



## About the Service Catalog

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An SAE service catalog has three main elements.

- **List of Server Profiles:** A server profile captures network details such as number of interfaces like Virtio, SR\_IOV, and management network names for port channels on the CSP devices or the physical PFTD devices used in the SAE site.
- **List of Catalogs:** A service instance defines a service in terms of how it would be deployed.
- **List of Service Instances:** A service chain refers to a common model for connecting services together.

A catalog in the catalog list can be an organization (provider) catalog or a tenant catalog. If the catalog is for organization (provider) level, it will be associated with all server profiles used for the SAE clusters and will store all the Service Chain Instances which are shared by all tenants under the organization. The catalog for individual tenant cannot be associated with any server profile and will store only the Service Chain Instances used within the tenant. These Service Chain Instances cannot be shared by other tenants.

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## View Service Catalog Components

To view the service catalog components follow the below steps:

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- Step 1** Click **Configuration** at the top-right corner of the homepage.
  - Step 2** Click **Service Catalog**.
  - Step 3** Depending on your requirement, click one of the following tabs: **Catalog**, **Virtual Service Instance**, **Physical Service Instance**, **Service Chain Instance**, **Organization**, or **Server Profile**.

The component you choose is displayed in card format by default.

**Step 4** Click **List View** to view your catalogs, virtual service instances, physical service instances, service chain instances, organization/providers, or server profiles in form of a list.

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#### What to do next

Repeat this procedure to create any other catalog.

Click **Back** to go back to the previous page.



**Note** To edit an existing catalog, select the instance and update the information.

Click  to delete an existing catalog.

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## Create SAE Catalog

The SAE catalog is created and assigned to an organization or tenant. It consists of sever profiles and service chain instance that a provider or tenant can use.


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**Step 1** Click **Configuration** at the top-right corner of the homepage.

**Step 2** Choose **Service Catalog > Catalog**.

**Step 3** Click **Card view** or **List View** to toggle between the card form and list form views.

**Step 4** Click **Add**.

Alternatively, click  to copy an existing catalog and edit and save it with a new name.

**Step 5** **Name:** Enter the name of the catalog. The created catalog are assigned to the organization or tenant.

**Step 6** **Server Profiles:** Click + next to **Server Profiles** to add the server profile and service chain instance that provider or tenant will use.

Service Chain Instance	Service Chain	Deployment Flavor
ASA-FW-HC	ASA-FW-HC	ASA-FW-HC
ASA-FW-HC-ECMP	ASA-FW-HC	ASA-FW-HC
ASA-FW-HC-ECMP-HA	ASA-FW-HC-HA	ASA-FW-HC-HA
ASA-FW-HC-HA	ASA-FW-HC-HA	ASA-FW-HC-HA
ASA-Half-Chain	ASA-Half-Chain	ASA-Half-Chain
ASA-Half-Chain-ECMP	ASA-Half-Chain-ECMP	ASA-Half-Chain-ECMP
ASA-Half-Chain-ECMP-HA	ASA-Half-Chain-ECMP-HA	ASA-Half-Chain-ECMP-HA
ASA-Half-Chain-HA	ASA-Half-Chain-HA	ASA-Half-Chain-HA

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**Note** First you have to create the Server Profile. The created server profile is reflected in this dropdown and you can choose it. *To create it, refer to the section **Add a Server Profile**.*

Second, all the Service Profiles should be added only to the Provider Catalog and should **NEVER** be added to the Tenant Catalog.

**Step 7** (Optional) Click **Validate** to verify your inputs.

**Step 8** Click **Save** to save the catalog.


### What to do next

Repeat this procedure to create any other catalog.

Click **Back** to go back to the previous page.



**Note** To edit an existing catalog, select the instance and update the information.

Click  to delete an existing catalog.


## Create Virtual Service Instance

A service instance defines a service in terms of how it is to be deployed. It specifies the following for a service: type, HA settings, role (active or standby) and so on.

**Step 1** Click **Configuration** at the top-right corner of the homepage.

**Step 2** Choose **Service Catalog > Service Instance**.

**Step 3** Click **Add**.

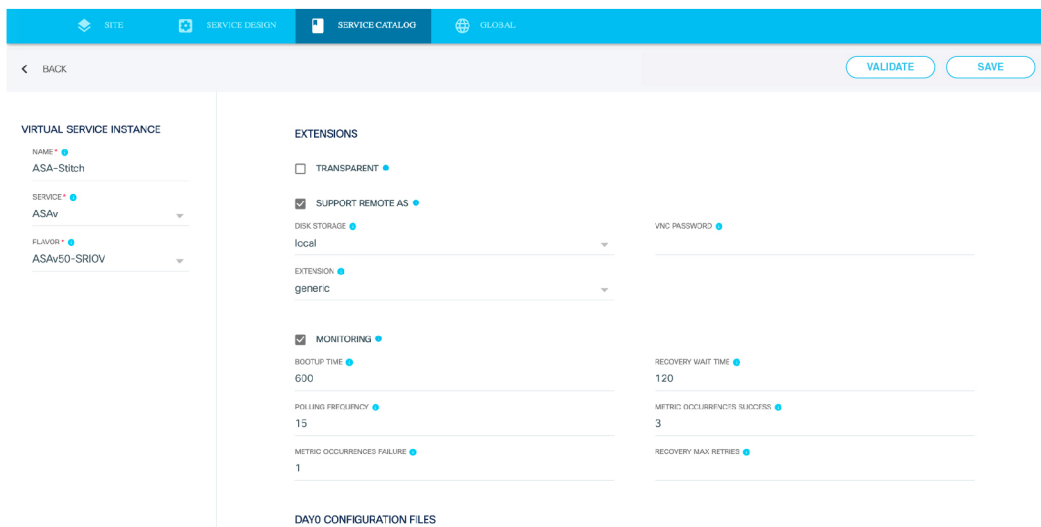
Alternatively, click  to copy an existing service instance and edit and save it with a new name.

**Step 4**

Enter the requested information.

Field	Description
Name	Enter a name for the service instance.
Service	From the drop-down list, choose the service that you are creating the service instance for.
Flavor	If the service that you selected has a single flavor, the Flavor field populates automatically. However, if the service has multiple flavors, you can choose the desired one from the drop-down list.
Service Configuration Parameters	<p><b>Note</b> The fields in the right panel of the screen populate only after you have selected a service and a flavor.</p> <ul style="list-style-type: none"> <li>• <b>Name:</b> Enter a name for your service configuration.</li> </ul>
	<p><b>Extensions:</b> The Routed check-box is selected by default.</p> <ul style="list-style-type: none"> <li>• <b>VNIC Password:</b> When the service instance is deployed on a CSP device, you can access the services through a VNC. The password that you enter here helps protect against unauthorized access to this service from the console.</li> <li>• <b>Service Type:</b> From the drop-down list, select the type of the service. Example types: generic, asav, fdtv.</li> </ul> <p>Depending upon the service you select, additional settings may have to be entered.</p>
	<p><b>Monitoring:</b> When Monitoring checkbox is selected user has to provide values for all the parameters.</p> <ul style="list-style-type: none"> <li>• <b>Bootup-Time:</b> Max time for ESC to wait for the VNF comes up fully.</li> <li>• <b>Recovery-Wait-Time:</b> ESC to wait before starting recovery of the VNF Polling</li> <li>• <b>Frequency:</b> Wait time for ESC to check the VNF up or down.</li> <li>• <b>Metric Occurrences Success:</b> Number of times for ESC to check the VNF success continuously. Note: If the checks fails within the number of time. You have to restart the check again.</li> <li>• <b>Metri Occurrences Failure:</b> Number of times ESC checks the VNF failure. After reaching this number, ESC will give up the VNF with failure sent to NSO</li> </ul>

Field	Description
	<ul style="list-style-type: none"> <li>• <b>Recovery Max Retries:</b> ESC waits for recovery max time and during this period, if VM does not come up due to any reason, ESC sends recovery completed with error notification to NSO. Note: Default value is 3.</li> </ul>
	<p><b>Day0 Configuration Files:</b> Provide the destination filename, URL path to day0 file, and configuration parameters.</p>
	<ul style="list-style-type: none"> <li>• <b>Managed by NSO:</b> Select the check-box if you want the service to be managed by NSO</li> <li>• <b>Management AuthGroup:</b> From the drop-down list, choose the appropriate authentication to enable NSO to access the service instance.</li> <li>• <b>Day 1:</b> Click + next to the Day1 option to add the day1 configuration file.</li> </ul>



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**Step 5** (Optional) Click **Validate** to verify your inputs.


**Step 6** Click **Save** to save the service instance.

### What to do next

Repeat this procedure to create any other service instances.



**Note** To edit an existing service instance, select the instance and update the information.

Click  to delete an existing service instance.


## Create Physical Service Instance

A service instance defines a service in terms of how it is to be deployed. It specifies the following for a service: type, HA settings, role (active or standby) and so on.

**Step 1** Click **Configuration** at the top-right corner of the homepage.

**Step 2** Choose **Service Catalog > Physical Service Instance**.

**Step 3** Click **Add**.

Alternatively, click  to copy an existing service instance and edit and save it with a new name.

**Step 4** Enter the requested information.

Field	Description
Name	Enter a name for the service instance.
Service	From the drop-down list, choose the service that you are creating the service instance for.
Physical Service Config	Enter the name of a physical service configuration to be used for this physical service instance.
	The Routed check-box is selected by default.
	<p><b>Configuration Parameters:</b> Click + next to the configuration parameters to enter the configuration parameters</p> <p><b>Name:</b> Enter the name of the configuration parameter.</p> <p><b>Value:</b> Enter the value for the configuraiton parameter.</p> <p><b>Day 1:</b> Click + next to the Day1 option to add the day1 configuration file.</p>

**Step 5** (Optional) Click **Validate** to verify your inputs.


**Step 6** Click **Save** to save the service instance.

### What to do next

Repeat this procedure to create any other physical service instances.

Click **Back** to go back to the previous page.



- Note** Click download icon to export the physical service instance and physical service config.  
To edit an existing physical service instance, select the instance and update the information.  
Click  to delete an existing service instance.

## Create Service Chain Instance

A service chain instance defines a service chain in terms of its service profiles and how they are deployed.

**Step 1** Click **Configuration** at the top-right corner of the homepage.

**Step 2** Choose **Service Catalog > Service Chain Instance**.

**Step 3** Click **Add**.

**Step 4** **Name:** Enter the name for the service chain instance.

**Step 5** **Service Chain Name:** Select a service chain from the **Service Chain Name** drop-down list.

When you choose the service chain from the drop-down list, the services that are associated with it populate automatically. You can then choose a service instance for each of the services.

**Step 6** **Catalog:** From the **Catalog** drop-down list, choose the catalog to associate with the service chain instance.

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**Step 7** (Optional) Click **Validate** to verify your inputs.

**Step 8** Click **Save** to save the service chain instance.

### What to do next


Repeat this procedure to create any other service chain instances.

Click **Back** to go back to the previous page.



**Note** Click download icon to export the service chain instance.

To edit an existing service chain instance, select the instance and update the information.

Click  to delete an existing service chain instance.

## Add Your Organization

When you add an organization, you are required to specify a catalog. This ensures that all the service chain instances and server profiles that are contained in the catalog are available for your organization to use. On the Add Organization screen, you can also add tenants. Tenants are various departments within an organization, such as, HR, Finance, Workplace Resources, and so on. You can even associate different catalogs to different tenants within your organization. Organizations and tenants represent a downward hierarchy for your site.

**Step 1** Click **Configuration** at the top-right corner of the homepage.

**Step 2** Choose **Service Catalog > Organization**.

**Step 3** Click **Add**.

Alternatively, click  to copy an existing organization, and edit and save it with a new name

**Step 4** Provide the requested information.

a) **Name:** Enter a name for your organization.



- b) **Catalog:** Choose a catalog from the drop-down list. NOTE: If there is no catalog in the drop-down list, you have to create it. Refer the section *Create SAE Catalog* to create the catalog. The selected Catalog must be associated with all Server Profiles for all CSPs and PNFs in the setup.

**Step 5**

Provide the requested Tenant information. You must add at least one tenant to complete this procedure.

- a) **Name:** Enter a name for the tenant.
- b) **Catalog:** Choose a catalog from the drop-down list. NOTE: The selected catalog will be the catalog for the tenant you are creating now. A tenant can have its own tenant catalog which is selecting here. It also shares all service chain instances in its organization catalog with other tenants under the organization.
- a) **Configuration Parameters:** Add additional configuration parameters.
- (Optional) Click + to add more tenants.

**Step 6**

(Optional) Click **Validate** to verify your inputs.

**Step 7**

Click **Save** to save the organization and tenant information.


**What to do next**

Repeat this procedure to add more organizations or tenants, as required.

Click **Back** to go back to the previous page.



**Note** Click an existing organization to view or edit its details.

Click the  on the organization to delete it.

## Add Server Profile


You can create two types server profiles: CSP and Physical FTD (FTD) devices. Server profiles define a server in terms of its type (CSP or physical FTD) and the server's physical interfaces. Server profiles serve as a server definition templates that can be referenced at the time of creating your site infrastructure.

**Step 1**

Click **Configuration** at the top-right corner of the homepage. Choose **Service Catalog > Server Profile**.

**Step 2**

Click **Add**.

Alternatively, click  on an existing server profile to copy and edit it, and save it with a new name.

**Step 3** **Name:** Enter a name for the server profile.

**Step 4** **VIM Type:** From the **Type** drop-down list, choose either CSP or PFTD. The options to be entered in the right panel of the screen differ based on your selection.

If you select CSP as the type, enter the following requested information.

- **Management Network:** Name of the management network interface
- **SRIOV Networks:** Name of the SRIOV network interface. Click + to add multiple SRIOV network interfaces.
- **VIRTIO Networks:** Name of the VIRTIO network interface. Click + to add multiple VIRTIO network interfaces.

If you select PFTD as the type, enter the following requested information.

- **Management Network:** Name of the management network interface
- **Data Networks:** Name of the data network interface. Click + to add multiple data network interfaces.

**Step 5** (Optional) Click **Validate** to verify your inputs.


**Step 6** Click **Save** to save the server profile.

### What to do next

Repeat this procedure to create any other server profiles.

Click **Back** to go back to the previous page.



- Note** Click an existing server profile to view or edit its details.
- Click download icon to export the service chain instance.
- Click  on a server profile to delete it.

## Import and Export Service Catalog Components

This topic describes the following:

- How to export catalogs, virtual service instances, physical service instances, service chain instances, organization information and server profiles individually.
- How to import catalogs, virtual service instances, physical service instances, service chain instances, organization information and server profiles in bulk.


To be able to import files, the file should be in XML format. Similarly, the files are also exported in XML or JSON format.





**Step 1** Click **Configuration** at the top-right corner of the homepage.


**Step 2** Click the **Service Catalog > tab** .

**Step 3** Depending on your requirement, click one of the tabs: **Catalog**, **Virtual Service Instance**, **Physical Service Instance**, **Service Chain Instance**, **Organization** or **Server Profile**.

*Table 1:*

Action	Result
Click <b>Catalog</b>	<p>Your catalogs are displayed in card view.</p> <p><b>Import Catalogs in Bulk</b></p> <ul style="list-style-type: none"> <li>• Click the <b>Import</b> button to import XML files containing configuration for single or multiple catalogs.</li> </ul> <p><b>Export Individual Catalogs</b></p> <ul style="list-style-type: none"> <li>• Click the  icon on the card of the catalog you want to export.</li> </ul>

Action	Result
Click <b>Virtual Service Instance</b>	<p>Your virtual service instances are displayed in card view.</p> <p><b>Import Virtual Service Instances in Bulk</b></p> <ul style="list-style-type: none"> <li>• Click the <b>Import</b> button to import XML files containing configuration for single or multiple virtual service instances.</li> </ul> <p><b>Export Individual Virtual Service Instances</b></p> <ul style="list-style-type: none"> <li>• Click the  icon on the card of the virtual service instance you want to export.</li> </ul>
Click <b>Physical Service Instance</b>	<p>Your physical service instance are displayed in card view.</p> <p><b>Import Physical Service Instances in Bulk</b></p> <ul style="list-style-type: none"> <li>• Click the <b>Import</b> button to import XML files containing configurations for single or multiple physical service instances.</li> </ul> <p><b>Export Individual Physical Service Instances</b></p> <ul style="list-style-type: none"> <li>• Click the  icon on the card of the physical service instance you want to export.</li> </ul>
Click <b>Service Chain Instance</b>	<p>Your existing service chain instances are displayed in card view.</p> <p><b>Import Service Chain Instances in Bulk</b></p> <ul style="list-style-type: none"> <li>• Click the <b>Import</b> button to import XML files containing configuration for single or multiple service chain instances.</li> </ul> <p><b>Export Individual Service Chain Instances</b></p> <ul style="list-style-type: none"> <li>• Click the  icon on the card of the service chain instance you want to export.</li> </ul>
Click <b>Organization</b>	<p>Your existing organizations are displayed in card view.</p> <p><b>Import Organization Information in Bulk</b></p> <ul style="list-style-type: none"> <li>• Click the <b>Import</b> button to import XML files containing configuration for single or multiple organization information.</li> </ul> <p><b>Export Information about Individual Organizations</b></p> <ul style="list-style-type: none"> <li>• Click the  icon on the card of the organization information you want to export.</li> </ul>

Action	Result
Click <b>Server Profile</b>	<p>Your existing server profiles are displayed in card view.</p> <p><b>Import Server Profiles in Bulk</b></p> <ul style="list-style-type: none"><li>• Click the <b>Import</b> button to import XML files containing configuration for single or multiple server profiles.</li></ul> <p><b>Export Individual Server Profiles</b></p> <ul style="list-style-type: none"><li>• Click the  icon on the card of the server profile you want to export.</li></ul>

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