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Configuring IP forwarding basic settings

About FIB table

A device uses the FIB table to make packet forwarding decisions.

A device selects optimal routes from the routing table, and puts them into the FIB table. Each FIB entry specifies the next hop IP address and output interface for packets destined for a specific subnet or host.

For more information about the routing table, see *Layer 3—IP Routing Configuration Guide*.

Use the `display fib` command to display the FIB table. The following example displays the entire FIB table.

```
<Sysname> display fib
```

```
Destination count: 4 FIB entry count: 4
```

```
Flag:
```

```
U:Usable   G:Gateway   H:Host     B:Blackhole  D:Dynamic   S:Static  
R:Relay    F:FRR
```

Destination/Mask	Nexthop	Flag	OutInterface/Token	Label
10.2.0.0/16	10.2.1.1	U	GE1/0/1	Null
10.2.1.1/32	127.0.0.1	UH	InLoop0	Null
127.0.0.0/8	127.0.0.1	U	InLoop0	Null
127.0.0.1/32	127.0.0.1	UH	InLoop0	Null

A FIB entry includes the following items:

- **Destination**—Destination IP address.
- **Mask**—Network mask. The mask and the destination address identify the destination network. A logical AND operation between the destination address and the network mask yields the address of the destination network. For example, if the destination address is 192.168.1.40 and the mask 255.255.255.0, the address of the destination network is 192.168.1.0. A network mask includes a certain number of consecutive 1s. It can be expressed in dotted decimal format or by the number of the 1s.
- **Nexthop**—IP address of the next hop.
- **Flag**—Route flag.
- **OutInterface**—Output interface.
- **Token**—MPLS Label Switched Path index number.
- **Label**—Inner label.

Saving the IP forwarding entries to a file

Restrictions and guidelines

The feature automatically creates the file if you specify a nonexistent file. If the file already exists, this feature overwrites the file content.

This feature triggers one-time saving of the IP forwarding entries.

To automatically save the IP forwarding entries periodically, configure a schedule for the device to automatically run the **ip forwarding-table save** command. For information about scheduling a task, see *Fundamentals Configuration Guide*.

Procedure

To save the IP forwarding entries to a file, execute the following command in any view:

```
ip forwarding-table save filename filename
```

Display and maintenance commands for FIB table

Execute **display** commands in any view.

Task	Command
Display FIB entries.	display fib [vpn-instance <i>vpn-instance-name</i>] [<i>ip-address</i> [<i>mask</i> <i>mask-length</i>]]

Configuring load sharing

About load sharing

If a routing protocol finds multiple equal-cost best routes to the same destination, the device forwards packets over the equal-cost routes to implement load sharing.

Enabling local-first load sharing

About local-first load sharing

Local-first load sharing distributes traffic preferentially across the output interfaces on the receiving IRF member device if output interfaces for multiple equal-cost routes are on different members. This feature enhances packets forwarding efficiency.

Procedure

1. Enter system view.
`system-view`
2. Enable local-first load sharing.
`ip load-sharing local-first enable`
By default, local-first load sharing is enabled.