使用GUI在安全防火牆威脅防禦中配置BFD

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簡介

本檔案介紹如何在執行7.3及更高版本的安全防火牆管理中心(FMC)中設定BFD通訊協定。

需求

思科建議您瞭解以下主題:

- 邊界閘道通訊協定(BGP)通訊協定
- 雙向轉送偵測(BFD)概念

採用元件

本文中的資訊係根據以下軟體和硬體版本:

- 安全FMC虛擬版本7.3.1
- BGP在思科安全防火牆威脅防禦(FTD)中配置,思科安全FMC運行版本7.3及更高版本

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除(預設))的組態來啟動。如果您的網路運作中,請確保您瞭解任何指令可能造成的影響。

背景資訊

BFD是一種檢測協定,旨在為所有媒體型別、封裝、拓撲和路由協定提供快速轉發路徑故障檢測時 間。

設定

有關運行7.3及更高版本的FMC中的BFD配置,請參閱以下步驟。

步驟 1. 導航至 Devices 按鈕, 然後按一下 Device Management 按鈕。



圖1.FMC控制面板。

步驟 2.選擇要配置BFD協定的裝置。

Firewall Management Center Overview Analysis	Policies Devices Objects	Integration		Deploy Q 🤩 🕻	8 😗 admin ▼ 🔤 🖏	
View By: Group •						History
All (2) Error (0) Warning (0) Offline (0) Normal (2)	Deployment Pending (0)	de (2) 🔍 Snort 3 (2)		٩	Search Device	Add 🔻
Collapse All						
Name	Model Versio	ion Chassis	Licenses	Access Control Policy	Auto RollBack	
Ungrouped (2)						
SF3130-A Snort 3 10.88.146.203 - Routed	Firewall 3130 Threat Defense 7.3.1	Manage	Essentials, IPS (2 more)	Default		1
SF3130-B Snort 3 10.88.146.205 - Routed	Firewall 3130 Threat Defense 7.3.1	Manage	Essentials, IPS (2 more)	Default	¢9	1

圖2.裝置管理部分。

步驟 3.按一下 Routing頁籤,然後按一下 BFD 左欄上的PDF檔案。選擇要配置的選項(Single-Hop 或 Multi-Hop),然後按一下 Add.



圖3.Device Routing部分。

步驟 4.選擇 Interface 其中要配置BFD協定,並通過按一下 + 按鈕。

Firewall Managemen Devices / Secure Firewall Rou	nt Center Overview Analysis Policies uting		Deploy 🔍 🥙 🌣 🔞 admin 🔻 🔐
SF3130-A Cisco Secure Firewall 3130 Threat D Device Routing Interface			
Manage Virtual Routers Global +	Bidirectional Forwarding Detectio	n Routing (BFD)	
Virtual Router Properties	Single-Hop Multi-Hop	Add BED Single-Hop	
ECMP	Slow Timer	Add bro Single-nop	
		Interface	
		BGP V	
		Template Name	Add
		Select + 2	
Policy Based Routing		Template Name is mandatory.	
		Cancel	
		There are no BFD records Add	

圖4.介面選擇。

步驟 5.命名模板並配置BFD所需的引數,然後按一下「儲存」按鈕。

Firewall Managemen Devices / Secure Firewall Ro	nt Center Overview Analysis Policies De uting	evices Objects Integration		Deptoy Q 🥔 🌣 😡 admin 🕶 🔤
		Add BFD Template Object		
		Name*		
		Type:		
		Single-Hop O Multi-Hop		Add
		Echo:		
		disabled •		
		Interval Authentication		/ i
		Interval Type:		
		None •		
		Multiplier		
		Minimum Transmit:		
		Historian Honann.		
		Minimum Receive:		
			Canal Same	
			Cancer Save	

圖5.模板配置。

註:回顯功能僅在單跳模式下可用。

步驟 6.選擇已在前面步驟中建立的模板,然後按一下 ок.

Firewall Managemen Devices / Secure Firewall Ro			Deploy 🔍 🥩 🌣 😝 admin 🕶 🔤
SF3130-A Cisco Secure Firewall 3130 Threat I			
Device Bouting Interfac	ss Inline Sets DHCP VTEP		
Manage Virtual Routers	Bidirectional Forwarding Detection Routing	(BFD)	
Global •			
Virtual Router Properties			
ECMP			
BFD		Edit BFD Single-Hop 💿	
OSPF			
OSPFv3		Interface	Add
EIGRP		BGP V	
RIP		Template Name	
Policy Based Routing		Template1	/ 1
Y BGP		Template 1	
IPv4		Cancel OK	
IPv6			
Static Route			
Y Multicast Routing			
IGMP DUM			
PIM			
Multicast Roundon: Eliter			
And the second s			
General Settings			
BGP			

圖6.模板選擇。

第7步(可選)。對於BFD翻轉,請按一下 IPv4 或 IPv6按鈕,具體取決於您在左欄中的BGP配置。選擇Neighbor 頁籤,然後按一下右側的編輯鉛筆以查詢所需的鄰居地址。

Firewall Managemer Devices / Secure Firewall Ro	nt Center Overview Analysis	Policies Devices Objects	Integration	Dep	iloy Q 🧳 🌣 🕜 admin ▼ 🔤 secure
SF3130-A Cisco Secure Firewall 3130 Threat I	Defense				You have unsaved changes Save Cancel
Device Routing Interfac	es Inline Sets DHCP				
Manage Virtual Routers	Enable IPv4: 🗹 AS Number 65000				
Global 💌			Badlatik dan Basta kitadan		
Virtual Router Properties	General Neighbor ZAdd Aggreç	ate Address Filtening Networks	Redistribution Route Injection		
ECMP					+ Add
BFD					
OSPF	Address	Remote AS Number	Address Family	Remote Private AS Number	Description
OSPFv3	172.16.10.2	65001	Enabled		3 ∠i
EIGRP					
RIP					
Policy Based Routing					
Y BGP					
IPv4					
IPv6					
Static Route					
Multicast Routing					
IGMP					
PIM					
Multicast Roundany Eliter					
Multicast boundary Pilter					
General Settings					

圖7.鄰居配置。

第8步(可選)。選擇選項BFD Failover for single_hop 或 multi_hop 然後按一下 OK.

Firewall Management Center Devices / Secure Firewall Routing	er _{Overview} A	Analysis Policies Devices C	Dbjects Integration	Deploy Q 🎸 🏟 🕢 admin 🕶 👘 secure
SF3130-A				You have unsaved changes Save Cancel
Cisco Secure Firewall 3130 Threat Defense				
Device Routing Interfaces Inlin	line Sets DHCP	Edit Neighbor		
Manage Virtual Routers Global Virtual Router Properties ECMP BFD OSPF OSPF OSPF RIP Policy Based Routing	IPv4: <table-cell> nber 65000 sral Neighbor / ess 16.10-2</table-cell>	IP Address* 172.16.10.2 Remote AS* 65001 (1-4294967295 or 1.0-65535.65535) BFD Fallover single_hop multi_hop auto_detect_hop none		+ Add Description
 > BGP ■Pv4 ■Pv6 Static Route > Multicast Routing ■ FMM ■ Multicast Routes ■ Multicast Boundary Filter ■ General Settings ■ BGP 		Route Map Prefix List AS path filter Limit the number of prefixes allowed Maximum Prefixes* (1-2147483647) Threshold Level Threshold Level	+ • + Route Map • + • Prefix List • + • AS path filter + • + • + • + • + •	
			Сапсер	1

圖8.BFD故障轉移配置。

步驟 9.要儲存配置,請按一下 Save 按鈕。

Firewall Management Devices / Secure Firewall Rout	t Center Overview Analysis	Policies Devices Objects Integ	ration		Deploy Q 🥏 🌣 👩 admin 🕶 🖓	SECURE
SF3130-A Cisco Secure Firewall 3130 Threat D	efense				You have unsaved changer	Cancel
Device Routing Interface	s Inline Sets DHCP VTEP					
Manage Virtual Routers Global	Enable IPv4: 🗹 AS Number 65000 General Neighbor Add Aggregat	e Address Filtering Networks Redistr	ibution Route Injection			
ECMP						+ Add
BFD OSPF	Address	Remote AS Number	Address Family	Remote Private AS Number	Description	
OSPFv3			Enabled			18
EIGRP						
Policy Based Routing						
Y BGP						
IPv4						
IPv6						
Static Route						
Multicast Routing						
PIM						
Multicast Routes						
Multicast Boundary Filter						
General Settings						
BGP						

圖9.儲存配置。

步驟 10.按一下 Deploy 按鈕,按一下 checkbox 您應用更改的裝置,然後再次輸入 Deploy 按鈕。

Firewall Managemen Devices / Secure Firewall Roo	nt Center Overview Analysis	Policies Devices Objects Integr	ation		🧳 🌣 👩 admin 🕶 讨 🖏 SECURE
SF3130-A					Advanced Deploy Deploy neel
Cisco Secure Firewall 3130 Threat E	Defense			SF3130-A 2	Ready for Deployment 3
Device Routing Interface	es Inline Sets DHCP VTEP				
Manage Virtual Routers Global	Enable IPv4: 🗹 AS Number 65000 General Neighbor Add Aggregate A	ddress Filtering Networks Redistri	bution Route Injection		
Virtual Router Properties					
ECMP					dd
BFD OSPE	Address	Remote AS Number	Address Family		
OSPFv3	172.16.10.2	65001	Enabled	1 selected 0 1 pending	₽ • •
EIGRP					
RIP					
Policy Based Routing					
Y BGP					
IPv4					
IPv6					
Static Route					
✓ Multicast Routing					
IGMP					
PIM Multilanat Devites					
Multicast Roundany Eilter					
muticals, boundary Pitter					
General Settings					
BGP					

圖10.正在部署更改。



使用以下命令直接在CLI會話中驗證BFD配置和狀態:

<#root>

>

system support diagnostic-cli

Attaching to Diagnostic CLI ... Press 'Ctrl+a then d' to detach. Type help or '?' for a list of available commands.

SF3130-A>

enable

Password: SF3130-A#

show running-config | inc bfd

bfd-template single-hop Template
bfd template Template
neighbor 172.16.10.2 fall-over bfd single-hop
SF3130-A#
SF3130-A#

show bfd summary

Total SF3130-A# SF3130-A# show bfd neighbors	Session 1	Up 1	Down O			
IPv4 Sessions NeighAddr 172.16.10.2		I	LD/RD 1/1	RH/RS Up	State Up	Int BGP

疑難排解

目前尚無適用於此組態的具體疑難排解資訊。

關於此翻譯

思科已使用電腦和人工技術翻譯本文件,讓全世界的使用者能夠以自己的語言理解支援內容。請注 意,即使是最佳機器翻譯,也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準 確度概不負責,並建議一律查看原始英文文件(提供連結)。