CA Release Automation - 5.0.2

Getting Started

Date: 28-Aug-2014

Table of Contents

Getting Started

With CA Release Automation's visual application modeling capabilities, operation teams can automate any application service task, from release and deployment, to troubleshooting, maintenance, and auditing. CA Release Automation supports application service workflows across the most complex applications tiers, multiple instances, and distributed sites and environments.

This area of the documentation site provides an overview of the concepts, user interface, and workflow of CA Release Automation and highlights how the organization of this site reflects these considerations.

Workflow

Understand how the content organization of this documentation site addresses the use of CA Release Automation.

Objects

Understand the objects and artifacts that CA Release Automation uses, creates, and manages for your release and deployment processes.

Infrastructure

Understand the multi-tier architecture of CA Release Automation.

User Interface

Understand CA Release Automation user interfaces.

Roles

Understand how CA Release Automation uses roles and permissions to manage product access.

Workflow

Contents

- Product and Content Workflow

- Supplementary Content

CA Release Automation documentation organizes the content into broad functional areas. These areas do not represent particular user roles or the ongoing operational use of the product.

The following workflow represents a suggested order in which to address the content and understand how these areas interact with each other:
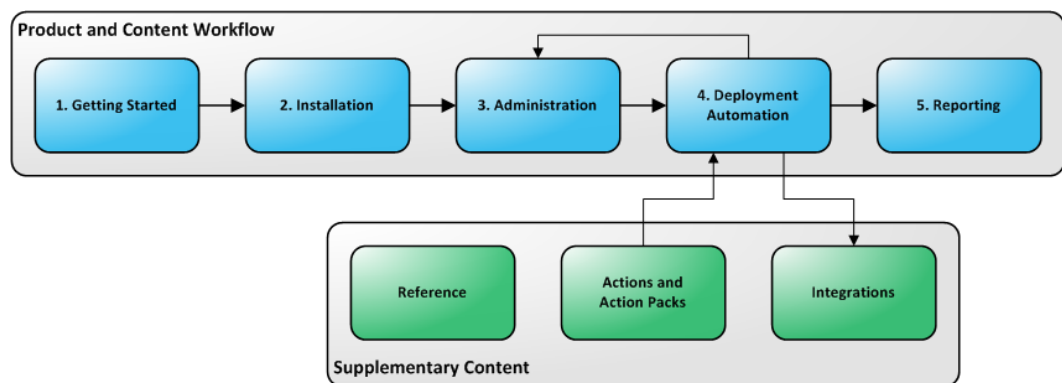
Suggested Content Workflow

Product and Content Workflow

Getting Started

Read Getting Started first to understand the concepts of CA Release Automation, the artifacts and objects it uses, and the product infrastructure.

Installation

CA Release Automation is a complex multi-tiered product. Installation provides a set of installation and deployment scenarios that enable you to deploy CA Release Automation in a configuration that suits your requirements.

Administration

After installation, and before using CA Release Automation, review Administration to learn how to configure the product settings, set up your users and groups, and how to manage the objects that you create during Deployment Automation.

Deployment Automation

Discover the main use case for CA Release Automation; the creation and management of your deployment artifacts, and the process involved to automate the deployment of applications and releases in your environments.

Reporting

Describes how to monitor your release processes and create custom reports.

Supplementary Content

Reference

Reference materials provide a detailed guide for developers working with CA Release Automation.

Actions and Custom Actions Development

Actions are the basic building blocks of automated release processes that enable CA Release Automation to perform operations in your environment. Actions and Action Packs provides a reference to the actions available in the product, the management of action packs available for download, and the functionality available to manage Actions. You can also create custom actions with the Custom Actions SDK.

Note: Action Packs are developed separately from CA Release Automation releases, maintain their own versions, and do not form part of the primary documentation set for CA Release Automation.

Integrations

CA Technologies provides a set of Plug-ins that enable you to embed CA Release Automation functionality in commonly used continuous integration products.

Note: Integration Plug-ins are developed separately from CA Release Automation releases, maintain their own versions, and do not form part of the primary documentation set for CA Release Automation.

Objects

Contents

-

-

-

CA Release Automation combines a number of object types to create a specific deployment. These separate deployment objects enable you to manage all parts of a release and maximize their reuse.

The following diagram describes the main objects in a deployment and their relationships:
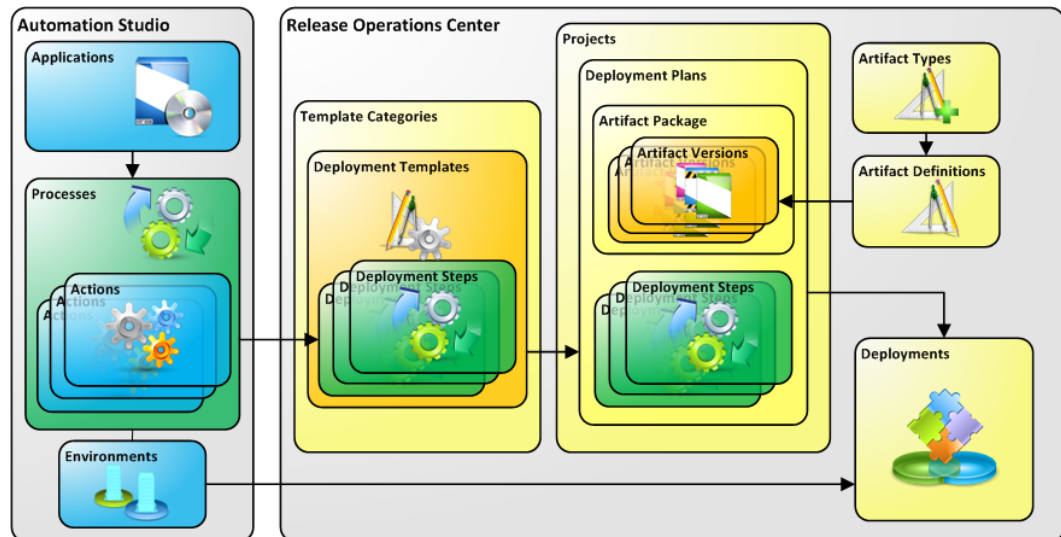
Product Object Overview

Object Management in Automation Studio

Automation Studio enables you to create processes that perform operations in a defined server architecture. This process involves the creation and combination of the following objects:

Applications

An application is a design element that represents an automated configuration and deployment for a server architecture. To create a deployment for a server architecture, the user permissions, processes, and server types must be associated with the same application.

For more information about applications and their associated objects, see How to Set Up an Application in Deployment Automation.

Processes

A process is a repeatable workflow of actions that perform operations in a server architecture. The main use case for a process is to deploy one or more software components to a correctly configured environment. Publish a process to make it available for use in Release Operations Center as a Deployment Step.

For more information about processes and their creation, see How to Create Automation Processes in Deployment Automation.

Actions

An action is an individual operation to perform in the target environment. Organize actions in categories, flows, and loops to create commonly used workflow segments. Set action parameters to specify the action for the process.

For more information about the available actions, see Actions and Custom Actions Development.

Environments

Create reusable environment configurations to assign to processes and deployments.

For more information, see How to Manage Environments in Deployment Automation.

Object Management in Release Operations Center

Release Operations Center enables you to create reusable deployment templates, deployment plans, and artifact packages. Combine a deployment plan with an environment configuration to create a deployment.

Template Categories and Deployment Templates

A template category is a container element that associates a set of deployment templates with an application. Each deployment template represents a particular workflow of deployment steps that are required to deploy the application where each step is a process created in Automation Studio.

For more information about template categories and deployment templates, see How to Create a Deployment Template in Deployment Automation.

Artifact Types, Definitions, Versions, and Artifact Packages

Artifact objects enable you to build a reusable library of software component types, software components, component versions. Combine a set of component versions as an artifact package.

For more information about artifact objects and their creation, see How to Manage Artifacts for Deployment in Deployment Automation.

Projects, Deployment Plans, and Deployments

A project specifies an application version. A deployment plan specifies a deployment template and artifact package with a project to define a workflow that deploys the package. The final step assigns an environment to create a deployment.

For more information about deployments and their creation, see How to Create a Deployment in Deployment Automation.

XML Manifest

CA Release Automation allows you to generate XML manifest files that you can use to specify release parameters. CA Release Automation generates an XML template that includes tags to identify all the relevant information. To specify the information, modify the XML file, and load the file in CA Release Automation.

Infrastructure

A deployment of CA Release Automation installs the following components:

Management Server

The management server is the central point the CA Release Automation environment. When you execute a process, the management server sends instructions to the agents through the designated execution servers. The management server also includes the UI server.

Repository

The repository provides storage for artifacts actions. The management server installation includes the repository by default. You can also install a standalone repository. For more information, see How to Install and Configure a Standalone Repository.

Execution Server

Execution servers channel execution and administrative instructions from the management server to the agents. The execution servers manage CA Release Automation agents.

Note: We recommended that you place each execution server electronically close to agents that the server manages.

Agent

CA Release Automation uses agents to execute actions. All computers that are part of the CA Release Automation environment require an agent. Install agents remotely or install agents manually after server installation. For more information about agents, see How to Deploy CA Release Automation Agents.

Important! Some third-party products that use multi-tier architectures require custom agent deployment. For more information, see the prerequisites for each Action Pack.

The deployment of each component and the number of times you deploy each component depends on the requirements for your environment. For information about the deployment options for CA Release Automation, see Installation.

The following diagram represents the installation components, and their relationships with each other, and with your environment in a simple deployment:
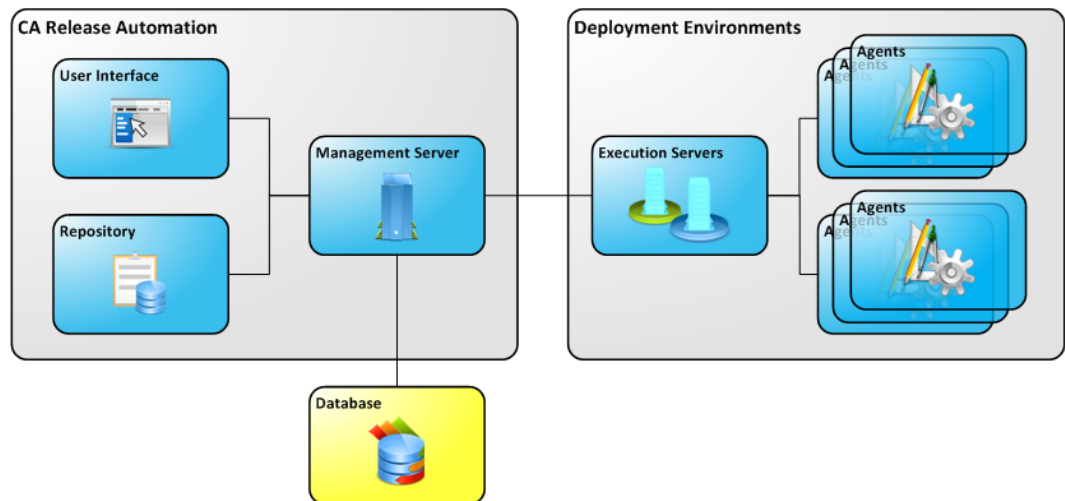
Product Infrastructure Overview

Note: For more information about the communication between installation components, see
Ports and Protocols in Installation.

User Interface

The CA Release Automation user interfaces are accessible from the UI landing page at http://<host>:<port>/nolio-app/.
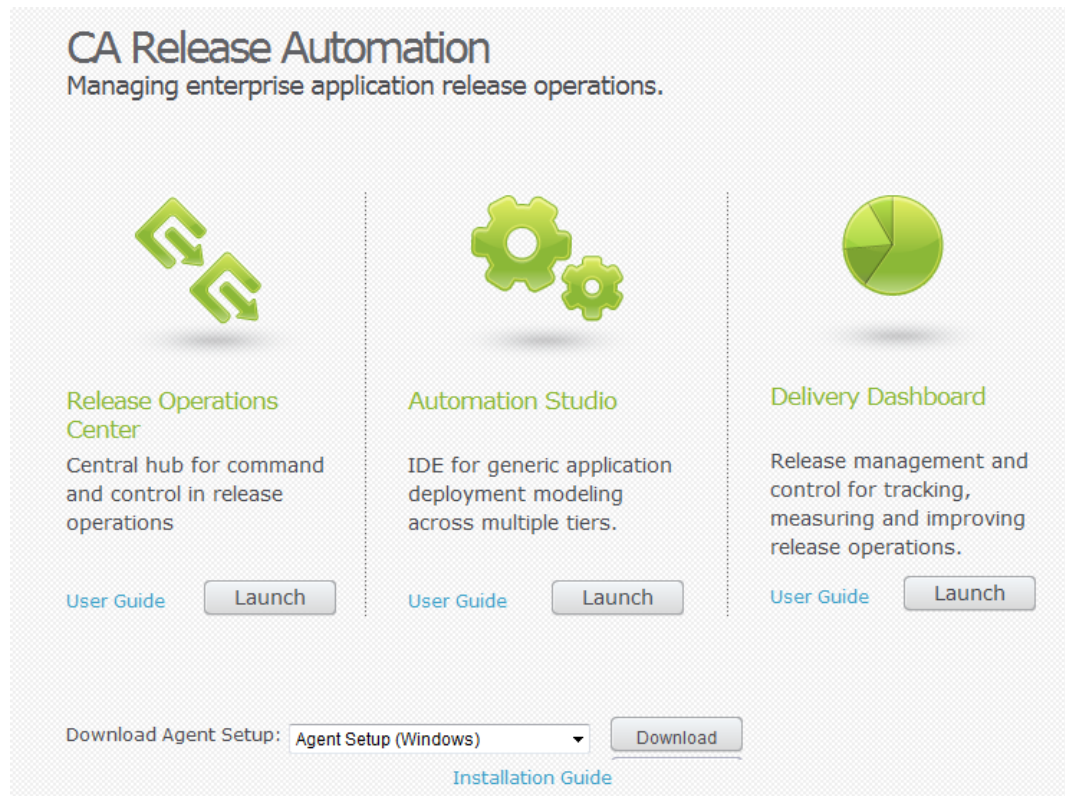
UI Landing Page

The user interface is split into the following pieces:

- Automation Studio
  The deployment modeling area of CA Release Automation.

- Release Operations Center
  The operational management area of CA Release Automation.

- Delivery Dashboard
  The high-level reporting area of CA Release Automation.

Automation Studio

Automation Studio is a Java client that provides the process design capabilities and the main administration functions for CA Release Automation. Open the client from the UI landing page.
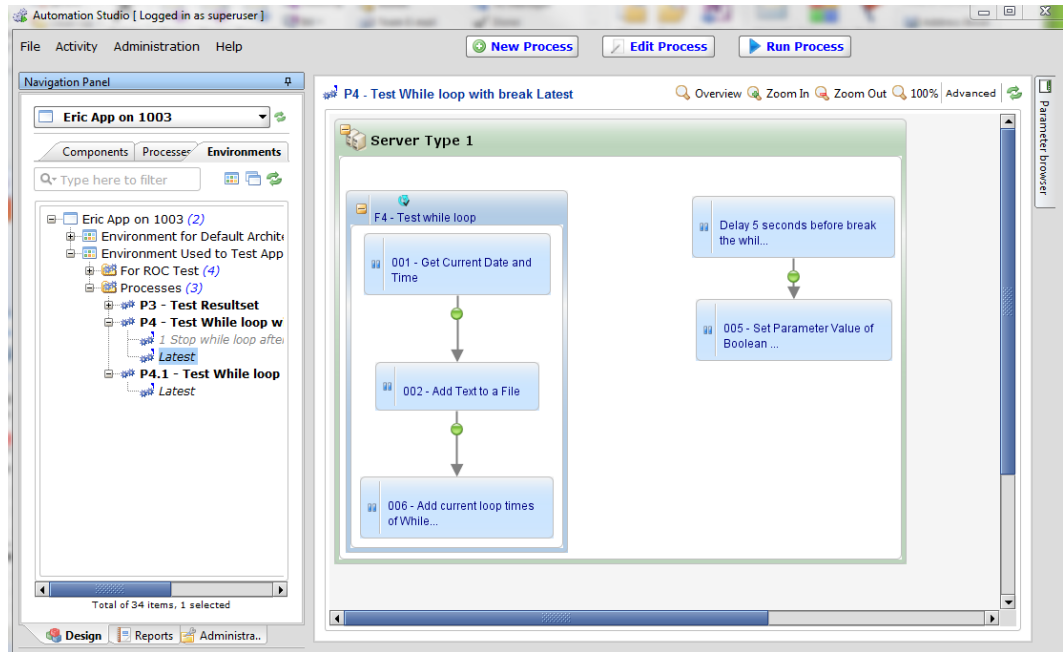
Automation Studio User Interface

The UI organizes the functionality into the following tabs in the Navigation Panel:

- **Design**
  Create and manage the environment architectures and the components to deploy. Design processes to deploy those components to specified architectures.
  The following documentation describes the design capabilities in Automation Studio:

  - How to Set Up an Application in Deployment Automation

  - How to Manage Environments in Deployment Automation

  - How to Create Automation Processes in Deployment Automation

  - How to Execute a Process in Automation Studio in Deployment Automation

- **Reports**
  Reporting in Automation Studio provides information about process executions.
  The following documentation describes the reporting capabilities of Automation Studio:

  - Generate Reports in Automation Studio in Reporting

- **Administration**
  The main administrative functions of CA Release Automation are accessible in the Administration tab in Automation Studio.
  For more information about CA Release Automation administration, see Administration.

Release Operations Center

The Release Operations Center UI enables the operational management of your releases. Access Release Operations Center from the UI landing page, or directly at http://<host>:<port>/datamanagement/asapui.jsp.
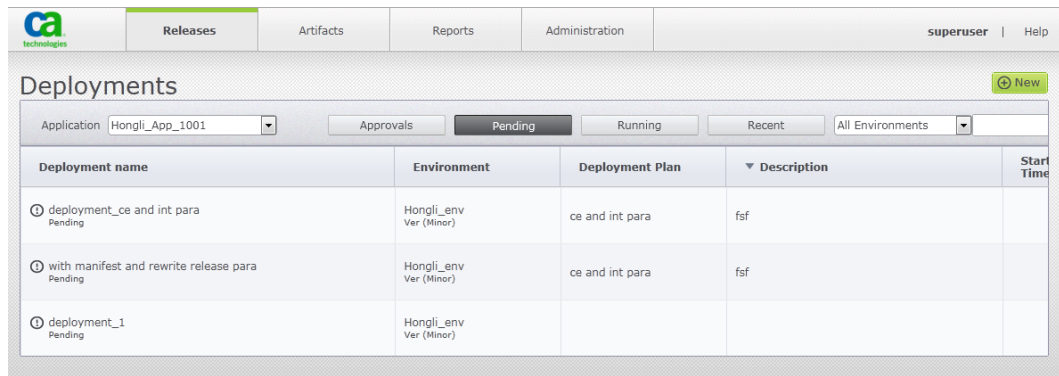
Release Operations Center User Interface

The UI organizes the operational functionality into the following tabs:

- **Releases**
  Create and manage your release templates, plans, and projects in the Releases tab.
  The following documentation describes the release processes managed from the Releases tab:

  - How to Create a Deployment Template in Deployment Automation

  - How to Create a Deployment in Deployment Automation

  - How to Run a Deployment in Deployment Automation

- **Artifacts**
  Create and manage your artifacts for deployment in the Artifacts tab.
  The following documentation describes the release processes managed from the Artifacts tab:

  - How to Manage Artifacts for Deployment in Deployment Automation

- **Reports**
  Report on release operations executions and related artifacts.
  The following documentation describes the reporting capabilities in Release Operations Center:

  - Release Operations Reporting in Reporting

- **Administration**
  Manage environment configurations, rollbacks, approvals, and agent groups, and monitor your CA Release Automation infrastructure.
  The following documentation describes the administration capabilities in Release Operations Center:

  - How to Manage Environments in Deployment Automation

  - Manage System Agents Groups in Administration

  - Manage and View the Health Monitor in Administration

  - Manage Approval Gates in Administration

  - Manage Action Packs in Release Operations Center in Actions and Custom Actions Development

Delivery Dashboard

The Delivery Dashboard provides a high-level overview of your release operations. Access the Delivery Dashboard from the landing page, or directly at http://<host>:<port>/datamanagement/MngConsole.jsp.
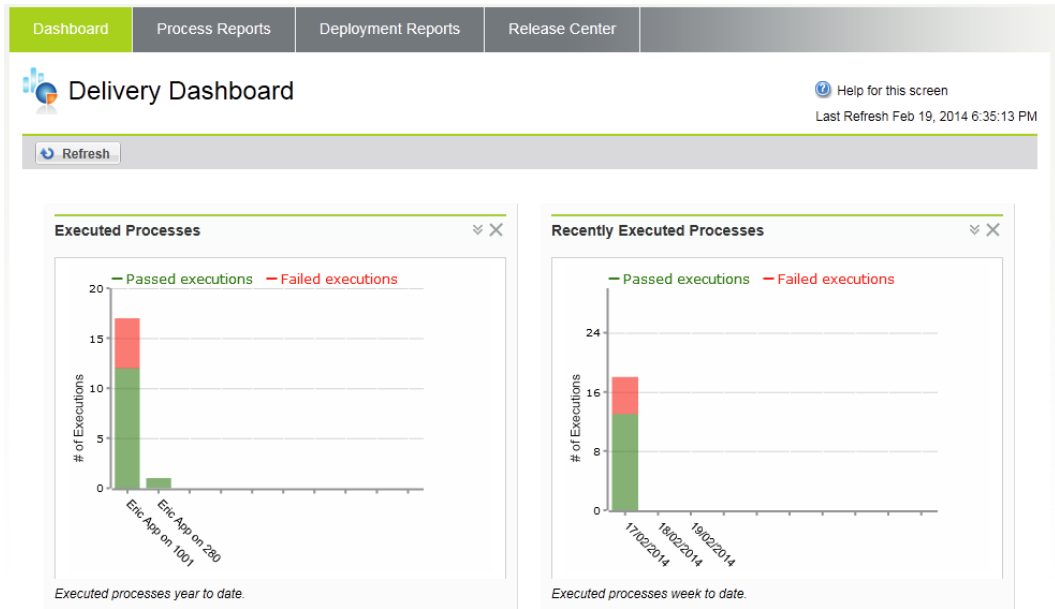
Delivery Dashboard User Interface

The UI organizes the reporting into the following tabs:

- **Dashboard**
  A custom layout containing a set of standard and custom reports.

- **Process Reports**
  A custom report generator for process executions in Automation Studio.

- **Release Reports**
  A custom report generator for release executions in Release Operations Center.

The following documentation describes the reporting capabilities of the Delivery Dashboard:

- How to Monitor Processes and Releases in Reporting

Roles

CA Release Automation uses roles and permissions to manage user access to functionality and release content.

- Use roles to determine generic access to functionality in the user interface.

- Use permissions to determine specific access to server groups, applications, environments, and processes.

Note: For more information about user management, see How to Set Up Users and Permissions in Administration.

Review the available roles and permissions before you configure users in CA Release Automation.

User Roles

In CA Release Automation, user roles determine user access rights.

CA Release Automation includes the following user roles:

- **User**
  Provides access to the Reports panel.

  Note: Users cannot view applications unless they also have the appropriate application-level permissions.

- **Superuser**
  Provides access to all panels and tabs.

  Important! For the initial login, the default superuser credentials are user name *superuser* with password *suser*. We recommend changing this password immediately after installation.

- **Admin User**
  Provides access to administrative tasks.
  Assign specific roles to Admin Users as follows:

  - **Security and Permissions Administrator**
    Manages users and permissions.

  - **Servers Administrator**
    Manages servers and agents.

  - **General System Administrator**
    Imports new action packages and defines general system settings.

  Note: Admin Users cannot access applications.

Permissions

Permissions control access to screens and functions. You can assign permissions for operations on a server group or in an application. In applications, you can assign permissions at the environment level and at the process level.

Note: Permissions for users and groups aggregate. When you assign a user to a group, the user has the group permissions and individual user permissions.

CA Release Automation includes the following permission types:

- Server group permissions

- Application-level permissions

- Environment-level permissions

- Process-level permissions

Server group permissions define the server group that a user can access.

Note: Any user with execution permissions can run reports. The reports are limited to areas where the user has execution permissions.

Application-level permissions:

- **Can View Application**
  This permission is an initial permission level that is required for other application, environment, and process level permissions. A user with this permission can:

  - View component actions, flows, and parameters.

  - View architectures, server types, and processes.

  - Copy components from the current application to another application to which the user has permissions.

  - View usages for components and parameters.

  - View the Reports tab and the process activity for the application.

- **Application Owner**
  Grants full permissions on a specific application and all the environments of that application.

- **Application Publisher**
  Enables a user to publish any process in any environment under the current application. By default, the Application Designer permission is enabled.

- **Application Designer**
  Enables a user to create and design processes and components under the current application.

- **Can View Design Components**
  Enables a user to view all objects in the Components tab and Processes tab in Automation Studio for the current application.

- **Execute Processes in All Environments**
  Enables a user to execute all processes in all environments under the current application.

- **Can View Execution Components**
  Enables a user to view the Environments tab in Automation Studio for the current application.

- **Execute Releases in All Environments (Release Operations Center)**
  Enables a user to execute all releases in all environments under the current application in Release Operations Center.

- **Release Template Designer (Release Operations Center)**
  Enables a user to create and design templates in all environments under the current application in Release Operations Center.

Environment-level permissions:

- **Environment Admin**
  Enables a user to execute all processes in Automation Studio, and design releases and execute all releases in Release Operations Center for the current environment.

- **Can Execute All Processes**
  Enables a user to execute all processes in Automation Studio for the current environment.

- **Release Designer (Release Operations Center)**
  Enables a user to design releases in Release Operations Center for the current environment.

- **Can Execute All Releases (Release Operations Center)**
  Enables a user to execute all releases in Release Operations Center for the current environment.

Process/release level permissions:

- **Individual processes**
  Enables a user to execute individual processes.

- **Individual release templates (Release Operations Center)**
  Enables a user to execute releases that are created from specific templates in Release Operations Center.