在ACI中配置配置区域功能

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简介

本文档介绍如何在思科以应用为中心的基础设施(ACI)中配置"配置区域"功能。

概念

配置区域功能在ACI中用于锁定部分交换矩阵交换机的配置更改。这意味着,如果将交换矩阵交换 机分组到不同的区域A和区域B,则我们可以将配置更改推送到区域A中的交换机,并保留区域B中 的交换机的更改。

此功能可以将配置更改部署到交换机上的风险降至最低,交换机将把配置推送到交换机组,而不是 交换矩阵中的每个交换机。

使用配置区域时的部署模式可以配置为:

1. 打开- 立即发送更新

2. 已锁定 -新更新已推迟

先决条件

基本了解ACI配置功能包括接口策略组、接口选择器、交换机配置文件,所有这些都属于思科应用 策略基础设施控制器(APIC) GUI的访问策略部分。

配置区域功能仅适用于在配置区域支持的策略(请参阅本文档)部分中定义的策略

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/kb/b APIC Config Zones.html

设置和拓扑

本实验使用节点ID分别为101和104的两台枝叶交换机构建。

型号:N9K-C93180YC-FX

APIC版本5.2(5c)

- 1. IPG策略: config_zone_ipg
 - config_zone_aaep
 - system-cdp-enabled
 - system-lldp-enabled
- 2. 枝叶接口选择器: config_zone_leaf_interface_profile
 - 端口7
 - config_zone_ipg
- 3. 交换机配置文件:Leaf_101_104_Port7
 - 枝叶101
 - 枝叶104
 - config_zone_leaf_interface_profile



配置示例

在本实验中,您将使用ACI中的配置区域功能将IPG接口策略组(MO infraAccPortGrp)更改延迟到枝 叶104,而更改在部署后立即推送到节点101。

配置区域配置

首先,您需要为枝叶101和枝叶104在APIC上创建配置区域

A) Leaf101是枝叶101的配置区域名称

B) Leaf104是枝叶104的配置区域名称

第1步:为"Leaf101"创建配置区。要配置,

导航到系统--->配置区域--->创建区域

System Tenants	Fabric Virtual Networking Admin	Operations Apps Integrations
QuickStart I Deshboen	d I Controllers I System Settings I Smart Licen	sing I Faults I History I Config Zones I Active Sessions I Security
Config Zones		
Select Zone:	select an option	Deployment Mode: Locked Coen
Description	Create Zone	
Node Type:	Post Los Switches	
Pads		0 = +
	* Pod D	
Pending Changes		o o
	Policy	Node Id

第二步:您为枝叶101设置"打开"模式。

Create Zone						08
Name:	Leaf101					
Description:	optional					
Deployment Mode:	Locked	Open)			
				Car	ncel	Submit

第3步:创建配置区域,但不映射任何枝叶。将交换机节点枝叶101与配置区域"枝叶101"进行映射

- 1. 选择节点类型—>枝叶交换机
- 2. 使用+号添加交换机节点101

Config Zones						
Select Zone:	Keal101		Deployment Model	Locked Open		
Description						
Node Type:	Path Lasguedures					
Los Dettubes					Create Node Block	00
	 Saloh D 	Nate	Rote		Last Serbites Induct setutes	
Parolice (Darrens				0 0		
the same second	Policy	Para	n-10			Cancel Submit

验证:

确保枝叶交换机节点101已添加到配置区域"枝叶101"。

Config Zones							
Select Zone:	Leaf101			Deployment Mode:	Locked		Open
Description:							
Node Type:	Pods Leaf Switches						
Leaf Switches:							
	 Switch ID 	Name		Role			
	101	bgl-aci07-leaf01		leaf			
Pending Changes:						Ó	0
	Policy		Node Id				

第四步:为"Leaf104"创建配置区域。您将配置区域Leaf104的模式设置为"锁定"。

g Zones								
This Zone's De	ployment Mode is currently set	to Locked". Thi	s prevents pol	icy and configuration	updates to	o participating	nodes and po	ods while in t
Description:	Learno4		20	Calculation account				
Node Type:	Pods Last Switches							
Leaf Switches:								
	 Switch ID 	Name		Role				
Pending Changes:					ć	•		
	Poley.		Node Id					

第五步:将交换机节点枝叶104添加到配置区域"枝叶104"。

Config Zones

🛆 This Zo	ne's Deployment Mode is cu	mently set to 'Locked'. This prevents	policy and configurat	tion updates to particip	ating nodes and pods while in this stat
Sele	t Zone: Lauf104		Deployment Mod	let Looked Open)
Deo	cription:				
	e Type: Posts Leaf Seite	hes			
Leaf Se	witches:				
	+ Switch (D	Name	Role		
	104	bgt-aci07-loaf04	leaf		
Pending-C	hanges:			° °	
	Policy	Niccle k	1		

访问策略配置

在上一节中,您已创建了一个IPG策略:config_zone_ipg,并且已映射到枝叶接口选择器 "config_zone_leaf_interface_profile",您将映射到交换机配置文件:Leaf_101_104_Port7。

执行上述步骤后,您可以看到更改被延迟到配置区域为"已锁定"(枝叶104)的"交换机",而更改会 立即推送到配置区域部署模式设置为"打开"(枝叶101)的节点。

请参阅代码片段中端口E1/7的跨两个枝叶的接口策略组、接口选择器和交换机配置文件配置。

IPG策略

Leaf Access Port Policy G	oup - config.,zonejpg								0 0
						Policy	Realts	163	Alley .
							Ó	4	$\mathfrak{M}_{\mathcal{T}}$
Proporties Name Description	only, pore, pg								T
Alas									
COP Palloy	system cuty analysis	0	LLDP Pulloy	system big-analited	- 0				

IPG策略连接到接口E1/7

Leaf Interface Profile -	config_zone_leaf_interface_profile				- 0	9 6
			Policy	Faults	100	lity .
				0	1	$\mathfrak{M}_{\mathcal{T}}$
Properties Name Description Allase	oorlig, sove, test, mention, profile optional					
Interface Selectors:						+
	n Name	Bucha	hito Sena			
	por?	1,0	surdq_sure_pp			

IPG分别连接到Leaf的101端口和104端口E1/7

Leaf Profile - Leaf_10	1_104_Port7					- (00
				_	olog Fasta	100	dary -
					0	1	$\mathfrak{M}_{\mathcal{T}}$
Properties Same Description	Lad, 101, 104, Perch optional						
Loud Selectors							
	* Nome	Booke		Policy Group			
	harton.	101					
Associated Interface							
Detector Phylines	Torte	Ownorightern		State			
	and an inclusion of			formed			
Associated Module Infector Problem							+
	Rane	Orsorytex		Date			
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跨两个枝叶的接口配置的配置区域功能测试

1. IPG更改推送到枝叶101

验证:

检查挂起的更改:无(所有更改都已推送)

Config Zones							
Select Zone:	Leaf101		· @	Deployment Mode:	Locked		Open
Description:							
Node Type:	Pods Leaf Switches						
Leaf Switches:							
	· Smitch ID	Name		Role			
	101	bgl-aci07-leaf01		leaf			
Pending Changes:						Ō	0
	Policy		Node Id				

CDP由IPG策略启用并推送到枝叶101,因为配置为"OPEN",

验证:

<#root>

apic1#

```
fabric 101 show cdp neighbors int e1/7
fabric 101 show cdp neighbors int e1/7
Node 101 (leaf01)
Capability Codes: R - Router, T - Trans-Bridge, B - Source-Route-Bridge
S - Switch, H - Host, I - IGMP, r - Repeater,
V - VoIP-Phone, D - Remotely-Managed-Device,
s - Supports-STP-Dispute
Device-ID Local Intrfce Hldtme Capability Platform Port ID
```

```
switch1(FDO23331683)
```

2. 枝叶104的IPG策略更改已推迟。选中待处理的更改(Pending Changes);与IPG和接口选择器 相关的更改被视为待处理。

验证:

Config Zones							
This Zone's De	ployment Mode is currently set to	'Locked'. This p	revents policy	and configuration	updates to	particip	vating n
Select Zone:	Leaf104		0	Deployment Mode:	Locked	Open)
Description:							
Node Type:	Pods Leaf Switches						
Leaf Switches:							
	 Switch ID 	Nomo		Role			
	104	logi-aci07-leaf04		leaf			
Pending Changes:					0	•	
	Policy		Node Id				
	uni/infra/funcerof/acceptore-config.	zone_log	104				
	uni/infra/accoortorof- confro_zone_leaf_interface_orofile		104				

您可以点击"Pending changes"(等待更改)查看有关正在更改、IPG配置正在等待推送至枝叶 104的更多详细信息。

System Torunts Substant I Sumour	Fabric Virtual Networking Ad	Leaf Access Port F	olicy Group -	config_zone_	ioa	Palloy	Faults	0	00
Config Zones						-			20-
The Zone's Dee	playment Mode is currently set to "Locked" Lauffol	Properties Name Description	onty, one, by						1
Description		Adams							- 1
		Adapted Ently Profile	configuration and	0	Unit Center Pullicy.	Autorit.		P	
	Party Cont Designers	COP-Policy:	nyatarta-adip-anadalari		UUP Policy	system-htp-endited		2	
Las' Beldver Pendrop Daragen	+ Seld.0.0 Nore 104 by sold	Advanced Settings BIO Is Park Authentication Calify Parky Egress Data Park Patring Flow Darent Hetring Calify Park Patring Litt Hog-Patring Litter Level Park Litter Level Park			MOR Manitoring Protocy Prof. Historica Prof. Security Presents from Connect Statem Connect Head- Statem Connect Head- Statem Connect Head- Statem Connect Head- Statem Connect Head- Statem Connect Head-	salacit a salaa adacit a salaa adacit a salaa adacit a salaa adacit a salaa adacit a salaa adacit a salaa			
	untining accounter of	AndPion Monter Polaine	+ Suffran IF Fran Tuin		Ref Ver Hards In term teet teet fand Selec Adver 5 onder 4 net Am	Franç	line (

枝叶接口配置文件更改处于挂起状态,以便推送到枝叶104。

cisco APIC					
System Torurts	Fatore Virtual Network	ng Admin Onerations ng I g <mark>a</mark> Leaf Interface P	Anne internatione Yofile - config_zone_le	af_interface_profile	
Config Zones					0 ± %.
A This Zone's D	episyment Made is surrently set	to Looked Proportion Name	unity, some land, interface, profile		
Salact Zona	Lartes	Description	optional		
Description		Alam			
North Type	The statement	Interface Selectors	+ hare the	au	Party Group
Last Switches			part 1.0		1149,009,00
	n (Juliuli ID) 194	Norme Trajl-actilit			
Panding Changes	Poley with the function for contract and with the same that it was and the	N. Jone Jon			
					Doubles Car

由于配置被锁定,属于接口策略组的CDP更改"未推送"到枝叶104。

验证:

<#root>

apic1#

fabric 104 show cdp neighbors interface ethernet 1/7

Node 104 (leaf04)

Note. CDP Neighbor entry not found

推送待处理的更改

现在,您可以将挂起的更改推送至枝叶104。我们需要使用(—>)按钮推送挂起的更改。单击(—>)按 钮并选择"确定"。 刷新挂起的更改,并确保没有剩余内容(如果可用)。

cisco	APIC								
System	Tenants	Fabric Vr	tual Networking	Admin	Operatio	es Apps	Integrations		
QuickStart.	I Deshboard	I Controllers I	System Settings	e I Smert Uk	ensing (A	euto i Hotory	Config Zones	I Active Sessions	I Security
Config Zo	oners								
<u>A</u> "	tiis Zone's Dep	ployment Mode is	currently set to	'Locked'. This	prevents po	licy and configura	tion updates to	participating noder	and pods while in this state.
	Select Zone:	Leaf104			0	Deployment Mor	tocked	Open)	
	Description:								
	Node Type:	Poin Loof S	atores						
	Leaf Switches:							+	
		 Switch ID 		Name		Role			
		104		0g1-aci07-leaf0	4	leaf			
Peo	ding-Changes:						0	•	
		Policy			Node 3d				
		uni/infra/functional/s	eccentore contre.	zone_los	104				
		confe pone leaf	nterface_profile		104				

确保更改最终推送到枝叶104。

Config Zones

This Zone's De	ployment Mode is currently set	t to 'Locked'. This preven	ts policy and configuration	updates to	particip
Select Zone:	Leaf104	0	Deployment Mode:	Locked	Open
Description:					
Node Type:	Pods Leaf Switches				
Leaf Switches:					
	 Switch ID 	Nome	Role		
	104	bgl-aci07-leaf04	leaf		
Pending Changes:				Ó	0
	Policy	Node	1d		

推送更改后,在枝叶104的端口E1/7上启用了CDP。

验证:

<#root>

apic1#

fabric 104 show cdp neighbors interface ethernet 1/7

Node 104 (leaf104) -----Capability Codes: R - Router, T - Trans-Bridge, B - Source-Route-Bridge S - Switch, H - Host, I - IGMP, r - Repeater, V - VoIP-Phone, D - Remotely-Managed-Device, s - Supports-STP-Dispute Device-ID Local Intrfce Hldtme Capability Platform Port ID switch1(FDO23331683)

Eth1/7 141 R S S N9K-C93108TC- Eth1/17

在此配置示例中,我们已经了解如何在ACI中使用配置区域功能。

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