



Working with Policies

This chapter includes the following sections:

- [Global Policies, page 1](#)
- [Local Policies, page 11](#)
- [Configuring Threshold Policies, page 11](#)

Global Policies

You can create and manage global policies for Network, Server and Storage in Cisco UCS Central and include them in service profiles or service profile templates for one or more Cisco UCS domains.



Note

Cisco UCS Central does not support Direct Attached Storage (DAS).

The service profiles and service profile templates that include global policies can be either of the following:

- Local service profiles or service profile templates that are created and managed by Cisco UCS Manager in one Cisco UCS domain. You can only associate local service profiles with servers in that domain. When you include a global policy in a local service profile, Cisco UCS Manager makes a local read-only copy of that policy.
- Global service profiles or service profile templates that are created and managed by Cisco UCS Central. You can associate global service profiles with servers in one or more registered Cisco UCS domains.

You can only make changes to global policies in Cisco UCS Central. Those changes affect all service profiles and service profile templates that include the global policy. All global policies are read-only in Cisco UCS Manager.

You can configure all operational policies under a domain group using IPv6 addresses. These policies are located in the **Operations Management** tab of the Cisco UCS Central GUI.

This feature helps the Cisco UCS Manager to use an IPv6 address while importing these policies from Cisco UCS Central.

Policy Conversion Between Global and Local

Under certain circumstances you can convert a global policy to a local policy or a local policy to a global policy in Cisco UCS Manager.

Global service profiles and templates can only refer to global policies. Upon deployment, you cannot convert global policies that are included in global service profiles and templates to local policies. You must first convert the service profile or any policies that use the global policy, such as a LAN or SAN connectivity policy or a vNIC or vHBA template, to local.

When a service profile refers to a global template in Cisco UCS Central and the template includes a global policy, the ownership of the template is with the service profile. The ownership of the global policy remains with Cisco UCS Central, and you cannot make any changes to the policy ownership using Cisco UCS Manager. You can make changes to the policy ownership locally only if the policy is included in a local service profile or template.

Converting a Global Policy to a Local Policy

You can convert a policy from global to local only if the policy is included in a local service profile or service profile template.

Before You Begin

You must be logged in as an admin or as a user with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 2	UCS-A /org # scope maint-policy <i>policy-name</i>	Enters the policy maintenance mode.
Step 3	UCS-A /org/maint-policy # set policy-owner <i>local</i>	Converts the global policy to local.
Step 4	UCS-A /org/maint-policy* # commit-buffer	Commits the transaction to the system configuration.

The policy is now a local policy that can be managed by Cisco UCS Manager.

The following example converts a global policy to local and commits the transaction:

```
UCS-A# scope org /
UCS-A /org # scope maint-policy GlobalScrubPolicy1
UCS-A /org/maint-policy* # set policy-owner local
UCS-A /org/maint-policy* # commit-buffer
UCS-A /org/maint-policy #
```

Converting a Local Policy to a Global Policy

You can change the ownership of the local policies to global only if they are associated with a service profile.

Before You Begin

You must be logged in as an admin or as a user with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 2	UCS-A /org # scope maint-policy <i>policy-name</i>	Enters the policy maintenance mode.
Step 3	UCS-A /org/maint-policy # set policy-owner <i>global</i>	Converts the local policy to global.
Step 4	UCS-A /org/maint-policy* # commit-buffer	Commits the transaction to the system configuration.

The policy is now a global policy that can only be managed by Cisco UCS Central and displays as read-only policy in the Cisco UCS Manager.

The following example converts a local policy to global and commits the transaction:

```
UCS-A# scope org /
UCS-A /org # scope maint-policy GlobalScrubPolicy1
UCS-A /org/maint-policy* # set policy-owner global
UCS-A /org/maint-policy* # commit-buffer
UCS-A /org/maint-policy #
```

Policy Resolution between Cisco UCS Manager and Cisco UCS Central

For each Cisco UCS domain that you register with Cisco UCS Central, you can choose which application will manage certain policies and configuration settings. This policy resolution does not have to be the same for every Cisco UCS domain that you register with the same Cisco UCS Central.

You have the following options for resolving these policies and configuration settings:

- **Local**—The policy or configuration is determined and managed by Cisco UCS Manager.
- **Global**—The policy or configuration is determined and managed by Cisco UCS Central.

The following table contains a list of the policies and configuration settings that you can choose to have managed by either Cisco UCS Manager or Cisco UCS Central:

Name	Description
Infrastructure & Catalog Firmware	Determines whether the Capability Catalog and infrastructure firmware policy are defined locally or come from Cisco UCS Central.
Time Zone Management	Determines whether the date and time is defined locally or comes from Cisco UCS Central.
Communication Services	Determines whether HTTP, CIM XML, Telnet, SNMP, web session limits, and Management Interfaces Monitoring Policy settings are defined locally or in Cisco UCS Central.
Global Fault Policy	Determines whether the Global Fault Policy is defined locally or in Cisco UCS Central.
User Management	Determines whether authentication and native domains, LDAP, RADIUS, TACACS+, trusted points, locales, and user roles are defined locally or in Cisco UCS Central.
DNS Management	Determines whether DNS servers are defined locally or in Cisco UCS Central.
Backup & Export Policies	Determines whether the Full State Backup Policy and All Configuration Export Policy are defined locally or in Cisco UCS Central.
Monitoring	Determines whether Call Home, Syslog, and TFTP Core Exporter settings are defined locally or in Cisco UCS Central.
SEL Policy	Determines whether managed endpoints are defined locally or in Cisco UCS Central.
Power Management	Determines whether the power management is defined locally or in Cisco UCS Central.
Power Supply Unit	Determines whether power supply units are defined locally or in Cisco UCS Central.

Consequences of Policy Resolution Changes

When you register a Cisco UCS domain, you configure policies for local or global resolution. The behavior that occurs when the Cisco UCS domain is registered or when that registration or configuration changes, depends upon several factors, including whether a domain group has been assigned or not.

The following table describes the policy resolution behavior you can expect for each type of policy.

Policies and Configuration	Policy Source		Behavior in Cisco UCS Manager on Registration with Cisco UCS Central		Behavior in Cisco UCS Manager when Registration Changed	
	Cisco UCS Central	Cisco UCS Manager	Domain Group Unassigned	Domain Group Assigned	Unassigned from Domain Group	Deregistered from Cisco UCS Central
Call Home	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
SNMP configuration	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
HTTP	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Telnet	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
CIM XML	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Management interfaces monitoring policy	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Power allocation policy	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Power policy (also known as the PSU policy)	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
SEL policy	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Authentication Domains	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy

Policies and Configuration	Policy Source		Behavior in Cisco UCS Manager on Registration with Cisco UCS Central		Behavior in Cisco UCS Manager when Registration Changed	
	Cisco UCS Central	Cisco UCS Manager	Domain Group Unassigned	Domain Group Assigned	Unassigned from Domain Group	Deregistered from Cisco UCS Central
LDAP	Domain group root	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
LDAP provider groups and group maps	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
TACACS, including provider groups	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
RADIUS, including provider groups	N/A Cisco UCS Manager only	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
SSH (Read-only)	Domain group root	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
DNS	Domain group root	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Time zone	Domain group root	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Web Sessions	Domain group root	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Fault	Domain group root	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Core Export	Domain group root	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Syslog	Domain group root	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy

Policies and Configuration	Policy Source		Behavior in Cisco UCS Manager on Registration with Cisco UCS Central		Behavior in Cisco UCS Manager when Registration Changed	
	Cisco UCS Central	Cisco UCS Manager	Domain Group Unassigned	Domain Group Assigned	Unassigned from Domain Group	Deregistered from Cisco UCS Central
Global Backup/Export Policy	Domain group root	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Default Authentication	Domain group root	Assigned domain group	Local	Local/Remote	Retains last known policy state	Converted to a local policy
Console Authentication	Domain group root	Assigned domain group	Local	Can be local or remote	Retains last known policy state	Converted to a local policy
Roles	Domain group root	Assigned domain group	Local	Local/Combine (Remote replacing Local)	Deletes remote policies	Converted to a local policy
Locales - Org Locales	Domain group root	Assigned domain group	Local	Local/Combine (Remote replacing Local)	Deletes remote policies	Converted to a local policy
Trust Points	Domain group root	Assigned domain group	Local	Local/Combine (Remote replacing Local)	Deletes remote policies	Converted to a local policy
Firmware Download Policy	Domain group root	N/A	N/A	N/A	N/A	N/A
ID Soaking Policy	Domain group root	N/A	N/A	N/A	N/A	N/A
Locales - Domain Group Locales	Domain group root	N/A	N/A	N/A	N/A	N/A
Infrastructure Firmware Packs	N/A	Assigned domain group	Local	Local/Remote (if Remote exists)	Retains last known policy state	Converted to a local policy
Catalog	N/A	Assigned domain group	Local	Local/Remote (if Remote exists)	Retains last known policy state	Converted to a local policy

Policies and Configuration	Policy Source		Behavior in Cisco UCS Manager on Registration with Cisco UCS Central		Behavior in Cisco UCS Manager when Registration Changed	
	Cisco UCS Central	Cisco UCS Manager	Domain Group Unassigned	Domain Group Assigned	Unassigned from Domain Group	Deregistered from Cisco UCS Central
Maintenance Policy Schedule Host Firmware Packs	N/A	Assigned domain group	See Consequences of Service Profile Changes on Policy Resolution, on page 8	See Consequences of Service Profile Changes on Policy Resolution, on page 8	Deletes remote policies	Converted to a local policy
Maintenance Policy Schedule Host Firmware Packs	N/A	Assigned domain group	See Consequences of Service Profile Changes on Policy Resolution, on page 8	See Consequences of Service Profile Changes on Policy Resolution, on page 8	Deletes remote policies	Converted to a local policy
Maintenance Policy Schedule Host Firmware Packs	N/A	Assigned domain group	See Consequences of Service Profile Changes on Policy Resolution, on page 8	See Consequences of Service Profile Changes on Policy Resolution, on page 8	Deletes remote policies	Converted to a local policy

Consequences of Service Profile Changes on Policy Resolution

For certain policies, the policy resolution behavior is also affected by whether or not one or more service profiles that include that policy have been updated.

The following table describes the policy resolution behavior you can expect for those policies.

Policy	Behavior in Cisco UCS Manager on Registration with Cisco UCS Central		Domain Group Assigned after Registration with Cisco UCS Central
	Domain Group Unassigned / Domain Group Assigned		
	Service Profile not Modified	Service Profile Modified	
Maintenance Policy	Local	Local, but any "default" policies are updated on domain group assignment	Local/Remote (if resolved to "default" post registration)

Policy	Behavior in Cisco UCS Manager on Registration with Cisco UCS Central		Domain Group Assigned after Registration with Cisco UCS Central
	Domain Group Unassigned / Domain Group Assigned		
	Service Profile not Modified	Service Profile Modified	
Schedule	Local	Local, but any "default" policies are updated on domain group assignment	Local/Remote (if resolved to "default" post registration)
Host Firmware Packages	Local	Local, but any "default" policies are updated on domain group assignment	Local/Remote (if resolved to "default" post registration)

Configuring Policy Resolution between Cisco UCS Manager and Cisco UCS Central using the Cisco UCS Manager CLI

Before You Begin

You must register the Cisco UCS Domain with Cisco UCS Central before you can configure policy resolution.

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope system	Enters system mode.
Step 2	UCS-A/system # scope control-ep policy	Enters control-ep policy mode.
Step 3	UCS-A/system/control-ep # set backup-policy-ctrl source {local global}	Determines whether the Full State Backup Policy and All Configuration Export Policy are defined locally or in Cisco UCS Central.
Step 4	UCS-A/system/control-ep # set communication-policy-ctrl source {local global}	Determines whether HTTP, CIM XML, Telnet, SNMP, web session limits, and Management Interfaces Monitoring Policy settings are defined locally or in Cisco UCS Central.
Step 5	UCS-A/system/control-ep # set datetime-policy-ctrl source {local global}	Determines whether the date and time is defined locally or comes from Cisco UCS Central.
Step 6	UCS-A/system/control-ep # set dns-policy-ctrl source {local global}	Determines whether DNS servers are defined locally or in Cisco UCS Central.
Step 7	UCS-A/system/control-ep # set fault-policy-ctrl source {local global}	Determines whether the Global Fault Policy is defined locally or in Cisco UCS Central.

	Command or Action	Purpose
Step 8	UCS-A/system/control-ep # set infra-pack-ctrl source {local global}	Determines whether the Capability Catalog and infrastructure firmware policy are defined locally or come from Cisco UCS Central.
Step 9	UCS-A/system/control-ep # set mep-policy-ctrl source {local global}	Determines whether managed endpoints are defined locally or in Cisco UCS Central.
Step 10	UCS-A/system/control-ep # set monitoring-policy-ctrl source {local global}	Determines whether Call Home, Syslog, and TFTP Core Exporter settings are defined locally or in Cisco UCS Central.
Step 11	UCS-A/system/control-ep # set powermgmt-policy-ctrl source {local global}	Determines whether the power management is defined locally or in Cisco UCS Central.
Step 12	UCS-A/system/control-ep # set psu-policy-ctrl source {local global}	Determines whether power supply units are defined locally or in Cisco UCS Central.
Step 13	UCS-A/system/control-ep # set security-policy-ctrl source {local global}	Determines whether authentication and native domains, LDAP, RADIUS, TACACS+, trusted points, locales, and user roles are defined locally or in Cisco UCS Central.
Step 14	UCS-A/system/control-ep # commit-buffer	Commits the transaction to the system configuration.

The following example configures policy resolution for a Cisco UCS Domain that is registered with Cisco UCS Central and commits the transaction:

```

UCS-A# scope system
UCS-A /system # scope control-ep policy
UCS-A /system/control-ep* # set backup-policy-ctrl source global
UCS-A /system/control-ep* # set communication-policy-ctrl source local
UCS-A /system/control-ep* # set datetime-policy-ctrl source global
UCS-A /system/control-ep* # set dns-policy-ctrl source global
UCS-A /system/control-ep* # set fault-policy-ctrl source global
UCS-A /system/control-ep* # set infra-pack-ctrl source global
UCS-A /system/control-ep* # set mep-policy-ctrl source global
UCS-A /system/control-ep* # set monitoring-policy-ctrl source global
UCS-A /system/control-ep* # set powermgmt-policy-ctrl source global
UCS-A /system/control-ep* # set psu-policy-ctrl source local
UCS-A /system/control-ep* # set security-policy-ctrl source global
UCS-A /system/control-ep* # commit-buffer
UCS-A /system/control-ep #

```

Policy and Policy Component Import in Cisco UCS Central

Cisco UCS Central enables you to import policies, pools, vLANs, vSANs directly from one registered Cisco UCS domain into Cisco UCS Central. When you have a perfect policy or a policy component in one of your UCS domains, you can import the policy and apply it to multiple domains. This import option enables you to import and apply a policy from one registered UCS domain to multiple UCS domains with a single click.

Using the Cisco UCS Central GUI, you can search for a policy or a component in the registered UCS domains. You can also refine your search using the available filters. From the search results, select the policy or component and import that into Cisco UCS Central.

**Note**

If the search results are more than 1000, the results truncate. Make sure to refine the search using filters.

Depending on the policy or component you are importing, you can import them into either of the following destinations:

- Domain group root or to a specific domain
- Org root or a specific org

Estimate Impact During Import

Cisco UCS Central provides you the option to estimate the impact of most of the management actions you perform using the GUI. Make sure to run estimate impact during an import. Make sure to review the estimate impact results. The results will help you to identify any potential issues such as unintentional server reboot or policy overwrite and take proper precautionary measures before importing the selected policy or component.

Local Policies

The policies you create and manage in Cisco UCS Manager are local to the registered Cisco UCS domain. In Cisco UCS Central you can view the policies available in the registered Cisco UCS Domains as local policies. These policies can only be included in local service profiles or service profile templates that are created and managed within that Cisco UCS domain.

Configuring Threshold Policies

Statistics Threshold Policy

A statistics threshold policy monitors statistics about certain aspects of the system and generates an event if the threshold is crossed. You can set both minimum and maximum thresholds. For example, you can configure the policy to raise an alarm if the CPU temperature exceeds a certain value, or if a server is overutilized or underutilized.

These threshold policies do not control the hardware or device-level thresholds enforced by endpoints, such as the CIMC. Those thresholds are burned in to the hardware components at manufacture.

Cisco UCS enables you to configure statistics threshold policies for the following components:

- Servers and server components
- Uplink Ethernet ports
- Ethernet server ports, chassis, and fabric interconnects
- Fibre Channel port

**Note**

You cannot create or delete a statistics threshold policy for Ethernet server ports, uplink Ethernet ports, or uplink Fibre Channel ports. You can only configure the existing default policy.

Server and Server Component Statistics Threshold Policy Configuration

Configuring a Server and Server Component Statistics Threshold Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr)# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type <i>/</i> as the <i>org-name</i> .
Step 3	UCSC(policy-mgr) /org # create stats-threshold-policy <i>policy-name</i>	Creates the specified statistics threshold policy and enters organization statistics threshold policy mode.
Step 4	UCSC(policy-mgr) /org/stats-threshold-policy # set descr <i>description</i>	(Optional) Provides a description for the policy. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 5	UCSC(policy-mgr) /org/stats-threshold-policy # commit-buffer	Commits the transaction to the system configuration.

The following example creates the server and server component statistics threshold policy named ServStatsPolicy, provides a description for the policy, and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr)# scope org /
UCSC(policy-mgr) /org* # create stats-threshold-policy ServStatsPolicy
UCSC(policy-mgr) /org/stats-threshold-policy* # set descr "Server stats threshold policy."
UCSC(policy-mgr) /org/stats-threshold-policy* # commit-buffer
UCSC(policy-mgr) /org/stats-threshold-policy #
```

What to Do Next

Configure one or more policy classes for the statistics threshold policy. For more information, see ["Configuring a Server and Server Component Statistics Threshold Policy Class, on page 13."](#)

Configuring a Server and Server Component Statistics Threshold Policy Class

Before You Begin

Configure or identify the server and server component statistics threshold policy that will contain the policy class. For more information, see ["Configuring a Server and Server Component Statistics Threshold Policy, on page 12."](#)

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr)# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type <i>/</i> as the <i>org-name</i> .
Step 3	UCSC(policy-mgr) /org # scope stats-threshold-policy <i>policy-name</i>	Enters organization statistics threshold policy mode.
Step 4	UCSC(policy-mgr) /org/stats-threshold-policy # create class <i>class-name</i>	Creates the specified statistics threshold policy class and enters organization statistics threshold policy class mode. The <i>class-name</i> argument can be any of the class name keywords available for the particular statistics threshold policy being configured. To see a list of the available class name keywords, enter the create class ? command in organization statistics threshold policy mode. Note You can configure multiple classes for the statistics threshold policy.
Step 5	UCSC(policy-mgr) /org/stats-threshold-policy /class # create property <i>property-name</i>	Creates the specified statistics threshold policy class property and enters organization statistics threshold policy class property mode. The <i>property-name</i> argument can be any of the property name keywords available for the particular policy class being configured. To see a list of the available property name keywords, enter the create property ? command in organization statistics threshold policy class mode. Note You can configure multiple properties for the policy class.
Step 6	UCSC(policy-mgr) /org/stats-threshold-policy/class/property # set normal-value <i>value</i>	Specifies the normal value for the class property. The <i>value</i> format can vary depending on the class property being configured. To see the required format, enter the set normal-value ? command in organization statistics threshold policy class property mode.
Step 7	UCSC(policy-mgr) /org/stats-threshold-policy /class/property # create threshold-value { above-normal below-normal }	Creates the specified threshold value for the class property and enters organization statistics threshold policy class property threshold value mode.

	Command or Action	Purpose
	{cleared condition critical info major minor warning}	Note You can configure multiple threshold values for the class property.
Step 8	UCSC(policy-mgr) /org/stats-threshold-policy /class/property/threshold-value # set {deescalating escalating} value	Specifies the de-escalating or escalating class property threshold value. The <i>value</i> format can vary depending on the class property threshold value being configured. To see the required format, enter the set deescalating ? or set escalating ? command in organization statistics threshold policy class property threshold value mode. Note You can specify both de-escalating and escalating class property threshold values.
Step 9	UCSC(policy-mgr) /org/stats-threshold-policy /class/property/threshold-value # commit-buffer	Commits the transaction to the system configuration.

The following example creates the server and server component statistics threshold policy class for CPU statistics, creates a CPU temperature property, specifies that the normal CPU temperature is 48.5° C, creates an above normal warning threshold of 50° C, and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org* # scope stats-threshold-policy ServStatsPolicy
UCSC(policy-mgr) /org/stats-threshold-policy* # create class cpu-stats
UCSC(policy-mgr) /org/stats-threshold-policy/class* # create property cpu-temp
UCSC(policy-mgr) /org/stats-threshold-policy/class/property* # set normal-value 48.5
UCSC(policy-mgr) /org/stats-threshold-policy/class/property* # create threshold-value
above-normal warning
UCSC(policy-mgr) /org/stats-threshold-policy/class/property/threshold-value* # set escalating
50.0
UCSC(policy-mgr) /org/stats-threshold-policy/class/property/threshold-value* # commit-buffer
UCSC(policy-mgr) /org/stats-threshold-policy/class/property/threshold-value #
```

Server Port, Chassis, and Fabric Interconnect Statistics Threshold Policy Configuration

Configuring a Server Port, Chassis, and Fabric Interconnect Statistics Threshold Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.

	Command or Action	Purpose
Step 2	UCSC(policy-mgr) # scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr)# scope eth-server	Enters Ethernet server mode.
Step 4	UCSC(policy-mgr) /eth-server # scope stats-threshold-policy default	Enters Ethernet server statistics threshold policy mode. Note You cannot create (or delete) a server port, chassis, and fabric interconnect statistics threshold policy. You can only enter (scope to) the existing default policy.
Step 5	UCSC(policy-mgr) /eth-server/stats-threshold-policy # set descr <i>description</i>	(Optional) Provides a description for the policy. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 6	UCSC(policy-mgr) /eth-server/stats-threshold-policy # commit-buffer	Commits the transaction to the system configuration.

The following example enters the default server port, chassis, and fabric interconnect statistics threshold policy, provides a description for the policy, and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) # scope eth-server
UCSC(policy-mgr) /eth-server* # scope stats-threshold-policy default
UCSC(policy-mgr) /eth-server/stats-threshold-policy* # set descr "Server port, chassis, and
fabric interconnect stats threshold policy."
UCSC(policy-mgr) /eth-server/stats-threshold-policy* # commit-buffer
UCSC(policy-mgr) /eth-server/stats-threshold-policy #
```

What to Do Next

Configure one or more policy classes for the statistics threshold policy. For more information, see [Configuring a Server Port, Chassis, and Fabric Interconnect Statistics Threshold Policy Class](#), on page 15.

Configuring a Server Port, Chassis, and Fabric Interconnect Statistics Threshold Policy Class

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.

	Command or Action	Purpose
Step 2	UCSC(policy-mgr) # scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root mode organization, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr)# scope eth-server	Enters Ethernet server mode.
Step 4	UCSC(policy-mgr) /eth-server # scope stats-threshold-policy default	Enters Ethernet server statistics threshold policy mode.
Step 5	UCSC(policy-mgr) /eth-server/stats-threshold-policy # create class <i>class-name</i>	Creates the specified statistics threshold policy class and enters Ethernet server statistics threshold policy class mode. The <i>class-name</i> argument can be any of the class name keywords available for the particular statistics threshold policy being configured. To see a list of the available class name keywords, enter the create class ? command in Ethernet server statistics threshold policy mode. Note You can configure multiple classes for the statistics threshold policy.
Step 6	UCSC(policy-mgr) /eth-server/stats-threshold-policy /class # create property <i>property-name</i>	Creates the specified statistics threshold policy class property and enters Ethernet server statistics threshold policy class property mode. The <i>property-name</i> argument can be any of the property name keywords available for the particular policy class being configured. To see a list of the available property name keywords, enter the create property ? command in Ethernet server statistics threshold policy class mode. Note You can configure multiple properties for the policy class.
Step 7	UCSC(policy-mgr) /eth-server/stats-threshold-policy /class/property # set normal-value <i>value</i>	Specifies the normal value for the class property. The <i>value</i> format can vary depending on the class property being configured. To see the required format, enter the set normal-value ? command in Ethernet server statistics threshold policy class property mode.
Step 8	UCSC(policy-mgr) /eth-server/stats-threshold-policy /class/property # create threshold-value { above-normal below-normal } { cleared condition critical info major minor warning }	Creates the specified threshold value for the class property and enters Ethernet server statistics threshold policy class property threshold value mode. Note You can configure multiple threshold values for the class property.
Step 9	UCSC(policy-mgr) /eth-server/stats-threshold-policy /class/property/threshold-value # set { deescalating escalating } <i>value</i>	Specifies the de-escalating or escalating class property threshold value. The <i>value</i> format can vary depending on the class property threshold value being configured. To see the required format, enter the set deescalating ? or set escalating ? command in Ethernet server statistics threshold policy class property threshold value mode.

	Command or Action	Purpose
		Note You can specify both de-escalating and escalating class property threshold values.
Step 10	UCSC(policy-mgr) /eth-server/stats-threshold-policy /class/property/threshold-value # commit-buffer	Commits the transaction to the system configuration.

The following example creates the server port, chassis, and fabric interconnect statistics threshold policy class for chassis statistics, creates an input power (Watts) property, specifies that the normal power is 8kW, creates an above normal warning threshold of 11kW, and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) # scope eth-server
UCSC(policy-mgr) /eth-server* # scope stats-threshold-policy default
UCSC(policy-mgr) /eth-server/stats-threshold-policy* # create class chassis-stats
UCSC(policy-mgr) /eth-server/stats-threshold-policy/class* # create property input-power
UCSC(policy-mgr) /eth-server/stats-threshold-policy/class/property* # set normal-value
8000.0
UCSC(policy-mgr) /eth-server/stats-threshold-policy/class/property* # create threshold-value
above-normal warning
UCSC(policy-mgr) /eth-server/stats-threshold-policy/class/property/threshold-value* # set
escalating 11000.0
UCSC(policy-mgr) /eth-server/stats-threshold-policy/class/property/threshold-value* #
commit-buffer
UCSC(policy-mgr) /eth-server/stats-threshold-policy/class/property/threshold-value #
```

Fibre Channel Port Statistics Threshold Policy Configuration

Configuring a Fibre Channel Port Statistics Threshold Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter root organization mode, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr)# scope fc-uplink	Enters Fibre Channel uplink mode.
Step 4	UCSC(policy-mgr) /fc-uplink # scope stats-threshold-policy default	Enters Fibre Channel uplink statistics threshold policy mode. Note You cannot create (or delete) an uplink Fibre Channel port statistics threshold policy. You can only enter (scope to) the existing default policy.

	Command or Action	Purpose
Step 5	UCSC(policy-mgr) /fc-uplink/stats-threshold-policy # set descr <i>description</i>	(Optional) Provides a description for the policy. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 6	UCSC(policy-mgr) /fc-uplink/stats-threshold-policy # commit-buffer	Commits the transaction to the system configuration.

The following example enters the default uplink Fibre Channel port statistics threshold policy, provides a description for the policy, and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) # scope fc-uplink
UCSC(policy-mgr) /fc-uplink* # scope stats-threshold-policy default
UCSC(policy-mgr) /fc-uplink/stats-threshold-policy* # set descr "Uplink Fibre Channel stats threshold policy."
UCSC(policy-mgr) /fc-uplink/stats-threshold-policy* # commit-buffer
UCSC(policy-mgr) /fc-uplink/stats-threshold-policy #
```

What to Do Next

Configure one or more policy classes for the statistics threshold policy. For more information, see "[Configuring a Fibre Channel Port Statistics Threshold Policy Class](#), on page 18."

Configuring a Fibre Channel Port Statistics Threshold Policy Class

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr)# scope fc-uplink	Enters Fibre Channel uplink mode.
Step 4	UCSC(policy-mgr) /fc-uplink # scope stats-threshold-policy default	Enters Fibre Channel uplink statistics threshold policy mode.
Step 5	UCSC(policy-mgr) /fc-uplink/stats-threshold-policy # create class <i>class-name</i>	Creates the specified statistics threshold policy class and enters Fibre Channel uplink statistics threshold policy class mode. The <i>class-name</i> argument can be any of the class name keywords available for the particular statistics threshold policy being configured. To see a list of the available class name keywords, enter the create class ?

	Command or Action	Purpose
		command in Fibre Channel uplink statistics threshold policy mode. Note You can configure multiple classes for the statistics threshold policy.
Step 6	UCSC(policy-mgr) /fc-uplink/stats-threshold-policy /class # create property <i>property-name</i>	Creates the specified statistics threshold policy class property and enters Fibre Channel uplink statistics threshold policy class property mode. The <i>property-name</i> argument can be any of the property name keywords available for the particular policy class being configured. To see a list of the available property name keywords, enter the create property ? command in Fibre Channel uplink statistics threshold policy class mode. Note You can configure multiple properties for the policy class.
Step 7	UCSC(policy-mgr) /fc-uplink/stats-threshold-policy /class/property # set normal-value <i>value</i>	Specifies the normal value for the class property. The <i>value</i> format can vary depending on the class property being configured. To see the required format, enter the set normal-value ? command in Fibre Channel uplink statistics threshold policy class property mode.
Step 8	UCSC(policy-mgr) /fc-uplink/stats-threshold-policy /class/property # create threshold-value { above-normal below-normal } { cleared condition critical info major minor warning }	Creates the specified threshold value for the class property and enters Fibre Channel uplink statistics threshold policy class property threshold value mode. Note You can configure multiple threshold values for the class property.
Step 9	UCSC(policy-mgr) /fc-uplink/stats-threshold-policy /class/property/threshold-value # set { deescalating escalating } <i>value</i>	Specifies the de-escalating or escalating class property threshold value. The <i>value</i> format can vary depending on the class property threshold value being configured. To see the required format, enter the set deescalating ? or set escalating ? command in Fibre Channel uplink statistics threshold policy class property threshold value mode. Note You can specify both de-escalating and escalating class property threshold values.
Step 10	UCSC(policy-mgr) /fc-uplink/stats-threshold-policy /class/property/threshold-value # commit-buffer	Commits the transaction to the system configuration.

The following example creates the uplink Fibre Channel port statistics threshold policy class for Fibre Channel statistics, creates an average bytes received property, specifies that the normal average number of bytes

received for each polling interval is 150MB, creates an above normal warning threshold of 200MB, and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) # scope fc-uplink
UCSC(policy-mgr) /fc-uplink* # scope stats-threshold-policy default
UCSC(policy-mgr) /fc-uplink/stats-threshold-policy* # create class fc-stats
UCSC(policy-mgr) /fc-uplink/stats-threshold-policy/class* # create property bytes-rx-avg
UCSC(policy-mgr) /fc-uplink/stats-threshold-policy/class/property* # set normal-value
150000000
UCSC(policy-mgr) /fc-uplink/stats-threshold-policy/class/property* # create threshold-value
above-normal warning
UCSC(policy-mgr) /fc-uplink/stats-threshold-policy/class/property/threshold-value* # set
escalating 200000000
UCSC(policy-mgr) /fc-uplink/stats-threshold-policy/class/property/threshold-value* #
commit-buffer
UCSC(policy-mgr) /fc-uplink/stats-threshold-policy/class/property/threshold-value #
```

Uplink Ethernet Port Statistics Threshold Policy Configuration

Configuring an Uplink Ethernet Port Statistics Threshold Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr)# scope eth-uplink	Enters Ethernet uplink mode.
Step 3	UCSC(policy-mgr) /eth-uplink # scope stats-threshold-policy default	Enters Ethernet uplink statistics threshold policy mode. Note You cannot create (or delete) an uplink Ethernet port statistics threshold policy. You can only enter (scope to) the existing default policy.
Step 4	UCSC(policy-mgr) /eth-uplink/stats-threshold-policy # set descr description	(Optional) Provides a description for the policy. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 5	UCSC(policy-mgr) /eth-uplink/stats-threshold-policy # commit-buffer	Commits the transaction to the system configuration.

The following example enters the default uplink Ethernet port threshold policy, provides a description for the policy, and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr)# scope eth-uplink
UCSC(policy-mgr) /eth-uplink* # scope stats-threshold-policy default
UCSC(policy-mgr) /eth-uplink/stats-threshold-policy* # set descr "Uplink Ethernet port stats
threshold policy."
UCSC(policy-mgr) /eth-uplink/stats-threshold-policy* # commit-buffer
UCSC(policy-mgr) /eth-uplink/stats-threshold-policy #
```

What to Do Next

Configure one or more policy classes for the statistics threshold policy. For more information, see "[Configuring an Uplink Ethernet Port Statistics Threshold Policy Class](#), on page 21."

Configuring an Uplink Ethernet Port Statistics Threshold Policy Class

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr)# scope eth-uplink	Enters Ethernet uplink mode.
Step 3	UCSC(policy-mgr) /eth-uplink # scope stats-threshold-policy default	Enters Ethernet uplink statistics threshold policy mode.
Step 4	UCSC(policy-mgr) /eth-uplink/stats-threshold-policy # create class <i>class-name</i>	Creates the specified statistics threshold policy class and enters Ethernet uplink statistics threshold policy class mode. The <i>class-name</i> argument can be any of the class name keywords available for the particular statistics threshold policy being configured. To see a list of the available class name keywords, enter the create class ? command in Ethernet uplink statistics threshold policy mode. Note You can configure multiple classes for the statistics threshold policy.
Step 5	UCSC(policy-mgr) /eth-uplink/stats-threshold-policy /class # create property <i>property-name</i>	Creates the specified statistics threshold policy class property and enters Ethernet uplink statistics threshold policy class property mode. The <i>property-name</i> argument can be any of the property name keywords available for the particular policy class being configured. To see a list of the available property name keywords, enter the create property ? command in Ethernet uplink statistics threshold policy class mode. Note You can configure multiple properties for the policy class.
Step 6	UCSC(policy-mgr) /eth-uplink/stats-threshold-policy /class/property # set normal-value <i>value</i>	Specifies the normal value for the class property. The <i>value</i> format can vary depending on the class property being configured. To see the required format, enter the set

	Command or Action	Purpose
		normal-value ? command in Ethernet uplink statistics threshold policy class property mode.
Step 7	UCSC(policy-mgr) /eth-uplink/stats-threshold-policy /class/property # create threshold-value { above-normal below-normal } { cleared condition critical info major minor warning }	Creates the specified threshold value for the class property and enters Ethernet uplink statistics threshold policy class property threshold value mode. Note You can configure multiple threshold values for the class property.
Step 8	UCSC(policy-mgr) /eth-uplink/stats-threshold-policy /class/property/threshold-value # set { deescalating escalating } value	Specifies the de-escalating or escalating class property threshold value. The <i>value</i> format can vary depending on the class property threshold value being configured. To see the required format, enter the set deescalating ? or set escalating ? command in Ethernet uplink statistics threshold policy class property threshold value mode. Note You can specify both de-escalating and escalating class property threshold values.
Step 9	UCSC(policy-mgr) /eth-uplink/stats-threshold-policy /class/property/threshold-value # commit-buffer	Commits the transaction to the system configuration.

The following example creates the uplink Ethernet port statistics threshold policy class for Ethernet error statistics, creates a cyclic redundancy check (CRC) error count property, specifies that the normal CRC error count for each polling interval is 1000, creates an above normal warning threshold of 1250, and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope eth-uplink
UCSC(policy-mgr) /eth-uplink* # scope stats-threshold-policy default
UCSC(policy-mgr) /eth-uplink/stats-threshold-policy* # create class ether-error-stats
UCSC(policy-mgr) /eth-uplink/stats-threshold-policy/class* # create property crc-delta
UCSC(policy-mgr) /eth-uplink/stats-threshold-policy/class/property* # set normal-value 1000
UCSC(policy-mgr) /eth-uplink/stats-threshold-policy/class/property* # create threshold-value
above-normal warning
UCSC(policy-mgr) /eth-uplink/stats-threshold-policy/class/property/threshold-value* # set
escalating 1250
UCSC(policy-mgr) /eth-uplink/stats-threshold-policy/class/property/threshold-value* #
commit-buffer
UCSC(policy-mgr) /eth-uplink/stats-threshold-policy/class/property/threshold-value #
```