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ip directed-broadcast

To enable the translation of a directed broadcast to physical broadcasts, use the **ip directed-broadcast** interface configuration command. To disable this function, use the **no** form of this command.

ip directed-broadcast [*access-list-number*| *extended access-list-number*]

no ip directed-broadcast [*access-list-number*| *extended access-list-number*]

Syntax Description

<i>access-list-number</i>	(Optional) Standard access list number in the range from 1 to 199. If specified, a broadcast must pass the access list to be forwarded.
<i>extended access-list-number</i>	(Optional) Extended access list number in the range from 1300 to 2699.

Command Default

Disabled; all IP directed broadcasts are dropped.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
10.0	This command was introduced.
12.0	The default behavior changed to directed broadcasts being dropped.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
Cisco IOS XE 3.3SE	This command was implemented in Cisco IOS XE Release 3.3SE.

Usage Guidelines

An IP directed broadcast is an IP packet whose destination address is a valid broadcast address for some IP subnet, but which originates from a node that is not itself part of that destination subnet.

A router that is not directly connected to its destination subnet forwards an IP directed broadcast in the same way it would forward unicast IP packets destined to a host on that subnet. When a directed broadcast packet reaches a router that is directly connected to its destination subnet, that packet is “exploded” as a broadcast on the destination subnet. The destination address in the IP header of the packet is rewritten to the configured IP broadcast address for the subnet, and the packet is sent as a link-layer broadcast.

The **ip directed-broadcast** command controls the explosion of directed broadcasts when they reach their target subnets. The command affects only the final transmission of the directed broadcast on its ultimate destination subnet. It does not affect the transit unicast routing of IP directed broadcasts.

If **directed broadcast** is enabled for an interface, incoming IP packets whose addresses identify them as directed broadcasts intended for the subnet to which that interface is attached will be exploded as broadcasts on that subnet. If an access list has been configured with the **ip directed-broadcast** command, only directed broadcasts that are permitted by the access list in question will be forwarded; all other directed broadcasts destined for the interface subnet will be dropped.

If the **no ip directed-broadcast** command has been configured for an interface, directed broadcasts destined for the subnet to which that interface is attached will be dropped, rather than being broadcast.



Note

Because directed broadcasts, and particularly Internet Control Message Protocol (ICMP) directed broadcasts, have been abused by malicious persons, we recommend that security-conscious users disable the **ip directed-broadcast** command on any interface where directed broadcasts are not needed and that they use access lists to limit the number of exploded packets.

Examples

The following example enables forwarding of IP directed broadcasts on Ethernet interface 0:

```
Router(config)# interface ethernet 0
Router(config-if)# ip directed-broadcast
```

Related Commands

Command	Description
ip forward-protocol	Specifies which protocols and ports the router forwards when forwarding broadcast packets.

