



## Hosted edge services

*Table 1: Feature history*

Feature name	Release information	Description
Hosted edge services	Cisco Catalyst SD-WAN Manager Release 20.18.1	You can monitor hosted edge services (IOx applications) for health, associated devices, version, and IOx state using the Cisco Catalyst SD-WAN Manager interface. You can also start or stop the hosted edge services.

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## Hosted edge services

Hosted edge services are Cisco IOx applications installed on WAN edge devices, improving their features and functionality beyond the core Cisco IOS XE Catalyst SD-WAN software. Cisco IOx applications can include both Cisco and third-party applications. Using Cisco SD-WAN Manager, you can

- monitor all hosted edge services installed on your edge devices for resource usage, device details, version, and more, and
- manage hosted edge services installed on your devices.

## Restrictions for monitoring hosted edge services

### Disk space calculation

If multiple hosted edge services are running on a device using any version older than Cisco IOS XE Catalyst SD-WAN Release 17.18.x, the disk space usage for some hosted edge services may not reflect correctly.

Upgrade to the latest version of Cisco IOS XE Catalyst SD-WAN Release 17.18.x to ensure proper disk space usage calculation.

### Multitenancy

In a multitenant environment, you can monitor hosted edge services only at the tenant level and not at the provider level.

## Start or stop the hosted edge services

Control the operation of the edge service installed on the device using these steps in SD-WAN Manager.

### Before you begin

- Deploy a hosted edge service to one or more devices in the network and activate it. See the configuration instructions in [Cisco Catalyst SD-WAN Integrations](#) guide.

### Procedure

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**Step 1** From the Cisco SD-WAN Manager menu, choose **Monitor > Hosted Edge Services**.

**Step 2** Select a hosted edge service.

The page shows devices running the selected hosted edge service.

Alternatively, to manage the hosted edge service from the **Devices** page, use these steps:

- a) From the Cisco SD-WAN Manager menu, choose **Monitor > Devices**.
- b) Select a device from the list.
- c) Click **App Status Info** to view hosted edge services associated with the device.

**Step 3** To start or stop a hosted edge service, click ... adjacent to the device and select **Start edge service** or **Stop edge service**.

### Note

You can stop a hosted edge service only if it is in **Running** state. Similarly, you can start a hosted edge service if it is in **Stopped** state. You cannot perform any operation on the hosted edge service if it is in **Deployed** or **Activated** state.

After the device metrics are refreshed, the **Edge service state** column shows the current state of the edge service.

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## Monitor the hosted edge services

Monitor the devices running hosted edge services, their resource usage, status of the hosted edge services on individual devices, and so on.

## Procedure

**Step 1** From the Cisco SD-WAN Manager menu, choose **Monitor > Hosted Edge Services**.

The hosted edge services view includes:

*Table 2: Hosted edge services*

Field	Description
<b>Hosted edge service name</b>	Name of the hosted edge service installed on your edge device to provide additional features.
<b>Edge service author</b>	Name of the organization that developed this edge service.
<b>Number of sites installed</b>	Total number of sites where the hosted edge service is currently installed.
<b>Number of devices installed</b>	Total number of edge devices on which the hosted edge service is installed.

**Step 2** To monitor the hosted edge services on specific devices, use these steps:

a) From the **Hosted Edge Services** page, select a hosted edge service name.

The page shows the devices running the selected hosted edge service.

*Table 3: IOx states and device details*

Field	Description
<b>IOx states</b>	<p>IOx states are hosted edge service states that indicate whether the service is operational.</p> <ul style="list-style-type: none"> <li>• <b>Stopped:</b> Indicates the hosted edge service has stopped and is no longer operational on the device.</li> <li>• <b>Running:</b> Indicates the hosted edge service is accessible and operational on the device.</li> <li>• <b>Deployed:</b> Indicates the hosted edge service is deployed to the device and the installation is successful.</li> <li>• <b>Activated:</b> Indicates the network configurations are successfully added to the hosted edge services and the application is now active.</li> </ul> <p>Click any state to filter the network devices as per the state of the hosted edge service.</p>
<b>Network device</b>	Name of the network device on which the selected instance of hosted edge service is running.
<b>Site name</b>	Logical identifier that represents the operational grouping of the network device within the Cisco SD-WAN environment.

Field	Description
<b>Resource usage health</b>	<p>Resource consumed by the hosted edge services.</p> <p>For a hosted edge service, the health status indicates:</p> <ul style="list-style-type: none"> <li>• <b>Good:</b> The hosted edge service's CPU, memory, or disk space resource usage is less than 50 percent of the allocated resources.</li> <li>• <b>Fair:</b> The hosted edge service's CPU, memory, or disk space resource usage lies between 50 and 75 percent of the allocated resources.</li> <li>• <b>Poor:</b> The hosted edge service's CPU, memory, or disk space resource usage is greater than 75 percent of the allocated resources.</li> </ul> <p>This reflects only the resource usage by the service. It does not reflect the total resource usage of the device.</p>
<b>Edge service state</b>	Displays the IOx state of the hosted edge service: stopped, running, deployed, or activated.
<b>Edge service version</b>	The IOx application version running on the device, as defined in the package.yaml file.
<b>Last update</b>	Displays the latest timestamp when the device metrics were updated.

- b) For a selected network device, click ... and select **View edge service info**.

The drawer shows this information:

- **Resource usage:** Current health status along with resource consumption of CPU, RAM, and disk space.
- **Edge service details:** Current IOx state, hosted edge service version, and last data fetch details. Use the **Stop edge service** option to stop the hosted edge service instance on the device. Click **Refresh device metrics** to manually update the device metrics for the selected device.
- **Package information:** Hosted edge service name, CPU architecture, and author information.

**Step 3** To monitor the hosted edge services on a specific device from the **Devices** page, use these steps:

- From the Cisco SD-WAN Manager menu, choose **Monitor > Devices**.
- Select a device from the list.
- Click **App Status Info**.

The page shows the hosted edge services running on the device.

Field	Description
<b>Edge service name</b>	Name of the IOx application hosted on the device.
<b>Edge service author</b>	Name of the organization that developed the edge service.
<b>Edge service version</b>	The IOx application version running on the device as defined in the package.yaml file.

Field	Description
<b>Resource usage health</b>	<p>Resource consumed by the hosted edge services.</p> <p>For a hosted edge service, the health status indicates:</p> <ul style="list-style-type: none"><li>• <b>Good:</b> The hosted edge service's CPU, memory, or disk space resource usage is less than 50 percent of the allocated resources.</li><li>• <b>Fair:</b> The hosted edge service's CPU, memory, or disk space resource usage lies between 50 and 75 percent of the allocated resources.</li><li>• <b>Poor:</b> The hosted edge service's CPU, memory, or disk space resource usage is greater than 75 percent of the allocated resources.</li></ul> <p>This reflects only the resource usage by the service. It does not reflect the total resource usage of the device.</p> <p>You can also view the health using the <b>Edge service resource usage health</b> column on the <b>Devices</b> page for all devices that have any hosted edge service.</p>
<b>Edge service state</b>	Displays the IOx state of the hosted edge service: Stopped, Running, Deployed, or Activated.
<b>CPU usage</b>	Displays CPU resource usage in percentage.
<b>Disk space usage</b>	Displays disk space usage in percentage.
<b>Memory usage</b>	Displays memory usage in percentage.

