使用GUI在安全防火墙威胁防御中配置BFD

目录

<u>简介</u> <u>要求</u> <u>使用的组件</u> <u>背景信息</u> 配置 <u>验证</u> <u>故障排除</u>

简介

本文档介绍如何在运行7.3及更高版本的安全防火墙管理中心(FMC)中配置BFD协议。

要求

Cisco 建议您了解以下主题:

- 边界网关协议(BGP)协议
- 双向转发检测(BFD)概念

使用的组件

本文档中的信息基于以下软件和硬件版本:

- 安全FMC虚拟版本7.3.1
- 在思科安全防火墙威胁防御(FTD)中配置BGP,其中思科安全FMC运行版本7.3及更高版本

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原 始(默认)配置。如果您的网络处于活动状态,请确保您了解所有命令的潜在影响。

背景信息

BFD是一种检测协议,旨在为所有媒体类型、封装、拓扑和路由协议提供快速转发路径故障检测时间。

配置

有关运行版本7.3及更高版本的FMC中的BFD配置,请参阅以下步骤。

步骤1:导航至 Devices 按钮并点击 Device Management 按钮。



图1.FMC控制面板。

第二步:选择要配置BFD协议的设备。

Firewall Management Center Overview Analysis	Policies Devices Objects Integ	ration		Deploy Q 修 🛉	🌣 😧 admin 🕶 🏻 -thesh	
View By: Group •						History
All (2) Error (0) Warning (0) Offline (0) Normal (2)	 Deployment Pending (0) Upgrade (2) 	Snort 3 (2)		٩	L Search Device	Add 🔻
Collapse All						
Name	Model Version	Chassis	Licenses	Access Control Policy	Auto RollBack	
Ungrouped (2)						
SF3130-A Short 3 10.88.146.203 - Roured	Firewall 3130 Threat Defense 7.3.1	Manage	Essentials, IPS (2 more)	Default		1
SF3130-8 Snort.3 10.88.146.205 - Routed	Firewall 3130 Threat Defense 7.3.1	Manage	Essentials, IPS (2 more)	Default	*9	1

图2.Device Management部分。

第三步:单击 Routing选项卡,然后单击 BFD 选项。选择要配置的选项(Single-Hop 或 Multi-Hop),然后单击 Add.



图3.Device Routing部分。

第四步:选择 Interface 其中将配置BFD协议,并通过点击 + 按钮。

Devices / Secure Firewall Rou	nt Center Overview Analysis Policies		Deploy 🔍 🧬 🌣 🔞 admin 🕶 🖓 SECURE
SF3130-A Cisco Secure Firewall 3130 Threat D Device Routing Interface			
Manage Virtual Routers	Bidirectional Forwarding Detection	Routing (BFD)	
Virtual Router Properties	Single-Hop Multi-Hop	Add BED Single-Hop	
ECMP	Slow Timer	Add Brb Siligle-Hop	
OSDE		Interface	
OSPEV3		BGP v	
EIGRP		Template Name	Add
RIP		Select + 2	
Policy Based Routing		Template Name is mandatory.	
∨ BGP			
IPv4		Cancel	
IPv6			
		There are no RED records Add	
		There are no bro records Add	

图4.接口选择.

第五步:命名模板并配置BFD所需的参数,然后点击Save按钮。

Firewall Managemen Devices / Secure Firewall Roo	nt Center Overview Analysis Policies Du	evices Objects Integration		Deploy Q 🥔 🔅 🔕 admin 🔻 🔤
		uting (BFD)		
		Add BFD Template Object		
		Name* Template		
		Type: Single-Hop O Multi-Hop		Add
		Echo: disabled •		2 B
		Interval Authentication		
		Interval Type: None •		
		Multiplier:		
		Minimum Transmit:		
		Minimum Receive:		
			Cancel	

图5.模板配置。

注:回声功能仅在单跳模式下可用。

第六步:选择您在前面的步骤中创建的模板,然后点击 ok.

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			
Multiclist boundary Pillor			
General Settings			
BGP			

图6.模板选择。

第7步(可选):对于BFD翻盖,请单击 IPv4 或 IPv6按钮,具体取决于您在左列上的BGP配置。选择Neighbor 选项卡,然后点击右侧用于所需邻居地址的编辑铅笔。

Firewall Manageme Devices / Secure Firewall Ro	nt Center Overview Analysis	Policies Devices Objects	Integration	Dep	aloy Q 🧳 🌣 🕜 admin ▼ 🔤 diset. SECURE
SF3130-A Cisco Secure Firewall 3130 Threat	Defense				You have unsaved changes Save Cancel
Device Routing Interfac	ces Inline Sets DHCP				
Manage Virtual Routers	Enable IPv4: 🗹 AS Number 65000				
Global •	General Neinhbur O Artd Angres	vate Arldrace Eiltering Natuurike	Pedistribution Doute Injection		
Virtual Router Properties		Jate Address Filtering Hetworks	Redistribution Route injection		
ECMP					+ Add
BFD	Address	Pamoto AS Number	Address Family	Pomoto Drivato AS Number	Description
OSPF	Address	Remote As Humber	Address ramily	Kemote Private A5 Humber	ouscription
OSPFv3	172.16.10.2	65001	Enabled		3∠i
EIGRP					
RIP					
Policy Based Routing					
* BGP					
IP-14					
Static Route					
V Multicast Routing					
IGMP					
PIM					
Multicast Routes					
Multicast Boundary Filter					
General Settings					

图7.邻居配置。

第8步(可选):选择选项BFD Failover for single_hop 或 multi_hop 并点击 OK.

Firewall Management Center Devices / Secure Firewall Routing	Analysis Policies Devices Objects Integration	Deploy 🔍 💞 🌣 😨 admin 🕶 讨 🖏 SECURE
SF3130-A		You have unsaved changes Save Cancel
Cisco Secure Firewall 3130 Threat Defense		
Device Routing Interfaces Inline Sets DHCP	Edit Neighbor	
Manage Virtual Routers Global ✓ Virtual Router Properties ECMP BFD OSPF OSPF OSPF OSPF OSPF OSPF OSPF BGP Policy Based Routing ✓ BGP IPv4 IPv6 Static Route	Ledit Neighbor IP Address* IP Address* Enabled address 172.16.10.2 Shuddown administratively A genote AS* Configure graceful restart 65001 Graceful restart(fallover/spanned mode) (1-4294967295 or 1.0-65535.65535) Description single_hop • • Advanced Migration Outgoing • •	+ Add Description
IGNP PIM Multicast Routes Multicast Boundary Filter General Settings BGP	AS path filter AS path filter + Limit the number of prefixes allowed from the neighbor Maximum Prefixes* (1-2147483647) Threshold Level	
	Cance OK	

图8.BFD故障切换配置。

步骤 9要保存配置,请点击 Save 按钮。

Firewall Management Center Overview Analysis Devices / Secure Frewall Routing	Policies Devices Objects Integ	pration		Deploy Q 🥏 🌣 🕜 admin 🕶 🖓	SECURE
SF3130-A Cisco Secure Firewall 3130 Threat Defense				You have unsaved changer Save	Cancel
Device Routing Interfaces Inline Sets DHCP VTEP					
Manage Virtual Routers AS Number 65000					
Global General Neighbor Add Aggreg Virtual Pruter Bronerties	ate Address Filtering Networks Redist	ribution Route Injection			
ECMP					+ Add
BFD Address	Remote AS Number	Address Family	Remote Private AS Number	Description	
OSPFv3 172.16.10.2	65001	Enabled			1
Eligiki ^y RiP					
Policy Based Routing					
IPv4					
IPv6					
Static Route					
Multicast Routing IGMP					
PIM					
Multicast Routes					
Multicast Boundary Filter					
General Settings					
BGP					

图9.保存配置。

步骤 10单击 Deploy 按钮,单击右上方的 checkbox 应用更改的设备,然后 Deploy 按钮。

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					

图10.正在部署更改。

验证

使用以下命令直接在CLI会话上验证BFD配置和状态:

<#root>

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

故障排除

目前没有针对此配置的故障排除信息。

关于此翻译

思科采用人工翻译与机器翻译相结合的方式将此文档翻译成不同语言,希望全球的用户都能通过各 自的语言得到支持性的内容。

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