

IP Unnumbered Ethernet Polling Support

The IP Unnumbered Ethernet Polling Support feature provides IP unnumbered support for Ethernet physical interfaces. This support already exists for serial interfaces.

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Information About IP Unnumbered Ethernet Polling Support

IP Unnumbered Ethernet Polling Support Overview

IP unnumbered support for serial interfaces is extended to Ethernet physical interfaces. Unnumbered Ethernet physical interfaces are used in the same manner as unnumbered serial interfaces. On a device, if two unnumbered interfaces inherit their addresses from the same loopback address and are connected to the same peer, this configuration is not supported.

The polling option enables the dynamic discovery of hosts (connected though the unnumbered interfaces) based on the Address Resolution Protocol (ARP) protocol.

How to Configure IP Unnumbered Ethernet Polling Support

Enabling Polling on an Ethernet Interface

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **interface** *type number*
4. **ip address** *ip-address mask*
5. **exit**

6. **interface** *type number*
7. **ip unnumbered** *type number* **poll**
8. **end**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 3	**interface** *type number* **Example:** `Device(config)# interface loopback 0`	Specifies an interface and enters interface configuration mode.
Step 4	**ip address** *ip-address mask* **Example:** `Device(config-if)# ip address 209.165.200.229 255.255.240.224`	Configures the IP address on the interface.
Step 5	**exit** **Example:** `Device(config-if)# exit`	Exits interface configuration mode and returns to global configuration mode.
Step 6	**interface** *type number* **Example:** `Device(config)# interface ethernet 0/0`	Specifies an interface and enters interface configuration mode.
Step 7	**ip unnumbered** *type number* **poll** **Example:** `Device(config-if)# ip unnumbered loopback 0 poll`	Enables IP–connected host polling on the specified interface.
Step 8	**end** **Example:**	Returns to privileged EXEC mode.

	Command or Action	Purpose
	`Device(config-if)# end`	

Configuring the Queue Size and the Packet Rate for IP ARP Polling for Unnumbered Interfaces

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ip arp poll queue** *queue-size*
4. **ip arp poll rate** *packet-rate*
5. **end**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 3	**ip arp poll queue** *queue-size* **Example:** `Device(config)# ip arp poll queue 1000`	Configures the IP ARP polling queue size.
Step 4	**ip arp poll rate** *packet-rate* **Example:** `Device(config)# ip arp poll rate 1000`	Configures the IP ARP polling packet rate, in packets per second.
Step 5	**end** **Example:** `Device(config-if)# end`	Returns to privileged EXEC mode.

Verifying IP Unnumbered Ethernet Polling Support

Perform this task to verify IP unnumbered Ethernet polling support.

Note The **show** commands are not in any specific order.

SUMMARY STEPS

1. **enable**
2. **show ip arp poll**
3. **show ip interface** *type number* **unnumbered**
4. **show ip interface** *type number* **unnumbered detail**

DETAILED STEPS

Procedure

Step 1 **enable**

Enables privileged EXEC mode.

Example:

```
Device> enable
```

Step 2 **show ip arp poll**

Displays the IP ARP host polling status.

Example:

```
Device# show ip arp poll

Number of IP addresses processed for polling: 438
Number of entries in the queue: 100 (high water mark: 154, max: 1000)
Number of request dropped:
  Queue was full: 1288
  Request was throttled by incomplete ARP: 10
  Duplicate entry found in queue: 1431
```

Step 3 **show ip interface** *type number* **unnumbered**

Displays the status of unnumbered interface support on interfaces configured for IP.

Example:

```
Device# show ip interface loopback 0 unnumbered

Number of unnumbered interfaces with polling: 10
Number of IP addresses processed for polling: 15
Number of IP addresses in queue for polling: 4
```

Step 4 **show ip interface** *type number* **unnumbered detail**

Displays the detailed status of unnumbered interface support on interfaces configured for IP.

Example:

```
Device# show ip interface loopback 0 unnumbered detail

Number of unnumbered interfaces with polling: 10
Number of IP addresses processed for polling: 15
Last 10 IP addresses processed for polling:
  209.165.201.2
  209.165.201.3
  209.165.201.4
  209.165.201.5
  209.165.201.6
  209.165.201.7
  209.165.201.8
  209.165.201.9
  209.165.201.10
  209.165.201.11
Number of IP addresses in queue for polling: 4 (high water mark: 5)
  209.165.201.12
  209.165.201.13
  209.165.201.14
  209.165.201.15
```

Configuration Examples for IP Unnumbered Ethernet Polling Support

Example: Enabling Polling on an Ethernet Interface

```
Device> enable
Device# configure terminal
Device(config)# interface loopback 0
Device(config-if)# ip address 209.165.200.229 255.255.240.224
Device(config-if)# exit
Device(config)# interface ethernet 0/0
Device(config-if)# ip unnumbered loopback 0 poll
Device(config-if)# end
```

Example: Configuring the Queue Size and the Packet Rate for IP ARP Polling for Unnumbered Interfaces

```
Device> enable
Device# configure terminal
Device(config)# ip arp poll queue 1000
Device(config)# ip arp poll rate 1000
```

```
Device(config)# end
```

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	Cisco IOS Master Command List, All Releases
IPv4 Addressing commands	Cisco IOS IP Addressing Services Command Reference
Conceptual information about IPv4 addresses	"Configuring IPv4 Addresses" module in the *IP Addressing: IPv4 Addressing Configuration Guide*

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 IP Unnumbered Ethernet Polling Support

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.

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.

Table 1: Feature Information for IP Unnumbered Ethernet Polling Support

Feature Name	Releases	Feature Information
IP Unnumbered Ethernet Polling Support	Cisco IOS XE Release 3.8S	The IP Unnumbered Ethernet Polling Support feature provides IP unnumbered support for Ethernet physical interfaces. The following commands were introduced or modified: **clear ip arp poll statistics**, **clear ip interface**, **ip arp poll**, **ip unnumbered poll**, **show ip arp poll**, and **show ip interface unnumbered**.