



On-Demand Routing Commands

Use the commands in this chapter to configure On-Demand Routing (ODR). For ODR configuration information and examples, refer to the “Configuring On-Demand Routing” chapter of the *Network Protocols Configuration Guide, Part 1*.

router odr

To configure a router to accept On-Demand Routing (ODR) routes from a stub routers, use the **router odr** global configuration command. To disable ODR, use the **no** form of this command.

router odr
no router odr

Syntax Description

There are no arguments or keywords for this command.

Default

The router ignores any received ODR information.

Command Mode

Global configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

Use this command on hub routers to enable ODR to update the routing table with information learned via ODR stub routers.

Example

The following examples sets up the routers in the distribution list to accept ODR routes from the specified access list:

```
router odr
  distribute-list 101 in
access-list 101 permit ip host 10.0.0.1 198.92.110.0 255.255.255.0
access-list 101 permit ip 11.1.1.1 255.0.0.0 198.92.111.0 255.255.255.0
router ospf 1
  redistribute odr subnets
```

Related Commands

You can use the master indexes or search online to find documentation of related commands.

distance
distribute-list in
distribute-list out
maximum-paths

timers basic

To adjust ODR network timers, use the **timers basic** router configuration command. To restore the default timers, use the **no** form of this command.

```
timers basic update invalid holddown flush [sleeptime]  
no timers basic
```

Syntax Description

<i>update</i>	Rate in seconds at which updates are sent. This is the fundamental timing parameter of the routing protocol.
<i>invalid</i>	Interval of time in seconds after which a route is declared invalid; it should be at least three times the value of <i>update</i> . A route becomes invalid when there is an absence of updates that refresh the route. The route then enters holddown. The route is marked inaccessible and advertised as unreachable. However, the route is still used for forwarding packets.
<i>holddown</i>	Interval in seconds during which routing information regarding better paths is suppressed. It should be at least three times the value of <i>update</i> . A route enters into a holddown state when an update packet is received that indicates the route is unreachable. The route is marked inaccessible and advertised as unreachable. However, the route is still used for forwarding packets. When holddown expires, routes advertised by other sources are accepted and the route is no longer inaccessible.
<i>flush</i>	Amount of time in seconds that must pass before the route is removed from the routing table; the interval specified must be at least the sum of <i>invalid</i> and <i>holddown</i> . If it is less than this sum, the proper holddown interval cannot elapse, which results in a new route being accepted before the holddown interval expires.
<i>sleeptime</i>	(Optional) Interval in milliseconds for postponing routing updates in the event of a flash update. The <i>sleeptime</i> value should be less than the <i>update</i> time. If the <i>sleeptime</i> is greater than the <i>update</i> time, routing tables will become unsynchronized.

Defaults

update is 90 seconds
invalid is 270 seconds
holddown is 280 seconds
flush is 630 seconds
sleeptime is 0 milliseconds

Command Mode

Router configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 10.0.

The basic timing parameters for ODR are adjustable. Since this routing protocol is executing a distributed, asynchronous routing algorithm, it is important that these timers be the same for all routers and access servers in the network.

Note The current and default timer values can be seen by inspecting the output of the **show ip protocols EXEC** command. The relationships of the various timers should be preserved as described previously.

Example

In the following example, updates are broadcast every 5 seconds. If a router is not heard from in 15 seconds, the route is declared unusable. Further information is suppressed for an additional 15 seconds. At the end of the suppression period, the route is flushed from the routing table.

```
router odr 109
  timers basic 5 15 15 30
```

Note that by setting a short update period, you run the risk of congesting slow-speed serial lines; however, this is not a big concern on faster-speed Ethernets and T1-rate serial lines. Also, if you have many routes in your updates, you can cause the routers to spend an excessive amount of time processing updates.