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port-channel hash-distribution

To set the hash distribution algorithm method, use the port-channel hash-distribution command in global configuration mode. To return to the default settings, use the **no** or **default** form of this command.

port-channel hash-distribution {**adaptive**| **fixed**}

{**no**| **default**} **port-channel hash-distribution**

Syntax Description

adaptive	Specifies selective distribution of the bundle select register among the port-channel members.
fixed	Specifies fixed distribution of the bundle select register among the port-channel members.
default	Specifies the default setting.

Command Default

The hash distribution algorithm method is set to **fixed.**

Command Modes

Global configuration (config)

Command History

Release	Modification
12.2(33)SXH	This command was introduced.
12.2(33)SRC	This command was integrated into Cisco IOS Release 12.2(33)SRC.

Usage Guidelines

The EtherChannel load distribution algorithm uses the bundle select register in the port ASIC to determine the port for each outgoing packet. When you use the **adaptive** algorithm, it does not require the bundle select register to be changed for existing member ports. When you use the **fixed** algorithm and you either add or delete a port from the EtherChannel, the switch updates the bundle select register for each port in the EtherChannel. This update causes a short outage on each port.

Note When you change the algorithm, the change is applied at the next member link event. Example events include link down, up, addition, deletion, no shutdown, and shutdown. When you enter the command to change the algorithm, the command console issues a warning that the command does not take effect until the next member link event.

Examples

The following example shows how to set the hash distribution algorithm method to adaptive:

```
Router(config)# port-channel hash-distribution adaptive
```

power inline

To determine how inline power is applied to the device on the specified switch port, use the **powerinline** command in interface configuration mode. To return the setting to its default, use the **no** form of this command.

power inline {**auto** [**max** *max-milliwatts*]| **never**| **police**| **static** [**max** *max-milliwatts*]}

no power inline [police]

Cisco Integrated Services Routers Generation 2 (ISR G2) with Cisco Gigabit EtherSwitch enhanced high-speed WAN interface cards (EHWICs)

power inline {**auto**| **never**| **port max** *max-milliwatts*}

no power inline {**auto**| **never**| **port**}

Syntax Description

auto	Turns on the device discovery protocol and applies power to the device, if found.
max *max-milliwatts*	(Optional) Specifies the maximum amount of power, in milliwatts, that a device connected to a port can consume. Range: 4000 to 16800. Default: 15400.
never	Turns off the device discovery protocol and stops supplying power to the device.
police	Turns on inline power policing; optional if entering the **no** form of the command. Default is disabled.
static	Allocates power from the system power pool to a port.
port max *max-milliwatts*	Specifies the maximum power allocated to the port. The maximum power can be set between 4,000 to 20,000 milliwatts.

Power is applied when a telephone is detected on the port (**auto**).*max-milliwatts* is 15400 milliwatts. Inline power policing is disabled.

Command Default

Power is applied when a telephone is detected on the port (auto). The maximum power limit is 20000 milliwatts. Inline power policing is disabled.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
12.0(5)XU	This command was introduced.
12.2(2)XT	This command was integrated to support switchport creation on Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T to support switchport creation .
12.2(14)SX	Support for this command was introduced on the Supervisor Engine 720.
12.2(17b)SXA	This command was changed to include the **static** and **max***max-milliwatts* keywords and arguments.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was extended to Cisco IOS Release 12.2(17d)SXB.
12.2(33)SXH	This command was changed to include the **police** keyword .
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(33)SXH2	This command was changed to increase the *max-watts* maximum to 16800 milliwatts for the WS-F6K-48-AF and the WS-F6K-GE48-AF modules. The default setting remains 15400 milliwatts. See the "Usage Guidelines" section for additional information.
15.1(2)T	This command was modified. The **portmax**keyword and *max-milliwatts* argument were added.

Usage Guidelines

The **police**keyword appears if you have a WS-F6K-48-AF or other inline power daughter card that supports power monitoring and inline power policing.

Inline power is supported only on switch ports that are connected to an IP phone. Before you enable inline power on a switch port, you must enter the **switchport** command.

The following information applies to WS-F6K-48-AF and WS-F6K-GE48-AF inline power cards:

- In Cisco IOS Release 12.2(33)SXH2 and later releases, the configurable range of maximum power using the max keyword is 4000 to 16800 milliwatts. For earlier releases, the configurable range for maximum power is 4000 to 15400 milliwatts. For all releases, if no maximum power level is configured, the default maximum power is 15400 milliwatts.

Note To support a large number of inline-powered ports using power levels above 15400 milliwatts on an inline power card, we recommend using the static keyword so that the power budget is deterministic.

- In Cisco IOS Release 12.2(33)SXH2 and later releases, when you enter the auto keyword and CDP is enabled on the port, an inline-powered device that supports CDP can negotiate a power level up to 16800 milliwatts unless a lower maximum power level is configured. For earlier releases, the inline-powered device can negotiate a power level up to 15400 milliwatts or the configured maximum power level, if it is configured lower than 15400 milliwatts.

Cisco ISR G2 with Cisco Gigabit EHWICs

- The **portmax**keyword and *max-milliwatts* argument are available only on the Firebee cards with Power-over-Ethernet (PoE).

Examples

The following example shows how to set the inline power to the off mode on a switch port:

```
Router(config)# interface fastethernet5/1
Router(config-if)# switchport
Router(config-if)# power inline never
```

The following example shows how to allocate power from the system power pool to a switch port:

```
Router(config)# interface fastethernet5/1
Router(config-if)# switchport
Router(config-if)# power inline static max 15000
```

The following example shows how to turn on inline power policing to a switch port:

```
Router(config)# interface gigabitethernet6/3
Router(config-if)# switchport
Router(config-if)# power inline police
```

Examples

The following example shows how to turn on inline power to a switch port:

```
Router(config)# interface gigabitethernet
0/1/3
Router(config-if)#
power inline
auto{!-condition!}
```

The following example shows how to set maximum inline power to a switch port:

```
Router(config)# interface
 gigabitethernet
0/1/3
```

The following example shows how to disable inline power to the switch port:

```
Router(config)# interface
 gigabitethernet

0/1/3
Router(config-if)# power inline
 never{!-condition!}
```

Related Commands

Command	Description
show power inline	Displays the power status for the specified port or for all ports.

Command	Description
switchport priority extend	Determines how the telephone connected to the specified port handles priority traffic received on its incoming port.
switchport voice vlan	Configures the voice VLAN on the port.

remote-span

To configure a virtual local area network (VLAN) as a remote switched port analyzer (RSPAN) VLAN, use the **remote-span** command in config-VLAN mode. To remove the RSPAN designation, use the **no** form of this command.

remote-span

no remote-span

Syntax Description

This command has no arguments or keywords.

Command Default

This command has no default settings.

Command Modes

Config-VLAN mode

Command History

Release	Modification
12.2(14)SX	Support for this command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was extended to Release 12.2(17d)SXB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.

Usage Guidelines

This command is not supported in the VLAN database mode.

You can enter the **show vlan remote-span** command to display the RSPAN VLANs in the Cisco 7600 series router.

Examples

This example shows how to configure a VLAN as an RSPAN VLAN:

```
Router(config-vlan)# remote-span
Router(config-vlan)
```

This example shows how to remove the RSPAN designation:

```
Router(config-vlan)# no remote-span
Router(config-vlan)
```

Related Commands

Connect	Description
show vlan remote-span	Displays a list of RSPAN VLANs.