



Configuring IRDP

The ICMP Router Discovery Protocol (IRDP) allows IPv4 hosts to locate routers that provide IPv4 connectivity to other (nonlocal) IP networks. For a complete description of the IPv4 addressing commands in this module, refer to the *Cisco IOS IP Application Services Command Reference*. To locate documentation of other commands that appear in this module, use the command reference master index or search online.

This module explains the concepts related to IRDP and describes how to configure IRDP in a network.

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Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see [Bug Search Tool](#) and 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 table.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Information About IRDP

IRDP Overview

ICMP Router Discovery Protocol (IRDP) allows hosts to locate routers that can be used as a gateway to reach IP-based devices on other networks. When the device running IRDP operates as a router, router discovery packets are generated. When the device running IRDP operates as a host, router discovery packets are received.

The Cisco IRDP implementation fully conforms to the router discovery protocol outlined in RFC 1256 (<http://www.ietf.org/rfc/rfc1256.txt>).

How to Configure IRDP

Configuring IRDP

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **no ip routing**
4. **ip gdp irdp [multicast]**
5. **interface type number**
6. **no shutdown**
7. **ip address ip-address mask**
8. **ip irdp**
9. **ip irdp multicast**
10. **ip irdp holdtime seconds**
11. **ip irdp maxadvertinterval seconds**
12. **ip irdp minadvertinterval seconds**
13. **ip irdp preference number**
14. **ip irdp address address number**
15. **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.

	Command or Action	Purpose
Step 3	no ip routing Example: Router(config)# no ip routing	Disables IP routing
Step 4	ip gdp irdp [multicast] Example: Router(config)# ip gdp irdp	Configures a gateway to discover routers that transmit IRDP router updates.
Step 5	interface type number Example: Router(config)# interface fastethernet 0/0	Specifies an interface and enters interface configuration mode.
Step 6	no shutdown Example: Router(config-if)# no shutdown	Activates (enables) the interface.
Step 7	ip address ip-address mask Example: Router(config-if)# ip address 172.16.16.1 255.255.240.0	Configures an IP address on the interface.
Step 8	ip irdp Example: Router(config-if)# ip irdp	Enables IRDP on the interface
Step 9	ip irdp multicast Example: Router(config-if)# ip irdp multicast	(Optional) Sends IRDP advertisements to the all-systems multicast address (224.0.0.1) on a specified interface.
Step 10	ip irdp holdtime seconds Example: Router(config-if)# ip irdp holdtime 120	(Optional) Sets the IRDP period for which advertisements are valid.
Step 11	ip irdp maxadvertinterval seconds Example: Router(config-if)# ip irdp maxadvertinterval 60	(Optional) Sets the IRDP maximum interval between advertisements.

	Command or Action	Purpose
Step 12	ip irdp minadvertinterval <i>seconds</i> Example: Router(config-if)# ip irdp minadvertinterval 10	(Optional) Sets the IRDP minimum interval between advertisements.
Step 13	ip irdp preference <i>number</i> Example: Router(config-if)# ip irdp preference 900	(Optional) Sets the IRDP preference level of the device.
Step 14	ip irdp address <i>address number</i> Example: Router(config-if)# ip irdp address 192.168.10.2 90	(Optional) Specifies an IRDP address and preference to proxy-advertise.
Step 15	end Example: Router(config-if)# end	Exits the current configuration mode and returns to privileged EXEC mode.

Configuration Examples for IRDP

Example: Configuring IRDP

The following example shows how to configure IRDP on a router:

```

Router(config)# no ip routing
Router(config)# ip gdp irdp
Router(config)# interface fastethernet 0/1
Router(config-if)# no shutdown
Router(config-if)# ip address 172.16.10.1 255.255.255.0
Router(config-if)# ip irdp
Router(config-if)# ip irdp multicast
Router(config-if)# ip irdp holdtime 120
Router(config-if)# ip irdp maxadvertinterval 60
Router(config-if)# ip irdp minadvertinterval 10
Router(config-if)# ip irdp preference 900
Router(config-if)# ip irdp address 192.168.10.2 90

```

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	Cisco IOS Master Commands List, All Releases
IP application services commands	Cisco IOS IP Application Services Command Reference

Standards and RFCs

Standard	Title
RFC 1256	ICMP Router Discovery Messages

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for IRDP

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

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Table 1: Feature Information for IRDP

Feature Name	Releases	Feature Information
ICMP Router Discovery Protocol	15.2(1)S	<p>The ICMP Router Discovery Protocol (IRDP) allows IPv4 hosts to locate routers that provide IPv4 connectivity to other (non-local) IP networks.</p> <p>The following command was introduced or modified: ip irdp.</p>