



# Configuring IRDP

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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 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 Table at the end of this document.

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](http://www.cisco.com/go/cfn). An account on Cisco.com is not required.

## Information About IRDP

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## 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



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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, page 2](#)

### 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	<b>enable</b>  <b>Example:</b> Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
Step 2	<b>configure terminal</b>  <b>Example:</b> Router# configure terminal	Enters global configuration mode.

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

Command or Action	Purpose
<b>Step 11</b> <code>ip irdp maxadvertinterval <i>seconds</i></code>  <b>Example:</b> <pre>Router(config-if)# ip irdp maxadvertinterval 60</pre>	(Optional) Sets the IRDP maximum interval between advertisements.
<b>Step 12</b> <code>ip irdp minadvertinterval <i>seconds</i></code>  <b>Example:</b> <pre>Router(config-if)# ip irdp minadvertinterval 10</pre>	(Optional) Sets the IRDP minimum interval between advertisements.
<b>Step 13</b> <code>ip irdp preference <i>number</i></code>  <b>Example:</b> <pre>Router(config-if)# ip irdp preference 900</pre>	(Optional) Sets the IRDP preference level of the device.
<b>Step 14</b> <code>ip irdp address <i>address number</i></code>  <b>Example:</b> <pre>Router(config-if)# ip irdp address 192.168.10.2 90</pre>	(Optional) Specifies an IRDP address and preference to proxy-advertise.
<b>Step 15</b> <code>end</code>  <b>Example:</b> <pre>Router(config-if)# end</pre>	Exits the current configuration mode and returns to privileged EXEC mode.

## Configuration Examples for IRDP

- [Example: Configuring IRDP, page 4](#)

### 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	<i>Cisco IOS Master Commands List, All Releases</i>
IP application services commands	<i>Cisco IOS IP Application Services Command Reference</i>

### Standards and RFCs

Standard	Title
RFC 1256	<i>ICMP Router Discovery Messages</i>

### 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.	<a href="http://www.cisco.com/cisco/web/support/index.html">http://www.cisco.com/cisco/web/support/index.html</a>

## 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	12.2(50)SY	<p>The ICMP Router Discovery Protocol (IRDP) allows IPv4 hosts to locate routers that provide IPv4 connectivity to other (nonlocal) IP networks.</p> <p>The following command was introduced or modified: <b>ip irdp</b>.</p>

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