



UDP Forwarding Support of IP Redundancy Virtual Router Group

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User Datagram Protocol (UDP) forwarding is a feature used in Cisco IOS software to forward broadcast and multicast packets received for a specific IP address. Virtual Router Group (VRG) support is currently implemented with the Hot Standby Routing Protocol (HSRP) and it allows a set of routers to be grouped as a logical router that answers to a well-known IP address. The UDP Forwarding Support for IP Redundancy Virtual Router Groups feature enables UDP forwarding to be VRG aware, resulting in forwarding only to the active router in the VRG.

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the [“Feature Information for UDP Forwarding Support for IP Redundancy Virtual Router Groups”](#) section on page 6.

Use Cisco Feature Navigator to find information about platform support and Cisco IOS, Catalyst OS, and Cisco IOS XE software image support. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

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Information About UDP Forwarding Support for IP Redundancy Virtual Router Groups

Before you configure the UDP Forwarding Support of Virtual Router Group feature, you should understand the following concepts:

- [Benefits of the UDP Forwarding Support for Virtual Router Groups Feature, page 2](#)

Benefits of the UDP Forwarding Support for Virtual Router Groups Feature

Forwarding is limited to the active router in the VRG instead of all routers within the VRG. Prior to the implementation of this feature the only VRG support was HSRP. Within a VRG that is formed by HSRP, the forwarding of UDP-based broadcast and multicast packets is done by all the routers within the VRG. This process can cause some DHCP servers to operate incorrectly. By making the UDP forwarding code VRG aware, forwarding will be limited to the active router in the VRG.

VRG awareness is achieved with IP Redundancy Service (IRS). The IRS API provides for notification updates of a specific VRG, addition and deletion of a VRG, and querying of the current state of a VRG. State change notification is provided to avoid the performance impact of querying the state of the VRG each time it is needed. The UDP forwarding code caches the VRG state for each required helper address defined. Each time the UDP forwarding code needs to execute, it checks the current state of the VRG associated with the helper address and forwards only for VRGs that are active.

**Note**

The UDP Forwarding Support for virtual Router Groups feature is available only on platforms that support VRGs.

How to Configure UDP Forwarding Support for IP Redundancy Virtual Router Groups

This section contains the following procedure:

- [Configuring UDP Forwarding Support for IP Redundancy Virtual Router Groups, page 2](#)

Configuring UDP Forwarding Support for IP Redundancy Virtual Router Groups

Perform this task to configure UDP Forwarding Support for IP Redundancy Virtual Router Groups.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **interface** *type number*
4. **ip helper-address** *address* **redundancy** *vrg-name*
5. **end**

DETAILED STEPS

| | Command or Action | Purpose |
|--------|--|---|
| Step 1 | enable Example: Router> enable | Enables privileged EXEC mode. <ul style="list-style-type: none">Enter your password if prompted. |
| Step 2 | configure terminal Example: Router# configure terminal | Enters global configuration mode. |
| Step 3 | interface <i>type number</i> Example: Router(config)# interface fastethernet 0/0 | Specifies an interface and enters interface configuration mode. |
| Step 4 | ip helper-address <i>address</i> redundancy <i>vrg-name</i> Example: Router(config-if)# ip helper-address 10.1.1.1 redundancy shop | Enables UDP forwarding support for the VRG. |
| Step 5 | end Example: Router(config-if)# end | Exits the current configuration mode and returns to privileged EXEC mode. |

Configuration Examples for UDP Forwarding Support for IP Redundancy Virtual Router Groups

This section provides the following configuration example:

- [Configuring UDP Forwarding Support for IP Redundancy Virtual Router Groups: Example, page 3](#)

Configuring UDP Forwarding Support for IP Redundancy Virtual Router Groups: Example

The following example shows how to configure UDP Forwarding Support for IP Redundancy Virtual Router Groups:

```
interface fastethernet 0/0
 no shutdown
 ip address 172.16.10.1 255.255.255.0
 ip helper-address 10.1.1.1 redundancy shop
```

Additional References

The following sections provide references related to the UDP Forwarding Support for IP Redundancy Virtual Router Groups feature.

Related Documents

| Related Topic | Document Title |
|--|---|
| IP application services commands: complete command syntax, command mode, command history, defaults, usage guidelines, and examples | Cisco IOS IP Application Services Command Reference |

Standards

| Standard | Title |
|--|-------|
| No new or modified standards are supported, and support for existing standards has not been modified | — |

MIBs

| MIB | MIBs Link |
|--|-----------|
| No new or modified MIBs are supported, and support for existing MIBs has not been modified | — |

RFCs

| RFC | Title |
|--|-------|
| No new or modified RFCs are supported, and support for existing RFCs has not been modified | — |

Technical Assistance

| Description | Link |
|---|--|
| <p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p> | <p>http://www.cisco.com/techsupport</p> |

Feature Information for UDP Forwarding Support for IP Redundancy Virtual Router Groups

Table 1 lists the features in this module. For information on a feature in this technology that is not documented here, see the other available documentation for your Cisco IOS release.

Not all commands may be available in your Cisco IOS software release. For release information about a specific command, see the command reference documentation.

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which Cisco IOS, Catalyst OS and Cisco IOS XE software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.



Note

Table 1 lists only the Cisco IOS software release that introduced support for a given feature in a given Cisco IOS software release train. Unless noted otherwise, subsequent releases of that Cisco IOS software release train also support that feature.

Table 1 Feature Information for UDP Forwarding Support for IP Redundancy Virtual Router Groups

| Feature Name | Releases | Feature Information |
|---|-----------|---|
| UDP Forwarding Support for IP Redundancy Virtual Router Group | 12.2(15)T | User Datagram Protocol (UDP) forwarding is a feature used in Cisco IOS software to forward broadcast and multicast packets received for a specific IP address. Virtual Router Group (VRG) support is currently implemented with the Hot Standby Routing Protocol (HSRP) and it allows a set of routers to be grouped as a logical router that answers to a well known well-known IP address. The UDP Forwarding Support for IP Redundancy Virtual Router Groups feature enables UDP forwarding to be VRG aware, resulting in forwarding only to the active router in the VRG. The following command was introduced or modified: ip helper-address. |

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