CA Release Automation - 5.0.2

Deployment Automation

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Deployment Automation

CA Release Automation enables you to automate and manage deployments for your applications. The workflow of CA Release Automation is divided into process design and release management.

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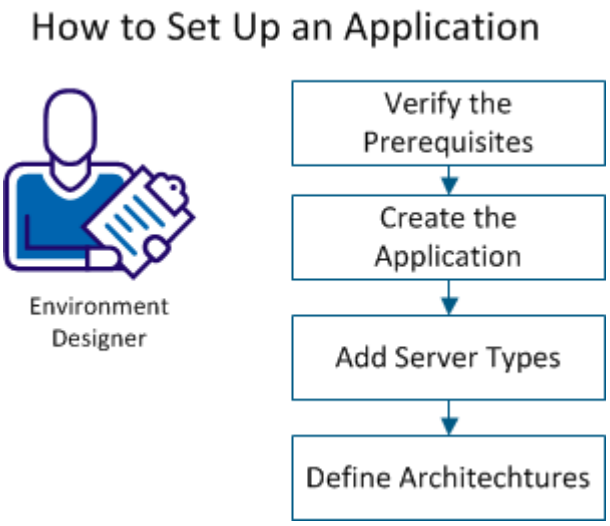
How to Set Up an Application

Contents

As an environment designer, you need to set up an application for process designers to work with. An application is a design element that represents an automated configuration and deployment for a server architecture. For a specific user to create a process for deployment, the user permissions, actions, and server types must be associated with the application.

Use this scenario to guide you through the process:



How to Set Up an Application

1. Verify the Prerequisites
2. Create an Application
3. Add Server Types
4. Define Architectures

Verify the Prerequisites

Verify the following prerequisites to ensure that you can create a release environment:

- You have super user access rights.

Create an Application

The application contains environments, users, processes, and components that serve the same business need. To define an environment for process designers to work in, create an application.

Note: When you create an application, Automation Studio creates a process.

Follow these steps:

1. In Automation Studio, click the Components tab in the Navigation panel.
2. Click New Application.
3. Specify the name and description for the application.
4. Specify the Process Name for the default process.
5. Specify the number of server types.
6. Click Create Application.
   Automation Studio creates the application.

Add Server Types

Server types represent the architecture of the application. To define the layers in your application, add server types.

Follow these steps:

1. Select the Processes tab.
2. Select the application, and click New Server Type.

   Note: To modify an existing server type, double-click the server icon in the center panel.
3. Specify a Name and Description.
4. (Optional) To indicated that the server executes two or more processes in parallel, select Is Utility server.
5. Select the components to assign to the server.
6. Click Save.
   Automation Studio adds the server type to the application.

Define Architectures

An architecture is a collection of server types that are used together in a specific deployment type of your application. To define the possible physical configurations of servers type for your application, add architectures.

Follow these steps:

1. Click the Processes tab.

2. Right-click the application, select New, and click New Architecture.

3. Specify a name and description, and click Save.

4. Select server types or click Add new Server Type, and click Save.
   The architecture is ready for use by process designers.

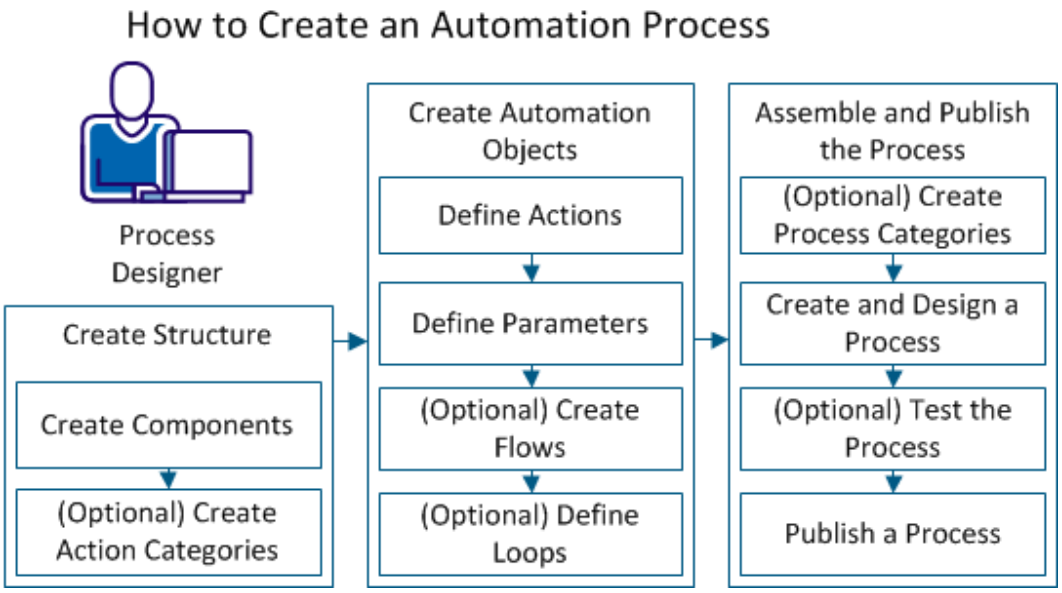
How to Create Automation Processes

Contents

As a process designer, you create processes to deploy applications. You require a tool that enables you to automate the process and ensure consistency.

Automation Studio for CA Release Automation provides a complete system for designing and publishing processes to consistently deploy applications across environments.

Use this scenario to guide you through the process:



How to Create Automation Processes

1. Create a structure:
    a. Create Components
    b. (Optional) Create Action Categories
2. Create automation objects:
    a. Define Actions
    b. Define Parameters
    c. (Optional) Create Flows
    d. (Optional) Define Loops
3. Assemble and publish the processes:
    a. (Optional) Create Process Categories
    b. Create and Design a Process
    c. (Optional) Test the Process
    d. Publish a Process

Verify the Prerequisites

Verify the following prerequisites to ensure that you can create and work with processes:

- The Application Owner has defined the application architecture.

- You have access rights as an Application Designer.

  Note: For more information about user types and permissions, see How to Set Up Users and Permissions.

Condition Logic in Flows and Processes

In CA Release Automation, all actions in processes and flows are evaluated. If the conditions for an action are not true, the action is canceled. Actions only begin if all incoming links resolve to true. The On Cancel condition allows a link to resolve when the preceding action has been canceled.

The following table lists the possible conditions for a link:

Icon		Resolution Condition
 On Pass icon	On Pass	The condition resolves when the previous action succeeds.
 On Fail icon	On Fail	The condition resolves if the previous action fails.
 On Cancel icon	On Cancel	The condition resolves if the previous action is canceled.
 On Passed or On Cancel icon	On Pass or Cancel	The condition resolves when the previous action succeeds, or if the action is canceled.
 On Failed or On Cancel icon	On Fail or Cancel	The condition resolves if the previous action fails, or if the action is canceled.

Create Components

To group actions and flows that server the same technical or business need, create components. You can create parameters in the scope of a single component.

Follow these steps:

1. Click the Components tab.
2. Select an application.
3. Click New Component.
4. Type the Name and Description, and click Save.
   Automation Studio adds the component and loads it in the center panel.

Create Action Categories

Each component has a default folder for all actions. To organize actions, create action categories.

Follow these steps:

1. Select a component in the Components tab in the Navigation Panel.
2. Click New Actions Category.
3. Specify a name and description, and click Save.

Define Actions

Actions are the basic operations that run during deployment. To create instances of actions for use in flows and processes, define the inputs and outputs of the actions.

Follow these steps:

1. Select an action category.
2. Click New Action.
3. Select an action, and click Choose.
4. Specify Input values, Output values, and properties.

   Note: To define values for multiple actions, or to define values that differ between environments, use parameters. For more information, see Define Parameters.
5. (Optional) To use credentials that differ from the server flow credentials, click Set credentials.
   a. Select Use the following credentials:
   b. Specify the Username and Password.
   c. Click Save.
6. Click Save.
   Automation Studio adds the action to the action category.

Define Parameters

To define input or output values for multiple actions, or to define values that differ between environments, define parameters.

Follow these steps:

1. Click Parameters browser.

   Note: Pin the Parameters browser tab so that the tab remains open.

2. Click + in the Parameters browser, and select a parameter type. The following parameter types require explanation:

   - **Collection Element**
     Collects parameters into a single element. To define the values of a collection element, add other parameters to the collection folder. When you generate a manifest, the XML file includes items for the collection element with a value for each parameter assigned to the element. For more information, see Define Loops and Test the Process.

   - **Array**
     Allows the specification of multiple values for a parameter. Define the values in the manifest.

3. Specify a name and description, and click Save.

4. Select the new parameter, and click the edit icon.

5. Specify the scope and any required values.
   The following scopes require explanation:

   - **Environment**
     Defines that the parameter differs at the environment level. Specify the values in the Environment Configuration in Release Operations Center. For more information, see Configure Environment Parameters.
     Example: Server credentials

   - **Internal**
     Defines that the parameter never changes in the component.

   - **Release**
     Defines that the parameter differs between releases. Specify the values in the XML manifest. For more information, see Prepare the Manifest.
     Example: File versions

   Note: Release and Environment parameter values that you define in Automation Studio do not apply to deployments that you execute in Release Operations Center. To test a process, specify parameter values with the manifest. For more information, see How to Execute a Process in Automation Studio.

6. Click Save.

Create Flows

A flow is a group of actions with a defined sequence. Flows include conditions for the start of subsequent actions. Flows only include actions for one component of an application. To create sets of actions that perform a specific task, or that are reusable across multiple processes, create flows.

Follow these steps:

1. Select a component, and select the Flows folder.

2. Click New Flow.

3. Type a Name and Description, and click Save.
4. Click Add action or flow.
5. Select an action or flow, and click Add.
6. To design your flow, use the following actions:
   - To add an action or flow in the sequence, right-click an action or flow, and click Add next action.
   - To add an action that is not linked to another action, right-click the panel, and click Add action.
   - To add a link, right-click an action or flow, click Create link, and click the action or flow you want to link next in the sequence.
   - To add a condition to a link, right-click the link and select a condition. For more information, see Condition Logic in Flows and Processes.
   - To replace an action or flow, right-click it, click Replace, select a new action or flow, and click Replace.
   - To add a loop, see Define Loops.
   - To remove an object, right-click the object, and click Delete.

     Note: Removing an object also removes all links that are attached to it.
7. Click Save.
8. (Optional). Click Test, and click OK in the Test Run dialog.
   If there are conflicts, the Conflicts Browser opens and displays a detailed list of conflicts.

Define Loops

To run a flow multiple times in a process or in another flow, define a loop. XML loops and collection loops allow

Follow these steps:

1. Click the Define Loop icon on a flow in a process or in another flow.
2. Select a Loop type. The following Loop types require explanation:
   - **XML**
     Runs the loop based on the contents of an XML file.
     Limit: 10 values
   - **COLLECTION**
     Runs the loop for each item defined in the XML manifest for a collection parameter.
3. Specify the required inputs.

4. Select the Output values tab, and specify the required Output values.

5. Click Save.
   The loop is set to run.

Create Process Categories

To create and organize processes, create process categories.

Note: Automation Studio creates a default process category for each architecture.

Follow these steps:

1. Click the Processes tab.

2. Right-click an architecture or process category, select New, and click New Category.

3. Type a Name and Description.

4. Click Save.
   CA Release Automation creates the process category.

Create and Design a Process

A process is a high-level sequence of planned actions involving one or more of the components of an application. To define the deployment logic across multiple server types in a single application, create a process.

Follow these steps:

1. Select the Processes tab.

2. Right-click the process category, and select New, New Process.

3. Specify the Name and Description, and click Save.

4. Select server types, and click Save.

   Note: To add a new server type, click Add new Server Type, and specify the required information.

5. (Optional) To manage execution properties, right-click the server type, and select Execution properties...
   The Execution properties dialog opens, and you can modify the following settings:

   - Maximum simultaneous agents
   - Maximum agents
   - User credentials

6. Click Add action in a server type, select an action, and click Add.
   Add actions and flows to each server types used in the process.

7. To design your process, use the following actions:

   - To add an action or flow in the sequence, right-click an action or flow, and click Add next action.
   - To add a link, right-click an action or flow, click Create link, and click the action or flow you want to link next in the sequence.
   - To add a condition to a link, right-click the link and select a condition. For more information, see Condition Logic in Flows and Processes.
   - To replace an action or flow, right-click it, click Replace, select a new action or flow, and click Replace.
   - To remove an object, right-click the object, and click Delete.

     Note: Removing an object also removes all links that are attached to it.
   - To add a server type, click Manage Server Types. Right-click a server type, and click Add to this process.
   - To execute an action or flow on a remote server, right-click the action or flow, click Execute on Another Server, select a server, and click continue.
   - To, specify which server to wait for, right-click a link that links two servers, select Link Type, and select Specific, All, or First.

     Note: Specific specifies that the process requests user-input to determine which instance of the server to wait for.

8. Click Save.

Test the Process

To verify that the process does not contain conflicts, test the process.

Note: To test a process, you must have an agent in the Test Servers group. For more information, see Assign Test Agents.

Follow these steps:

1. In the Processes tab, select a process.

2. Click Test.
   CA Release Automation prepares the Test Process. The Test Process dialog opens.

3. Select the Servers tab, and select agents for the server types.

4. (Optional) To specify release parameters and artifact definition, generate and populate an XML manifest.

    a. Select the Manifest tab, and click Generate Manifest.

    b. Specify the filename and location, and click Generate.

    c. Open the xml file in an editor, specify the parameters, and save the changes.

    d. Click the Load Test Manifest icon, select the manifest file, and click Load.

5. Click Test.
   The Test Run window opens.

6. Click the Start icon.
   The test process runs. If there are conflicts, the Conflicts Browser opens and displays a detailed list of conflicts.

Publish a Process

To make the latest version of a process available for use, publish the process.

Follow these steps:

1. Select the Processes tab, and select the process.

2. Click Publish.

3. (Optional) Select Add Tag Information, and type a tag name and tag description.

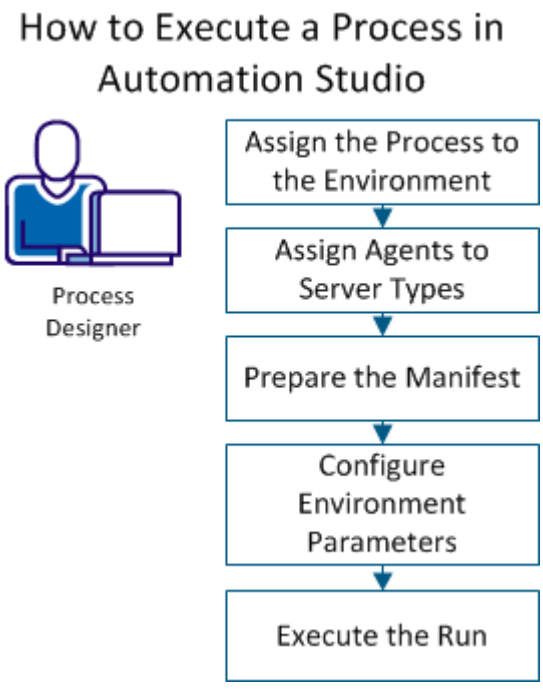
4. Click Publish Process.
   The process is ready for execution or use in Release Operations Center.

How to Execute a Process in Automation Studio

Contents

As a process designer, you need to test the process you designed on a real environment before you build the complete deployment. Automation Studio enables you to execute processes directly without requiring the use of Release Operations Center.

Use this scenario to guide you through the process:



How to Execute a Process in Automation Studio

1. Assign the Process to the Environment
2. Assign Agents to Server Types
3. Prepare the Manifest
4. Configure Environment Parameters

5. Execute the Run

Assign the Process to the Environment

To run the process, assign it to an environment.

Follow these steps:

1. In Automation Studio, select the Environments tab.
2. Right-click the Environment that you want to assign the published process to, and select Assigned Processes.
3. Select the process.
   - If the last process was not tagged during publishing, it is labeled as 'Latest'.
   - If the last process was tagged during publishing, it is labeled with the provided tag followed by Latest.
     Example: My Tag 1 Latest.
4. Click Save.
   Automation Studio adds the process to the environment.

Assign Agents to Server Types

To select real server agents for your process, assign agents to server types.

Follow these steps:

1. In Automation Studio, select the Environments tab, and select an environment.
2. Double-click a server type or an empty agent.
3. Double-click Double-click to choose server or a server type.
4. Select a server, and click Choose.
5. (Optional) To assign multiple agents to a single server type, select another server .
6. Click Save.
   Automation Studio assigns the server type to the agent for the execution of the process.

Prepare the Manifest

To execute a process in Automation Studio, generate a manifest and specify the relevant parameters. The manifest is an xml file that includes all the parameters with the release scope and artifact definitions. For more information about artifacts, see How to Manage Artifacts for Deployment.

The manifest is also used to populate the values of collection parameters and array parameters. For more information, see Define Parameters and Define Loops.

Follow these steps:

1. In Automation Studio, right-click the published process, and click Generate Manifest.
2. Specify a file name and location.
3. Open the xml file in an editor, specify the parameters, and save the changes.
   The manifest is ready for use in the execution.

Configure Environment Parameters

To specify data that differs between environments, such as usernames and passwords, define parameters in scope of environment, and assign the relevant values for each environment. You can specify only the values of parameters that are used in actions in processes you assigned to the environment. Only parameters with the environment scope appear in the Environment Configuration.

Follow these steps:

1. In Release Operations Center, click Administration, and select Environment Configuration.
2. Select your application, and select your environment.
3. Select the parameter folder.
4. Specify the values for the parameters.
5. (Optional) To set a specific value for a specific server type, override the parameter per server type:
   a. Click the dropdown icon, and click Override per Server Type.
   b. Select the server types.
   c. Specify the value for the parameter.
   d. Click Save.
6. Click Save.

Execute the Run

To run a process in a real environment before adding it to a deployment, execute the process in Automation Studio.

Follow these steps:

1. In the Environments screen, click Run Process.

2. Specify a Name for the run.

   Note: We recommend that you accept the automatically generated Name.

3. In the Servers tab, select the servers.

4. In the Dependencies tab, specify or change the links between the server types and physical servers.

   Note: If there are dependencies between Server Types and there is only one Agent for a dependent Server Type, Automation Studio automatically sets the dependency to the Agent of that Server Type.

5. In the Manifest tab, select one of the following options:

   - Select Load new file, click the Load icon, specify the manifest file, and click Load.
   - Select Previously loaded, and specify the manifest file.

   Note: Previously loaded manifest files are stored in the repository.

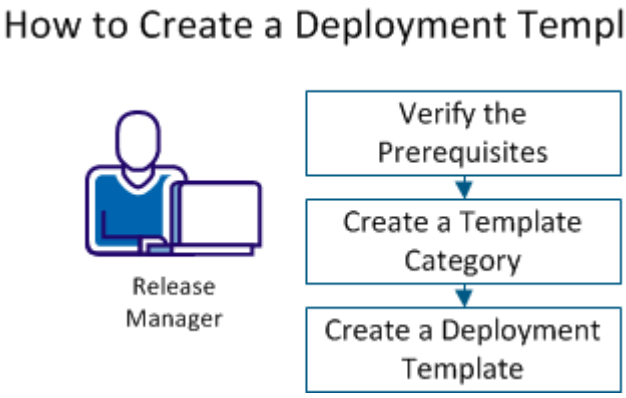
6. Click Run.
   The process runs in the environment that you specified.

How to Create a Deployment Template

Contents

As a release manager, you are responsible for preparing for deployments. A deployment template is a generic deployment plan that can you can use for multiple deployment executions. CA Release Automation uses deployment templates to generate deployments.

Use the following scenario to guide you through the process:



How to Create a Deployment Template

1. Verify the Prerequisites
2. Create a Template Category
3. Create a Deployment Template

Verify the Prerequisites

To ensure that you can successfully create a release template, verify the following prerequisites:

- You have access rights.
- To add steps to the deployment plan, the processes are published.

Create a Template Category

To provide organization for deployment templates, create a template category.

Follow these steps:

1. Select the Releases tab, and Template Categories.

2. Select an Application.

3. Click New, specify the Name and Description, and click Save.
   CA Release Automation creates and opens the template category.

Create a Deployment Template

A deployment template is a series of processes that CA Release Automation executes during a deployment. To define the sequence of a deployment, add steps to the deployment plan.

Follow these steps:

1. Select the Releases tab, and Template Categories.

2. Select a Template Category.

3. Click New, specify the Name and Description, and click Save.

4. Add steps to the deployment plan.

   - **Pre-Plan Step**
     Specifies a process that runs when you create the deployment. Use an initialization step to prepare artifacts.

   - **Pre-Deployment Step**
     Specifies a process that prepares the deployment.

   - **Deployment Step**
     Specifies the processes to use in the deployment.

   - **Post Deployment Step**
     Specifies the processes to execute after the deployment.

   - Select the relevant tab, and click +Add Step.

     Note: For the Initialization Steps, click + next to the step type instead.

   - Specify the required information, and click Save.

5. (Optional) To edit you Post deployment preferences, select the Post Deployment tab, click Preferences, select your preferences, and click Save.

6. (Optional) To add Template Properties, expand the Template Properties panel, click + Add Property, specify a Property Name and Value, and click Save.
   You can now use the template to create a deployment. Form more information, see How to Create a Deployment.

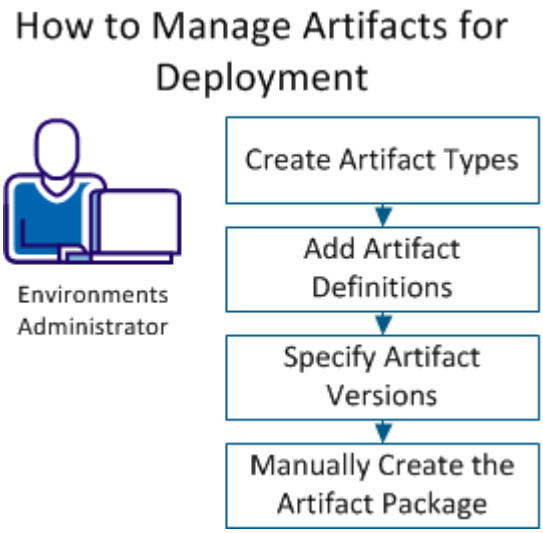
How to Manage Artifacts for Deployment

Contents

As a Release Template Designer, you configure and manage the deployment process in Release Operations Center. Artifacts are the binaries that are deployed during the deployment. To identify the artifacts for a deployment, create an artifact package that contains the binaries for a single execution.

You can also create the artifact package with an XML manifest. For more information, see Manage Artifact Packages in XML.

Use this scenario to guide you through the process.



How to Manage Artifacts for Deployment

1. Create Artifact Types
2. Add Artifact Definitions
3. Specify Artifact Versions
4. Manually Create the Artifact Package

Create Artifact Types

An Artifact Type is a type of artifact that is part of your application architecture, such as war, ear, or dll. You can assign shares values to each artifact type. To build a workflow with an artifact type, you can associate the artifact type with a component. To create a framework for identifying artifacts, create artifact types.

Follow these steps:

1. Select the Artifacts tab, and select Artifacts Management.
2. Click New, and specify the Name, associated Components, and Attributes.
3. Click Save.
   The artifact type appears in the Artifact Types panel.

Add Artifact Definitions

An Artifact Definition is a specific artifact of an artifact type. For example, site.war is the specific file name of the WAR artifact type. To identify artifacts for use in an application, create a definition for each artifact.

Follow these steps:

1. Select the Artifacts tab, and select Artifacts Management.
2. Select the Application, and the Artifact Type.
3. Click Add Artifact Definition.
4. Specify the Definition Name and Attribute values, and select Server Types.

   Note: By default, all server types are selected. To exclude server types, clear the selection of the server types.
5. Click Save.
   The assigned artifact definition appears in the Artifact Definition panel.

Specify Artifact Version

Artifact Versions is a specific instance of an artifact definition. You can identify the artifact version with characters or numbers. For example, site-1.0.war and site-1.1.war are artifact versions of the site.war artifact definition. To prepare an artifact for a deployment, edit or specify the artifact version.

Follow these steps:

1. Select the Artifacts tab, and select Artifacts Management.

2. Select the Application, and select the Artifact Type.

3. Click the Artifact Definition.

4. Click + Add Version.

5. Specify the required information for artifact retrieval.

6. Click Save.
   The artifact appears in the Artifacts pane under the Type folder.

Manually Create the Artifact Package

The Artifact Package contains artifact versions for use in a single deployment. To prepare the relevant artifact items for a deployment, create the artifact package.

Follow these steps:

1. Click the Artifacts tab, and select Artifact Package.

2. Select the Application, and click New.

3. Select Create the package manually.

4. Specify a Name and Description, and click Save.
   The package loads in the center panel.

5. Click Select Version, specify the required information, and click Save.

6. (Optional) To specify a new Artifact Version, click + New Version, specify the required information, and click Save.

7. Add all the required artifact versions to the package.
   The artifact package is ready and can be used as inputs for a deployment.

Manage Artifact Packages in XML

Contents

Manage Artifact Package with a XML Manifest File

To manage artifact packages without going into the UI, use an XML manifest.

Follow these steps:

1. In Release Operations Center, click Artifacts, Artifact Packages.
2. Click the Generate a package manifest icon (), and save the package manifest template.
3. Open the XML file in an editor, specify the information for the artifacts, and save the changes.

   Note: For detailed information about the XML file, see The Artifact Package XML Template .
4. On the Artifact Packages page, click New.
5. Select Load package from XML, and click Browse.
6. Locate the file, and click Open.
7. Specify the Name and Description, and click Save.
   CA Release Automation creates the artifact package based on the XML file.

The Artifact Package XML Template

The Artifact Package XML template enables you to specify the necessary information in XML to generate artifact packages. The following XML tags require additional explanation:

- **<useExisting>**
  Specifies whether CA Release Automation uses an existing artifact when the artifact version specified in the XML matches the artifact version in the repository. If the value is set to false and an artifact version matches, an error occurs when you generate the artifact package from the manifest.

Important! When the artifact version matches, CA Release Automation uses the values of the existing artifact version, not the values that you specify in the manifest.

Values: True or False**Default:** True

Note: If the tag has no value, or if the tag does not exist, the default is true.

The following example shows a simple artifact package in XML format:

```
<?xml version="1.0" encoding="UTF-8"?>
<package xmlns="http://www.example.org/ArtifactPackage">

    <name>Summer Travel</name>
    <description>All the artifacts that compose the "Summer Travel"
application</description>

    <artifactVersionByPath>
        <definition>travel</definition>
        <type>WAR</type>
        <version>5.0.1</version>
    </artifactVersionByPath>

    <artifactVersionByPath>
        <definition>travel</definition>
        <type>SQL</type>
        <version>5.0.1</version>
    </artifactVersionByPath>

    <artifactVersionById>
        <id>10</id>
    </artifactVersionById>

    <artifactVersion>
        <name>5.0.1</name>
        <description>New log properties</description>
        <artifactTypeName>PROPERTIES</artifactTypeName>
        <artifactDefinitionName>log4j</artifactDefinitionName>

        <retrievalAgentName>retreiver04</retrievalAgentName>
        <storeInRepository>false</storeInRepository>
        <validateMD5>true</validateMD5>

        <FTPArtifact>
            <filePath>foo/bar</filePath>
            <hostname>builder02</hostname>
            <password>secret</password>
            <username>root</username>
        </FTPArtifact>
    </artifactVersion>

</package>
```

Create an Artifact Package from an Existing Artifact Package

To create an artifact package based on an existing artifact package, export the package to XML.

Export Artifact Package to XML

Follow these steps:

1. In Release Operations Center, click Artifacts, Artifact Packages.
2. Select an Artifact Package, and click Get artifact package as XML file ().
3. Save the file.
   You can edit the file to change the Artifact Versions that are in the package.

Import Artifact Package from XML

Follow these steps:

1. In Release Operations Center, click Artifacts, Artifact Packages.
2. Click New.
3. Select Load package from XML, and click Browse.
4. Locate the file, and click Open.
5. Click Save.

   Note: You must rename the artifact package in the XML file.

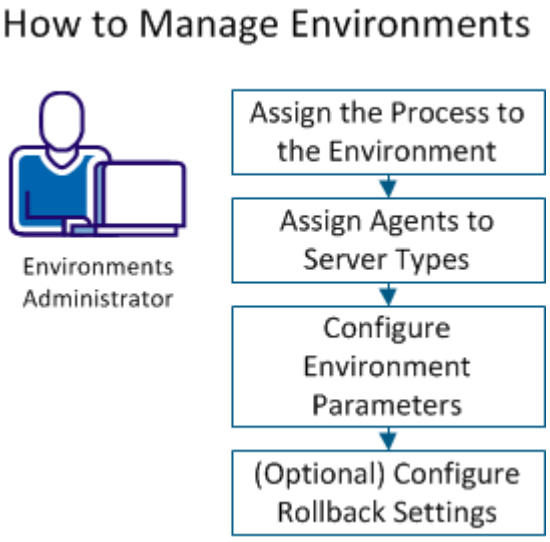
   CA Release Automation creates the artifact package based on the XML file.

How to Manage Environments

Contents

As an environments administrator, you need to set up processes to run in specific environments. You can assign each process to multiple environments.

Use this scenario to guide you through the process:



How to Manage Environments

1. Assign the Process to the Environment
2. Assign Agents to Server Types
3. Configure Environment Parameters
4. (Optional) Configure Rollback Settings

Assign the Process to the Environment

To run the process, assign it to an environment.

Follow these steps:

1. In Automation Studio, select the Environments tab.

2. Right-click the Environment that you want to assign the published process to, and select Assigned Processes.

3. Select the process.

   - If the last process was not tagged during publishing, it is labeled as 'Latest'.

   - If the last process was tagged during publishing, it is labeled with the provided tag followed by Latest.
     Example: My Tag 1 Latest.

4. Click Save.
   Automation Studio adds the process to the environment.

Assign Agents to Server Types

To select real server agents for your process, assign agents to server types.

Follow these steps:

1. In Automation Studio, select the Environments tab, and select an environment.

2. Double-click a server type or an empty agent.

3. Double-click Double-click to choose server or a server type.

4. Select a server, and click Choose.

5. (Optional) To assign multiple agents to a single server type, select another server .

6. Click Save.
   Automation Studio assigns the server type to the agent for the execution of the process.

Configure Environment Parameters

To specify data that differs between environments, such as usernames and passwords, define parameters in scope of environment, and assign the relevant values for each environment. You can specify only the values of parameters that are used in actions in processes you assigned to the environment. Only parameters with the environment scope appear in the Environment Configuration.

Follow these steps:

1. In Release Operations Center, click Administration, and select Environment Configuration.

2. Select your application, and select your environment.

3. Select the parameter folder.

4. Specify the values for the parameters.

5. (Optional) To set a specific value for a specific server type, override the parameter per server type:

a. Click the dropdown icon, and click Override per Server Type.

b. Select the server types.

c. Specify the value for the parameter.

d. Click Save.

6. Click Save.

Configure Rollback Settings

Release Operations Center allows you to set manual or automatic rollback invocation. Definition on the template level supersedes definition on the environment level. By default, Release Operations Center allows only manual invocation. To enable automatic rollback invocation, change the rollback invocation method.

Follow these steps:

1. Select the Administration tab, and select Rollback.
2. Select the Application and Environment.
3. Select the Environment tab or the Templates tab.
4. In the Templates tab, select a template, and click Edit.
5. Select the permitted rollback release invocation method, and click Save.
   Release Operations Center applies the invocation method to the environment or template.

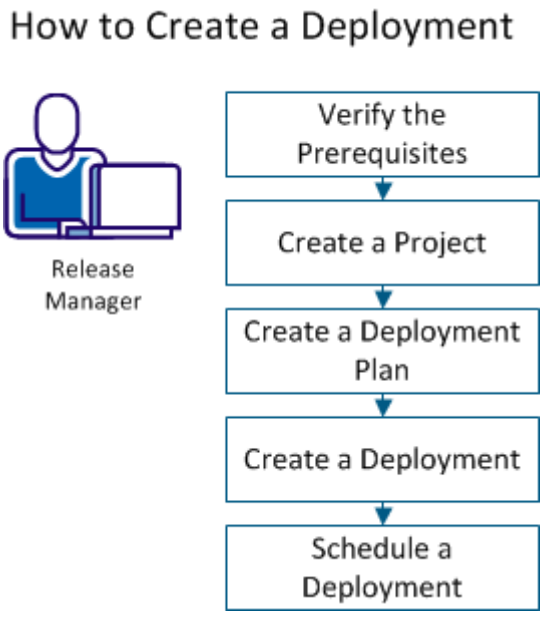
How to Create a Deployment

Contents

As a release manager, you are responsible for the deployment of software in your environments. As you create new builds often, each of the builds requires to be deployed in a testing environment. Then based on success criteria, the build can be promoted to other environments in the chain.

For this purpose, you can define the project element that serves as a container to all build instances. Each build represents the content a certain build with the logic on how to deploy it. Using this approach the release manager decides which build to deploy and to which environment.

Use this scenario to guide you through the process:



Create a Release for Deployment

1. Verify the Prerequisites
2. Create a Project
3. Create a Deployment Plan
4. Create a Deployment

5. (Optional) Schedule a Deployment

Verify the Prerequisites

To create a deployment, verify the following prerequisites:

- You have a deployment template. For more information, see How to Create a Deployment Template.
- (Optional) You have an artifact package. For more information, see How to Manage Artifacts for Deployment.

  Note: You can create the artifact package after you create the deployment.
- The environment configuration is complete. For more information, see How to Manage Environments.

Create a Project

To group repeated deployments for the same project, create a project.

Follow these steps:

1. In the Release Operations Center, select the Releases tab, and select Deployment Plans.
2. Select the Application, and click +New.
3. In the New Project dialog, specify a name and description, and click Save.

   The new project is listed in the Projects panel.

Create a Deployment Plan

To prepare the deployment for execution, create a deployment plan.

Follow these steps:

1. Select the Releases tab, and select Template Categories.
2. Select a template category, and select a deployment template.
3. Click Create Deployment Plan.
4. Specify the required information, and click Save.

Create a Deployment

To run an automated release, create a deployment.

Follow these steps:

1. Select the Releases tab, and select Deployment Plans.
2. Select a Project, a click a Deployment Plan.
3. (Optional) To modify Post Deployment Processes, select the Post Deployment tab, click Properties, select your preferences, and click Save.
4. Select the Artifact Package tab, and click Select Package.
5. Select a package, and click Save.
6. (Optional) To define a Rollback Plan, select the Rollback tab, click Define Rollback, specify the required information, and click Save.
7. Click Create Deployment.
8. Specify the required information, select the Environment, and click Save.
   The Deployment is ready for execution. For more information, see How to Run a Deployment.
   To add an approval gate to the deployment, see Manage Approval Gates.

Schedule a Deployment

To automatically run a deployment at a predefined time, schedule a deployment.

Follow these steps:

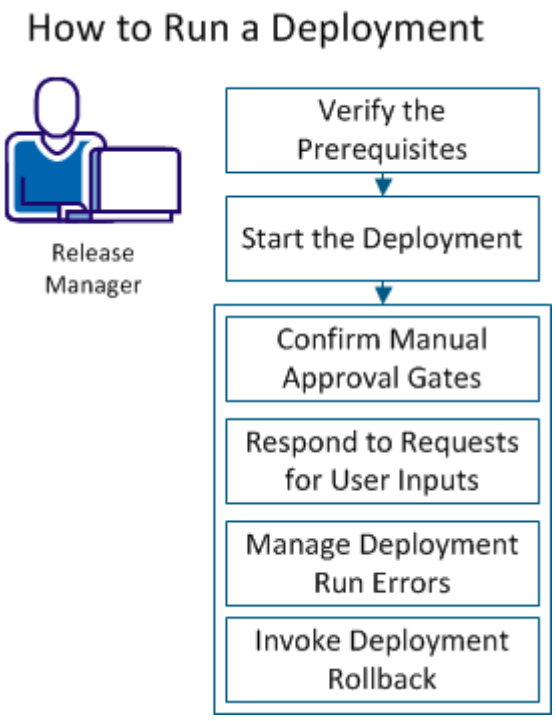
1. Select the Releases tab, and select Deployments.
2. Select the deployment.
3. Click Define Schedule.
4. Specify a date, Time Zone, Start time, and Estimated Duration.
5. Click Save.
   The deployment is set to run at the time that you specified.

How to Run a Deployment

Contents

As a Release Manager, you are responsible for deploying releases for your application. A deployment is a set of processes that deploys an artifact package to a specific environment.

Use this scenario to guide you through the process:



How to Run a Deployment

1. Verify the Prerequisites
2. Start the Deployment
3. Manage the Deployment:
    - Confirm Manual Approval Gates

- Respond to Requests for User Inputs
- Manage Deployment Run Errors
- Invoke Deployment Rollback

Verify the Prerequisites

To ensure that you can successfully execute the deployment, verify the following prerequisites:

- The release manager created the deployment.

Start the Deployment

To execute a release, start the deployment.

Follow these steps:

1. Select the Releases tab, and select Deployments.
2. Select the Application, select the Deployment.
3. Select the Deployment Package tab, and click Distribute to Agents.
4. In the Deployment Progress panel, click Run, and click OK in the confirmation dialog.
   - To run a scheduled release, Click OK.
   - If the release has an initialization step, select Run Release Automatically, and click OK.
   - If the release has an approval gate, select Run Release Automatically, and click OK.

     Note: If you do not select Run Release Automatically, manually start the execution after the initialization step or approval.

   The deployment starts. You can monitor the progress of the run and respond to requests for user input.
   To verify the success of the deployment, run a Deployment Overview Report. For more information, see Release Operations Reporting.

Confirm Manual Approval Gates

To allow a release with a manual approval gate to run, confirm approval. A Release Designer or Environment Administrator can confirm approval.

Follow these steps:

1. Click the Approval Gate tab.
2. Click Approve, and click OK.
   An approval message appears and the execution can now run.

Respond to Requests for User Inputs

During the release run, an executing step may require user input. To continue the execution, input the required information.

Follow these steps:

1. Click Waiting for user input in the Progress column of the currently running step.

   Note: The content for the tabs may take some time to populate from the Automation Studio process.

2. Click + to expand the display.

3. Select an option or type the information.

4. Click Apply.
   The execution run continues. You can manually close the user input dialog, or wait for the step to finish and the box to close.

Manage Deployment Run Errors

Release Operations Center automatically pauses the execution run when an error occurs. To continue a release run, resolve the error.

Follow these steps:

1. To examine the run details of a Failed-paused release, click the step.

2. Click Open in Automation Studio.
   You can manage the process from Automation Studio.

3. Close the Process Execution tab in your browser.

4. Click Resume.

Invoke Deployment Rollback

To invoke a rollback release and recover from a failure in a deployment release, click Run in the Rollback Release Pending pane.