

Cloud OnRamp for SaaS Commands

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probe-path load-balance-dia latency-variance

To configure the latency variance for Cloud onRamp for SaaS load balancing, use the **probe-path load-balance-dia latency-variance** command in global configuration mode. To disable Cloud onRamp for SaaS load balancing, use the **no** form of the command.

probe-path load-balance-dia latency-variance *latency-variance*

no probe-path load-balance-dia latency-variance

Syntax Description

latency-variance	To use another interface for load balancing, the latency value of the interface cannot vary from the latency of the best path interface by more than this number of milliseconds. You can configure a smaller value to restrict load balancing only to interfaces with a latency value very close to that of the best path interface, or you can configure a larger value to be more inclusive of interfaces that might have a higher latency than the best path interface. For example, if the best path interface has a latency of 5 milliseconds, and the *latency-variance* is set to 15, then another interface can be used for load balancing only if its latency is no more than 20 milliseconds. Range: 1 to 1000 (milliseconds) Default: 50

Command Default

50 milliseconds

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	This command was introduced.

Usage Guidelines

Note We recommend configuring Cloud onRamp for SaaS load balancing using Cisco SD-WAN Manager, not by CLI.

By default, Cloud onRamp for SaaS load balancing is disabled. Any of the following commands can enable Cloud onRamp for SaaS load balancing:

- **probe-path load-balance-dia latency-variance**
- **probe-path load-balance-dia loss-variance**
- **probe-path load-balance-dia source-ip-hash**

Using the **no** form of each of the commands disables Cloud onRamp for SaaS load balancing after it has been enabled:

- **no probe-path load-balance-dia latency-variance**
- **no probe-path load-balance-dia loss-variance**
- **no probe-path load-balance-dia source-ip-hash**

After determining the best path interface for a cloud application, Cloud onRamp for SaaS compares the performance statistics for other interfaces. To use another interface for load balancing, the following must be true:

- The packet loss value of the interface must be within a configured percentage of the value for the best path interface. See the **probe-path load-balance-dia loss-variance** command.
- The latency value of the interface cannot vary from the latency of the best path interface by more than a configured number of milliseconds (configured by this command).

Example

The following example configures a latency variance of 50 milliseconds.

```
Device(config)# probe-path load-balance-dia latency-variance 50
```

Example

The **show full-configuration probe-path load-balance-dia** command displays the currently configured parameters for Cloud onRamp for SaaS load balancing.

```
Device(config)# show full-configuration probe-path load-balance-dia
probe-path load-balance-dia latency-variance 50
probe-path load-balance-dia loss-variance 30
probe-path load-balance-dia source-ip-hash false
```

Example

The **no** form of each of the following commands disables Cloud onRamp for SaaS load balancing.

```
Device(config)# no probe-path load-balance-dia latency-variance
Device(config)# no probe-path load-balance-dia loss-variance
Device(config)# no probe-path load-balance-dia source-ip-hash
```

probe-path load-balance-dia loss-variance

To configure the packet loss variance for Cloud onRamp for SaaS load balancing, use the **probe-path load-balance-dia loss-variance** command in global configuration mode. To disable Cloud onRamp for SaaS load balancing, use the **no** form of the command.

probe-path load-balance-dia loss-variance *loss-variance*

no probe-path load-balance-dia loss-variance

Syntax Description

loss-variance	To use another interface for load balancing, the packet loss value of the interface must be within the percentage configured with *loss-variance* , compared with the value for the best path interface. You can configure a smaller value to restrict load balancing only to interfaces with a packet loss value very close to that of the best path interface, or you can configure a larger value to be more inclusive of interfaces that might have a higher packet loss than the best path interface. For example, if the best path interface has a packet loss value of 2% and the *loss-variance* value is 10, then another interface can be used for load balancing only if its packet loss value is no more than 12%. Range: 1 to 100 (percent) Default: 10

Command Default

10

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	This command was introduced.

Usage Guidelines

Note We recommend configuring Cloud onRamp for SaaS load balancing using Cisco SD-WAN Manager, not by CLI.

By default, Cloud onRamp for SaaS load balancing is disabled. Any of the following commands can enable Cloud onRamp for SaaS load balancing:

- **probe-path load-balance-dia latency-variance**
- **probe-path load-balance-dia loss-variance**
- **probe-path load-balance-dia source-ip-hash**

Using the **no** form of each of the commands disables Cloud onRamp for SaaS load balancing after it has been enabled:

- **no probe-path load-balance-dia latency-variance**
- **no probe-path load-balance-dia loss-variance**
- **no probe-path load-balance-dia source-ip-hash**

After determining the best path interface for a cloud application, Cloud onRamp for SaaS compares the performance statistics for other interfaces. To use another interface for load balancing, the following must be true:

- The packet loss value of the interface must be within a configured percentage of the value for the best path interface (configured by this command).
- The latency value of the interface cannot vary from the latency of the best path interface by more than a configured number of milliseconds. See the **probe-path load-balance-dia latency-variance** command.

Example

The following example configures a packet loss variance of 30 percent.

```
Device(config)# probe-path load-balance-dia loss-variance 30
```

Example

The **show full-configuration probe-path load-balance-dia** command displays the currently configured parameters for Cloud onRamp for SaaS load balancing.

```
Device(config)# show full-configuration probe-path load-balance-dia
probe-path load-balance-dia latency-variance 50
probe-path load-balance-dia loss-variance 30
probe-path load-balance-dia source-ip-hash false
```

Example

The **no** form of each of the following commands disables Cloud onRamp for SaaS load balancing.

```
Device(config)# no probe-path load-balance-dia latency-variance
Device(config)# no probe-path load-balance-dia loss-variance
Device(config)# no probe-path load-balance-dia source-ip-hash
```

probe-path load-balance-dia source-ip-hash

To ensure that all traffic from a single host uses a single interface, when using Cloud onRamp for SaaS load balancing, use the **probe-path load-balance-dia source-ip-hash** command in global configuration mode. To disable this option, use the **no** form of this command.

probe-path load-balance-dia source-ip-hash

no probe-path load-balance-dia source-ip-hash

Command Default

Disabled

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	This command was introduced.

Usage Guidelines

Note We recommend configuring Cloud onRamp for SaaS load balancing using Cisco SD-WAN Manager, not by CLI.

By default, Cloud onRamp for SaaS load balancing is disabled. Any of the following commands can enable Cloud onRamp for SaaS load balancing:

- **probe-path load-balance-dia latency-variance**
- **probe-path load-balance-dia loss-variance**
- **probe-path load-balance-dia source-ip-hash**

Using the **no** form of each of the commands disables Cloud onRamp for SaaS load balancing after it has been enabled:

- **no probe-path load-balance-dia latency-variance**
- **no probe-path load-balance-dia loss-variance**
- **no probe-path load-balance-dia source-ip-hash**

Cloud onRamp for SaaS determines the best network path for each type of cloud traffic. However, if multiple direct internet access (DIA) interfaces on a WAN edge device at a branch site provide acceptable performance for a cloud application, Cloud onRamp for SaaS can employ load balancing across multiple interfaces to further improve performance. When you enable load balancing across multiple interfaces of a WAN edge devices, load balancing is enabled for all cloud applications that are managed by Cloud onRamp for SaaS.

If you want all traffic from a single host, such as a device within your network, to use a single interface (not load balancing), you can enable this option. For example, you may want DNS and application traffic from a

device to use the same interface. Use the **probe-path load-balance-dia source-ip-hash** command to configure this.

Example

```
Device(config)# probe-path load-balance-dia source-ip-hash
```

Example

The **show full-configuration probe-path load-balance-dia** command displays the currently configured parameters for Cloud onRamp for SaaS load balancing.

```
Device(config)# show full-configuration probe-path load-balance-dia
probe-path load-balance-dia latency-variance 50
probe-path load-balance-dia loss-variance 30
probe-path load-balance-dia source-ip-hash false
```

Example

Executing the **no** form of each of the following commands disables Cloud onRamp for SaaS load balancing.

```
Device(config)# no probe-path load-balance-dia latency-variance
Device(config)# no probe-path load-balance-dia loss-variance
Device(config)# no probe-path load-balance-dia source-ip-hash
```

probe saas-app

To define a SaaS application list for Cloud onRamp for SaaS, use the **probe saas-app** command in global configuration mode. To remove a SaaS application list, use the **no** form of the command.

Note We do not recommend using this command. We recommend using Cisco SD-WAN Manager to configure this feature. Configuring Cloud onRamp for SaaS features using CLI commands causes devices to be out of synchronization with Cisco SD-WAN Manager.

probe saas-app *applist-name application*
[*application ...*]
{ **endpoint-ip** *ip-address* | **endpoint-fqdn** *fqdn* | **endpoint-url** *url* }

no probe saas-app *applist-name*

Syntax Description

applist-name	Name of the SaaS application list.
application	Applications to include in the SaaS application list. Minimum number of applications: 1 Maximum number of applications: 8

endpoint-ip *ip-address*	IP address of the application server to probe. Cloud onRamp for SaaS probes the server using port 80.
endpoint-fqdn *fqdn*	Fully qualified domain name of the application server to probe. Cloud onRamp for SaaS probes the server using port 80.
endpoint-url *url*	A URL using HTTP or HTTPS of the application server to probe. Cloud onRamp for SaaS probes the server using port 80 or port 443, depending on the URL provided.

Command Default

By default, no application list is defined.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.8.1a	This command was introduced.

Example

The following example creates a SaaS application list called example-apps that includes two applications (example-audio and example-video) and specifies www.example.com as the endpoint for probing to find the best path.

```
probe saas-app example-apps
  app example-audio
  app example-video
  endpoint-fqdn www.example.com
```

probe saas-app webex

To enable Cloud onRamp for SaaS to determine the best path for network traffic for Webex, use the **probe saas-app webex** command in global configuration mode.



Note We do not recommend using this command. It requires an understanding of Webex server information and knowledge of how to configure region-name, region-id, and endpoint-fqdn. In addition, using this command can cause a device to go out of synchronization with the configuration of Cloud onRamp for SaaS by Cisco SD-WAN Manager.

probe saas-app webex region *region-name* **id** *region-id* **endpoint-fqdn** *server-fqdn*

Syntax Description

region *region-name*	Region of the Webex server.
id *region-id*	Region ID of the Webex server.
endpoint-fqdn *server-fqdn*	Fully qualified domain name of the Webex server.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.7.1a	Command qualified for use in Cisco SD-WAN Manager CLI templates.

Usage Guidelines



Note We do not recommend using this command. It requires an understanding of Webex server information and knowledge of how to regions and ID's. In addition, using this command can cause a device to go out of synchronization with the configuration of Cloud onRamp for SaaS by Cisco SD-WAN Manager.

Examples

The following example configures two webex servers.

```
probe
saas-app webex
  region ap-east-1
   id 231
   endpoint-fqdn  pinger.ap-east-1.net.infra.webex.com

  !
  region ap-northeast-1
   id 221
   endpoint-fqdn  pinger.ap-northeast-1.net.infra.webex.com
  !
```