

Resolve ACI Access Policies: "parent is a system generated profile" Error

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Introduction

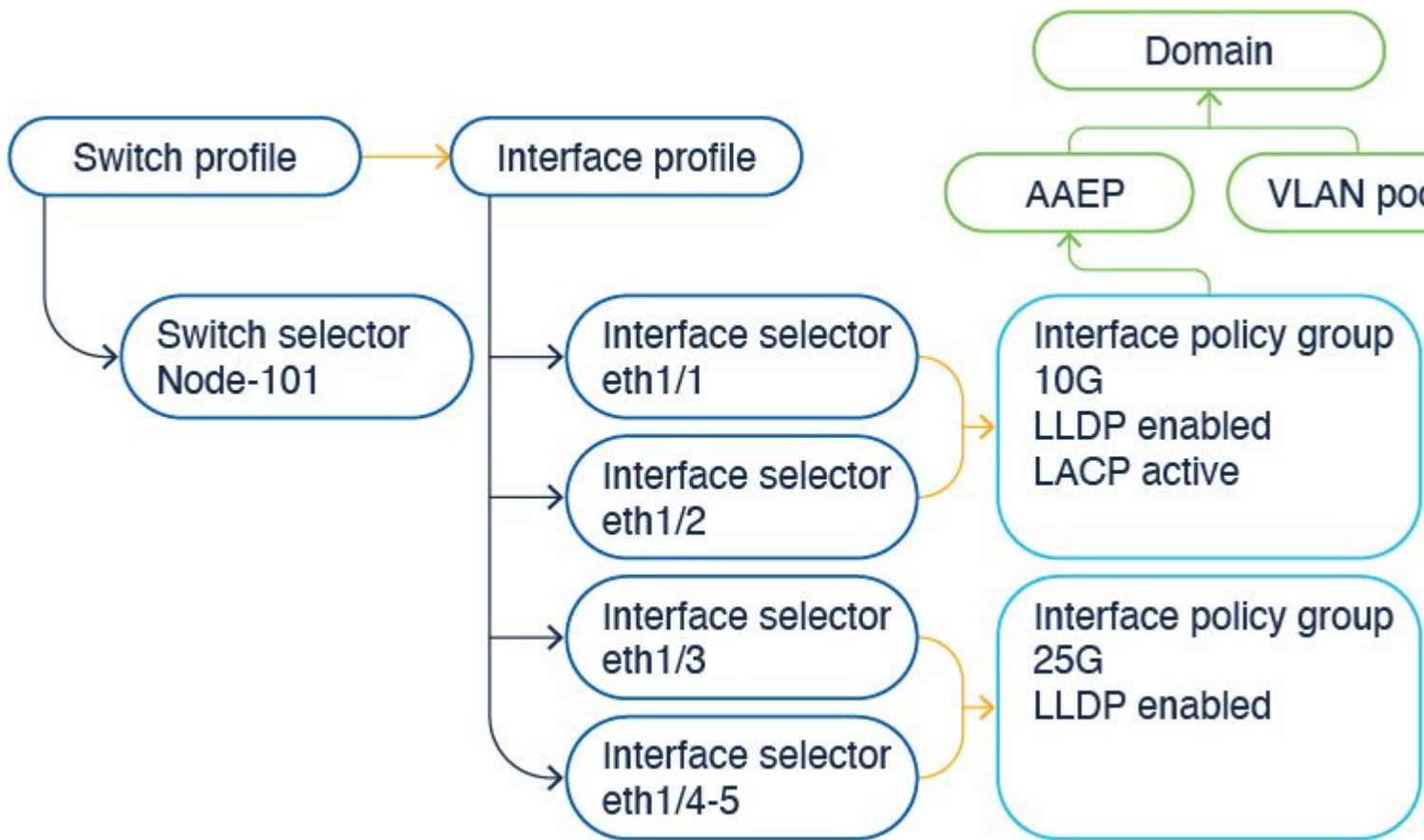
This document describes the new interface configuration approach in ACI and provides steps to fix errors when modifying system-generated access policies tied to it.

Background Information

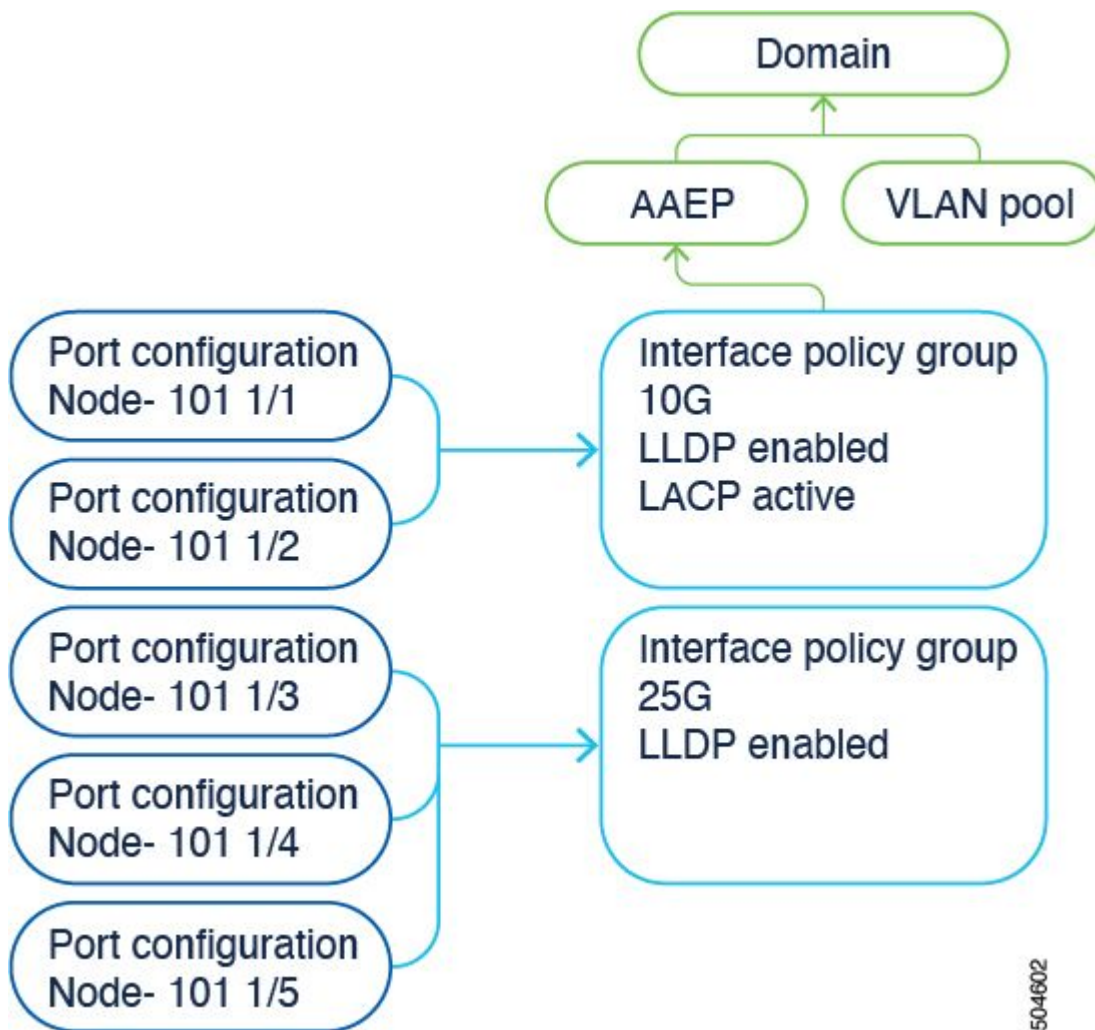
The 5.2.4 and later releases introduced the "per-port configuration" option (also called "interface configuration" or infraPortConfig) to simplify access policies.

Traditionally, ACI uses four objects (switch profile, switch selector, interface profile, and interface selector) to select a certain interface on a certain switch node.

This document refers to this mode of operations as the "profiles and selectors configuration." This image illustrates the configuration:



The interface configuration option presents the four objects as a single object. As a result, you do not need to use nor maintain switch profiles, switch selectors, interface profiles, and interface selectors.



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The details are documented in the config guide. Please always reference the configuration guide for the latest updates.

<https://www.cisco.com/c/en/us/td/docs/dcn/aci/apic/6x/12-configuration/cisco-apic-layer-2-networking-configuration-guide-60x/access-interfaces-60x.html>

What is important to know is that when using the new "interface configuration" option, the Cisco APIC creates and maintains switch profiles and selectors and interface profiles and selectors as read-only with as few objects as possible.

These objects that the Cisco APIC creates automatically are called "system-generated profiles".

If you try to edit the system profile policy using any other way, you see an error. It is not possible to delete <> since the parent is a system-generated Profile or It is not possible to delete <> since it is a system-generated MO.

Specific error examples:

Error 1. Failed to delete object:

It is not possible to delete infraPortBlk uni/infra/accportprof-system-port-profile-node-600/hports-system-port-selector-accbundle-DstSymmpo-typ-range/portblk-portblock1 under infraAccPortP uni/infra/accportprof-system-port-profile-node-600 since the parent is a system generated profile.

Error 2. Error: 400:

It is not possible to modify infraPortBlk uni/infra/accportprof-system-port-profile-node-600/hports-system-port-selector-accbundle-DstSymmpo-typ-range/portblk-portblock1 under infraAccPortP

uni/infra/accportprof-system-port-profile-node-600 since the parent is a system generated profile.

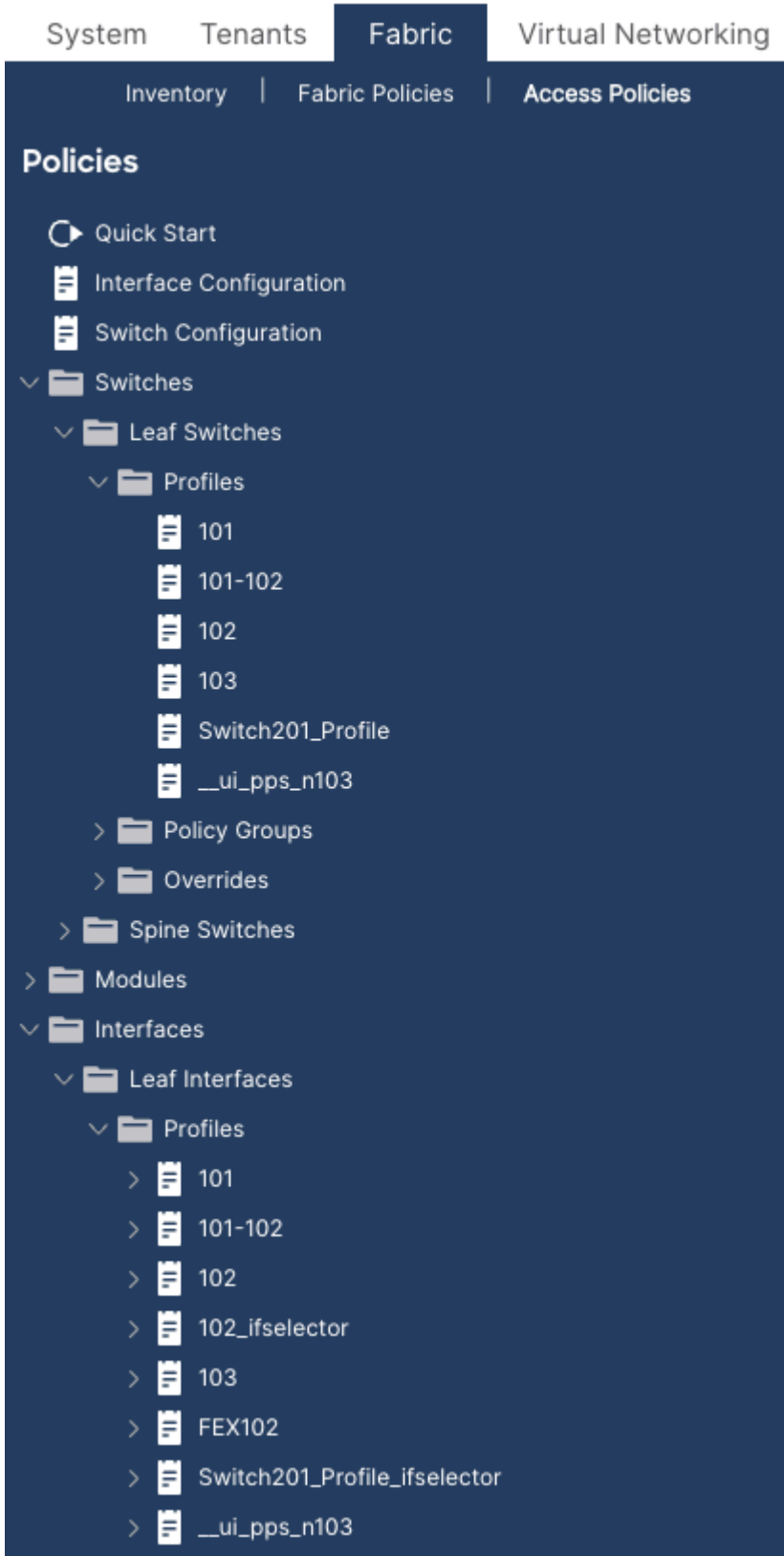
Error 3. Failed to delete object:

It is not possible to delete infraAccPortP uni/infra/accportprof-system-port-profile-node-600 since it is a system-generated MO.

Edit the System-generated Objects

The editing of these read-only switch profiles and selectors and interface profiles and selectors can be done only via the Fabric > Access Policies > Interface Configurations.

On a lab APIC running 6.0.2h, there are no system-defined profiles yet. A setup can be a green field deployment or you upgraded from an older release to 5.2.4 and later.



Configure Interface on Leaf 101

Assign interface e1/8 on leaf 101 to use a 10gig interface policy.

Either you can manually add the interface to an existing interface profile if one is already created or for this exercise, explore using the Quick Start Wizard as shown in the image.



Policies



Quick Start

Interface Configuration

Switch Configuration

Switches

Leaf Switches

Profiles

101

101-102

102

103

Welcome to Access Policies

Access policies govern the operation of interfaces by configuring various functions or protocols. Administrators can use the APIC to select the policies to apply to the interfaces.

What's Next?



[Configure Interfaces](#)



Configure Interfaces

General

Node Type

Leaf

Spine

Port Type

Access

Fabric

Interface Type

Ethernet

Fibre Channel

Interface Aggregation Type

Individual

PC

vPC

Node * ?

101

Select Node

Interfaces For All Switches * ?

1/8

Leaf Access Port Policy Group *

10gig_policy X

Configuration Status

ID *	Name	Interfaces
101	leaf101	1/8

Once the configuration is saved, you see different system policies are created as shown in this image.

The screenshot displays a network management interface with a dark blue sidebar and a light gray main panel. The sidebar, titled 'Policies', contains a tree view of configurations. Under 'Switches' > 'Leaf Switches' > 'Profiles', 'system-node-profile-101' is highlighted with a red box. Under 'Interfaces' > 'Leaf Interfaces' > 'Profiles', 'system-port-selector-accportgrp-10gig_policy' is also highlighted with a red box. The main panel, titled 'Access Port Selector - system-port-selector-accportgrp-10gig_policy', shows configuration details. The 'Name' field is 'system-port-selector-accportgrp-10gig_policy' (circled in red), and the 'Description' is 'optional'. The 'Type' is 'range'. The 'Policy Group' is '10gig_policy'. The 'Port Blocks' section shows a table with one entry: '1/8'. The 'Sub Port Blocks' section is currently empty.

You see that the previously mentioned step has been created:

1. Switch profile > system-node-profile-101
2. Interface Profile > system-port-profile-node-101
3. Port Selector > system-port-selector-accportgrp-10gig_policy

If you add one more interface E1/9 to the same policy using the Quick Start Wizard, then the system "system-port-selector-accportgrp-10gig_policy" blocks include E1/9 as well.



Configure Interfaces

General

Node Type

Leaf

Spine

Port Type

Access

Fabric

Interface Type

Ethernet

Fibre Channel

Interface Aggregation Type

Individual

PC

vPC

Node * ⓘ

101

Select Node

Interfaces For All Switches * ⓘ

1/9

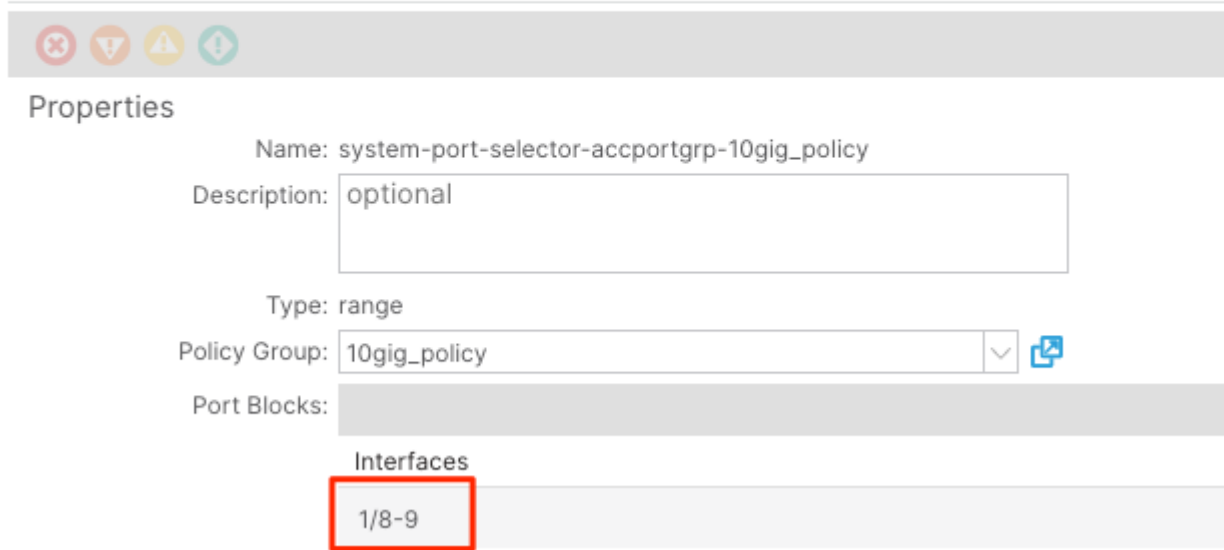
Leaf Access Port Policy Group *

10gig_policy ✕

Configuration Status

ID *	Name
101	leaf101

Access Port Selector - system-port-selector-accportgrp-10gig_policy



Properties

Name: system-port-selector-accportgrp-10gig_policy

Description: optional

Type: range

Policy Group: 10gig_policy

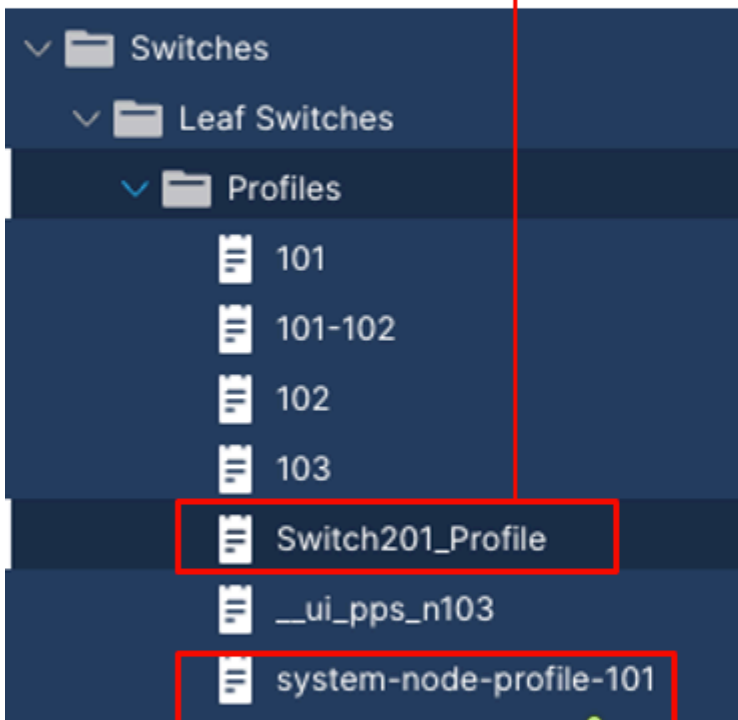
Port Blocks:

Interfaces

1/8-9

The difference between the policy created using the wizard and a user-defined policy is that the system policy is read-only.

You can right-click on a policy to view the object store browser and see the creator of the object as shown in the image.



infraNodeP	
dn	< uni/infra/nprof-Switch201
annotation	
childAction	
creator	USER
descr	GUI Interface Selector Generato
extMngdBy	
lcOwn	local
modTs	2022-11-18T22:08:55.954+00
monPolDn	< uni/fabric/monfab-default
name	Switch201_Profile

infraNodeP	
dn	< uni/infra/nprof-system-node
annotation	
childAction	
creator	SYSTEM
descr	
extMngdBy	
lcOwn	local
modTs	2023-05-16T14:40:21.437+00:00
monPolDn	< uni/fabric/monfab-default
name	system-node-profile-101

How to Edit a System Profile Policy

As an example, if you try deleting the system port selector e1/8 from the system port profile, you see an

error as shown in the image:

The screenshot shows a network management interface with the following structure:

- System | Tenants | **Fabric** | Virtual Networking | Admin | Operations | Apps | Integrations
- Inventory | Fabric Policies | Access Policies
- Policies**
 - Quick Start
 - Interface Configuration
 - Switch Configuration
 - Switches
 - Modules
 - Interfaces
 - Leaf Interfaces
 - Profiles
 - 101
 - 101-102
 - 102
 - 102_ifselector
 - 103
 - FEX102
 - Switch201_Profile_ifselector
 - _ui_pps_n103
 - system-port-profile-node-101**
 - system-port-selector-accportgrp-10gig_policy

The right-hand pane displays the configuration for the selected profile:

Leaf Interface Profile - system-port-profile-node-101

Properties

- Name: system-port-profile-node-101
- Description: optional
- Alias:
- Interface Selectors:

Name	Blocks
system-port-sele...	1/8

The screenshot shows a network management interface with a top navigation bar containing tabs for System, Tenants, Fabric, Virtual Networking, Admin, Operations, Apps, and Integration. Below this, there are sub-tabs for Inventory, Fabric Policies, and Access Policies. The main area is titled 'Policies' and contains a navigation tree on the left with categories like Quick Start, Interface Configuration, Switch Configuration, Switches, Modules, Interfaces, and Leaf Interfaces. The 'Leaf Interfaces' section is expanded to show 'Profiles', which includes a list of items such as 101, 101-102, 102, 102_ifselector, 103, FEX102, Switch201_Profile_ifselector, __ui_pps_n103, and system-port-profile-node-101. On the right, a 'Leaf Interface Profile - s' configuration panel is visible, showing a 'Properties' section with fields for Name and Description. An 'Error' dialog box is overlaid on the interface, displaying the message: 'It is not possible to delete infraHPortS uni/infra/accportprof-system-p system-port-selector-accportgrp-10gig_policy-typ-range under infra system-port-profile-node-101 since the parent is a system generated'. An 'OK' button is located at the bottom right of the error dialog.

To modify a system-generated profile, navigate to Fabric > Access Policies > Interface Configuration.

Here you can clear or edit the configuration for E1/8.

System Tenants **Fabric** Virtual Networking Admin Operations Apps Integrations

Inventory | Fabric Policies | Access Policies

Policies

- Quick Start
- Interface Configuration**
- Switch Configuration
- Switches
- Modules
- Interfaces
 - Leaf Interfaces
 - Profiles
 - 101
 - 101-102
 - 102
 - 102_ifselector
 - 103
 - FEX102
 - Switch201_Profile_ifselector
 - _ul_pps_n103
 - system-port-profile-node-101
 - system-port-selector-accportgrp-10gig_policy
 - Policy Groups
 - Overrides
 - Spine Interfaces
 - Policies
 - Physical and External Domains
 - Pools

Interface Configuration

Warning Some of the interfaces are still configured using Selectors and Profiles.

Filter by attributes

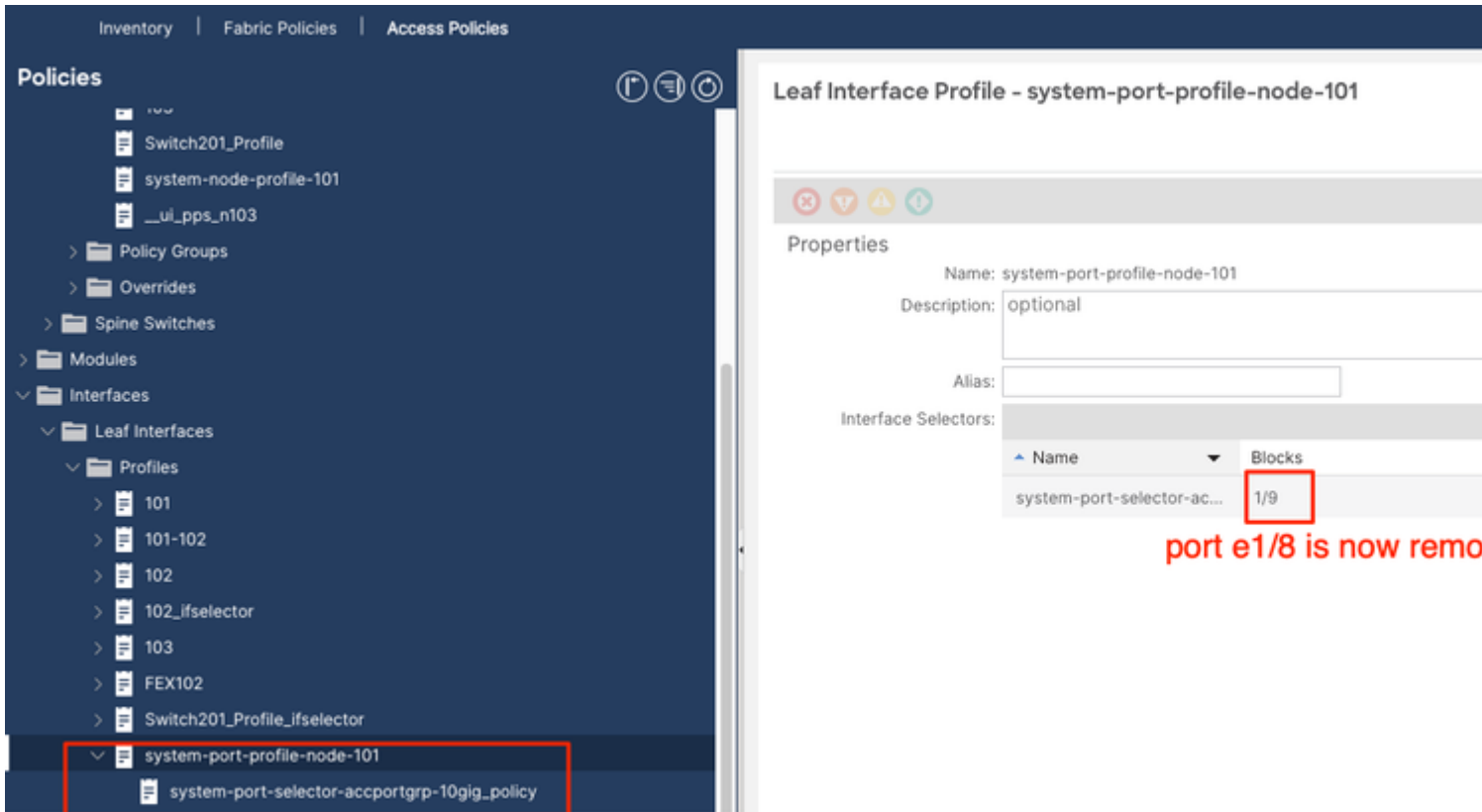
	P...	No...	Inter...	Port Type	Admin State	Port Mode	Policy Gro
<input type="checkbox"/>	1	101	eth1/1	Access	↑ up	Individual	APIC Used by 2
<input type="checkbox"/>	1	101	eth1/5	Access	↑ up	Individual	bcg1-n5k Used by 3
<input type="checkbox"/>	1	101	eth1/6	Access	↑ up	Individual	bcg1-l3ou Used by 4
<input type="checkbox"/>	1	101	eth1/7	Access	↑ up	Individual	bcg1-n5k Used by 3
<input checked="" type="checkbox"/>	1	101	eth1/8	Access	↑ up	Individual	10gig_pol Used by 1
<input type="checkbox"/>	1	101	eth1/15	Access	↑ up	Individual	shared-n3 Used by 1
<input type="checkbox"/>	1	101	eth1/16	Access	↑ up	Individual	GG-OSP-f Used by 1

Once you elect to clear the policy associated with port e1/8 on leaf 101, you are prompted for confirmation and then the system policy is updated accordingly.

Warning

Do you want to unconfigure the interface eth1/8

Cancel **OK**



API Approach to Add/Delete the Interface Configuration

Add Interface Policy "10gig_policy" to Leaf 101 - E1/8

```
echo '{"infraInfra":{"attributes":{},"children":[{"infraPortConfig":{"attributes":{"assocGrp":"uni/infra/10gig_policy","description":"optional","alias":"","interfaceSelectors":[{"name":"system-port-selector-ac...","blocks":1/9}]}}}]}'
curl -X POST http://localhost:7777/api/mo/uni/infra.json -d @interfaceconfig.json
```

Add Interface Policy "bcg1-3k" to Leaf 101 - E1/10

```
echo '{"infraInfra":{"attributes":{},"children":[{"infraPortConfig":{"attributes":{"assocGrp":"uni/infra/bcg1-3k","description":"optional","alias":"","interfaceSelectors":[{"name":"system-port-selector-ac...","blocks":1/9}]}}}]}'
curl -X POST http://localhost:7777/api/mo/uni/infra.json -d @interfaceconfig1.json
```

Delete Interface Configuration Associated with Leaf 101 - E1/10

```
echo '{"infraInfra":{"attributes":{},"children":[{"infraPortConfig":{"attributes":{"dn":"uni/infra/port-selector-accportgrp-10gig_policy","description":"optional","alias":"","interfaceSelectors":[{"name":"system-port-selector-ac...","blocks":1/9}]}}}]}'
curl -X POST http://localhost:7777/api/mo/uni/infra.json -d @interfaceconfig_delete1.json
```

Add Interface Policy "bcg1-3k" to leaf 102 - E1/14

Prior to this add, there is no system node profile for switch 102 nor there is a system port profile. This post creates both of these policies.

```
echo '{"infraInfra":{"attributes":{},"children":[{"infraPortConfig":{"attributes":{"assocGrp":"uni/infraPortConfig"},"children":[]},"infraPortConfig":{"attributes":{"assocGrp":"uni/infraPortConfig"},"children":[]}}]}' |  
icurl -X POST http://localhost:7777/api/mo/uni/infra.json -d @interfaceconfig2.json
```

Summary

The "per-port configuration" option can simplify managing access policies without having to create different profiles and selectors.

Known Issues/Bugs

Cisco bug ID [CSCwd83295](#) - ACI: VLANs are indefinitely removed from leaf interfaces after migrating to infraPortConfig