_Projects	listZMFProjects
	createRelPackage, createRPfromAR	listDCRProjects, listDimCMProjects, listZMFProjects
Application Release	addBusinessChangeRequest	RESTGridWidget
Release Train	addRFC	listRfcRequests
Deployment	newAutomationTask, newAutomationTemplate, editAutomationTask, editAutomationTemplate	gridApps, gridEnv, gridProc
	newVaultDimDeployTask, editVaultDimDeployTask	gridDepUnits, gridDepStages, gridDepAreas
	newVaultZMFDeployTask, editVaultZMFDeployTask	gridDepUnits, gridDeploymentSites, gridPromotionAreas
	newVaultZMFApprovalTask, editVaultZMFApprovalTask	gridDepUnits, gridApprovers

Changing the Web Services to Point to a Different Port

If you are changing the port that Serena Release Manager runs under, you must change the port to which the Web Services WSDLs point and re-import the WSDLs.

To change and re-import the Web services WSDLs:

1. From SBM Composer, open one of the Serena Release Manager process apps.
2. In the navigation pane, click **Extensions**.
3. Under **Web Services**, select one of the following Serena Release Manager Web services, RLMUtilServices or ReleaseRequestService.
4. In the **Property Editor** beside the **WSDL** field, click **Reimport**.
5. Change the port number to the one you are using.
6. Click **OK** to re-import the updated Web service.
7. Repeat for each of the Serena Release Manager Web services in each of the process apps except RLM_AUX and Environments, which do not use endpoints.
8. Continue with the next checklist item in Checklist for Changing the Port Number [page 145].

Activating Environment Association to Release Packages

Although you can create environments and report on their state in the default implementation of Serena Release Manager, you cannot associate the environments with release packages.

To activate this additional functionality, you can activate the underlying objects that have already been implemented. The JavaScript code is already included in the default implementation, so no shell changes are required.

To activate the existing environment form and functionality for release packages:

1. In SBM Composer, open the Release Package blueprint.
2. On the **Environments** tab form, add the button controls for **Add Environments** and **Remove Environments**.
3. In Serena Release Manager in the native SBM interface, create a report with the reference name that is referenced in the orchestration workflow.
4. Deploy the updated process app and test your changes.

Customizing the SSM Integration

You can associate SSM Change Management change requests with Serena Release Manager RFCs in the default implementation. Reports are configured to support the UI and provide relevant information about the RFC associations to release trains. Events in Serena Release Manager send information back to SSM and transition the related change requests as the release train moves through its workflow.

CAUTION! If you have the SBM Sample DB installed in the same instance of SBM as SSM, make sure to select SSM Changes from the Change Management process app rather than Change Requests from the SBM Change Request Management process app.

What Can You Change?

You can change the SSM integration as follows:

- Create the reports that SSM and Serena Release Manager use for the integration.
- Change the events within the release train workflow.
- Change the integration in SSM.

- Change the instance of SSM to which Serena Release Manager connects.
- Configure the Release Train non-Gantt calendar to display the SSM Requests along with the release train Production dates.

What is the Impact?

- If you change reports that impact the UI, the UI changes accordingly.
- If you change the reports or events used by SSM, you must change the related information in SSM to match the updated Serena Release Manager elements.
- If you change the release train workflow, you must assess and test the impacts for each affected transition and state.
- If you change references to Serena Release Manager elements in SSM, you must change the related information in Serena Release Manager to match the updated SSM elements.

How Do You Change It?

- You can create the reports in the SBM user workspace.
- For the Serena Release Manager-side changes, you can change the integration in SBM Composer in the Serena Release Manager RTrain process app.
- For the SSM-side changes, you can change the integration in SBM Composer in the SSM - Change Management process app.

Documentation References

- Documentation on using the default SSM-Serena Release Manager integration from SSM is in *Serena Service Manager ITIL Guide* in "Integration to Serena Release Manager".
- Documentation on using the default SSM-Serena Release Manager integration from Serena Release Manager is in *Serena Release Manager Getting Started Guide* in "Associating RFCs with Release Trains".
- Documentation on configuring workflow events in SBM is in the *Serena Business Manager SBM Composer Guide* in "Applications".
- Documentation on managing reports in SBM is in the *Serena Business Manager User’s Guide* in "Working with Reports".

Creating the Reports Used for the SSM Integration

To activate the integration, you must create the auxiliary table reports in Serena Release Manager that SSM uses for the integration.

To create the Release Manager reports used by SSM:

1. In SBM Composer, check your SSM - Change Management blueprint to get the report reference names used in your implementation.
2. In Serena Release Manager in the native SBM interface, select the RTrain process app.
3. Create listing reports with the reference names from the SSM blueprint.

   Example

   a. Create a report to select all release trains in the planning state as follows:

Title:	All Planned Release Trains
Reference Name:	AllTrains-Planned

Privilege Category:	Guest
Report Project:	Base Project
Columns to Display:	Official release name
	Production deployment start date
	Production deployment end date
Include items from Sub-projects	(Select)
Use Basic Conditions:	State in Planning

b. Create a report to select release trains within a selected date range as follows:

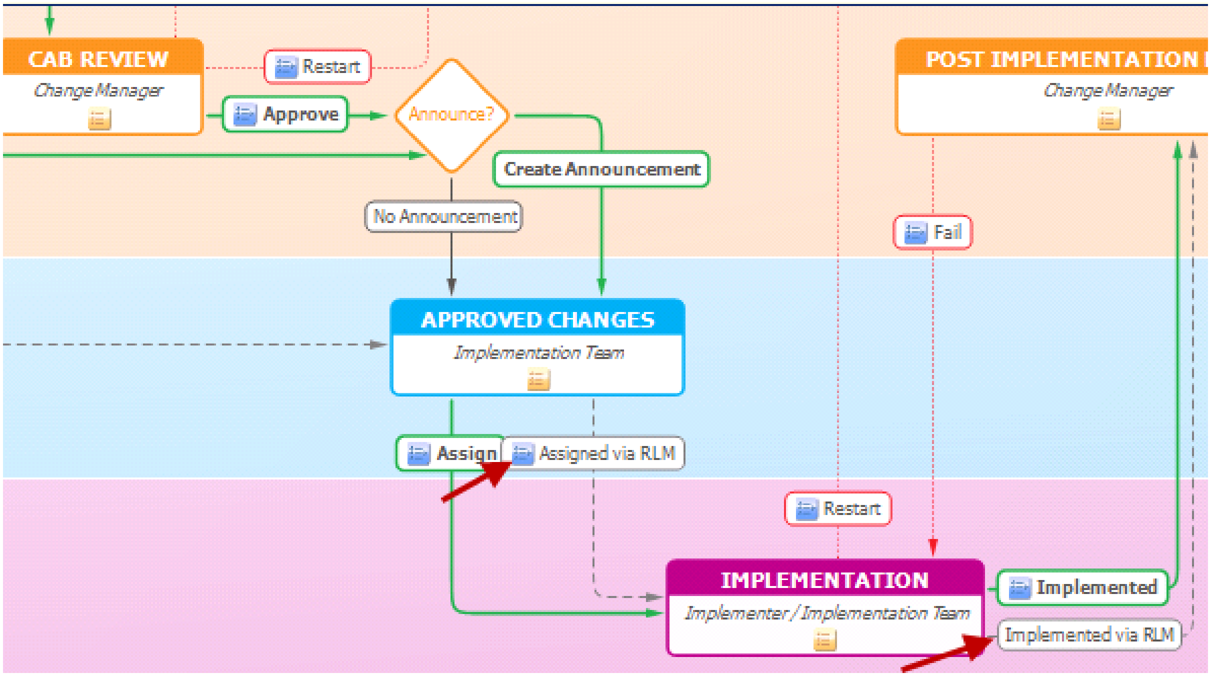
Title:	Suitable Release Trains
Reference Name:	Suitable_Trains
Privilege Category:	Guest
Report Project:	Base Project
Columns to Display:	Official release name
	Production deployment start date
	Production deployment end date
Include items from Sub-projects	(Select)
Use Basic Conditions:	State in Planning
	Production deployment start date = (Query At Runtime)
	Production deployment end date = (Query At Runtime)

Changing the Integration in SSM

You can change the integration to Serena Release Manager in SSM. Change the SSM integration according to the SBM and SSM documentation, along with your knowledge of the integration on the Serena Release Manager side.

Integration Points in the SSM Workflow

The SSM integration points are in the Change Management workflow as shown in the following figure.



The **Assigned via RLM** and **Implemented via RLM** transitions are implemented in the **Approved Changes** and **Implementation** states respectively. The transitions for linking a release train are available from any state. The full SSM Change Management workflow is shown in the *Serena Service Manager User's Guide*.

Configuring the SSM Feed for the Release Train Calendar

You can configure the non-Gantt Release Train calendar to display the SSM request dates along with the associated release train Production dates.

You must create the associated report in SSM provide the calendar feed. The report is referenced in the Serena Release Manager calendar user interface file, ../`template/shell/alm/config/calendar.jsvar`.

To create the SSM report for the calendar:

1. In SSM, create a report as follows:

Title:	SSM.Approved.Changes
Reference Name:	SSM.Approved.Changes
Privilege Category:	Guest
Report Project:	Changes
Columns to Display:	Change ID
	Title
	State
	Implementation Start Date
	Implementation End Date

Search Filter	
Include items from Sub-projects	(Select)
Use Basic Conditions:	State in APPROVED CHANGES
	and
	Linked to Release = Yes
Additional Options:	
Optional HTML Template:	jsonlist.htm

Changing the Instance of SSM that Release Manager Uses

You can change the instance of SSM to which Serena Release Manager connects through the Serena ALM Configurator **RFC** page. In the default implementation, SSM detects that Serena Release Manager is installed if both are in the same instance of SBM.

Setting Maximum Associations for Release Control Objects

To ensure that you don't overload your system by trying to deploy too many deployment units in one process, you can set maximum limits for the number of hierarchical associations for release trains, application releases, and release packages.

By default, Serena Release Manager sets the maximum number of hierarchical associations to 50 each. For example, application releases per release train, release packages per application release, and deployment tasks per release package.

Depending on the bandwidth of your servers and the demands your deployment processes make on the participating servers, you may choose to raise or lower the maximum limit.

To change the maximum values for the associations:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
   ```

2. Open the `rlm-sbm.properties` file.

3. Update the value of one or more of the following entries as needed:

   ```
   # URM_RELEASE_TRAIN

   release.train.maximum.application.releases=50

   #USR_APPLICATION_RELEASE

   application.release.maximum.release.packages=50

   # USR_RELEASE_PACKAGE

   release.package.maximum.deployment.tasks=50
   ```

4. After updating the file, restart the Serena common Tomcat service.

> **CAUTION!** Do not change any other entries in the `rlm-sbm.properties` file. The other entries are used by Serena Release Manager Web services and any changes could cause Serena Release Manager to stop working correctly.

Customizing the User Interface

The Serena Release Manager user interface is populated using underlying SBM foundational objects and a UI shell layer written in HTML and JavaScript. You can usually change the information that appears on lists quite quickly by changing the underlying reports.

To change the UI shell itself requires a more in-depth knowledge of the product architecture. If you want to change elements there, please contact Serena Services for advice.

If you want to send input feeds of set a date-based items from an integrating product to the Release Train calendar, see the implementation of the SSM request calendar feeds and use that as an example.

Troubleshooting

This section gives information on troubleshooting issues in Serena Release Manager.

Troubleshooting Overview

When you encounter an issue in Serena Release Manager, there are several places you can look to determine the problem.

Depending on the area of the product where the error occurs, you may use one or more of the following:

- Information displayed in the user interface.
- Information displayed in the Serena ALM Configurator.
- Information stored in installer log files.
- Information stored in the suite execution log file, `alm.log`.
- Troubleshooting information for integrating products, such as SBM, Dimensions CM, ChangeMan ZMF, and Serena Release Automation.

Information from the User Interface

Serena Release Control provides as much information as possible in the user interface to help you determine the cause of failures.

Error Messages

Error messages displayed in Serena Release Control are your first indication of problems that have occurred. In many cases, the message will give you enough information to help you resolve a problem. For example, if you have not filled in a required field, the error message will prompt you to do so.

If an error message is returned from one of the integrating products, it may not direct you to the exact solution to the problem. See Symptoms and Solutions [page 156] for more assistance in these situations.

Activity Log

When you deploy a release package, you can click the **Activity Log** tab in the Release Package view to see the status of the deployment tasks that are initiated. This lets you know if the deployment task was successfully initiated and whether it successfully completed or failed.

Activity Page

You can monitor release package deployment progress in real-time using the **Activity** page. This page lists all active release packages that have been deployed within a designated time period and gives visual indicators of in progress, complete, or failed status.

History

To see the change history of a release train, application release, release package, or deployment task, click the **History** tab in that item's view. This shows the date and time of the change, a description of the change, and the user who made the change.

Information from the ALM Configurator

You can use the Serena ALM Configurator to help determine and resolve connection issues.

From the ALM Configurator, click the following links in the navigation pane to display the corresponding pages.

- **CONFIG**: Verify and change connection information as needed.
- **SHOW LOG**: Show and analyze the product log file.
- **SERVICES**: List the Web services and verify that they are running.

Information from Log Files

Log files are created by the installer and by the Serena Release Manager product. Both of these files are useful for troubleshooting.

Execution Log File

The product log file is `alm.log`. Logging is done through the common Tomcat Web server using the Apache log4j Java-based logging utility.

The `alm.log` file contains status messages returned to the AFS server. The level of messaging depends on the settings in the log4j settings. Debugging and append are on by default.

You can view the log contents using the Serena ALM Configurator or using any text editor.

The default location of the `alm.log` file is the catalina home directory, set by the variable `${catalina.home}`. For example:

```
..\Program Files\Serena\common\tomcat\6.0
```

To change the location of the log file:

1. Navigate to the Serena Release Manager common Tomcat Web server `classes` folder. For example:

   ```
   ..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
   ```

2. Open the `log4j.properties` file.
3. Change the following line to specify the location for the file.

   ```
       log4j.appender.alm.file=<drive:path>\alm.log
   ```

Installer Log Files

The installer creates log files that contain the full trace log from the installation process, successful or otherwise.

The default location of the installer log files is the directory set by the variable %TEMP%. You can change directory into this folder. For example:

```
>cd %TEMP%
```

The installer log files are as follows:

```
Install_SUITE_comp32.log or Install_SUITE_comp64.log
```

The following file appears if the check box **Show the Windows log file** is selected on the final installation dialog box, before you click **Finish**:

```
summary.rtf
```

This file shows the content of the **Installation Summary** page of the installation wizard. This is shown at the end of a successful installation, and shows details of the files installed onto the system during that installation run.

You can view the log file contents using any text editor. If there is an issue with the installation you should supply these files to Serena Support.

Symptoms and Solutions

Symptoms of unexpected results and their possible solutions are explained in this section as follows:

- Installer Errors [page 156]
- Snapshot Promotion Errors [page 156]
- Cannot log into Serena Release Control [page 158]
- Cannot Log into Serena ALM Configurator [page 158]
- User Interface Display Issues [page 160]
- Create Release Fails with a Check Uniqueness Error [page 161]
- Unable to update landing page layout [page 161]
- Matches Not Found for Selections [page 162]
- No Change Package Data Displayed in ZMF Deployment Tasks [page 162]
- Release Package Deployment Fails [page 162]
- Slow Response Time [page 164]

Installer Errors

If the installer fails, here are some possible solutions.

Common Tools files are missing from the install

If it doesn’t detect the Serena Common Web server, the installer may fail with a message similar to this message:

> "Common Tools files are missing from the install. Please ensure these files are present under the common folder before continuing with this install."

If you have Serena Common Web services installed, check to make sure the services are started. If they aren’t, start them.

If you do not have Serena Common Web services installed, you must make sure the Common folder for the Serena Common Web services installer is in the same folder as the `ALM.exe` file and that the folder has the Common Web services files.

Snapshot Promotion Errors

If the promote of a snapshot fails or gives warning messages, here are some possible reasons and solutions.

The SBM environment endpoints are not mapped properly

If the promotion of a snapshot fails, the message in the log may give an error message similar to one of the following:

```
ERROR -- Can't deploy a process app with orchestration to an environment
  that doesn't have target servers defined.

ERROR -- Cannot deploy BPEL definition for process model alf/
  13db576c-5bec-4115-8ea1-56b44d7f0ffb/ - <soapenv:Reason
  xmlns:soapenv="http://www.w3.org/2003/05/soap-envelope"><soapenv:Text
  xml:lang="en-US">The endpoint reference (EPR) for the Operation not
  found is /eventmanager/services/ALFAdmin?ns=00000 and the WSA Action =
  null</soapenv:Text></soapenv:Reason>.

Failed to complete the promotion to server "SBM Event Manager." at 1/18/
  12 10:19 AM.
```

Look at the SBM environment target servers and verify that they are set up properly.

Some common oversights are:

- Selecting the same server type twice, such as System Event Manager or BPEL Server (JBPM).
- Pointing both server types to the same endpoint URL.

The promotion succeeds but gives warnings

If the promotion of a snapshot succeeds but gives warning messages that concern you, you may or may not need to take further action.

Warnings you can ignore

Warning messages similar to one of the following can be ignored:

```
WARN -- Import: Invalid Data 'b320b63f-f08b-44ed-8803-806acc663278' in
  node 'LastModifierID'.

WARN -- Import: Invalid Data 'b320b63f-f08b-44ed-8803-806acc663278' in
  node 'AuthorID'.

WARN -- Import: Invalid Data '19c59fdf-f13d-4b1a-a07c-0ffca1c14a37' in
  node 'UserID'.
```

These warnings occur because the snapshot was captured on a system that had data populated and this data doesn’t exist on the target system. This is not a problem, as you will create your own data in the target system.

Warnings that require further action

Warning messages similar to one of the following should not be ignored:

```
WARN -- Unable to map a parameter for web service call 'Mashup
  Event.EventNotice' made from transition 'Done' because field
  'Application' in table 'Deployment' could not be created.

WARN -- Unable to map a parameter for web service call 'Mashup
  Event.EventNotice' made from transition 'Fail' because field 'Release
  Package' in table 'Deployment' could not be created.
```

These warnings occur because there are dependencies between snapshots. When there is a two-way dependency, one of the dependent snapshots must be promoted again after the snapshot it depends on is promoted.

The easiest way to resolve the mappings is to promote all snapshots once and then promote any snapshots that had the mapping warnings again.

Cannot log into Serena Release Control

If the Test Connection is successful when you configure the destination endpoints for the snapshots but Serena Release Control fails to appear in SBM, verify that the Serena Release Manager service is running in the common Tomcat Web server.

Verifying the Web Services Connection

To verify the Serena Release Manager Web Services in Apache Tomcat:

1. In your Web browser, browse to the home page for your Tomcat installation. For example:

   ```
   http://localhost:8080
   ```

   The **Serena Common Tools** page appears.

   If you do not see this page, the common Tomcat Web server is not running or you may have entered an incorrect host and port number combination.

2. After you have verified that the Serena Common Tools Web server is running, browse to the `alm` subdirectory of your Tomcat installation. For example:

   ```
   http://localhost:8080/alm
   ```

3. Log into the Serena ALM Configurator.

4. In the navigation pane, click **List Services**.

Verify that the Serena Release Manager Web services are listed and in active status as follows:

- **RLMUtilService**
- **ReleaseRequestService**
- **DeploymentAutomationService**
- **DeployUnitService**

If any of these are not active, double-check your configuration for that Web service and start the Web service.

Cannot Log into Serena ALM Configurator

If you cannot log into the Serena ALM Configurator, check the following.

Error Obtaining Security Token (DEF224185)

If when attempting to log on to the Serena ALM Configurator, you receive the error:

```
ALF SSO Gatekeeper error has occurred: Error obtaining security token.

Detail

Validation of WS-Federation token failed with code 40:Token issuer not
  allowed.
```

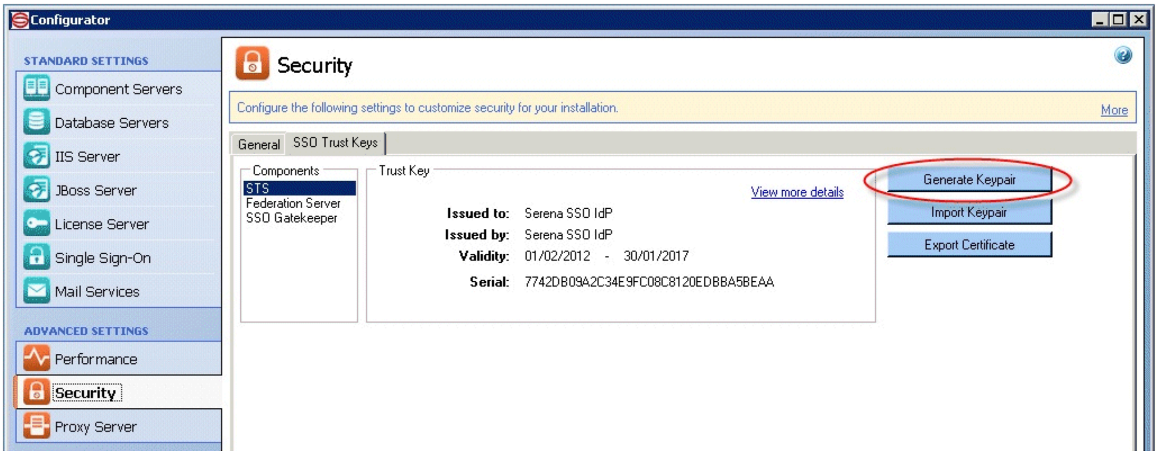
You will need to update your SSO STS certificates by carrying out the following steps:

On the server where SBM is installed:

If you are using SBM 10.1 to 10.1.1.3:

1. Start SBM Configurator and navigate to Security | SSO Trust Keys | STS.

2. Use the **Generate Keypair** button to regenerate the STS certificate.



Security

Configure the following settings to customize security for your installation.

Issued to: Serena SSO IdP

Issued by: Serena SSO IdP

Validity: 01/02/2012 - 30/01/2017

Serial: 7742DB09A2C34E9FC08C8120EDBBA5BEAA

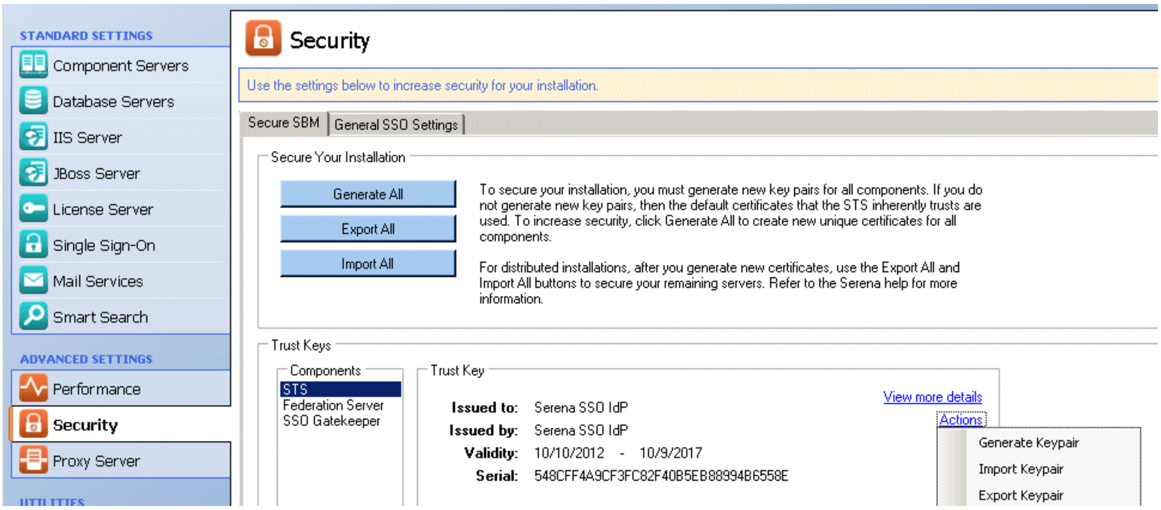
3. Use the **Export Certificate** button to export the newly generated certificate to a `.pem` file (for example to `C:\Temp\sts.pem`).

4. Click **Apply** to apply the changes.

If you are using SBM 10.1.1.4:

1. Start SBM Configurator and navigate to Security | Secure SBM | Trust Keys | STS.

2. Under **Actions**, select **Generate Keypair** to regenerate the STS certificate.



Security

Use the settings below to increase security for your installation.

To secure your installation, you must generate new key pairs for all components. If you do not generate new key pairs, then the default certificates that the STS inherently trusts are used. To increase security, click Generate All to create new unique certificates for all components.

For distributed installations, after you generate new certificates, use the Export All and Import All buttons to secure your remaining servers. Refer to the Serena help for more information.

Issued to: Serena SSO IdP

Issued by: Serena SSO IdP

Validity: 10/10/2012 - 10/9/2017

Serial: 548CFF4A9CF3FC82F40B5EB88994B6558E

3. Under **Actions**, select **Export Certificate** to export the newly generated certificate. Save this as a `.pem` file (for example to `C:\Temp\sts.pem`).

4. Click **Apply** to apply the changes.

On each machine where the Serena Common Tomcat is installed:

1. Stop Tomcat.

2. Copy the `sts.pem` file to that machine (for example to `C:\Temp\sts.pem`).

3. Under the folder where the common Tomcat is installed, for example:

```
..\Program Files\Serena\Common Tools\tomcat\6.0\...

..\Program Files\Common\tomcat\6.0\...

..\Program Files\Serena\Dimensions 12.2\Common Tools\tomcat\6.0
```

4. Navigate to

```
\alfssogatekeeper\conf
```

and make a backup of the `truststore.jks` file.

5. Under the Common Tools or Common folder, Navigate to

   ```
   \jre\6.0\bin.
   ```

6. Delete the existing STS certificate, for example using the following command:

   ```
   keytool -delete -keystore "C:\Program Files\Serena\Common
   Tools\tomcat\6.0\alfssogatekeeper\conf\truststore.jks
   -alias sts
   ```

   Enter the default password *changeit* when prompted.

7. Import the certificate from the `C:\Temp\sts.pem` file into `truststore.jks`, for example by using the following command:

   ```
   keytool -import -keystore "C:\Program Files\Serena\Common
   Tools\tomcat\6.0\alfssogatekeeper\conf\truststore.jks
   -file "C:\temp\sts.pem" -alias sts
   ```

   After entering the password, when prompted with *Trust this certificate? [no]:,* reply **Y**.

8. Restart Tomcat.

If this is the Dimensions CM Server:

Also do the following:

1. Stop the Dimensions Listener service.

2. Create a backup of

   ```
   C:\Program Files\Serena\Dimensions 12.2\CM\dfs\sts.pem
   ```

3. Copy the file `C:\Temp\sts.pem` to

   ```
   C:\Program Files\Serena\Dimensions 12.2\CM\dfs\sts.pem
   ```

4. Restart the Dimensions Listener service.

User Interface Display Issues

If the Serena Release Control user interface and data doesn’t appear as it should, here are some possible symptoms and solutions.

You can’t view something you created or added

If you add something and it doesn't appear in the place it should in the UI, or information you expect to see in a view does not appear, you may not have proper privileges, roles, or ownership set for Serena Release Control in SBM.

Examples:

- If you added release trains and they do not appear in the inbox in the **Manage All Items** section, your privileges probably aren’t set properly.

- If you created a deployment process template and do not see the option to add deployment tasks, the owning role may not be enabled for the RLM Aux project.

- If you created an item as one user and log in as another, you may not see the item you created as the other user, depending on privilege settings and ownership.

Some of the UI elements are missing

If your UI looks correct, but some elements, such as the spell check icon, do not appear, ensure that you have put the files in the SBM database during the installation, upgrade, or after customizing and redeploying the process apps.

The UI shows outdated elements

If your user interface retains elements from a prior release of Serena Release Manager after an upgrade, new installation, or customization, you may need to clear and refresh your browser cache. This occurs because certain UI elements are stored in the browser cache for faster refresh time.

Release trains are not appearing on the Calendar page

If your release trains do not appear on the calendar, make sure that the following are true:

- The release trains have been created and you are logged in with a user who has the privileges to view them. For example, can you view the release train from your inbox?
- The release trains have to and from schedule dates for the last stage, such as Production. If not, you can view the release train from your inbox and edit it to add the schedule.
- You have completed the suggestions in the preceding troubleshooting sections.

Create Release Fails with a Check Uniqueness Error

When you try to create a release train, application release, or release package, the operation may fail with an error similar to the following:

> Error occurred during web service invocation:
>
> SOAP Fault Code: env:Client
>
> SOAP Fault String: checkUniquness: Blank: The error occurred during the execution of the orchestration workflow.

If you receive this error even though the name and version are unique, this means the check uniqueness call is failing. This is the first Web services call in the orchestration workflow, so this message could simply mean that there is a problem with the Web services.

The Web services are using the wrong port number

The check uniqueness error may indicate that the Serena Release Manager Web services are defined for a different port number than the one on which the Serena Common Tomcat services are currently running. If you are using a non-default port number (not 8080), this message may indicate that you have not changed the port number in all of the Web services WSDLs.

An incorrect version of the Web services is present

Make sure that the correct version of the `alm.war` file is installed under the Serena common Web services and that no older version of the `alm.war` file is present in the `..\Serena\common\tomcat\6.0\webapps` folder. You can use the Serena ALM Configurator to see if the Web services are running.

The SBM connection properties are not set properly

Make sure that the `sbm-client-connection.properties` file has the correct URL for the Serena Release Manager to SBM connection, and that is has a valid and fully authorized username and password. This is now a required configuration to enable you to create objects in Serena Release Manager. If this connection is not configured properly, you will receive a `checkuniquness` error.

Unable to update landing page layout

If a user cannot change the landing page, check their privileges for the ALM_USER_SETTINGS table in the SBM Application Administrator. To change the landing page layout in Serena ALM Settings, users must have the privileges Submit, Update, Delete, and View for the ALM_USER_SETTINGS table.

Matches Not Found for Selections

If selections from integrating systems are not found, such as projects from Dimensions CM or applications from Serena Release Automation, here are some possible solutions.

We did not find any matches for your request (error 401 or 404)

If Serena Release Manager fails to find any matches for your request, for example when you select a project for a release package or click **Add development change requests**, this indicates that the connection to the provider is not completing successfully. There are several things that can cause this.

User credentials must match in both products

First check the `alm.log` file for specific error messages.

If you see a message similar to the following in the alm.log file,

> DimClientException ... Error: Not an authorized user

check to make sure that the same administrative password is set up with the same password in both SBM and Dimensions CM.

SSO must be enabled in both products and share an SSO server

Verify that both SBM and Dimensions CM have SSO enabled and share the same SSO server.

SSO must be selected for each RESTgrid widget

The security token may not be included in the URL the RESTgrid widget uses to pass to the SSO server. The **Use SSO authentication** check box is set by default for each RESTgrid widget to enable the security token to be included in the URL. See Configuring SSO in RESTgrid Widgets [page 41] for more details.

Provider file entries cannot be commented out or deleted

You cannot comment out or delete provider file entries. If you do, a null pointer is passed to the DeploymentUnitSkeleton.getRLMService.

If you have commented or deleted values in the provider configuration files, you must restore the entries, leaving values blank for any entries that you do not want to use. See Provider Configuration [page 93].

We did not find any matches for your request in an automation deployment task

If Serena Release Manager fails to find any matches for your request when you try to select a process for an automation deployment task, verify the following:

- The desired application, environment, process, and server combination is defined in Serena Release Automation.
- The values used for the connection to Serena Release Automation are correct.

No Change Package Data Displayed in ZMF Deployment Tasks

If there is no change package data displayed in the ZMF deployment task, look at the message at the bottom left of the page. If it says "Waiting for localhost", it's still loading.

If this is not the problem, recheck your configuration and make sure the HTTP server is running on the port you specified in the HTTP Server setting in the Serena ALM Configurator **ZMF** tab.

Release Package Deployment Fails

If deployment of a release package fails, here are some possible solutions.

A deployment vault task fails when you deploy a release package

Before you try deployment tasks in Serena Release Manager, make sure that the same type of task works in native Dimensions CM.

If you are sure the task works in native Dimensions CM, check the **Activity Page** and **Activity Log** tab for information. If those do not give enough information for you to identify the problem, check the details in the `alm.log` file.

Verify that the connection requirements are met

A common source of the problem is the user ID setup. Make sure that all of the requirements are met as follows:

- The same user ID and password must be used in both SBM and Dimensions CM.
- SSO must be enabled for both SBM and Dimensions CM on the same SSO server.
- The user ID must be given a role in the Serena Release Control projects, such as Release Packages and Deployment Tasks.

If the deployment task fails with the error: Project was not found

If your deployment of a Dimensions CM or DVM deployment task fails with an error similar to the following, make sure that you specified the VAULT parameters in all upper case in the provider file, such as `dm_qlarius.properties`.

```
"Deployment of unit VAULT:V_QA_BASE1 to area(s) V_PRE-PROD_AREA has
  failed : Project was not found"

"Promotion of deployment unit VAULT:V_QA_BASE1 to stage PRE-PROD has
  failed : Project was not found."
```

This also causes a message similar to the following to be generated in the log file:

```
10-23@04:29:03 DEBUG [DimClientException.java:28] [max] :
  DimClientException happened : Project was not found.

10-23@04:29:03 ERROR [RLMUtilServiceSkeleton.java:519] [max] : Error:
  Deployment of unit VAULT:V_QA_BASE1 to area(s) V_PRE-PROD_AREA has
  failed : Project was not found.
```

Check for an SbmDeployUnitHelper error message

If you receive an error in the product log file similar to the following:

```
Error

java.lang.NullPointerException: null at
  java.util.StringTokenizer.(Unknown Source) ~[na:1.6.0_12] at
  java.util.StringTokenizer. Unknown Source) ~[na:1.6.0_12] at
  com.serena.alm.sbm.client.internal.util.hlp.
  SbmDeployUnitHelper.getRelatedByIds (SbmDeployUnitHelper.java:175)
```

check the `rlm-sbm.properties` related deployment unit ID table value to ensure it is entered exactly as follows.

```
deployment.extfield.relatedDeployUnitId=RELATED_DEPLOY_UNITS
```

The value should be plural, not singular. If you have upgraded from a pre-release version of Serena Release Manager 2.1 and did not replace the `rlm-sbm.properties` file with the latest version, you could encounter this issue.

An automation deployment task fails when you deploy a release package

If an automation deployment task fails when you promote a release package, test the server process in native Serena Release Automation.

If the process works in native Serena Release Automation but not in Serena Release Manager, here are some other things to try:

- Verify that the Serena Release Automation service is running properly.
- Close the Deployment Task dialog box and reopen it.
- Clear the Web browser cache and retry.

Slow Response Time

A number of factors can affect response time across the network. Some things to check if you are experiencing slow response time include the following.

Using a single physical Server for Serena Release Manager

If you install Serena Release Manager, all SBM server components, all Dimensions CM server components, and Serena Release Automation on the same physical server, you may experience slow response times. The performance of a single server configuration depends on the physical memory allocation to the server, processor type and speed, level of application usage, and network configuration factors such as routing to client machines and network latency.

In medium to large organizations, heavy usage of these applications can have a negative impact on performance. For optimal response time and end user productivity, Serena suggests a minimum of four servers be used for the Serena Release Manager suite.

For example, a recommended architecture is to install SBM, Dimensions CM, and Serena Release Automation on separate physical servers and make use of a dedicated database server to house the SBM database and the Dimensions CM database.

For small scale usage, testing, and proof of concept purposes, installing the entire suite on a single high specification server should not pose a problem.

Workflow Reference

Each major aspect of a release, from the Release Train level to the Deployment Task level, has a lifecycle associated with it. The default release process lifecycles in Serena Release Manager are based on typical release workflows.

The states in the lifecycle reflect the actions users take in Serena Release Control as they work with release information. The workflow information is reflected in the actions that appear on the user interface. As you use Serena Release Control, the user interface leads you through the workflow, so you always know the state of the release objects and what actions are pending.

This section gives a reference of workflows provided in the default version of Serena Release Manager. The workflows implemented for your organization may be customized so that they differ from these. The most reliable way to analyze your workflows is to open them in SBM Composer.

Workflow Relationships

Serena Release Manager is a hierarchical system, with Release Train as the highest level organizing entity, Application Release next, and so on. Release Packages can optionally participate in the hierarchy or exist standalone. Deployment Tasks are dependent on Release Packages.

Workflow Dependencies

The two main dependency relationships among the workflows are restrictions and automations.

Workflow Restrictions

Most of the default workflows allow editing and associating objects to other objects only when items are in the Development or Planning states. For example, you can associate application releases with a release train only when that release train is in the Planning state. You can associate release packages with an application release only when the application release is in the Planning state.

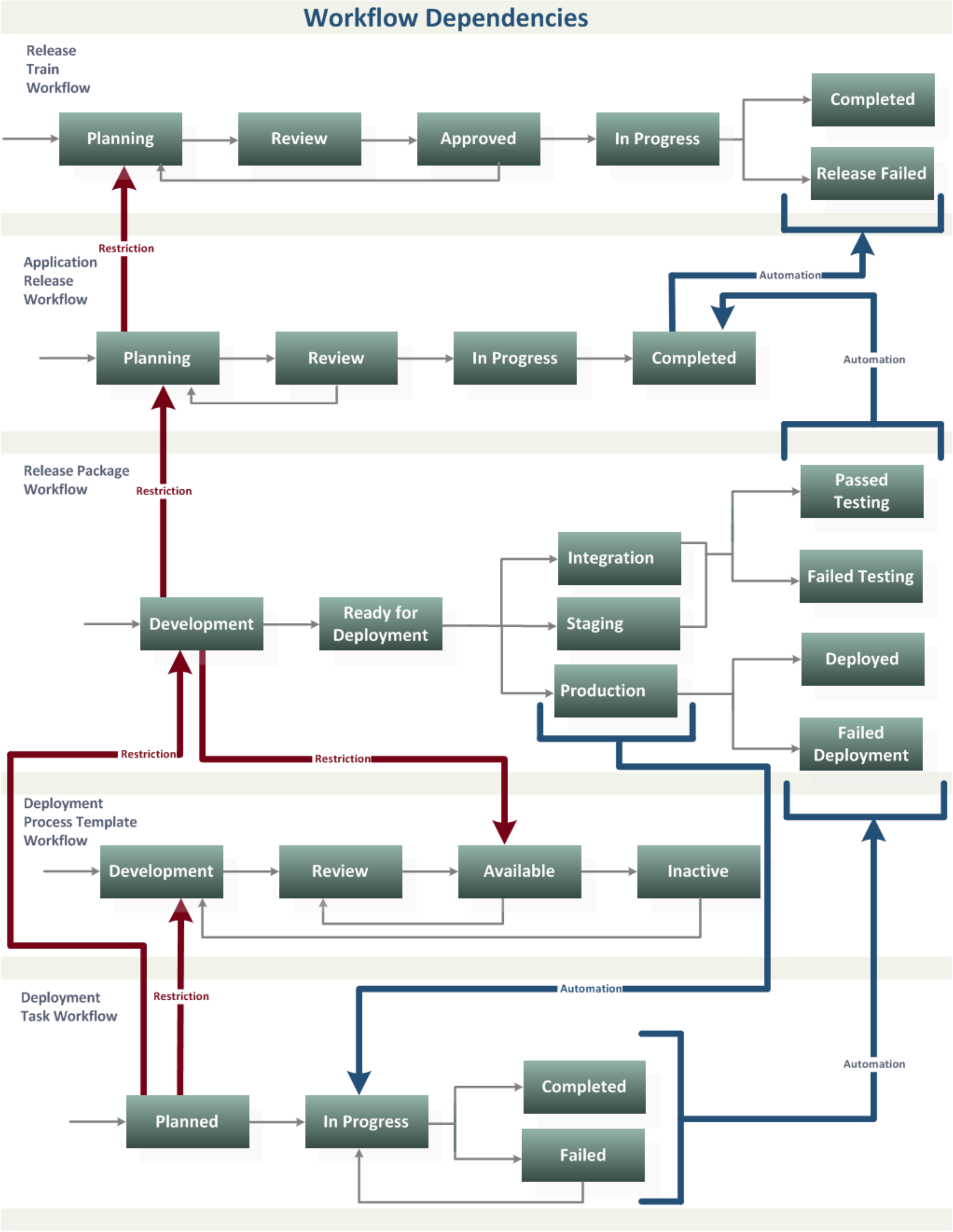
Workflows for Deployment Process Templates are standalone, although deployment process templates populate the deployment tasks for release packages and in that respect have a link to the workflows for both Deployment Tasks and Release Packages. Workflows for environments are completely standalone by default.

Workflow Automations

Many of the workflows are moved to completion states automatically when associated objects are complete. The automation is usually initiated at the lowest level of association and moves up the hierarchy as each level of release activities are completed. For example, after all deployment tasks for a release package reach completion, the release package is marked complete. After all release packages for an application release reach completion, the application release is marked complete.

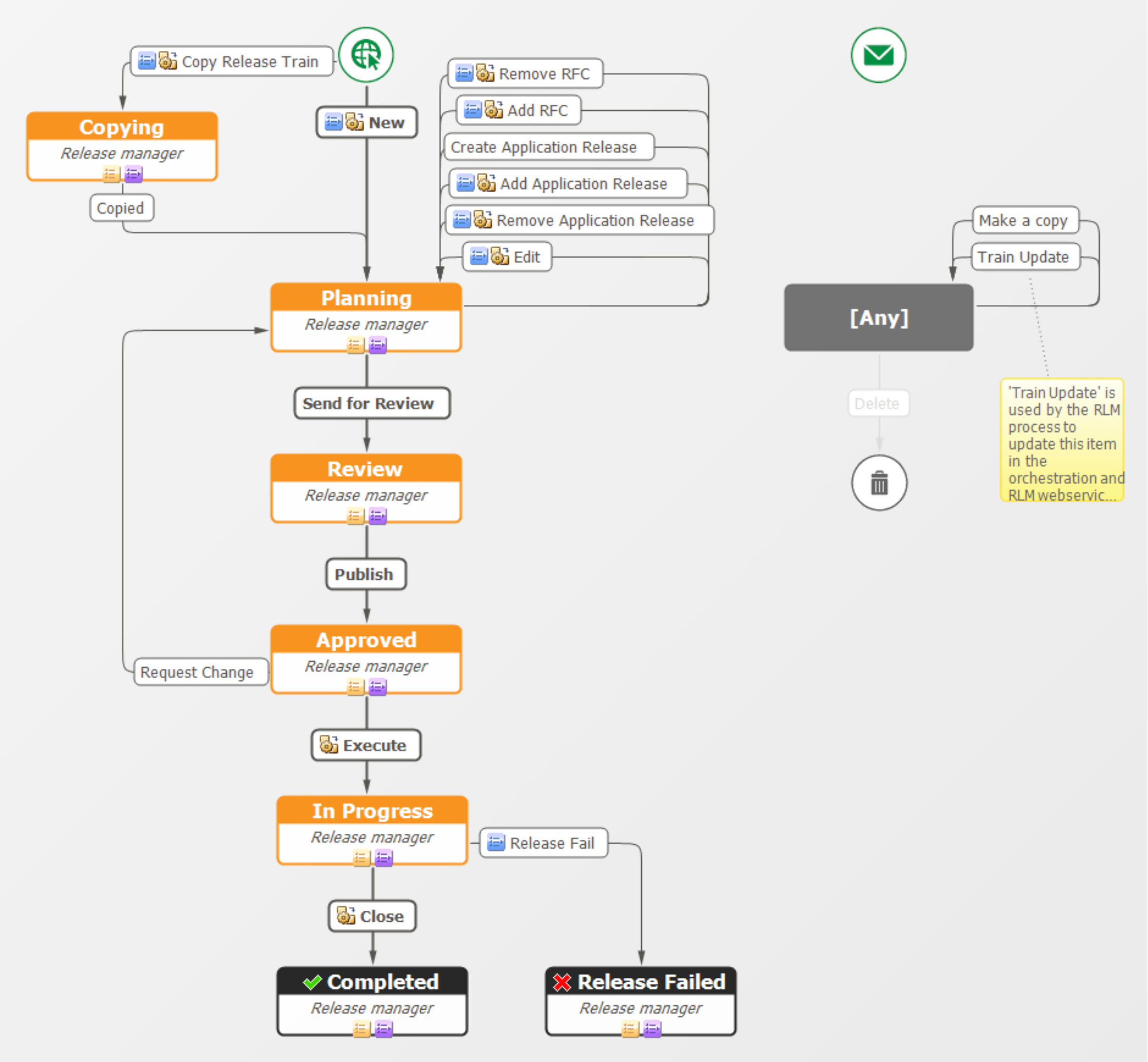
When all application releases for a release train reach completion, the release train is marked complete.

The dependencies among the default workflows are shown in the following figure.



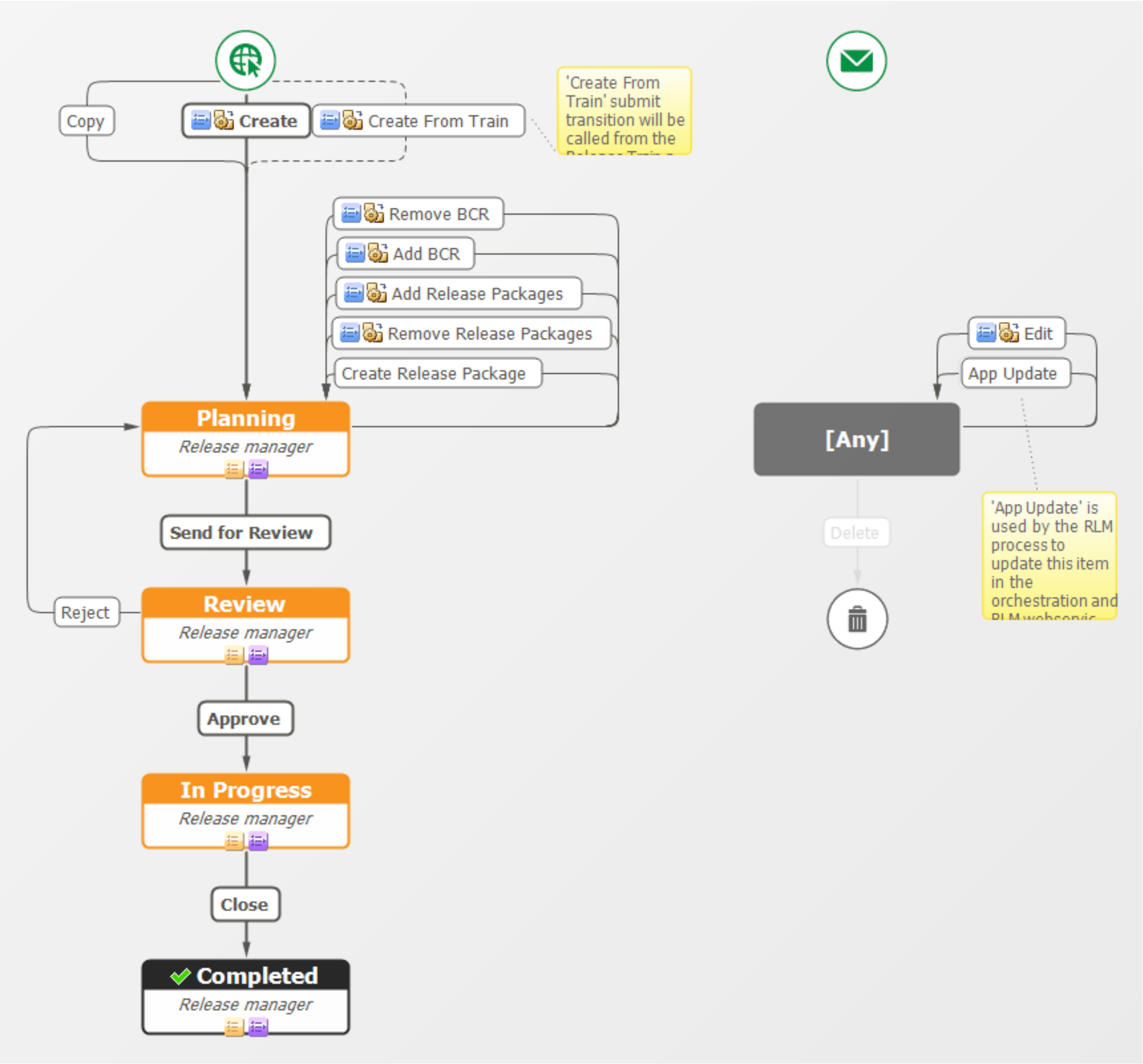
Release Train Workflow

The Release Train workflow in the default version of Serena Release Manager is shown in the following figure.



Application Release Workflow

The Application Release workflow in the default version of Serena Release Manager is shown in the following figure.

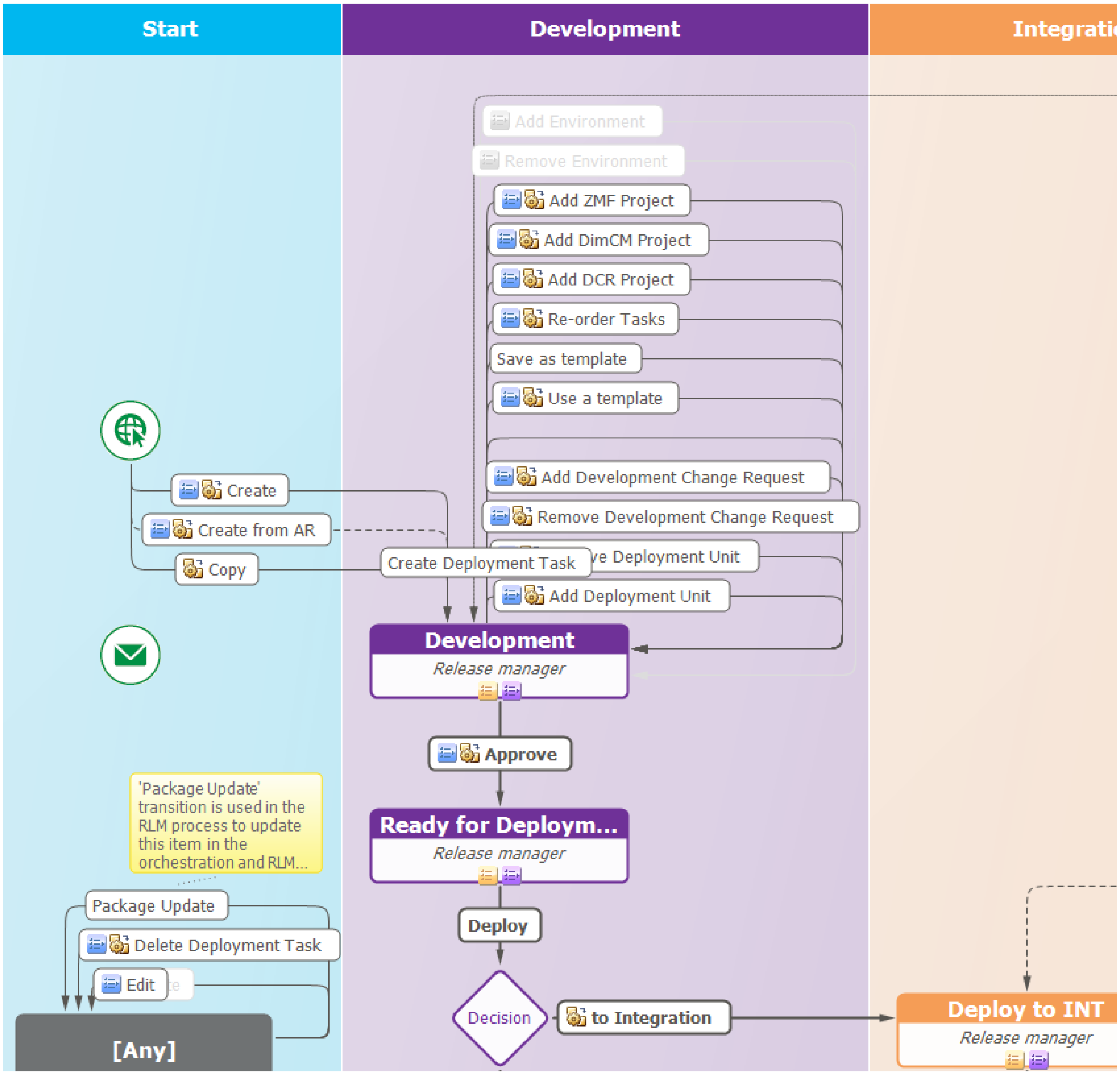


Release Package Workflow

The Release Package workflow in the default version of Serena Release Manager is shown in the following figures. Because the workflow is a conditional workflow with multiple swimlanes, the workflow is shown in parts for ease of viewing.

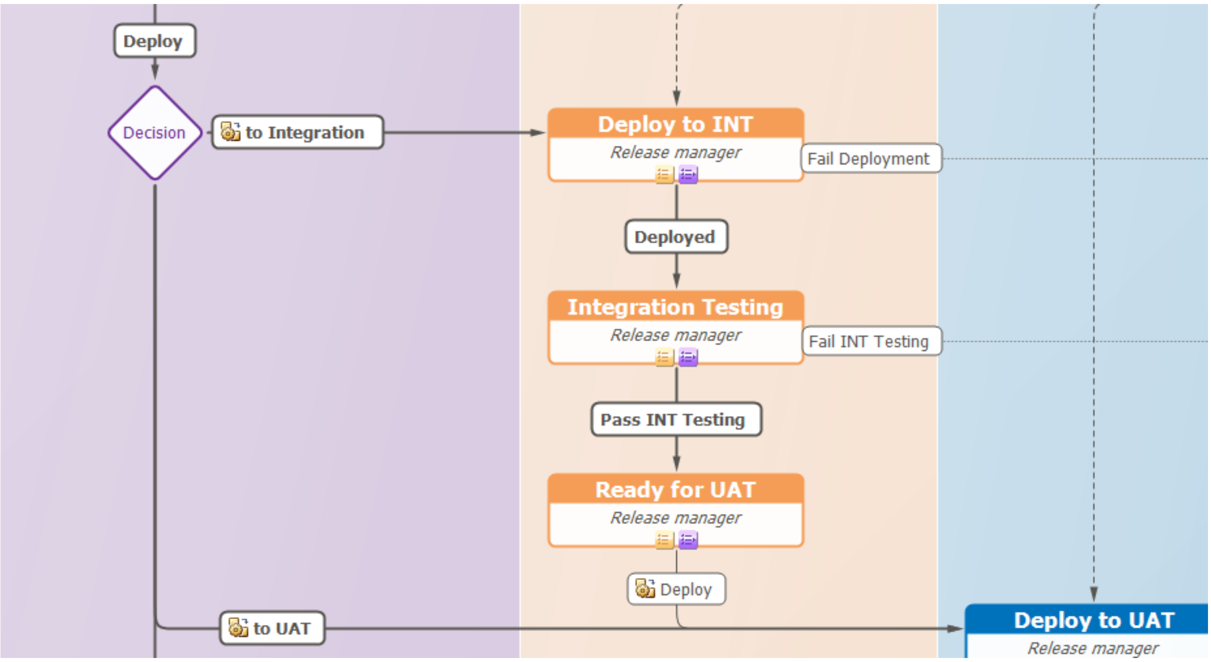
Start and Development States

The Start and Development states swimlanes of the Release Package workflow in the default version of Serena Release Manager are shown in the following figure.



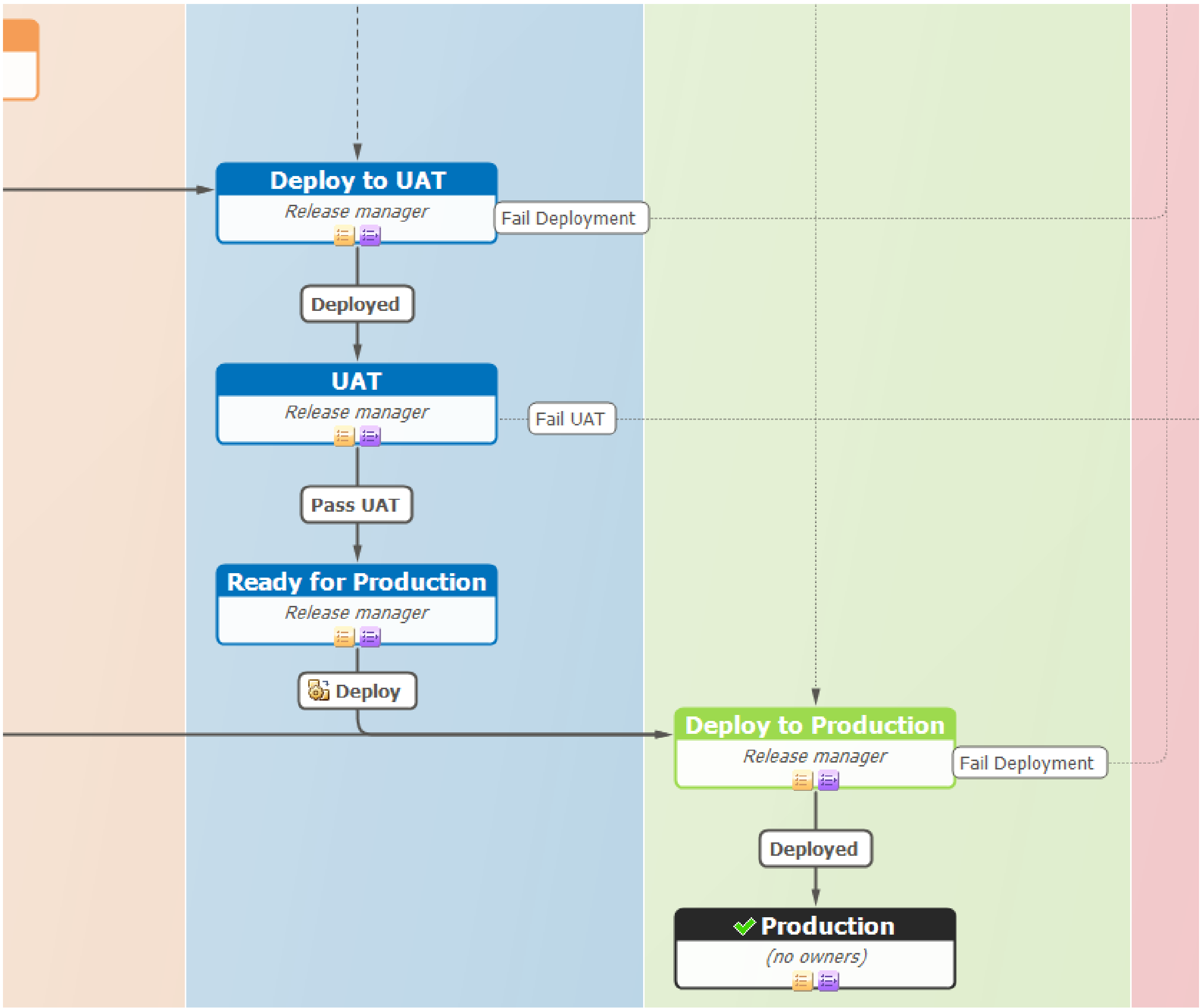
Integration State

The Integration state swimlane of the Release Package workflow in the default version of Serena Release Manager is shown in the following figure.



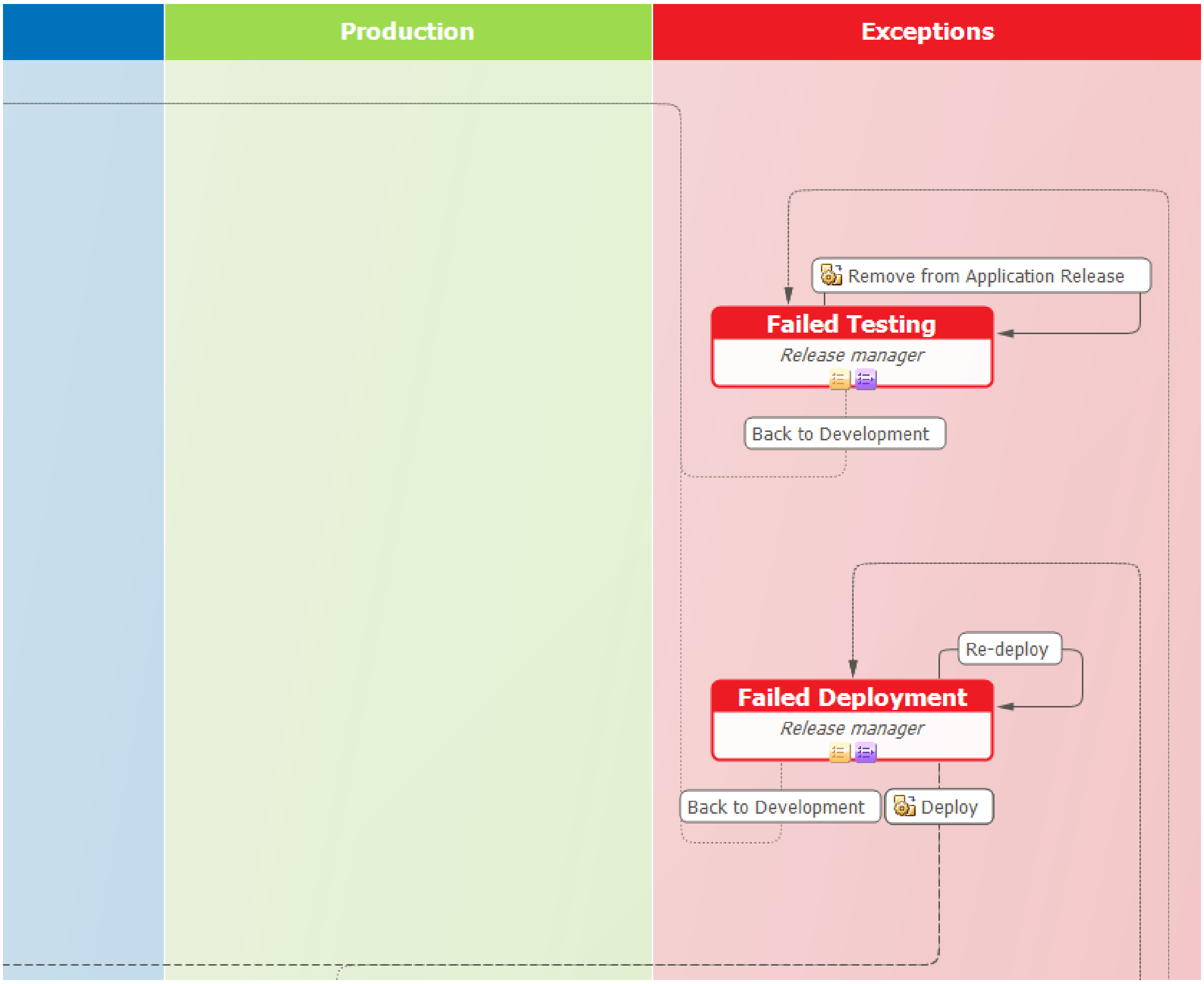
Staging and Production States

The Staging and Production states swimlanes of the Release Package workflow in the default version of Serena Release Manager are shown in the following figure.



Exceptions State

The Exceptions state swimlane of the Release Package workflow in the default version of Serena Release Manager is shown in the following figure.

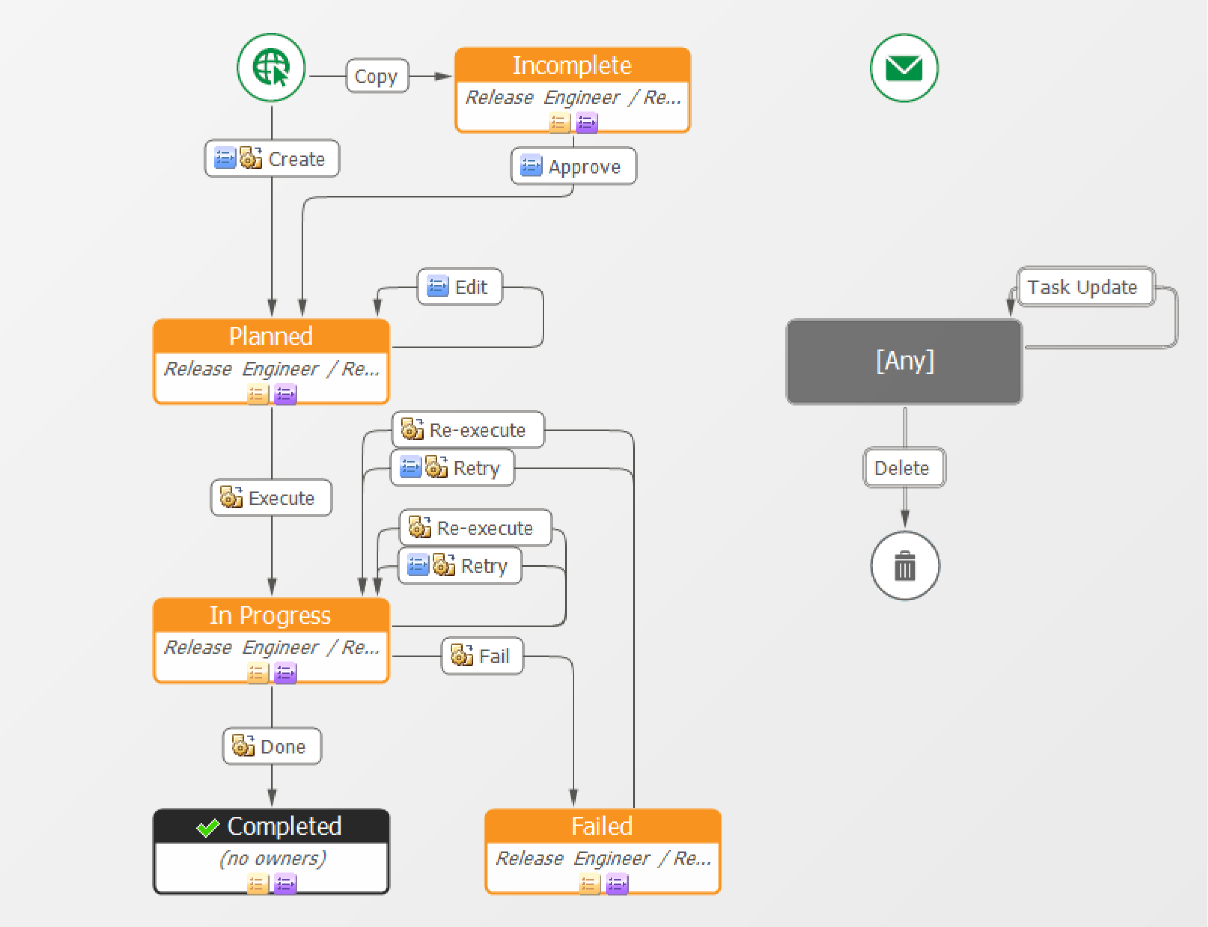


Deployment Task Workflows

The Deployment Task workflows in the default version of Serena Release Manager are shown in the following figures.

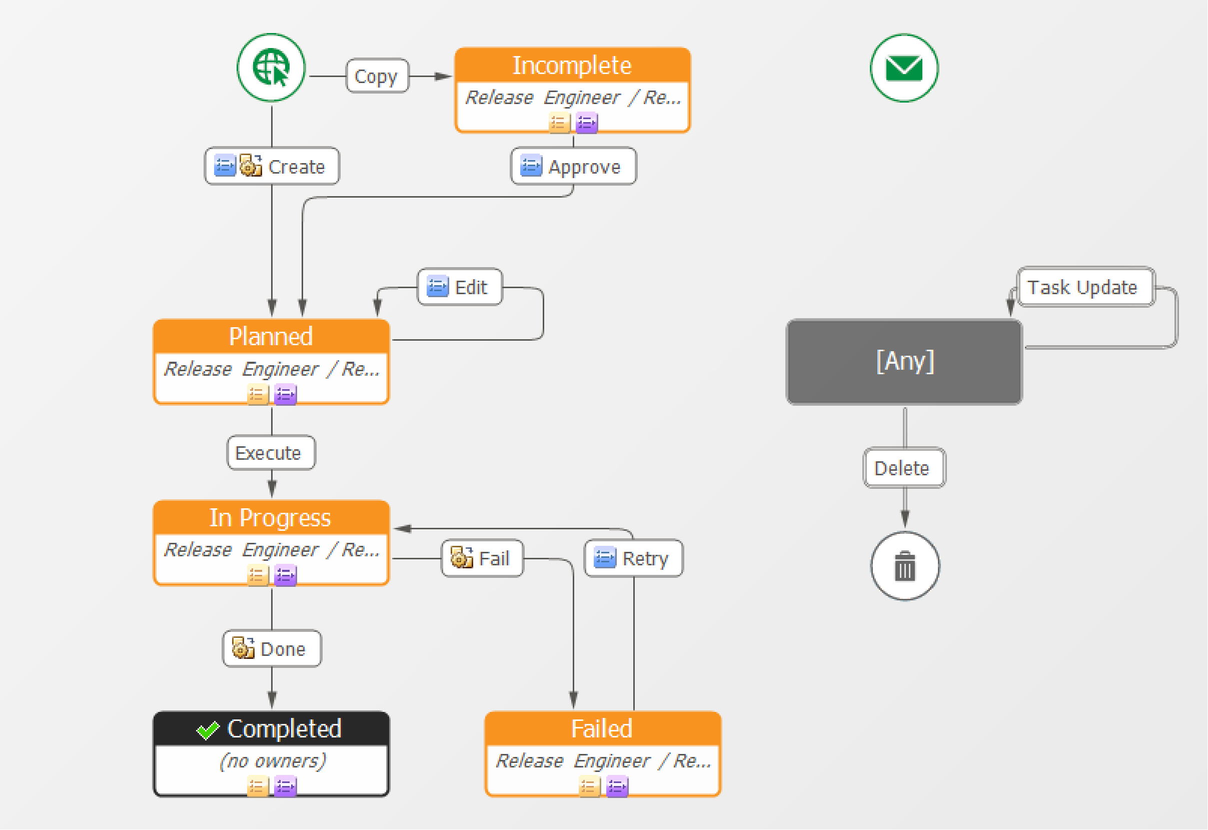
Automation Deployment Task Workflow

The Automation Deployment Task workflow in the default version of Serena Release Manager is shown in the following figure.



Manual Deployment Task Workflow

The Manual Deployment Task workflow in the default version of Serena Release Manager is shown in the following figure.

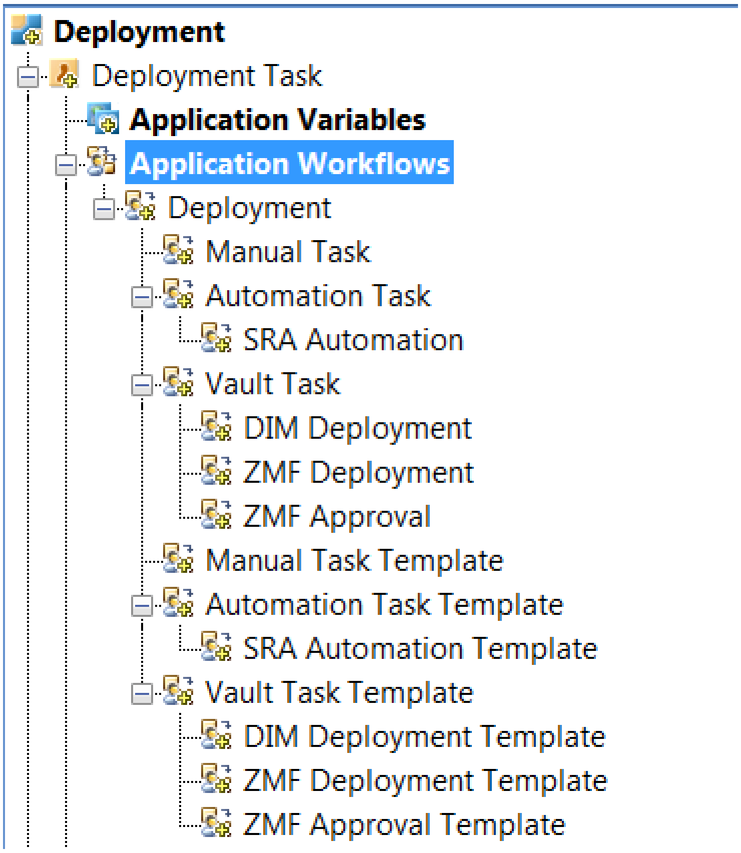


Vault Deployment Task Workflows

There are several vault deployment workflow types to support variations of vault deployment tasks.

Deployment Task Hierarchy

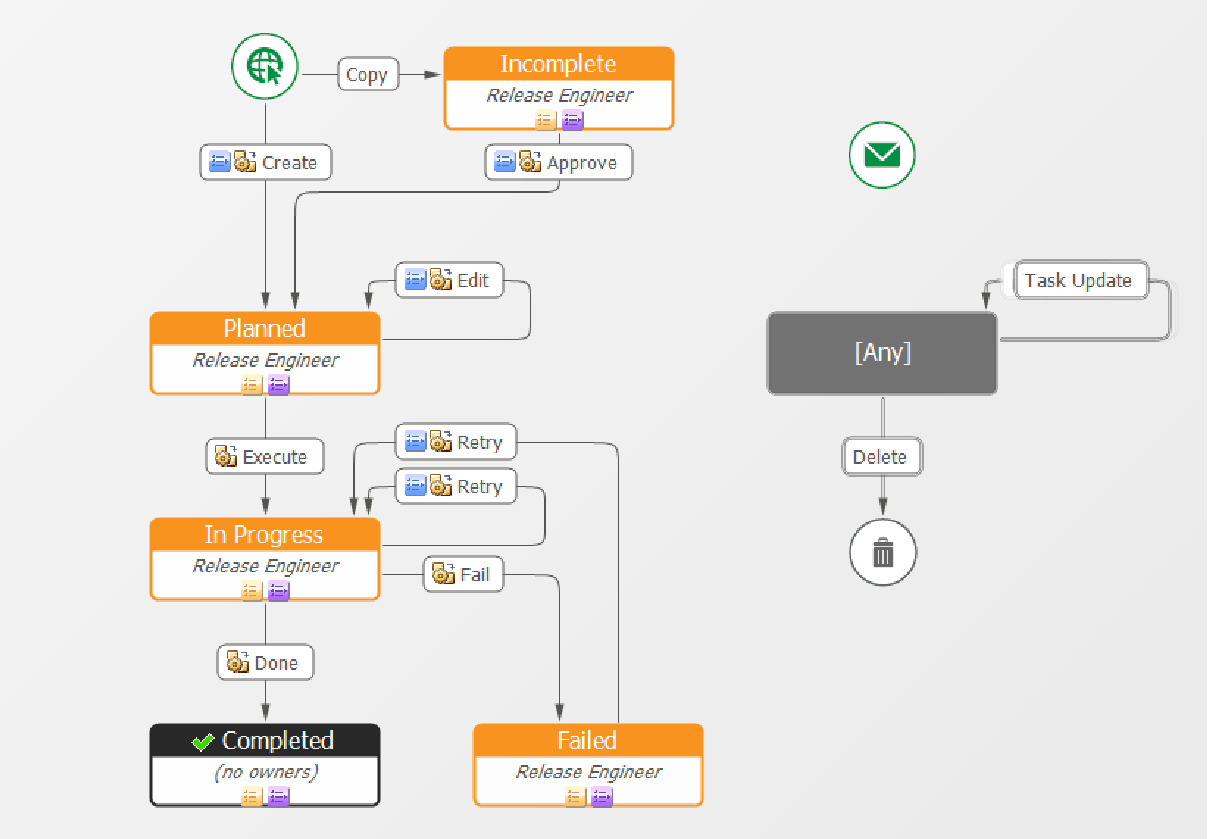
The default hierarchy of workflows and sub-workflows for vault deployment tasks is shown in the following figure.



- **Deployment**
  - Deployment Task
    - **Application Variables**
    - **Application Workflows**
      - Deployment
        - Manual Task
        - Automation Task
          - SRA Automation
        - Vault Task
          - DIM Deployment
          - ZMF Deployment
          - ZMF Approval
        - Manual Task Template
        - Automation Task Template
          - SRA Automation Template
        - Vault Task Template
          - DIM Deployment Template
          - ZMF Deployment Template
          - ZMF Approval Template

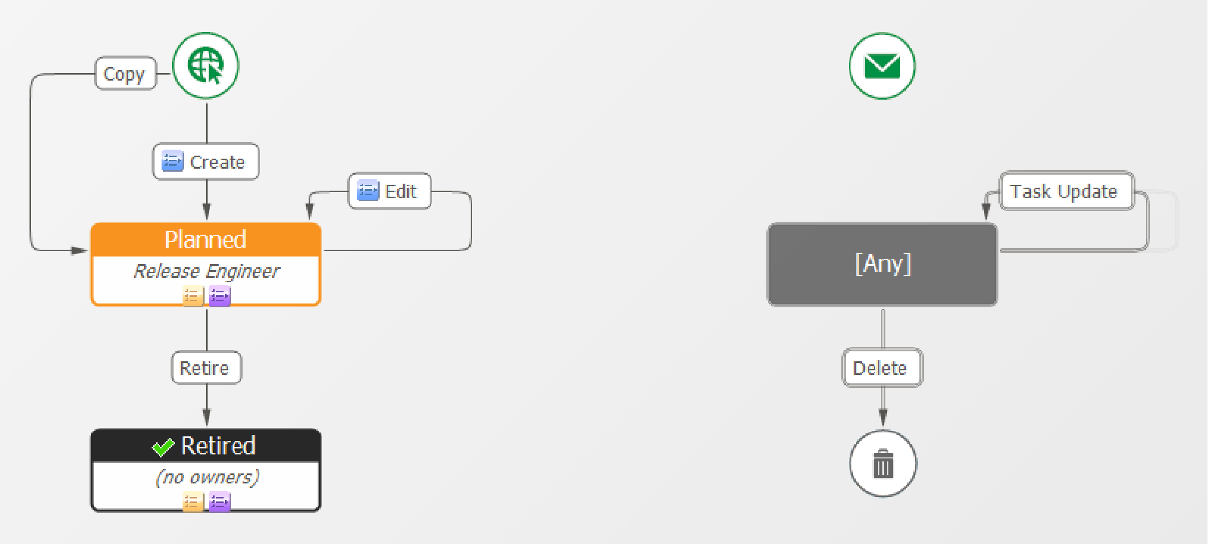
Main Vault Task Workflow

The DIM Deployment, ZMF Deployment, and ZMF Approval sub-workflows inherit from the main workflow for Vault Task. The main Vault Task workflow is shown in the following figure.



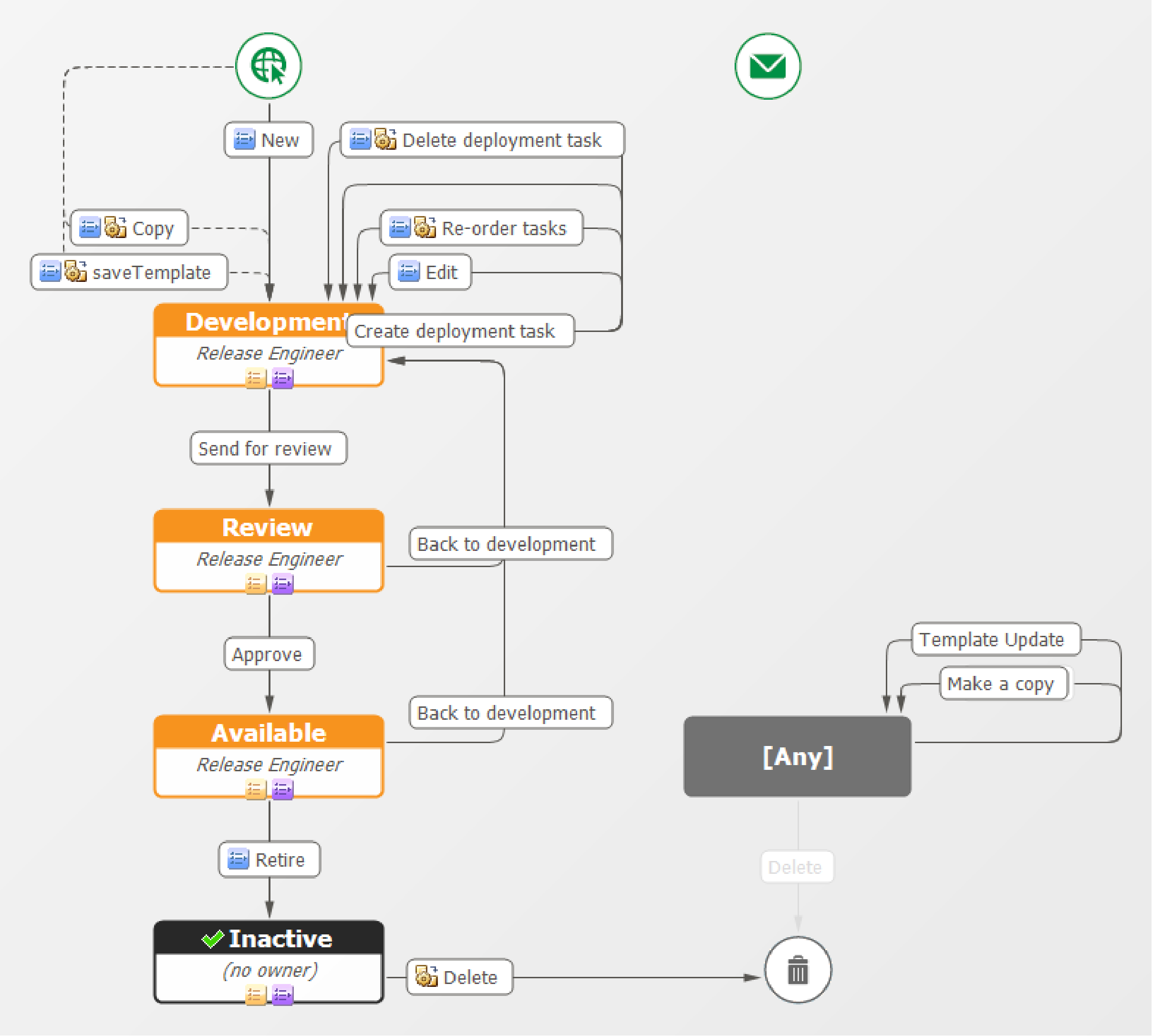
Main Vault Task Template Workflow

The DIM Deployment Template, ZMF Deployment Template, and ZMF Approval Template sub-workflows inherit from the main workflow for Vault Task Template. The main workflow for Vault Task Template is shown in the following figure.



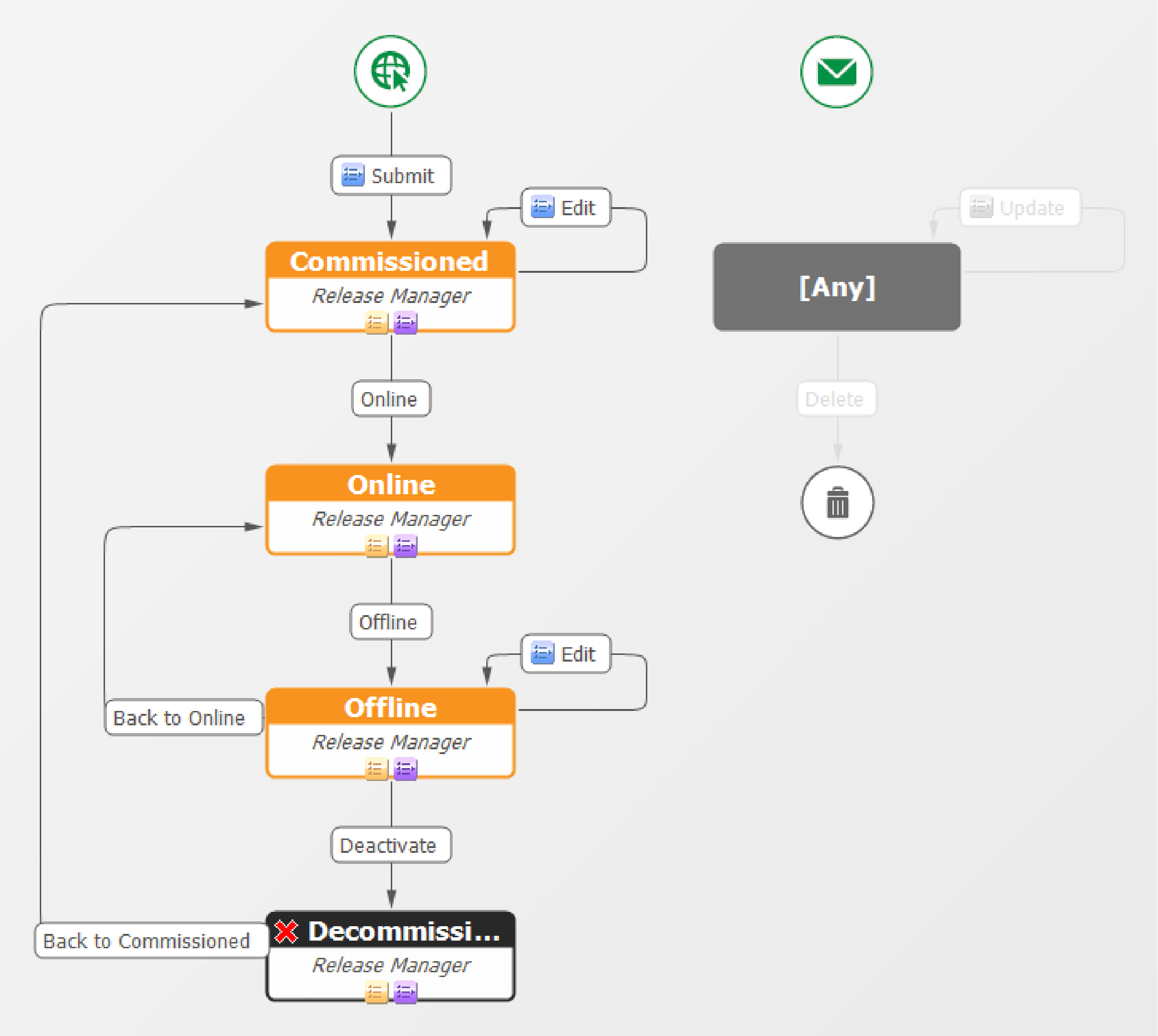
Deployment Process Template Workflow

The Deployment Process Template workflow in the default version of Serena Release Manager is shown in the following figure.



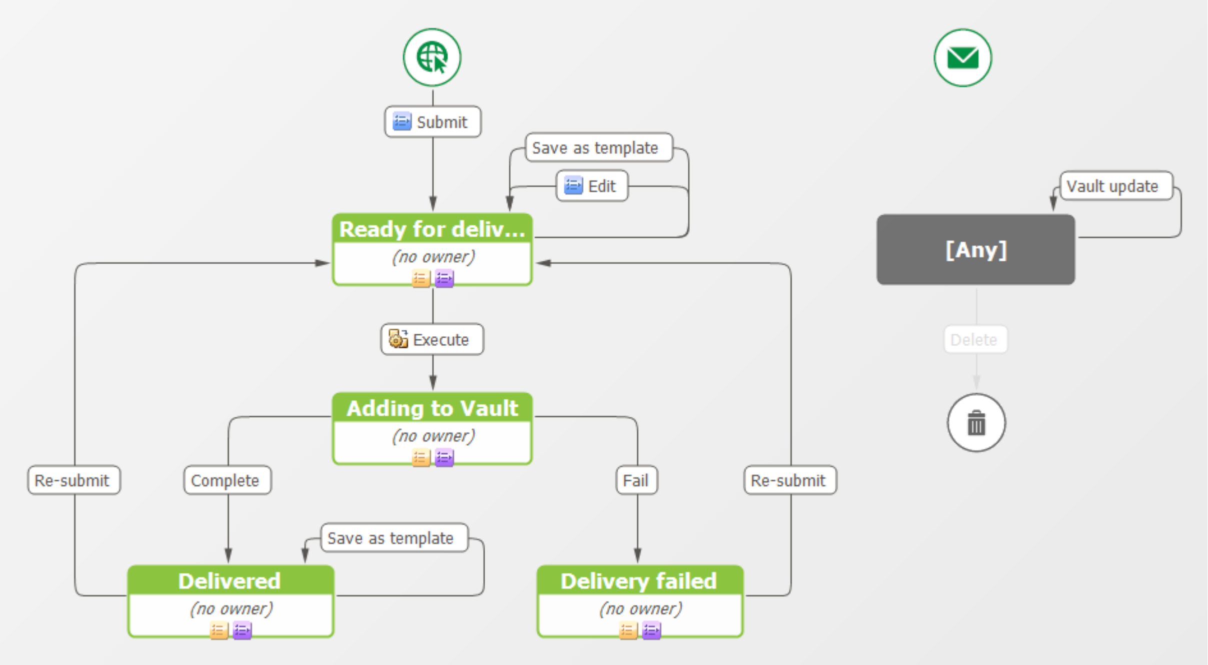
Environment Workflow

The Environment workflow in the default version of Serena Release Manager is shown in the following figure.



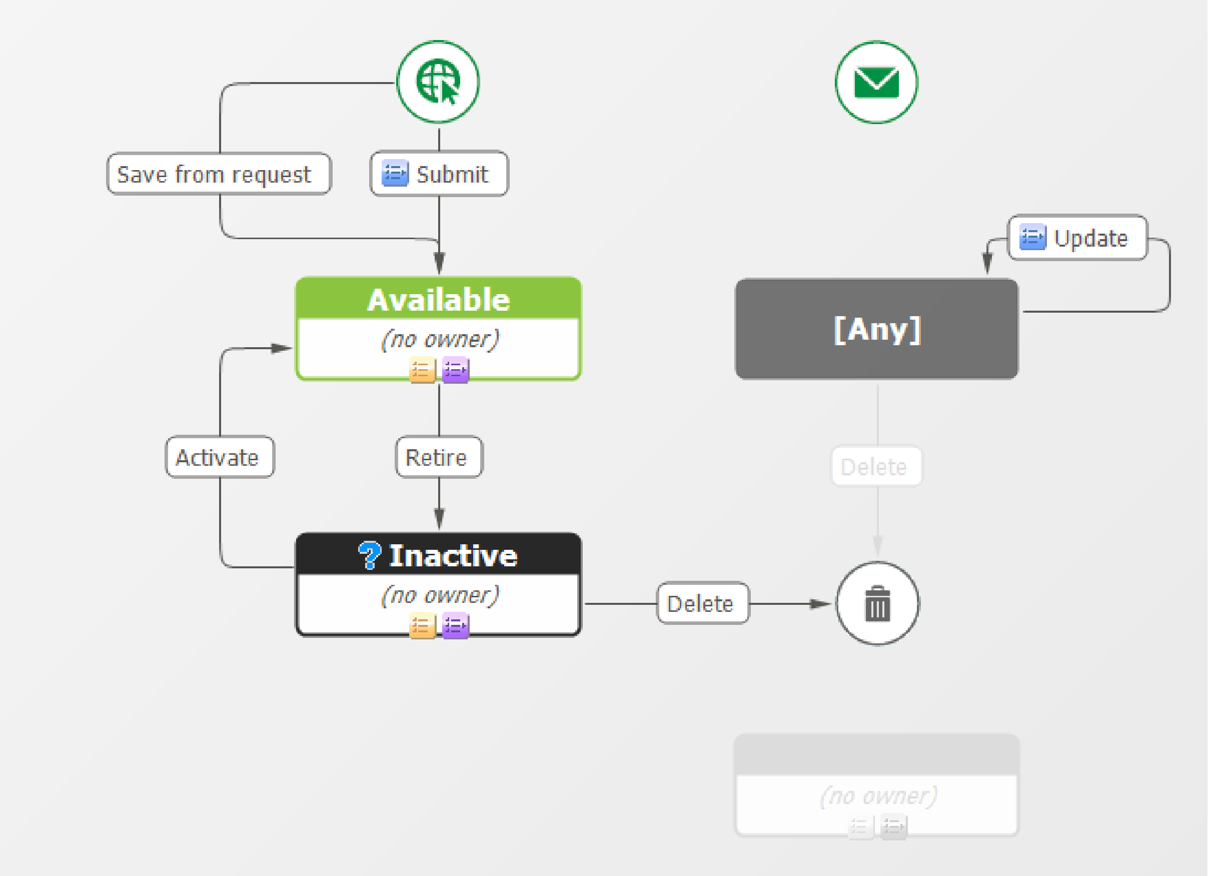
Vault Request Workflow

The Vault Request workflow in the default version of Serena Release Manager is shown in the following figure.



Vault Template Workflow

The Vault Template workflow in the default version of Serena Release Manager is shown in the following figure.



Configuration File Reference

Serena Release Manager uses configuration files to specify information for the Web services to use. These configuration files contain client connection information, filters, and other information necessary to execute a comprehensive set of release management operations.

This section lists and explains the use of the configuration files.

Configuration Files on the Serena Release Manager Server

Configuration files are used by Serena Release Manager to set implementation-specific details. Most of the configuration files reside on the Serena Release Manager server.

Files in the Classes Folder

Most of the configuration files on the Serena Release Manager server are located under the `alm` Web service folder in the `WEB-INF\classes` folder. For example:

```
..\Program Files\Serena\common\tomcat\6.0\webapps\alm\WEB-INF\classes
```

The configuration file names and purpose are given in the following table.

File Name	Purpose
`alf-client-connection.properties`	Use this file to specify credentials for the ALF server to be used for notifications sent from the Serena Release Automation server. When the automation deployment task is completed, Serena Release Manager sends an ALF event to SBM server. This requires the credentials to access the ALF server, because Serena Release Automation isn't implemented to use SSO. See Configuring Connections Using the Configurator [page 93].
`bcr.properties`	Provides provider definitions for Business Change Requests (BCRs). See Configuring Access to Business Change Requests [page 102].
`bcr-connection.properties`	Provides connection information for Business Change Requests (BCRs). See Configuring Connections Using the Configurator [page 93].
`commons-logging.properties`	Apache log file installed with this software.
`dm_qlarius.properties`	Provides filtering information for Dimensions CM objects accessed by Release Manager. See Configuring Access to Development Change Requests [page 103] and Configuring Access to Deployment Units [page 106].
`dm-client-connection.properties`	Provides connection information for Dimensions CM. See Configuring Connections Using the Configurator [page 93].

File Name	Purpose
`itsm.properties`	Provides provider definitions for ITSM (for RFCs). See Configuring Access to Requests for Change [page 101].
`itsm-connection.properties`	Provides connection information for ITSM (for RFCs). See Configuring Connections Using the Configurator [page 93].
`LICENSE.txt`	Apache licensing information for use with this software.
`log4j.properties`	Tells the location and behavior for the primary message log file for Serena Release Manager, `alm.log`. See Information from Log Files [page 155].
`logback.xml`	This file is used for logging confirmation. Do not change this file.
`messages.properties`	This file is planned for future use to define strings used in the Serena ALM Configurator UI.
`nolio-client.properties`	Provides client-specific information for Serena Release Automation, powered by Nolio. See Configuring Release Automation (Nolio) Communication in Release Manager [page 88].
`nolio-client-connection.properties`	Provides connection information for Serena Release Automation, powered by Nolio. See Configuring Connections Using the Configurator [page 93].
`nolio-client-queries.properties`	Provides filtering information for Serena Release Automation, powered by Nolio. See Configuring Release Automation (Nolio) Communication in Release Manager [page 88].
`NOTICE.txt`	Notice that Apache software is used and distributed with this software.
`providers.properties`	Specifies the providers to be used for this implementation of Serena Release Manager. See Telling Release Manager Which Providers to Use [page 112].
`ra-client.properties`	Provides client-specific information for Serena Release Automation. See Configuring Release Automation Communication in Release Manager [page 82].
`ra-client-connection.properties`	Provides connection information for Serena Release Automation. See Configuring Connections Using the Configurator [page 93].
`rlm.properties`	This file is used for global `alm.war` settings. Most settings are system settings for Web services. The only setting that you should change is: `alm.config.service.authdUsers=<list of user IDs delimited by commas>` This defines the list of users who can access the Serena ALM Configurator through SSO. See Configuring Connections Using the Configurator [page 93].

File Name	Purpose
rlm-sbm.properties	Sets values for the Serena Release Manager Web services. See Setting Maximum Associations for Release Control Objects [page 152]. **CAUTION!** The only values that should be changed in this file are the maximum object association limits for release trains, application releases, and release packages.
sbm.properties	Sets values for the Serena ALM Web services.
`sbm_incidents.properties`	Provides provider definitions for SBM Incidents, typically associated with BCRs. See Designating the Details for Each BCR Provider [page 102].
`sbm_issues.properties`	Provides provider definitions for SBM Issues, typically associated with DCRs. See Designating the Details for Each DCR Provider [page 103].
`sbm-client-connection.properties`	Provides connection information for SBM. See Configuring Connections Using the Configurator [page 93].
`rlmzmf_packages.properties`	Provides filtering information for ChangeMan ZMF. See Designating ChangeMan ZMF Deployment Unit Selection Criteria [page 109] .
`zmf-client.properties`	Provides client-specific information for ChangeMan ZMF. See Configuring ZMF Communication in Release Manager [page 78].
`zmf-client-connection.properties`	Provides connection information for ChangeMan ZMF. See Configuring Connections Using the Configurator [page 93].

Files in Other Folders

Some of the configuration files on the Serena Release Manager server are located in other folders. The configuration file names, location, and purpose are given in the following table.

File Name	Location and Purpose
`alfzmf_resource.properties`	`..\Program ;Files\Serena\common\tomcat\6.0\webapps\almzmfalf\WEB-INF\conf` ALF event manager information for ChangeMan ZMF. See Specifying ALF Event Manager Connection Information for ZMF [page 78].

Configuration Files on the Dimensions CM Server

Configuration files on the Dimensions CM server are used to configure return communication to Serena Release Manager from Dimensions CM. The configuration file names, location, and purpose are given in the following table.

File Name	Location and Purpose
dm.cfg	..\Program Files\Dimensions 12.2\CM You must update this file on the Dimensions CM server with Dimensions CM ALF event configuration information Serena Release Manager needs. See Specifying Dimensions CM ALF Event Configuration Information [page 62].
ALF_EVENTS_CONFIG.XML	..\Program Files..\Dimensions\12.2\CM\dfs You must update this file on the Dimensions CM server to specify selection criteria for Dimensions CM information Serena Release Manager accesses. See Specifying Selection Criteria for Dimensions CM Events and Objects [page 63]

Configuration Files on the Release Automation (Nolio) Server

Configuration files on the Serena Release Automation, powered by Nolio, server are used to configure return communication to Serena Release Manager from Serena Release Automation, powered by Nolio. The configuration file names, location, and purpose are given in the following table.

File Name	Location and Purpose
rest.integration.properties	..\Program Files\Serena\Serena Release Automation\conf Tells Serena Release Automation, powered by Nolio, what server to notify when an event occurs. See Specifying the Release Automation (Nolio) Server to Notify [page 86].