Tokyo Hyperautomation and Low-Code

Last updated: July 15, 2023

PDF generated on July 15, 2023
©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement
ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Some examples and graphics depicted herein are provided for illustration only. No real association or connection to ServiceNow products or services is intended or should be inferred.

This PDF was created from content on docs.servicenow.com. The web site is updated frequently. For the most current ServiceNow product documentation, go to docs.servicenow.com.

Company Headquarters
2225 Lawson Lane
Santa Clara, CA 95054
United States
(408)501-8550

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Build apps using App Engine Studio

ServiceNow® App Engine Studio (AES) is a guided, low-code tool for developing rich web applications to store information, automate business processes, and solve business problems. Work that was once assigned to administrators can now be delegated to employees with little to no training using AES.

Get started

By delegating development to citizen developers in your organization, administrators are freed up to address more strategic, system-wide priorities. AES can help you do the following:

- Build powerful apps quickly to fit any business need by using a suite of development tools, including guided workflows and templates.
- Create experiences users love with Catalog Builder, Flow Designer, Workspace Builder, Mobile App Builder, and other integrated tools.
- Scale apps without sprawl with straightforward governance and tools that support both citizen and pro developers, such as App Engine Management Center (AEMC).

Explore
Learn about App Engine Studio concepts and features.

Install
Install App Engine Studio and its associated apps.

Configure
Configure environments, tools, and user access.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Build

Build applications using App Engine Studio.

Deploy

Deploy applications to the instances in your pipeline, from development to production.

Reference

Get details about App Engine Studio components such as fields, tables, and properties.

Request apps on the Store

Visit the ServiceNow Store website to view all the available apps and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes.

Troubleshoot and get help

- Ask or answer questions in the App Engine Studio community forum
- Search the Known Error Portal for known error articles
- Learn more about how to create your own apps on the developer site.
- Contact Customer Service and Support

Exploring App Engine Studio

Learn how you can use the low-code app development tool, App Engine Studio (AES), to build powerful applications using guided setup, predefined templates, and workflows.

Get to know AES

AES is designed to address enterprise low-code development needs by putting the power of the Now Platform in the hands of low-code developers. Guidance-driven flows and easy-to-customize templates help citizen developers to come up to speed quickly.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Regardless of their skill level, citizen developers become more productive using AES. Whether you're building a custom app from scratch or using a template, the simplified low-code experience in AES speeds up development on the Now Platform.

Key features of the AES include:

- **Guided experience for first-time users:** AES features a guided experience that orients developers, making it easy to navigate the environment. Guidance from start to finish ensures that citizen developers succeed.
- **App templates:** App templates simplify the app development process. Using templates based on proven use cases gives developers the ability to create powerful apps without the learning curve.
- **Guardrails:** Citizen developers receive tooltips and recommendations along the way, keeping them on track. Submitting apps for approvals also ensures quality.
- **Collaboration:** Developers of all skill levels can seamlessly collaborate on app development in AES's low-code environment.
- **Integrated tools:** Why work with multiple low-code tools when AES integrates with several? From designing tables to building catalogs and creating custom flows, AES has it all.

Additional resources for App Engine Studio

Learn more about App Engine Studio	ServiceNow resources
App Engine Studio is a guided, low-code tool for developing rich web applications to store information, automate business processes, and solve business problems.	App Engine Studio Playlist
	App Engine Studio vs. Studio

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Learn more about App Engine Studio	ServiceNow resources
Note: AES requires an App Engine subscription or product packaged with one. For more information, refer to Install App Engine Studio. Contact your account representative for details.	ServiceNow Community site
	Build My First App Engine Studio Application - ServiceNow Developers site

Visually explore App Engine Studio

This video shows a visual overview of the app creation process using App Engine Studio.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Scale development while maintaining oversight

App Engine Studio lets you scale development across your organization while establishing and maintaining guardrails. You can control access to AES. You can also review apps created by your citizen developers before they're moved through your pipeline and published to your production environment. This review process gives you confidence to ensure the quality of the apps you create, release, and deploy.

Create apps using App Engine Studio

The following illustration describes the basic tasks involved in creating an app using App Engine Studio. For detailed instructions, see Building applications in App Engine Studio.

Note: Select the image to enlarge it.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Application creation process using AES

PDF generated on July 15, 2023
©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement
ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

App development in App Engine Studio usually follows this process:

1. As a citizen developer, you submit your plan for an app through Application Intake for approval and development in AES.
2. The AES admin reviews the intake request. If it's rejected, that closes out the request. But you can always update your idea and submit a new request.
3. When the request is approved, you need to decide whether to create your app using a predefined template, or to create it from scratch. You should explore the available templates. They can save you lots of time.
4. Then you need to determine whether you have the resources to build the app on your own. If you need help, you can request collaboration, or the AES admin can assign a collaborating developer.
5. If you use a template, the base system app is created automatically, with a basic data model, user experiences, automated workflows, and security roles.
6. You can customize all those elements for the app. If you're creating the app from scratch, you need to define those four elements yourself.
7. The AES admin can monitor the development of the app every step of the way using the App Engine Management Center (AEMC). Monitoring apps through the development cycle can help the AES admin balance workloads and ensure quality.
8. When your app is complete, the AES admin uses the AEMC to request that the app is deployed into the pipeline for testing, staging, and final deployment.
9. When the app receives final approval, it's deployed to your product environment.

AES user interface

Learn about the App Engine Studio (AES) user interface.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

AES is a web user interface that lets you build custom applications for your organization. You can build applications using templates which can be customized to fit your organizations needs.

App Engine Studio home

The App Engine Studio home page provides easy access to creating apps, viewing your app, quick start actions, and templates.

Use the top navigation bar to view your apps, access app templates, and find help resources. You can also access the help center by selecting the in the top right.

Users can access the following in AES:

- Create app— Create an application from scratch.
- Quick start— Links to add objects to apps, browse app templates, and learn more about the App Engine Studio tools.
- My recent apps— A list of applications you have accessed recently using App Engine Studio.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Templates— A list of templates you can use to create an application with preconfigured data, experience, logic and automation, and security.

My Apps tab

View and search the applications you created.

Templates tab

Provides a list of available app templates.

Resources tab

View tutorials and helpful resources to get started in App Engine Studio.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

App Home

Add data, experience, logic and automation, and security to your app from the app home.

Some objects require access depending on your role. You can request access by selecting **Contact your system administrator** to become a delegated developer. For more information on the delegated developer role, see Delegate developers using AES.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Application properties

View general settings of your application such as the name, description, and logo. You can also open your application in ServiceNow Studio or delete your application.

Repository configuration

View and edit the source control repository settings for your application.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Integrated development tools for AES

App Engine Studio (AES) provides instant access to several tools available in the Now Platform development suite.

As you create apps using App Engine Studio, you can extend their capabilities with these powerful development tools.

App Engine Studio development tools and features

Tool	Description	Reference
Access Control	Work with access control and roles for the application.	See Add application security.
Catalog Builder	Add record producer catalog items in a guided tool for	See Add a standard catalog item.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Tool	Description	Reference
	building a Service Catalog.	
Decision Builder	Add decision rules to decouple decision logic from code using decision tables.	See Add a decision.
Email notifications	Create and edit email notifications that are automatically sent when a record is created or updated. Email notifications are also used as a reference in flows or can be triggered by an event.	See Add an email notification.
Flow Designer	Add flows to automate application processes.	See Add a flow from scratch.
Integration Hub - Import	Import and map data into existing tables.	See Import and map spreadsheet data into an existing data table
Mobile App Builder	Add mobile experiences.	See Add a mobile experience.
Process Automation Designer	Edit cross-functional processes and consolidate them	See Modify a process.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Tool	Description	Reference
	into automated task-oriented views.	
Table Builder	Work with data models in a tabular format. Table Builder is exclusive to App Engine Studio and necessary for creating apps.	See Create a table from scratch.
UI Builder	Edit workspace and portal experiences using a highly configurable UI development tool.	See Add a workspace and Add a portal.
Workspace Builder	Quickly build custom workspaces to give users a service desk-like experience to manage tickets.	See the following topics: • Building workspaces in AES • Configure a workspace in Workspace Builder • Configure workspace settings in Workspace Builder • Configure a workspace home page in Workspace Builder • Configure a record page for a

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Tool	Description	Reference
		workspace in Workspace Builder • Configure lists for a workspace in Workspace Builder • Configure analytics for a workspace in Workspace Builder

App Engine versions and App Engine Studio

App Engine is a Now Platform® suite of products to help boost productivity by automating workflows. It's available in Starter and full App Engine versions. The full version includes App Engine Studio (AES) for building low-code apps.

App Engine Starter and full App Engine versions

The following table differentiates the available apps and differences between the App Engine Starter and full App Engine versions.

App Engine Starter vs. App Engine

App Engine Starter	Full App Engine version
Limited custom tables	No limits to custom tables
Limited number of apps you can build	Build unlimited apps
Standard App Engine app creation tools: • UI Builder • Automated Test Framework • Delegated development	Standard App Engine app creation tools: • UI Builder • Automated Test Framework • Delegated development

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

App Engine Starter	Full App Engine version
• Flow Designer • Service Creator • Service Portal • Studio IDE • Guided Application Creator • Now® Mobile • Mobile App Builder • Agent Workspace • Process Automation Designer	• Flow Designer • Service Creator • Service Portal • Studio IDE • Guided Application Creator • Now® Mobile • Mobile App Builder • Agent Workspace • Process Automation Designer

N/A	Additional products and offerings:
	• App Engine Management Center (AEMC)
	• App Engine Studio exclusive apps within App Engine:
	  • Table Builder for App Engine
	  • Workspace Builder for App Engine
	• Dynamic Translation
	• Mobile Publishing
	• Prebuilt app, flow, and UI templates
	• Performance Analytics
	• Predictive Intelligence
	• Universal Request Pro

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

App Engine Starter	Full App Engine version
	• Virtual Agent

App Engine Starter is included in all products (that is, it's free). To access additional features outside of App Engine Starter, you need a paid license of App Engine subscription. The full App Engine version enables users to act as a Fulfiller for unlimited custom apps and unlimited custom tables. Customer entitlements may vary depending on the type of App Engine subscription purchased. Contact your account team for entitlement confirmation.

Additional information on App Engine

Learn more about App Engine	Additional ServiceNow resources
ServiceNow provides several additional resources on App Engine.	App Engine purchase overview and version comparison
	App Engine data sheet (PDF)
	Entitlements for subscription products
	Custom table guide (PDF)

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Learning plan for getting started with App Engine Studio

ServiceNow provides citizen developers with several quick training modules for getting started building low-code apps in App Engine Studio (AES).

The ServiceNow Developers site provides numerous resources for developing apps in AES.

Use the following learning modules to quickly explore ways to build apps.

ServiceNow Developers site learning modules

Course	Description
Build My First App Engine Studio Application	Create an application to track a collection using AES. The application will be secure, automated, and provide an engaging user experience.
Create an App and Data Model	Create an application from scratch with AES, including the data model used by the application. The data model is a foundation for learning how to add user experiences, logic and automation, and security to your application in other learning modules.
Create Record Producer User Experiences	Create record producer catalog items in AES. Users can submit a request or create a task using Service Catalog items in Service Portal.
Create Workspace User Experiences	Create a workspace to report on and manage data in an application created with AES.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Course	Description
Create Mobile User Experiences	Create and test a mobile experience in AES that enable users to access applications from anywhere.
Automate Processes with Flows	Create flows in AES to automate business processes. Flows reduce human error, improve efficiency, and make apps work better.
Secure Apps and Data	Use AES to secure an application by creating roles, assigning the roles to users, and testing user access to application data.

Additional learning resources

Learn more about application development
You can learn about How citizen developers cook up innovation on the ServiceNow blog.
For more information about defining cross-scope access to an application resource and approving or denying requests, see Define cross-scope access to an application resource.

Configuring App Engine Studio and related apps

App Engine Studio (AES) guided setup walks you through the implementation process, one step at a time. As you finish each setup procedure, you're prompted to begin the next one.

When you have finished configuring AES, you have the option of configuring other products related to AES:

- App Engine Management Center (AEMC)
- Application Intake
- Pipelines and Deployments

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Each of these products has its own guided setup. If you have already configured one or more of the products and you are prompted to configure it again, you can simply ignore that instruction. The following diagram illustrates the preferred method for implementing AES and associated applications:

PDF generated on July 15, 2023
©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

AES implementation

PDF generated on July 15, 2023
© 2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement
ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: If you plan on cloning your production instance to one or more non-production instances, you should also install the AES product on your production instance prior to cloning. For more information, see System clone.

- AES and domain separation

  Domain separation is unsupported for App Engine Studio (AES). Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data.

- Install App Engine Studio

  You can install the App Engine Studio (AES) application (com.snc.app-engine-studio) if you have the admin role. The application installs related ServiceNow® Store applications and plugins if they are not already installed.

- Configure App Engine Studio

  App Engine Studio (AES) guided setup provides a sequence of tasks that help you configure AES on your ServiceNow instance.

- Configure the App Engine Management Center

  Use the App Engine Management Center (AEMC) guided setup to step through the initial configuration of the App Intake and Pipelines and Deployments applications. The App Intake guided setup is optional, but the Pipelines and Deployments guided setup is required if you want to use AEMC.

- Configure Application Intake

  Use the App Engine Studio (AES) Application Intake guided setup to step through the initial configuration of the Application Intake application. Detailed instructions for each step are provided in subsequent sections of the product documentation.

- Configure Pipelines and Deployments

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Use the App Engine Studio (AES) Pipelines and Deployments guided setup to step through the initial configuration of Pipelines and Deployments. Detailed instructions for each step are provided in subsequent sections of the product documentation.

- Cloning instances with AES

  Learn how to protect the data, tables, and templates you've created in App Engine Studio when using System Clone to copy instances from production to non-production.

AES and domain separation

Domain separation is unsupported for App Engine Studio (AES). Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data.

Support level: No support

- The domain field may exist on data tables but there is no business logic to manage the data.
- This level is not considered domain-separated.

For more information on support levels, see Application support for domain separation.

Install App Engine Studio

You can install the App Engine Studio (AES) application (com.snc.app-engine-studio) if you have the admin role. The application installs related ServiceNow® Store applications and plugins if they are not already installed.

Trial version of AES

To try AES before purchasing a license, you can install it on a Personal Development Instance. For more information, see the ServiceNow Developer Program.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: An App Engine Studio subscription is required to install on a production or non-production instance. For more information, contact your ServiceNow representative.

Using the ServiceNow Store to install AES

The ServiceNow Store enables you to download core products and applications. A product contains one or more applications that are licensed as a group. For example, App Engine Studio is a product that contains numerous tools and applications within it, such as Flow Designer and Mobile App Builder. If you install the basic AES application and not the full AES product, you won't get its full suite of features and tools.

Check that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see Get entitlement for AES apps.

When you install AES, you also install the following related items:

- Roles and groups
- Tables
- Plugins

For more information, see Components installed with AES.

Installation workflow for AES

The following is an overview of the tasks that you must perform to install AES for the first time:

1. Develop your instance strategy for AES.
2. Get entitlement for AES to ensure you have a license.
3. Install AES (the full product, not the application) from the ServiceNow Store.
4. Install the AES integrations and plugins.

Alternatively, you can update existing AES installations by doing the following:

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Update a previously installed AES version
- Upgrade your AES instance to the next family release

Learn more about AES installation	Additional ServiceNow resources
ServiceNow provides several additional resources on installing and administering App Engine Studio.	
	ServiceNow Community site
	Introduction to App Engine Studio on-demand course

- AES instance strategy

  You should install App Engine Studio (AES) on all ServiceNow instances where users will develop applications.

- AES and the ServiceNow Store

  App Engine Studio (AES) enables you to obtain new and updated features more rapidly. Before you can use AES, you must verify that you have entitlement to it, meaning that you have valid licenses to use it. Then, you can install AES and its plugins from the ServiceNow Store.

- Components installed with AES

  Several types of components are installed with activation of the App Engine Studio (AES) plugin, including tables and user roles.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

AES instance strategy

You should install App Engine Studio (AES) on all ServiceNow instances where users will develop applications.

You will need to establish your company's instance strategy for AES. Some of the decisions you will need to make include:

- Whether you want to allow anyone within your company to have access to App Engine Studio to start building apps.
- Whether you want to grant access to a select group of people.
- Whether you want to grant access on a case-by-case basis by setting up a form where individuals can complete information about the app that they are looking to build. IT then decides whether to give those individuals access to build that app.

A non-production instance that is similarly configured to your production instance may be the best candidate for your test environment. You can then more accurately find issues that may arise if the application is deployed to production.

> **Note:** If you plan on cloning your production instance to one or more non-production instances, you should also install the AES product on your production instance prior to cloning. For more information, see System clone.

After you have established your instance strategy, you must also establish and automate your approval or review process. AES is a product that runs on your non-production environment. For an organization with multiple non-production environments, you will need to decide which non-production environment AES will run on. You must also determine which pipeline to use for promoting apps from a particular non-production instance to your test instance, and then finally to production where the app will be running live. For more information, see Pipelines and Deployments.

AES and the ServiceNow Store

App Engine Studio (AES) enables you to obtain new and updated features more rapidly. Before you can use AES, you must verify that you

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

have entitlement to it, meaning that you have valid licenses to use it. Then, you can install AES and its plugins from the ServiceNow Store.

Request apps on the Store

Visit the ServiceNow Store website to view all the available apps and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes.

Methods for installing AES

The process you use to obtain AES depends on whether you are installing AES for the first time, updating a version of AES that you previously installed from the ServiceNow Store, or upgrading from one family release to the next one.

- Get entitlement for AES apps

  Install App Engine Studio (AES) by verifying that the application or the product and its associated applications have valid ServiceNow entitlements. An entitlement means you have a license to install the product.

- Install AES from the ServiceNow Store for the first time

  Install App Engine Studio (AES) from the ServiceNow Store for the first time. The installation involves several easy steps. Some steps are performed on the ServiceNow Store and some in your Now Platform instance.

- Install the AES product and integrations

  Install the App Engine Studio (AES) product to ensure you get all the dependencies, integrations, and tools, such as templates and builders.

- Update a previously installed AES version

  If you previously installed App Engine Studio (AES) from the ServiceNow Store and if a new version is available, then update the version in your instance.

- Upgrade your AES instance to the next family release

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

If you are currently running a family release (Rome, for example) and want to upgrade App Engine Studio (AES) to the next release, you don't need to acquire the applications from the ServiceNow Store.

Install App Engine Studio (AES) by verifying that the application or the product and its associated applications have valid ServiceNow entitlements. An entitlement means you have a license to install the product.

Before you begin

Note: An App Engine Studio subscription is required to install on a production or non-production instance. For more information, contact your ServiceNow representative.

Individuals performing entitlement must have a Now Support account and have permission to request applications for the instances under consideration.

Role required: admin

Procedure

1. Navigate to the ServiceNow Store.
2. Select **Log In** and log in using your Now Support credentials.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Integrations and other types of content appear on the **Certified Apps** tab.

3. Select the **ServiceNow Products** tab to view all available ServiceNow products.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

4. Select **App Engine Studio**.

   Note: When you have obtained entitlement to the core product, the applications listed under it are also entitled.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The page lists all the applications that are associated with the AES product you're entitling.

5. Verify that you have entitlement to the product and applications by selecting **Opt-in**.

   Note: The **Opt-in** button is not available unless you purchased an AES subscription.

6. When the ServiceNow Store prompts you to read and accept the ServiceNow terms and conditions, select the check box and select **Accept**.

   Opting in to entitlement is a one-time process for each product.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

A check mark appears next to the product name, and the **Manage Entitlements** button appears. The button indicates that you are subscribed to the product and its associated applications.

7. Change the instances affected by the entitled applications by selecting the **Manage Entitlements** button and then specifying one of the following options:
   - **Remove all existing entitlements**
   - **Entitle all instances**
   - **Entitle selected instances**

Result

Install and activate AES. Navigate to **All > My Company Applications** and select App Engine Studio.

Install App Engine Studio (AES) from the ServiceNow Store for the first time. The installation involves several easy steps. Some steps are performed on the ServiceNow Store and some in your Now Platform instance.

Before you begin

Role required: admin

About this task

The ServiceNow Store enables you to download core products and applications. A product contains one or more applications that are licensed as a group. For example, App Engine Studio is a product that contains numerous tools and applications within it, such as Flow Designer and Mobile App Builder. If you install the basic AES application and not the full AES product, you won't get its full suite of features and tools.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

For a list of all dependencies and tools installed with the AES product, see the listing in the ServiceNow Store.

Procedure

1. In the ServiceNow Store, ensure that you have entitlements (or licenses) to the product and its dependent applications.
2. Install AES from the ServiceNow Store.
3. Run the installation on your instance, and accept all the plugins.

Result

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Install the App Engine Studio (AES) product to ensure you get all the dependencies, integrations, and tools, such as templates and builders.

Before you begin

Store installation requires a Now Support account. You must also have permission to request applications for the instances you're supporting.

Role required: admin

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Locate the App Engine Studio product (not the application), and select **Install**.

   Visit the ServiceNow Store website to view all the available apps and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes.

   Note: You must select the AES product, not the application.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

3. On the Install dialog box, review the list of applications and dependencies to install.
   Dependent plugins and applications are listed if they will be installed, are currently installed, or need to be installed. If any plugins or applications must be installed, you must install them before you can install App Engine Studio.

4. (Optional) If demo data is available and you want to install it, select the **Load demo data** check box.

   Demo data comprises sample records that describe application features for common use cases. Load demo data when you first install the application on a development or test instance.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Important: If you don't load the demo data during installation, it's unavailable to load later.

5. Select **Install**.

Result

App Engine Studio is installed on your instance.

If you previously installed App Engine Studio (AES) from the ServiceNow Store and if a new version is available, then update the version in your instance.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Search for `App Engine Studio`.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

3. Select the version that you want to update to, and select **Update** or **Install/Update All**.

Result

App Engine Studio automatically updates on the instance.

If you are currently running a family release (Rome, for example) and want to upgrade App Engine Studio (AES) to the next release, you don't need to acquire the applications from the ServiceNow Store.

The application is automatically updated when the platform is updated to the minimum required version.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Components installed with AES

Several types of components are installed with activation of the App Engine Studio (AES) plugin, including tables and user roles.

> **Note:** The Application Files table lists the components that are installed with this application. For instructions on how to access this table, see Find components installed with an application.

Roles installed

Role title [name]	Description	Contains roles
App Engine Studio app template admin [app_template_admin]	Administers the use, sharing, and activation or deactivation of templates. This role is assigned by an admin to individual users. For more information, see Manage template access	• app-template-author • app-template-runner • flow-designer • flow-operator
App Engine Studio user [sn_app_eng_studio.user]	Builds applications in App Engine Studio. This role is assigned automatically to users in the App Engine Studio Users group. For more information, see Grant user access to AES.	• catalog_builder_editor • app_template_runner • sn_g_app_creator.app_creator

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Role title [name]	Description	Contains roles
		• sn_table_builder.user

Tables installed

Table	Description
App Details [sn_app_eng_studio_app_details]	Details about the operations that a developer used to create an application in App Engine Studio. This table is updated automatically as developers build applications in App Engine Studio.
Applications in Projects [sn_app_eng_studio_project_application_m2m]	Applications that a developer creates in App Engine Studio. This table is updated automatically as developers build applications in App Engine Studio.
Environment [sn_pipeline_environment]	Instances that you use for the developing, testing, or launching an application. You update this table as you define environments for App Engine Studio.
Deployment Request [sn_deploy_pipeline_deployment_request]	Requests to review and publish an application that a developer created in App Engine Studio. From the deployment request form, a reviewer can deploy the application to different environments, accept or reject an application, and send

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Table	Description
	feedback to a developer. For more information, see Managing application deployments using Pipelines and Deployments.
Pipeline [sn_pipeline_pipeline]	Configurations for deploying applications to different environments. There can be only one active pipeline at a time. You update this table as you create a pipeline for the deployment of applications from App Engine Studio. For more information, see Managing application deployments using Pipelines and Deployments.
Project [sn_app_eng_studio_project]	Details about App Engine Studio development sessions. A project is created automatically when a developer creates an application in App Engine Studio. This table is updated automatically as developers build applications in App Engine Studio.
Resources Content [sn_app_eng_studio_resources_content]	Help resources that a developer can access in App Engine Studio. This table includes configurations to support the default user experience for App Engine Studio.
Resources Content Topic	Categorizations of help resources in App Engine Studio. This table

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Table	Description
[sn_app_eng_studio_resources_content_topic]	includes configurations to support the default user experience for App Engine Studio.
Taxonomy [sn_app_eng_studio_taxonomy]	Application files that a developer creates in App Engine Studio. This table is updated automatically as developers build applications in App Engine Studio.
Taxonomy Category [sn_app_eng_studio_taxonomy_category]	Categorizations for application files in App Engine Studio. By default, application files are categorized as data, experience, logic and automation, or security. This table includes configurations to support the default user experience for App Engine Studio.
Taxonomy Details [sn_app_eng_studio_taxonomy_details]	Details about application files that a developer creates in App Engine Studio. This table includes configurations to support the default user experience for App Engine Studio.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: The following data preservers are added for tables related to pipelines:

- Environment
- Pipeline
- Pipeline Environment Order
- Pipeline Types

The data preservers prevent records in these tables from being overwritten during cloning on a non-production instance. For more information, see Data preservation on cloning target instances.

Configure App Engine Studio

App Engine Studio (AES) guided setup provides a sequence of tasks that help you configure AES on your ServiceNow instance.

App Engine Studio must be installed on the instances where you expect to be developing your applications. In earlier versions, you were required to install AES on all instances in your pipeline.

If you plan on cloning your production instance to one or more non-production instances, you should also install the AES product on your production instance prior to cloning. For more information, see System clone.

Learn more about AES configuration	Additional ServiceNow resources
ServiceNow provides several additional resources on configuring and administering App Engine Studio.	

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Learn more about AES configuration	Additional ServiceNow resources
	ServiceNow Community site
	App Engine Studio video on adding security

Guided setup to configure AES

To open App Engine Studio guided setup, navigate to **All > App Engine > App Engine Studio > Configuration > Guided Setup**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The landing page provides information on the different tools and user access. Select the **Get Started** button in the top, right corner to start your configuration.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The App Engine Studio Guided Setup page provides a list of different categories. Select the **Get Started** button under each category to start configuring App Engine Studio.

> **Note:** If you have previously started any of the guided setup tasks, and then exited without completed them, the **Get Started** button is labeled **Continue**.

For detailed instructions on any of the tasks initiated from guided setup, see the Perform AES configuration tasks.

- Configure AES personas and roles

  The responsibilities of your staff are controlled by roles assigned to each member. Personas are not explicitly part of App Engine Studio (AES), but administrators assign roles to give team members permission to configure or use AES.

- Perform AES configuration tasks

  As you work through the App Engine Studio (AES) guided setup, you must perform different configuration tasks.

- Delegate developers using AES

  Delegated development enables designated users without a system admin role to develop or deploy applications on the Now Platform. This

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

enables administrators and delegated developers to work together to deliver custom applications through App Engine Studio (AES).

- AES integration with a Git source control repository

  Enable application developers to integrate App Engine Studio (AES) with a Git source control repository to save and manage multiple versions of an application from a non-production instance.

Configure AES personas and roles

The responsibilities of your staff are controlled by roles assigned to each member. Personas are not explicitly part of App Engine Studio (AES), but administrators assign roles to give team members permission to configure or use AES.

Personas for AES

Persona	Roles required	Responsibilities
System administrator	Admin	• Install and configure App Engine Studio and its dependent apps. • Define environments. • Configure pipelines. • Provision access to the App Engine Studio administrator group. • Upgrade the App Engine Studio application, when applicable. • Define guardrails for which AES administrators can approve or reject

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Persona	Roles required	Responsibilities
		application intake requests. • Collaborate with professional ServiceNow developers to create instance scan definitions for the platform. • Collaborate with AES administrators to resolve application conflicts that arise on the platform.
App Engine Studio admin	• atf_test_designer • scan_admin • sn_app_eng_studio.admin	• Manage App Engine Studio processes and properties. • Review and approve/reject submitted application requests based on intake guardrails defined by the system administrator. • Provision App Engine Studio user access. • Review submitted App Engine Studio applications. • Manage deployment requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Persona	Roles required	Responsibilities
		• Manage promotion of App Engine Studio applications across instances. • Execute ATF tests/ suites in testing instances. • Ensure instance scans run with proper definitions. • Collaborate with the system administrator to resolve application conflicts that arise on the platform.
Professional ServiceNow developer	• atf_test_admin • delegated_developer • scan_admin • sn_app_eng_studio.user	• Build and test applications in ServiceNow Studio and App Engine Studio • Collaborate with citizen developers on an as-needed basis to deliver applications in App Engine Studio, including the following tasks: • Ensuring application development and organizational best practices are

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Persona	Roles required	Responsibilities
		followed by citizen developers. • Helping with review and testing of submitted App Engine Studio applications. • Building complex configurations involving UI Builder, Mobile App Builder, Flow Designer, or other builder tools. • Create ATF tests/suites for applications. • Collaborate with a system administrator to create instance scan definitions for the platform.
App template admin	app_template_admin	• Control access to custom and predefined templates. • Activate and deactivate templates. • Share templates globally or with users and groups.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Persona	Roles required	Responsibilities
Low-code/citizen developer	sn_app_eng_studio.user	• Submit requests for new custom applications to build in App Engine Studio. • Understand ServiceNow and application development best practices. • Build and test applications in App Engine Studio. • Submit App Engine Studio applications for IT review. • Maintain and modify the application during its life cycle if determined during the intake process.

Perform AES configuration tasks

As you work through the App Engine Studio (AES) guided setup, you must perform different configuration tasks.

Setting up environments, tools, and user access

The tasks for configuring App Engine Studio are listed below, along with links to detailed instructions for completing them.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

App Engine Studio configuration tasks

Task	Description
Install App Engine Studio in your development instances.	You can install the App Engine Studio application (com.snc.app-engine-studio) if you have the admin role. The application installs related ServiceNow® Store applications and plugins if they are not already installed. For detailed instructions, see Install App Engine Studio.
Set up instance credentials.	For each instance that you're using, create a Connection & Credential alias. Ensure that the alias type is **Credential**, not **Connection and Credential**. For detailed instructions, see Set up instance credentials.
Activate Process Automation Designer.	You can edit processes in App Engine Studio, but you must activate Process Automation Designer for App Engine Studio and enable the **Process Automation Designer for App Engine [com.glide.pad.license]** plugin to get started. For more information, see Activate Process Automation Designer for App Engine.
Set up IntegrationHub spokes.	Activate spokes to enhance your Flow Designer and App Engine Studio experience with integration-specific content. The following spokes are available for use with App Engine Studio.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Task	Description
	• Gmail spoke • Google Sheets spoke • Jira spoke • Microsoft 365 Excel spoke • Microsoft Teams spoke • Slack spoke • Twilio spoke • Twitter spoke • Zoom spoke
Review access settings for Flow Designer in your development instance.	Enable your developers to use the editing capabilities that best suit them. For detailed instructions, see Review Flow Designer access settings.
Review access settings for Catalog Builder.	Enable your developers to add items to the appropriate catalogs and categories. For detailed instructions, see Review Catalog Builder access settings.
Set up an instance scan cadence in Health Center.	Schedule regular scans of your instance so that you can identify possible issues that arise from application development in App Engine Studio. For detailed instructions, see Set up an instance scan cadence in Health Center.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Task	Description
In your production instance, add users to the App Engine Studio Admin group.	Add members to the group so they can review app- and deployment-related requests. Also, define a contact email address for the group. For detailed instructions, see Add users to the App Engine Admin group.
In your development instance, add developers to the App Engine Studio Users group.	Enable developers in your organization to build applications in App Engine Studio. For detailed instructions, see Grant user access to AES.
In your non-production instance, specify an app template admin.	Grant the app_template_admin role to users who will manage template activation, deactivation, and sharing in App Engine Studio. For detailed instructions, see Manage template access.

Learn more about AES configuration	Additional ServiceNow resources
ServiceNow provides several additional resources on configuring and administering App Engine Studio.	
	ServiceNow Community site

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Learn more about AES configuration	Additional ServiceNow resources
	App Engine Studio video on adding security

- Add users to the App Engine Admin group

  Add users to the App Engine Admin group in your production instance to give them administrative rights to App Engine Studio (AES). You must also identify a contact email address for the group. After you configure the email address of the App Engine Admin group, members can receive notifications for app development-related requests, including app intake requests.

- Grant user access to AES

  Let developers in your organization build applications in App Engine Studio (AES) by adding them to the App Engine Studio Users group.

- Manage template access

  Control who has access to templates in App Engine Studio (AES) using the app_template_admin role. App template admins activate and deactivate templates and grant other users access to share their templates.

Add users to the App Engine Admin group in your production instance to give them administrative rights to App Engine Studio (AES). You must also identify a contact email address for the group. After you configure the email address of the App Engine Admin group, members can receive notifications for app development-related requests, including app intake requests.

Before you begin

Role required: admin

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

About this task

If you are not using pipelines, you must also add users to the App Engine Admin group in your development instance.

Procedure

1. Navigate to **All > User Administration > Groups**.
2. Open the App Engine Admins group.
3. Select the **Group Members** related list and select **Edit**.
4. Select one or more names in the **Collection** list.
5. Enter a contact email address for the group.
6. Select **Add**.
7. Select **Save**.

Let developers in your organization build applications in App Engine Studio (AES) by adding them to the App Engine Studio Users group.

Before you begin

Role required: user_admin or admin

About this task

An administrator grants access to App Engine Studio (AES) by adding users to the App Engine Studio Users group in your organization's development instance. Each group member is automatically assigned the sn_app_eng_studio.user role.

Procedure

1. Log in to your instance.
2. Navigate to **All > User Administration > Groups**.
3. Find and open the record named **App Engine Studio Users**.
4. In the Group Members related list, select **Edit**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

5. On the Edit Members page, move each developer from **Collection** to **Group Members List**.
   Group Members List

6. Select **Save**.
7. On the group record, select **Update**.

Related reference

- Components installed with AES

Control who has access to templates in App Engine Studio (AES) using the app_template_admin role. App template admins activate and deactivate templates and grant other users access to share their templates.

Before you begin

Role required: admin

About this task

An administrator grants the app_template_admin role to users who will manage template activation, deactivation, and sharing. This role should

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

be granted on non-production instances where App Engine Studio users author and use templates.

Procedure

1. Navigate to **All > User Administration > Users**.
2. Select the user you want to give the app_template_admin role to.
3. On the Roles related list, select **Edit**.
4. Move **app_template_admin** from the **Collection** list to the **Roles list**.
5. Select **Save**.

Delegate developers using AES

Delegated development enables designated users without a system admin role to develop or deploy applications on the Now Platform. This enables administrators and delegated developers to work together to deliver custom applications through App Engine Studio (AES).

After an administrator reviews a request, they delegate the development work by providing a link to the developer that opens App Engine Studio in your organization's development environment. The administrator can:

- Send the link directly to a developer via email
- Post the link on a portal page
- Create a catalog item for delegated developers to request App Engine Studio access

Delegated developer role in AES

The delegated developer role enables an admin to elevate user permissions to a dedicated role with specific access for App Engine Studio.

A delegated developer has more permissions than a user, but less than an admin. The delegated developers each have their own permissions.

An admin may have several delegated developers, each with their own set of permissions. For example, you may want a designated developer

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

for developing a time-off request, and another developer with separate permissions for creating support tickets.

Some AES features may be inaccessible to the delegated developer, depending on permissions. Your role enables you to access, edit, and add objects. If a feature of App Engine Studio is unavailable to you, contact your system administrator.

For more information about delegated development and permissions, see Delegated development and deployment

AES integration with a Git source control repository

Enable application developers to integrate App Engine Studio (AES) with a Git source control repository to save and manage multiple versions of an application from a non-production instance.

Linking an application to source control enables all application developers on a non-production instance to:

- Import applications from a Git repository.
- Pull and apply remote changes from a Git repository.
- Commit all local changes on the instance to a Git repository.
- Create tags to permanently link to a given version of an application.
- Create branches to maintain multiple versions of an application simultaneously.

Integration requirements

To link an application to source control:

- The user must have the admin role.
- The non-production instance must have network access to the Git repository.
- Each application must be within its own Git repository.
- The repository user credentials must grant read and write access.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: All application developers on the instance share a single set of credentials per repository.

Options available from App Engine Studio

After linking an application to source control, application developers can use App Engine Studio to manage the repository. From App Engine Studio, developers can:

- Edit the application repository credentials.
- Commit all local changes on the instance.
- Apply remote changes from the repository.
- Create a branch.
- Switch branches.
- Import an application from a remote repository.

Source control integration does not support managing applications on a production instance. Instead, you can manage applications on a production instance using the application repository, an update set, or App Engine Studio. For more information about managing applications on a production instance, see Application sharing.

Options available from a Git repository

The ServiceNow platform offers limited support for modifying linked application files outside of an instance. From Git, developers can:

- Move application files to a different Git directory structure.
- Edit application files outside of App Engine Studio.

The system generates a properties text file called sn_source_control.properties at the root level of the repository. To move application files to a different Git directory structure, application developers can set the path parameter to specify the subfolder path containing their application files. For example, if you moved your application to the src/app subfolder, set the path to `path=src/app`.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The system generates a checksum.txt file in the Git repository to determine if any application files have been changed outside of App Engine Studio. When the checksum value from the file matches the current checksum value, the integration skips the validation and sanitization process. When the checksum values do not match, the integration validates and sanitizes the application files as part of the source control operation. The sanitization process:

- Creates upgrade log entries for each sanitization action taken.
- Removes unsupported folders and files from the repository.
- Aborts all source control operations when a system application file fails XML schema validation. For example, if a database dictionary record fails XML schema validation, the system aborts all operations.
- Skips the current source control operation when a non-system application file fails XML schema validation.

The Git integration sanitizes only content within the application path listed in the sn_source_control.properties file. Repository content outside the application path is ignored.

MID Server support

Use an existing MID Server to connect to a source control repository. Connecting an application through a MID Server enables access to repositories behind a firewall.

Source control role permissions

For more information on roles and collaborators, see Application collaboration.

- Link an application or application-customization to source control

  Linking an application or application-customization to source control allows application developers to manage changes in App Engine Studio (AES) from a Git repository.

- Edit a Git repository configuration

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

You can edit a Git repository's integration with App Engine Studio (AES) to change the network protocol selection, credentials or other field entries.

Linking an application or application-customization to source control allows application developers to manage changes in App Engine Studio (AES) from a Git repository.

Before you begin

- Learn more about Manage customizations to applications.
- Create a dedicated Git repository for the application. For increased security, enable multi-factor authentication for the Git repository.
- Generate an access token that the source control integration can use instead of a password and multi-factor authentication passkey while creating a Credential record. Search for personal access token on GitHub or GitLab.
- Restrict permissions on the access token to allow read and write access to the Git repository.
- Verify that the non-production instance has network access to the Git repository.
- Ensure that users add the email address to their respective Users Table (ServiceNow sys_user) records that they use in their commits to the Git repository.
- Role required: admin

About this task

The source control integration does not support linking to an application or customization on a production instance. Instead, install applications on a production instance from the application repository, an update set, or the App Engine Studio.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

3. Select **Source control > Link to source control**.
   App Engine Studio displays the Link to source control dialog box.

4. Enter the connection details for the Git repository.

Source control connection details

Field	Description
Network protocol	Https or SSH credential type that enables secure channel data exchange.
URL	The URL to the Git repository where you want to save application files. For SSH protocol, use command to generate private key `ssh-keygen -t rsa -m PEM -b 4096 -C "email@address"`.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	Note: If the Git repo URL for SSH provided by your Git server does not work, check with your Git server owner or provider for the correct URL. There may be additional specifications such as scheme protocol prefixes, port numbers, and so on, required for your Git repo URL to function.
Branch	The repository branch to work on within the application.
MID Server Name	The name of the existing MID Server to link through. **Note:** Use a separate MID Server to prevent conflicts with Discovery activities. Be sure that the MID server user can create files to the sys_attachment table and that the table can accept files of the "bundle" type. Linking or an application through a MID Server enables access to repositories behind a firewall.
Default email	The committer email address is defined by the sys_user record if available. But if a committer's sys_user record email field is empty, the system generates an alternate email

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	(username@instancename.service-now.com). You can also enter a default email address and change it later. To use that default email address in all cases, select the check box.
Credential	The credential to be used with the selected protocol. See Getting started with Credentials to learn more about creating credentials. **Note:** If you select the SSH network protocol, enter a valid credential of the SSH private key type. If you select the https protocol, enter a valid credential of the Basic Auth credentials type.
Commit Comment	An optional description of the repository or application.

Note: All application developers on the instance share a single set of repository credentials.

5. Select **Link to source control**.
   The system validates the connection and user credentials and displays a success message.

   All application developers on the instance can use the linked Git repository to manage changes.

You can edit a Git repository's integration with App Engine Studio (AES) to change the network protocol selection, credentials or other field entries.

Before you begin

Role required: admin

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select **Source control > Edit repository configuration**.

4. Choose **https** or **ssh** Network protocol and enter the URL address of your repository.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

5. Change your credential or MID Server name if you wish.

   Note: If you have no MID server name, you can select a new one from the drop-down list. If you choose a new MID server, in the **Source control** menu before making any further source control operations to avoid errors.

6. Default email field: The committer email address is defined by the sys_user record if available. But if a committer's sys_user record email field is empty, the system generates an alternate email (username@instancename.service-now.com). You can also enter a default email address and change it later. To use that default email address in all cases, select the check box.

7. Select **Save**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Configure the App Engine Management Center

Use the App Engine Management Center (AEMC) guided setup to step through the initial configuration of the App Intake and Pipelines and Deployments applications. The App Intake guided setup is optional, but the Pipelines and Deployments guided setup is required if you want to use AEMC.

Before you begin

Role required: admin

About this task

Using AEMC, track and manage intake application requests, collaboration requests, and deployment requests in your production instance. You can also provide approvals to these requests from AEMC. Monitor development activities as well as custom apps in development and production. For more information, see Managing app development using the App Engine Management Center.

AEMC uses Pipelines and Deployments to deploy applications through different instances. Pipelines and Deployments uses the Application Repository to manage these deployments. For more information, see ServiceNow application repository.

Each application can either be deployed using the Application Repository or System Update Sets. If you've used Update Sets in the past, but want to switch to using the Application Repository, you can do a one-time conversion to deploy the app using the Application Repository instead. All apps do not have to follow the same deployment. For more information, see System update sets.

App Engine Management Center guided setup provides a sequence of tasks that help you configure the Application Intake and Pipelines and Deployments applications on the Now Platform®. If you have already configured one or both of these applications, you can skip those steps of the guided setup.

Procedure

1. Navigate to **All > App Engine > Administration > Guided Setup**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The landing page provides information on the applications you must configure.

2. Initiate guided setup by selecting **Get Started**.
   The App Engine Management Center guided setup category page provides a list of different categories of tasks you must complete before you can use AEMC.

   Note: If you have previously started any of the guided setup tasks, and then exited without completing them, the **Get Started** button will be labeled **Continue**.

3. Select the first **Get Started** button to initiate the App Intake Guided Setup.
   When you have completed all of the tasks in the first category, the Category screen reopens.

4. Select the next **Get Started** button to initiate the Pipelines and Deployments Guided Setup.
   When you have completed the tasks in the second category, the Category page reappears. Congratulations! You have completed guided setup for App Engine Management Center.

Configure Application Intake

Use the App Engine Studio (AES) Application Intake guided setup to step through the initial configuration of the Application Intake application. Detailed instructions for each step are provided in subsequent sections of the product documentation.

Before you begin

Before you can use Application Intake to submit application ideas, you must perform these actions:

- Ensure that the App Engine Studio application is installed.
- Navigate to **All > App Engine Studio > Configuration > Properties**, and set the **sn_app_intake.instance_can_provision_users** system property to true.

Role required: admin

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

About this task

Application Intake guided setup provides a sequence of tasks that help you configure the Application Intake app on the Now Platform®.

For general information about guided setup, see Using guided setup.

Procedure

1. Navigate to **All > App Engine > Application Intake > Guided Setup**. The landing page provides information on the different categories, tools, and user access.
   Application Intake guided setup landing page

2. To initiate guided setup, select **Get Started**. The Application Intake Guided Setup category page provides a list of different categories of tasks you must complete before you can use Application Intake to submit requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Application Intake guided setup category page

Note: If you have previously started any of the guided setup tasks, and then exited without completed them, the **Get Started** button is labeled **Continue**.

3. Select the first **Get Started** button to begin performing tasks for activating and configuring the intake request process in your production environment. When you have completed the tasks in the first category, the Category screen reappears.

4. Select the next **Get Started** button to begin performing tasks for configuring development environments for your users. On your production instance, create an environment record of type "Development" for each development instance that you want to provision users to. This process allows your production instance to connect to your development instances.

   Note: If these records have already been set up in the Pipelines and Deployments Guided Setup, you can skip this step. When you have completed the tasks in the second category, the Category screen reappears.

   Congratulations! You have completed guided setup for Application Intake.

- Application Intake configuration tasks

As you work through the App Engine Studio (AES) Application Intake guided setup, you must perform different configuration tasks.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Application Intake configuration tasks

As you work through the App Engine Studio (AES) Application Intake guided setup, you must perform different configuration tasks.

Activating and configuring the intake request process, and setting up development environments

The tasks for configuring Application Intake are listed below, along with links to detailed instructions for completing them.

Application Intake configuration tasks

Task	Description
Activate the catalog item where developers will submit their application ideas	Activate the Apply for Citizen Development catalog item so that citizen developers can submit their ideas for applications. For detailed instructions, see Activate the Apply for Citizen Development catalog item.
Set up the App Engine Admins group	Add users to the App Engine Admin group. After the email address of the App Engine Admin group is configured, members can receive notifications for app development-related requests, including application intake requests. **Note:** If already added users on the production instance using AES guided setup or Configure Pipelines and Deployments guided setup, you can skip this step. For detailed instructions, see Add users to the App Engine Admin group.
Activate user provisioning	Activate the sn_app_intake.instance_can_provision_users property on your production instance to provision users to development instances. Each approved

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Task	Description
	user is automatically added to the App Engine Studio Users group. For detailed instructions, see Activate user provisioning.
Create development environment records	On your production instance, create an environment record of type "Development" for each development instance that you want to provision users to. This will allow your production instance to connect to your development instances. **Note:** If these records have already been set up in the Pipelines and Deployments Guided Setup, you can skip this step. For detailed instructions, see Configure your pipeline environments.

When you have completed Application Intake guided setup, proceed to Pipelines and Deployments guided setup to fully configure App Engine Studio.

- Activate the Apply for Citizen Development catalog item

  The first step in configuring the App Engine Studio (AES) Application Intake app is activating the Apply for Citizen Development catalog item. This allows citizen developers to submit their ideas for applications.

- Activate user provisioning

  Activate the sn_app_intake.instance_can_provision_users property on your production instance to provision users to development instances. Each approved user is automatically added to the App Engine Studio Users group.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The first step in configuring the App Engine Studio (AES) Application Intake app is activating the Apply for Citizen Development catalog item. This allows citizen developers to submit their ideas for applications.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > App Engine > Application Intake > Guided Setup**. For more information, see Configure App Engine Studio.

2. Select **Get Started**. If you previously completed one or more of the tasks, select **Continue**.

3. In the **Turn on and configure the intake request process** section, select **Get Started**.
   Activate the catalog item

4. In the **Activate the catalog item where developers will submit their application ideas** section, select **Configure**. The Apply for Citizen Development catalog item opens in a new browser window.
   Apply for Citizen development catalog item

5. Select **Active** and select **Update**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

6. Close the browser window and return to the Application Intake guided setup.

Activate the sn_app_intake.instance_can_provision_users property on your production instance to provision users to development instances. Each approved user is automatically added to the App Engine Studio Users group.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > App Engine > Application Intake > Guided Setup**. For more information, see Configure App Engine Studio.
2. Select **Get Started**. If you previously completed one or more of the tasks, select **Continue**.
3. In the **Turn on and configure the intake request process** section, select **Get Started**.
4. Scroll down to the **Activate user provisioning** section and select **Configure**. A new browser window opens.
   System Property for activating user provisioning

5. Change the setting for **Value** to **true**.
6. Select **Update**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

7. Close the browser window and return to the Application Intake guided setup.

Configure Pipelines and Deployments

Use the App Engine Studio (AES) Pipelines and Deployments guided setup to step through the initial configuration of Pipelines and Deployments. Detailed instructions for each step are provided in subsequent sections of the product documentation.

Before you begin

Role required: admin

About this task

Pipelines and Deployments guided setup provides a sequence of tasks that help you configure Pipelines and Deployments on the Now Platform®.

For general information about guided setup, see Using guided setup.

Procedure

1. Navigate to **All > App Engine > Pipelines and Deployments > Guided Setup**. The landing page provides information on the different categories, tools, and user access.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Pipelines and Deployments guided setup landing page

2. To initiate guided setup, select **Get Started**. The Pipelines and Deployments Guided Setup category page provides a list of different categories of tasks you must complete before you can use Pipelines and Deployments.

   Note: If you have previously started any of the guided setup tasks, and then exited without completed them, the **Get Started** button will be labeled **Continue**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Pipelines and Deployments guided setup category page

Important: Please be aware that each of the categories of tasks shown here are to be performed on different environments in your pipeline.

3. Select the first **Get Started** button to begin performing tasks for configuring Pipelines and Deployments on your production environment. When you have completed all of the tasks in the first category, the Category screen reappears.

4. Select the next **Get Started** button to begin performing tasks for configuring Pipelines and Deployments on each of the non-production (that is, test, development, staging, and so forth) environments in your pipeline. When you have completed the tasks in the second category on each of your non-production environments, the Category screen reappears.
   Congratulations! You have completed guided setup for the Pipelines and Deployments application.

- Pipelines and Deployments configuration tasks

As you work through the App Engine Studio (AES) Pipelines and Deployments guided setup, you must perform different configuration tasks.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Pipelines and Deployments configuration tasks

As you work through the App Engine Studio (AES) Pipelines and Deployments guided setup, you must perform different configuration tasks.

Setting up environments, pipeline records, and user access

The tasks for configuring Pipelines and Deployments are listed below, along with links to detailed instructions for completing them.

Pipelines and Deployments configuration tasks

Task	Description
Create pipeline credentials.	Create credentials for each instance in your pipeline so that the flows used by AEMC can access the instances in your pipelines. For detailed instructions, see Create pipeline credentials.
Configure environments in your production instance.	Set up your production and non-production (that is, development, test, and/or staging) environments by adding the URLs and credentials used to access each instance. For detailed instructions, see Configure your pipeline environments.
Configure your pipeline in your production instance.	Set up and configure each pipeline by naming the pipeline, identifying each of the environments associated with the pipeline, and specifying the order in which apps are deployed between the environments in that pipeline. For detailed instructions, see Configure your pipeline.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Task	Description
Add users to the App Engine admin group in your production instance.	Add users involved with this flow of tasks to the App Engine admin group. **Note:** If already added users on the production instance using AES guided setup or Configure Application Intake guided setup, you can skip this step. For detailed instructions, see Add users to the App Engine Admin group.
Configure the controller instance in your non-production instances.	Identify the controller instance that contains the pipeline deployment flows, as well as all of the data associated with the pipeline. As each instance completes its assigned tasks, it communicates with the controller instance to determine where the next stage of deployment takes place. **Note:** Your production instance should be identified as the controller. For detailed instructions, see Configure your controller instance.
Enable Automated Test Framework (ATF) properties on instances of type Testing.	Enable system properties that allow the ATF suite to run during the deployment process. If you do not enable these properties, a warning displays during the deployment process, but you can continue with the deployment. **Note:** If you plan on cloning your production instance to one or more non-production instances, you should either create a data preserver for these settings or enable these settings on your production instance. For more information, see System clone.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Task	Description
	For detailed instructions, see Enable Automated Test Framework (ATF) properties.

- Create pipeline credentials

  Create pipeline credentials in your production instance so that the flows used by the App Engine Management Center (AEMC) can access different instances.

- Configure your pipeline environments

  Set up your App Engine Studio (AES) production and non-production (for example, development, test, and/or staging) environments by adding the URLs and credentials used to access each instance.

- Configure your pipeline

  Configure your App Engine Studio (AES) pipeline so that your administrator can quickly move an application from one environment to another.

- Enable Automated Test Framework (ATF) properties

  The App Engine Studio (AES) Pipelines and Deployments app includes an Application Test Framework (ATF) suite called the Application Deployment Test Suite. Two system properties control whether the test runs automatically whenever an app is deployed to a Test environment.

- Configure your controller instance

  You must identify one of the instances in your App Engine Studio (AES) pipeline as the controller instance. All communication between the instances in your pipeline, including the deployment order for applications in the pipeline, takes place in the controller instance.

- Add users to the App Engine Admin group

  In App Engine Studio (AES), add users to the App Engine Admin group and configure the email address of the group so members can receive notifications for app development-related requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Create pipeline credentials in your production instance so that the flows used by the App Engine Management Center (AEMC) can access different instances.

Before you begin

You must use a functional user account with admin permissions to create the credentials for use in your pipelines. This user account should have the following characteristics:

- It should not be associated with a person in your organization.
- It should not need its password reset regularly.
- It should be controlled by your administrator.

You can create a new functional user account specifically for pipeline credentials, or use one that you have previously created with these characteristics. Either way, this user account must be created before you can create the pipeline credentials. For more information about creating this user, see Create a user.

Role required: admin

About this task

Create the pipeline credentials with a functional user account that you created on the Users [sys_users] table. This account should have admin privileges on all instances in the pipeline. For example, you create a user account called Pipeline Runner and give it admin permissions. This account user name and password are used to set up the credential record.

Procedure

1. Navigate to **All > Connections & Credentials > Connections & Credentials Aliases**.
2. Select **New**.
3. On the form, change the **Type** to **Credential**.
   Changing the type removes several fields from the form.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

4. On the form, fill in the remaining fields.

Field	Description
Name	Unique name for the credential record. For example, Pipeline Credentials.
Application	Scope the record is being created in, which should be **Global**.
ID	Unique ID for the credential record. This field populates automatically based on the name. IDs are written in the form [scope_name.credential_name], unless the application is in the Global scope, then the ID is just the credential name.

5. Select **Submit**.
   The Connections & Credentials Aliases table reopens.
6. Open the credential that you created to add credential records to it.
7. On the **Credentials** tab, select **New**.
8. In the **What kind of Credentials would you like to create?** list, select **Basic Auth Credentials**.
9. On the form, fill in the fields.

Field	Description
Name	Unique name for the basic auth credential record. For example, Pipeline Credentials.
Order	Order in which the flows you're using read the credential records. For example, if you have multiple credentials for backups,

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	order them like 100, 200, 300, and so on. Flows read from the top of the list.
User name	User name for the functional account. For example, pipeline.runner.
Password	Password for the functional user account.
Active	Option to make the record active.
Credential alias	Alias for the record based on the credential record ID. The alias exists so that only certain users can see what the user name and password are. When flows execute, they use the credential alias so they can install the apps.

10. Select **Submit**.
11. Repeat this process on each non-production instance in your pipeline.
    For the credential record, use the user name and password that the pipeline should use to access the production instance.

Set up your App Engine Studio (AES) production and non-production (for example, development, test, and/or staging) environments by adding the URLs and credentials used to access each instance.

Before you begin

Role required: admin

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: Only users with the System Administrator (admin) role can define instance credentials for environments. Users with the App Engine Administrator [sn_app_eng_notify.app_engine_admin] role can view environment records; however, the **Instance credential** field is not visible.

Procedure

1. In your production instance, navigate to **All > App Engine > Pipelines and Deployments > Environments**.
2. Select **New**.
   Environment - new record
3. On the form, fill in the fields.

Environment form

Field	Description
Name	Name of the environment. Enter a name that distinguishes the instance as a development, test, or production environment. For example, if you're defining a development environment, you could include `Dev` in the name.
Instance Type	The type of environment you are defining: • Sandbox • Development • Testing • Staging • Production
Instance URL	Web address of your ServiceNow instance.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Instance Id	The instance_id sys_property for the instance.
Application	Application scope of the environment.
Instance credential	Authentication data related to the instance that you're configuring as an environment.
Is Controller?	Identifies if this instance is a controller. This should be selected for the production environment record where you plan to manage deployment requests. For more information, see Configure your controller instance.

4. Select **Submit**.
5. Repeat the previous steps as you define each remaining environment in your pipeline.
   For example, if you defined a production environment, repeat the procedure again to define a development environment. Then repeat the procedure once more to define a test environment.

Configure your App Engine Studio (AES) pipeline so that your administrator can quickly move an application from one environment to another.

Before you begin

Role required: admin or aes_admin

Procedure

1. In your production instance, navigate to **All > App Engine > Pipelines and Deployments > Pipelines**.
2. Select **New**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Pipeline - new record

3. On the form, fill in the fields.

Pipeline form

Field	Description
Name	Name of the pipeline. Enter a name that distinguishes this pipeline from other pipelines.
Pipeline Type	The type of pipeline you are defining. The most common use case for pipelines is to select Application Deployment; however, you can define other types as needed.
Source Environment	The environment for this pipeline, usually the development environment. For more information, see Configure your pipeline environments.
Application	Application scope of the pipeline.
Active	Select the check box to activate this pipeline.

4. Save the form. The Pipeline Environments Order section opens.
5. Select the environments in the pipeline, excluding the **Source Environment**, and specify the order in which apps should be deployed through the pipeline.
6. Select **Update**.

The App Engine Studio (AES) Pipelines and Deployments app includes an Application Test Framework (ATF) suite called the Application Deployment Test Suite. Two system properties control whether the test runs automatically whenever an app is deployed to a Test environment.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

Role required: admin

About this task

The tests in the Application Deployment Test Suite can be run on production instances; however, the flows included in the base system run only on non-production (Test) instances. Additionally, the tests should run only on an instance defined with an **Instance Type** of **Testing**. For more information, see Configure your pipeline environments.

> **Note:** If you plan on cloning your production instance to one or more non-production instances, you should either create a data preserver for these settings or enable these settings on your production instance. For more information, see System clone.

Procedure

1. Navigate to the System Properties table by typing `sys_properties.list` in the navigation filter and pressing **Enter**.
2. Locate the following two properties:
   - sn_atf.runner.enabled
   - sn_atf.schedule.enabled
3. If you want these tests to run automatically on non-production instances whenever an app is deployed to a Test instance, open each property record, change the **Value** field to true, and select **Update**.

You must identify one of the instances in your App Engine Studio (AES) pipeline as the controller instance. All communication between the instances in your pipeline, including the deployment order for applications in the pipeline, takes place in the controller instance.

Before you begin

Role required: admin

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

About this task

Typically, your production instance should be identified as the controller instance. All request and approval records are stored on your controller instance.

Procedure

1. When you are configuring your pipeline environments, decide which instance you want to use as the controller, and select the **Is Controller?** check box for that instance.
   Controller environment

2. Select **Save**.
   When the workflow for the pipeline runs, the non-production instances communicate with the controller instance to determine to which instance the app should next be deployed.

In App Engine Studio (AES), add users to the App Engine Admin group and configure the email address of the group so members can receive notifications for app development-related requests.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > User Administration > Groups**.
2. Open the App Engine Admins group.
3. Select the **Group Members** related list and select **Edit**.
4. Select one or more names in the **Collection** list.
5. Enter a contact email address for the group.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

6. Select **Add**.
7. Select **Save**.

Cloning instances with AES

Learn how to protect the data, tables, and templates you've created in App Engine Studio when using System Clone to copy instances from production to non-production.

Preserving data and tables when cloning

The following are requirements for cloning instances with AES:

1. Ensure that all of your AES plugins are installed across all instances.
2. If you're cloning a production instance, you must enable Automated Test Framework (ATF) and Instance Scan properties on the production instance.
3. If you're collecting development and deployment data, the App Engine Management Center (AEMC) plugin must be installed on all instances.

Cloning data and tables from a production instance over a non-production instance can overwrite data in your non-production tables. To ensure that data isn't lost in development environments, create a cloning strategy for collaboration:

1. In the source instance, add data preservers to the following collaboration descriptor tables and collaboration users and groups tables:
   - App Collaboration Descriptors (sys_appcollab_descriptor)
   - App Collaboration Descriptor Permissions (sys_appcollab_permission_m2m)
   - App Collaboration Users (sys_appcollab_user)
   - App Collaboration Groups (sys_appcollab_group)
2. In the source instance, to preserve tables and ensure that no data from the source instance is cloned, add clone exclusions for the following collaboration descriptor tables:

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- App Collaboration Descriptors (sys_appcollab_descriptor)
- App Collaboration Descriptor Permissions (sys_appcollab_permission_m2m)

3. If AES is the only application using the Credentials table, consider creating data preservers for Credential Alias, Basic Auth, and Discovery credentials. Otherwise, you must ensure that these tables aren't overwritten when the production instance is cloned to non-production instances.
4. Users in the AES user group or who have the sn_app_eng_studio.user role in non-production instances must be reassigned their roles after cloning.
5. You can merge data from source and target for collaboration users and groups tables.

The following tables have data preservation to ensure that the tables are correctly cloned between instances:

- Pipeline Instance
- Request Authorization Key
- Deployment Request
- Deployment Environment Request

Preserving app templates when cloning

Admins must protect custom templates from being overwritten during the cloning process. Without protection, templates created in AES (both from existing applications and from scratch) are in danger of disappearing during a clone.

When you create a template in AES, a scoped app is automatically generated on the Custom Applications [sys_app.list] table in your instance. Though they have different contents, template applications and standard custom applications are treated similarly on the Now Platform. So, preserving app templates during a system clone works the same way as preserving an application.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

To protect app templates on your non-production instances, follow the process in Preserve applications and customizations in development during a system clone.

More information on cloning and data preservation

See the following topics for more information on cloning and data preservation:

- For more information on using the System Clone tool, see System clone.
- For more information on data preservation, see Data preservation on cloning target instances.
- For more details on cloning instances with AES, see the App Engine Studio System Administrator Guide on Now Learning.

Learn more about cloning instances with AES	Additional ServiceNow resources
ServiceNow provides several additional resources on cloning instances with App Engine Studio.	See the App Engine Studio System Administrator Guide on Now Learning.
	App Engine - Data Preservation During System Clone Whitepaper.

Building applications in App Engine Studio

Meet the business needs of your organization by building custom applications in App Engine Studio (AES).

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

App Engine Studio build process

At a high level, there are six main steps for building a new application in App Engine Studio . Select each step to see more information.

Plan your application

Submit your idea for app development

Delegate development

Create your application

Submit your app for IT review

Deploy your app for testing

Considerations

There are several considerations to keep in mind as you build applications in App Engine Studio:

- You access App Engine Studio by navigating to **App Engine Studio > App Engine Studio** or with the following web address: `<instance-`

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

name>.service-now.com/now/appenginestudio. If you don't have a working link, contact your administrator.

- When you navigate back and forth between different applications in App Engine Studio, the application scope changes accordingly.

Working with data, experiences, automation, and security

App Engine Studio enables you to add as many data tables, types of experiences, logic and automation, and security roles as needed. However, you do not need to add all four categories to your app if the app doesn't need them.

- Before you begin

  The application development process in App Engine Studio (AES) begins with your idea for the next amazing app. Careful planning is the key to producing a successful app that satisfies a business case. Before submitting your idea, consider how the application will work, who will use it, and how it will improve your users' experience.

- Submit your idea for app development

  With your carefully-planned idea in hand, you are ready to submit it through Application Intake for approval and development in App Engine Studio (AES).

- Create your application

  Use a template in App Engine Studio (AES) to build data, experience, logic and automation, and security into your application automatically. Or, create your app from scratch and customize it as needed.

- Enhance your application

  Whether you use a template or create your app from scratch in App Engine Studio (AES), you must enhance it by creating a data model, user experiences, logic and automation, and security.

- Collaborate with other developers

  In App Engine Studio (AES), you can add or remove users and groups to be collaborators on an application from the AES dashboard.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Use AES with a Git source control repository

  App developers working in App Engine Studio (AES) can manage their data repository in numerous ways.

- Publish your app

  When you have completed your app in App Engine Studio (AES), you need to submit it for approval and publishing. The process you use depends on whether you are linked to source control.

- Remove an application from AES

  If you have the appropriate permissions, you can remove an application from App Engine Studio (AES).

Before you begin

The application development process in App Engine Studio (AES) begins with your idea for the next amazing app. Careful planning is the key to producing a successful app that satisfies a business case. Before submitting your idea, consider how the application will work, who will use it, and how it will improve your users' experience.

Plan before you build

Essentially, an application is a digital program that supports user tasks. As you plan your app, you may ask the following questions:

- What are the goals, objectives, and outputs of your application?
- Who uses your application?
- Who has access to what?
- What tasks do people complete with your application?
- Where does the data come from?
- How do people interact with your application?
- What processes must the application support?

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The answers to these questions can help you decide whether you want to base your application on a predefined template or create your app from scratch.

An application template provides predefined content to support a certain use case. For example, the Travel Request template provides application content for submitting and approving employee travel requests. Choose the template that most closely fits your application goals.

If the available templates don't fit your application goals, you can create your app from scratch and control all aspects of the development process.

Application Intake process

Any member of your organization can submit ideas for app development through a process called Application Intake. After the idea has been submitted and approved, developers can begin building the app with a guided, intuitive app development environment in App Engine Studio.

The Application Intake request process benefits your organization in the following ways.

- Streamlining the process to request, approve, track, and store app ideas.
- Enhancing planning by getting visibility into all app ideas.
- Governing the process to filter out repetitive requests.

Related concepts

- The intake request form is available through the standard Service Catalog. To modify the intake request form, edit the Service Catalog items. For more information, see Service catalog items.
- Intake request uses Flow Designer for the approval flow. To modify the approval flow, see Flows.
- Admins review intake application requests in App Engine Management Center . For more information about this process, see Managing app development using the App Engine Management Center.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Submit your idea for app development

With your carefully-planned idea in hand, you are ready to submit it through Application Intake for approval and development in App Engine Studio (AES).

Before you begin

If you have not already activated the Apply for Citizen Development standard catalog item, you must do so before you can perform this procedure.

Role required: none

About this task

The intake request process streamlines submitting ideas for app development. Using Application Intake, the idea is shared with your App Engine Studio admin for review. The admin either approves or denies the request based on how well you have sold the business value of the idea.

If the idea is approved, developers can build the app with the guided, intuitive app development environment provided in App Engine Studio.

Procedure

1. Navigate to **All > Self-Service > Service Catalog**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Service Catalog

2. In the Service Catalog, select the **Can We Help You?** category.

Apply for Citizen Development catalog item

3. Select the **Apply for Citizen Development** catalog item to open the Application Intake form.

4. On the form, fill in the fields.

Fields on the Apply for Citizen Development form

Field	Description
Application Name	Unique name for the app.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Describe your idea in a few sentences	Simple description of the application.
Is your process repeatable?	Option to indicate whether the app idea could be used in other areas of the business.
Do you have an email or excel-based process?	Option to indicate whether an existing process is in place that this application would replace.
How many users are involved in this?	Number of users who would use the resulting application.
Does this involve any sensitive/PII data?	Option to indicate if the application would use any of the users' health, financial, or personally identifying information.
Do you need data from other departments?	Option to indicate whether other departments must supply data for the application.
Who are the users that will have access to the data in this application?	Users or groups who need access to the application.

5. Select **Order Now**.

Result

If the admin approves your request, you can start building your app in App Engine Studio. You should receive a confirmation email with access to build the app.

If you are an admin who approves requests, learn more about managing AEMC requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Create your application

Use a template in App Engine Studio (AES) to build data, experience, logic and automation, and security into your application automatically. Or, create your app from scratch and customize it as needed.

To build an application in App Engine Studio, add the following content:

Data

Information that is stored in your application. For example, employee phone numbers or office locations. You configure application data using tables.

Experience

Graphical interface that your users interact with. For example, you can create a portal where users find information, submit requests, or complete business tasks.

Logic and automation

Automate all the work in your application by adding logic and automation. For example, you can build a flow that sends a notification to the admin when someone makes a request.

Security

Roles and access controls to limit who can use your application.

If you use an application template, the template automatically adds one or more of these items to your application. You can then edit them to tailor to your specific business needs. You can also add more data, experience, logic and automation, or security to an application that you created using a template.

To build an application from scratch, add data, experience, logic and automation, and security to your application and then edit each.

- Create your app using an application template

  Build an application in App Engine Studio (AES) that uses predefined data, experience, logic and automation, and security. Add to the template contents to customize the app for your organization.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Create your application from scratch

  If the available application templates in App Engine Studio (AES) don't fit your application goal, create an empty application to which you can add data, experience, logic and automation, and security.

- Prepare your app for approval

  Prepare your app for the approval process by making any needed changes, such as renaming your app, editing the app description, or replacing the app image. You can also delete the app from App Engine Studio (AES) if it has taken a wrong turn.

Create your app using an application template

Build an application in App Engine Studio (AES) that uses predefined data, experience, logic and automation, and security. Add to the template contents to customize the app for your organization.

Before you begin

Role required: admin, sn_app_eng_studio.user

About this task

Using templates in App Engine Studio helps you save time and effort creating applications. You can download several templates from the ServiceNow Store, or you can create templates from your existing applications.

This video shows you how to perform the following procedure.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the **Templates** tab, browse the available templates.
3. Hover over the template you want to use and select **Use template**.
4. Enter a **Name** and **Description** for your application.
5. (Optional) Add a logo by dragging an image into the AES page or browsing your computer for the file.
6. Select **Continue**.
7. On the summary screen, select **Go to app home**.
8. From the app home, review the data, experience, logic and automation, and security that was created with the template. To tailor the application to your business needs, you can edit these predefined items or add your own. For more information, see Enhance your application.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

What to do next

After you've finished building your application, submit the application for approval to get it reviewed and deployed by an administrator. For more information, see Submit your application for approval and publishing.

- Available templates

  Use an application template to create an application in App Engine Studio (AES) with preconfigured data, experience, logic and automation, and security.

- Build a custom template

  App Engine Studio (AES) provides various predefined application templates. However, creating custom templates can speed up time to production if you have types of applications that you want to create more than once.

- Update custom template contents and properties

  Improve the effectiveness of your custom template by updating its contents or properties in App Engine Studio (AES).

- Manage template activation

  Manage template activation and deactivation to ensure that users creating apps in App Engine Studio (AES) have access to the best application templates for their needs.

- App template sharing

  Specify which users and groups have access to predefined and custom templates in App Engine Studio (AES).

Use an application template to create an application in App Engine Studio (AES) with preconfigured data, experience, logic and automation, and security.

- Document Approval template

  Build an application in App Engine Studio (AES) using the Document Approval template to manage the approval of documents in your organization.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Emergency Alert template

  Build an application in App Engine Studio (AES) using the Emergency Alert template to manage communications and track essential resources during an emergency.

- Event Registration template

  Build an application in App Engine Studio (AES) using the Event Registration template to manage scheduling, booking, and registration for company events.

- Expense Pre-Approval template

  Build an application in App Engine Studio (AES) using the Expense Pre-Approval template to create, track, and manage planned expenses in your organization.

- Inventory Tracker template

  Build an application in App Engine Studio (AES) using the Inventory Tracker template to track the status of inventory and assets.

- Performance Review template

  Build an application in App Engine Studio (AES) using the Performance Review template to automate scheduling, notifications, and feedback for performance reviews.

- Team Contacts template

  Build an application in App Engine Studio (AES) using the Team Contacts template to manage contact information for the people in your organization.

- Time Off template

  Build an application in App Engine Studio (AES) using the Time Off Requests template to schedule employee vacations and time-off.

Build an application in App Engine Studio (AES) using the Document Approval template to manage the approval of documents in your organization.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

To use the Document Approval template, install this application from the ServiceNow Store.

A document approval app enables your users to quickly create and use document approval workflows. Document owners and submitters can upload documents needing approvals and check the progress on those approvals. Designated approvers can approve, reject, or return documents with comments.

Admins can use the document approval application to create different workflows for different document types.

This app template is an ideal way to quickly and efficiently make your internal workflows for processing documents. Document owners and submitters can upload a document needing approval to a portal using simple upload functionality that automatically sends submissions through a unique workflow. Once a document has been received, submitters follow the progress of their documents while designated users approve, reject, or return their document for edits. Both submitters and approvers use comments to add notes and feedback to the submission, which is stored in the system for future reference. To give this app even more variety, admins can create unlimited workflows that are customized for each document type and user that allows for multiple stages and approvers depending on what the document category requires.

For more information on creating an application using a template, see Create your app using an application template.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Data

The Document Approval app template includes the following tables:

Table label [name]	Description
Document Approver Table [x_ <company-code>_ <document_approver>]	Tracks document approvers, their comments, and state of a document.
Document Approval Category Table [x_ <company-code>_ <document_approval_category>]	Tracks the category of document approval requests.
Document Approval Table [x_ <company-code>_ <document_approval>]	Tracks the document approval requests.

Experience

The Document Approval app template includes the following experiences:

Experience	Experience type	Description
Document Approval | Default view	Form	Form for creating a document approval request.
Document Approval | Portal	Form	Simplified form for creating a document approval request.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
Document Approval Category | Default view	Form	Form to attach a flow to a document approval record.
Document Approval Category | Workspace	Form	Form to attach a flow to a document approval record.
App name Workspace	Workspace	Main document approval app workspace, where users can upload documents, check the status of an approval, edit documents, and view their submissions in the workspace. Approvers can view assigned approvals, view previous submissions, and approve or reject submissions.
Document Approver | Workspace	Form	Form for assigning document approvers to records.
Document Approval | Workspace	Form	Form for creating a document approval request.
Document Approver | Default view	Form	Approvers can view assigned approvals and approve or reject submissions.
App name Portal	Portal	Main portal for people to submit documents for approvals and

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
		manage previous submissions.
Document Approval Mobile Experience	Mobile experience	Mobile app that employees and managers can use to check the status of an approval, approve or reject documents, and view submissions using your organization's iOS or Android app.

Logic and automation

The Document Approval app template includes the following automated workflows:

Workflow name	Workflow type	Description
Document Approval - Master Flow	Flow - record	Flow that is executed when a new document approval record is submitted. It then retrieves the flow to be executed from the document category and executes it.
Document Approval Notification	Email	Email that can be configured to notify users of changes to their document approvals.
Single Stage Approval	Flow	Flow that allows for the user's manager to be the approver, with basic email notifications

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
		being generated on approval, return, or rejection.

Security

The Document Approval app template includes the following roles:

Role title [name]	Description	Contains roles
Approvers [x_<company-name>_<document_approval_app>.approver]	Approvers can create, read, delete all documents, and read document approval category data.	Create, Read (all), Edit (all)
Admins [x_<company-name>_<document_approval_app>.admin]	Admins can create, read, write, and delete in the tables document_approval and document_approval_category.	Create, Read (all), Edit (all), Delete (all)
Submitters [x_<company-name>_<document_approval_app>.submitter]	Submitters can create documents, read their own documents, edit their own documents when status is not submitted and delete their own documents. They can also read data from document approval category.	Create, Read (own), Edit (own when status is not submitted), Delete (own)

Build an application in App Engine Studio (AES) using the Emergency Alert template to manage communications and track essential resources during an emergency.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

To use the Emergency Alert template, install this application from the ServiceNow Store.

An emergency alert app allows your organization to keep employees informed and connected during natural disasters and infectious diseases, such as COVID-19.

You can use the Emergency Alert template to create command center dashboards and a mobile app to monitor and notify employees about the latest news. Employees can self-report their status, request work-from-home or time off, and receive instructions during an emergency. Managers can assess the impact on their respective teams, approve or reject requests, request for status, and automatically receive instruction on actions to take during any emergency.

For more information on creating an application using a template, see Create your app using an application template.

Data

The Emergency Alert app template includes the following tables:

Table label [name]	Description
Status Report Request Table	Track the severity of an emergency reported by employees. For example, the

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Table label [name]	Description
[x_<company>_<my emergency_alert_app>_status_report_requests]	status, the color associated with danger levels, and conditions.
Self Report Table [x_<company>_<my emergency_alert_app>_status_report]	Track reported emergencies created by employees or managers. For example, the emergency details, status, duration, and affected individuals.
Emergency Alert Table [x_<company>_<my emergency_alert_app>_emergency_alert]	Track emergency alerts for your company. For example, the emergency type, who created the alert, and who has read the alerts.
Work Status Request Task Table [x_<company>_<my emergency_alert_app>_work_status_request_task]	Track the work status request of an emergency. For example, the requester, the assignee, and the state of the work status.

Experience

The Emergency Alert app template includes the following experiences:

Experience	Experience type	Description
Emergency alert | SendEmergency AlertWS	Form	Form to create a new emergency alert record.
Self Report | Employee View	Form	Form for employees to report an emergency.
Self Report | Default View	Form	Form for employees to report an emergency.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
Emergency Alert - Portal	Portal	Portal where employees can view reported emergencies, the status of their team, and submit a self report.
Emergency Alert | Default View	Form	Form to create a new emergency alert and connect knowledge resources to it.
Self Report | Update Report	Form	Form for employees to self report their health status.
Self Report | Activity View	Form	Form to add comments about a self report.
Self Report | RequestReportWS	Form	Form to self report an emergency within a specific time frame.
Status Report Request | Default View	Form	Form to send an update about an emergency with time and location details.
Self Report | Update status report	Form	Form to add an update about an emergency.
App name Workspace	Workspace	Workspace where admins can set up and send notifications, view dashboards, and configure lists and forms.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
Work Status Request Task | Default view	Form	Form to update an employee about a work status request.

Logic and automation

The Emergency Alert app template includes the following automated workflows:

Workflow name	Workflow type	Description
Emergency report/ update state for managers	Email	Email that notifies managers to update an emergency report if the source is empty.
Emergency Alert App - Please report or update status	Flow - record	Email asking for a status update on work.
Emergency Alert App - Status request for employees from manager	Flow - record	Flow that notifies employees that a status request is made by their manager.
Self report submitted without manager	Email	Email request saying that an employee submitted an expense request without listing their manager.
Emergency Alert App - Create Work Status Task When Self Report is created	Flow - record	Flow that starts the work status task when a self report emergency is submitted.
Emergency Alert App - Create Status Report Requests for Affected	Flow	Flow that creates or updates status report requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Emergency alert app - Create App Self Reports	Flow - record	Flow that sends a notification when a report request is created or updated.
Emergency Alert App - Request for WFH/Time off submitted	Flow - record	Flow that starts the work from home or time off request approval flow.
Emergency instructions for employees	Email	Email that can be configured to send a notification if a status update is requested.
Emergency Alert App - Employee emergency report changes to submitted	Flow - record	Flow that sends a notification when an employee self report has been submitted.
Emergency Alert App - Request for WFH/Time off approved/denied	Flow - record	Flow that sends a notification to an employee when a WFH or Time off request is approved or denied.
Emergency Alert App - Employee emergency report request response submitted	Flow - record	Flow that sends a notification when an employee emergency report has been submitted.
Request for WFH approved	Email	Email that notifies an employee that their request to work from home was approved.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Emergency alert app - Emergency instructions for employees	Flow - record	Flow that sends employees instructions to follow during an emergency.
Please report/update status of employee	Email	Email requesting information about the status of an employee.
Self-report submitted for manager	Email	Email that notifies a manager that an emergency alert has been created and needs review.
Emergency Instructions for managers	Email	Email to managers that their request was created and that their team will receive information about it.
Please report/update status	Email	Email that sends a notification when a status change has been committed.
Request for WFH/Time off submitted	Email	Email that notifies an employee that their work from home or time off request was successfully submitted.
Employee Emergency report submitted	Email	Email that notifies an employee that their emergency report was successfully submitted.
Emergency Alert App - Manager emergency request submitted	Flow - record	Flow that sends a notification when a manager emergency

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
		report has been submitted.
Emergency Alert App - Employee emergency report submitted	Flow - record	Flow that sends a notification when an employee submits changes to an emergency report.
Create KB article	Flow - record	Flow that creates a knowledge base article when a new emergency alert is created.
Employee emergency report request submit	Email	Email that notifies an employee that their request for status was submitted and that their manager will be notified.
Emergency Alert App - Cancel work status task if self report closed	Flow - record	Flow that will cancel a work status request if the self report is closed.
Manager emergency request submitted	Email	Email sent to managers notifying them the emergency report was sent.
Please report/update status of employee	Email	Email that notifies employees of action needed on their self report.
Request for WFH denied	Email	Email that notifies the employee that their work from home request was denied.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Emergency Alert App - Emergency report/ update state for managers	Flow - record	Flow that sends a notification based on changes in an emergency alert report.

Security

The Emergency Alert app template includes the following roles:

Role title [name]	Description	Contains roles
Emergency alert admin [x_<company-code>_<my emergency_alert_app>.emergency_alert_admin]	Admins manage the app and configure the dashboard	Create, Read (all), Edit (all), Delete
Emergency alert manager [x_<company-code>_<my emergency_alert_app>.manager]	Managers can approve or reject requests, access dashboards, and send notifications	Create, Read (all), Edit (all)
Emergency alert employee [x_<company-name>_<my emergency_alert_app>.emergency_alert_employee]	Self-report emergency alerts	Create, Read (own), Edit (own)

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Role title [name]	Description	Contains roles
Admin	The System Administrator role. This role has access to all system features, functions, and data regardless of security constraints.	Create, Read (all), Edit (all), Delete
Public	No login is required to access features or functions with the public role.	No access by default.

Build an application in App Engine Studio (AES) using the Event Registration template to manage scheduling, booking, and registration for company events.

To use the Event Registration template, install this application from the ServiceNow Store.

An internal event registration app allows your event organizers to publish a list of events to employees and collect attendees in a centralized database. The app helps streamline the event discovery and registration process.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Event organizers can manage events and wait-lists, publish new events, and view registered users' details. Employees and attendees can view a list of events, view event info, and register to attend in a portal. Organizers can set the size of the event, and requesters will automatically be added to a wait-list.

For more information on creating an application using a template, see Use an application template.

Data

The Event Registration app template includes the following tables:

Table label [name]	Description
Attendee Table [x_<company-code>_<attendee>]	Track event attendee information such as name, status, and date of submission.
Event Table [x_<company-code>_<event>]	Track event information such as event name, date of the event, and capacity.
Event Location Table [x_<company-code>_<event_location>]	Track event location details such as capacity and location.

Experience

The Event Registration app template includes the following experiences:

Experience	Experience type	Description
Event Location | Workspace	Form	Workspace where organizers and admins can configure events, create event applications, and view lists.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
App name Portal	Portal	Main portal for organizers to create and view details about the event.
Attendee | Default view	Form	Form that attendees can use to view the event name, change their status, and take notes about the event.
Event | Default view	Form	Form that organizers can use to create events.
App name Workspace	Workspace	Workspace where users can register for an event and where admins/organizers can manage registration information.
Event Location | Default view	Form	Form for organizers to add event location name, location address, status, and capacity.
Event | Workspace	Form	Form for organizers to add event name, location details, timelines, and comments.
Attendee | Workspace	Form	Form for attendees to register for events and add notes about the event.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
Mobile app for organizers	Mobile experience	Organizers can view or edit events and view attendees using your organization's iOS or Android app.

Logic and automation

The Event Registration app template includes the following automated workflows:

Workflow name	Workflow type	Description
Event Details Have Changed	Email	Email that can be configured to notify users/attendees of changes to the event.
Event Reminder - Confirmed attendees	Email	Email that can be configured to send reminder about the event to confirmed attendees.
Attendee registered confirmed	Email	Email that notifies attendees of confirmed registration.
Send Event Reminder Email	Flow	Flow that sends a reminder email to event attendees.
Send Event Details Changed Email	Flow - record	Flow that sends an email to all confirmed and waitlisted attendees when details of an event have changed or the event was cancelled.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Send Waitlist Confirmation Email	Flow - record	Flow that sends an email to attendees when they are added to the waitlist of an event.
Event Registration cancelled events	Flow - record	Flow that updates attendee records when an event is cancelled.
Update Event Registration attendee records	Flow	Flow that updates attendee records when an event is cancelled or is past the end date.
Attendee waitlisted confirmed	Email	Email confirming attendees on event waitlist.
Event Registration expired events	Flow	Flow that sets the **Event state** field to Expired and the **Attendees** field to Event ended after the event ends.
Send On Hold Confirmation	Flow - record	Flow that allows for organizers to send an email to attendees when they are on-hold to attend an event.
Event Registration Confirmation Email	Flow - record	Flow that sends an email to attendees when they are confirmed to attend an event.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Attendee registration on hold	Email	Email informing attendees that their registration is on hold.
Event Has Been Cancelled	Email	Email that informs users of event cancellation.
Event Registration Process Flow	Flow	Flow responsible for processing all pending requests.

Security

The Event Registration app template includes the following roles:

Role title [name]	Description	Contains roles
Organizer [x_<company-name>_<my events app>.organizer]	Organizers create and manage events.	Create, Read (all), Update (all).
Attendee [x_<company-name>_<my events app>.attendee]	Attendees can search, sign up, and RSVP to events.	Create, Read (all), Update (own).
Admin [x_<company-name>_<my events app>.admin]	Admins configure event locations and applications.	Create, Read (all), Update (all), Delete.
Public	No login is required to access features	No access by default.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Role title [name]	Description	Contains roles
[x_<company-name>_<my events app>.public]	or functions with the public role.	

Build an application in App Engine Studio (AES) using the Expense Pre-Approval template to create, track, and manage planned expenses in your organization.

To use the Expense Pre-Approval template, install this application from the ServiceNow Store.

Expense Pre-Approval Te...

Create, track, and manage planned expenses in your organization

Employees can easily submit their planned expenses for multiple levels of approval using the Expense Pre-Approval application. Managers can then review every submitted request. Approved requests are assigned to the budget review group, which can approve or reject the request. The employee receives a notification with the final status of the request.

To ensure compliance and improved financial planning, admins can customize the existing flow and levels of approval using decision tables. For more information, see Decision table.

For more information on creating an application using a template, see Create your app using an application template.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Data

The Expense Pre-Approval app template includes the following tables:

Table label [name]	Description
Budget definition [x_<company-code>_<expense_approval_app>_budget_definition]	The description of all budgets.
Expense request [x_<company-code>_<expense_approval_app> expense_request]	The expense requests submitted by employees.
Expense line item [x_<company-code>_<expense_approval_app>_expense_line_item]	Each expense line item in an expense request.

Experience

The Expense Pre-Approval app template includes the following experiences:

Experience	Experience type	Description
Expense request | Default view	Form	Form to create a new expense request.
Budget definition | Default view	Form	Form to define budgets for a specified time frame.
Budget Reviewer	Mobile experience	Way to define what the mobile experience

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
		for budget reviewers looks like.
Expense request | Workspace	Form	Form to create a new expense request.
Expense request | Cost Approval	Form	Form to create a new expense request from an admin.
Manager	Mobile experience	Way to define what the mobile experience for managers looks like.
Budget definition | Workspace	Form	Form in the workspace view to define budgets for a specified time frame.
App name - Budget workspace	Workspace	Way to configure a high-level view of all budget requests.
Expense request	Record producer	Way for employees to submit an expense request.
Expense line item | Default view	Form	Form to add an expense line item to an expense request.
Expense Request SLA | Default view	Form	Form to create an expense request based on a breach of service level agreement (SLA).
Budget definition | Cost Approval	Form	Form in the cost approval view to

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
		define budgets for a specified time frame.
App name - Manager workspace	Workspace	Workspace where managers can approve or reject the expense requests assigned to them.
Cost Approval Mobile App	Mobile experience	iOS or Android app used for the following actions: • Approving or rejecting expense requests. • Viewing dashboards that display historical data to compare budget and expense requests. • Creating or modifying budgets by budget reviewers.
Cost Approval Workspace - Budget Reviewer	Workspace	Budget reviewers can use the workspace for the following actions: • Approving or rejecting expense requests. • Creating or modifying budgets. • Viewing the data on the budget funds allocated,

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
		spent, available, and allocated for the future. • Viewing dashboards that display historical data to compare the budget and expense requests.

Logic and automation

The Expense Pre-Approval app template includes the following automated workflows:

Workflow name	Workflow type	Description
Expense request approved - reviewer	Email	Email that can be configured to let users know that an expense request has been approved.
Expense Request Assigned	Email	Email that can be configured to let users know that an expense request has been assigned.
Expense request - SLA breached	Email	Email that can be configured to let users know that a service level agreement (SLA) has been breached.
Budget Creation	Flow - record	Flow executed when a budget reviewer creates a budget. It checks the start date of an expense request

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
		and associates the request to a budget with corresponding time frame.
Expense request - SLA-close to due	Email	Email that can be configured to let users know that a service level agreement (SLA) is close to due.
Expense Request Reassigned	Email	Email that can be configured to let users know that their request was reassigned.
Expense request comment added - Assigned	Email	Email that can be configured to let users know about a comment that has been added to their request.
New Expense Request or manager approval	Email	Email that can be configured to let users know about a new expense request.
Expense request reject	Email	Email that can be configured to let users know that their request was rejected.
Budget state update	Flow	Daily workflow that updates each budget record by priority.
Expense Request Inserted - Requestor	Email	Email that can be configured to let users know that

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
		their request was successfully created.
Expense Request Approved	Email	Email that can be configured to let users know that their request was approved.
Expense request work note added	Email	Email that can be configured to let users know a work note was added to their request.
Notify Team - Work note added	Email	Email that can be configured to let a team know a work note was added to a request.
Expense request comment added - Employee	Email	Email that can be configured to let users know a comment was added to a request.
Expense Request Rejected	Email	Email that can be configured to let users know that their request was rejected.
Budget Updation	Flow - record	Flow executed when a budget reviewer modifies the budget. After a budget is modified, this flow updates the **Budget** field in the corresponding expense requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Notify Requestor - Comments added	Email	Email that can be configured to let users know a comment was added to a request.
SLA Notification - Expense Request - warning	Flow - record	Flow that warns admins about a potential service level agreement (SLA) issue.
Budget Approval Process	Flow - record	Flow that is executed to obtain expense approvals in the following scenarios: • When an employee submits an expense request for the manager's approval. • Upon the manager's approval, the expense request is sent to the budget reviewer for the final level of approval.
Budget Calculations	Flow	Flow that recalculates the budget spent and the available budget when a budget reviewer performs any of the following actions: • Creates a budget • Modifies an existing budget

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
		• Approves an expense request

Security

The Expense Pre-Approval app template includes the following roles:

Role label [name]	Description
Budget Reviewer [x_<company-code>_<expense_approval_app>.Budget reviewer]	Budget reviewers can create or modify budgets and provide the final level of approval on expense requests.
Manager [x_<company-code>_<expense_approval_app>.Manager]	Managers can submit, view, and approve or reject expense requests at the first level.
Employee [x_<company-code>_<expense_approval_app>.Employee]	Employees can submit and track expense requests.
Admin	The System Administrator role. This role has access to all system features, functions, and data, regardless of security constraints.

Build an application in App Engine Studio (AES) using the Inventory Tracker template to track the status of inventory and assets.

To use the Inventory Tracker template, install this application from the ServiceNow Store.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

An inventory tracker app enables your business and teams to easily track what they have, where it is, and who has it. Anytime, anywhere, and on any device. If your company needs to track the stock of items, this app can be used as a stock management tool or inventory tracker at home or in a warehouse.

This app covers three inventory use cases: consumables, loaners, and discontinued. Employees can request items via mobile app or web portal from any warehouse. Inventory managers can set reorder levels and will be automatically notified if an item is low on stock. Discontinued items with outstanding stock can still be requested but will not prompt inventory managers for reorder. Inventory managers can create items manually or by uploading a spreadsheet.

For more information on creating an application using a template, see Create your app using an application template.

Data

The Inventory Tracker app template includes the following tables:

Table label [name]	Description
Inventory Control Table	Track the stock of items used by your business. For example, item name, manufacturer, image, category, and location.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Table label [name]	Description
[inventory_ x_<company-code>_<my_inventory_tracker_app>_inventory_control]	
Inventory Request Table [x_<company-code>_<my_inventory_tracker_app>_inventory_request]	Track inventory requests submitted by employees. For example, the name and department of the requester, stock location, count, requested date, and return date.
Stock Location Table [x_<company-code>_<my_inventory_tracker_app>_stock_location]	Track the location of stocked items. For example, name, address, and inventory manager.

Experience

The Inventory Tracker app template includes the following experiences:

Experience	Experience type	Description
Inventory Control | Portal	Form	Form for admins and managers to add inventory items, view stock quantity, and add stock locations.
Inventory request | Workspace	Form	Form for employees to submit and manage inventory requests.
Inventory Control | Default view	Form	Form for admins and managers to manage inventory items, view stock quantity, and manage stock locations.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
App name | Portal	Portal	Portal where all users can manage inventory requests and tracking.
Inventory request | Default view	Form	Form for admins and managers to inventory items, view stock quantity, stock locations, and add notes.
Inventory request | Portal	Form	Form for admins and managers to request inventory items.
App name | Workspace	Workspace	Workspace to manage all Inventory tracker app configuration.
Stock Location | Workspace	Form	Form for inventory managers to add stock names, addresses, and descriptions.
Stock Location | Default view	Form	Form for inventory managers to add stock name, address, description, and department.
Inventory Control | Workspace	Form	Form for admins and managers to manage inventory items, view stock quantity, and stock locations.
Inventory Tracker App	Form	Form for employees to view inventory list,

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
		see stock quantities, request items, and check the status of their requests using their organization's iOS or Android app.

Logic and automation

The Inventory Tracker app template includes the following automated workflows:

Workflow name	Workflow type	Description
Inventory Tracker Request Completed - Admin/Manager	Flow - record	Flow that sends a notification when an inventory request has been completed.
Request Update as Submitted - Manager	Email	Email that notifies a manager that they have a new update on a requested item.
Item Out of Stock-Admin	Email	Email that informs an admin of items that are out of stock.
Return Date Updated - Manager	Email	Email that notifies manager of an updated return date.
Inventory Tracker Request Submitted - Manager	Flow - record	Flow that sends a notification to managers when an inventory request is submitted.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Inventory Tracker Inventory track Created - Admin	Flow - record	Flow that sends a notification when an inventory track is created.
Stock Location Updated - Admin	Email	Email that informs an admin of updated stock location.
Inventory Tracker Checked Out - Employee	Flow - record	Flow that sends a notification to an employee when an item is checked out.
Request Overdue - Manager	Email	Email that informs a manager of an overdue request.
Item Returned - Manager	Email	Email that informs a manager of returned items.
Request Completed - Manager	Email	Email that informs a manager of a completed request.
Inventory Tracker Request Approved - Employee/Admin/ Manager	Flow - record	Flow that sends a notification to employees, admins, and managers when an inventory request is approved.
Inventory Tracker Request Submitted - Employee	Flow - record	Flow that sends a notification to employees when their inventory request is submitted.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Checked Out - Employee	Email	Email that notifies employees of items that are checked out.
Inventory Tracker Out of Stock - employee	Flow - record	Flow that sends a notification to employees if an inventory item is out of stock.
Return Date Updated - Admin	Email	Email that informs an admin of an updated return date.
Request Canceled - Manager	Email	Email that notifies a manager when a request is cancelled.
Inventory Tracker Stock Location Updated - Admin	Flow - record	Flow that notifies admins when a stock location is updated.
Item Out of Stock - Manager	Email	Email that notifies a manager when an item is out of stock.
Inventory Tracker Item Returned - Employee/ Manager	Flow - record	Sends notification to employee/ manager when an item is returned.
Inventory Tracker Inventory track updated- Admin	Flow - record	Flow that sends a notification to an admin when an inventory track is updated.
Item returned - Employee	Email	Email that notifies employees of returned items.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Request Denied - Admin	Email	Email that informs admins of denied requests.
Inventory Tracker Stock Location Created - Admin	Flow - record	Flow that sends a notification to admin when a stock location is created.
Inventory Item Discontinued - Admin	Email	Email that notifies admins of discontinued items.
Request Approved - Manager	Email	Email that notifies of an approved request.
Inventory Item Updated - Admin	Email	Email that notifies admin of updated inventory item.
Inventory Tracker Inventory track Created - Admin	Flow - record	Flow that sends a notification to admin when an inventory track is created.
Out of stock - Employee	Email	Email that notifies employees of items that are out of stock.
Inventory Tracker Request Denied - Admin	Flow - record	Flow that sends a notification to admins when an inventory request is denied.
Request Approved - Employee	Email	Email that notifies employees of approved requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Inventory Tracker Item Out of stock - Admin/ Manager	Flow - record	Flow that sends a notification to admins and managers when an inventory item is out of stock.
Request Approved - Admin	Email	Email that notifies admins of an approved request.
Request submitted - Manager	Email	Email that notifies admins of a submitted request.
Request Overdue - Admin	Email	Email that notifies admins of an overdue request.
Request Denied - Manager	Email	Email that notifies managers of a denied request.
Stock Location Created - Admin	Email	Email that notifies admin when a stock location is created.
Overdue - Employee	Email	Email that notifies employee of overdue items.
Inventory Tracker Request Updated - Manager	Flow - record	Flow that sends a notification to managers when an inventory request is updated.
Request Denied - Employee	Email	Email that notifies employee ofa denied request.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Inventory Tracker Inventory Discontinued - Admin	Flow - record	Flow that sends a notification when an inventory item is discontinued.
Inventory tracker Return Date Changes - Admin/ Manager	Flow - record	Flow that sends a notification to admin and manager when a return date changes.
Comments Added - Manager	Email	Email that notifies a manager about added comments.
Comments Added - Admin	Email	Email that notifies admins about added comments.
Inventory tracker Request Denied - Employee	Flow - record	Flow that sends a notification to employees when their inventory request is denied.
Request Submitted - Employee	Email	Email that notifies employees when they submit a request.
Request created - Admin	Email	Email that no notifies admins when a request is created.
Inventory Tracker Comments Added - Admin/Manager	Flow - record	Flow that sends a notification to admins and managers when comments are added to inventory requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Request Canceled - Admin	Email	Email that notifies admins of a canceled request.
Inventory Tracker Request Overdue - Employee/Manager/ Admin	Flow	Flow that sends a notification to employees, managers, and admins if a request is overdue.
Inventory Item created - admin	Email	Email that notifies an admin when an inventory item is created.
Request Completed - Admin	Email	Email that notifies an admin when a request is completed.
Inventory tracker Request Cancelled - Admin/Manager	Flow - record	Flow that sends a notification to admins and managers when an employee cancels an inventory request.
Inventory tracker Request Created - Admin	Flow - record	Sends a notification to admins when an inventory request is created.

Security

The Inventory Tracker app template includes the following roles:

Role title [name]	Description	Contains roles
Employee	Employees can view inventory lists, check stock, request items,	Create, Read (own), Update (own)

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Role title [name]	Description	Contains roles
[x_<company-name>_<my_inventory_tracker_app>.employee]	and check the status of their requests.	
Admin [x_<company-name>_<my_inventory_tracker_app>.admin]	Admins can set up multiple inventory managers and stock locations.	Create, Read (all), Update (all), Delete
Inventory Manager [x_<company-name>_<my_inventory_tracker_app>.inventory_manager]	Inventory managers can create inventory items, define the type of item, monitor inventory levels, and update vendor information.	Create, Read (all), Update (all)
Public [x_<company-name>_<my_inventory_tracker_app>.public]	Public users require no login to access features or functions with the public role.	Contains no roles.

Build an application in App Engine Studio (AES) using the Performance Review template to automate scheduling, notifications, and feedback for performance reviews.

To use the Performance Review template, install this application from the ServiceNow Store.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

A performance review app automates the process of scheduling annual or quarterly reviews, reviewing employee performance, and providing manager feedback. The app displays report information by default and lets managers view, update, and request employee performance reviews.

Employees can complete their self-evaluation, monitor the status, and confirm evaluations via a web portal. The app will automatically notify employees and managers to submit their evaluations.

Managers can request an update to the self-evaluations, submit manager-evaluations, confirm evaluations, and monitor the status of their team's submissions via a portal.

The HR/admin role can select an annual, bi-annual, or quarterly review process schedule and edit both the self-evaluation and manager-evaluation templates. HR/admins can monitor the status of all evaluations by department, organization, or manager.

You can improve this template by incorporating the following features:

- Add continuous option as a review process
- Use Playbook to manage review schedules
- Include HR review/escalation process for both self-reviews and manager reviews
- Add peer reviews process

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Add goal setting or objectives and key results (OKRs)
- Add integration with HR software
- Add skill set assessment metrics
- Add performance improvement plan (PIP) process/individual development plans
- Include compensation info/annual performance review (APR)

For more information on creating an application using a template, see Create your app using an application template.

Data

The Performance Review app template includes the following tables:

Table label [name]	Description
Performance Review Table [x_<company-code>_<my performance_review_app>_performance_review]	Track the performance evaluations created by employees and managers. For example, the employee name, state of the review, manager feedback, and state of the review.

Experience

The Performance Review app template includes the following experiences:

Experience	Experience type	Description
Performance Review | Edit Settings	Form	Form where managers can configure performance review settings and add notifications.
App name | Workspace	Workspace	Workspace where admins and managers can configure review schedules, update

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
		evaluation templates, and monitor the status of all evaluations.
Performance Review Test | Emp Mgr feedback	Form	Form for managers to create employee evaluation questions, monitor the status, and leave feedback.
Performance Review | Manager Review	Form	Form managers can use to include questions, review employees responses, and leave feedback.
Performance Review | Self Review WS	Form	Form for employees to complete self review questions.
Performance Review | Workspace	Form	Form for mangers to monitor the status of their team's submissions.
App name | Portal	Portal	Portal where employees can submit, update, review, and confirm evaluations.
Performance Review | Default View	Form	Form that managers and employees can use to view performance reviews.
Performance Review | Self Review	Form	Form employees and managers can use to submit a self-assessment of their performance.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
Mobile app	Mobile experience	Employees can access their performance reviews using your organization's iOS or Android app.

Logic and automation

The Performance Review app template includes the following automated workflows:

Workflow name	Workflow type	Description
Perf Review - Send PR Employee Update Self-Eval email	Flow - record	Flow that triggers the PR Employee Update Self-Eval email.
PR Employee Manager - Eval submitted	Email	Email that notifies managers that an evaluation has been submitted.
Perf Review - Send PR Employee Complete Evaluation email	Flow - record	Flow that triggers the PR Employee Complete Evaluation email.
PR Employee Manager - Eval submitted DJ	Email	Email that notifies managers when self-evaluations are submitted.
PR Admin Eval Deadline Passed	Email	Email that notifies admins when an evaluation deadline has passed.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
PR Reminder: Manager need to submit eval	Email	Email reminding managers to submit their evaluations.
PR Manager Self Evaluation Submitted	Email	Email notifying admins that managers have submitted self-evaluations.
Perf Review - Send PR Employee Manager - Eval submitted	Flow - record	Flow that triggers the PR Employee Manager - Eval submitted email.
PR Reminder - Employee Self Evaluation	Email	Email that notifies employees to submit self-evaluation.
Perf Review - Send deadline email	Flow	Flow that triggers a deadline reminder email on the date indicated in the system properties.
PR Employee Complete Evaluation	Email	Email that notifies employees their evaluation is complete.
PR Employee Update Self Evaluation	Email	Email that notifies employees they need to update their self-evaluation.
Perf Review - Main Flow	Flow	Main flow which triggers daily. This flow controls when reviews are triggered, email reminders, and end of review period is reached.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
Perf Review - Send reminder emails	Flow	Flow that triggers reminder emails on the date indicated by sys_properties.
Perf Review - Create records	Flow	Flow that triggers review records on the date indicated by sys_properties.
Perf Review - Set review inactive	Flow	Flow that inactivates reviews on the end date of the review period, specified in sys_properites.
PR Admin Self - Eval Submitted w/o Manager	Email	Admins receive notification if a self-evaluation is submitted without a manager or title.
PR Reminder Employee Update Self Eval	Email	Email that notifies employees to update self- evaluation.
Perf Review - Send Manager/Admin Self-Evaluation Submitted email	Flow - record	Flow that triggers the PR Admin Self-Evaluation Submitted without manager or the PR Manager Self Evaluation Submitted email.

Security

The Performance Review app template includes the following roles:

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Role title [name]	Description	Contains roles
Employee [x_<company-name>_<my performance_review_app>.employee	Employees can complete/update self-evaluations and confirm evaluations.	Create, Read (own), Update (own, Delete (own)
HR/Admin [x_<company-name>_<my performance_review_app>.admin	HR/Admins can schedule reviews (annual, bi-annual, custom, or manual), edit self and manager evaluation templates, and monitor the status of all reviews.	Read (all), Update (all), Delete (all)
Manager [x_<company-name>_<my performance_review_app>.manager	Managers can request updates to a self-evaluation, submit manager-evaluations, and monitor issues related to evaluation submissions.	Create, Read (my team), Update (my team)

Build an application in App Engine Studio (AES) using the Team Contacts template to manage contact information for the people in your organization.

To use the Team Contacts template, install this application from the ServiceNow Store.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

A team contacts app uses a mobile experience to view employee contact information, tag favorites, and add privacy notes. The app displays report information by default and lets an employee search for employees, view employee profiles, and create a list of favorite employee contacts.

For more information on creating an application using a template, see Create your app using an application template.

Data

The Team Contacts app template includes the following tables:

Table label [name]	Description
Relationship Contact Table [x_<company-code>_<team_contact>_relationship_contact]	Tracks employee contact information. For example, contact names, date created, favorites, and updates.
Reminder Table [x_<company-code>_<team_contact>_relationship_contact_reminders]	Tracks reminders created by your team. For example, when to send a reminder and the subject of a reminder.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Table label [name]	Description
Relationship Notes Table [x_<company-code>_<team_contact>_relationship_notes]	Tracks the notes that employees create for each other. For example, the employee name, reason for contact, HTML notes, and option to mark the contact as a favorite.

Experience

The Team Contacts app template includes the following experiences:

Experience	Experience type	Description
Employees Mobile experience	Mobile experience	Employees can access an employee directory, and relationship notes using your organization's iOS or Android app.
Team contact	Portal	Portal where employees and managers can view employee profiles, mark favorite contacts, and add relationship notes using a website. The team contacts portal includes a sign-in page, a home page, and a page to add relationship notes.
Note | Default view	Form	Form to add notes to contact information.
Relationship contact	Form	Form to view contact information.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
Reminder | Portal	Form	Form for employees and managers to set reminders.
Reminder | Default view	Form	Form for employees and managers to set reminders.
Note | Portal	Form	Form for managers and employees to add notes to contacts.

Logic and automation

The Team Contacts app template includes the following automated workflows:

Workflow name	Workflow type	Description
Team Contact Reminder Push	Email	Email that sends a reminder push to employees.
Notify Contact Reminder	Flow - record	Flow that sends a notification about a reminder that an employee sets up in a relationship note. The notification contains details from the relationship note.
Team Contact Reminder Notification	Email	Email reminder to employees.
Team Contact Reminder Ackn Notfication	Email	Email for employees to acknowledge a reminder.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Security

The Team Contacts app template includes the following roles:

Role title [name]	Description	Contains roles
Manager [x_<company-name>_ <app-name>.manager]	Managers can view profile info, add relationship notes, and see their direct reports.	Create, Read (own), Update (own), Delete (own)
Admin [x_<company-name>_ <app-name>.admin]	Managers can configure the team contacts app and grant access to the app.	Read (all), Update (all), Delete
Employee [x_<company-name>_ <app-name>.employee]	Employees can view information on their team, search for employees, view employee profiles, and mark favorite contacts.	Create, Read (own), Update (own), Delete (own)
Canvas user	User role for Canvas Core application	

Build an application in App Engine Studio (AES) using the Time Off Requests template to schedule employee vacations and time-off.

To use the Time Off template, install this application from the ServiceNow Store.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Create a time off application to streamline the process for employees to request time off through a single mobile or web-based form. Managers are notified via email when a request is submitted. They can use a mobile app or a web-based portal to view historical and pending requests by month or year for an employee or their entire team. This allows the manager to make informed decisions, improve planning for upcoming work, or identify where shifts must be covered. Employees are automatically notified when their requests are approved or rejected and why. If plans change and updates to an approved request are required, the employee can edit and resubmit their requests for approval through the portal.

For more information on creating an application using a template, see Create your app using an application template.

Data

The Time Off app template includes the following tables:

Table label [name]	Description
Time Off Request Table [x_<company-code>_<my_time_off_request_app>_request]	Track time off requests that employees create using the Time Off Request app. For example, the employee name, creation date, manager, requested days off, and state of the time off request.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience

The Time Off app template includes the following experiences:

Experience	Experience type	Description
Time Off Request | Default view	Form	Form for managers and admins to use as a template for time off requests.
Time Off Request | Workspace	Form	Workspace where managers can view, submit, and approve or reject time off requests. The workspace also contains historical records which can be viewed by team, employee, and time.
App name | Portal	Portal	Portal for managers and admins to view, submit, and approve or reject time off requests and for employees to view, edit, review, or cancel their time off requests.
App name | Workspace	Workspace	Workspace where managers and admins can use view, submit, and approve or reject time off requests.
Time Off Request | Record	Form	Form that managers can use to view, submit, and approve or reject time off requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Experience type	Description
Time Off Request | New	Form	Users can create new (save, submit, or cancel), update (save, submit, delete, or cancel), and review (approve or reject) time off requests.
Mobile app	Mobile experience	Employees can request time off and access their requests. Managers can submit, view, update, approve or reject time off requests using your organization's iOS or Android app.
Dashboard	Mobile experience	Managers and admins can view time off requests using your organization's iOS or Android app.

Logic and automation

The Time Off app template includes the following automated workflows:

Workflow name	Workflow type	Description
Time off request - Send comments	Flow - record	Flow that sends a notification to an employee or manager when a comment has been added to a time off request.
Daily Time Off inactivating records	Flow	Flow that update the remaining time off on Time off

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
		request records until the remaining days is set to 0.
Time Off Req Approved	Email	Email that notifies an employee of an approved time off request.
Time Off Req Updated/resubmitted	Email	Email that notifies managers of updated/resubmitted time off requests.
Time Off Comments	Email	Email that notifies an employee or manager of a comment added to a time off request.
Time Off requests - Send notifications	Flow - record	Flow that sends a notification to an employee or manager when a time off request state changes. The notification contains details from the time off request.
Time Off Request Cancelled	Email	Email that notifies an employee or manager of a cancelled time off request.
Time Off Request Rejected	Email	Email that notifies an employee of a rejected time off request.
Time Off Request - updated/resubmitted	Flow - record	Flow that sends a notification to an

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workflow name	Workflow type	Description
		employee or manager that a time off request is updated/ resubmitted.
Time Off Req Submitted	Email	Email that notifies a manager when a time off request is submitted.
Time Off Request	Email	Employees can draft, request, approve, reject, and cancel time off requests.

Security

The Time Off app template includes the following roles:

Role title [name]	Description	Contains roles
Manager [x_<company-name>_<my time_off_request_app>.manager]	Managers can submit, view, approve, and reject time off requests	Create, Read (all), Edit (all)
Employee [x_<company-name>_<my time_off_request_app>.employee]	Employees can submit, view, edit, and cancel time off requests	Create, Read (own), Edit (own), Delete (own)
Admin [x_<company-name>_<my	Admins can manage the time off app and view all records	Create, Read (all), Edit (all), Delete (all)

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Role title [name]	Description	Contains roles
time_off_request_app >.admin]		
Public	Public users require no login to access features or functions within the application.	Role contains no access by default.

App Engine Studio (AES) provides various predefined application templates. However, creating custom templates can speed up time to production if you have types of applications that you want to create more than once.

You can create a custom template from scratch or use existing content as a starting point. If one of the predefined AES templates is close to what you need, consider extending that template and then customizing it for your needs. Complete your template by adding and customizing data, experiences, logic and automation, and security roles for access.

- Build a custom template from an existing application

  Use an existing application as a starting point to build a custom template in App Engine Studio (AES). Existing data, experience, logic and automation, and security roles from the application are automatically added to the custom template.

- Build a custom template from scratch

  Build your custom template from scratch if none of the predefined App Engine Studio (AES) templates fit your business needs or you don't have an existing application as a starting point.

- Identifying and fixing app template creation errors

  Learn how to identify and fix your app when unsupported features or metadata stop the template creation process in App Engine Studio (AES).

- Assign permissions to publish custom templates

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Assign permissions for developers to publish a custom template to the application repository or the ServiceNow Store. You can grant permissions to publish either a specific custom template or publish all existing custom templates in App Engine Studio (AES).

- Publish a custom template

  You can publish a custom template that is built from scratch or from an existing application using App Engine Studio (AES).

Use an existing application as a starting point to build a custom template in App Engine Studio (AES). Existing data, experience, logic and automation, and security roles from the application are automatically added to the custom template.

Before you begin

Role required: admin, app_template_author

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the Template page, select **Create new template**.
3. Select **Existing app**, and then select **Continue**.
4. On the app selection screen, select an existing application for the custom template creation, and then select **Continue**.
   The following outcomes are possible.
   - All items are supported: The custom template is created. All the objects are available in the custom template and in apps created from the custom template.
   - Some items aren't supported: You can continue to create the template but a few items are not available in the custom template. There's no impact on the custom template or the apps created from the template.
   - Some items are denied: You encounter an error message and cannot continue further until the errors are fixed. The author must change the app, if it was created from an existing app or the template, if it was created from scratch.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: For more information, see Supported features and metadata in custom templates.

5. Enter a name and description for the custom template.
6. Accept or change the application's logo.
   - If the existing application has a logo in SVG format, the same logo is applied to the custom template.
   - If there's no logo or the logo is in a format other than SVG, upload an SVG logo for the custom template by either dragging the image to the **Browse or drag an SVG image** field or selecting the field, selecting the image from your file directory, and selecting **Open**.
7. Select **Continue**.
8. Specify which users or groups should have access to this template.

Option	Description
Share with specific users and groups	a. From the **Shared with** list, select **Specific users and groups**. b. Add users individually or in groups. c. Select **Give access**. d. Select **Continue**.
Share with all users and groups	a. From the **Shared with** list, select **All users and groups**. b. Select **Continue**.

For more information about template sharing and permissions, see App template sharing.

9. Access the custom template in one of the following ways.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Action
Go to all templates	Access custom templates from the template library.
View template	Access the custom template you just created.

Result

Your custom template is created and ready for your use. The custom template is activated and is available to App Engine Studio users who have access to it.

Build your custom template from scratch if none of the predefined App Engine Studio (AES) templates fit your business needs or you don't have an existing application as a starting point.

Before you begin

Role required: admin, app_template_author

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the Template page, select **Create new template**.
3. Select **Start from scratch**, and then select **Continue**.
4. Enter a name and description for the custom template.
5. (Optional) Add a logo to the custom template by either dragging the image to the **Browse or drag an SVG image** field or selecting the field, selecting the image from your file directory, and selecting **Open**.
6. Select **Continue**.
   A progress message indicates when the empty custom template has been created.
7. Specify which users or groups should have access to this template.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Description
Share with specific users and groups	a. From the **Shared with** list, select **Specific users and groups**. b. Add users individually or in groups. c. Select **Give access**. d. Select **Continue**.
Share with all users and groups	a. From the **Shared with** list, select **All users and groups**. b. Select **Continue**.

For more information about template sharing and permissions, see App template sharing.

8. On the template details screen, select **Go to template dashboard**.
9. Add data, experience, logic and automation, and security measures to the custom template.
   For more information, see the following topics:
   - Create a data model for your application
   - Add an application experience
   - Add logic and automation
   - Add application security
10. Select **Save**.

What to do next

Provide an overview of the custom template and activate the template to make it available to App Engine Studio users through the template library. For more information, see Update custom template contents and properties.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Learn how to identify and fix your app when unsupported features or metadata stop the template creation process in App Engine Studio (AES).

Unsupported features

Sometimes items in a source application from which you created a custom template aren't supported in the template. You must remove unsupported items before you can create a template from the application.

When an error happens during the template creation process, an error message is displayed.

Template creation failure notification

You can identify which elements of your application are causing it to fail the template creation process by selecting **View all errors**, which displays the Scan Failure [sys_app_scan_failure] table. For more information about the errors in the table and their cause, see Template creation errors in the Scan Failure table.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Template creation errors in the Scan Failure table

Errors that occurred during the creation of a custom template that are displayed in the Scan Failure [sys_app_scan_failure] table and their cause.

Error messages

For more information about what types of records are allowed and skipped, see Supported features and metadata in custom templates.

Error message	Definition	More details
Unsupported_table	Record class for which there is no allow rule, and there's an unknown level of support.	One or more unsupported records are unrecognized by App Engine Studio and must be removed for the template creation process to continue.
Denied_table	Record class for which there is a deny rule, and template creation isn't supported.	The record class is explicitly denied and must be removed for the template creation process to continue.
Scripted_record	Scripted rule that runs on each record in the app.	Current scripted deny rules include, but aren't limited to: • Custom metadata: The app has tables that extend the sys_metadata table. • Scoped administration: The
Scripted_app	Scripted rule that runs once for the app.	

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Error message	Definition	More details
		app has scoped administration turned on. • Template execution in progress: The template associated with the source app is currently being executed.

Assign permissions for developers to publish a custom template to the application repository or the ServiceNow Store. You can grant permissions to publish either a specific custom template or publish all existing custom templates in App Engine Studio (AES).

- Assign permissions to publish an individual custom template

  Assign permissions to developers so they can publish an individual App Engine Studio (AES) custom template to the application repository or ServiceNow Store.

- Assign permissions to publish custom templates and apps

  Assign permissions for developers to publish custom App Engine Studio (AES) templates and applications to the app repository or ServiceNow Store.

Assign permissions to developers so they can publish an individual App Engine Studio (AES) custom template to the application repository or ServiceNow Store.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > App Engine > Templates > App Templates**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

2. Select the personalize List icon ( ).
3. Add the Package column by moving the **Package** value from the **Available** list to the **Selected** list and select **OK**.
4. From the Package column, select the package link for your custom template.
5. Under the **Related links** heading, select **Manage Collaborators**.
6. Assign permissions to new or existing collaborators.

Choice	Action
Assign permissions to a new user or group	a. In the **Invite people by name or group** field, enter a user name or group name to add as a collaborator. b. From the collaboration descriptor, select **Editor**. c. Select **Send**. After the collaboration request is approved, the user or group is added as a collaborator for the custom template. d. From the collaboration descriptor, select **Customize**. e. On the Manage Collaborators window, select the **Publish To App Repo** and **Publish To App Store** check boxes. f. Select **Save**.
Assign permissions to an existing user or group	a. From the list of collaborators, select a user or group.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Choice	Action
	b. Select **Customize**. c. On the Manage Collaborators window, select the **Publish To App Repo** and **Publish To App Store** check boxes. d. Select **Save**.

Result

The specified user or group now has permission to publish an individual custom template.

Assign permissions for developers to publish custom App Engine Studio (AES) templates and applications to the app repository or ServiceNow Store.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > App Engine > Collaboration > Descriptors**.
2. In the **Name** field of the All Collaboration Descriptors page, search for and select **Owner**.
3. From the **Development Permission Sets** tab, select **Edit**.
4. Move the **Publish To App Repo** and **Publish To App Store** values from the **Collection** list to the **Development Permission sets** list.
5. Select **Save**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Result

Developers who own applications now have permissions at a platform level to publish all custom templates to their application repository or ServiceNow Store.

You can publish a custom template that is built from scratch or from an existing application using App Engine Studio (AES).

Before you begin

You must have permissions to publish a custom template. For details, see Assign permissions to publish custom templates.

Role required: admin, app_template_author

Procedure

1. Navigate to **All > App Engine > App Engine Studio > Templates**.
2. Point to the custom template, select the More actions icon (•••), and select **Properties**.
3. On the **General** tab, select the **Activate this template** check box.
4. Select **Publish template**.
5. (Optional) For a custom template built from scratch, select **Publish anyway**.

   App Engine Studio displays the publish template fields.
6. Fill in the fields.

   Provide a version number and release notes

Field	Description
Version	Provide a new version number for the custom template.
Release notes	Provide a brief description of the changes made to the custom template.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Publish options	Select where you want the custom template published. • To publish the template to your application repository, select **My application repository (Make the app available to my instances)**. • To publish the template to the ServiceNow Store, select **ServiceNow Store (Submit this app to the ServiceNow Store for review)**.

7. Select **Continue**.
8. On the confirmation screen, select **Close**.

Result

The custom template is published and available to users the app template admin shares it with.

Improve the effectiveness of your custom template by updating its contents or properties in App Engine Studio (AES).

Before you begin

Role required: admin, app_template_author

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. Select the **Template** tab.
3. Modify different aspects of the template to make them more useful to your needs.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Choice	Procedure
Update the template contents	a. Point to the custom template, select the More actions icon (•••), and select **Edit Template**. b. Modify the custom template by editing data, experience, logic and automation, or security. For more information, see the following topics: • Modify application data tables • Add an application experience • Add logic and automation • Add application security c. Select **Save template**.
Update the template properties	a. Point to the custom template, select the More actions icon (•••), and select **Edit Properties**. b. Select **General**. c. Modify aspects of the template. • To rename the custom template, update the **Name** field.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Choice	Procedure
	• To rewrite the custom template description, update the **Description** field. • To replace the custom template logo, select **Remove image** and then add a new logo. d. Select **Save properties**.
Update template sharing settings	a. Point to the custom template, select the More actions icon (•••), and select **Edit Properties**. b. Select **Sharing settings**, and share the template in one of the following ways: a. Share with some users or groups. b. Share with all users and groups. c. On the General tab, select **Save properties**.
Update content on the Template details page	a. Point to the custom template, select the More actions icon (•••), and select **Edit Properties**. b. Select **Details page**. c. Update details about the template that help users understand its features and why they should choose

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Choice	Procedure
	this template for their application. d. Select **Save properties**.
Delete the custom template	To delete the custom template, ensure you have administrator privileges or have permissions to delete. Select **Delete template**, type `Delete` to confirm your choice, and select **Delete**. **Note:** To request delete permissions, contact your administrator.

Manage template activation and deactivation to ensure that users creating apps in App Engine Studio (AES) have access to the best application templates for their needs.

Before you begin

Role required: app_template_admin

About this task

App template admins manage the templates that are active in non-production instances and determine which users can see and use those templates. Admins may want to deactivate custom templates that deviate from company standards or don't suit the needs of their users.

Procedure

1. Navigate to **All > App Engine > Templates > App Templates**.
2. Select the template that you want to activate or deactivate.
3. To edit the template, select **here** in the message that appears.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

4. Activate or deactivate the template.
    - To activate the template, select the **Active** check box.
    - To deactivate the template, clear the **Active** check box.
5. Select **Update**.

Specify which users and groups have access to predefined and custom templates in App Engine Studio (AES).

Implicit sharing

Templates are implicitly shared with some users in your organization, meaning that no sharing record exists that determines sharing. The three rules governing implicit sharing are:

- Instance administrators can see and use all templates.
- App template admins (users with the app_template_admin role) can also see and use all templates.
- App template authors (users with the app_template_author role) can see templates that are not shared with them if they have permission to edit the scope in which the template resides.

These sharing rules apply regardless of whether a template is active.

Explicit sharing

You can share app templates with anyone in your organization by creating a sharing record for that user or group. However, regardless of sharing permissions, the user or group must have the sn_app_eng_studio.user role to see and use the template. The three ways to share templates are:

- Share globally with every user in your organization
- Share with a specified user group
- Share with a specified single user

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: If you stop sharing a template with an individual user but that user is a part of any group the template is shared with, that user is still able to see and use the template.

Manage template sharing permissions

Share App Engine Studio (AES) templates globally, with groups, or with individual users to ensure users have access to the right templates.

Before you begin

Role required: app_template_admin

Procedure

1. Navigate to **All > App Engine > Templates > App Templates**.
2. Select the template you want to modify sharing permissions for.
3. In the Template Sharing Permissions related list, select **New**.
4. Select a sharing option.

Choice	Permissions
Global	Shared with everyone in your organization.
User Group	Shared with the groups you select from the list.
User	Shared with individual users you select from the list.

5. Select **Submit**.

Create your application from scratch

If the available application templates in App Engine Studio (AES) don't fit your application goal, create an empty application to which you can add data, experience, logic and automation, and security.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

Role required: admin, sn_app_eng_studio.user

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. Select **Create app**.
3. Enter a **Name** and **Description** for your application.
4. (Optional) Add a logo by either dragging the image to the **Drag app logo or browse to upload** field or selecting the field, selecting the image from your file directory, and selecting **Open**.
5. Select **Continue**.
6. Control who has access to create, read, write, and delete content in your application by adding or customizing roles. To add security roles to your app, select **Add a role**, and enter a name and description for the role.

   Note: At least one role must have **Read** access to be able to update application security.

7. Select **Continue**.
8. On the summary screen, select **Go to app dashboard**.
9. (Optional) Review the guiding information for each section of your application by enabling the **Guidance** toggle (Guidance) in the bottom left corner of the window.
10. Continue building your application by adding data, experiences, logic and automation, and security to your app.
    For more information, see the following topics:
    - Create a data model for your application
    - Add an application experience
    - Add logic and automation
    - Add application security

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

What to do next

After you've finished building your application, submit the application for approval to get it reviewed and deployed by an administrator. For more information, see Submit your application for approval and publishing.

Prepare your app for approval

Prepare your app for the approval process by making any needed changes, such as renaming your app, editing the app description, or replacing the app image. You can also delete the app from App Engine Studio (AES) if it has taken a wrong turn.

Before you begin

Role required: admin, sn_app_eng_studio.user

About this task

You can change certain features of your application, based on your permissions. To request delete permissions, contact your administrator.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. From the app home, select the gear icon ( ).
4. Update the application properties.
   - To rename the application, update the **Name** field.
   - To rewrite the application description, update the **Description** field.
   - To replace an image, select **Remove image** and then add a new image.
   - To delete your application, select **Delete application**, type `Delete` to confirm your choice, and select **Delete**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

5. Select **Save**.

Enhance your application

Whether you use a template or create your app from scratch in App Engine Studio (AES), you must enhance it by creating a data model, user experiences, logic and automation, and security.

Use the following topics as guides as you build out your application.

- Create a data model for your application

  Create a data model in App Engine Studio (AES) for your application by creating the tables that will house your application data. Create data tables that will be used in your application by creating the table from scratch, uploading a spreadsheet or PDF, or by using an existing table as a template. You can also create and schedule data imports by mapping a spreadsheet to an existing table in your application.

- Add an application experience

  Use App Engine Studio (AES) to add an experience to your app. Experiences are the interface, or wrapper, for how users interact with your app.

- Add logic and automation

  Replace manual work by adding logic and automation to your app in App Engine Studio (AES).

- Add application security

  Control who is permitted to use or edit your application by configuring roles in App Engine Studio (AES).

Create a data model for your application

Create a data model in App Engine Studio (AES) for your application by creating the tables that will house your application data. Create data tables that will be used in your application by creating the table from scratch, uploading a spreadsheet or PDF, or by using an existing table as a template. You can also create and schedule data imports by mapping a spreadsheet to an existing table in your application.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Creating a data model and a key starting point for any new application. Data populates application user interfaces that are interacted with. Users may provide data, such as their name and phone number, when they fill in a form. Other users may refer to data as they fulfill a request.

In App Engine Studio, application data is stored in table format. When users update application data, they create a row or change an existing row in the table (each row is also known as a data record). You can create tables from existing Now Platform tables, from a spreadsheet or PDF, or customize a completely new table for your application to store records in.

The data records stored in your application may come from several sources. One table might store data records entered by users who are using your application, another might be populated via the import and mapping of data from a spreadsheet or through a script that updates data records with data from another Now Platform table.

Application templates and data

Application templates automatically add data to your application. If you use a template to create your application, you can edit the tables that were added or add different tables.

Forms

When you add data to your app, any associated form views display in the **Experience** section of your app. To edit the form, select it in the **Experience** section. Form views can be edited in the **Forms** tab of Table Builder. For more information, see Forms in Table Builder.

Use the methods listed below to create a data model and add data to your application.

Table extension

There are several tables that your organization may already be using in other applications. For example, your organization may be using the Configuration item [cmdb_ci] table for an application that houses configuration data. You can create a table for your application by extending any of these existing tables.

Table extension allows a table to share fields and records with a parent table. You might extend a table if you expect users to fill in similar fields

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

across different form views in an application. For example, to create a ticketing type of table, you might extend the Task [task] table. The Task table includes fields that are standard for most work tickets, such as **Number** and **Assigned to**.

Many organizations create extensible standardized tables for their citizen developers to use when designing their apps. This enables the developers to standardize the way data is utilized across multiple applications within the organization.

To make a table in your application extensible, select **Make extensible** during table creation. After extending an existing table, you can further customize the new table by adding more columns.

The following table provides a list of commonly extended tables in the Now Platform. For more information on commonly extended tables and models for extension, see Table extension and classes.

Commonly extended tables

Table	Short Description	Description
task	Task	Stores fields for the core applications such as Incident, Problem, and Change Management. It provides a series of standard fields used on each of the tables that extend it. Any table which extends the task table can take advantage of task-specific functionality for driving tasks.
cmdb_ci	Configuration Item	Stores configuration items. This table can be extended for configuration items

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Table	Short Description	Description
		such as hardware, services, etc.
sn_customerservice _case	Customer Service Case	Stores customer service case records.
sm_order	Service Order	Stores data that defines and manages work that needs to be performed.
sm_task	Service Task	Stores units of work performed by one person in one session (one location, one time).
planned_task	Planned Task	Stores additional fields for tasks pertaining to time and effort as part of a planned, multi-stage process.
cmn_location	Location	Stores location information.
cmdb_serviceorder _product_model	Service Order Model	Stores service order templates.
cmdb_servicetask _product_mode	Service Task Model	Stores service task templates.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Table	Short Description	Description
cmdb_qb_result _base	Query Results	Stores query results created by the CMDB Query Builder.
alm_asset	Asset	Stores general, financial, and contractual information about assets.
cmdb_ci_service	Business Service	Stores IT Services data that directly supports a business process.
sys_user	User	Stores user data. The User table provides a list of all system users and their related department.
sys_user_group	User Group	Stores and groups a set of users who share a common purpose. Groups may perform tasks such as approving change requests, resolving incidents, receiving email notifications, or performing work order tasks.
core_company	Company	Stores company information.
cmn_schedule	Schedule	Stores records that specify a time zone and a type of schedule and use

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Table	Short Description	Description
		one or more schedule entries.
cmn_department	Department	Stores a list of all departments and their related business unit.
cmn_cost_center	Cost Center	Stores cost center records. This is a reference between financial systems and IT. Cost center records represent business entities, and have a related list of CI Cost Center Relationships that measure the cost center's consumption of business services.
cmdb_model	Product Model	Specific versions or various configurations of an asset. Models are used for managing and tracking assets through various ServiceNow platform asset applications, including Product Catalog, Asset Management, and Procurement.
life_cycle_stage	Life Cycle Stage	Stores standard fields and values for tracking life cycle stages for CIs. Using these standard values consistently across applications helps to

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Table	Short Description	Description
		effectively track assets through their life cycle transitions.
life_cycle_stage _status	Life Cycle Status	Stores standard fields and values for tracking life cycle stage status for CIs. Using these standard values consistently across applications helps to effectively track assets through their life cycle transitions.
incident	Incident	Stores deviations from an expected standard of operation.
sysapproval	Approval	Stores data that allows you to require authorization on tasks before the work is done. You can define approvals for all tasks and associate users or groups to a task to approve or reject them.

- Create a table from scratch

  If there are no spreadsheets or existing tables to use for your application, you can create and customize a new table.

- Create a table from an existing table

  Add a data table to your application from an existing table that you or someone else previously created.

- Create new tables from a spreadsheet

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Add one or more tables to your application by uploading Microsoft Excel spreadsheet.

- PDF extractor

  Create tables from a PDF form using the PDF extractor tool in App Engine Studio.

- Import and map spreadsheet data into an existing data table

  Add new or updated information to your current data sets by importing it into existing tables in your application. Schedule future imports to add data at specific times.

- Modify application data tables

  Use Table Builder to modify data tables used in your application.

If there are no spreadsheets or existing tables to use for your application, you can create and customize a new table.

Before you begin

Role required: admin, sn_app_eng_studio.user

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to the Data heading, select the Add icon (⊕).
4. Select **Create a table**, and then select **Begin**.
5. Select **Create from scratch**, and then select **Continue**.
6. On the form, fill in the fields.

Field	Description
Table label	Unique label to identify the table.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Table name	Database name for the table. A table name is created automatically after you enter a table label. You can edit the name if needed.
Make extensible	Option to allow other tables to share data from this table. For more information on table extension, see Table extension.
Auto number	Option to track table records with a unique number. If you select this option, define the **Prefix**, **Starting number**, and **Number of digits**.
Prefix	Abbreviated name of the table to append to the beginning of the record number. For example, if you are creating a "Laptop" table, then your prefix may be "LPTP" or "LT."
Starting number	Number to identify the first record created for your table.
Number of digits	Maximum number of digits to allow in the record number. This value determines the highest possible record number. For example, if you enter 7, then the highest possible number is 9999999.

7. Control who has access to create, read, write, and delete content from this table by creating roles or further defining existing roles.

   Roles that you create in the table persist throughout the application and can be further defined in other tables you add.

   Note: At least one role must have read access for you to be able to preview the table.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

8. Select **Continue**.
9. To begin building your table, select **Edit table**.

   Table Builder opens in a new tab.

   Your new table includes several default columns, including **Created** and **Updated**. You can't delete these default columns.
10. Customize your table by adding table columns.
    a. In Table Builder, select **+ Add new field**.
    b. On the empty row, fill in the fields.

    Table column properties

Field	Description
Column label	Unique label for the column.
Column name	Database name for the column.
Type	Type of information that the column contains. For example, to contain plain text in the column, select **String**. Depending on the type that you select, fill in the additional fields to further define the table column. For example, if you select **String**, define the character limit of the string input. Or, if you select **Choice**, define the choices that users can choose from. See Field types.
Reference	Table that is associated with the column. This field applies only if the column type is **Reference**.
Max length	Maximum number of characters that users can enter in the field.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Default value	Value that populates the field automatically after a new record is created.
Display	Option to set the column as the display value for the table. A reference field shows the display value of the table to which it is referring. For example, the **Opened by** column of the task table refers to the user table. Because the display value of the user table is the user name, the **Opened by** field shows something like **Beth Anglin** or **Joe Employee**. When you select a display value, choose the table column that would act as an appropriate title for individual records. Only one column can act as the display value for a table.

11. Select **Save**.

What to do next

For more information on what you can do in Table Builder, see Table Builder.

Add a data table to your application from an existing table that you or someone else previously created.

Before you begin

Role required: admin, sn_app_eng_studio.user

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

3. Next to the Data heading, select the Add icon (⊕).
4. Select **Create a table**, and then select **Begin**.
5. Select **Create from an existing table**, and then select **Continue**.
6. Select an existing table, and then select **Continue**.
7. On the form, fill in the fields and then select **Continue**.

Field	Description
Table label	Unique label to identify the table.
Table name	Database name for the table. A table name is created automatically after you enter a table label. You can edit the name if needed.
Make extensible	Option to allow other tables to share data from this table. For more information on table extension, see Table extension.
Auto number	Option to track table records with a unique number. If you select this option, define the **Prefix**, **Starting number**, and **Number of digits**.
Prefix	Abbreviated name of the table to append to the beginning of the record number. For example, if you are creating a "Laptop" table, then your prefix may be "LPTP" or "LT."
Starting number	Number to identify the first record created for your table.
Number of digits	Maximum number of digits to allow in the record number. This value determines the highest possible

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	record number. For example, if you enter 7, then the highest possible number is 9999999.

8. Control who has access to create, read, write, and delete content from this table by creating roles or further defining existing roles.

   Roles that you create in the table persist throughout the application and can be further defined in other tables you add.

   Note: At least one role must have read access for you to be able to preview the table.

9. Return to your application home page or continue editing your table.
   - Select **Done** to return to your application home page.
   - Select **Edit table** to review the columns that were added to your table and continue editing it in Table Builder.

10. If you continue editing, in the new tab that opens, review the table columns.

    Each table column appears as a row in Table Builder.

    A lock icon ( ) appears next to columns from the extended table. You can't modify these columns.

11. Customize your table by adding table columns.
    a. In Table Builder, select **+ Add new field**.
    b. On the empty row, fill in the fields.

    Table column properties

Field	Description
Column label	Unique label for the column.
Column name	Database name for the column.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Type	Type of information that the column contains. For example, to contain plain text in the column, select **String**. Depending on the type that you select, fill in the additional fields to further define the table column. For example, if you select **String**, define the character limit of the string input. Or, if you select **Choice**, define the choices that users can choose from. See Field types.
Reference	Table that is associated with the column. This field applies only if the column type is **Reference**.
Max length	Maximum number of characters that users can enter in the field.
Default value	Value that populates the field automatically after a new record is created.
Display	Option to set the column as the display value for the table. A reference field shows the display value of the table to which it is referring. For example, the **Opened by** column of the task table refers to the user table. Because the display value of the user table is the user name, the **Opened by** field shows something like **Beth Anglin** or **Joe Employee**. When you select a display value, choose the table column that would act as an appropriate title for individual records. Only one column can act as the display value for a table.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

12. Select **Save**.

What to do next

For more information on Table Builder, see Table Builder.

Add one or more tables to your application by uploading Microsoft Excel spreadsheet.

Before you begin

Check that the spreadsheet meets the following requirements:

- Formatted with horizontal columns and a header label for each
- Saved as an XLSX file type

> **Note:** The Excel spreadsheet you upload can have multiple worksheet tabs, each of which you might use to create a data table. If multiple worksheets are present, you will be prompted to select which worksheet tab to create the table from after you upload the file.

Role required: admin, sn_app_eng_studio.user

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to the Data heading, select the Add icon ( ).
4. Select **Create a table**, and then select **Begin**.
5. Select **Upload a spreadsheet** and then select **Continue**.
6. Upload your spreadsheet and then select **Continue**.

   You can drag the spreadsheet file onto App Engine Studio or browse your computer.
7. Choose one of the following paths.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- If your spreadsheet only has a single worksheet tab, proceed to the next step.
- If the spreadsheet has multiple worksheet tabs, you will have a list of sheets to choose from. From this list of sheets, select which worksheet tab to add as a table to your application first.

8. In the **Enter a row number for the table header** field, enter the row number in which the sheet column headers are located.
   For example, if the headers are in the second row, enter `2`.

9. (Optional) To upload the information below the column headers in the sheet (e.g., the data in your spreadsheet), select the **Import spreadsheet data** option.
   To upload only the column headers, leave the check box cleared. You may want to upload only the headers if you intend to use this table as a template and don't want any of the other data added to your AES table.

10. Make one of the following selections.

    - If you have uploaded an Excel file with multiple worksheet tabs, select **Convert to table** to proceed with converting the selected worksheet tab to a table.
    - If you have uploaded an Excel file with a single worksheet tab, select **Continue** to convert the worksheet to a table.

11. Review the properties for each column header, using the **Expand options** drop-down to display more properties.

Column header property	Description
Field Label	Unique label for the column.
Field name	Database name for the column.
Type	Type of information that the column contains. For example, to contain plain text in the column, select **String**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Column header property	Description
	Depending on the type that you select, fill in the additional fields to further define the table column. For example, if you select **String**, define the character limit of the string input. Or, if you select **Choice**, define the choices that users can choose from. See Field types.
Character limit	Max length of the strings that can be stored.
Display	Option to set the column as the display value for the table. A reference field shows the display value of the table to which it is referring. For example, the **Opened by** column of the task table refers to the user table. Because the display value of the user table is the user name, the **Opened by** field shows something like **Beth Anglin** or **Joe Employee**. When you select a display value, choose the table column that would act as an appropriate title for individual records. Only one column can act as the display value for a table.
Mandatory	Option to require that the column must contain a value before a new record can be saved.

To add another column to your table, select **Add new field**.

To delete a column, select the trash icon ( ).

12. Select **Continue** to define table properties.
13. On the form, fill in the fields.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Table label	Unique label to identify the table.
Table name	Database name for the table. A table name is created automatically after you enter a table label. You can edit the name if needed.
Make extensible	Option to allow other tables to share data from this table. For more information on table extension, see Table extension.
Auto number	Option to track table records with a unique number. If you select this option, define the **Prefix**, **Starting number**, and **Number of digits**.
Prefix	Abbreviated name of the table to append to the beginning of the record number. For example, if you are creating a "Laptop" table, then your prefix may be "LPTP" or "LT."
Starting number	Number to identify the first record created for your table.
Number of digits	Maximum number of digits to allow in the record number. This value determines the highest possible record number. For example, if you enter 7, then the highest possible number is 9999999.

14. Control who has access to create, read, write, and delete content from this table by creating roles or further defining existing roles.

    Roles that you create in the table persist throughout the application and can be further defined in other tables you add.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

> **Note:** At least one role must have read access for you to be able to preview the table.

15. For each sheet that you want to upload, repeat steps 7-14.
16. Select **Continue**, and then select **Done** on the summary screen. Alternatively, to view your table in Table Builder, you can select **Edit table** on the summary screen.

What to do next

For more information on editing your data tables in Table Builder, see Table Builder.

Create tables from a PDF form using the PDF extractor tool in App Engine Studio.

> **Note:** This feature is only available if your licensing entitles you to "exclusive low code capability" and you have Table Builder for App Engine installed. Contact your Solutions consultant for more information.

Overview

The PDF extractor in App Engine Studio allows you to upload a PDF and then extract table fields for use in a custom app. This streamlines the process of building application data tables from pre-existing PDF forms because you no longer need to manually type in field labels.

> **Note:** Ensure that you are mindful about recreating any tables that may already exist on the Now Platform. For example, with a PDF containing user demographic data, determine whether you want to reference existing user data tables rather than creating new tables from the PDF.

General navigation

The following table contains a list of some of the other basic navigational elements within the PDF extractor tool.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Navigational elements in PDF extractor

Navigational element	Description
Collapse / expand icons ( )	Select these icons to toggle between collapsing or expanding the PDF and table panes.
Page controls (1 2)	Use the arrows at the bottom of the PDF to page through the document one page at a time or navigate directly to the beginning or end of the document.
Zoom controls (100%)	Use the zoom controls to zoom in or out in the PDF.
Add new field icon (+ Add new field)	Add a field column to your table manually by selecting **+Add new field**, and then enter details directly. This is similar to how you add fields on the **Table** tab of Table Builder.
Add reference table icon (Add reference table)	Select **Add reference table** in the right side panel to add a reference field in your table that points to a new table.
Open data table and form icon (Open data table and form)	Select **Open data table and form** to open the selected table within Table Builder.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Navigational element	Description
Table additional actions list (⋮)	Use the table additional actions menu to edit basic properties for your table, or if you have added a reference table, select **Delete** to delete the table.
Trash icon (🗑)	Select the **Trash icon** (🗑) to delete fields from a table.

PDF parsing limitations

The following limitations currently exist when uploading a PDF using this tool:

- PDF cannot be converted from an image.
- PDF cannot be longer than 25 pages.
- PDF file size cannot exceed 5 MB.
- Languages other than English are not currently supported.

Create a table from a PDF form

Add data tables to your application by uploading a PDF in App Engine Studio.

Before you begin

> **Note:** This feature is only available if your licensing entitles you to "exclusive low code capability" and you have Table Builder for App Engine installed. Contact your Solutions consultant for more information.

Verify that the PDF meets the following requirements:

- PDF cannot be converted from an image.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- PDF cannot be longer than 25 pages.
- PDF file size cannot exceed 5 MB.
- Languages other than English are not currently supported.

Role required: admin, sn_app_eng_studio.user

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to the Data heading, select the Add icon ( ).
4. Select **Create a table**, and then select **Begin**.
5. Select **Upload a PDF** and then select **Continue**.
6. Select and upload the PDF.
   You can drag the PDF file onto App Engine Studio or browse your computer.

   Note: It may take a moment for the PDF to load. Select the trash icon ( ) to clear the PDF selection.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Choose the PDF you want to upload

7. Select **Continue**.

   Note: It may take up to a minute for the PDF to be parsed.

8. Define the properties for your new table.

Property	Description
Table label	Unique label to identify the table.
Table name	Database name for the table. A table name is created automatically after you enter a table label. Once this is created, this field is read only.
Make extensible	Option to allow other tables to share data from this table. For more information on table extension, see Table extension.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Property	Description
Auto number	Option to track table records with a unique number. If you select this option, define the **Prefix**, **Starting number**, and **Number of digits**.
Prefix	Abbreviated name of the table to append to the beginning of the record number. For example, if you are creating a "Laptop" table, then your prefix may be "LPTP" or "LT."

9. Select **Continue**.
   You may now configure permissions for your new data table.
10. Control who has access to create, read, write, and delete content from this table by creating roles or further defining existing roles.

    Roles that you create in the table persist throughout the application and can be further defined in other tables you add.

    Note: At least one role must have read access for you to be able to preview the table.

11. Select **Continue** after you have configured table permissions.
12. Select **Go to PDF extractor** to open up the PDF in the PDF extractor.

What to do next

Next, you will add fields from the uploaded PDF. Follow the steps in Add new fields from a PDF form to populate your new data table with field columns.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Add new fields from a PDF form

Add field columns to your data table using the PDF extractor in App Engine Studio.

Before you begin

> **Note:** This feature is only available if your licensing entitles you to "exclusive low code capability" and you have Table Builder for App Engine installed. Contact your Solutions consultant for more information.

Role required: admin, sn_app_eng_studio.user

Procedure

1. Choose one of the following options:
   - Follow the steps outlined in the previous procedure to upload a PDF (see Create a table from a PDF form).
   - If you have already uploaded the PDF, select the **Open pdf extractor** element on the **Forms** or **Table** tab in Table Builder to launch the PDF extractor tool.

   The PDF form displays.
2. Review the PDF. Use any of the navigational controls in the PDF pane to navigate to where you'd like to begin adding fields. See General navigation.
3. In the PDF, click on a field or text phrase to highlight it to use it as the basis for a new field.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Add fields from PDF

4. Edit the extracted text in the **Field Label** as needed for the new field you are going to add.

5. Choose a **Field type**.

   Field type refers to the type of data that the new column will store. For example, to store plain text in the column, select **String**. To understand the basic field properties, see Add and customize a field in a table.

   Depending on the type that you select, you may need to fill in additional fields to further define the table column. For example, with Reference field types, search for and select the appropriate data table to reference.

   a. (Optional) If you have chosen to create a choice field, perform the following actions to populate options for the choice field.

      a. Choose a **Choice Type** from the menu. This controls whether or not the list will have None as an option.

      b. Click in the **Choices** field, and then enter text manually or select text on the PDF to automatically extract it.

      c. Click **Add** to add your choice to the list.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Adding a choice field

b. (Optional) Repeat the previous steps until all choices have been added for your choice field.

6. Select the **Table** where you want to add the new field. Multiple options may appear if you have added reference tables. The original table is selected by default.

7. Select **Add field** to add the field to the list of fields in the table on the right.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: Any fields you add to the table on the right remain highlighted in green in the PDF to remind you that you have created a related field from them. If you delete a field from the tables on the right, the extracted text will no longer be highlighted.

8. Repeat the steps above until you have added all the fields you want to add from the PDF.

   Note: You can also add fields manually by clicking **+Add new field** in the table on the right and entering details directly similar to how you add fields on the **Table** tab of Table Builder.

9. Review the fields in your table and edit as necessary.

   Table pane actions

Action	Description
Move fields between tables	To move a field between tables within the PDF extractor, change the selected **Table Name** to the desired table location.
Delete reference table	Delete any additional reference tables that you add by selecting **Delete** from the Additional actions list in the top right corner of the table (⋮)
Add a new field	Add a field column to your table manually by selecting **+Add new field**, and then enter details directly. This is similar to how you add fields on the **Table** tab of Table Builder.
Edit a field	To edit field properties (e.g., Field type), click on the field property

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Action	Description
	to select it, and then make your edits.
Delete a field	Select the **Trash icon** (🗑) to delete fields from a table.
Open table within Table Builder	Select **Open data table and form** to open the selected table within Table Builder.

10. Select **Save**.

What to do next

To open your data table in Table Builder, select **Open data table and form** above the displayed tables. For more information on editing your data tables in Table Builder, see Table Builder.

To add a reference table, see Add a reference table from a PDF form.

Add a reference table from a PDF form

Move fields into a new referenced data table using the PDF extractor in App Engine Studio.

Before you begin

> **Note:** This feature is only available if your licensing entitles you to "exclusive low code capability" and you have Table Builder for App Engine installed. Contact your Solutions consultant for more information.

Role required: admin, sn_app_eng_studio.user

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

About this task

You may decide that you want to add some of the form information into separate tables that are referenced from the original table and can be referenced by other tables. For example, if you work for an insurance company, you may want to create separate data tables for bills, claims, and policies that can be referenced as separate data tables even though the information is extracted from a single PDF form.

You can add a reference field, and then create the corresponding reference data table directly from the PDF extractor in App Engine Studio.

> **Note:** Before you create any new reference tables for your app, it's a good practice to verify that you are not accidentally recreating any tables that already exist on the Now Platform.

Procedure

1. Choose one of the following options:
   - Follow the steps outlined in the previous procedure to upload a PDF (see Create a table from a PDF form).
   - If you have already uploaded the PDF, select the **Open pdf extractor** element on the **Forms** or **Table** tab in Table Builder to launch the PDF extractor tool.

   The PDF form displays.
2. Select **Add reference table** in the right side panel to add a reference table to your table.
3. Enter the following properties for your reference table.

Column header property	Description
Table label	Unique label for the reference table.
Table name	Database name for the reference table.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Column header property	Description
Make extensible	Option to allow other tables to share data from this table. For more information on table extension, see Table extension.
Auto number	Option to track table records with a unique number. If you select this option, define the **Prefix**, **Starting number**, and **Number of digits**.

Next, you will add a reference field to the original table you are editing. This creates the connection between the tables (e.g., "Seller info").

4. Select the **Table label** of the table where you want to add your reference field in (the original table is selected by default).
   The original table should be selected by default in the **Table label** field.

5. Enter a **Reference field label** for this new reference field (e.g., "Seller information").

6. Select fields from your original table to add them to your new reference table.
   These fields are related to the reference field you added to the current table.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Add a reference table

7. Select **Add reference table**.
   The reference table appears below and contains the fields that you selected that were in the original table.

8. Review and edit the fields and table properties as necessary.

   Table pane actions

Action	Description
Move fields between tables	To move a field between tables within the PDF extractor, change the selected **Table Name** to the desired table location.
Delete reference table	Delete any additional reference tables that you add by selecting **Delete** from the Additional actions list in the top right corner of the table (⋮)

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Action	Description
Add a new field	Add a field column to your table manually by selecting **+Add new field**, and then enter details directly. This is similar to how you add fields on the **Table** tab of Table Builder.
Edit a field	To edit field properties (e.g., Field type), click on the field property to select it, and then make your edits.
Delete a field	Select the **Trash icon** (🗑) to delete fields from a table.
Open table within Table Builder	Select **Open data table and form** to open the selected table within Table Builder.

See General navigation for more information on additional navigational controls in the table pane.

9. Select **Save**.

What to do next

To open your data table in Table Builder, select **Open data table and form** above the displayed tables. For more information on editing your data tables in Table Builder, see Table Builder.

Add new or updated information to your current data sets by importing it into existing tables in your application. Schedule future imports to add data at specific times.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

- You must have an existing table in your application. For more information, see Create a table from an existing table.

  Note: Currently, Excel files are the only accepted data format users can upload.

- Role required: admin, sn_app_eng_studio.user

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to the Data heading, select the Add icon ( ).
4. Select **Import and map data**.
5. On the next screen, select **Get Started**.
6. Enter a name and short description for the import, and select **Continue**.
7. Select **Edit data import** to import your data set and map it to the existing table in your application.
8. On the **Source configuration** tab, select and define the source data.
   a. In the **Source type** field, under AD-HOC, select **File**, and then select **Excel** to upload data in .xls or .xlsx format.
   b. Upload a spreadsheet by dragging the file onto the window or selecting **Drag and drop or browse to upload spreadsheet** and selecting the file locally.
   c. Under **Configuration**, indicate the sheet number and table header row number for the data you want to import.
   For example, if the data you want to import is on the second sheet in your spreadsheet and the header row information is in row 1, you would enter `2` and `1`, respectively.
   d. Select the **Load source data structure** button.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

A preview of the source data structure you uploaded on the left side of the screen appears on the right side of the screen.

9. On the **Map to target** tab, select **Add a mapping**.
   Mapping the source data to the target table allows you to control how the system treats the data you uploaded.

10. In the **Target table** field, enter the name of the table you want to import the spreadsheet data into, and select **Save**.

11. Select the target table, and drag column headers from the **Source** table to the corresponding field in the **Target table**.

12. Specify fields where the system should check for matching data and, if found, update existing records instead of creating new ones by enabling the **Match** toggle and selecting **Save**.
    Mapping data to the target table

13. Either import the data set now or set up a future import time.

    - To import the data set you uploaded now, select **Run Import**.
    - To set up a future import of the data, select **Schedule an import**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

14. (Optional) If you ran the import, preview the table and ensure it appears with the additional content by returning to the target table, refreshing your browser screen, and clicking **Preview**.
15. (Optional) If you added new columns during the import and want them to display on the target table, select **Personalize list** to edit the columns that display.

Use Table Builder to modify data tables used in your application.

Role required: admin, sn_app_eng_studio.user.

To modify data tables associated with your application:

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the **My Apps** page, open your application.
3. Under the Data heading, select the Additional actions icon ( ) for an existing table in your application, and then select **Edit**.

When you click on a data table or select **Edit** in the Additional actions menu ( ) to edit data for your application, Table Builder is launched. Table Builder is a tool for editing data tables that you've added to your application.

You can perform the following actions in Table Builder:

- Edit table properties
- Add a table column
- Delete a table column
- Change a column label or name
- Change a column type
- Edit field properties
- Add a default value to a table column
- Set a column as the table display value
- Preview a table

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Delete a table
- Create and manage form views and display logic that is associated with the table.
- Create and manage flows triggered when the table is updated or created (if your license includes AES v2).

See Tables in Table Builder for more information on editing tables in Table Builder.

> **Note:** To delete a table from your application, select the Additional actions icon ( ) for an existing table in your application, and then select **Delete** and follow the instructions.

Add an application experience

Use App Engine Studio (AES) to add an experience to your app. Experiences are the interface, or wrapper, for how users interact with your app.

Application templates automatically add experiences to your application.

Types of experiences

Experience	Definition	Example	Reference
Standard catalog item	A standard catalog item displays a form that users can fill in to create requests, such as a form to request an item or service. Standard catalog items make use of the Request table	Create a catalog item form, such as a form to request time-off. After submitting the form, a request is created for a manager to approve or reject.	• Add a standard catalog item • Types of standard catalog items you can build

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Definition	Example	Reference
	and produce a request record. In addition, generated request items are linked with a workflow, a catalog task, and any related approvals. Using standard catalog items, users can add multiple items to a cart and generate a request for each requested item. Use a catalog item when you want the service catalog form to generate a request, complete with a workflow, approvals, tasks, etc.		
Record producer	A record producer is a simplified type of catalog item displays a form that users will fill out that will insert a new data record in a selected custom target table that you set up. This type of	Create a service catalog form that generates a task record, such as an incident, instead of a request.	• Add a record producer • Types of record producers you can build

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Definition	Example	Reference
	catalog item enables users to create task-based records, such as an incident record (without any of the more complex functionality that comes with using a standard catalog item (e.g., creating requests). Use a record producer when you want the service catalog form to create a simplified type of record that isn't a request (e.g., a task record such as an incident, change, or enhancement, etc.).		
Workspace	A workspace is a suite of tools that provides agents, case managers, help desk professionals, and managers with tools to help answer customer questions	Create an equipment fulfillment dashboard where employees can request laptops and other items. Workspaces are similar to portals but smaller in scope.	• Add a workspace • Building workspaces in AES • Configure a workspace in Workspace Builder

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Definition	Example	Reference
	and resolve customer problems.		• Configure workspace settings in Workspace Builder • Configure a workspace home page in Workspace Builder • Configure a record page for a workspace in Workspace Builder • Configure lists for a workspace in Workspace Builder • Configure analytics for a workspace in Workspace Builder • Types of workspaces you can build
Portal	A portal is a site where users inside of your organization can find information,	Create a self-service portal, or entry point for employees to make requests and browse a	• Add a portal • Types of portals you can build

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience	Definition	Example	Reference
	submit requests, and complete business tasks.	knowledgebase, which you can then populate with additional workspaces and catalogs.	
Mobile	A mobile experience enables users to access your application from a ServiceNow native mobile app. You must then populate the app with data.	Create a time-off request application for mobile for managers to approve or reject requests in the Now Mobile app on their mobile device.	• Add a mobile experience • Types of mobile experiences you can build

- Add a record producer

  A record producer enables users to create task-based records, such as an incident record, in apps you create in App Engine Studio (AES) without creating a request. It enables a better end-user experience by standardizing requests using a simplified form.

- Add a standard catalog item

  Add a standard catalog item to your application in App Engine Studio (AES) so users can submit requests for services and offerings.

- Add a workspace

  Create a workspace in App Engine Studio (AES) to build a space that provides agents, case managers, help desk professionals, and managers with tools to help answer customer questions and resolve customer problems. Workspaces are primarily used for request and fulfillment processes, such as a service desk to manage tickets.

- Add a portal

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Create a portal in App Engine Studio (AES) to give your users a site where they can find information, create requests, and complete business tasks.

- Add a mobile experience

  Add a mobile experience, or interface, to enable users to access your application from a ServiceNow native mobile app.

- Editing an experience in App Engine Studio

  Tailor your app's experience to suit your business needs by building interfaces in App Engine Studio (AES), such as for mobile apps or catalog items.

A record producer enables users to create task-based records, such as an incident record, in apps you create in App Engine Studio (AES) without creating a request. It enables a better end-user experience by standardizing requests using a simplified form.

Before you begin

Create a data table that the record producer will add a new record to when a user fills out the form. For more information, Create a data model for your application.

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

About this task

A record producer is a simplified type of catalog item displays a form that users will fill out that will insert a new data record in a selected custom target table that you set up. This type of catalog item enables users to create task-based records, such as an incident record (without any of the more complex functionality that comes with using a standard catalog item (e.g., creating requests). Use a record producer when you want the service catalog form to create a simplified type of record that isn't a request (e.g., a task record such as an incident, change, or enhancement, etc.). When you add a record producer, you create a basic version of the record producer. You must then continue editing it in Catalog Builder before it's ready to deploy.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: If you created an application using a template, a record producer may already be added to your application.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, next to Experience, select the add icon (⊕).
4. Select **Record Producer** and select **Begin**.
5. On the form, fill in the fields.

   Record Producer form

Field	Description
Name	Name for the record producer.
Short description	Brief overview of the record producer.

6. Select **Edit record producer**.
7. In Catalog Builder, specify the required information.
   After completing each step, select **Save**.

   Catalog Builder steps

Step	Description
Details	• Basic info: Record producer name and short description. • Item details: Description of the record producer.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Step	Description
	Note: You can attach files such as graphics, images, videos, or a link to an external source of information.
Destination	Table in which the record producer creates records.
Location	• Catalogs: Name of the catalog the record producer belongs to. • Categories: Available categories that can be linked with the record producer.
Questions	Questions for the record producer. From the **Insert new question** list, you can include additional question sets, questions, deactivated questions, single-column container, two-column container, and line break. For information on creating a question and supported question types, see Create a question for a catalog item in Catalog Builder. You can also add dynamic form behavior for a question. For information on adding dynamic form behavior, see Edit a question in Catalog Builder.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Step	Description
	Note: • The questions within a question set can't be edited. The question sets can be reordered by dragging and dropping them. • Question sets specified in the template can't be removed, while the ones added by the user can be removed. • Removal of question sets simply removes the association with the item and doesn't delete the question set. • A single-column question set can be added to a single-column or a two-column container. A two-column question set cannot be added to a container.
Settings	Options to customize the record producer behavior. • Hide 'Add to wishlist' button: Option to hide the **Add to wishlist** button for the record producer. • Hide attachment button: Option to hide the

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Step	Description
	Attachment button for the record producer • Make attachment mandatory: Option to make the **Attachment** field required for the record producer.
Access	Group or individual users for whom the record producer is available or not available.
Review and Submit	Review and submit the record producer.

8. To preview a catalog item in Portal or Now Mobile, select **Preview**.

   Note: When you preview an item, you can interact with it but not submit it.

   a. To preview the item in the portal, select **Portal** for the **View within** field.

      Note: Portal preview is based on the portal URL configured for the Catalog Builder.

   b. To view an item representation in Now Mobile, select **Now Mobile** for the **View within** field.

   c. To open the preview in a new tab, select **Open preview in a new tab**.

      Note: When you change the item and save it, the preview is dynamically refreshed in the opened tab.

9. Select **Submit**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

What to do next

For the record producer you want to edit, select the menu icon (•••) and select **Edit**.

- Types of record producers you can build

  A record producer experience that you create in App Engine Studio (AES) is a service catalog form that generates a task record, such as an incident, instead of a request.

A record producer experience that you create in App Engine Studio (AES) is a service catalog form that generates a task record, such as an incident, instead of a request.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Example record producer

The following provides an example of a record producer that creates a password reset request.

Add a standard catalog item to your application in App Engine Studio (AES) so users can submit requests for services and offerings.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

About this task

A standard catalog item displays a form that users can fill in to create requests, such as a form to request an item or service. Standard catalog

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

items make use of the Request table and produce a request record. In addition, generated request items are linked with a workflow, a catalog task, and any related approvals. Using standard catalog items, users can add multiple items to a cart and generate a request for each requested item. Use a catalog item when you want the service catalog form to generate a request, complete with a workflow, approvals, tasks, etc. When you add a standard catalog item, you're creating a standard version of the catalog item, which you must then continue editing in Catalog Builder before it's ready to deploy.

Note: If you created an application using a template, a standard catalog item may already be added to your application.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, next to Experience, select the add icon (⊕).
4. Select **Standard catalog item** and select **Begin**.
5. On the form, fill in the fields.

   ADD EXPERIENCE form

Field	Description
Name	Name for the standard catalog item.
Short description	Brief overview of the standard catalog item.

6. Select **Edit catalog item**.
7. Specify the required information.

   After completing each step, select **Save**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Catalog Builder steps

Step	Description
Details	• Basic info: Standard catalog item name and short description. • Item details: Description of the standard catalog item. **Note:** You can attach files such as graphics, images, videos, or a link to an external source of information.
Location	• Catalogs: Name of the catalog the standard catalog item belongs in. • Categories: Available categories that can be linked with the standard catalog item.
Questions	Questions for the standard catalog item. From the **Insert new question** list, you can include additional question sets, questions, deactivated questions, single-column container, two-column container, and line break. For information on creating a question and supported question types, see Create a question for a catalog item in Catalog Builder.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Step	Description
	You can also add dynamic form behavior for a question. For information on adding dynamic form behavior, see Edit a question in Catalog Builder. **Note:** • The questions within a question set can't be edited. The question sets can be reordered by dragging and dropping them. • Question sets specified in the template can't be removed, while the ones added by the user can be removed. • Removal of question sets simply removes the association with the item and doesn't delete the question set. • A single-column question set can be added to a single-column or a two-column container. A two-column question set cannot be added to a container.
Settings	Configure the standard catalog item based on the request method. Request method:

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Step	Description
	• Order: Use this method in scenarios, such as a corporate laptop request. • Request: Use this method in scenarios, such as a code access request. • Submit: Use this method in scenarios, such as a reset password request. Other options: • Hide 'Add to cart' button: Option to hide the **Add to Cart** button for the standard catalog item. This option is automatically selected if the **Request method** is **Request** or **Submit**. • Hide 'Add to wishlist' button: Option to hide the **Add to wishlist** button on standard catalog items. • Hide quantity selector: Option to hide the **Quantity** list on standard catalog items. • Hide delivery time: Option to hide the **Delivery time** field on the standard catalog items. This option is automatically selected if you set the **Request method** to **Submit**. • Hide attachment button: Option to hide the **Attachments** button on standard catalog items.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Step	Description
	• Make attachment mandatory: Option to make the **Attachment** field mandatory on standard catalog items.
Access	Specify the group or individual users for whom the standard catalog item is available or not available.
Fulfillment	Flow with which you can associate the standard catalog item. The flow defines the fulfillment process for the standard catalog item. For more information on flows, see Flows.
Review and Submit	Review and submit the standard catalog item.

8. To preview a catalog item in Portal or Now Mobile, select **Preview**.

   Note: When you preview an item, you can interact with it but not submit it.

   a. To preview the item in the portal, select **Portal** for the **View within** field.

      Note: Portal preview is based on the portal URL configured for the Catalog Builder.

   b. To view an item representation in Now Mobile, select **Now Mobile** for the **View within** field.

   c. To open the preview in a new tab, select **Open preview in a new tab**.

      Note: When you change the item and save it, the preview is dynamically refreshed in the opened tab.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

9. Select **Submit**.

What to do next

For the standard catalog item you want to edit, select the menu icon (•••) and select **Edit**.

> **Note:** Due to a known issue, you encounter an error when you edit an item. To fix this issue, log out, login, and then edit the item.

- Types of standard catalog items you can build

  A standard catalog item displays a form that users can fill in to create requests, such as a form to request an item or service. Standard catalog items make use of the Request table and produce a request record. In addition, generated request items are linked with a workflow, a catalog task, and any related approvals. Using standard catalog items, users can add multiple items to a cart and generate a request for each requested item. Use a catalog item when you want the service catalog form to generate a request, complete with a workflow, approvals, tasks, etc.

A standard catalog item displays a form that users can fill in to create requests, such as a form to request an item or service. Standard catalog items make use of the Request table and produce a request record. In addition, generated request items are linked with a workflow, a catalog task, and any related approvals. Using standard catalog items, users can add multiple items to a cart and generate a request for each requested item. Use a catalog item when you want the service catalog form to generate a request, complete with a workflow, approvals, tasks, etc.

For example, an employee can fill in a catalog item form to request time-off for a holiday. After submitting the form, a request is created for a manager to approve or reject.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Example standard catalog item

The following provides an example of a standard catalog item to request a parking permit.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Create a workspace in App Engine Studio (AES) to build a space that provides agents, case managers, help desk professionals, and managers with tools to help answer customer questions and resolve customer problems. Workspaces are primarily used for request and fulfillment processes, such as a service desk to manage tickets.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

About this task

When you add a workspace you're creating a basic version of it, which you must then continue editing in Workspace Builder before it's ready to deploy. For more complex customizations, edit the workspace in UI Builder.

If you create a workspace from an App Engine Studio workspace experience template, you can edit the home page, lists, and record pages in Workspace Builder. However, if you create the workspace using an application template, you must edit some of its pages and objects in UI Builder.

You must wait until Tokyo Patch 4 to promote apps built in Workspace Builder from a non-production to a production instance.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, next to Experience, select the add icon ( ).
4. Select **Workspace**, and then select **Begin**.
5. On the form, fill in the fields.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Name	Name of the workspace that appears to users. By default, the workspace shares the same name as your application. **Tip:** Use a name that uniquely identifies the workspace from other experiences. For example, `Office art requests workspace`.
Description	Description of the workspace.
URL	Unique web address of the workspace. By default, the workspace URL is based on the application name, but you can edit it.
Roles	User roles to limit who can access the workspace. • To make the workspace accessible to everyone, do not specify any roles. • To use a custom role for your workspace, you must create one in **Security** first. For more information, see Add application security.

6. Select **Continue** to define data for your workspace.
7. On the form, fill in the fields.

Field	Description
Primary Table	Data table that workspace users view or update. **Note:** You can select only tables with default views. Workspace Builder automatically generates a record page for the table you select.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Secondary Tables	Additional data tables that workspace users view and update.

8. Select **Continue**, and then select Done.
   After you create the workspace in AES, you must edit it in Workspace Builder by adding or configuring components on each page.

9. Next to the workspace you created, select the menu icon (•••) and then select **Edit**.

   You can also select the bar that lists the workspace in the Experience section of your app.

   Edit a workspace

10. (Optional) Edit your workspace home page in the In-line editor by selecting **Preview**.

    a. On your workspace home page, select **Edit**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

If you don't see **Edit**, you may not have the permissions needed to edit the workspace home page.

b. Adjust the home page elements and widgets by resizing, reorganizing, or reconfiguring them.
Editing your workspace home page works similarly to editing a dashboard on your workspace. For more information, see Edit a dashboard in the In-line editor .

Note: If the workspace was created before Tokyo, you must edit it in UI Builder. See Next Experience UI Builder for more information.

c. Select **Add new element** to add items to your workspace home page.

d. Select **Exit Editing Mode** to stop editing in the In-line editor.

11. Edit the workspace in Workspace Builder. For more information, see Configure a workspace in Workspace Builder.
You can also add more record pages to the workspace, if needed.

Note: The default workspace record pages are read-only and can't be edited. To change the content of each record page, create a page variant and edit the variant.

What to do next

For more information on using Workspace Builder to customize your workspace, see Building workspaces in AES.

- Types of workspaces you can build

  App Engine Studio (AES) provides a basic workspace that includes a home page, record pages, lists, an Analytics Center, and other functions.

- Building workspaces in AES

  Workspace Builder for App Engine is a streamlined, no-code environment that enables you to create a custom workspace from within App Engine Studio (AES) quickly and efficiently.

- Configure a workspace in Workspace Builder

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Edit a workspace in Workspace Builder to make customizations in App Engine Studio (AES).

- Configure workspace settings in Workspace Builder

  Define workspace settings in App Engine Studio (AES) to control the basic functionality of the workspace, such as name and record page navigation.

- Configure a workspace home page in Workspace Builder

  Edit the home page for a workspace in App Engine Studio (AES). Adjust what users see when first accessing the workspace, which is a dashboard.

- Workspace Builder components for home pages

  Several UI Builder components are available as elements to build home pages and contextual side panels in Workspace Builder. Workspace Builder helps you quickly create workspaces in App Engine Studio (AES).

- Configure a record page for a workspace in Workspace Builder

  Configure a record page for a workspace in App Engine Studio (AES). Use containers and components to guide a user through an experience. Each record page is linked to only one data table.

- Configure lists for a workspace in Workspace Builder

  Create list categories in App Engine Studio (AES) to add pages that list table records. You can add filter conditions and change columns to create variations on the list.

- Configure analytics for a workspace in Workspace Builder

  Enable the Analytics Center for a workspace in App Engine Studio (AES). The Analytics Center enables users to track and analyze records and usage with dashboards, visualizations, and insights on the instance.

App Engine Studio (AES) provides a basic workspace that includes a home page, record pages, lists, an Analytics Center, and other functions.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The workspace that you create in App Engine Studio includes several default pages. You can use these pages as-is or edit them to suit your business needs.

The following are some examples of the page customizations you can apply to the workspace after you add it:

- Home page
- List page
- Record page
- Search page
- Analytics Center

Workspace home page

> **Note:** You can make changes to the home page, but editing all other pages requires creating a variant or copy of the page. If you edit the pages directly, then they won't get the latest code in a system upgrade.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Home page

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workspace list page

List page

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workspace record page

Record page

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workspace search page

Search page

Workspace Analytics Center

The Analytics Center includes the following components:

Analytics Q&A

A field where you can ask natural language questions about the trends and health of your processes. (The Natural Language Query feature is required.)

Indicator Scorecard

A list of the Performance Analytics indicators that you are allowed to access based on your roles. Depending on the configuration, selecting an indicator can open it in KPI Details.

Dashboards Overview

A set of tiles for each dashboard on the instance that you are allowed to access. Selecting a tile opens that dashboard.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: You can create and edit dashboards in-line. For more information, see Create a dashboard in the Analytics Center .

For more information on Analytics Center, see Analytics Center.
Analytics Center

Workspace Builder for App Engine is a streamlined, no-code environment that enables you to create a custom workspace from within App Engine Studio (AES) quickly and efficiently.

You can use Workspace Builder to quickly create workspaces for workspaces built starting with Tokyo. Workspace Builder enables you to edit the workspace home page, list pages, and record page contextual side panel directly in the Workspace Builder preview canvas. For workspaces created before Tokyo, or if you need more robust functionalities and configurations, edit the workspace in UI Builder from a tab within AES.

You must wait until Tokyo Patch 4 to promote apps built in Workspace Builder from a non-production to a production instance.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Parts of a workspace

Build your workspace by including the following pages and elements.

Workspace pages and elements

Component	Definition
Home	Landing page for the workspace, which contains a dashboard and appears to users when first accessing the workspace. **Note:** The home page is an essential part of the workspace, and thus can't be hidden or removed. For more information on configuring the home page, see Configure a workspace home page in Workspace Builder. For information on configuring the basic settings for a workspace, see Configure workspace settings in Workspace Builder.
List	List pages for records from the specified tables, which help users to find individual records in a workspace. **Note:** If you remove the list page/route, you must use UI Builder to edit the workspace, not Workspace Builder. You can create a list category and then add filtered lists for each list category. Filtered lists apply unique

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Component	Definition
	conditions, ensuring that only the filtered subset of records appears. For more information on adding and editing lists in Workspace Builder, see Configure lists for a workspace in Workspace Builder.
Analytics	The customizable Analytics Center enables users to track and analyze records and usage with dashboards, visualizations, and insights on your instance. **Note:** If Analytics Center page/route doesn't exist for a workspace, Workspace Builder is still available, but the Analytics Center tab doesn't appear in the workspace. For more information on enabling the Analytics Center for a workspace, see Configure analytics for a workspace in Workspace Builder.
Record pages	Pages in a table that give users useful information to work on a task, issue, or incident. Useful information can include priority, state, activity, and so on. Create and customize record pages by using containers and components in different sections of the layout. You can also add a Playbook Experience to a record page.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Component	Definition
	For more information, see Configure a record page for a workspace in Workspace Builder.

Note: Your workspace must have a home page and lists for you to edit it in Workspace Builder. If they aren't present, you must edit the workspace in UI Builder.

Layout for Workspace Builder

The first time you access Workspace Builder, an onboarding modal displays a brief tour of what you can do in Workspace Builder.

Workspace Builder consists of the following sections:

- A left navigation panel to configure the pages that users can navigate to within the workspace.
- A preview of the workspace in the middle canvas.
- A right configuration panel for configuring the selected workspace component.
- An option to preview the workspace in a new browser tab.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Workspace Builder layout

PDF generated on July 1
©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The Workspace Builder header has the following navigation options just below the tab, where you can work with the following:

- Navigation configuration
- Record pages

Workspace Builder plugin

To use Workspace Builder, you must enable the com.devsnc_sn_workspace_builder plugin in the sn_ws_builder scope. It is a dependency of com.snc.aes.starter_workspace_template.

Edit a workspace in Workspace Builder to make customizations in App Engine Studio (AES).

Before you begin

Before you can configure a workspace in Workspace Builder, you must first create the workspace. See Add a workspace.

Role required: App Engine Studio user role and delegated developer permissions (**All file types**). For more information, see Delegate developers using AES.

About this task

You can customize essential elements and components in Workspace Builder. For more complex configurations, or if you don't have the full entitlement for AES, you must edit the workspace in UI Builder.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to the workspace you created, select the menu icon (•••) and then select **Edit**.

   You can also select the bar that lists the workspace in the Experience section of your app.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Edit a workspace

The Workspace Builder tab displays your workspace within AES:

- The left navigation panel is a list of pages or components, or building blocks of a page, that you can include in your workspace.

  Note: The home page is an essential part of the workspace, and thus can't be hidden or removed.

- The middle canvas is an in-line editing space for the home page for workspaces created in AES after Tokyo. For lists and other pages, the middle canvas is a preview of what you configure in the right configuration panel. You can preview workspace home pages built before Tokyo in Workspace Builder, but you must edit them in UI Builder.

- The right configuration panel is the configuration panel for working with selected components.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

4. Edit the basic settings for the workspace by selecting **Settings**.
   For more information, see Configure workspace settings in Workspace Builder.

5. Adjust the home page elements and widgets by resizing, reorganizing, or reconfiguring them.
   For more information on editing a clickable home page, see Configure a workspace home page in Workspace Builder.

   Note: If the workspace was created before Tokyo, you must edit it in UI Builder. See Next Experience UI Builder for more information.

6. Add or edit a list category and any subsequent filtered lists.
   For more information, see Configure lists for a workspace in Workspace Builder.

7. (Optional) Enable an Analytics Center for the workspace.
   For more information, see Configure analytics for a workspace in Workspace Builder.

8. Add and edit a record page to configure the settings, tables, and related links that the workspace should support.

   When you create a record page, you're creating the metadata view, or shell, using a record page template for a type of record. You then edit the record page in Table Builder. Within Workspace Builder, you can only change the contextual side panel and the related items.

   For more information, see Configure a record page for a workspace in Workspace Builder.

9. Preview the workspace in a new browser tab by clicking **Preview**.

Result

If you made additional, more complex configurations to the workspace in UI Builder, such as custom additions to the contextual side panel or custom components, those changes may not appear in Workspace Builder.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

> **Note:** Your workspace must have a home page and lists for you to edit it in Workspace Builder. If they aren't present, you must edit the workspace in UI Builder.

Define workspace settings in App Engine Studio (AES) to control the basic functionality of the workspace, such as name and record page navigation.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions (**All file types**). For more information, see Delegate developers using AES.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to the workspace you created, select the menu icon (•••) and then select **Edit**.

   You can also select the bar that lists the workspace in the Experience section of your app.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Edit a workspace

The workspace appears in Workspace Builder.

4. In the Workspace Builder header, select **Settings**.
   The settings form appears.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

5. On the **General** tab of the form, specify or change the basic settings for the workspace by filling in the editable fields.

   Note: Some settings are specified when adding a workspace, and can't be changed.

General workspace settings

Field	Description
Name	Name for the workspace, which is visible to users.
URL	Relative URL for the workspace. The path is automatically created based on the name of your workspace, and is preceded by your instance URL.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	However, you can customize the path in this field.
Description	Brief description of the purpose of the workspace.
User access	People and groups that can access the workspace. To give unrestricted access to the workspace, leave this field empty.
Search configuration	Source of information when users perform a search in the workspace. You can reuse an existing search configuration by selecting the configuration from the drop-down menu. Select the **Edit search application** link to make additional, advanced configuration changes.
Show tables included in search configuration	Option that displays one or more tables that the workspace searches as sources.
Workspace theme	Theme to define the visual style of the workspace. Currently the only available theme is **Polaris**.

6. Select **Save**.
7. Specify what type of records users can create by selecting the **Record navigation** tab of the form and then filling in the fields.

Record navigation workspace settings

Field	Definition
Navigation type	How users interact with or navigate the workspace.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Definition
	Tabbed navigation creates separate tabs for each page, enabling users to work on multiple records at a time. Choose tabs if you anticipate that users must change between records quickly. Tabs also enable users to create records directly from the navigation. **Note:** The default navigation type for workspaces built in AES is tabbed, and can't be changed after the workspace is created. You must create the workspace in UI Builder to specify breadcrumb navigation. You can't change the navigation type after the workspace is created.
Table	Data table that is added to when a user creates a record. The table you select automatically has associated lists. **Note:** The tables specified when the workspace was created appear automatically. Select **Add a table** to incorporate additional tables into the workspace. To remove a table, select its delete icon ( ). No confirmation message appears,

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Definition
	but you can select **Cancel** to revert the deletion.
Label	Brief label for the option that appears when users select the new record menu. Specify a label that tells the user what the record is used for.

8. Select **Save**.

Edit the home page for a workspace in App Engine Studio (AES). Adjust what users see when first accessing the workspace, which is a dashboard.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions (**All file types**). For more information, see Delegate developers using AES.

About this task

You can edit workspace home pages in Workspace Builder only for workspaces created in Tokyo and going forward. You can edit older workspaces in UI Builder.

> **Note:** The home page is an essential part of the workspace, and thus can't be hidden or removed.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to the workspace you created, select the menu icon (•••) and then select **Edit**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

You can also select the bar that lists the workspace in the Experience section of your app.

Edit a workspace

The home page for the workspace appears in Workspace Builder, where you can drag elements and components to design the page.

4. Add an element to the page.
   You must be in the **Navigation configuration** tab of Workspace Builder. If you are already in the **Navigation configuration** tab you can't select it.

   a. In the navigation panel, select **Home**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

b. In the home page canvas, select **Add new element**.

c. From the list, select the element or component that you want to add.

For example, select **Data visualization** to add a graphic of data from the specified table.

You can add the following elements to the home page in Workspace Builder.

Home page elements

Element	Description	More information
Data visualization	Graphic, visual representation of current instance data. In addition to data visualizations, you can select the **Library** element to add an already-saved data visualization to the home page.	• Data visualizations in the Analytics Center • Create a single score visualization in the Visualization Designer • Developer site data visualization component listing
Filter	Refine the visualizations on a dashboard based on specified criteria. The filters can apply to both tables and indicators.	• Next Experience filters • Configurable workspace dashboard filters

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Element	Description	More information
		• Developer site filter component listing
Heading	Title or text for the top of the home page or section.	• Heading components in UI Builder • Developer site heading component listing
Image	Static or animated images or pictures for the workspace.	• Image components in UI Builder • Developer site image component listing
List - Simple	Table data that you can customize for the dashboard audience.	• Simple List or List - Simple Usage - Developer site • Developer site List - simple component listing

The Workspace Builder components for home pages has details on home page elements. For more information, see Analytics Center dashboard elements.

If you want to include additional elements that aren't available in the **Add new element** menu, you must edit the workspace in UI Builder. For a complete list of elements you can add in UI

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Builder, see the components documentation on the ServiceNow Developer site.

The element appears on the dashboard, where you can make edits.

d. Drag the element to move or resize it.

e. In the canvas header, select **Save**.

5. If needed, complete any additional configuration changes.

Option	Description
Edit an element	a. Select the element that you want to edit, such as a data visualization. A header appears with the name of the element type. b. Select the settings icon ( ) in the element header to open the configuration panel within the canvas. c. Edit the configuration of the element in the configuration panel as needed.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Description
	For example, if you're editing a data visualization, you must specify the source table. For more information on editing components, see Add and configure components. d. In the canvas header, select **Save**.
Configure the dashboard layout	Select and drag an entire element to move it around the dashboard layout. Resize an element by selecting and dragging the handlebars ( ) in the lower corners of the element.
Add tabs to the workspace and edit them as needed	a. Add a tab to the home page by selecting **Add a tab**. When you add your first tab to a home page dashboard, a new part of the layout appears below the title. Elements you add to the tab are visible no matter which tab the user is on. A tab labeled **untitled** is added next to any existing tabs. b. Rename a tab by selecting the tab name, selecting the

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Description
	edit icon ( ), typing the new name, and pressing **Enter**. c. Reorder a tab by selecting the tab and dragging it to the new position. d. Delete a tab by selecting its delete icon ( ) then selecting **Delete**. **Note:** No confirmation message appears. The tab disappears from the dashboard.
Delete an element from the workspace dashboard	a. Select the element that you want to delete. A header appears with the name of the element type. b. In the header, select the context menu icon ( ) and select **Delete**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Description
	Note: There is no confirmation message. The element disappears from the dashboard.
Preview a workspace and make in-line edits	Make basic edits to a workspace when previewing it using the In-line editor. a. In the Workspace Builder header, select **Preview**. b. In the preview that appears in a new browser tab, select **Edit**. c. Adjust the home page elements and widgets by resizing, reorganizing, or reconfiguring them. For more information, see Edit a dashboard in the In-line editor . d. Select **Add new element** to add items to your workspace home page. e. Select **Exit Editing Mode** to stop editing in the In-line editor.
Make additional or more advanced configurations to the home page	In the configuration panel, select **Open in UI Builder**.

6. In the Workspace Builder header, select **Save**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Several UI Builder components are available as elements to build home pages and contextual side panels in Workspace Builder. Workspace Builder helps you quickly create workspaces in App Engine Studio (AES).

For complete details on all elements and components, see the ServiceNow® Developer site.

Data visualization components

The data visualization component is a container for available chart types. You select the chart type to display data in different ways depending on your application. You can use the data visualization container in Workspace Builder home pages.

- Data visualizations in the Analytics Center
- Create a single score visualization in the Visualization Designer
- Developer site data visualization component listing

Filter components

Filters enable you to filter data visualizations without modifying the visualizations. Add a filter element when working with the home page in the canvas. Then select a table, field, and other properties to configure the filter. When a user selects one or more values of the field, the filter

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

applies to those data visualizations that are based on the same data source.

For more information on using filters components to build a workspace, see the following topics and sources:

- Next Experience filters
- Configurable workspace dashboard filters
- Developer site filter component listing

Heading components

Heading components are available in the home pages for workspaces. Add a title to your landing page using a heading component.

The following image shows the heading, My Heading, as the title for a landing page.

The following table explains the heading component parameters.

Heading component parameters

Parameter	Description
Component name	Name that appears in the component controls above a component in the Stage pane. The maximum number of characters is 18.
Label	Text of the heading.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Parameter	Description
Style	Size of the heading text.
Disable text wrap	Toggle to wrap or not wrap the heading text. If you set the heading text not to wrap and the heading is wider than the landing page, UI Builder truncates the end of the heading and appends an ellipsis. If the user widens the landing page, more of the heading text appears.
Hide bottom margin	Toggle to show or hide a blank line below the heading text.

For more information on heading components, see the Heading Overview on the Developer site.

Image components

Add images to your landing page with an image component.

When you drag the image component icon ( ) into the Stage pane, a stock image appears that you can change and resize. You can change the stock image by supplying your image's URL.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The following table explains the parameters of the image component.

Image component parameters

Parameter	Description
Component name	Name that appears in the component controls above a component in the Stage pane. The maximum number of characters is 18. Component name here
Alt Text	HTML Alt element that labels images so they are WCAG compliant.
Image URL	URL for the image.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Parameter	Description
Fit	Image size control. • **Expand to fill** zooms in or out on the image in both X and Y axises proportionally so the image fills the container. • **Stretch to fit** zooms in on the image so it fills the container but the image does not expand proportionally. • **Keep original size** displays the image in its original size, which may be larger or smaller than the container.
Position	Location of the image in the container. For example, **Bottom-right** places the image at the bottom-right of the container. This parameter only works when the image is smaller than the container.
Height	Height of the image measured by the number of pixels high. If this height is shorter than the image height, the parameter cuts off the top of the image. The width is not reduced proportionally.

List components

Use a list component to add lists to your landing page.

When you drag the list component icon ( ) into the Stage pane, a sample list appears. List components have the following parts:

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The following table explains the list component parameters. Use the previous image for the location of the parameter values in the list component.

List component parameters

Parameter	Description
Component Name	Name that appears in the component controls above a component in the Stage pane. The maximum number of characters is 18.
List Title	Title of your list.
Table	Database table hat the records come from that appear in the list.
Query	Button that you use to open the condition builder, which enables you to filter the records that are included in the list. For example, you might display only list records from **Table** that satisfy the conditions: **Active is true** and **Priority is 1 – Critical**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Parameter	Description
	The badge and count icon ( ) show the number of filters applied. If there is no badge, there are no filters.
Columns	Number of columns that you specify to appear in the list instead of the default columns. Use the parameter multiple times to display multiple columns.
Max Rows	Maximum number of rows that you specify to appear in the list. The default is 5. The maximum is 100.
Max Columns	Maximum number of columns that you specify to appear in the list. The default is 5. If the number of columns is greater than the value of this parameter, only the first columns appear.
Hide Header	Toggle to show or hide the list's header.
Hide Title	Toggle to show or hide the list's title.
Hide Badge with Record Count	Toggle to show or hide the list's badge and record count. The number is the total number of records in the list. Only some records may be seen in the current display.
Hide Refresh Button	Toggle to show or hide the refresh button.
Hide "Last Refreshed" Text	Toggle to show or hide the "Last refreshed" text.
Hide Links	Toggle to make the values in the **Number** column links or not. If they are not links, the number text is black. In the following image, the numbers in black are not links. The numbers in green are links.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Parameter	Description
Hide "View All" Footer	Toggle to show or hide the "View all" link in the footer.
Hide Highlighted Values	Toggle to show or hide highlights that have been configured to appear in specified list fields. For more information, see Highlight list fields in Workspace.
Hide Empty State Image	Toggle to show or hide the image that appears when filter conditions prevent any records from appearing in the list. The intention is to show a response so agents realize that the list is empty. You cannot change the image. No records to display.

Rich text components

Add text to your landing page with a rich text component to explain parts of your landing page, for example, "Tackle these priority 1 incidents first."

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The following table explains the rich text component parameters.

Rich text parameters

Parameter	Description
Component name	Name that appears in the component controls above a component in the Stage pane. The maximum number of characters is 18.
HTML	HTML editor that you use to enter text.

Configure a record page for a workspace in App Engine Studio (AES). Use containers and components to guide a user through an experience. Each record page is linked to only one data table.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions (**All file types**). For more information, see Delegate developers using AES.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

About this task

Components are the building blocks of your page. Add components to your page to build or customize your workspace experience. For example, add a button component to your page that lets users submit requests.

A container is a type of component that can contain other components. Containers have layout properties applied to them. Change the page layout and visual styling to make the record page a unique experience.

> **Note:** Starting with workspaces built after the AES Workspace UI Template v22.0.3 release, you can work with record pages in Workspace Builder. For older workspaces, you must edit the record pages in UI Builder.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to the workspace you created, select the menu icon (•••) and then select **Edit**.

   You can also select the bar that lists the workspace in the Experience section of your app.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Edit a workspace

The workspace appears in Workspace Builder.

4. Create a record page.
   AES automatically generates record pages for the tables you selected when you created the workspace.

   a. In the Workspace Builder header, from the Record pages menu, select **Create new**.

   b. On the form, fill in the fields.

   Record page settings

Field	Description
Name	Brief name that identifies the purpose of the record page.
Table	Table that the record page is linked to and updates. The following rules apply:

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	• If you're using a table that you or someone at your organization created, the table must contain at least one new field or column. Otherwise the form view and the record for the table can't be created. • Some tables are unavailable for record pages, such as the Change approval definition table. For a complete list, see Unsupported tables in Workspace Builder. • You can link each table to only one record page.

c. Select **Create**.
The page is created and appears in the preview panel. You can select the page from the Record page menu.

5. Edit the record details for the record page.

   a. In the navigation panel, select **Record details**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

b. In the Form details section of the configuration panel that appears, fill in the form.

Form details for record page

Field	Description
Form details	Link to edit the form in a Table Builder tab inside AES. AES automatically opens the form builder in Table Builder to the selected view of the form. **Note:** After you leave the record page in the Table Builder tab, a dialog prompts you to **Reload this page**. For more information on editing forms for a record page, see Forms in Table Builder.
Activity stream	Option to enable the Activity stream for the record page. The Activity stream enables your workspace users to communicate with requesters and make internal notes about the work done on a record. For more information on the Activity stream, see Activity streams.

6. Configure the related information in the Related information section of the configuration panel for the record page.
   Related information includes tables that are related to the record, which appear as tabs, such as Child Incidents. For more information on configuring related information, see Related lists.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: You can't create a table for the related information in a record page. The table must exist in Now Platform.

a. If no related lists exist yet, add a new related list by selecting **Add tabs** in the Related information section.
If related lists exist for the record page, select the **Manage related information** link in the configuration panel.

b. In the form that appears in a new tab within AES, move the related list that you want to appear as a tab from the **Available** panel to the **Selected** panel.

c. Use the arrow buttons to move the selected lists into the order you want them to appear.

d. Select **Save** and return to the Workspace Builder tab within AES.

e. View the changes that you made by selecting **Reload this page** in the dialog box that appears.

Each related information component has an information icon ( ) that, when selected, displays its related table.

7. Provide fulfillers with visibility into cross-business workflows and the actionable tasks used to complete these workflows by specifying the playbook.
For more information on playbooks, see Interact with Playbook.

Note: You must have the Playbook Experience plugin installed.

a. In the Playbook section of the configuration panel, select **Add a playbook**.

b. On the form, fill in the fields.

Playbook details

Field	Description
Tab name	Label for the record tab that contains the playbook.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Playbook experience	Existing playbook to add to the record. **Note:** You can choose only from the playbooks that are available for the table.

c. Select **Add**.

d. Update the playbook by selecting the settings icon ( ), making the change, and then selecting **Update**.

Note: If you want to make additional changes to the playbook, you must open and edit the playbook in Process Automation Designer.

e. Delete a playbook from the workspace by selecting its delete icon ( ) and selecting **Delete** on the confirmation dialog.

8. Configure the Contextual side panel for the record page, which contains the icons for the tools that appear on the right side of the page.
The Contextual side panel contains icons that enable agents to research and resolve issues using various Now Platform tools. If your organization created any custom right tab components in UI Builder, you can add them as well. For more information, see Setting up the contextual side panel.

a. In the navigation panel for the record page, select **Contextual side panel**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

b. In the configuration panel, select the toggle switch for each component and ribbon component that you want to appear on the record page.
For example, you can include Agent assist and attachments for the record. Attachments and templates are enabled by default, though you can disable them by deselecting their toggle options.
The following components are available for the Contextual side panel in Workspace Builder. To add pre-existing custom components, edit the workspace in UI Builder.

Contextual side panel components

Tool	Type	Description	More information
Active SLA	Ribbon component	Display active Service License Agreements (SLAs) for the case, including time remaining, the SLA state, and any breaches.	Active SLA component
Agent assist	Component	Display automatic search results that show possible solutions for records that agents open.	Set up Agent Assist
Attachment	Component	Add attachments to the record, such as images and PDFs.	Attachments

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Tool	Type	Description	More information
Configuration Management Database (CMDB) Timeline	Ribbon component	Display a chronological summary of case activities, including state changes and interactions between the agent and the requester (usually the customer). The ribbon also displays how much time that the fulfiller and requester spent on the case.	Timeline ribbon component
Customer 360	Ribbon component	Display customer information, such as the contact or consumer name, email address, and phone numbers.	Customer 360 ribbon component
Ribbon	Component	Display the contextual side panel ribbon, which contains tools to help agents resolve issues.	Viewing ribbon information in the contextual side panel

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Tool	Type	Description	More information
		Ribbon components can have additional components added to them.	
Template	Component	Display templates that help reduce the time agents spend responding to requesters by automatically filling in record fields.	Set up templates in the contextual side panel

The selected tools appear in the record page preview canvas.

c. In the configuration panel, drag the components to rearrange them.

d. (Optional) Complete any additional configuration for components by selecting the settings icon ( ). For example, Customer 360 requires that you specify additional settings before the component works on the record page.

Workspace Builder automatically saves the changes to the contextual side panel.

9. Complete any additional changes and configurations.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Description
Update the name of the record page	**Note:** You can't change the table that a record page is linked to after you create the page. To change the table for the record page, you should create a new, separate record page. a. From the Record pages menu, select the page that you want to edit. A preview of the record page appears. b. In the navigation panel, select **Settings**. c. In the Record page settings configuration panel that appears, enter the new page name. d. Select **Save**.
Preview the record page in a new browser tab	Select **Preview** in the Workspace Builder header. The record page appears in the workspace. If no data exists for the table, AES displays a page where you can add data to the table.
Delete a record page	a. From the Record pages list, select the page.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Description
	b. In the navigation panel, select **Settings**. c. At the bottom of the configuration panel, select **Delete record page**. d. On the confirmation dialog, select **Delete**.

Create list categories in App Engine Studio (AES) to add pages that list table records. You can add filter conditions and change columns to create variations on the list.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions (**All file types**). For more information, see Delegate developers using AES.

About this task

Note: If you remove the list page/route, you must use UI Builder to edit the workspace, not Workspace Builder.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to the workspace you created, select the menu icon (•••) and then select **Edit**.

   You can also select the bar that lists the workspace in the Experience section of your app.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Edit a workspace

The workspace appears in Workspace Builder.

4. If they are not already activated, activate lists to enable them for the workspace.
   You must be in the **Navigation configuration** tab of Workspace Builder. If you are already in the **Navigation configuration** tab you can't select it.

   a. In the navigation panel, select **List**.

   b. In the configuration panel, select the **Activate list** option.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

5. Add a list category.
   a. In the List section navigation panel, select **Add list category**.
      If the table associated with the workspace isn't a core table, you must add new list categories.
   b. On the form, fill in the fields.

      List category settings

Field	Definition
Name	Name to identify the list category.
Description	Brief description of the contents of the list category to help developers understand the purpose. **Note:** Workspace end users don't see the description.

   c. Select **Add**.
6. Add a filtered list to a list category.
   For example, in the list category for the Task table, you could create separate filtered lists for Opened, Unassigned, and Closed tasks.
   a. In the navigation panel, expand the list category you want to create a filtered list for.
   b. Select **Add filtered list**.
   c. On the form, fill in the fields.

      Filtered list settings

Field	Definition
Name	Name to identify the filtered list.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Definition
Table	Table that contains the subset of records that appear in the filtered list.

d. Select **Add**.
The preview canvas displays the contents of the filtered list.

7. Refine how the filtered list displays its content by adding filter conditions to narrow what it displays.
You can make additional configurations to the filtered list.

   a. In the navigation panel, expand the list category and select the filtered list you want to change.

   b. In the configuration panel, specify the additional settings.

More filtered list settings

Field	Definition
Activate list	Option to enable users to work with the filtered list.
Manage columns	Option to select and arrange the columns that appear. In the Manage columns dialog box, move columns from **Available columns** to **Selected columns**, drag to rearrange the columns, and select **Apply**.
Add filter condition	Option to add a filter condition to the list. In the dialog box that appears, you can do the following: • To apply a predefined filter, select **Use existing filter** and search for the filter.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Definition
	• To view existing conditions, expand the **Filter overview** section. • To create a filter condition, use the condition builder. For more information on building conditions, see Condition builder. • To change the sort order of the filtered results, expand the **Sort by** section and make changes. • To save the filter condition that you created for reuse, select **Save filter**. When you're done creating the filter condition, select **Apply filter**. For more information on working with filters for lists, see Filters.

c. In the configuration panel, select **Save**.

8. Complete any additional actions on the list.

Option	Description
Edit a list category	a. In the navigation panel, select the list category. b. In the configuration panel, specify its **List category settings**. c. Select **Save**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Description
Change how the filtered list appears by selecting the list in the navigation panel	a. In the configuration panel, select **Manage columns**. b. In the form that appears, move columns from **Available columns** to **Selected columns**, drag to rearrange the columns, and select **OK**. c. Refresh the canvas preview by selecting the refresh icon ( ) in the canvas header.
Delete a list category	a. In the navigation panel, select the list category. b. In the configuration panel, select **Delete list category**. c. In the confirmation dialog, select **Delete**.
Delete a filtered list	a. In the navigation panel, select the filtered list. b. In the configuration panel, select **Delete filtered list**. c. In the confirmation dialog, select **Delete**.

Enable the Analytics Center for a workspace in App Engine Studio (AES). The Analytics Center enables users to track and analyze records and usage with dashboards, visualizations, and insights on the instance.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions (**All file types**). For more information, see Delegate developers using AES.

About this task

If Analytics Center page/route doesn't exist for a workspace, Workspace Builder is still available, but the Analytics Center tab doesn't appear in the workspace.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to the workspace you created, select the menu icon (•••) and then select **Edit**.

   You can also select the bar that lists the workspace in the Experience section of your app.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Edit a workspace

The workspace appears in Workspace Builder.

4. In the navigation panel, select **Analytics**.
   You must be in the **Navigation configuration** tab of Workspace Builder. If you are already in the **Navigation configuration** tab you can't select it.
   A mock-up of the Analytics Center appears in the preview panel.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

5. In the configuration panel, select the **Activate Analytics Center** toggle option.

6. Make additional configuration updates to the Analytics Center by selecting the **Open in UI Builder** link in the canvas header.

Result

For more information on working with the Analytics Center, see Dashboards in the Analytics Center.

Create a portal in App Engine Studio (AES) to give your users a site where they can find information, create requests, and complete business tasks.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

About this task

When you add a portal you're creating a basic version of it, which you must then continue editing in UI Builder before it's ready to deploy.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: If you created an application using a template, a portal may already be added to your application.

Most companies implement a maximum of three portals, which they then populate with catalogs.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, next to Experience, select the add icon (⊕).
4. Select **Portal**, and then select **Begin**.
5. On the form, fill in the fields.

Field	Description
Name	Name of the portal. By default, the portal shares the same name as your application. **Tip:** Use a name that uniquely identifies the portal from other experiences. For example, `Office art portal`.
Description	Description of the portal.
URL	Web address of the portal. By default, the URL is based on the application name.
Roles	User roles to limit who can access the portal. To use a custom role for your portal, you must create one in **Security** first. For more information, see Add application security.

6. Select **Continue**, and then select **Done**.
   After you create the portal in AES, you must edit it in UI Builder by adding or configuring components on each page.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

7. Next to the portal you created, select the menu icon (•••) and then select **Edit**.
   Edit a portal

8. In UI Builder, edit the portal by adding or configuring components on each page.
   You can also add more pages to the portal, if needed.

   Note: The default portal pages are read-only and can't be edited. To change the content of each page, create a page variant and edit the variant.

What to do next

For more information on using UI Builder to edit portals, see UI Builder.

- Types of portals you can build

  A portal is a site where users inside of your organization can find information, submit requests, and complete business tasks.

A portal is a site where users inside of your organization can find information, submit requests, and complete business tasks.

The portal that you create in App Engine Studio includes several default pages. You can use these pages as-is or edit them to suit your business needs.

- Article page

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Catalog item page
- Landing page
- Login
- Order success
- Record page(request)
- Record page(task)
- Search page
- Settings page
- Task approved
- Task rejected

Note: Unlike Service Portal, the portal that you can create in App Engine Studio is built on the Next Experience UI Framework. You edit the portal by configuring pages and components in UI Builder.

Home page

Add a mobile experience, or interface, to enable users to access your application from a ServiceNow native mobile app.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

Role required: App Engine Studio (AES) user role and delegated developer permissions. For more information, see Delegate developers using AES.

About this task

When you add a mobile experience, you're creating a basic version of the mobile app, which you must then continue editing in Mobile App Builder before it's ready to deploy.

Use Mobile App Builder to build and manage screens and records that make up workflows within the mobile apps that you build with AES. For example, you can add a webpage or a list that appears as a tab on a phone app.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, next to Experience, select the add icon ( ).
4. Select **Mobile experience**, and then select **Get started**.
5. Select where you want to add the experience and select **Continue**:
   - Mobile Agent
   - Now Mobile
6. On the form, fill in the fields.

   Add experience form

Field	Description
Add an icon	Icon that best reflects the content of the screen.
Label for experience	Description for the screen.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
Roles	Roles that have access to the screen. You can specify multiple roles, but you must select them one at a time from the list that appears when you start typing in the **Roles** field. **Note:** If you do not specify a role, all users will have access to the mobile experience.
Available offline	Option to make the experience available offline. **Note:** Offline experiences are available only in Mobile Agent apps.

7. Select **Continue**.
8. Select the type of screen to add and select **Continue**.

Type of screen options

Option	Description
List	Screen that lists information retrieved from an existing data table, which you choose in the next step. **Note:** Creating a List screen adds all of the data table's values to the mobile experience.
Webpage	Screen that displays an existing webpage, which you specify the URL for in the next step.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

9. To add a list page to the mobile experience, do the following:
   a. Select the table that will appear as a list on the screen.
      After you select a data table, some of its contents appear on the page.
   b. To make the table conditional, select **Set conditions for this table** and define the conditions that must be met for the data to appear using the condition builder.

      For more information, see Condition builder.
   c. Select **Continue**.
   d. Specify attributes for the data extracted from the table and select **Continue**.

      Identifiers for table data

Field	Description
Add an icon	Icon that reflects the data in the table.
Screen label	Brief label to describe the list screen.

10. To add a webpage to the mobile experience, do the following:
    a. Specify the attributes for the table data and select **Continue**.

       Identifiers for table data

Field	Description
Add an icon	Icon that reflects webpage.
Screen label	Brief label to describe the webpage.
URL	Absolute or relative URL for the webpage.

11. Depending on if you are done or not, do one of the following:

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- If you are done adding screens to the mobile experience, select **Done adding screens**.
- To add more screens to the mobile experience, select **Add more screens**.

12. To finish creating the mobile experience, select **Done**.
    After you create the mobile experience in AES, you must edit it in Mobile App Builder.

13. Next to a mobile experience, select the menu icon (•••) and then select **Edit**.
    Edit mobile experience

14. Edit the mobile experience in Mobile App Builder.
    For more information, see Mobile App Builder.

What to do next

Scan or copy the QR code for your mobile experience using the **Select app** and **Select platform** fields.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

For more information on modifying mobile experiences, see Mobile App Builder.

- Types of mobile experiences you can build

  A mobile experience enables users to access your application from a ServiceNow native mobile app.

A mobile experience enables users to access your application from a ServiceNow native mobile app.

Example mobile experience

The following provides an example of a mobile experience.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Tailor your app's experience to suit your business needs by building interfaces in App Engine Studio (AES), such as for mobile apps or catalog items.

Editing workspaces in Workspace Builder

Workspace Builder is a new, streamlined no-code tool that enables you to configure custom workspaces built in AES quickly and easily. For more information on using Workspace Builder, see Building workspaces in AES. For more complex customizations, edit the workspace in UI Builder.

Editing forms created in Table Builder

When you add data to your app, any associated form views display in the **Experience** section of your app. To edit the form, select it in the

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Experience section. Form views can be edited in the **Forms** tab of Table Builder. For more information, see Forms in Table Builder.

- Preview an experience

  See what an application experience built in App Engine Studio (AES) looks like to your users by previewing it in a browser.

- Delete an experience

  Delete an experience, such as a portal or record producer form, that you no longer need within App Engine Studio (AES).

See what an application experience built in App Engine Studio (AES) looks like to your users by previewing it in a browser.

Before you begin

Add an experience to your application. For more information, see Add an application experience.

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to an experience, select **Preview**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Preview an experience

4. On the browser tab that opens, review the experience.

What to do next

If the experience looks or behaves differently than expected, edit the experience.

Delete an experience, such as a portal or record producer form, that you no longer need within App Engine Studio (AES).

Before you begin

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to an experience, select the menu icon (•••) and then select **Delete**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Delete an experience

4. On the dialog box that appears, enter `delete` and then select **Delete**.

Add logic and automation

Replace manual work by adding logic and automation to your app in App Engine Studio (AES).

Application templates automatically add logic and automation to your application.

Types of automation

Automation	Definition	Example	Reference
Decision	Decisions decouple logic from code by creating decision rules, such as inputs that evaluate data from existing records, external data sources, or data	Automatically apply cascading discounts to different products based on the increasing number of units ordered.	• Add a decision • Edit decision tables in Decision Builder

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Automation	Definition	Example	Reference
	provided at runtime.		
Email notification	Notifications are emails that are automatically sent when the specified conditions are met.	Automatically send an email when a new support record is created.	• Add an email notification • Modify an email notification
Flow	A flow is a sequence of reusable actions, initiated by a trigger event, and passing variables between actions.	Automatically generate a Twitter post when an incident is closed or send an email when a record in a specific table is updated or created (record-based flow).	• Add a flow from scratch • Modify a flow • Work with record-based flows in Table Builder

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Automation	Definition	Example	Reference
			Note: This feature is only available if your licensing entitles you to "exclusive low code capability " and you have Table Builder for App Engine installed. Contact your Solutions consultant for more informatio n.
Process	Processes are cross-enterprise workflows that enable you to create a single, unified process. Processes can include multiple flows.	Standardize and automate how agents handle chat interactions with VIP users.	• Create a process definition • Modify a process

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: If you're using source control to collaborate with other developers, only changes that have been checked in are available to other developers. For example, if an admin creates a new flow for an app that's linked to Git, the new flow won't be available in the app for other AES users until the admin checks the flow into Git.

- Add a pre-built flow using a template

  Use a pre-built flow to quickly automate manual work in the app you're building in App Engine Studio (AES).

- Add a flow from scratch

  If an existing automation template doesn't fit your application goal, define custom automation in App Engine Studio (AES) by building a new flow.

- Add a decision

  Use Decision Builder within App Engine Studio (AES) to create automation for decisions. The automation decouples decision logic from code by enabling you to create and manage decision rules.

- Add an email notification

  Use Notification Builder in App Engine Studio (AES) to create automated email notifications using templates or custom messages.

- Modify a process

  To update or change an existing process for an app built in App Engine Studio (AES), edit it in Process Automation Designer.

Use a pre-built flow to quickly automate manual work in the app you're building in App Engine Studio (AES).

Before you begin

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, in the Logic and Automation section, select the add icon (⊕).
4. Select the card for **Flow**.
5. From the gallery of automation templates, select a template and then select **Begin**.
   Template automation

6. Complete the wizard for the template that you selected.
7. On the summary screen, select **Done**.

What to do next

You can edit the flow to tailor it to your business needs. For more information on working with automation, see Modify a flow.

If an existing automation template doesn't fit your application goal, define custom automation in App Engine Studio (AES) by building a new flow.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

About this task

If a pre-built flow already exists, you can easily add its template to your app and then customize it. For more information, see Add a pre-built flow using a template.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, in the Logic and Automation section, select the add icon (⊕).
4. Select the card for **Flow**.
5. Select **Build from scratch**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Build from scratch

6. On the form, fill in the fields and then select **Continue**.

Field	Description
Name	Name to identify your flow.
Description	Description of your flow.
Protection	Access settings for the flow. You can select one of the following options: **-- None --** Option to enable other users to edit the flow.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	Read-only Option to enable other users to view the flow but not edit it.
Run as	Selection to specify if the flow runs as a system user or the user who initiates the session. If updates should come from the user who triggered the flow, select **User who initiates session**. For example, when you want incident record comments to come from the current user, or approval emails to originate from the approver.
Run with roles	Roles that the flow runs with. This option is available only when **Run as** is set to **User who initiates session**. To use a custom role for your flow, you must create one in **Security** first. For more information, see Add application security.

7. On the summary screen, select **Edit this flow** to open your flow in Flow Designer.
   Flow Designer

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

For an example of how to build a flow, see Build your first flow in Flow Designer.

8. Add a trigger to your flow.
   a. Under the TRIGGER section, select **Add a trigger**.
   b. From the Trigger list, select a trigger that will start running your flow.
      For more information on trigger types, see Flow Designer trigger types.
      The system displays a set of fields depending on the type of trigger that you've selected.
   c. Set up your trigger by filling in the fields.
      For a record-based trigger, for example, select a table and set field conditions that, when met, will start running your flow.
   d. Click **Done**.
9. To add actions, flows, subflows, or flow logic, select **Add an Action, Flow Logic, or Subflow**.
   a. Select an option.

Option	Description
Action	Select the desired action. Flow Designer includes Flow Designer actions that are available to flows and subflows. Alternatively, a user with the action_designer role can create additional actions to add to flows. The Integration Hub and spoke plugins install additional actions. To add draft actions from the More Actions menu, set **Show draft actions** to **true**. To view spokes that are available in the ServiceNow Store, set **Show store spokes** to **true** from the More Actions menu.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Description
	Note: Under **Not Installed Spokes**, the system displays spokes that are available in the ServiceNow Store based on compatibility with the ServiceNow version and application dependency on Flow Designer.
Flow Logic	Select an option to specify conditional or repeated operations.
Subflow	Select a published subflow and define the input values. In addition to adding a subflow as a flow action, you can enable the **Show triggered flows** option from the More Actions menu to select an activated flow and define the required inputs. Running a triggered flow ignores its trigger conditions and runs all actions.

To change the order of an action in a flow, drag the handle on the left side of the action to the desired location.

The system displays a set of fields depending on the option that you selected.

b. To configure the action, flow logic, or subflow, fill in the fields.

c. Select **Done**.

d. Repeat adding actions until complete.

10. To specify how the app will handle errors, enable the **ERROR HANDLER** switch and fill in the fields.
    For more information on configuring how errors are handled in flows, see Flow error handler .

11. Select **Save**.
    Flow Designer saves a draft of the flow, trigger, and actions.

What to do next

Test your flow until you're ready to activate it. For more information on testing and editing flows, see Activate a flow.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: Your application can trigger only activated flows.

- Modify a flow

  To update or change an existing flow for an app you built in App Engine Studio (AES), edit it in Flow Designer.

To update or change an existing flow for an app you built in App Engine Studio (AES), edit it in Flow Designer.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

Add logic and automation to your application. If you created an application using a template, logic and automation may already be added to your application. For more information on adding custom logic and automation, see Add logic and automation.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to a flow, select the menu icon (•••) and then select **Edit**.
   Edit a flow

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: When a flow is triggered by a record being created or updated in a data table, it's referred to as a record-based flow. Record-based flows display in the list of logic and automation with a distinct icon ( ). These flows open up within the **Flows** tab in Table Builder if you are licensed for Table Builder for App Engine and have it installed. Contact your account team for details. For more information on flows functionality in Table Builder, see Flows in Table Builder.

4. Take the appropriate actions to edit the flow in Flow Designer.

Option	Description
Change the flow name, description, or roles	In the main header, select **Properties**, enter the values you want into the appropriate fields, and then select **Update**.
To edit the trigger	In your flow, select the trigger description, fill in the fields as desired, and then select **Done**. **Note:** Modifying triggers can result in the deletion of referenced action configurations.
To edit an existing action	In your flow, select the action description, fill in the fields as desired, and then select **Done**.
To add a new action	In your flow, select the plus icon in the ACTION section, then proceed as you would for adding an action to a new flow.

For more information on editing flows, see Edit a flow

5. To save your changes, select **Save**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

What to do next

Test a flow to make certain it works the way you expect. For more information on testing flows, see Test a flow.

Use Decision Builder within App Engine Studio (AES) to create automation for decisions. The automation decouples decision logic from code by enabling you to create and manage decision rules.

Before you begin

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, in the Logic and Automation section, select the add icon (⊕).
4. On the Add logic and automation screen, select **Decision** and then **Get started**.
5. Specify the name and scope of the decision table.

   Decision Table form

Field	Description
Name	Name for the decision table.
Accessible From	Scopes that can use the decision table. Available values are as follows: • **All application scopes** • **This application scope only**

6. Select **Done**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

What to do next

After you create the decision table, you must edit it to specify inputs and triggers. For more information on editing decision tables, see Modifying decision tables in Decision Builder.

Learn more about decisions in AES	Additional ServiceNow resources
ServiceNow provides several additional resources on installing and administering App Engine Studio.	https://www.youtube.com/watch?v=0edK6z6yFAs
	ServiceNow Developers site
	Now Learning Introduction to App Engine Studio on-demand course

- Modify a decision

  To update or change an existing decision for an app built in App Engine Studio (AES), edit it in Decision Builder.

To update or change an existing decision for an app built in App Engine Studio (AES), edit it in Decision Builder.

Before you begin

Add logic and automation to your application. If you created an application using a template, logic and automation may already be added to your application. For more information on adding custom logic and automation, see Add logic and automation.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to a decision, select the menu icon (•••) and then select **Edit**.
4. Take the appropriate actions to edit the decision.
   For more information on editing decision tables, see Modifying decision tables in Decision Builder.
5. To save your changes, select **Save**.

Use Notification Builder in App Engine Studio (AES) to create automated email notifications using templates or custom messages.

Before you begin

You can perform this task if you're either an administrator or a developer for the application. The required developer permission is **All File Types**. For more information on being a developer for an application, see Delegated development in App Engine Studio.

Role required: permitted developer or admin

About this task

Email notifications enable you to send emails to the selected users about activities in the system, such as updates to incidents or change requests.

> **Note:** You can't currently create any other types of automatic notifications, such as SMS messages.

Creating an email notification involves specifying when to send it, who receives it, and what it contains.

If your administrator has created an email template in the Now Platform, you can use it as is or override its content. For more information on email templates, see Email Templates.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In the Logic and automation section, select the add icon (⊕).
4. Select the card for **Email**.

5. On the form, fill in the fields for the basic settings.

Add notification form basic settings

Field	Description
Name	Name of the email notification. Descriptive names help identify the purpose of the email notification. For example, `Incident Opened & Unassigned`.
Short description	A brief explanation of the purpose of the notification.

6. On the Notification trigger settings section of the form, fill in the fields.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Add notification form Notification trigger settings

Field	Description
Send email notification	Situation where a notification is sent, such as after something happens or when a table is modified. Choices are as follows: • **When a record is created or updated** • **Only when a record is created** • **Only when a record is updated** • **When triggered via Flow Action** • When event is fired This field is automatically set to **When a record is created or updated**. After you create an email notification with a Flow Action as the trigger, you specify the notification when creating a flow in Flow Designer. For more information, see Notification step.
Table	The database table that hosts the records to link the notification trigger to. For example, the Incident [incident] table. If you set the **Send email notification** field to one of the

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	following values, the table is required: • **When a record is created or updated** • **Only when a record is created** • **Only when a record is updated**
Event name	Event that triggers the notification. This appears only when **When event is fired** is selected from the **Send email notification** field.

If the same trigger generates multiple notifications, the system only sends one notification. The system considers all other notifications, even if they have a different subject and body, as duplicates. The Ignore Duplicates business rule controls this functionality.

7. Make the trigger conditional by using the condition builder.

   Define the condition sets and values that must be met for the notification trigger. For more information, see Condition builder.

   Note: The condition builder is not available if you specify that the notification trigger is a Flow Action.

8. In the Recipients section of the form, specify who receives the notification.

   You can either define dynamic recipients, which requires you to specify a table in the notification trigger details, or search for users or groups.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Add notification form Recipients settings

Field	Description
Users and groups from table fields	Dynamic users and groups who receive the email based on the table. For example, if a notification uses the Incident [incident] table, you can select the **Opened by** field to send the notification to users or groups who opened the incident. For some fields, you can also select values contained by a reference field, such as **Opened by > Manager**. Select the **Add** button to search for dynamic users and groups based on fields from the specified table. **Note:** If you don't specify a table, the **Add** button isn't available.
People and groups	Static addresses for users and groups who receive the email notification. You can also search for users and groups.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

9. In the Email content section of the form, select a template or write original content.

Add notification form Email content settings

Field	Description
Email template	Predefined email template to apply existing content, which you can override. You can select only templates that have the following: • The same table as the notification • No specified table

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	If you use a template and don't override it, then when your administrator updates the template, the content of your email notification is also automatically updated.
Override template	Option to override the contents of the selected email template. If you use an email template, any images from the template still belong to the template regardless of whether you override it. Images in the notification are automatically updated when administrators update the template. If you override an email template and then change the selected template, the system removes the overrides and replaces them with content from the new template.
Subject	Subject line for the email. To make the subject dynamic, use the **Add variables** button below the Email message to generate variable syntax in the message body and then copy/paste it in the subject line. If empty, the system uses the **Subject** value from the email template. If you enter a value

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	in this field, it overrides the template.
Email message	Content of the email notification message, which can include variables. You can format the contents of the email message using the rich text editor icons. If empty, the system uses the **Message** value from the email template. If you enter a value in this field, it overrides the template value.
Add variables	Dynamic variables, or values, derived from fields in the specified table. **Note:** You must specify a table for the **Add variables** button to appear. Use variables to include values from a record in the table, such as an incident short description or comments and work notes. Variables are available fields from the specified table.

10. Select **Create**
    The notification is saved. You can now preview it.
11. View how the email notification appears by selecting **Preview**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

View the preview that appears. To see how a notification renders, select the search icon in the preview and select the record you want to preview.

Result

When you create a notification in AES, the notification is saved only to the application that you're currently building.

- Modify an email notification

  Edit an email notification created for an app in App Engine Studio (AES) to change it. For example, modify when to send the email notification, who receives it, and what it contains.

Edit an email notification created for an app in App Engine Studio (AES) to change it. For example, modify when to send the email notification, who receives it, and what it contains.

Before you begin

You can perform this task if you're either an administrator or a developer for the application. The required developer permission is **All File Types**. For more information on being a developer for an application, see Delegated development in App Engine Studio.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Role required: permitted developer or admin

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to a notification, select the menu icon (•••) and then select **Edit**.
4. Edit the notification by taking the appropriate actions.
   For more information on working with notification fields, see Add an email notification.
5. Change the template you're using.
   a. Select a different template from the **Email template** field.

      If you override an email template and then change the selected template, the system removes the overrides and replaces them with content from the new template.

   b. In the dialog box that appears, select **Change template** to confirm that you want to lose the changes you made by overriding the previous template.
6. To save your changes, select **Save**.

To update or change an existing process for an app built in App Engine Studio (AES), edit it in Process Automation Designer.

Before you begin

Before you edit a process, you must add a process in Process Automation Designer. For more information, see Create a process definition.

You can edit processes in App Engine Studio, but you must activate Process Automation Designer for App Engine Studio and enable the **Process Automation Designer for App Engine [com.glide.pad.license]** plugin to get started. For more information, see Activate Process Automation Designer for App Engine.

Role required: App Engine Studio user role and delegated developer permissions. For more information, see Delegate developers using AES.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to a process, select the menu icon (•••) and then select **Edit**.
4. Take the appropriate actions to edit the process.
5. To save your changes, select **Save**.

What to do next

Test a process to make certain it works the way you expect. For more information on testing processes, see Test a process.

Add application security

Control who is permitted to use or edit your application by configuring roles in App Engine Studio (AES).

Security and roles in App Engine Studio overview

Working with roles

You add security to your application by defining roles. A role is used to limit and control access to your application. The access that you define for a role is granted to all users who are assigned to the role.

An administrator assigns a role to the appropriate user based on the kind of work that the role permits. For example, to enable a manager to read and approve employee requests, an administrator would assign a role that has access to read and update records from the relevant table. The role may also need access to the portal or workspace where the manager would see the request.

Application templates automatically add security to your application. If you use a template to create your application, you can edit the roles that were added or add different roles.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Learn more about AES roles and security	Additional ServiceNow resources
App Engine Studio includes default roles that you can use for your application. Alternatively, you can build custom roles for your application. After you submit your application, an administrator on-boards the requesting team by assigning the roles that you've defined.	What is Security? - ServiceNow Developers site
	Security and Roles - ServiceNow Developers site
	Elevating Privileges - ServiceNow Developers site

- Build a new role for your application

  Create a custom role for your application in App Engine Studio (AES).

- Use an existing role for your application

  Use a previously created role for your application in App Engine Studio (AES).

- Change access settings for a role

  Control the application permissions for a role in App Engine Studio (AES).

- Delete a role

  Delete a role that you no longer need in App Engine Studio (AES).

Create a custom role for your application in App Engine Studio (AES).

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

Role required: admin, security admin

Note: If you are an admin, be sure to elevate your role.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, next to Security, select the add icon ( ).
4. Select **Build a new role** and then select **Continue**.
   Option to build a new role

5. Enter a name and description for your role, and then select **Continue**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

> **Tip:** For consistency with existing role names, enter a role name that is all lower-case and uses underscores instead of spaces. For example, for an office art requester role, you would enter `office_art_requester`.

6. For each table in your application, select one or more access controls for your role.

   Create

   Users with the role can create new records on the data table.

   Read

   Users with the role can read the data that is stored in the table.

   Write

   Users with the role can update existing records in the table.

   Delete

   Users with the role can delete table records.

7. Select the **Experience** tab, and then select the experiences that users with the role can access.

8. Select **Continue**, and then select **Done** on the summary screen.

Use a previously created role for your application in App Engine Studio (AES).

Before you begin

Role required: admin, sn_app_eng_studio.user

About this task

App Engine Studio includes default roles that you can use for your application. For more information on the default roles, see Base system roles.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, next to Security, select the add icon ( ).
4. Select **Use an existing role**, and then select **Continue**.
   Option to use an existing role

5. Select the search field and then select a role from the list.
6. Select **Edit**.
   A new tab opens to set access controls for the existing role.
7. In the Experience section, select the experiences that users with the role can access.
8. In the Data section, set access controls for each available table.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Create

Users with the role can create new records on the data table.

Read

Users with the role can read the data that is stored in the table.

Write

Users with the role can update existing records in the table.

Delete

Users with the role can delete table records.

9. Select **Save**.

Control the application permissions for a role in App Engine Studio (AES).

Before you begin

Role required: admin, sn_app_eng_studio.user

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to a role, select the menu icon (•••) and then select **Edit**.
   Editing a role

   A new tab opens to edit the role.
4. In the Experience section, select the experiences that users with the role can access.
5. In the Data section, set the access controls for each available table.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Create

Users with the role can create new records on the data table.

Read

Users with the role can read the data that is stored in the table.

Write

Users with the role can update existing records in the table.

Delete

Users with the role can delete table records.

6. Select **Save**.

Delete a role that you no longer need in App Engine Studio (AES).

Before you begin

Role required: admin, sn_app_eng_studio.user

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Next to a role, select the menu icon (•••) and then select **Delete**.
   Deleting a role

4. On the dialog box that appears, enter `delete` and then select **Delete**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Collaborate with other developers

In App Engine Studio (AES), you can add or remove users and groups to be collaborators on an application from the AES dashboard.

Users have varying levels of permissions for actions on the Collaboration feature. At a high level:

Users with these permissions	Can perform these actions
Manage Collaborators delegated development permission to the application	Can: • See a list of Collaborators and their descriptors • Search for users or groups • Select/change user or group's Collaboration descriptor (but users cannot change customized users or groups and cannot change the owner if there is only one owner) • Add collaborators by sending invite • Remove users or groups (but users cannot remove customized users or groups and cannot remove the owner if there is only one owner) Cannot customize a user or group's permissions
Invite Collaborators delegated development permission to the application	Can: • See a list of Collaborators and their descriptors • Search for users or groups

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Users with these permissions	Can perform these actions
	• Add collaborators by sending invite Cannot: • Select/change user or group's Collaboration descriptor • Remove users or groups • Customize a user or group's permissions
No Collaborator-related roles to the application	Can see a read-only list of Collaborators and their descriptors: Cannot: • Search for users or groups • Select/change user or group's Collaboration descriptor • Add collaborators by sending invite • Remove users or groups • Customize a user or group's permissions
Administrators	Can: • See a list of Collaborators and their descriptors • Show/hide members of a group • Search for users or groups

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Users with these permissions	Can perform these actions
	• Select/change user or group's Collaboration descriptor (includes changing customized users or groups and changing the owner even if there is only one owner) • Add collaborators by sending invite • Remove users or groups (includes removing customized users and groups and removing the owner even if there is only one owner) • Customize a user or group's permissions

When you add a user or group, a collaboration task is generated and an approval flow kicks off. To find all collaboration tasks, navigate to **All > App Engine > Collaboration > Collaboration Tasks**. The collaboration task provides information on which application a developer is being added to, and what permissions will be granted. Approvers will sometimes need to review these task records before developers can be added to the application.

If you are an admin, you can use flow designer to modify the Collaboration Request flow. The base system Collaboration Request flow handles collaboration requests as follows:

- If the user has AES or delegated developer permissions and is not new to the platform, the collaboration request approval record is auto-approved.
- If the user does not have AES or delegated developer permissions and is new to the platform, approval is required.

If you are an admin, you can modify the collaboration descriptors with which developers assign other developers delegated development permissions. The base system table provides Owner and Editor collaboration descriptors. By default, Owners have the manage

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

collaborator delegated development permission set and Editors have the invite collaborator delegated development permission set.

> **Note:** If you're using source control to collaborate with other developers, only changes that have been checked in are available to other developers. For example, if an admin creates a new flow for an app that's linked to Git, the new flow won't be available in the app for other AES users until the admin checks the flow into Git.

Add a user or group to collaboration

You can add a user or group to the Collaboration feature.

Before you begin

Role required: admin, manage collaborator delegated development role, or invite collaborator delegated development role

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select the Manage Collaborators button. The Collaborate with others screen appears with the users and groups that are collaborators.
   Collaborate with others

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

4. To add another user or group as a collaborator, enter the user name or group name in the **Invite people by name or group** field.
5. You can search for a user or group by entering the first few characters. A drop-down list with matching user names and groups displays and you can select the user or group you want to add. If a user or group displays in the drop-down list but cannot be selected, that user or group has already been added as a collaborator and cannot be selected again.
6. Select the collaboration descriptor for the user or group that you are adding (users with invite collaborators do not have this ability and will default to the Editor option). Only App Collaboration Descriptors that are defined in the global scope and have the standard option selected display in the list.
7. Select **Send**.
   - If the user has AES or delegated developer permissions and is new to the platform, they are listed under the pending requests section, and approval is required. After the request is approved, both the requester and the user receive an email indicating that the user has been added to the application.
   - If the user has AES or delegated developer permissions and is not new to the platform, the collaboration request is auto-approved. Both the requester and the user receive an email indicating that the user has been added to the application.

     Note: If a valid controller has been configured on the instance from which the collaboration request originated, a collaboration request task is created on the controller instance. If the originating instance is not configured on the controller, work notes are automatically added to the request record indicating that the instance must be configured before approval is granted. If the originating instance is the controller or a valid controller has not been configured, the collaboration request task is created on the requesting instance.

Change collaborator permissions

You can change the permissions that are currently assigned to a collaborator or create a custom description.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

Role required: admin or manage collaborator delegated development role

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select the Manage Collaborators button. The Collaborate with others modal appears with the users and groups that are collaborators.
4. For the user or group you want to change, select a different collaborator descriptor from the drop-down list.

Every application must have at least one owner and customized users and groups are not editable by non-admins.

5. Admin only: Custom collaboration descriptions can be changed by administrators.
   a. To customize a user or group's collaboration descriptor in the UI, select Custom Permissions from the drop-down list.
   b. Select or deselect delegated development permissions for the user or group. If the selection matches that of another standard Collaboration descriptor, the system will provide a prompt before proceeding. For details on each delegated development permission, see Delegate development and

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

deployment permissions to personnel delegated development permission documentation.

6. Select **Save**.

Remove a user or group from collaboration

You can remove a user or group from collaboration.

Before you begin

Role required: admin or manage collaborator delegated development role

About this task

Every application must have at least one owner. If an application has only one owner, you cannot remove the owner until another owner is assigned first.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select the Manage Collaborators button. The Collaborate with others modal appears with a list of the current collaborators.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

4. To remove a user or group as a collaborator, select **Remove** from the drop-down list.

Use AES with a Git source control repository

App developers working in App Engine Studio (AES) can manage their data repository in numerous ways.

After your admin has linked an application to Source control, all application developers on a non-production instance can perform these actions:

- Import applications from a Git repository.
- Pull and apply remote changes from a Git repository.
- Commit all local changes on the instance to a Git repository.
- Create tags to permanently link to a given version of an application.
- Create branches to maintain multiple versions of an application simultaneously.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: If you're using source control to collaborate with other developers, only changes that have been checked in are available to other developers. For example, if an admin creates a new flow for an app that's linked to Git, the new flow won't be available in the app for other AES users until the admin checks the flow into Git.

Options available from App Engine Studio

After an application has been linked to source control, application developers can use App Engine Studio to manage the repository. From App Engine Studio, developers can:

- Edit the application repository credentials.
- Commit all local changes on the instance.
- Apply remote changes from the repository.
- Create a branch.
- Switch branches.
- Import an application from a remote repository.

Source control integration does not support managing applications on a production instance. Instead, you can manage applications on a production instance using the application repository, an update set, or App Engine Studio. For more information about managing applications on a production instance, see Application sharing.

Options available from a Git repository

The ServiceNow platform offers limited support for modifying linked application files outside of an instance. From Git, developers can:

- Move application files to a different Git directory structure.
- Edit application files outside of App Engine Studio.

The system generates a properties text file called sn_source_control.properties at the root level of the repository. To move application files to a different Git directory structure, application developers can set the path parameter to specify the subfolder path

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

containing their application files. For example, if you moved your application to the src/app subfolder, set the path to `path=src/app`.

The system generates a checksum.txt file in the Git repository to determine if any application files have been changed outside of App Engine Studio. When the checksum value from the file matches the current checksum value, the integration skips the validation and sanitization process. When the checksum values do not match, the integration validates and sanitizes the application files as part of the source control operation. The sanitization process:

- Creates upgrade log entries for each sanitization action taken.
- Removes unsupported folders and files from the repository.
- Aborts all source control operations when a system application file fails XML schema validation. For example, if a database dictionary record fails XML schema validation, the system aborts all operations.
- Skips the current source control operation when a non-system application file fails XML schema validation.

The source control integration sanitizes only content within the application path listed in the sn_source_control.properties file. Repository content outside the application path is ignored.

MID Server support

Use an existing MID Server to connect to a source control repository. Accessing an application through a MID Server enables access to repositories behind a firewall.

- Source control operations in App Engine Studio

  The source control integration primarily supports operations from App Engine Studio (AES), but can also support some operations directly from the Git repository.

- Import application or application-customization from source control

  Import an app or app customization from a source control repository into App Engine Studio (AES) to continue developing it on this instance.

- Work with changes in Git

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Developers using App Engine Studio (AES) can pull and commit changes in their Git repository.

- Create versions and branches in Git

  App developers using App Engine Studio (AES) can create versions and branches in their Git repositories.

- Stash changes

  Developers can remove and save changes locally to apply them later, and manage stashed changes from App Engine Studio (AES).

- Resolve conflicts

  App developers can select the app file version to use when applying remote or stashed changes in App Engine Studio (AES).

- View commit history

  App developers can view the commit history of apps linked to a source control repository in App Engine Studio (AES).

- Move application files in a Git repository

  Move application files linked to source control to any folder of the repository when working in App Engine Studio (AES). Allow application developers to store supporting content such as automated tests in the same repository as the applications they support.

Source control operations in App Engine Studio

The source control integration primarily supports operations from App Engine Studio (AES), but can also support some operations directly from the Git repository.

Available source control operations

Operation	Description	Available from
Import from source control	Imports an application from the repository to the local instance.	App Engine Studio

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Operation	Description	Available from
	For more information, see Import application or application-customization from source control.	
Link to source control	Allows developers to manage application changes from a Git repository. For more information, see Link an application or application-customization to source control.	App Engine Studio
Edit Repository Configuration	Updates the Git repository user credentials. For more information, see Edit a Git repository configuration.	App Engine Studio
Apply Remote Changes	Updates the local version of the application to match the repository version. For more information, see Pull changes from a repository.	App Engine Studio
Commit Changes	Updates the repository version of the application to match the local version. For more information, see Commit changes.	App Engine Studio
Stash Local Changes	Removes and saves local changes for later work. For more	App Engine Studio

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Operation	Description	Available from
	information, see Stash local changes.	
Switch Branch	Updates the local version of the application to match the repository branch version. For more information, see Switch branches.	App Engine Studio
Create Branch	Creates a branch in the repository to save a different version of the application. For more information, see Create a branch.	• App Engine Studio • Git repository
Create Tag	Creates a tag in the repository to link to a particular application version. For more information, see Create a tag to link to a particular application version.	• App Engine Studio • Git repository
Manage Stashes	Allows developers to apply or delete stashed changes. For more information, see Manage stashes.	App Engine Studio
Create repository	Creates a repository to store application changes.	Git repository
Create credentials	Creates credentials to the repository.	Git repository

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Operation	Description	Available from
Grant access to repository	Provides read and write access to the repository tied to a specific set of credentials.	Git repository

Import application or application-customization from source control

Import an app or app customization from a source control repository into App Engine Studio (AES) to continue developing it on this instance.

Before you begin

- Role required: admin
- Verify that the non-production instance has network access to the Git repository.
- Verify that the repository contains a valid application.
- Ensure that users add the email address to their respective Users Table (ServiceNow sys_user) record that they use in their commits to the Git repository.
- Learn more about application-customizations Manage customizations to applications.

About this task

The source control integration does not support importing an application on a production instance. Instead install applications on a production instance from the application repository, an update set, or the App Engine Studio.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. Select **Import app**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

App Engine Studio displays the Import from source control fields.

3. Enter the following field values.

Import from source control fields

Field	Description
Network protocol	Https or ssh credential type that enables secure channel data exchange.
URL	The URL to the Git repository where the application files reside.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	Note: If the Git repo URL for SSH provided by your Git server does not work, check with your Git server owner or provider for the correct URL. There may be additional specifications such as scheme protocol prefixes, port numbers, and so on, required for your Git repo URL to function.
Branch	The repository branch to work on within the application. **Note:** The default branch is named after your instance. If you do not choose a name, the branch defaults to **master**.
MID Server Name	Select an existing MID Server to link to a Git repository stored behind your corporate firewall. **Note:** Use a separate MID Server to prevent conflicts with Discovery activities.
Default email	The committer email address is defined by the sys_user record if available. But if a committer's sys_user record email field is empty, the system generates an alternate email (username@instancename.service-now.com). You can also enter a default email address and change it later. To use that

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	default email address in all cases, select the check box.
Credential	Select the credential for your Git repository. (See Getting started with Credentials.) **Note:** If you select the ssh network protocol, enter a valid credential of the SSH Private Key type. If you select the https protocol, enter a valid credential of the Basic Auth Credentials type.

Note: All application developers on the instance share the credential used to link a Git repository to an application.

4. Select **Import app**.
   The system compares the checksum in the checksum.txt file to current checksum. When the checksum values match, the integration skips validation and imports the application. When the checksum values do not match, the integration first validates and sanitizes the application files before importing them.

5. Select **Select Application**.
   App Engine Studio displays the application as a new choice in the Switch Applications window.

What to do next

- Review the upgrade logs for any sanitization applied to application files during the import.
- Select the imported application to edit it.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Work with changes in Git

Developers using App Engine Studio (AES) can pull and commit changes in their Git repository.

> **Note:** If you're using source control to collaborate with other developers, only changes that have been checked in are available to other developers. For example, if an admin creates a new flow for an app that's linked to Git, the new flow won't be available in the app for other AES users until the admin checks the flow into Git.

- Pull changes from a repository

  App developers using App Engine Studio (AES) can pull changes from a linked Git repository to apply remote changes to the local instance.

- Commit changes

  App developers using App Engine Studio (AES) can commit their changes on the instance to the linked Git repository. You can either select a few changes to commit, or commit all changes on the instance at once.

App developers using App Engine Studio (AES) can pull changes from a linked Git repository to apply remote changes to the local instance.

Before you begin

- Role required: admin
- Link an application or application-customization to source control

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select **Source control > Pull from repository**.
4. Review your uncommitted files, then select **Stash local changes** or **Discard local changes**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

5. Select **Pull from repository**.
   The following operations occur:

   - The system fetches the most recent changes from the remote repository.
   - The system applies the remote changes to the instance.
   - The system identifies any change conflicts requiring resolution.

   If there are conflicts, the system displays the **Resolve Conflicts** window.

   Delta loading is enabled by default in sys properties so your data isn't removed. You can disable this feature if you want data automatically deleted.

What to do next

Resolve any change conflicts.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

App developers using App Engine Studio (AES) can commit their changes on the instance to the linked Git repository. You can either select a few changes to commit, or commit all changes on the instance at once.

Before you begin

- Role required: admin
- Link an application or application-customization to source control

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select **Source control > Commit changes**.
   The system displays the **Select files to commit to source control** window. The file changes from all the updates sets display. By default, the file changes from the current update set display.

4. Select the file changes you wish to commit.
5. To include untracked changes, select the **Include changes not tracked via the Customer Update [sys_update_xml] table** check box.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- The default for this check box is set via the **glide.sourcecontrol.default_commit_mode** property.
  - Property can be set to **include_untracked** or **exclude_untracked**.
  - The **include_untracked** mode commits the updates to the application that do not generate sys_update_xml records, as well as any user-selected updates.
  - The **exclude_untracked** mode commits only updates selected by the user in the **Select files to commit to source control** dialog.
- The base system setting for the property is **exclude_untracked**.
- To hide the check box and use the value of the **glide.sourcecontrol.default_commit_mode** property, create the **sn_devstudio.vcs.allow_commit_mode_selection** property and set it to false.
- Checking this check box may incur a performance penalty.

  Note:

  Commits always occur in **include_untracked** mode in the following cases:

  - Linking to source control for the first time. (To learn more, see Link an application or application-customization to source control.)
  - Publishing an application that's linked to source control from App Engine Studio.
  - Selective commit mode is disabled.

6. Select **Continue**.
7. In **Commit comment**, enter a comment for the changes.
8. Select **Commit Files**.
   The following operations occur:
   - The system identifies all local changes.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- The system commits all local changes to the remote repository.

  Note: For list of known files that don't have customer update records and are untracked, see Customer updates table

Create versions and branches in Git

App developers using App Engine Studio (AES) can create versions and branches in their Git repositories.

- Create a tag to link to a particular application version

  Create a tag in the repository to link to a particular app version in App Engine Studio (AES).

- Switch branches

  Application developers can switch to a different repository branch to work on another version of the application using App Engine Studio (AES).

- Create a branch

  Application developers can create a branch to work on a new version of an existing app in App Engine Studio (AES).

- Set the default branch

  Set a default branch when you want to use a branch other than main for new changes or for your main App Engine Studio (AES) development repository.

Create a tag in the repository to link to a particular app version in App Engine Studio (AES).

Before you begin

- Role required: admin or sn_group_creator.app_creator
- Link an application or application-customization to source control

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select **Source control > Create tag**.
   App Engine Studio opens the Create Branch window.

4. Enter the **Tag Name**.
5. Select **Create Tag**.
   App Engine Studio creates the tag.
6. Select **Close**.

What to do next

Commit changes to the new branch.

Application developers can switch to a different repository branch to work on another version of the application using App Engine Studio (AES).

Before you begin

- Role required: admin
- Git repository with one or more available branches.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select **Source control > Switch branch**.

The system displays the Switch Branch window.

4. (Optional) If there any local changes on the instance, you can save or discard them.

Option	Description
Save local changes	Saves local changes before switching to an alternate branch. You can later merge or discard the saved changes.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Description
Discard local changes	Permanently deletes all local changes before switching to an alternate branch.

Note: Use caution when discarding local changes. Since all application developers share repository credentials, there is no way to discard just one set of user changes. Note you cannot later restore discarded changes.

5. Select the branch you want to switch to.
6. Select **Switch Branch**.
   App Engine Studio updates the local application to match the branch version from repository.

Application developers can create a branch to work on a new version of an existing app in App Engine Studio (AES).

Before you begin

- Role required: admin or sn_group_creator.app_creator
- Link an application or application-customization to source control

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select **Source control > Create branch**.
   App Engine Studio opens the Create Branch window.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

4. Enter the **Branch Name**.
5. (Optional) To create a branch from a tag, select the **Create from Tag** drop-down list and select an existing tag.
6. Select **Create Branch**.
   App Engine Studio creates the branch.

7. Select **Close**.

What to do next

Commit changes to the new branch.

Set a default branch when you want to use a branch other than main for new changes or for your main App Engine Studio (AES) development repository.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

- Role required: admin
- Link an application or application-customization to source control

Procedure

1. Follow the steps to Add a system property .
2. Add the **glide.source_control.default_branch_name** property, and specify the default branch name of the Git source control repository to work from (pull requests, code commits, etc.). Application developers' work is managed from and saved into the default branch if not otherwise specified. If not changed, this value defaults to sn_instances/<instance_name>.

Stash changes

Developers can remove and save changes locally to apply them later, and manage stashed changes from App Engine Studio (AES).

- Stash local changes

  App developers can remove and save changes locally to apply them later in App Engine Studio (AES).

- Manage stashes

  App developers can apply or delete stashed changes from App Engine Studio (AES).

App developers can remove and save changes locally to apply them later in App Engine Studio (AES).

Before you begin

- Role required: admin
- Link an application to source control
- Change one or more application files

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

About this task

Stashing changes removes them from the current application and saves them for a developer to later apply or delete.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select **Source control > Stash local changes**.
   The system displays a list of locally changed files.
4. Enter your description.
5. Select **Stash Changes**.
   The system saves the current changes and displays a success message.

What to do next

- Close dialog

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Manage stashes

To learn more see Getting started with credentials

App developers can apply or delete stashed changes from App Engine Studio (AES).

Before you begin

- Role required: admin
- Link an application to source control.
- Stash one or more application file changes.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Select **Source control > Manage stashes**.
   The system displays a list of locally stashed changes.
4. Select the action next to the stash you want to manage.

Option	Description
Apply	Commits the stashed changes to the application and checks for conflicts.
Delete	Removes the stashed changes.

Resolve conflicts

App developers can select the app file version to use when applying remote or stashed changes in App Engine Studio (AES).

Before you begin

- Role required: admin
- Link an application to source control

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Apply a stashed change

About this task

Conflicts occur when there are multiple change versions of the same application file: one set of changes in the remote or stashed version and another set of changes in the local version. App Engine Studio requires developers to resolve conflicts before applying remote or stashed changes.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. Pull from a repository or stash local changes.
   If the system identifies a conflict, it displays the Resolve Conflicts dialog.
4. Select how to resolve the conflict.

Option	Description
Select an action	Apply or discard all stashed changes. Go to step 3.
Manually merge changes	Individually select which changes to apply. Go to step 6.

5. If you want to apply or discard all stashed changes, select an **Action**.

Option	Description
Take Stashed Changes	Applies the application file version from the stashed changes.
Discard Stashed Changes	Applies the application file version from the most recent pull from the repository.

6. Select **Apply Stashed Changes**.
   The system applies the selected changes.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

7. Select **Close Dialog**.
8. If you want to merge the conflicting changes, select **Manually Apply**.
   The system displays a list of version differences by field.
9. Select the field values you want the merged application file to have.
10. Select **Save Merge**.
    The system applies the selected changes.

View commit history

App developers can view the commit history of apps linked to a source control repository in App Engine Studio (AES).

Before you begin

- Role required: admin
- An existing link to a Git repository

Procedure

1. Navigate to **All > Source Control > View History** .
   The system displays the History window.
2. Select the commit sort order type.

Option	Description
Date	Sort by commit date.
Committer	Sort by user name.

3. Select the sort order direction.

Option	Description
Descending	Sort dates from the most recent to oldest date. Sort user names reverse-alphabetically from Z to A.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Option	Description
Ascending	Sort dates from the oldest to most recent date. Sort user names alphabetically from A to Z.

The system sorts commits by the selected sort order.

4. Select a commit.
   The system displays the commit details for the selected commit.

5. Review the commit details.

   Commit Details

Field	Description
Committer	The user who committed the change.
Date	The date-time stamp of the commit.
SHA-1	The secure hash value identifying this commit in the repository.
Message	The commit message associated with this commit.
Files	The list of application files changed in this commit.

6. Close the History window.

Move application files in a Git repository

Move application files linked to source control to any folder of the repository when working in App Engine Studio (AES). Allow application developers to store supporting content such as automated tests in the same repository as the applications they support.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

- Link an application or application-customization to source control
- Role required: Source control credentials with write access

About this task

Linking an application to source control generates a properties text file called sn_source_control.properties at the root level of the repository. The properties file specifies the folder containing the application files. The integration tracks changes to these application files by generating a checksum.txt file. When the checksum matches, the integration skips the validation and sanitization process. When the checksum does not match, the integration validates and sanitizes the application files as part of the source control operation. The integration ignores all repository content outside the application path.

> **Note:** You can set system properties **glide.source_control.checksum_required** to enable optional checksum validations and sanitizations and **glide.source_control.checksum_quick_install** to bypass sanitization steps on checksum matches. See Available system properties for more information.

Procedure

1. Login to the source control repository linked to the application.
2. Create the destination folder where you will move the application files.
   For example, create the folders src/app.
3. Move the folder containing your application files to the destination folder.
   For example, move the folder demo_my_app to src/app.
4. Navigate to the root level of the repository.
5. Open the sn_source_control.properties text file in a text editor.
6. For the `path=` property, enter the folder path where you moved the application files.
   For example, enter `path=src/app`.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

7. Save the properties file.

What to do next

Login to your instance and perform Source control operations in App Engine Studio from App Engine Studio.

Publish your app

When you have completed your app in App Engine Studio (AES), you need to submit it for approval and publishing. The process you use depends on whether you are linked to source control.

- Submit your application for approval and publishing

  Start the process of getting the application you built in App Engine Studio (AES) published by submitting it for administrator review.

- Publish an application from App Engine Studio when linked to source control

  You can publish a custom application from App Engine Studio (AES) when linked to source control.

Submit your application for approval and publishing

Start the process of getting the application you built in App Engine Studio (AES) published by submitting it for administrator review.

Before you begin

Role required: delegated developer with permissions

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. From the app home, select **Submit**.
4. On the dialog box that appears, review the submission details and then select **Submit**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

What to do next

The administrator reviews the submitted application and checks for potential issues. You can check the status of your application from the application home in App Engine Studio.

"Pending Approval" status

After a reviewer begins testing the application, the status changes to In Validation.

"In Validation" status

An administrator may provide you with test accounts for different roles in your application. Log in with each of these accounts to check that the application works as expected.

If the reviewer rejects the application, the status changes to Rejected. You may also receive an email that includes the reviewer's comments. Use the feedback to improve your application, and then submit the application again.

"Rejected" status

If the application passes testing, the administrator publishes the application and the status changes to Published. The administrator on-boards the team that requested the application. For example, if you specified a certain security role for the application, the administrator assigns that role to the relevant users.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

"Published" status

Related concepts

- Delegate developers using AES

Publish an application from App Engine Studio when linked to source control

You can publish a custom application from App Engine Studio (AES) when linked to source control.

Before you begin

Role required: admin

About this task

When you publish an application from App Engine Studio that is linked to source control, there is a different outcome than when you publish via the sys_app or sys_store_app **Publish** related link.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. From the app home, select **Publish**.
   App Engine Studio displays the publish app fields.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

4. Enter the following field values.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Provide a version number and release notes

Field	Description
Version	View your current app version and provide a new version number for your application.
Release notes	Provide a brief description of the changes made to your application.
Publish options	Select if you want the application to be published to your application repository or the ServiceNow Store.

Note: All application developers on the instance share the credential used to link a Git repository to an application.

5. Select **Continue**.
6. The current state of the application is committed to source control, including any untracked or uncommitted changes. The value of the **glide.sourcecontrol.default_commit_mode** property is ignored. This occurs because when the application is published, all the untracked and uncommitted changes are also published. Therefore, the state of the application in the Git repository matches what is published. See the Commit changes topic for more information about the **glide.sourcecontrol.default_commit_mode** property.
7. A source control tag is created for the new version and the application is published.
   If needed, the sys_app record is updated with the new store correlation ID.

   Note: If your application is linked to source control and you publish a new version outside of App Engine Studio, a source control commit and tag are not created.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Remove an application from AES

If you have the appropriate permissions, you can remove an application from App Engine Studio (AES).

Before you begin

Role required: admin, delete application, or delegated developer with permissions. For more information, see Delegate developers using AES.

About this task

Delegated developers can delete applications based on their permissions. To request delete permissions, contact your administrator.

Procedure

1. Navigate to **All > App Engine > App Engine Studio**.
2. From the My Apps page, open your application.
3. In your application, select the gear icon ( ).
4. Select **Delete application**.
5. On the dialog box, enter `delete` and then select **Delete**.

Managing application deployments using Pipelines and Deployments

Review the applications the developers build using App Engine Studio (AES) so you can deploy with confidence.

Deployment requests

After a developer submits an application in App Engine Studio, a deployment request is created. A deployment request is a record to track the review of submitted applications.

A reviewer can deploy the app to your test environment, reject it, or publish it.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Deployment request form

Note: If you submit deployment requests without upgrading all instances in the pipeline, your existing pipeline continues to be used.

For more information on reviewing a deployment request, see Deployment Request form in the Pipelines and Deployments app.

Testing an application

Before you publish a submitted application, test it in a non-production instance. To begin testing, an admin must open the deployment request and select **Approve**. The pipeline record is read and determines the next state for the request.

The goal of testing the application is to ensure the viability of the production instance. When the app has transitioned to the Testing state, ServiceNow Automated Test Framework tests run if you have enabled the appropriate properties.

If the application doesn't pass testing, then you reject the deployment request.

Deploying to a test environment

When you deploy or install an application to a test environment, two jobs are automatically executed:

- Application Deployment Test Suite
- Scoped App Definitions instance scan

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

These tests can be useful to the administrator for diagnosing issues before an app is deployed.

Jobs automatically run during deployment

Job	Description
Application Deployment Test Suite	A set of Automated Test Framework (ATF) tests. The suite consists of a single test called **Log**. When the test is run, scan results are logged to the Test Results [sys_atf_test_result] table. **Note:** The following two system properties must be enabled to run the Application Deployment Test Suite: • sn_atf.runner.enabled • sn_atf.schedule.enabled If they aren't enabled, only the instance scan runs. For more information, see Enable Automated Test Framework (ATF) properties.
Scoped App Definitions instance scan	Instance scans aid in diagnosing health issues on a non-production instance, and are useful for addressing best practices. For more information, see Instance Scan. The instance scan checks all tables in the app that extend Task [task].

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

The admin can view the results of the scans for troubleshooting purposes by selecting the **Deployment Environment Results** tab in the deployment request.

Simply open the record of the instance. The results are split into three tabs:

- **ATF Results**
  - Test suite name
  - Test URL
  - Success and failure counts
  - Overall error count
- **Instance Scan Results**
  - Scan suite name
  - Scan URL
  - Finding count for the scan
- **Results (JSON)** includes unformatted JSON code of the ATF and instance scan results, as well as any errors identified during the scans. This JSON can also be found in the **Notes** related list.

Publishing an application

If an application passes testing, open the deployment request and deploy the application to your production environment. It is then available to all employees in your organization.

Guides for more information

If you need more information, you can try these external ServiceNow-sponsored guides.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Learn more about Pipelines and Deployments	Additional ServiceNow resources
The Pipelines and Deployments app is used to deploy the apps you are creating using App Engine Studio between instances in a pre-defined order. Unlike previous versions, Pipelines and Deployments allows you to deploy your apps to an unlimited number of instances for app creation, testing, staging, and production.	Promoting apps through the AES pipeline Create apps fast with App Engine Studio

Managing app development using the App Engine Management Center

Track and manage your App Engine Studio (AES) requests, deployments, applications, and collaborative developers using the App Engine Management Center (AEMC) in your production instance. Additionally, AEMC allows admins to manage app development from intake through production.

Although you can use AEMC in any instance, for full functionality, you must install AEMC in the production instance. You must also set up the deployment pipelines with the controller instance in production. For more information, see Configure Pipelines and Deployments.

Navigating AEMC

From the AEMC home screen, you can navigate to four additional views: List, Pipelines, Applications, and Developers by selecting icons in the primary navigation bar.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

AEMC primary navigation bar

Tab	Description
Home	High-level view of all intake application, collaboration, and deployment requests. You can also see a high-level view of your pipelines.
List	Full list of each request type broken down by approval status.
Pipelines	High-level view of the number of open deployment requests in each instance and within each pipeline. Selecting a pipeline or an environment in a pipeline displays all active deployment requests. **Note:** If you view deployment requests in a production instance, all **Closed - Published** deployment requests for that environment are listed.
Applications	Charts and graphs illustrating the status of your active applications, and a list of all custom apps in development or production. You can view details for individual apps, including usage information, deployment history, and collaborators.
Developers	Charts and graphs illustrating total and active developers, as well as developers by department. You can view details for individual developers, including the apps for

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Tab	Description
	which they are collaborators and request history.

- Managing requests using AEMC

  You can track the three types of requests made through App Engine Studio using the App Engine Management Center (AEMC): Application Intake, Collaboration, and Deployment.

- Managing deployments using AEMC

  The App Engine Studio App Engine Management Center (AEMC) dashboard allows administrators to view multiple pipelines and manage applications at all stages of deployment.

- Managing applications using AEMC

  View information about your applications in the App Engine Studio App Engine Management Center (AEMC).

- Managing developers using AEMC

  View charts and cards in the App Engine Studio App Engine Management Center (AEMC) with information about any developer in the App Engine User group or any developer with delegated development permission, and details about specific developers.

Managing requests using AEMC

You can track the three types of requests made through App Engine Studio using the App Engine Management Center (AEMC): Application Intake, Collaboration, and Deployment.

To work more efficiently, you can also filter and search for requests.

- Manage application intake requests

  View details of application intake requests submitted by developers in the App Engine Studio App Engine Management Center (AEMC) dashboard, and approve or reject them.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Manage collaboration requests

  As an admin, view and approve or reject collaboration requests in the App Engine Studio App Engine Management Center (AEMC) from developers who want assistance building their applications.

- Manage deployment requests

  Review and approve or reject deployment requests in the App Engine Studio App Engine Management Center (AEMC) as applications move from development to production.

- Filter and search for requests in AEMC

  The App Engine Studio App Engine Management Center (AEMC) application provides tools for locating requests. You can perform a global search for request records or filter the list of current requests to locate the ones you want to work on.

Manage application intake requests

View details of application intake requests submitted by developers in the App Engine Studio App Engine Management Center (AEMC) dashboard, and approve or reject them.

Before you begin

Before application intake requests can be displayed in the AEMC, you must ensure that the Application Intake application has been properly configured. For more information, see Configure Application Intake. For more information about how users submit intake application requests, see Submit your idea for app development.

Role required: sn_app_eng_notify.app_engine_admin

Procedure

1. Navigate to **All > App Engine > Administration > App Engine Management Center**.

   The AEMC dashboard shows the number of pending intake application requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Pending intake application requests

Note: To view a list of all intake application requests, either select the number of requests (**5** in the example) or select the List icon ( ).

2. Select an application intake request to review its details.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Pending application intake request

3. View all intake requests submitted by the user by selecting the **Opened by** link.
   Intake requests submitted by the user

Note: Use the **Related records** filter to select the type of records you want to view (Collaboration, Deployment, or Intake requests).

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

4. Return to the **Details** tab and review the request.

   Note: The **Administration** section includes a **Development instance** field. Ensure that the development instance the developer intends to use has been selected. Also, if the user is not defined on that instance, a message displays and you must manually add the user to that instance. For more information, see Create a user.

5. Approve or reject the request.

   - If the request is approved, the user is added to the App Engine Studio User group and granted the App Engine Studio User role. The AES User role allows developers to begin creating their application in AES in the approved instance. The user also receives an email notification with a link to the provisioned instance. For more information about the AES User role, see Components installed with App Engine Studio.
   - If the request is rejected, a rejection email is sent to the user. The user can submit new requests. However, the rejected request cannot be edited.

Manage collaboration requests

As an admin, view and approve or reject collaboration requests in the App Engine Studio App Engine Management Center (AEMC) from developers who want assistance building their applications.

Before you begin

To view collaboration requests in AEMC, you must first set up Pipelines and Deployments in your production instance. Otherwise, requests are created on the instance where they originated (that is, the instance with App Engine Studio (AES) installed).

Role required: sn_app_eng_notify.app_engine_admin

About this task

Developers with collaboration permissions can access and develop certain parts of an application.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: Requests from collaborators who already have the AES User role are approved automatically. For more information about managing collaboration and permissions, see Collaborate with other developers.

Procedure

1. Navigate to **All > App Engine > Administration > App Engine Management Center**.

   The AEMC dashboard shows the number of pending collaboration requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Pending Collaboration requests

Note: To view a list of all collaboration requests, either select the number of requests (**8** in the example) or select the List icon ( ).

2. Select a collaboration request to review its details.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Pending collaboration request record

3. View all collaboration requests submitted by that user by selecting the **Requestor** link.

   Note: If the **Requestor** field is blank, it indicates that requestor does not have a user record on your Production instance. For assistance, contact your system administrator.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Collaboration requests submitted by the user

Note: Use the **Related records** filter to select the type of records you want to view (Collaboration, Deployment, or Intake requests).

4. Return to the **Details** tab and review the request.
5. Approve or reject the request.
   - If the request is approved, the user invited to be a collaborator is added as a developer to the specified app. The collaborator can now work on the parts of the app defined in the Collaboration Descriptor, but cannot concurrently develop other apps in AES. For more information about the AES User role, see Components installed with App Engine Studio.
   - If the request is rejected, the request is closed, and the primary developer is notified by email.

Manage deployment requests

Review and approve or reject deployment requests in the App Engine Studio App Engine Management Center (AEMC) as applications move from development to production.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

Role required: sn_app_eng_notify.app_engine_admin

About this task

To view deployment requests in AEMC, pipelines must be configured correctly. For details, see Configure Pipelines and Deployments.

Procedure

1. Navigate to **All > App Engine > Administration > App Engine Management Center**.

   The AEMC dashboard shows the number of deployment requests.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Pending deployment requests

Note: To view a list of all deployment requests, either select the number of requests (**4** in the example) or select the List icon ( ).

2. Select a deployment request to review its details.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Pending deployment request record

3. Review the details of the deployment request, including details about the application, the developer who requested deployment, and the deployment process. At the top of each deployment request, you can see the app's current position in the pipeline.

   Note: If the request is in a testing environment, you can review the ATF test and instance scan results in the activity stream or on the **Deployment Environment Results** tab.

4. Review the notes and application activity for the app manifest and any important details the developer may have added.

5. If a different AES admin must review the deployment request, update the request assignee and select **Save**.

6. Approve or reject the request.

   - To move the application to the next deployment stage, select **Approve**.

   - If the application is not ready or could potentially cause issues if it was moved on to the next deployment stage, select **Reject**. Add **Work notes** to identify the reasons for the rejection and any changes required to make the application ready for deployment.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Filter and search for requests in AEMC

The App Engine Studio App Engine Management Center (AEMC) application provides tools for locating requests. You can perform a global search for request records or filter the list of current requests to locate the ones you want to work on.

Filtering requests

On the Home and Pipelines tabs, the **Filter by** fields allow you to filter the list of requests by ranges of request creation dates and application names.
Filtering fields

To filter by individual dates or ranges of dates, select **Date**. Select a range of dates or select **Custom** and specify the date you want to filter by. Select **Apply** to create the filter.

To filter by a specific application, type the name in the **Filter by app name** field, and select **Apply** to create the filter.

You can filter the requests individually by dates or app names, or in tandem. For example, you can select requests created within the last three months, and then filter them by application name.

When you filter on the Pipelines tab, only instances with requests that match the filtering criteria display information. For example, if your pipeline shows request data in three instances and you filter by an app name used in only one of those instances, only that instance returns results.

Searching for requests

You can use the **Search** field at the top of any AEMC screen to search for submitted requests. Simply select App Engine Management Center from

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

the drop-down list, type all or a portion of a request number using an asterisk wild card character, and select **View results**.

Search

For example, you can type DEV0001* and select **View results** (or simply press **Return**), and a list of all collaboration requests that begin with DEV0001 are returned.

Search results

You can then select the record you want to review.

Managing deployments using AEMC

The App Engine Studio App Engine Management Center (AEMC) dashboard allows administrators to view multiple pipelines and manage applications at all stages of deployment.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Before you begin

Role required: sn_app_eng_notify.app_engine_admin

Procedure

1. Navigate to **All > App Engine > Administration > App Engine Management Center**. The Pipelines section of the AEMC dashboard shows the number of apps at each deployment stage within each of your pipelines.
   Pending deployment requests

2. Select **View** in a pipeline to review all deployment requests currently in that pipeline.
   List of apps within the selected pipeline

App name	Created by	Created	App Version	Pipeline	Target Environment
Proposal generator	system	2022-02-23 11:11:56	1.0.1	Application Deployment	Stage Instance
Warehouse operations	system	2022-02-23 11:13:51	1.0.1	Application Deployment	Prod Instance
Site security	system	2022-02-23 11:14:15	1.0.1	Application Deployment	Test Instance
Travel approval system	system	2022-03-23 13:37:35	1.0.1	Application Deployment	Test Instance

3. To view all deployment requests at a particular stage of deployment in a pipeline, click the large number associated with the environment. For example, select the **2** in the **Dev Instance** box to view the two deployment requests currently on the development instance.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Apps deployed to an instance

4. To review and approve, or reject a deployment request, select the app name. A deployment request for the app opens.

Deployment request

5. Review the details of the deployment request, including details about the application, the developer who requested deployment, and the deployment process.

6. Review the notes and application activity for the app manifest and any important details the developer may have added.

7. If a different App Engine Studio admin must review the deployment request, update the request assignee and select **Save**.

8. Approve or reject the request.

   - To move the application to the next deployment stage, select **Approve**.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- If the application is not ready or could potentially cause issues if it was moved on to the next deployment stage, select **Reject**. Add **Work notes** to identify the reasons for the rejection and any changes required to make the application ready for deployment.

Managing applications using AEMC

View information about your applications in the App Engine Studio App Engine Management Center (AEMC).

Before you begin

Role required: sn_app_eng_notify.app_engine_admin

Procedure

1. Navigate to **All > App Engine > Administration > App Engine Management Center**.

2. From the Home tab, select the **Applications** ( ) icon to open the Applications homepage.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Applications homepage

The cards and graphs described in the following table are displayed.

Applications tab cards and charts

Screen element	Description
All apps	Total number of apps in all instances.
Apps in production	Total number of apps in your production instance.
Apps with active deployment requests	Total number of apps that are in an active deployment request.
Apps in development	Total number of apps in your development instance.
Applications by department (Dev)	Number of applications in your development instance by department.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Screen element	Description
Applications by department (Prod)	Number of applications in your production instance by department.

You can add or remove the departments displayed in the two charts by selecting the department name in the chart key. In the following example, the Finance department has been deselected.

3. In the Applications section below the charts and cards, you can view records for individual applications being developed in your

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

organization. The total number of applications appears to the right of the **Applications** section heading.

4. You can show all apps in the Applications list or limit the list to only certain types of applications.

5. Select an application name from the list to view the app's deployment history and collaborators, if any.

6. View the app's usage data, deployment history, and collaborators, if any, by selecting an application name from the list.
   Application information

7. See a high-level view of the usage data for apps on production instances by selecting the **Usage** tab.
   The data includes the user count, insert count, and update count aggregated for the current month.

   - User count: The number of users who have accessed the application.
   - Insert count: The number of new records on tables in the application.
   - Update count: The number of records in the application that have been updated.

   Knowing usage data for your applications has several benefits.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Discover whether your app is being used. Are people using the app? Are they creating records? If not, consider updating or deleting the app.
- Investigate and fix problems with the app. Knowing when or how data was changed can narrow down where something went wrong.
- Determine whether you need to load balance your instance's processing power by seeing when there might be consistently higher traffic in your app.

In the User Experience Analytics dashboards section, see detailed data such as active users, sessions, and page views by selecting an experience. For more information about how to understand and use this data, see User Experience Analytics.

8. On the **Deployment history** tab, view the list of deployments your app has gone through.
   Knowing deployment history information has several benefits:
   - If an app is deployed to production, and there is a defect, you can quickly see when the app was deployed and track down the problem.
   - If an app is deployed multiple times, you can quickly track what's changed over multiple deployments.
   - If an app is deployed to production, you can quickly see who approved the app deployment.
9. View the collaborators for the app by selecting the **Collaborators** tab.

   All collaborators are stored on the Development instance.

   If you need to take quick action in the application to fix an issue or defect, you can quickly see who has permissions to make changes in an app and what those permissions are.

Managing developers using AEMC

View charts and cards in the App Engine Studio App Engine Management Center (AEMC) with information about any developer

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

in the App Engine User group or any developer with delegated development permission, and details about specific developers.

Before you begin

Role required: sn_app_eng_notify.app_engine_admin

Procedure

1. Navigate to **All > App Engine > Administration > App Engine Management Center**.

2. From the Home tab, click the **Developers** ( ) icon to open the Developers homepage.
   Developers homepage

   The **Total developers** card shows the total number of developers in the App Engine User group and who have a delegated development permission, regardless of whether they are currently active. The **Active developers** card shows the number of developers who have been active within the previous 30 days. The **Developers by department** chart shows the number of developers in each department.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

You can select specific departments in the key to add or remove departments from the chart. For example, in the following chart the Customer Support, IT, and Product Management departments have been deselected.

3. In the Developers section, below the charts and cards, you can view records for individual developers in your organization. Note that the total number of developers appears to the right of the **Developers** section heading:

   Developers 25

   The Developers section can be viewed in two ways:

   - In Grid view
   - In List view

- Manage developers in Grid view

  Grid view in the App Engine Studio App Engine Management Center (AEMC) presents each developer in a separate card that includes the developer's department, contact information, and a photograph (if used).

- Manage developers in List view

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

List view in the App Engine Studio App Engine Management Center (AEMC) presents all of your developers in a classic list format. Each record includes the developer's department, contact information, and the date when activity last occurred.

Manage developers in Grid view

Grid view in the App Engine Studio App Engine Management Center (AEMC) presents each developer in a separate card that includes the developer's department, contact information, and a photograph (if used).

Before you begin

Role required: sn_app_eng_notify.app_engine_admin

Procedure

1. Navigate to **All > App Engine > Administration > App Engine Management Center**.

2. From the Home tab, click the **Developers** ( ) icon to open the Developers homepage.

3. If it is not already selected, select the **Grid view** ( ) icon.
   Developers are displayed in a grid format with each developer occupying a separate card.
   Developers in Grid view

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: If you resize your browser window, the grid of developer cards also resizes to better accommodate the cards displayed. You can also specify the number of cards to display on the screen.

4. In a developer card, select **View details** to review apps created by the developer and a history of requests submitted by the developer.
5. In the **Apps** tab for the selected developer, select the **AEMC Application sys id**. Two additional tabs (Deployment history and Collaborators) appear.

   Note: The **Open in App Engine Studio** button also appears. Select this to view all details about the application. The App Engine Studio application opens in a new browser window.

6. In the **Deployment history** tab, select a deployment record to view its deployment request. You can approve, reject, or delete the deployment request from this screen. For more information, see Manage deployment requests.
7. Select the **Collaborators** tab to view developers who collaborated on this app. You can select any links displayed to view or modify the user records of collaborators, their development descriptors, email addresses, and departments.
8. Select the browser Back key to return to the Apps tab for the developer.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

9. Select the **Request History** tab to view all intake, collaboration, and deployment requests submitted by the developer that you are viewing.

10. Select any of the displayed records to view the history or to approve, reject, or delete the requests.

Manage developers in List view

List view in the App Engine Studio App Engine Management Center (AEMC) presents all of your developers in a classic list format. Each record includes the developer's department, contact information, and the date when activity last occurred.

Before you begin

Role required: sn_app_eng_notify.app_engine_admin

Procedure

1. Navigate to **All > App Engine > Administration > App Engine Management Center**.

2. From the Home tab, click the **Developers** ( ) icon to open the Developers homepage.

3. Select the **List view** ( ) icon. Developers are displayed in a classic list format.
   Developers in List view

Developers 11

Name	Email	Department	Title	City	Country code	Last activity on
Abel Tuter	abel.tuter@example.com	Product Management				
Abraham Lincoln	abraham.lincoln@example.com	(empty)				
System Administrator	admin@example.com	Finance	System Administrator			2022-06-16 16:41:52
Alejandra Prenatt	alejandra.prenatt@example.com	Product Management				
Alene Rabeck	alene.rabeck@example.com	Sales				
Annabelle Coger	annabelle.coger@example.com	Sales				

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Note: You can specify the number of records to display on the

screen.

4. To view and maintain the department record for a given developer, select the developer's department name.

5. Select a developer's name to view additional details, such as apps created by the developer and a history of requests.

6. In the **Apps** tab for the selected developer, select the **AEMC Application sys id**. Two additional tabs (Deployment history and Collaborators) appear.

   Note: The **Open in App Engine Studio** button also appears. Select this to view all details about the application. The App Engine Studio application opens in a new browser window.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

7. In the **Deployment history** tab, select a deployment record to view its deployment request. You can approve, reject, or delete the deployment request from this screen. For more information, see Manage deployment requests.
8. Select the **Collaborators** tab to view developers who collaborated on this app. You can select any links displayed to view or modify the user records of collaborators, their development descriptors, email addresses, and departments.
9. Select the browser Back key to return to the Apps tab for the developer.
10. Select the **Request History** tab to view all intake, collaboration, and deployment requests submitted by the developer that you are viewing.
11. Select any of the displayed records to view the history or to approve, reject, or delete the requests.

App Engine Studio reference

Reference topics provide additional information about the lists and forms that you use to configure and administer App Engine Studio (AES).

- AES glossary

  Learn about terms and concepts that are unique to App Engine Studio (AES).

- AES properties

  System properties control system behavior. The properties in this section are specific to the App Engine Studio (AES) application. You can access system properties for AES by navigating to **All > App Engine Studio > Configuration > System Properties**.

- Deployment Request form in the Pipelines and Deployments app

  The Deployment Request form is accessed from within the App Engine Studio (AES) Pipelines and Deployments app.

- Supported features and metadata in custom templates

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Custom templates in App Engine Studio (AES) support most features and metadata, including, but not limited to tables, forms, roles, ACLs, record producers, simple workspaces, flows, and actions.

- Unsupported tables in Workspace Builder

  Multiple tables are unavailable for use when you build a record page using Workspace Builder in App Engine Studio (AES).

AES glossary

Learn about terms and concepts that are unique to App Engine Studio (AES).

Application template

Provides predefined data, experience, logic and automation, and security to support a certain use case. For example, the Travel Request template provides application content for submitting and approving employee travel requests.

For more information on the available templates, see Available templates.

Logic and automation

Automate all the work in your application by adding logic and automation. For example, you can build a flow that sends a notification to the admin when someone makes a request.

Data

Information that is stored in your application. For example, employee phone numbers or office locations. You configure application data using tables.

Deployment request

Ticket to track the review of submitted applications. From the deployment request form, a reviewer can deploy the application to different environments, accept or reject an application, and send feedback to a developer.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Environment

Instance that you use for the developing, testing, or launching an application. To set up App Engine Studio, you must define environments in each of the instances that you're using as environments.

Experience

Graphical interface that your users interact with. For example, you can create a portal where users find information, submit requests, or complete business tasks. For more information on the available application experiences, see Add an application experience.

Pipeline

Configuration for deploying an application to different environments.

Security

Roles and access controls to limit who can use your application.

AES properties

System properties control system behavior. The properties in this section are specific to the App Engine Studio (AES) application. You can access system properties for AES by navigating to **All > App Engine Studio > Configuration > System Properties**.

sn_app_eng_studio.aes_admin_contact

Defines the contact email for the App Engine Studio administrator. The system sends deployment request notifications to each email address listed in this property. For more information, see Add users to the App Engine Admin group.

- Type: string
- Default value: none

sn_app_eng_studio.illustration_supported_content_types

Defines the supported content types for Taxonomy Category illustrations. This property is read-only.

- Type: string

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

- Default value: image/svg+xml

sn_app_intake.instance_can_provision_users

Determines if the current instance can support the provisioning of users. The users on this instance will be provisioned to another instance. For more information on provisioning users, see Configure Application Intake.

- Type: true | false
- Default value: false

Deployment Request form in the Pipelines and Deployments app

The Deployment Request form is accessed from within the App Engine Studio (AES) Pipelines and Deployments app.

To view the Deployment Request form, navigate to **All > App Engine > Pipelines and Deployments > Deployment Requests** and open a record.

Deployment Request form

Field	Description
Number	Number to track the deployment request.
Assignment group	Group to which the deployment request is assigned.
State	State of the deployment request. All states are automatically updated by the pipeline flows: **New** The submitted request is new. **In Review** The submitted request is ready for review.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
	Closed - Published The submitted request has been deployed to the production instance. **Closed - Rejected** The submitted request is not ready to publish. This state is enabled when you select **Reject** on the associated approval record at any time during the deployment process. The system then prompts you to include the reason why the application is rejected. These comments are then sent via email to the address included in the **Requestor Email** field on the **Requestor Details** related list. **Closed - Failed** This state is enabled when any of the pipeline flows or sub-flows fail for any reason. **Canceled** The submitted request has been canceled.
Assigned to	The user in the assignment group to whom this request is assigned.
Short description	A brief description for the request.
Release notes	Text that appears on the for this application after it is published.
App Details	
App name	Name of the submitted application.
App version	Version of the submitted application.
App Sys ID	System ID of the submitted application.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field	Description
App Development URL	Link to app in App Engine Studio.
Requestor Details	
Requestor First/ Last Name	First and last name of the user who requested to the app deployment.
Requestor User ID	Identifier of the user who requested to the app deployment.
Requestor Email	Email address of the user who requested to the app deployment.
Deployment Details	
Originating Environment	The instance of the originating environment.
Pipeline	Pipeline being used for deployment.
Current Environment	The target environment for the app.
Notes	
Additional comments (Customer visible)	Any additional comments to be shared with the customer, including the app manifest, which lists the number of each type of file in the app, and any ATF or instance scan results are shown.
Work notes	Internal notes.

When you have saved the form, additional tabs for approval-related information display. The AES admin can use these tabs to approve the request.

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Supported features and metadata in custom templates

Custom templates in App Engine Studio (AES) support most features and metadata, including, but not limited to tables, forms, roles, ACLs, record producers, simple workspaces, flows, and actions.

Custom templates can be created in two ways, either from scratch or using an existing scoped application as a starting point.

When you create a custom template, the pre-scan checks to make sure that everything in the application is supported. There are three possible outcomes.

- All items are supported: The custom template is created. All the objects are available in the custom template and in apps created from the custom template.
- Some items aren't supported: You can continue to create the template but a few items are not available in the custom template. There's no impact on the custom template or the apps created from the template.
- Some items are denied: You encounter an error message and cannot continue further until the errors are fixed. The author must change the app, if it was created from an existing app or the template, if it was created from scratch.

For more information on the template creation process, see Build a custom template.

Supported metadata

Label	Name
Access Control	sys_security_acl
Access Roles	sys_security_acl_role
Action Assignment	sys_declarative_action_assignment

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Action Category	sys_hub_category
Action Definition	sys_declarative_action_definition
Action Exclusion	sys_workspace_declarative_action_exclusion
Action Inputs	sys_hub_action_input
Action Instance	sys_hub_action_instance
Action item	sys_sg_write_back_action_item
Action Outputs	sys_hub_action_output
Action parameters mapping	sys_sg_action_param_map
Action Payload Definition	sys_declarative_action_payload_definition
Action Payload Field	sys_declarative_action_payload_field
Action Payload Mapping	sys_declarative_action_payload_mapping
Action Type	sys_hub_action_type_definition
Action Type Snapshot	sys_hub_action_type_snapshot
Activity Designer	wf_element_activity
Activity Stream Screen	sys_sg_activity_stream_screen
Activity Variables	wf_activity_variable
Allowed Error	sys_atf_whitelist
Analytics preview	sys_sg_chart

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Analytics section	sys_sg_chart_section
Answer	sys_wizard_answer
Application Information	sys_app_info
Application Menu	sys_app_application
Application Menu	sys_ui_application
Application Search Sources	m2m_search_context_config_search_source
ATF UI Component	sys_atf_ui_component
Audience	sys_ux_applicability
Basic Auth Configuration	sys_auth_profile_basic
Builder Template	sys_uib_template
Business Rule	sys_script
Card	sys_sg_view_config
Card element	sys_sg_view_config_element
Card element attribute	sys_sg_view_config_element_attribute
Card template	sys_sg_view_template
Card template element	sys_sg_view_template_slot
Card template element attribute	sys_sg_view_template_slot_attribute
Catalog Client Scripts	catalog_script_client
Catalog Item Available for	sc_cat_item_user_criteria_mtom

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Catalog Item Category	sc_cat_item_category
Catalog Item Not Available for	sc_cat_item_user_criteria_no_mtom
Catalog Items Catalog	sc_cat_item_catalog
Catalog UI Policy	catalog_ui_policy
Catalog UI Policy Action	catalog_ui_policy_action
Catalog Variable Set	io_set_item
Category Property	sys_properties_category_m2m
Chart Colors	sys_report_chart_color
Chart screen	sys_sg_chart_screen
Choice	sys_choice
Choice Set	sys_choice_set
Client Script	sys_script_client
Collection Home Page	sys_ui_mobile_home_page_collection_m2m_home_page
Color Definition	sys_report_color
Complex Object	sys_complex_object
Composite Data Broker	sys_ux_data_broker_composite
Contained Role	sys_user_role_contains
Cross scope privilege	sys_scope_privilege
Crypto Module Key Policies	sys_kmf_module_key_policy

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Custom Application	sys_app
Data Broker Scriptlet	sys_ux_data_broker_scriptlet
Data Broker Server Script	sys_ux_data_broker_transform
Data Item	sys_sg_data_item
Data parameter	sys_sg_item_parameter
Data Source	sys_data_source
Deleted Application File	sys_metadata_delete
Details screen	sys_sg_details_screen
Dictionary Entry	sys_dictionary
Dictionary Entry Override	sys_dictionary_override
Dynamic Filter Options	sys_filter_option_dynamic
Email Address Filter	sys_email_address_filter
Email Address Filter Domain	sys_email_address_filt_domain
Email Client Configuration	sys_email_client_configuration
Email Client From Address	sys_email_client_from_address
Email Client Template	sys_email_client_template
Email Filter	sys_email_filter
Email Layout	sys_email_layout
Email Reply Separator	sys_email_reply_separator
Email Script	sys_script_email

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Email Template	sysevent_email_template
Embedded Help Role Priority	sys_embedded_help_role
Empty State	sys_sg_empty_state
EVAM Data Filter	sys_ux_composite_data_filter
EVAM Data Source Filter	sys_ux_composite_datasource_filter
EVAM Datasource	sys_ux_composite_datasource
EVAM Datasource M2M	sys_ux_composite_data_m2m_datasource
EVAM Definition	sys_ux_composite_data
EVAM View Config	sys_ux_composite_data_template_predicate
EVAM View Config Action Assignment M2M	sys_ux_predicate_m2m_action_assignment
EVAM View Config Bundle	sys_ux_composite_data_template_predicate_bundle
EVAM View Config Bundle M2M	sys_ux_composite_data_m2m_predicate_bundle
Event Registration	sysevent_register
Extended Flow Logic Inputs	sys_hub_flow_logic_ext_input
Extended Step Input Variable	sys_hub_step_ext_input
Extended Step Output Variable	sys_hub_step_ext_output
Facet	sys_search_facet

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Field Label	sys_documentation
Field Map	sys_transform_entry
Filter Action	sys_email_filter_action
Fix Script	sys_script_fix
Flow	sys_hub_flow
Flow catalog variable	sys_flow_cat_variable
Flow Inputs	sys_hub_flow_input
Flow Logic Instance	sys_hub_flow_logic
Flow Outputs	sys_hub_flow_output
Flow Snapshot	sys_hub_flow_snapshot
Flow Stages	sys_hub_flow_stage
Flow Template Mapping	sys_app_flow_template_mapping
Flow Variables	sys_hub_flow_variable
Form	sys_ui_form
Form Header	sys_aw_form_header
Form Section	sys_ui_form_section
Form Section	sys_ui_section
Function	sys_sg_button
Function instance	sys_sg_button_instance
GraphQL Data Broker	sys_ux_data_broker_graphql

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Guided Setup Change Log	gsw_change_log
Guided Setup Content	gsw_content
Guided Setup Content Status	gsw_status_of_content
Guided Setup Group	gsw_content_group
Guided Setup Information	gsw_content_information
Highlighted Value	sys_highlighted_value
Highlighted Value Condition	sys_highlighted_value_condition
Home Page Section	sys_ui_mobile_home_page_m2m_home_page_section
Home Page Section Module	sys_ui_mobile_home_page_section_m2m_home_page_module
HTTP Headers	sys_rest_message_fn_headers
HTTP Headers	sys_rest_message_headers
HTTP Method	sys_rest_message_fn
HTTP Query Parameters	sys_rest_message_fn_param_defs
Icon	sys_sg_icon
Icon section destination launcher	sys_sg_navigation_section_destination_applet_launcher
Images	db_image
Inbound Email Actions	sysevent_in_email_action
Indexes	sys_index
Input Detail	sys_app_template_input_detail

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Input Variables	atf_input_variable
Launcher header title	sys_sg_applet_launcher_header
Launcher screen	sys_sg_applet_launcher
Launcher section mapping	sys_sg_applet_launcher_m2m_section
Launcher tab	sys_sg_applet_launcher_tab
Layout Applicability	sys_ux_applicability_m2m_layout
Legacy card	sys_sg_item_view
Legacy icon section	sys_sg_icon_section
List	sys_ui_list
List Applicability	sys_ux_applicability_m2m_list
List Control	sys_ui_list_control
List item config	sys_sg_master_item
List screen	sys_sg_list_screen
List stream	sys_sg_item_stream
M2m Action Assig Ux Action Config	sys_ux_m2m_action_assignment_action_config
M2m Workspace Header Ux Header Config	sys_ux_m2m_workspace_header_ux_header_config
Message	sys_ui_message
Metadata Snapshot	sys_metadata_link
Mobile App Shortcut Item	sys_ui_mobile_app_shortcut_item

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Mobile Home Page	sys_ui_mobile_home_page
Mobile Home Page Collection	sys_ui_mobile_home_page_collection
Mobile Home Page Module	sys_ui_mobile_home_page_module
Mobile Home Page Section	sys_ui_mobile_home_page_section
Mobile Offline Result	sys_ui_mobile_offline_result
Mobile Theme	sys_ui_mobile_theme
Mobile UI Rule	sys_sg_ui_rule
Mobile UI Rule Action	sys_sg_ui_rule_action
Mobile Visualization	sys_ui_mobile_visualization
Modified Record	sys_atf_modified_record
Modified Record	sys_atf_modified_record_m2m
Module	sys_app_module
Module	sys_ui_module
Mutual Exclusion Rule	sys_atf_mutual_exclusion_rule
Navigation Tab Map	sys_sg_navigation_tab_map
Notification	sysevent_email_action
Notification	sys_notification
Notification Category	sys_notification_category
Notification Common Content	sys_notification_common_content

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Notification Route	notification_route
Notification Workspace Content	sys_notification_workspace_content
Number	sys_number
Output Variables	atf_output_variable
Parameter Set Run	sys_atf_parameter_run
Parameter Variable	sys_atf_parameter_variable
Parameterized Test Result	sys_atf_parameter_result
Payload	sys_app_scan_payload
Payload Loader Rule	sys_app_payload_loader_rule
Payload Rule	sys_app_payload_unloader_rule
Process Flow Trigger Plan	sys_flow_trigger_plan
Push Notification	sys_sg_push_notification
Push Notification Installation	sys_push_notif_app_install
Push Notification Message	sys_push_notif_msg
Push Notification Message Content	sys_push_notif_msg_content
Question Choice	question_choice
Quick actions menu	sys_sg_alp_quick_action_map
Recipient Qualifier	sys_recipient_qualifier
Record Producer	sc_cat_item_producer
Record screen	sys_sg_form_screen

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Record screen segment	sys_sg_form_segment
Record section	sys_sg_item_section
Redirection destination fields	sys_sg_redirect_dest_field
Related List	sys_ui_related_list
Related lists mapping	sys_sg_related_list_map
Related lists screen	sys_sg_related_lists_screen
Relationship	sys_relationship
Relationship Data Item	sys_sg_relationship_data_item
Remembered Value	sys_atf_remembered_values
Report	sys_report
Report Users and Groups	sys_report_users_groups
REST Data Broker	sys_ux_data_broker_rest
REST Message	sys_rest_message
Role	sys_user_role
Route Configuration	sys_ux_dynamic_route_config
Route Mapping	sys_ux_dynamic_route_mapping
Scheduled Script Execution	sysauto_script
Scheduled Suite Run	sys_atf_schedule_run
Screen Applicability	sys_ux_applicability_m2m_screen
Screen fields	sys_sg_screen_field

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Screen parameters mapping	sys_sg_screen_param_map
Screen segment	sys_sg_item_stream_segment
Screen tab	sys_sg_applet_tab
Screen UI Policy	sys_sg_ui_policy
Script Include	sys_script_include
Scripted REST API	sys_ws_definition
Scripted REST Query Parameter	sys_ws_query_parameter
Scripted REST Query Parameter Association	sys_ws_query_parameter_map
Scripted REST Resource	sys_ws_operation
Search Application Configuration	sys_search_context_config
Search config	sys_sg_global_search
Search M2M item config	sys_sg_global_search_m2m_master_item
Search Source	sys_search_source
Secondary Values	sys_aw_form_header_secondary_values
Snapshot	sys_atf_snapshot
Spoke Configuration	sys_app_template_spoke_configuration
Stage Default	wf_stage_default
Step Instance	sys_hub_step_instance

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Step Result	sys_atf_test_result_step
Step Result Transaction	sys_atf_transaction_mtom
Stream M2M item config	sys_sg_item_stream_m2m_master_item
Stream M2M segment	sys_sg_item_stream_m2m_segment
Sub Flow instance	sys_hub_sub_flow_instance
Subflow Instannce Inputs	sys_hub_sub_flow_instance_inputs
Subtemplate	sys_app_subtemplate
Suggestion Reader and Suggestion Reader Group Relations	m2m_sys_suggestion_reader_sys_suggestion_reader_group
Suggestion Reader Group	sys_suggestion_reader_group
Suite Schedule	sys_atf_schedule
Sys Ux M2m Action Layout Item	sys_ux_m2m_action_layout_item
Sys Ux M2m Highlighted Value Config	sys_ux_m2m_highlighted_value_config
Sys Ux M2m Workspace View Rule Ux View Rule Config	sys_ux_m2m_workspace_view_rule_ux_view_rule_config
System Property	sys_properties
System Property Category	sys_properties_category
Table	sys_db_object
Table Subscription Configuration	ua_table_licensing_config
Table Transform Map	sys_transform_map

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Template	sys_app_template
Template Dependency	sys_app_template_dependency
Template Dependency Definition	sys_app_template_dependency_definition
Template Details	sys_app_template_detail
Template Function Type	sys_app_template_function_type
Template Input Variable	sys_app_template_input_var
Template Manifest	sys_app_template_manifest
Template Output Variable	sys_app_template_output_var
Template Page	sys_app_template_page
Template Page Configuration	sys_app_template_page_configuration
Template Wizard	sys_app_template_wizard
Test	sys_atf_test
Test Result Item	sys_atf_test_result_item
Test Results	sys_atf_test_result
Test Run Data Set	sys_atf_parameter_set
Test Runner	sys_atf_agent
Test Step	sys_atf_step
Test Step Config	sys_atf_step_config
Test Step Config Category	sys_atf_step_config_category

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Test Step Environment	sys_atf_step_env
Test Suite	sys_atf_test_suite
Test Suite Result	sys_atf_test_suite_result
Test Suite Test	sys_atf_test_suite_test
Test Template	sys_atf_test_template
Test Variable	sys_atf_variable
Trigger Execution	sys_flow_trigger_auto_script
Trigger Instance	sys_hub_trigger_instance
UI Action	sys_ui_action
UI Action Group	sys_aw_form_uiaction_group
UI Action Role	sys_ui_action_role
UI Formatter	sys_ui_formatter
UI parameter	sys_sg_ui_parameter
UI Policy	sys_ui_policy
UI Policy Action	sys_ui_policy_action
UI Policy Rule	sys_sg_ui_policy_rule
UI View	sys_ui_view
UIB Screen Test Values	sys_uib_screen_test_values
UX Actions Configuration	sys_ux_action_config
UX Add-on Event Mapping	sys_ux_addon_event_mapping

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
UX App Configuration	sys_ux_app_config
UX App Route	sys_ux_app_route
UX App Theme	m2m_app_config_theme
UX Application	sys_ux_page_registry
UX Application Category M2M	sys_ux_registry_m2m_category
UX Asset	sys_ux_lib_asset
UX Client Script	sys_ux_client_script
UX Client Script Include	sys_ux_client_script_include
UX Custom Content Extension	sys_ux_custom_content_root_elem
UX Dashboard Route Permission	sys_ux_route_permission
UX Event	sys_ux_event
UX Form Actions	sys_ux_form_action
UX Form Actions Layout	sys_ux_form_action_layout
UX Form Actions Layout Group	sys_ux_form_action_layout_group
UX Form Actions Layout Item	sys_ux_form_action_layout_item
UX Header Configuration	sys_ux_header_config
UX Highlighted Value Configuration	sys_ux_highlighted_value_config
UX List	sys_ux_list
UX List Category	sys_ux_list_category
UX List Menu Configuration	sys_ux_list_menu_config

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
UX Macroponent Definition	sys_ux_macroponent
UX Page Element Permissions	sys_ux_page_element_m2m_role
UX Page Property	sys_ux_page_property
UX Ribbon Configuration	sys_ux_ribbon_config
UX Screen	sys_ux_screen
UX Screen Collection	sys_ux_screen_type
UX Screen Condition	sys_ux_screen_condition
UX Theme	sys_ux_theme
UX Theme Asset	sys_ux_theme_asset
UX Theme Assets	sys_ux_theme_m2m_asset
UX View Rules Configuration	sys_ux_view_rules_configuration
Variable	item_option_new
Variable	sys_app_scan_variable
Variable Set	item_option_new_set
Variable Substitutions	sys_rest_message_fn_parameters
Variable Type	sys_app_scan_variable_type
View Rule	sysrule_view_workspace
View Template	sys_ux_composite_data_template
Workflow	wf_workflow
Workflow Activity Definition	wf_activity_definition

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Workflow Instance	wf_workflow_instance
Workflow SC Variable	wf_variable
Workflow Schedule	wf_workflow_schedule
Workflow UI Policy	wf_ui_policy
Workspace	sys_aw_master_config
Workspace Global Search Configuration	sys_aw_global_search_config
Workspace List	sys_aw_list
Workspace List Category	sys_aw_list_category
Workspace Module	sys_aw_module

Skipped features and metadata

The template creation process only skips items that should not impact the template or apps created from the template.

***** Denotes a wildcard, meaning the name is the starting point, and other words or letters may follow the listed name.

Label	Name
Answers	sys_wizard_answer
Automated Test Framework Files	atf*
Automated Test Framework Files	sys_atf*
Crypto Module Key Policies	sys_kmf_module_key_policy
Data Sources	sys_data_source

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Label	Name
Deleted Application Files	sys_metadata_delete
Field Maps	sys_transform_entry
Guided Setup	gsw*
Metadata Snapshots	sys_metadata_link
Related List Mappings	sys_sg_related_list_map
Related List Screens	sys_sg_related_lists_screen
ServiceNow Classic Mobile Customizations	sys_ui_mobile_*
Table Subscription Configurations	ua_table_licensing_config
Table Transform Maps	sys_transform_map
UI Action Groups	sys_aw_form_uiaction_group

Unsupported tables in Workspace Builder

Multiple tables are unavailable for use when you build a record page using Workspace Builder in App Engine Studio (AES).

Unsupported tables in Workspace Builder

Label	Name
Access Control	sys_security_acl
Access Roles	sys_security_acl_role
Action	sn_ex_sp_action
Action Assignment	sys_declarative_action_assignment
Action Binding	sys_ux_page_action_binding

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Action Category	sys_hub_category
Action Definition	sys_declarative_action_definition
Action Exclusion	sys_workspace_declarative_action_exclusion
Action group	sn_ex_sp_action_group
Action group M2M	sn_ex_sp_m2m_action_group
Action item	sys_sg_write_back_action_item
Action Model Definition	sys_declarative_action_model_definition
Action parameter	sn_ex_sp_action_parameter
Action parameters mapping	sys_sg_action_param_map
Action Payload Definition	sys_declarative_action_payload_definition
Action Payload Mapping	sys_declarative_action_payload_mapping
Action step	sys_sg_write_back_action_step
Action Step Definition	sys_flow_step_definition
Action Type	sn_ex_sp_action_type
Action Type Base	sys_hub_action_type_base
Actionable Content	sys_notification_actionable_content
Active Cluster Transactions	v_cluster_transaction
Active Transactions	v_transaction
Activity Configuration	sn_ex_sp_activity_configuration

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Activity Configuration Detail	sn_ex_sp_activity_config_detail
Activity Context	sn_actsub_activity_context
Activity Context Group	sn_actsub_m2m_context_subobject
Activity Context Type	sn_actsub_source_context_mapping
Activity Definition	sys_pd_activity_definition
Activity Event Filter	sys_activity_event_filter
Activity Facet	sn_actsub_facet
Activity Fanout	sn_actsub_activity_fanout
Activity Group	sn_actsub_subscribable_object
Activity Group Type	sn_actsub_m2m_subobject_activitytype
Activity Pattern	ssa_activity_pattern
Activity Start Rule Definition	sys_pd_activity_start_rule_definition
Activity Type	sys_pd_activity_type
Activity Type	sn_actsub_activity_type
Activity Type Attributes	sn_actsub_atype_attributes
Activity Type Notification Preference	sn_actsub_atype_notif_pref
Activity Type Template	sn_actsub_activitytype_template
Activity Type Template Field	sn_actsub_activitytype_template_field
Adapter Card	sys_cs_adapter_card

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Adapter Card Template	sys_cs_adapter_card_template
Adapter Rule	sys_adapter_rule
Add Field	v_ws_field_creator
Additional Notification Recipients	sys_notification_recipient
Advanced Solution Setting	ml_advanced_solution_settings
Agent Assist Recommendation	agent_assist_recommendation
AI Search ACL Overrides	ais_acl_overrides
AI Search Child Table	ais_child_table
AI Search Dictionary	ais_dictionary
AI Search Dictionary Term	ais_dictionary_term
AI Search Genius Result Configuration	ais_genius_result_configuration
AI Search Genius Result Configuration NLU Model Mapping	ais_genius_result_configuration_sys_nlu_model_m2m
AI Search Indexed Source	ais_datasource
AI Search Indexed Source Attribute	ais_datasource_attribute
AI Search Indexed Source Field Attribute	ais_datasource_field_attribute
AI Search Results Action Configuration	sp_ai_search_results_action_config
AI Search Results Improvement Rule	ais_rule
AI Search Results Improvement Rule Action	ais_rule_action

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

AI Search Results Improvement Rule Condition Builder Values	v_ais_result_improvement_rule_condition_builder_values
AI Search Search Profile	ais_search_profile
AI Search Search Profile Dictionary Mapping	ais_search_profile_ais_dictionary_m2m
AI Search Search Profile Genius Result Configuration Mapping	ais_search_profile_ais_genius_result_configuration_m2m
AI Search Search Profile Search Source Mapping	ais_search_profile_ais_search_source_m2m
AI Search Search Source	ais_search_source
AJAX Script	sys_script_ajax
Allowed Error	sys_atf_whitelist
Alternate Rotation Schedule	v_alternate_rotation
AMB Message Processor	sys_amb_processor
Analytics preview	sys_sg_chart
Angular ng-template	sp_ng_template
Angular Providers	m2m_sp_ng_pro_sp_widget
Angular Providers 2	m2m_sp_ng_pro_sp_ng_pro
Announcement	announcement
Announcement Consumer Type	announcement_consumer_type
Announcement Style	announcement_style
Answer	sys_wizard_answer
App Collaboration Descriptor	sys_appcollab_descriptor

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

App Collaboration Descriptor Permission	sys_appcollab_permission_m2m
App Config	sn_ace_app_config
App Template	sn_appcreator_app_template
Application	sn_admin_center_application
Application Administration ACL Inheritance	sys_scoped_admin_acl_inheritance
Application File	sys_metadata
Application Information	sys_app_info
Application License Definition	sys_app_license_defn
Application Menu	sys_ui_application
Application Menu	sys_app_application
Application Registries	oauth_entity
Application Search Sources	m2m_search_context_config_search_source
Approval	sc_ic_aprvl_defn_staging
Approval Definition	sc_ic_aprvl_defn
Approval Type	sc_ic_aprvl_type_defn_staging
Approval Type Definition	sc_ic_aprvl_type_defn
Approving Groups	sc_cat_dt_app_group
Approving Groups	sc_cat_item_app_group
Approving Users	sc_cat_item_app_user
Approving Users	sc_cat_dt_app_user

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Archive Destroy Rule	sys_archive_destroy
Archive Related Records	sys_archive_related
Archive Rule	sys_archive
Assessment Metric	asmt_metric
Assessment Metric Definition	asmt_metric_definition
Assessment Metric Template	asmt_template
Assessment Metric Type	asmt_metric_type
Assessment Template Definition	asmt_template_definition
Assessment X Category Matrix	asmt_m2m_xcategory_matrix
Assessment Y Category Matrix	asmt_m2m_ycategory_matrix
Asset CI Field Mapping	alm_asset_ci_field_mapping
Asset CI Hardware State Mapping	alm_hardware_state_mapping
Asset CI Install Status Mapping	alm_asset_ci_state_mapping
Attachment Extractor	attachment_extractor
Audience	sys_ux_applicability
Audio	db_audio
Auth Algorithm	auth_algorithm
Auth Scopes	oauth_entity_auth_scope_mappin g
Authentication Configuration	sys_auth_profile
Authentication Scope	sys_auth_scope
Auto Flush	sys_auth_flush

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Available at Locations	sc_category_location_mtom
Available at Locations	sc_cat_item_location_mtom
Available for Companies	sc_cat_item_company_mtom
Available for Companies	sc_category_company_mtom
Available for Departments	sc_cat_item_dept_mtom
Available for Departments	sc_category_dept_mtom
Available for Groups	sc_cat_item_group_mtom
Available for Groups	sc_category_group_mtom
Available For State Transition Model	sttrm_model_user_criteria_read_mtom
Available for Subscribers	sc_cat_item_subscribe_mtom
Available for Users	sc_cat_item_user_mtom
Available for Users	sc_category_user_mtom
Available Search Resource	v_cxs_search_resource
Available Search Resource	cxs_search_resource
Azure Alert Rule	azure_alert_rule
Badge Count	sys_sg_badge_count
Banner Step	expert_banner_step
Base Theme	sys_ui_base_theme
Base UI Configuration	cxs_ui_config_base
Benchmark Indicator	sn_bm_common_indicator
Benchmark Indicator Category	sn_bm_common_indicator_category

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Benchmark Indicator Group	sn_bm_common_indicator_group
Branding	sys_cs_branding_setup
Breakdown	pa_breakdowns
Breakdown Mapping	pa_breakdown_mappings
Breakdown matrix exclusions	pa_indicator_breakdown_excl
Breakdown Relation	pa_breakdown_relations
Breakdown Source	pa_dimensions
Breakdown Widget Indicator	pa_m2m_widget_indicators
BSM Related Item	bsm_related_item
Bubble Chart	asmt_bubble_chart
Bucket	pa_buckets
Bucket group	pa_bucket_groups
Builder	sn_cb_builder
Builder Component	sys_uib_toolbox_component
Builder Component Group	sys_uib_toolbox_group
Builder Template	sys_uib_template
Builder Template Type	sys_uib_template_type
Business Calendar	business_calendar
Business Calendar Entry Name	business_calendar_span_name
Business Calendar Filter Option	business_calendar_filter_option
Business Calendar Group	business_calendar_group

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Business Calendar Group Relationship	m2m_business_calendar_group_business_calendars
Business Objective	sn_admin_center_business_objective
Business Rule	sys_script
Business Rule Exclusion List	cmdb_business_rule_exclusions
Button Attribute	sys_sg_button_attribute
Button Attribute Name	sys_sg_button_attribute_name
Calendar	sys_calendar
Can write State Transition Model	sttrm_model_user_criteria_write_mtom
Card	sys_sg_view_config
Card element	sys_sg_view_config_element
Card element attribute	sys_sg_view_config_element_attribute
Card element attribute type	sys_sg_view_element_attribute_name
Card sizes	sys_sg_card_size
Card template	sys_sg_view_template
Card template element	sys_sg_view_template_slot
Card template element attribute	sys_sg_view_template_slot_attribute
Carousel Slide	sp_carousel_slide
Cart Layout	sc_layout
Cascading Filter	sys_ui_hp_cascading_filter

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Catalog	sc_catalog
Catalog (App Use)	v_st_sc_catalog
Catalog Item	sc_cat_item
Catalog Item Available for	sc_cat_item_user_criteria_mtom
Catalog Item Category	sc_cat_item_category
Catalog Item Not Available for	sc_cat_item_user_criteria_no_mtom
Catalog Item(App Use)	v_st_sc_cat_item
Catalog Items Catalog	sc_cat_item_catalog
Catalog Portal Page	sc_catalog_view_mtom
Catalog Renderer	sc_renderer
Catalog Site	sc_catalog_site
Catalog Template	sc_template
Catalog Template Detail	sc_template_detail
Catalog Variable Set	io_set_delivery_plan
Catalog Variable Set	io_set_item
Catalog Wizard	sc_wizard
Catalog Wizard Feedback	sc_wizard_feedback
Catalog Wizard Question	sc_wizard_question
Catalog Wizard Section	sc_wizard_section
Catalog Wizard Step	sc_wizard_step
Category	sc_category

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Category	sn_diagram_builder_category
Category Available for	sc_category_user_criteria_mtom
Category Hierarchy(App Use)	v_st_sc_category
Category Not Available for	sc_category_user_criteria_no_mtom
Category Property	sys_properties_category_m2m
CB Topic Language	sys_cb_topic_language
Chain Summary	ts_chain_summary
Change Schedule Definition Core	chg_soc_definition_core
Channel Proxy App Installation	sys_proxy_app
Channel User ID Mapping	sys_cs_channel_user_id_mapping
Chart color scheme	pa_chart_color_schemes
Chart Colors	sys_report_chart_color
Chat Setup	sys_cs_live_agent_setup
Chat Surveys	sys_cs_survey
Check	scan_check
Child	sc_cat_item_children
Children Slot	sys_ux_children_slot
Choice Set	sys_choice_set
CI Filters	map_filters
CI Identifier	ci_identifier
CI Relation Filter	cmdb_rel_filter

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

CI Relationship Rollup	cmdb_rel_rollup
CI Relationship Type	cmdb_rel_type
CI Relationship Type Rule Definition	cmdb_rel_type_rule_definitions
CI/Group Relationship Type	cmdb_rel_group_type
CI/User Relationship Type	cmdb_rel_user_type
CIM Query	discovery_probes_cim_query
Classic Mobile Layout Categories	sc_mobile_layout_cats_mtom
Classic Notification Channels	sys_classic_notification_channels
Classification	discovery_classy
Classification Criteria	discovery_class_criteria
Classified Dictionary Entries	m2m_dictionary_dataclass
Client Extension Instance	sys_client_extension_instance
Client Extension Point	sys_client_extension_point
Client Script	sys_script_client
Clone Cleanup Script	clone_cleanup_script
Clone Data Preserver	clone_data_preserver
Clone Exclude Table	clone_data_exclude
Clone Profile	clone_profile
Clone Profile Cleanup Scripts	clone_profile_cleanup_scripts
Clone Profile Exclusions	clone_profile_exclusions
Clone Profile Preservers	clone_profile_preservers
Cloud Mgmt Region	cloud_mgmt_region

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Cloud Public IP Configuration	cloud_public_ip_config
Cluster Nodes	v_cluster_nodes
CMDB Categories	cmdb_categories
CMDB Class Information	cmdb_class_info
CMDB Class User Preference	cmdb_class_user_preference
CMDB Data Management Policy	cmdb_data_management_policy
CMDB Dependent CI Class Exclusion	cmdb_dependent_ci_class_exclusion
CMDB Duplicate Remediator Default Related Items	cmdb_dedup_default_rel_item
CMDB Health Configuration	cmdb_health_config
CMDB Health Group Scorecard Threshold	cmdb_health_scorecard_group_threshold
CMDB Health Metric	cmdb_health_metric
CMDB Health Metric Preference	cmdb_health_metric_pref
CMDB Health Orphan Rule	cmdb_health_orphan_rule
CMDB Health Scorecard Threshold	cmdb_health_scorecard_threshold
CMDB Health Staleness Rule	cmdb_health_staleness_rule
CMDB Integration Studio Application	cmdb_inst_application
CMDB Metadata Containment Rules	cmdb_metadata_containment
CMDB Metadata Hosting Rules	cmdb_metadata_hosting
CMDB Metadata Reference Rules	cmdb_metadata_reference

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

CMDB MultiSource Column Metadata	cmdb_multisource_column_metadata
CMDB Multisource Queries	cmdb_multisource_query
CMDB Policy Type	cmdb_policy_type
CMDB Policy Type Categories	cmdb_policy_type_categories
CMDB Recommended Field	cmdb_recommended_fields
CMDB Remediation Rule	remediation_rule
CMDB View	cmdb_view
CMDB View Instance	cmdb_view_instance
Code Search Group	sn_codesearch_search_group
Code Search Table	sn_codesearch_table
Collection Home Page	sys_ui_mobile_home_page_collection_m2m_home_page
Color Definition	sys_report_color
Column	sc_ic_column
Column	sp_column
Column mappings	sys_rest_insert_multiple_column_mapping
Command	sys_cs_contextual_action
Complex Object	sys_complex_object
Complex Object Output Strategy	sys_complex_object_output_strategy
Component Action	sys_ux_lib_component_action
Component Property	sys_ux_lib_component_prop

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Composite Dataset	sys_ux_query_variable
Condition	clm_condition_checker
Condition Checks	clm_condition_check
Conditional Definition	sn_rf_conditional_definition
Configuration	ecc_queue_config
Configuration Page	sys_cs_adapter_configuration_page
Connect Action	connect_action
Connection & Credential Aliases	sys_alias
Connection & Credential Templates	sys_alias_templates
Connector Port	sn_diagram_builder_connector_port
Consumer Channel	sys_cs_consumer_channel
Contained Role	sys_user_role_contains
Container	sp_container
Content Block	sn_ace_content_block
Content Block	content_block
Content Block Type	sn_ace_content_block_type
Content section M2M stream container	sys_sg_content_section_m2m_item_stream_container
Content Type	content_type
Content variable	sp_metatag_variable
Context	sys_cs_virtual_agent_context

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Context Menu	sys_ui_context_menu
Context Related Record Definition	sn_m2m_context_related_record_defn
Context Topic	sys_cs_context_topic
Control	sys_cs_control
Conversation Server Configuration	sys_cs_configuration
Conversation Server Configuration Page	sys_cs_configuration_page
Conversation Server Field Script Validator	sys_cs_field_script_validator
Cool Thing	cool_thing
CORS Rule	sys_cors_rule
Count Gauges	sys_gauge_counts
Create Field	v_field_creator
Create Table	v_table_creator
Create Web Service	v_ws_creator
Credential Type Metadata	credential_type_metadata
Cross scope privilege	sys_scope_privilege
CS Topic Language	sys_cs_topic_language
CSM Field Map	csm_field_map
CSM Table Map	csm_table_map
CSS Include	sp_css_include
Custom Adapter Configuration	sys_cs_custom_adapter_config

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Custom Adapter Default Configuration	sys_cs_custom_adapter_default_c onfig
Custom Adapter Property	sys_cs_custom_adapter_property
Custom Configuration Input	sys_uib_config_component
Custom Control Definition	sys_cs_custom_control_definition
Custom Control Execution Plan	sys_cs_custom_control_execution_ plan
Custom Greetings and Setup	sys_cs_context_profile
Custom map config	sys_sg_custom_map_config
Custom Map Provider	sys_sg_custom_map_provider
Custom Metric	asmt_custom_metric
Customer Size Bucket	sn_bm_common_size_bucket
Customer Uploads	v_customer_uploads
Dashboard	pa_dashboards
Dashboard Breakdown Source	pa_m2m_dashboard_sources
Dashboard Group	pa_dashboards_group
Dashboard Layout	sys_dashboard
Dashboard Permissions	pa_dashboards_permissions
Dashboard Placement	sys_dashboard_detail
Dashboard Tab	pa_m2m_dashboard_tabs
Data Broker	sys_ux_data_broker
Data Classification	data_classification
Data Definition	sys_flow_data_definition

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Data import	sn_ihub_integration_instance
Data Item	sys_sg_data_item
Data Item Function	sys_sg_function
Data Lookup Definitions	dl_definition
Data Lookup Matcher Rules	dl_matcher
Data parameter	sys_sg_item_parameter
Data Policy	sys_data_policy2
Data Policy Rule	sys_data_policy_rule
Data Source	sys_data_source
Data Source Precedence	cmdb_datasource_precedence
Data Source Staleness Definition	cmdb_datasource_staleness
Database Indexes	v_index_creator
Database Indexes	v_db_index
Database Trigger	v_db_trigger
Database View	sys_db_view
Datum Ownership	sc_dp_datum_task
Day	sys_cal_day
Decision	sys_decision_question
Decision Condition	sn_decision_table_decision_condition
Decision Matrix	asmt_decision_matrix
Decision Table	sys_decision

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Decision Table Multiple Result	sys_decision_multi_result
Declarative Action Render Mode	sys_declarative_action_render_mode
Default Form Section	sys_aw_form_default_section
Deflection Configuration	ssa_deflection_configuration
Deflection Pattern	ssa_deflection_pattern
Deleted Application File	sys_metadata_delete
Deleted Application File Order	v_metadata_delete_order
Dependency CSS Includes	m2m_sp_dependency_css_include
Dependency JS Includes	m2m_sp_dependency_js_include
Dependency Types	ngbsm_script
Dependent CI Relations Evaluation Config	cmdb_dependent_ci_extra_rels_config
Deployment Extension Container	svc_extension
Deployment Extension Definition	svc_extension_definition
Design Access	sys_scope_design_access
Development Permission	sys_development_permission
Development Permission Set	sys_development_permission_set
Diagnostic	pa_diagnostic
Diagram Action	sn_diagram_builder_diagram_action
Diagram Action Argument	sn_diagram_builder_diagram_action_argument

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Diagram Action Dependency	sn_diagram_builder_diagram_action_dependency
Diagram Configuration	sn_diagram_builder_configuration
Diagram Instances	sn_diagram_builder_instance
Diagram Templates	sn_diagram_builder_diagram_template
Diagrammer Actions	diagrammer_action
Dictionary Attribute	sys_schema_attribute
Dictionary Entry	sys_dictionary
Dictionary Entry Override	sys_dictionary_override
Digest Interval	sys_email_digest_interval
Discovery IP Range	discovery_range_item
Discovery Port Probe	discovery_port_probe
Discovery Range Set	discovery_range
Document Meta for ts_v4_12_	ts_v4_12_doc
Document Meta for ts_v4_16_	ts_v4_16_doc
Document Meta for ts_v4_19_	ts_v4_19_doc
Document Meta for ts_v4_23_	ts_v4_23_doc
Document Title	sys_ui_title
Dynamic Filter Options	sys_filter_option_dynamic
Dynamic IRE Feature	cmdb_dynamic_ire_feature
Dynamic IRE Filter Condition	cmdb_dynamic_ire_filter_condition
Dynamic IRE Model	cmdb_dynamic_ire_model

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Dynamic page title variables	sp_page_title_variable
Dynamic Reconciliation Definition	cmdb_dynamic_reconciliation_definition
Edit Field	v_field_editor
Edit Table	v_table_editor
Edit Web Service	v_ws_editor
Edit Web Service Field	v_ws_field_editor
Editor Macro	syntax_editor_macro
Element Base	ssa_element_base
Elements Filter	pa_filters
Elements List	pa_dimensions_acl_elements
Elements Security List	pa_dimensions_acl
Email Access Restriction	email_access_restriction
Email Address Filter	sys_email_address_filter
Email Address Filter Domain	sys_email_address_filt_domain
Email Address Filter Exception	sys_email_address_filt_except
Email Client Configuration	sys_email_client_configuration
Email Client From Address	sys_email_client_from_address
Email Client Template	sys_email_client_template
Email Configuration	cxs_table_email_config
Email Filter	sys_email_filter
Email Layout	sys_email_layout

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Email Reply Separator	sys_email_reply_separator
Email Script	sys_script_email
Email Template	sysevent_email_template
Embed Object	sys_embed_object
Embedded Help	sys_embedded_help_content
Embedded Help Qualifier	sys_embedded_help_qualifier
Embedded Help Role Priority	sys_embedded_help_role
Embedded List Control	sys_ui_list_control_embedded
Employee Center Footer	sn_ex_sp_footer
Employee Center Footer Menu	sn_ex_sp_footer_menu
Empty State	sys_sg_empty_state
Environment	sn_pipeline_environment
Escalation Interval	sysrule_escalate_interval
Evaluation type	sn_rf_evaluation_type
EVAM Data Filter	sys_ux_composite_data_filter
EVAM Data Source Filter	sys_ux_composite_datasource_filter
EVAM Datasource	sys_ux_composite_datasource
EVAM Datasource M2M	sys_ux_composite_data_m2m_datasource
EVAM Definition	sys_ux_composite_data
EVAM View Config	sys_ux_composite_data_template_predicate

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

EVAM View Config Action Assignment M2M	sys_ux_predicate_m2m_action_assignment
EVAM View Config Bundle	sys_ux_composite_data_template_predicate_bundle
EVAM View Config Bundle M2M	sys_ux_composite_data_m2m_predicate_bundle
Event Registration	sysevent_register
Excluded channel	sys_cs_contextual_action_excluded_channel
Excluded Classes	ml_excluded_classes
Execution Plan	sc_cat_item_delivery_plan
Execution Plan Task	sc_cat_item_delivery_task
Experience Category	sys_ux_experience_category
Export Definition	sys_export_definition
Export Set	sys_export_set
Export Target	sys_export_target
Expression Cache	v_expression_cache
Extension Instance	sys_extension_instance
Extension Point	sys_extension_point
External Dependencies	sc_cat_item_dt_ext_mtom
Facet	sys_search_facet
Facet	sp_search_facet
Favorite Content Configuration	sn_ex_sp_favorite_content_config
Favorite Content Type	sn_ex_sp_favorite_content_type

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Field class	sys_glide_object
Field Label	sys_documentation
Field Map	sys_impex_entry
Field Map	sys_transform_entry
Field Setter	expert_panel_t_fields
File Descendant	v_metadata_descendant
File Load Order	v_file_load_order
File Parent	v_metadata_parent
Filter	sys_sg_filter
Filter	sys_filter
Filter Action	sys_email_filter_action
Filter Category	sys_sg_filter_category
Filter Category M2M Filter Condition	sys_sg_filter_category_m2m_filter_condition
Filter Category M2M Item Sorting	sys_sg_filter_category_m2m_item_sorting
Filter Condition	cxs_fltr_condition
Filter Condition	sys_sg_filter_condition
Filter Condition Attribute	sys_sg_filter_condition_attribute
Filter Condition Attribute Name	sys_sg_filter_condition_attribute_name
Filter Condition Field	sys_sg_filter_condition_field
Filter Condition M2M Filter Condition Attribute	sys_sg_filter_condition_m2m_filter_condition_attribute

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Filter Condition M2M Filter Condition Field	sys_sg_filter_condition_m2m_filter_condition_field
Filter Condition Type	sys_sg_filter_condition_type
Filter Configuration	cxs_fltr_config
Filter M2M Filter Category	sys_sg_filter_m2m_filter_category
Filtered Message	sp_filtered_message
Fix Script	sys_script_fix
Flow Block	sys_hub_flow_block
Flow Designer Complex Object Templates	sys_hub_flow_designer_co_template
Flow Designer Resource	sys_hub_resource
Flow Designer Resource Filter Rule	sys_hub_resource_filter_rule
Flow Formatter	sys_process_flow
Flow Template Mapping	sys_app_flow_template_mapping
Font glyph	sys_sg_font_glyph
Form	sys_ui_form
Form Annotation Type	sys_ui_annotation_type
Form Header	sys_aw_form_header
Form Section	sys_ui_section
Formatted Schedule Report HTML	v_formatted_schedule_report
Formula Function	sys_formula_function
Function	sys_sg_button
Function instance	sys_sg_button_instance

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Function Instance carried param mapping	sys_sg_button_instance_carried_param_map
FX Currency Configuration	fx_configuration
Gauge	sys_gauge
Global Searches	ts_query
Goal Node	sys_cb_node
Graph Line	jrobin_graph_line
GraphQL API	sys_graphql_schema
GraphQL Resolver Mapping	sys_graphql_resolver_mapping
GraphQL Scripted Resolver	sys_graphql_resolver
GraphQL Type Resolver	sys_graphql_typeresolver
Grid Canvas	sys_grid_canvas
Grid Canvas Pane	sys_grid_canvas_pane
Grouped Input	sys_sg_grouped_input
Guidance	help_guidance
Guided Setup Change Log	gsw_change_log
Guided Setup Configuration	guided_setup_configuration
Guided Setup Configuration Rule	guided_setup_configuration_rule
Guided Setup Content	gsw_content
Guided Setup Content Status	gsw_status_of_content
Guided Setup Rule Categories	guided_setup_rule_categories
Guided Setup Rule On Category	guided_setup_rule_on_category

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Guided Tour	sys_embedded_tour_guide
Guided Tour Element	sys_embedded_tour_element
Guided Tour Step	sys_embedded_tour_step
Help	sys_product_help
Help Answer	help_answer
Help Content	help_content
Help Context	cmn_context_help
Help Guidance Step	help_guidance_step
Help M2M Step Dependency	help_m2m_step_dependency
Help Page	sys_product_help_page
Help Question	help_question
Help Section	sys_product_help_section
Highlighted Value	sys_highlighted_value
Highlighted Value Condition	sys_highlighted_value_condition
Holiday	sys_holiday
Home Page Section	sys_ui_mobile_home_page_m2m_home_page_section
Home Page Section Module	sys_ui_mobile_home_page_section_m2m_home_page_module
HTTP Headers	sys_rest_message_fn_headers
HTTP Headers	sys_rest_message_headers
HTTP Method	sys_rest_message_fn
HTTP Query Parameters	sys_rest_message_fn_param_defs

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

HTTP Response Header	sys_response_header
Icon	sys_sg_icon
Icon family	sys_sg_icon_family
Icon family attribute	sys_sg_icon_family_attribute
Icon image	sys_sg_icon_image
Icon section destination	sys_sg_navigation_section_destination
Icon section destinations	sys_sg_navigation_section_m2m_destination
Identification Inclusion Rules	cmdb_ie_active_config
Identifier	cmdb_identifier
Identifier Entry	cmdb_identifier_entry
Images	db_image
Import Export Map	sys_impex_map
Import Table Users and Groups and Roles	sys_report_import_table_users_groups_roles
Index Stop Word	ts_index_stop
Index Suggestion Rule	sys_suggestion_rule
Index Synonym Dictionary	ts_index_synonym_dictionary
Indexes	sys_index
Indicator	pa_indicators
Indicator Breakdown	pa_indicator_breakdowns
Indicator Group	pa_m2m_indicator_tags

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Indicator Group	pa_tags
Indicator Source	pa_cubes
Indicator Text Indexes	pa_m2m_indicator_text_indexes
Indicator time series exclusion	pa_indicator_aggregate_excl
Input	sys_sg_input
Input Attribute	sys_sg_input_attribute
Input Choice	sys_sg_input_choice
Input Detail	sys_app_template_input_detail
Input Form Page	sys_sg_parameter_page
Input Form Section	sys_sg_parameter_section
Input Form Sections Mapping	sys_sg_parameter_section_m2m
Input Parameter	sys_web_service_input
Input Type	sys_sg_input_type
Installation Exit	sys_installation_exit
Instance	sp_instance
Integration Data Mapping Definition	sn_ihub_data_mapping_definition
Interaction Context	v_interaction_context
Interactive Filter	sys_ui_hp_publisher
Interactive Filter Date	sys_ui_hp_date
Interactive Filter Group	sys_ui_hp_group
Interactive Filter Reference	sys_ui_hp_reference

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Interceptor	sys_wizard
Invalid Serial Number	dscy_invalid_serial
IOStats	v_iostats
IP Service	cmdb_ip_service
IRE Data Source Rule	cmdb_ire_data_source_rule
Item	sc_ic_item_staging
Item Option	sc_cat_item_option
Item Sorting	sys_sg_item_sorting
Item Sorting Attribute	sys_sg_item_sorting_attribute
Item Sorting Attribute Name	sys_sg_item_sorting_attribute_name
Item Sorting Field	sys_sg_item_sorting_field
Item Sorting Type	sys_sg_item_sorting_type
Item Variable Assignment	sc_item_variable_assignment
Japanese User Token	ts_japanese_token_dictionary
JavaScript Content Provider Rule	sys_js_content_provider_rule
Job Indicator	pa_job_indicators
Job Indicator Breakdown exclusions	pa_job_indicator_breakdown_ex
JS Include	sp_js_include
JS Includes	m2m_sp_theme_js_include
JSON response	sys_sg_mock_json_response
JWT Claim Validation	jwt_claim_validation

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

JWT Keys	jwt_keystore_aliases
JWT Provider	jwt_provider
Jwt Verifier Map	jwt_verifier_map
Knowledge Category	v_st_kb_category
Knowledge keyword	kb_keyword
Knowledge keyword	kb_knowledge_keyword
Knowledge Nav-ons	kb_navons
Knowledge Searches	ts_query_kb
Lane Start Rule Definition	sys_pd_lane_start_rule_definition
Languages	sys_language
Launcher header title	sys_sg_applet_launcher_header
Launcher screen	sys_sg_applet_launcher
Launcher section mapping	sys_sg_applet_launcher_m2m_section
Layout Applicability	sys_ux_applicability_m2m_layout
Layout Column	sc_layout_column_mtom
LDAP OU Definition	ldap_ou_config
LDAP Server	ldap_server_config
LDAP Server URL	ldap_server_url
Legacy card	sys_sg_item_view
Licensing Exclusion	licensing_exclusion
Life Cycle Control	life_cycle_control

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Life cycle mapping	life_cycle_mapping
Life Cycle Stage	life_cycle_stage
Life Cycle Stage Status	life_cycle_stage_status
List	sys_ui_list
List Action	sp_vlist_action
List Applicability	sys_ux_applicability_m2m_list
List Client Script	sys_ui_list_script_client
List Control	sys_ui_list_control
List item config	sys_sg_master_item
List Server Script	sys_ui_list_script_server
List stream	sys_sg_item_stream
Live Table Notification	live_table_notification
Logged in User	v_user_session
Logger Configuration	sys_logger_configuration
Logic Definition	sys_hub_flow_logic_definition
M2m Action Assig Ux Action Config	sys_ux_m2m_action_assignment_action_config
M2m Workspace Header Ux Header Config	sys_ux_m2m_workspace_header_ux_header_config
Macro	sys_ui_macro
Macroponent Priority	sys_ux_macroponent_priority
Mailboxes	sys_mailbox
Managed Source	pa_managed_sources

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Managed Source Indicators	pa_managed_sources_indicators
Manual Breakdown	pa_manual_breakdowns
Manual CI Exclusions / Inclusions	svc_manual_ci_exclusions_inclusions
Many to Many Definition	sys_m2m
Map Coordinates Refresh Configuration	cmn_coordinate_refresh_config
Map Filter Data Mapping	cmn_map_filter_data_mapping
Map Filter Items	m2m_map_filter_to_filter_item
Map Indicator	bsm_indicator
Map Item	cmn_map_item
Map Marker Click Actions	m2m_map_marker_map_marker_click_action
Map Marker Icons	m2m_map_marker_marker_icon
Map Page	cmn_map_page
Map Page Markers	m2m_map_page_map_marker
Map View Configuration Types	map_view_ci_type
Map View Relationship Types	map_view_rel_type
Mapped Facet Filter	sp_search_facet_filter
Matcher Field Definitions	dl_definition_rel_match
Member	jrobin_graph_set_member
Menu Action	sa_context_menu
Menu Action	ngbsm_context_menu

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Menu Category	sys_app_category
Menu Item	sp_rectangle_menu_item
Menu Item	va_branding_contact_menu
Menu List	sys_perspective
Message	sys_ui_message
Messaging Channel	sys_cs_channel
Meta Tag	sp_metatag
Metadata Snapshot	sys_metadata_link
Metric Category	asmt_metric_category
Metric Definition	metric_definition
MID Cert Intranet Topology	mid_cert_intranet
MID Certificate Policy	mid_cert_check_policy
Mid Selector Override	mid_selector_override
MID Server Application	ecc_agent_application
MID Server Capability	ecc_agent_capability
MID Server Capability Value Test	ecc_agent_capability_value_test
MID Server Extension	ecc_agent_ext
MID Server IP Range	ecc_agent_ip_range
MID Server Property	ecc_agent_property
MID Server Script	ecc_agent_script
MID Server Script Include	ecc_agent_script_include
MID Server Script parameter	ecc_agent_script_param

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

MID Server Synchronized File	ecc_agent_sync_file
ML Capability	ml_capability
ML Labeled Data	ml_labeled_data
ML Solution Definition	ml_solution_definition
ML Solution Parameters	ml_solution_parameters
Mobile Alert	sys_sg_alert
Mobile app config	sys_sg_native_client
Mobile App Shortcut Item	sys_ui_mobile_app_shortcut_item
Mobile app theme	sys_sg_client_theme
Mobile Application	sys_sg_mobile_application
Mobile Home Page	sys_ui_mobile_home_page
Mobile Home Page Collection	sys_ui_mobile_home_page_collection
Mobile Home Page Module	sys_ui_mobile_home_page_module
Mobile Home Page Section	sys_ui_mobile_home_page_section
Mobile Properties	sys_sg_properties
Mobile Studio Card Template	sg_studio_card_template
Mobile Studio Layout Pattern	sg_studio_layout_pattern
Mobile Theme	sys_ui_mobile_theme
Mobile UI Rule	sys_sg_ui_rule
Mobile UI Rule Action	sys_sg_ui_rule_action
Mobile UI Rule Operation	sys_sg_ui_rule_operation

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Mobile UI Rule Trigger	sys_sg_ui_rule_trigger
Model State	sttrm_state
Model State Transition	sttrm_state_transition
Model State Transition Condition	sttrm_transition_condition
Model State Transition Condition Type	sttrm_condition_type
Module	sys_ui_module
Module	sn_actsub_module
Module	sys_app_module
Most Viewed Article	v_st_kb_most_viewed
Multilevel Pivot Rule	sys_report_mpivot_rule
MultiProbe Included Probe	discovery_probes_multi_probe
Mutual Exclusion Rule	sys_atf_mutual_exclusion_rule
Mutually Exclusive Test	v_atf_mutually_exclusive_test
MySQL Process List	v_mysql_proclist
MySQL Status	v_mysql_status
MySQL Variables	v_mysql_variables
Namespace	sys_transformer_namespace
Navigation bar	sys_sg_navigation
Navigation Handler	sys_navigator
Navigation Link	sys_nav_link
Navigation Tab	sys_sg_navigation_tab

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Navigation Tab	sys_search_filter
Navigation Tab Map	sys_sg_navigation_tab_map
New Button List Exclusion	sys_aw_crud_exclusions
New Record Menu Item	sys_aw_new_menu_item
NLQ Cmdb Implicit Relationship	nlq_cmdb_implicit_relationship
NLQ Semantic Shortcut	nlq_semantic_shortcut
NLQ Synonym	nlq_synonym
NLU Entity	sys_nlu_entity
NLU Intent	sys_nlu_intent
NLU Intent Entity	m2m_sys_nlu_intent_entity
NLU Intent Traceability	sys_nlu_intent_trace
NLU Model	sys_nlu_model
NLU Model System Entity	m2m_sys_nlu_model_sys_entity
NLU System Entity	sys_nlu_sys_entity
NLU Utterance	sys_nlu_utterance
NLU Utterance Entity	m2m_sys_nlu_utterance_entity
NLU Vocabulary	sys_nlu_vocabulary
Node Connector	sn_diagram_builder_node_connector
Node Log	v_logfiles
Node Type	sys_node_type
Node Type	sn_diagram_builder_node_type

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Node Type Attribute	sn_diagram_builder_node_type_attribute
Node Type Context Menu Option	sn_diagram_builder_node_type_context_menu_option_m2m
Node Type Handler	sn_diagram_builder_node_type_handler
Non-Doctype Layout Column	sc_layout_column_nd_mtom
Non-Doctype Widget/View Macros	sc_layout_ui_macro_nd_mtom
Not Available at Locations	sc_cat_item_location_no_mtom
Not Available for Companies	sc_cat_item_company_no_mtom
Not Available for Companies	sc_category_company_no_mtom
Not Available for Departments	sc_category_dept_no_mtom
Not Available for Departments	sc_cat_item_dept_no_mtom
Not Available for Groups	sc_cat_item_group_no_mtom
Not Available for Groups	sc_category_group_no_mtom
Not Available for Locations	sc_category_location_no_mtom
Not Available for Subscribers	sc_cat_item_subscribe_no_mtom
Not Available for Users	sc_category_user_no_mtom
Not Available for Users	sc_cat_item_user_no_mtom
Notification Action	sys_notification_action
Notification Category	sys_notification_category
Notification Channel	sys_notification_channel
Notification Channel Property	sys_notification_channel_property

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Notification condition	notification_condition
Notification Content	sys_notification_content
Notification Destination Type	sys_notif_destination_type
Notification Destination Type Setting	sys_notif_dest_type_setting
Notification Filter	notification_filter
Notification Indicator	pa_m2m_indicator_notifications
Notification Object	sn_actsub_notif_object
Notification Property	sys_notification_property
Notification Provider	sys_notification_provider
Notification Provider Property	sys_notification_provider_property
Notification Route	notification_route
Notification Service Provider	cmn_notif_service_provider
Notification Subscription	sys_notif_subscription
NowMQ Provider	sys_nowmq_provider
NowMQ Provider Parameter	sys_nowmq_provider_param
NowMQ Provider Parameter Definition	sys_nowmq_provider_param_definition
NowMQ Subject	sys_nowmq_subject
NowMQ Subject Parameter	sys_nowmq_subject_param
NowMQ Subject Parameter Definition	sys_nowmq_subject_param_definition
Number	sys_number

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

OAuth Entity Profile	oauth_entity_profile
OAuth Entity Profile Scope	oauth_entity_profile_scope
OAuth Entity Scope	oauth_entity_scope
OAuth JWT Claim Validation	oauth_jwt_claims
Object Operation	sys_security_obj_oper
Offline download schedule	sys_sg_offline_download_schedule
OIDC Provider Configuration	oidc_provider_configuration
OLAP Cube View	sys_report_olap
On-Call Contact Source	sys_on_call_contact_source
On-Call Group Template	sys_on_call_group_template
On-call Notification	v_on_call
On-call Report	v_on_call_report_cache
On-Call Shift Template	sys_on_call_shift_template
One API Feature	one_api_feature
One API Feature Provider	one_api_feature_provider
One Api Mapping	sys_cs_one_api_service_plan_mapping
One API Service Plan	one_api_service_plan
One API Service Plan Feature	one_api_service_plan_feature
Open NLU Driver Language	open_nlu_driver_language
OpenAPI	sys_openapi
OpenAPI Operation	sys_openapi_operation

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Operation	sys_security_operation
Operational Toggle	sys_operational_toggle
Operational Toggle Level	sys_operational_toggle_level
Opt Out Feedback Option	sn_bm_common_optout_feedback_options
Orderable Items	expert_panel_c_item
Ordered Item Link	sc_ordered_item_link
Out-Of-Band Record Transformer Rule	sys_record_transformer_out_of_band_rule
Output Parameter	sys_web_service_output
Overview Help Page	sys_ui_overview_help
Overview Help Panel	sys_ui_overview_help_panel
PA Business Calendar Retention Period	pa_calendars_retention
Page	sp_page
Page	sn_ace_page
Page Number Configuration	doc_page_number_config
Page Route Map	sp_page_route_map
Page theme support	sys_page_theme
Page to Section	sys_product_help_p2s
PAR Dashboard	par_dashboard
PAR Dashboard Page Canvas	par_dashboard_canvas
PAR Dashboard Permission	par_dashboard_permission

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

PAR Dashboard Tab	par_dashboard_tab
PAR Dashboard User Metadata	par_dashboard_user_metadata
PAR Dashboard Visibility	par_dashboard_visibility
PAR Dashboard Widget	par_dashboard_widget
PAR Visualization	par_visualization
Password Reset Credential Store	pwd_cred_store
Password Reset Credential Store Parameters	pwd_cred_store_param
Password Reset Credential Store Types	pwd_cred_store_type
Password Reset Extension Type	pwd_extension_type
Password Reset Identification Type	pwd_identification_type
Password Reset Process	pwd_process
Password Reset Process Credential Store	pwd_map_proc_to_cred_store
Password Reset Process User Group	pwd_map_proc_to_group
Password Reset Process Verification	pwd_map_proc_to_verification
Password Reset Question	pwd_question
Password Reset Verification	pwd_verification
Password Reset Verification Param	pwd_verification_param
Password Reset Verification Type	pwd_verification_type
Pattern Element Mapping	ssa_pattern_m2m_element
Payload	sys_app_scan_payload

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Payload Loader Rule	sys_app_payload_loader_rule
Payload Rule	sys_app_payload_unloader_rule
PDF Page Header Footer Template	sys_report_page_hdrftr
Performance Analytics Text Index Configuration	pa_text_index_configurations
Pipeline	sn_pipeline_pipeline
Pipeline Environment Order	sn_pipeline_pipeline_environment_order
Pipeline Type	sn_pipeline_pipeline_type
Plan Sequencing	sc_cat_item_dt_mtom
Planned Change Validation Script	planned_change_validation_script
Popular Item	v_st_popular_item
Portal Announcements	m2m_announcement_portal
Portal Catalog	m2m_sp_portal_catalog
Portal Knowledge Base	m2m_sp_portal_knowledge_base
Portal Page	sys_portal_page
Portal Taxonomy	m2m_sp_portal_taxonomy
Predefined Filters	map_view
Private Cache	v_private_cache
Privileged Command	privileged_command
Probe	discovery_probes
Probe parameter	discovery_probe_parameter
Process Definition	sys_pd_process_definition

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Process Guides	process_guide
Process Steps	process_step
Processor	sys_processor
Promoted Topics	sys_cs_context_profile_promotion
Provider Channel	sys_cs_provider
Provider Channel Identity	sys_cs_provider_application
Public Pages	sys_public
Published Topic	sys_cb_design_topic
Push Action	sys_sg_push_action
Push Action Category	sys_sg_push_action_category
Push Action Instance	sys_sg_push_action_instance
Push Application	sys_push_application
Push Feedback	sys_push_feedback
Push Message Attribute Value	sys_push_notif_msg_attr_val
Push Notification	sys_sg_push_notification
Push Notification Action	sys_push_notif_act_script
Push Notification Installation	sys_push_notif_app_install
Push Notification Message	sys_push_notif_msg
Push Notification Message Content	sys_push_notif_msg_content
Push Parameter Value	sys_sg_push_parameter_value
Question	question
Question	sc_ic_question

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Question Choice	sc_ic_question_choice
Question Choice	question_choice
Question Class	sc_ic_question_class
Question Regular Expression	question_regex
Question Type	sc_ic_question_type
Question Type Choice	sc_ic_question_type_choice
Quick actions menu	sys_sg_alp_quick_action_map
Quick Message	sys_email_canned_message
Range	sys_report_range
Rate Limit Rules	sys_rate_limit_rules
Recent Item	v_st_recent_item
Recently Viewed Article	v_st_kb_recently_viewed
Recipient Qualifier	sys_recipient_qualifier
Reclassification Restriction	cmdb_ire_reclassification_restriction
Recommendation	sn_bm_client_recommendation
Recommendation Action	sn_rf_recommendation_action
Recommendation Experience	sn_rf_recommendation_experience
Recommendation Indicator M2M	sn_bm_client_recommendation_indicator_m2m
Recommendation Rule	sn_rf_recommendation_rule
Reconciliation Definition	cmdb_reconciliation_definition

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Record Display Configuration	sn_rf_record_display_configuration
Record Producer Configuration	aisa_rp_config
Record screen segment	sys_sg_form_segment
Record Transformer	sys_record_transformer
Record Transformer Debug Trigger	sys_record_transformer_debug_trigger
Record Transformer Rule	sys_record_transformer_rule
Record Transformer Rule Sequence	sys_record_transformer_rule_sequence
Record Type Selector	sn_sow_interceptor_record_type_selector
Redirection destination fields	sys_sg_redirect_dest_field
Reference Style	sys_ui_reference_style
Registered Scripting Modal	sys_aw_registered_scripting_modal
Related Entry	cmdb_related_entry
Related Item	ngbsm_related_item
Related List	sys_ui_related_list
Related lists mapping	sys_sg_related_list_map
Related Record Context	sn_related_record_context
Related Record Definition	sn_related_record_definition
Relationship	sys_relationship
Relative Duration	cmn_relative_duration
Remote Table	sys_script_vtable

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Report	sys_report
Report Field Alias	sys_report_field_alias
Report Layer	sys_report_layer
Report Map Types	sys_report_map_type
Report Source	sys_report_source
Report Users and Groups	sys_report_users_groups
Report Value Alias	sys_report_value_alias
Request Parent Mapping	request_parent_mapping
Resolution Shaper Config	sys_resolutionshaper_config
Resource Configuration	cxs_res_context_config
REST Insert Multiple	sys_rest_insert_multiple
REST Message	sys_rest_message
Restricted Caller Access Privilege	sys_restricted_caller_access
Retry Policy	sys_retry_policy
Ribbon Component	sys_aw_ribbon_component
Ribbon Configuration Setting	sys_ux_ribbon_config_setting
Ribbon Setting	sys_aw_ribbon_setting
Risk Conditions	risk_conditions
Robust Import Set Transformer	sys_robust_import_set_transformer
Robust Transform Definition	sys_rte_definition
Role	sys_user_role
Rotation Schedule	v_rotation

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Round Robin Archive	jrobin_archive
Round Robin Data Source	jrobin_datasource
Round Robin Definition	jrobin_definition
Round Robin Graph	jrobin_graph
Round Robin Graph Set	jrobin_graph_set
Route Configuration	sys_ux_dynamic_route_config
Route Mapping	sys_ux_dynamic_route_mapping
Row	sp_row
RTE Entity	sys_rte_eb_entity
RTE Entity Field	sys_rte_eb_field
RTE Entity Mapping	sys_rte_eb_entity_mapping
RTE Entity Operation	sys_rte_eb_operation
RTE Entity Operation Type	sys_rte_eb_operation_type
RTE Field Mapping	sys_rte_eb_field_mapping
RTE Transformer Service Definition	sys_rte_transformer_definition
Rule	sysrule
Rule	sc_cat_item_guide_items
Run Level Toggle Mapping	sys_run_level_op_toggle_m2m
Run Level Toggle Override	sys_run_level_op_toggle_override
SAML2 Assertion Attribute	saml2_assertion_attribute
SAML2 Assertion Producer	saml2_assertion_producer
Saved deny list	sys_sg_favorite_deny_list

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Scan Trigger	scan_trigger
Schedule Page	cmn_schedule_page
Scheduled Job	sysauto
Scheduled Suite Run	sys_atf_schedule_run
Scope Script Access	sys_scope_script_access
Scope Table Access	sys_scope_table_access
Scoped Cache	sys_scoped_cache
Scoped Cache Table Pair	sys_scoped_cache_table_pair
Screen	sys_sg_screen
Screen Applicability	sys_ux_applicability_m2m_screen
Screen fields	sys_sg_screen_field
Screen fields button instances mapping	sys_sg_screen_field_button_instance_map
Screen parameters mapping	sys_sg_screen_param_map
Screen segment	sys_sg_item_stream_segment
Screen Shortcut	sys_sg_screen_shortcut
Screen UI element mapping	sys_sg_screen_m2m_ui_element
Screen UI Policy	sys_sg_ui_policy
Script	pa_scripts
Script Adapter Rule	sys_script_adapter_rule
Script Batch Adapter Rule	sys_script_batch_adapter_rule
Script Execution History	sys_script_execution_history

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Script Include	sys_script_include
Scriptable Object	v_scriptable_object
Scripted REST API	sys_ws_definition
Scripted REST Header	sys_ws_header
Scripted REST Header Association	sys_ws_header_map
Scripted REST Query Parameter	sys_ws_query_parameter
Scripted REST Query Parameter Association	sys_ws_query_parameter_map
Scripted REST Resource	sys_ws_operation
Scripted REST Version	sys_ws_version
Scripted Web Service	sys_web_service
Scriptlet Function	sys_scriptlet_function
Search Action Configuration	cxs_ui_action_config
Search Actions	aisa_ui_action
Search Actions	cxs_ui_action
Search Application Configuration	sys_search_context_config
Search config	sys_sg_global_search
Search Context	cxs_context_config
Search Field	cxs_table_field_config
Search Genius Result	v_search_genius_result
Search Genius Result Model	sys_search_genius_result_model
Search Group	sp_search_group

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Search M2M item config	sys_sg_global_search_m2m_master_item
Search Profile	sys_cs_context_profile_search
Search Resource	cxs_search_res_config
Search Resource Context Property	cxs_res_context_config_prop
Search Resource Property	cxs_search_res_config_prop
Search Result Display Configuration	cxs_search_result_fields
Search Scripted Post-processor	sys_search_scripted_processor
Search Scripted Post-processors	m2m_search_context_config_search_scripted_processor
Search Source	sys_search_source
Search Source	m2m_sp_portal_search_source
Search Source	sp_search_source
Search Source Filter	sys_search_source_filter
Searcher	cxs_searcher_config
Secondary Values	sys_aw_form_header_secondary_values
Section	sc_ic_section
Sections screen sections	sys_sg_sections_screen_m2m_section
Security Allow/Deny List Entity	sys_security_restricted_list
Semaphore	sys_semaphore
Semaphore Set	sys_semaphore_set

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Service API	sys_service_api
Service Category	catalog_category_request
Service Fulfillment Flow Registry	sc_service_fulfillment_flow_registry
Service Fulfillment Stage	sc_service_fulfillment_stage
Service Fulfillment Step	sc_service_fulfillment_step
Service Fulfillment Step Configuration	sc_service_fulfillment_step_configuration
Service Portal	sp_portal
Service Portal Agent Chat Configuration	sp_agent_chat_config
Service Portal Documentation	sp_documentation
Service Portal UI Formatter	sp_ui_formatter
Service Registry Query	service_reg_query
Service Scope	service_scope
Service Security Contained Personas	svc_security_persona_cont
Service Security Object Type Definition	svc_security_object_def
Service Security Object Type Operations	svc_security_object_ops
Service Security Persona	svc_security_persona
Service Security Persona Operations	svc_security_persona_ops
Service Type	service_reg_query_slp_service_type

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Setter Field Definitions	dl_definition_rel_set
Setup Dependency	help_setup_dependency
Setup Topics	sys_cs_context_profile_topic
Shape	sn_diagram_builder_shape
Shape Property	sn_diagram_builder_shape_property
Shape Property Override	sn_diagram_builder_shape_property_override
Shape Template	sn_diagram_builder_shape_template
Shape Template Map	sn_diagram_builder_shape_template_m2m
Shared Cache	v_shared_cache
Signature	asmt_signature
SLA Conditions	sla_condition_class
SLA Definition	contract_sla
SLA Timer Configuration	sla_timer_config
SLA timer configuration mapping	sla_timer_config_mapping
Slow Pattern	sys_pattern
Slow Scripts	sys_script_pattern
SNMP Field	discovery_probes_snmp_field
SOAP Message	sys_soap_message
SOAP Message Function	sys_soap_message_function
Soap Security Policy	sys_soap_security_policy

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Solution	sn_admin_center_solution
Solution Definition	ml_capability_definition_base
Solution Template	ml_trainer_definition
Sort Option	sys_search_sort_option
Source UI element mapping	sys_sg_source_ui_elements_mappings
Spot	sn_diagram_builder_spot
SQL Debug	v_sql_debug
Stage Default	wf_stage_default
Standard Change Properties	std_change_properties
State Model	sys_state_model
State Transition	sys_state_transition
State Transition Model	sttrm_model
Stationery	sysevent_email_style
Stop Word	ts_stop
Stream container	sys_sg_item_stream_container
Stream container M2M stream	sys_sg_item_stream_container_m2m_item_stream
Stream M2M item config	sys_sg_item_stream_m2m_master_item
Stream M2M segment	sys_sg_item_stream_m2m_segment
Studio Navigation Module	sn_devstudio_navigation_module
Style	sys_ui_style

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Style Rule Core	chg_soc_style_rule_core
Style Sheet	content_css
Style Sheet	sp_css
Stylesheets	m2m_sp_theme_css_include
Subtemplate	sys_app_subtemplate
Suggested Relationship	cmdb_rel_type_suggest
Suggestion Reader	sys_suggestion_reader
Suggestion Reader and Suggestion Reader Group Relations	m2m_sys_suggestion_reader_sys_suggestion_reader_group
Suggestion Reader Group	sys_suggestion_reader_group
Suite	scan_check_suite
Suite Check	scan_check_suite_check
Suite Relationships	scan_check_suite_m2m
Supported Types for Transformations	sys_transform_type
Synonym Dictionary	ts_synonym_dictionary
Synonym Set	ts_synonym_set
Synonym Term to Synset Mapping	ts_v_synonym_term_to_synset
Sys Cal Span	sys_cal_span
Sys Cs Vendor Client Adapter Configuration	sys_cs_vendor_client_adapter_configuration
Sys Job	sys_job
Sys Listener Detail	sys_listener_detail

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Sys Ux M2m Action Layout Item	sys_ux_m2m_action_layout_item
Sys Ux M2m Highlighted Value Config	sys_ux_m2m_highlighted_value_config
Sys Ux M2m Workspace View Rule Ux View Rule Config	sys_ux_m2m_workspace_view_rule_ux_view_rule_config
System Address Filters	sys_email_system_filter
System Help	sys_ui_help
System Plugin	v_plugin
System Property	sys_properties
System Property Category	sys_properties_category
System Run Level	sys_run_level
Tab	pa_tabs
Tab Configuration	ticket_tab_configuration
Table	sys_db_object
Table of Contents Configuration	doc_toc_config
Table Subscription Configuration	ua_table_licensing_config
Table Transform Map	sys_transform_map
Target	pa_targets
Target Tables	sys_ui_hp_cascading_filter_target_references
Target value	pa_target_values
Task	sc_ic_task_defn_staging
Task Action Workflow	task_action_workflow

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Task Assignment	sc_ic_task_assign_defn_staging
Task Assignment Definition	sc_ic_task_assign_defn
Task Definition	sc_ic_task_defn
Taxonomy	sn_app_eng_studio_taxonomy
Taxonomy	taxonomy
Taxonomy Category	sn_app_eng_studio_taxonomy_category
Taxonomy Content Configuration	taxonomy_content_configuration
Taxonomy contributors	m2m_taxonomy_contributor
Taxonomy Details	sn_app_eng_studio_taxonomy_details
Taxonomy Editor	sn_app_eng_studio_taxonomy_editor
Taxonomy Exclusion List	sn_app_eng_studio_taxonomy_exclusion
Template	sys_app_template
Template	sys_template
Template Dependency	sys_app_template_dependency
Template Dependency Definition	sys_app_template_dependency_definition
Template Details	sys_app_template_detail
Template Function Type	sys_app_template_function_type
Template Input Variable	sys_app_template_input_var
Template Manifest	sys_app_template_manifest

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Template Output Variable	sys_app_template_output_var
Template Page	sys_app_template_page
Template Page Configuration	sys_app_template_page_configuration
Template Page Type	sys_app_template_page_type
Template Permit Rule	sys_app_template_permit_rule
Template Type	sys_app_template_type
Template Wizard	sys_app_template_wizard
Test	sys_atf_test
Test Run Data Set	sys_atf_parameter_set
Test Step	sys_atf_step
Test Step Config	sys_atf_step_config
Test Step Config Category	sys_atf_step_config_category
Test Step Environment	sys_atf_step_env
Test Suite	sys_atf_test_suite
Test Suite Test	sys_atf_test_suite_test
Test Template	sys_atf_test_template
Text Analytics Stop Words	pa_text_stop_words
Text Index	ts_index_name
Text Index Attribute Map	ts_attribute_map
Text Index Column Attribute Map	ts_column_attribute_map
Text Index Configuration	ts_configuration

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index Configuration Attribute	ts_configuration_attribute
Text Index Doc Freq for kb_knowledge	ts_v4_23_df
Text Index Doc Freq for sc_cat_item	ts_v4_16_df
Text Index Doc Freq for sys_cs_topic	ts_v4_19_df
Text Index Doc Freq for sys_metadata	ts_c_13_df
Text Index Doc Freq for sys_user	ts_v4_12_df
Text Index for alm_asset	ts_c_10_2
Text Index for alm_asset	ts_c_10_1
Text Index for alm_asset	ts_c_10_5
Text Index for alm_asset	ts_c_10_0
Text Index for alm_asset	ts_c_10_3
Text Index for alm_asset	ts_c_10_6
Text Index for alm_asset	ts_c_10_7
Text Index for alm_asset	ts_c_10_8
Text Index for alm_asset	ts_c_10_9
Text Index for alm_asset	ts_c_10_4
Text Index for appsec_domain_listing	ts_c_3_3
Text Index for appsec_domain_listing	ts_c_3_6

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for appsec_domain_listing	ts_c_3_0
Text Index for appsec_domain_listing	ts_c_3_1
Text Index for appsec_domain_listing	ts_c_3_2
Text Index for appsec_domain_listing	ts_c_3_8
Text Index for appsec_domain_listing	ts_c_3_4
Text Index for appsec_domain_listing	ts_c_3_5
Text Index for appsec_domain_listing	ts_c_3_7
Text Index for appsec_domain_listing	ts_c_3_9
Text Index for ci_diagnostic_kb	ts_c_5_7
Text Index for ci_diagnostic_kb	ts_c_5_6
Text Index for ci_diagnostic_kb	ts_c_5_5
Text Index for ci_diagnostic_kb	ts_c_5_9
Text Index for ci_diagnostic_kb	ts_c_5_1
Text Index for ci_diagnostic_kb	ts_c_5_4
Text Index for ci_diagnostic_kb	ts_c_5_3
Text Index for ci_diagnostic_kb	ts_c_5_2
Text Index for ci_diagnostic_kb	ts_c_5_0
Text Index for ci_diagnostic_kb	ts_c_5_8

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for cmdb	ts_c_27_2
Text Index for cmdb	ts_c_27_8
Text Index for cmdb	ts_c_27_9
Text Index for cmdb	ts_c_27_7
Text Index for cmdb	ts_c_27_6
Text Index for cmdb	ts_c_27_5
Text Index for cmdb	ts_c_27_4
Text Index for cmdb	ts_c_27_3
Text Index for cmdb	ts_c_27_1
Text Index for cmdb	ts_c_27_0
Text Index for cmdb_ci_outage	ts_c_1_8
Text Index for cmdb_ci_outage	ts_c_1_0
Text Index for cmdb_ci_outage	ts_c_1_7
Text Index for cmdb_ci_outage	ts_c_1_9
Text Index for cmdb_ci_outage	ts_c_1_5
Text Index for cmdb_ci_outage	ts_c_1_1
Text Index for cmdb_ci_outage	ts_c_1_2
Text Index for cmdb_ci_outage	ts_c_1_3
Text Index for cmdb_ci_outage	ts_c_1_4
Text Index for cmdb_ci_outage	ts_c_1_6
Text Index for cmn_location	ts_c_6_0
Text Index for cmn_location	ts_c_6_1

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for cmn_location	ts_c_6_4
Text Index for cmn_location	ts_c_6_2
Text Index for cmn_location	ts_c_6_9
Text Index for cmn_location	ts_c_6_8
Text Index for cmn_location	ts_c_6_7
Text Index for cmn_location	ts_c_6_6
Text Index for cmn_location	ts_c_6_5
Text Index for cmn_location	ts_c_6_3
Text Index for cmn_rota	ts_c_4_1
Text Index for cmn_rota	ts_c_4_0
Text Index for cmn_rota	ts_c_4_6
Text Index for cmn_rota	ts_c_4_3
Text Index for cmn_rota	ts_c_4_4
Text Index for cmn_rota	ts_c_4_7
Text Index for cmn_rota	ts_c_4_8
Text Index for cmn_rota	ts_c_4_9
Text Index for cmn_rota	ts_c_4_2
Text Index for cmn_rota	ts_c_4_5
Text Index for core_company	ts_c_15_1
Text Index for core_company	ts_c_15_2
Text Index for core_company	ts_c_15_9
Text Index for core_company	ts_c_15_3

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for core_company	ts_c_15_4
Text Index for core_company	ts_c_15_5
Text Index for core_company	ts_c_15_6
Text Index for core_company	ts_c_15_8
Text Index for core_company	ts_c_15_7
Text Index for core_company	ts_c_15_0
Text Index for core_country	ts_c_2_0
Text Index for core_country	ts_c_2_1
Text Index for core_country	ts_c_2_2
Text Index for core_country	ts_c_2_3
Text Index for core_country	ts_c_2_4
Text Index for core_country	ts_c_2_6
Text Index for core_country	ts_c_2_7
Text Index for core_country	ts_c_2_8
Text Index for core_country	ts_c_2_9
Text Index for core_country	ts_c_2_5
Text Index for kb_knowledge	ts_v4_23_4
Text Index for kb_knowledge	ts_v4_23_1
Text Index for kb_knowledge	ts_v4_23_0
Text Index for kb_knowledge	ts_v4_23_6
Text Index for kb_knowledge	ts_v4_23_5
Text Index for kb_knowledge	ts_v4_23_3

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for kb_knowledge	ts_v4_23_7
Text Index for kb_knowledge	ts_v4_23_8
Text Index for kb_knowledge	ts_v4_23_9
Text Index for kb_knowledge	ts_v4_23_2
Text Index for kb_knowledge_base	ts_c_22_9
Text Index for kb_knowledge_base	ts_c_22_7
Text Index for kb_knowledge_base	ts_c_22_8
Text Index for kb_knowledge_base	ts_c_22_6
Text Index for kb_knowledge_base	ts_c_22_0
Text Index for kb_knowledge_base	ts_c_22_1
Text Index for kb_knowledge_base	ts_c_22_3
Text Index for kb_knowledge_base	ts_c_22_4
Text Index for kb_knowledge_base	ts_c_22_5
Text Index for kb_knowledge_base	ts_c_22_2
Text Index for kb_social_qa_answer	ts_c_20_8
Text Index for kb_social_qa_answer	ts_c_20_5
Text Index for kb_social_qa_answer	ts_c_20_6
Text Index for kb_social_qa_answer	ts_c_20_9
Text Index for kb_social_qa_answer	ts_c_20_1
Text Index for kb_social_qa_answer	ts_c_20_3
Text Index for kb_social_qa_answer	ts_c_20_4
Text Index for kb_social_qa_answer	ts_c_20_2

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for kb_social_qa_answer	ts_c_20_0
Text Index for kb_social_qa_answer	ts_c_20_7
Text Index for kb_social_qa_comment	ts_c_26_2
Text Index for kb_social_qa_comment	ts_c_26_3
Text Index for kb_social_qa_comment	ts_c_26_4
Text Index for kb_social_qa_comment	ts_c_26_5
Text Index for kb_social_qa_comment	ts_c_26_6
Text Index for kb_social_qa_comment	ts_c_26_7
Text Index for kb_social_qa_comment	ts_c_26_8
Text Index for kb_social_qa_comment	ts_c_26_9
Text Index for kb_social_qa_comment	ts_c_26_1
Text Index for kb_social_qa_comment	ts_c_26_0
Text Index for kb_social_qa_question	ts_c_11_2
Text Index for kb_social_qa_question	ts_c_11_9
Text Index for kb_social_qa_question	ts_c_11_0

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for kb_social_qa_question	ts_c_11_1
Text Index for kb_social_qa_question	ts_c_11_3
Text Index for kb_social_qa_question	ts_c_11_4
Text Index for kb_social_qa_question	ts_c_11_5
Text Index for kb_social_qa_question	ts_c_11_6
Text Index for kb_social_qa_question	ts_c_11_7
Text Index for kb_social_qa_question	ts_c_11_8
Text Index for live_message	ts_c_17_3
Text Index for live_message	ts_c_17_7
Text Index for live_message	ts_c_17_2
Text Index for live_message	ts_c_17_4
Text Index for live_message	ts_c_17_1
Text Index for live_message	ts_c_17_6
Text Index for live_message	ts_c_17_9
Text Index for live_message	ts_c_17_8
Text Index for live_message	ts_c_17_0
Text Index for live_message	ts_c_17_5
Text Index for sc_cat_item	ts_v4_16_0

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for sc_cat_item	ts_v4_16_7
Text Index for sc_cat_item	ts_v4_16_2
Text Index for sc_cat_item	ts_v4_16_3
Text Index for sc_cat_item	ts_v4_16_4
Text Index for sc_cat_item	ts_v4_16_5
Text Index for sc_cat_item	ts_v4_16_6
Text Index for sc_cat_item	ts_v4_16_8
Text Index for sc_cat_item	ts_v4_16_1
Text Index for sc_cat_item	ts_v4_16_9
Text Index for sc_ic_category_request	ts_c_9_3
Text Index for sc_ic_category_request	ts_c_9_8
Text Index for sc_ic_category_request	ts_c_9_7
Text Index for sc_ic_category_request	ts_c_9_6
Text Index for sc_ic_category_request	ts_c_9_5
Text Index for sc_ic_category_request	ts_c_9_4
Text Index for sc_ic_category_request	ts_c_9_1
Text Index for sc_ic_category_request	ts_c_9_0

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for sc_ic_category_request	ts_c_9_9
Text Index for sc_ic_category_request	ts_c_9_2
Text Index for sla	ts_c_18_6
Text Index for sla	ts_c_18_8
Text Index for sla	ts_c_18_9
Text Index for sla	ts_c_18_4
Text Index for sla	ts_c_18_0
Text Index for sla	ts_c_18_1
Text Index for sla	ts_c_18_3
Text Index for sla	ts_c_18_5
Text Index for sla	ts_c_18_7
Text Index for sla	ts_c_18_2
Text Index for sn_gf_core_goal	ts_c_8_9
Text Index for sn_gf_core_goal	ts_c_8_0
Text Index for sn_gf_core_goal	ts_c_8_1
Text Index for sn_gf_core_goal	ts_c_8_2
Text Index for sn_gf_core_goal	ts_c_8_3
Text Index for sn_gf_core_goal	ts_c_8_5
Text Index for sn_gf_core_goal	ts_c_8_6
Text Index for sn_gf_core_goal	ts_c_8_7
Text Index for sn_gf_core_goal	ts_c_8_8

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for sn_gf_core_goal	ts_c_8_4
Text Index for sn_gf_goal_target	ts_c_25_2
Text Index for sn_gf_goal_target	ts_c_25_9
Text Index for sn_gf_goal_target	ts_c_25_3
Text Index for sn_gf_goal_target	ts_c_25_0
Text Index for sn_gf_goal_target	ts_c_25_8
Text Index for sn_gf_goal_target	ts_c_25_7
Text Index for sn_gf_goal_target	ts_c_25_6
Text Index for sn_gf_goal_target	ts_c_25_5
Text Index for sn_gf_goal_target	ts_c_25_4
Text Index for sn_gf_goal_target	ts_c_25_1
Text Index for sn_rf_recommendation_history	ts_c_24_1
Text Index for sn_rf_recommendation_history	ts_c_24_3
Text Index for sn_rf_recommendation_history	ts_c_24_4
Text Index for sn_rf_recommendation_history	ts_c_24_5
Text Index for sn_rf_recommendation_history	ts_c_24_8
Text Index for sn_rf_recommendation_history	ts_c_24_2
Text Index for sn_rf_recommendation_history	ts_c_24_0

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for sn_rf_recommendation_history	ts_c_24_9
Text Index for sn_rf_recommendation_history	ts_c_24_7
Text Index for sn_rf_recommendation_history	ts_c_24_6
Text Index for std_change_producer_version	ts_c_7_6
Text Index for std_change_producer_version	ts_c_7_9
Text Index for std_change_producer_version	ts_c_7_0
Text Index for std_change_producer_version	ts_c_7_1
Text Index for std_change_producer_version	ts_c_7_2
Text Index for std_change_producer_version	ts_c_7_8
Text Index for std_change_producer_version	ts_c_7_7
Text Index for std_change_producer_version	ts_c_7_4
Text Index for std_change_producer_version	ts_c_7_5
Text Index for std_change_producer_version	ts_c_7_3
Text Index for sys_cs_topic	ts_v4_19_1
Text Index for sys_cs_topic	ts_v4_19_2

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for sys_cs_topic	ts_v4_19_4
Text Index for sys_cs_topic	ts_v4_19_5
Text Index for sys_cs_topic	ts_v4_19_6
Text Index for sys_cs_topic	ts_v4_19_7
Text Index for sys_cs_topic	ts_v4_19_8
Text Index for sys_cs_topic	ts_v4_19_9
Text Index for sys_cs_topic	ts_v4_19_0
Text Index for sys_cs_topic	ts_v4_19_3
Text Index for sys_metadata	ts_c_13_1
Text Index for sys_metadata	ts_c_13_2
Text Index for sys_metadata	ts_c_13_3
Text Index for sys_metadata	ts_c_13_4
Text Index for sys_metadata	ts_c_13_5
Text Index for sys_metadata	ts_c_13_7
Text Index for sys_metadata	ts_c_13_8
Text Index for sys_metadata	ts_c_13_9
Text Index for sys_metadata	ts_c_13_6
Text Index for sys_metadata	ts_c_13_0
Text Index for sys_user	ts_v4_12_3
Text Index for sys_user	ts_v4_12_8
Text Index for sys_user	ts_v4_12_9
Text Index for sys_user	ts_v4_12_0

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for sys_user	ts_v4_12_1
Text Index for sys_user	ts_v4_12_2
Text Index for sys_user	ts_v4_12_4
Text Index for sys_user	ts_v4_12_5
Text Index for sys_user	ts_v4_12_6
Text Index for sys_user	ts_v4_12_7
Text Index for sys_user_group	ts_c_14_9
Text Index for sys_user_group	ts_c_14_8
Text Index for sys_user_group	ts_c_14_7
Text Index for sys_user_group	ts_c_14_6
Text Index for sys_user_group	ts_c_14_3
Text Index for sys_user_group	ts_c_14_2
Text Index for sys_user_group	ts_c_14_1
Text Index for sys_user_group	ts_c_14_4
Text Index for sys_user_group	ts_c_14_0
Text Index for sys_user_group	ts_c_14_5
Text Index for task	ts_c_21_7
Text Index for task	ts_c_21_9
Text Index for task	ts_c_21_6
Text Index for task	ts_c_21_5
Text Index for task	ts_c_21_0
Text Index for task	ts_c_21_1

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Text Index for task	ts_c_21_4
Text Index for task	ts_c_21_3
Text Index for task	ts_c_21_2
Text Index for task	ts_c_21_8
Text Index Group	ts_index_group
Text Index Keywords	pa_text_keywords
Text Index Phrases	pa_text_phrases
Text Index Table Attribute Map	ts_table_attribute_map
Text Search Groups	ts_group
Text Search Stat	ts_search_stats
Text Search Summaries	ts_search_summary
Text Search Table	ts_table
Theme	sp_theme
Theme	sys_ui_theme
Theme Style	sys_sg_theme_style
Threshold	pa_thresholds
Ticket Configuration	ticket_configuration
Time series	pa_aggregates
Timeline Page	cmn_timeline_page
Timeline Page Span Style	cmn_timeline_page_style
To-do Configuration Detail	sn_ex_sp_todo_config_detail
Topic	sys_cs_topic

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Topic	topic
Topic	sys_cb_topic
Topic Category	sys_cb_topic_category
Topic Goal	sys_cb_goal
Topic Library Usage	sys_cs_topic_library_usage
Transaction Quotas	v_quota_transaction
Transform Definition	sys_transform_definition
Transform Definition Composition	sys_transform_composition
Transform Definition Configuration	sn_ihub_transform_definition_whitelist
Transform Script	sys_transform_script
Transformation Definition Categories	sys_transform_category
Translated Name / Field	sys_translated
Traversal Rules for Application Services	svc_traversal_rules
Trend Definition	sn_rf_trend_definition
Trend Definition	trend_definition
Trend Recommendation	trend_recommendation
Trigger Condition	asmt_condition
Trigger Definition	sys_pd_trigger_definition
Trigger Probes	trigger_probe_m2m
Trigger Rule Table Config	trigger_rule_table_cfg

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Trigger Type	sys_pd_trigger_type
Ts Attachment	ts_attachment
Ts C Attachment	ts_c_attachment
Ts Chain	ts_chain
Ts Deleted Doc	ts_deleted_doc
Ts Document	ts_document
Ts Field	ts_field
Ts Index Stats	ts_index_stats
Ts Phrase	ts_phrase
Ts V4 Attachment	ts_v4_attachment
Ts Word	ts_word
Ts Word Roots	ts_word_roots
Type	sys_security_type
UI Action	sn_diagram_builder_ui_action
UI Action	sys_ui_action
UI Action - Mobile	sys_ui_ng_action
UI Action Group	sys_aw_form_uiaction_group
UI Action Layout	sys_aw_form_uiaction_layout
UI Action Role	sys_ui_action_role
UI element	sys_sg_ui_element
UI Extension Instance	sys_ui_extension_instance
UI Extension Point	sys_ui_extension_point

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

UI Formatter	sys_ui_formatter
UI Page	sys_ui_page
UI parameter	sys_sg_ui_parameter
UI Policy	sys_ui_policy
UI Policy Action	sys_ui_policy_action
UI Policy Related List Action	sys_ui_policy_rl_action
UI Policy Rule	sys_sg_ui_policy_rule
UI Script	sys_ui_script
UI section	sys_sg_section
UI Style	sys_sg_ui_style
UI View	sys_ui_view
UI View Action	sys_ui_action_view
UIB Screen Test Values	sys_uib_screen_test_values
Unified Navigation Configurable Menu Item	sys_polaris_configurable_menu_item
Unified Navigation Menu	sys_polaris_menu_config
Unit	pa_units
Universal Link Path Segment	sys_sg_universal_link_path_segment
Universal Link Screen Mapping	sys_sg_universal_link_applet_mapping
Universal Link Supported Url	sys_sg_universal_link_supported_url
Upgrade Plan	sys_upgrade_plan

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Upgrade Plan Item	sys_upgrade_plan_item
UPS Alarm	ups_alarm
URL Navigation	sys_cs_portal_url_mapping
UsageAnalytics Count Configuration	usageanalytics_count_cfg
User Criteria	user_criteria
User Criteria Exclusions	sys_ux_criteria_m2m_exclusion
User Criteria Inclusion	sys_ux_criteria_m2m_inclusion
User Experience Analytics Settings	sys_analytics_bucket
User Preference Definition	sys_user_preference_definition
User Rotation Schedule	v_user_rotation
UX Actions Configuration	sys_ux_action_config
UX Add-on Event Mapping	sys_ux_addon_event_mapping
UX App Configuration	sys_ux_app_config
UX App Property	sys_ux_app_property
UX App Route	sys_ux_app_route
UX App Shell UI	sys_ux_page
UX App Theme	m2m_app_config_theme
UX Application	sys_ux_page_registry
UX Application Category M2M	sys_ux_registry_m2m_category
UX Asset	sys_ux_lib_asset
UX Children Definition	sys_ux_children

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

UX Children Layout	sys_ux_children_layout
UX Client Script	sys_ux_client_script
UX Client Script Include	sys_ux_client_script_include
UX Component Assets	sys_ux_lib_component_m2m_asset
UX Component Definition	sys_ux_lib_component
UX Component Prefetched Resource	sys_ux_lib_presource
UX Component Preset	sys_ux_component_preset
UX Content Picker Slot	sys_ux_lib_content_picker_slot
UX Controller	sys_ux_controller
UX Dashboard Route Permission	sys_ux_route_permission
UX Event	sys_ux_event
UX Extension Point	sys_ux_extension_point
UX Form Actions	sys_ux_form_action
UX Form Actions Layout	sys_ux_form_action_layout
UX Form Actions Layout Group	sys_ux_form_action_layout_group
UX Form Actions Layout Item	sys_ux_form_action_layout_item
UX Header Configuration	sys_ux_header_config
UX Highlighted Value Configuration	sys_ux_highlighted_value_config
UX Interface	sys_ux_interface
UX List	sys_ux_list
UX List Category	sys_ux_list_category

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

UX List Menu Configuration	sys_ux_list_menu_config
UX Macroponent Definition	sys_ux_macroponent
UX Macroponent Type	sys_ux_macroponent_type
UX Managed Service Worker	sys_ux_managed_service_worker
UX Page Action Registry	sys_ux_page_action
UX Page Element	sys_ux_page_element
UX Page Element Permissions	sys_ux_page_element_m2m_role
UX Page Property	sys_ux_page_property
UX Parent Application	sys_ux_app
UX Ribbon Configuration	sys_ux_ribbon_config
UX Screen	sys_ux_screen
UX Screen Collection	sys_ux_screen_type
UX Screen Condition	sys_ux_screen_condition
UX Source Code	sys_ux_lib_source_script
UX Style	sys_ux_style
UX Style Assets	m2m_style_asset
UX Template Type	sys_ux_template_type
UX Theme	sys_ux_theme
UX Theme Asset	sys_ux_theme_asset
UX Theme Assets	sys_ux_theme_m2m_asset
UX Theme Property	sys_ux_theme_property
UX Theme Property Schema	sys_ux_theme_property_schema

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

UX Theme Style	m2m_theme_style
UX Type	sys_ux_type
UX View Rules Configuration	sys_ux_view_rules_configuration
V Pd Activity Condition To Run	v_pd_activity_condition_to_run
V Pd Activity Start Rule With Condition	v_pd_activity_start_rule_with_condition
V Pd Lane Condition To Run	v_pd_lane_condition_to_run
VA NLU Dispatch	sys_cs_nlu_dispatch
VA NLU Language	sys_cs_nlu_language
Validation Script	sys_script_validator
Variable	sys_app_scan_variable
Variable	sys_sg_variable
Variable Attribute	sys_sg_variable_attribute
Variable Category	item_option_category
Variable Set	item_option_new_set
Variable Substitutions	sys_rest_message_fn_parameters
Variable Substitutions	sys_soap_message_parameters
Variable Type	sys_app_scan_variable_type
Vendor Catalog Item	pc_vendor_cat_item
View Field	sys_db_view_table_field
View Table	sys_db_view_table
View Template	sys_ux_composite_data_template

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Virtual Agent Variable	sys_cs_virtual_agent_variable
Viz Framework Data Sources	sys_viz_data_source
VMware Folder Type	vmware_folder_type
Welcome Page Section	sys_home
Who Can Contribute To Knowledge Base	kb_uc_can_contribute_mtom
Who Can Read Knowledge Base	kb_uc_can_read_mtom
Who Cannot Contribute To Knowledge Base	kb_uc_cannot_contribute_mtom
Who Cannot Read Knowledge Base	kb_uc_cannot_read_mtom
Widget	sp_widget
Widget	sys_widgets
Widget Angular Provider	sp_angular_provider
Widget Clone	sp_rel_widget_clone
Widget Dependency	m2m_sp_widget_dependency
Widget Dependency	sp_dependency
Widget Element	pa_widget_elements
Widget Indicator	pa_widget_indicators
Widget/View Macros	sc_layout_ui_macro_mtom
Widgets	pa_widgets
Wizard	expert
Wizard Panel	expert_panel

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Wizard Panel Transition	expert_panel_transition
Wizard Panel Variable	expert_panel_variable
WMI Field	discovery_probes_wmi_field
Workflow	wf_workflow
Workflow Element Definition	wf_element_definition
Workflow Validation Report	v_wf_validation_report
Workspace	sys_aw_master_config
Workspace Global Search Configuration	sys_aw_global_search_config
Workspace List	sys_aw_list
Workspace List Attribute	sys_aw_list_attribute
Workspace List Category	sys_aw_list_category
Workspace Module	sys_aw_module
Workspace Record Types Selector	aw_record_type_selector
Workspace Renderer	sys_aw_renderer
Workspace Renderer Type	sys_aw_renderer_type
WS-Security Profiles (Outbound)	ws_security_profiles_outbound

©2023 ServiceNow. All rights reserved. Terms of Use Privacy Statement

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.