
AWS Service Catalog

User Guide



AWS Service Catalog: User Guide

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What is AWS Service Catalog?

Welcome to the AWS Service Catalog User Guide.

AWS Service Catalog allows organizations to create and manage catalogs of IT services that are approved for use on AWS. These IT services can include everything from virtual machine images, servers, software, and databases to complete multi-tier application architectures. AWS Service Catalog allows organizations to centrally manage commonly deployed IT services, and helps organizations achieve consistent governance and meet compliance requirements, while enabling users to quickly deploy only the approved IT services they need.

- **Self-service discovery and launch**

Users browse listings of services or applications that they have access to, locate the service or application that they want to use, and launch it all on their own. The system administrator can restrict where the product can be launched, the type of instance that can be used, and many other configuration options.

- **Fine-grain access controls and configuration**

Administrators assemble portfolios of services and applications from their catalog, add rules that apply to a certain group of users (such as the tags that can be assigned to resources they launch), and then grant access to the portfolio through AWS Identity and Access Management (IAM) users and groups.

- **Extensibility and version control**

Administrators can add an application or service to any number of portfolios and restrict it without creating another copy. Updating the application to a new version propagates the update to all instances of the application in every portfolio that references it.

For more service highlights, see the [AWS Service Catalog detail page](#).

Concepts

Understanding the basic components of AWS Service Catalog will help you get the most out of this service.

Topics

- [AWS Service Catalog Users \(p. 2\)](#)
- [Portfolio \(p. 2\)](#)
- [Product \(p. 2\)](#)

- [Versioning \(p. 2\)](#)
- [Permissions \(p. 2\)](#)
- [Constraints \(p. 3\)](#)
- [Stack \(p. 3\)](#)

AWS Service Catalog Users

AWS Service Catalog users might be either of the following types, depending on the level of permissions that they have:

- **Catalog administrators (administrators)** – Manage a catalog of products (applications and services), organizing them into portfolios and granting access to end users. Catalog administrators prepare AWS CloudFormation templates, configure constraints, and manage IAM roles that are assigned to products to provide a launch context for advanced resource management.
- **End users** – Receive AWS credentials from their IT department or manager and use the AWS Management Console to launch products to which they have been granted access. End users may be granted permission to launch and manage all of the resources required by the products they use or only permission to service features.

Portfolio

A portfolio is a collection of products, together with configuration information. Portfolios help manage who can use specific products and how they can use them. With AWS Service Catalog, you can create a customized portfolio for each type of user in your organization and selectively grant access to the appropriate portfolio. When you add a new version of a product to a portfolio, that version is automatically available to all current users. You also can share your portfolios with other AWS accounts and allow the administrator of those accounts to distribute your portfolios with additional constraints. Through the use of portfolios, permissions, sharing, and constraints, you can ensure that users are launching products that are configured properly for the organization's needs.

Product

A product is an IT service that you want to make available for deployment on AWS. A product can comprise one or more AWS resource, such as EC2 instances, storage volumes, databases, monitoring configurations, and networking components, or packaged AWS Marketplace products. A product can be a single compute instance running AWS Linux, a fully configured multi-tier web application running in its own environment, or anything in between. You create your products by importing AWS CloudFormation templates. These templates define the AWS resources required for the product, the relationships between resources, and the parameters that the end user can plug in when they launch the product to configure security groups, create key pairs, and perform other customizations.

Versioning

AWS Service Catalog allows you to manage multiple versions of the products in your catalog. This allows you to add new versions of templates and associated resources based on software updates or configuration changes. When you create a new version of a product, the update is automatically distributed to all users who have access to the product, allowing the user to select which version of the product to use. Users can update running instances of the product to the new version quickly and easily.

Permissions

Granting a user access to a portfolio enables that user to browse the portfolio and launch the products in it. You apply AWS Identity and Access Management (IAM) permissions to control who can view and modify your catalog. IAM permissions can be assigned to IAM users, groups, and roles. When a user

launches a product that has an IAM role assigned to it, AWS Service Catalog uses the role to launch the product's cloud resources using AWS CloudFormation. By assigning an IAM role to each product, you can avoid giving users permissions to perform unapproved operations and enable them to provision resources using the catalog.

Constraints

Constraints restrict the ways that specific AWS resources can be deployed for a product. You can use them to apply limits to products for governance or cost control. There are two types of constraints: template and launch. Template constraints restrict the configuration parameters that are available for the user when launching the product (for example, EC2 instance types or IP ranges). Template constraints allow you to reuse generic AWS CloudFormation templates for products and apply restrictions to the templates on a per-product or per-portfolio basis. Launch constraints allow you to specify a role for a product in a portfolio. This role is used to provision the resources at launch, so you can restrict user permissions without impacting users' ability to provision products from the catalog.

Stack

AWS CloudFormation stacks make it easier to manage the lifecycle of your product by allowing you to provision, tag, update, and terminate your product instance as a single unit. An AWS CloudFormation stack includes an AWS CloudFormation template and its associated collection of resources. When an end user launches a product, the instance of the product that is provisioned by AWS Service Catalog is a stack of resources necessary to run the product.

Using the End User Console

Use the AWS Service Catalog end user console to start and stop the products you need to do your job. Also use the end user console to manage the computing resources (known collectively as a *stack*) needed to run those products. The home page for the end user console is the dashboard, which you can find at <https://console.aws.amazon.com/servicecatalog/>.

Note

If you see an error message when attempting to access the AWS Service Catalog end user console, contact your administrator to ensure that your account has both the permissions required to use the AWS Service Catalog service and access to one or more products.

Topics

- [Using the Dashboard \(p. 4\)](#)
- [Using the Product List \(p. 5\)](#)
- [Using the Stack List \(p. 5\)](#)
- [Viewing Available Products \(p. 5\)](#)
- [Launching a Product \(p. 6\)](#)
- [Viewing Stack Information \(p. 7\)](#)
- [Updating Stacks \(p. 8\)](#)
- [Deleting Stacks \(p. 9\)](#)

Using the Dashboard

The AWS Service Catalog Dashboard displays a list of products and a list of stacks. From the Dashboard, you can launch products, and view, update, or delete stacks that you have created.

To view the AWS Service Catalog Dashboard

- Sign in to the AWS Management Console, and then navigate to <https://console.aws.amazon.com/servicecatalog/>.

While using AWS Service Catalog, you can return to the Dashboard at any time by choosing the link at the top of the page or by choosing **Dashboard** from the **Service Catalog** menu.

The Dashboard shows up to five products and five stacks. You can see a complete list of products and stacks on the **Product list** and **Stacks list** pages, which you can display by choosing them from the **Service Catalog** menu.

Using the Product List

The **Product list** shows the applications, tools, and cloud resources that your administrator has made available to you. You can use the **Product list** to launch an instance of those products and manage each stack you create.

To view the Product list

1. Sign in to the AWS Management Console, and then navigate to <https://console.aws.amazon.com/servicecatalog/>.
2. Choose **See All Products**.

You can return to the **Product list** at any time by choosing **Service Catalog** in the navigation bar, and then choosing **Product List**.

Using the Stack List

The **Stack list** displays all of the stacks that you have created by launching products. By default, the **Stack list** shows each stack's name, the time it was created, its current status, and a status message, if applicable. You can also use the column chooser to show stack ARNs (Amazon Resource Names) and the time they were last updated. Use the **Stack list** to search for stacks by name, update a stack to a new version, or delete a stack.

To view the Stack list

1. Sign in to the AWS Management Console, and then navigate to <https://console.aws.amazon.com/servicecatalog/>.
2. Choose **See All Stacks**.

While using AWS Service Catalog, you can return to the **Stack List** at any time by choosing **Service Catalog** in the navigation bar, and then choosing **Stack list**.

To change the columns that are visible

1. Choose the **Edit Columns** button (the gear icon at the top right of the **Stack List**).
2. Choose any of the available columns to show or hide them.
3. Choose **Save**.

Viewing Available Products

The **Product details** page displays information about a product, including a description of the product, details about product versions, and support information.

To view detailed information about a product

1. Navigate to the **Product List**.

2. Choose the product name.

Choosing the Product Version

If multiple versions of a product are available, you can decide which version to use by reading the version descriptions. Typically, you should use the latest version of a product.

Contexts

The launch context for the product includes identifiers for the product, the portfolio used to deliver it, and constraints or tags that are applied during launch. When you launch a product, the context determines the information needed to create and configure the stack, the parameters that you supply, and the constraints used to validate those parameters.

- **Path** – The ARN (Amazon Resource Name) of the product and the portfolio that contains the product.
- **Launch as** – The ARN of the role assumed by AWS Service Catalog to launch the product. If this field is blank, the product is launched with your user permissions.
- **Rules** – The names of template constraints applied to the product during launch.
- **Tags** – The names and values of tags that are inherited from the portfolio or product.

Tags

Tags are metadata assigned to a stack for tracking and analysis. In addition to the tags that you enter when you launch a product, a stack may have tags that were applied to the product or to the portfolio by the AWS Service Catalog administrator.

Support Details

Support details can include an email address, URL, or both. Support details are provided by the administrator when creating the product. Use this information to get help with your products.

Launching a Product

You can launch any product that appears in your AWS Service Catalog [Using the Dashboard \(p. 4\)](#) or [Using the Product List \(p. 5\)](#). Launching a product creates an instance of the product in an AWS stack. A stack in AWS is one or more cloud resources (compute instances, databases, networking components, etc.) that you manage as a single unit.

To launch a product

1. Choose the product in the AWS Service Catalog [Using the Dashboard \(p. 4\)](#) or [Using the Product List \(p. 5\)](#), and then choose **Launch product**.
2. On the **Product Version** page, enter a stack name. Stack names must start with a letter and can contain only letters, numbers, and dashes.
3. Choose the version of the product to launch, and then choose **Next**.
4. On the **Parameters** page, enter values for each parameter required by the product, and then choose **Next**. If a product has no parameters, AWS Service Catalog skips this step.
5. On the **Tags** page, add the tags that you would like to use with your product stack, and then choose **Next**. Tags can have a key and value and they help you identify resources in your stack. The most

common tag key is "Name"; AWS uses this key to populate the **Name** field for resources shown in other areas of the AWS Management Console.

A stack can inherit a maximum of three tags each from the product and portfolio, and can have a maximum of ten tags. Additional tags are added to some resources by AWS CloudFormation, but these do not apply toward the limit and do not appear on this page.

6. On the **Review** page, review the values that you entered, and then choose **Launch**.

When you choose **Launch**, you are redirected to the [Using the Stack List \(p. 5\)](#). If you want to see status message updates as resources are created and parameters are validated, choose **Refresh**.

If a problem occurs during launch, the status changes to **FAILED**. To identify the problem, choose the stack name to display the **Stack details** page by choosing the stack's name.

If the product launches successfully, the status changes to **SUCCESS**. To see output generated by the launch, click through to the **Stack Details** page.

Viewing Stack Information

Each stack has a **Stack details** page that displays information about the stack. The **Stack details** page is available from the time the product is first launched until the stack is deleted.

To view details about a stack

1. Navigate to the [Using the Dashboard \(p. 4\)](#) or [Using the Stack List \(p. 5\)](#).
2. Choose the stack.

Viewing Stack Status

Each stack that you launch changes state as AWS Service Catalog attempts to create and configure AWS resources using the product template and parameters that the user enters during launch. If all goes well, the stack advances from an initial status of **LAUNCHING** to **AVAILABLE**.

A stack's status is shown in the **Dashboard**, **Stack list**, and on the **Stack details** page. A status of **AVAILABLE** indicates that the product launched successfully and is ready for use.

If any of the cloud resources in a stack failed to start or if parameters failed to pass all constraints applied to the product, all of the resources are terminated and the stack has a status of **FAILED**. A failed stack cannot be recovered, but remains in the **Stack list** for troubleshooting.

When you update a stack to use a new version or different parameters, the stack's status is **UPDATING**. If the update succeeds, the stack's status changes to **AVAILABLE**.

The status of a deleted stacks is **TERMINATING** while resources are being terminated. When all of the resources have terminated, the stack is removed from AWS Service Catalog and no longer is listed.

The operations that you can perform on a stack depends on the stack's status. For example, stacks that are **AVAILABLE** can be updated or deleted, but stacks that are **LAUNCHING**, **UPDATING**, or **TERMINATING** cannot. **FAILED** stacks can only be viewed and deleted.

Viewing Outputs

Stacks provide information, called outputs, when a product is launching. Outputs usually display URLs, IP addresses, and database connection strings that are generated when the stack is launched. Each output has a key, value, and description.

How you use the information provided by outputs depends on the type of product you launch. For example, if the product launches an EC2 instance, the stack might generate the IP address of the instance, which you could use to connect to the instance using Remote Desktop Connection or SSH.

Viewing Events

AWS CloudFormation provides information during each step of the launch and updating processes. When a stack's status changes, resources are created, or errors occur, AWS CloudFormation logs an event with the following information:

- **Date** – The time that the event occurred, in local time.
- **Status** – The condition of a resource in a stack, as opposed to the [Viewing Stack Status \(p. 7\)](#).
- **Type** – The type of the resource that is the subject of the event. For details on resource types, see [Resource Types](#) in the *AWS CloudFormation User Guide*.
- **Logical ID** – The name of the resource, as defined in the underlying template.
- **Status reason** – Additional information about the stack's status, if available.
- **Physical ID** – The physical identifier of the resource, which appears when you choose an event.

Entering Parameters

You enter parameters when launching or updating a stack. If you enter an incorrect parameter value when you launch or update a stack, **CREATE_FAILED** will appear in the [Viewing Events \(p. 8\)](#) section.

Viewing Tags

Tags are metadata that are applied to the stack during launch. The **Stack details** page also shows tags that were inherited from the product and portfolio.

Viewing Support Details

If your AWS Service Catalog administrator provided support information in this optional section, you will find an email address or site link that you can use to get support if you encounter problems with your stack. It might also contain additional support information.

Updating Stacks

When you want to use a new version of a product or configure a running stack with updated parameter values, you update it. However, you cannot update a stack to change tags.

You can update stacks only if they have a status of **AVAILABLE**. You cannot update failed stacks or stacks that are in the process of starting, updating, or terminating. See [Viewing Stack Status \(p. 7\)](#) for more information on stack status.

To update a stack

1. Choose the stack, and then choose **Update stack**.
2. Choose the version that you want to update, and then choose **Next**.
3. Enter the parameters, and then choose **Next**.
4. Choose **Update**.

The stack status changes to **UPDATING**. To see output from the update operation, open the **Stack details** page and expand the **Events** section .

Deleting Stacks

To remove all AWS resources that a stack uses, delete the stack. Deleting a stack terminates all resources and removes the stack from your stack list. Delete a stack only if you no longer need it. Before deleting a stack, record any information about the stack or its resources that you might need later.

Before deleting a stack, ensure that it is in either the available or failed state. AWS Service Catalog can delete stacks only in these two states. For more information on stack status, see [Viewing Stack Status \(p. 7\)](#).

To delete a stack

1. Navigate to the [Using the Dashboard \(p. 4\)](#) or [Using the Stack List \(p. 5\)](#).
2. Select the stack, and then choose **Terminate Stack**.
3. Verify that you've chosen the stack that you want to delete, and then choose **Terminate**.

Document History

The following table describes the important changes to the documentation since the last release of AWS Service Catalog.

- **Latest documentation update:** July 9, 2015

Feature	Description	Release Date
New guide	This is the first release of <i>AWS Service Catalog User Guide</i> .	July 9, 2015