配置名为Mode的EIGRP

目录

简介

本文描述已命名增强的内部网关路由选择协议(EIGRP)模式功能并且在相关配置帮助下讨论传统和已命名模式之间的差异。

先决条件

要求

思科建议您有IP路由和EIGRP协议基础知识。

使用的组件

本文档不限于特定的软件和硬件版本。

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。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

背景信息

传统方式配置EIGRP要求将配置的多种参数在接口和EIGRP配置模式下。为了配置EIGRP IPV4和IPv6，它要求配置独立的EIGRP实例。传统EIGRP不支持虚拟路由和转发(VRF)在IPv6 EIGRP实施。

使用已命名mode EIGRP，一切在EIGRP配置下的单个地方配置，并且没有限制如以前被提及。

配置

网络图

此镜像是本文的其余的一拓扑示例。

不同于传统方法，当这在路由器时，配置EIGRP实例没有创建也没有开始：

```
R1(config)#router eigrp TEST
```

实例将创建，当address-family和自治系统编号配置，例如：

```
R1(config-router)#address-family ipv4 unicast autonomous-system 1
```

使用此已命名模式， EIGRP仅单个实例需要创建。它可以用于所有地址家族类型。它由可用系统资源也仅支持多个VRFs limited。知道一件的事关于已命名模式是address-family的配置不启用路由作为IPv4 EIGRP的一传统配置的IPv4。'no shut'要求为了开始进程：

```
R1(config-router)#address-family ipv4 unicast autonomous-system 1
```

已命名EIGRP有下配置大多数完成的三个模式在。即：

- address-family配置模式- (设置路由器AF) #
- address-family接口配置模式- (设置路由器AF接口) #
- address-family拓扑配置模式- (设置路由器AF拓扑) #

Address-family配置模式

您输入此模式用此命令：

```
R1(config-router)#address-family ipv4 unicast autonomous-system 1
R1(config-router-af)#?
Address Family configuration commands:
 af-interface                 Enter Address Family interface configuration
 default                       Set a command to its defaults
 eigrp                         EIGRP Address Family specific commands
 exit-address-family  Exit Address Family configuration mode
 help                          Description of the interactive help system
 maximum-prefix       Maximum number of prefixes acceptable in aggregate
 metric                        Modify metrics and parameters for advertisement
 neighbor                    Specify an IPv4 neighbor router
 network                      Enable routing on an IP network
 no                            Negate a command or set its defaults
 shutdown                  Shutdown address family
 timers                        Adjust peering based timers
 topology                   Topology configuration mode
```

在此模式，这些参数可以配置：网络、EIGRP邻居和Eigrp router-id。已命名EIGRP另外两个配置模式从此模式访问。

传统配置

```
R1(config-router)#address-family ipv4 unicast autonomous-system 1
R1(config-router-af)#?
Address Family configuration commands:
 af-interface                  Enter Address Family interface configuration
 default                        Set a command to its defaults
 eigrp                          EIGRP Address Family specific commands
 exit-address-family  Exit Address Family configuration mode
 help                           Description of the interactive help system
 maximum-prefix       Maximum number of prefixes acceptable in aggregate
 metric                         Modify metrics and parameters for advertisement
 neighbor                     Specify an IPv4 neighbor router
 network                       Enable routing on an IP network
 no                             Negate a command or set its defaults
 shutdown                    Shutdown address family
 timers                         Adjust peering based timers
 topology                     Topology configuration mode
```

已命名Configuration

```
R1(config-router)#address-family ipv4 unicast autonomous-system 1
R1(config-router-af)#?
Address Family configuration commands:
 af-interface                  Enter Address Family interface configuration
 default                        Set a command to its defaults
 eigrp                          EIGRP Address Family specific commands
 exit-address-family  Exit Address Family configuration mode
 help                           Description of the interactive help system
 maximum-prefix       Maximum number of prefixes acceptable in aggregate
 metric                         Modify metrics and parameters for advertisement
 neighbor                     Specify an IPv4 neighbor router
 network                       Enable routing on an IP network
 no                             Negate a command or set its defaults
 shutdown                    Shutdown address family
 timers                         Adjust peering based timers
 topology                     Topology configuration mode
```

Address-family接口配置模式

此模式采取在一个实际接口以前配置的所有界面特殊化的命令(逻辑或物理)。 EIGRP身份验证、水平分割和摘要地址配置是当前配置此处而不是在实际接口的某些选项：

```
R1(config-router-af)#af-interface g0/0
R1(config-router-af-interface)#?
Address Family Interfaces configuration commands:
 authentication             authentication subcommands
 bandwidth-percent    Set percentage of bandwidth percentage limit
 bfd                        Enable Bidirectional Forwarding Detection
 dampening-change   Percent interface metric must change to cause update
 dampening-interval   Time in seconds to check interface metrics
 default                    Set a command to its defaults
 exit-af-interface          Exit from Address Family Interface configuration
 hello-interval             Configures hello interval
 hold-time                  Configures hold time
 next-hop-self              Configures EIGRP next-hop-self
 no                       Negate a command or set its defaults
 passive-interface        Suppress address updates on an interface
 shutdown                   Disable Address-Family on interface
 split-horizon              Perform split horizon
 summary-address     Perform address summarization
```

注意：您能使用**defaultAF**

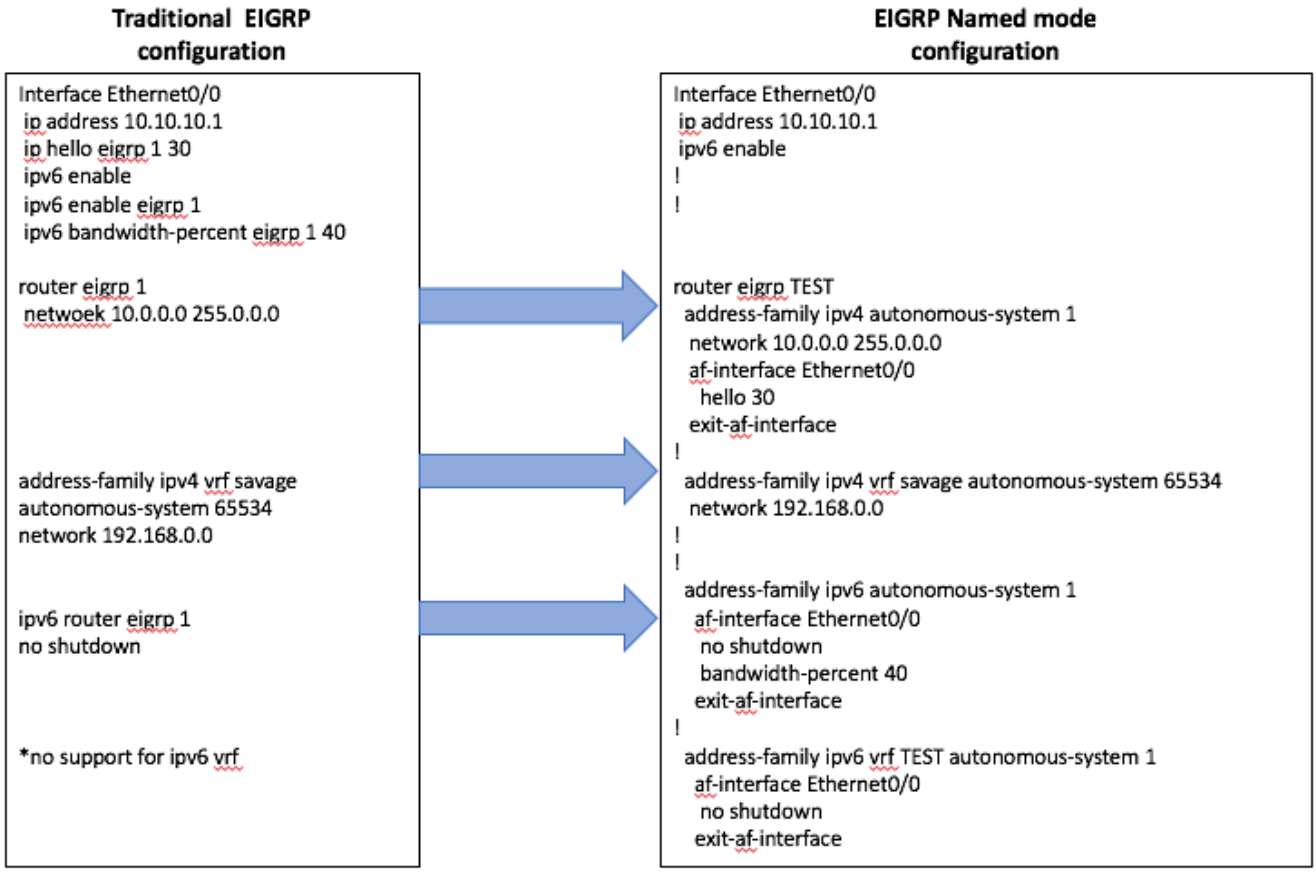
Address-family拓扑配置模式

此模式提供起作用EIGRP拓扑表的几个配置选项。事类似再分配，距离，偏移量列表，差异等等可以配置在此模式下。您能输入从address-family配置模式的此模式。

```
R1(config-router-af)#topology base
R1(config-router-af-topology)#?
Address Family Topology configuration commands:
 auto-summary          Enable automatic network number summarization
 default               Set a command to its defaults
 default-information   Control distribution of default information
 default-metric        Set metric of redistributed routes
 distance              Define an administrative distance
 distribute-list       Filter entries in eigrp updates
 eigrp                 EIGRP specific commands
 exit-af-topology      Exit from Address Family Topology configuration
 maximum-paths         Forward packets over multiple paths
 metric                Modify metrics and parameters for advertisement
 no                    Negate a command or set its defaults
 offset-list           Add or subtract offset from EIGRP metrics
 redistribute          Redistribute IPv4 routes from another routing proto
 summary-metric        Specify summary to apply metric/filtering
 timers                Adjust topology specific timers
 traffic-share         How to compute traffic share over alternate paths
 variance              Control load balancing variance
```

比较

在讨论的两个配置模式之间的一个比较显示此处：



可用性

名为配置的EIGRP从这些Cisco IOS版本是可得到：

- 15.0(1)M
- 12.2(33)SRE
- 12.2(33)XNE
- Cisco IOS XE版本2.5

自动转换命名了EIGRP

有转换从传统方式的配置的一个自动方法到新方法。在EIGRP进程里面，命令

eigrp升级CLI <EIGRP虚拟实例Name>需要被输入。这自动地转换配置对已命名模式，不用影响对已建立EIGRP并列：

Traditional Configuration

```
router eigrp 1
network 10.10.10.1 0.0.0.0
!
interface Ethernet0/0
ip address 10.10.10.1 255.255.255.0
ip hello-interval eigrp 1 100
```

Configuration

```
R1(config)#router eigrp 1
R1(config-router)#eigrp upgrade-cli TEST
Configuration will be converted from router eigrp 1 to router eigrp TEST.
Are you sure you want to proceed? ? [yes/no]: yes

*Oct 10 14:14:40.684: EIGRP: Conversion of router eigrp 1 to router eigrp TEST -
Completed.
```

Converted Named Configuration

```
router eigrp TEST
!
address-family ipv4 unicast autonomous-system 1
!
af-interface Ethernet0/0
hello-interval 100
exit-af-interface
!
topology base
exit-af-topology
network 10.10.10.1 0.0.0.0
exit-address-family
```

验证

当前没有可用于此配置的验证过程。

故障排除

目前没有针对此配置的故障排除信息。