

bandwidth (interface)

To set the inherited and received bandwidth values for an interface, use the **bandwidth** command in interface configuration mode. To restore the default values, use the **no** form of this command.

bandwidth {*kbps* / **inherit** [*kbps*] | **receive**[*kbps*]}

no bandwidth {*kbps* / **inherit** [*kbps*] | **receive**[*kbps*]}

Syntax Description

<i>kbps</i>	Intended bandwidth, in kilobits per second. Valid values are 1 to 10000000. For a full bandwidth DS3 line, enter the value 44736.
inherit	(Optional) Inherited bandwidth. Specifies how a subinterface inherits the bandwidth of its main interface.
receive	(Optional) Receiver bandwidth. Entering this option enables asymmetric transmit/receive operations so that the transmitted (inherit [<i>kbps</i>]) and received bandwidth are different.

Command Default

Default bandwidth values are set during startup. The bandwidth values can be displayed using the **show interfaces** or **show ipv6 interface** command. If the receive keyword is not used, by default, the transmit and receive bandwidths are the same.

Command Modes

Interface configuration

Command History

Release	Modification
10.0	This command was introduced.
12.2T	The inherit keyword was added.
12.4(6)T	Support for IPv6 was added.
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.
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Usage Guidelines

Bandwidth Information

The **bandwidth** command sets an informational parameter to communicate only the current bandwidth to the higher-level protocols; you cannot adjust the actual bandwidth of an interface using this command.

Note This is a routing parameter only. It does not affect the physical interface.

Changing Bandwidth

For some media, such as Ethernet, the bandwidth is fixed; for other media, such as serial lines, you can change the actual bandwidth by adjusting hardware. For both classes of media, you can use the **bandwidth** command to communicate the current bandwidth to the higher-level protocols.

Bandwidth Inheritance

Before the introduction of the **bandwidth inherit** command option, when the bandwidth value was changed on the main interface, existing subinterfaces did not inherit the bandwidth value from the main interface. If the subinterface was created before the bandwidth was changed on the main interface, then the subinterface would receive the default bandwidth of the main interface, not the configured bandwidth. Additionally, if the router was subsequently reloaded, the bandwidth of the subinterface would then change to the bandwidth configured on the main interface.

The **bandwidth inherit** command controls how a subinterface inherits the bandwidth of its main interface. This functionality eliminates the inconsistencies related to whether the router has been reloaded and what the order was in entering the commands.

The **no bandwidth inherit** command enables all subinterfaces to inherit the default bandwidth of the main interface, regardless of the configured bandwidth. If a bandwidth is not configured on a subinterface, and you use the **bandwidth inherit** command, all subinterfaces will inherit the current bandwidth of the main interface. If you configure a new bandwidth on the main interface, all subinterfaces will use this new value.

If you do not configure a bandwidth on the subinterface and you configure the **bandwidth inherit** *kbps* command on the main interface, the subinterfaces will inherit the specified bandwidth.

In all cases, if an interface has an explicit bandwidth setting configured, then that interface will use that setting, regardless of whether the bandwidth inheritance setting is in effect.

Bandwidth Receipt

Some interfaces (such as ADSL, V.35, RS-449, and HSSI serial interfaces) can operate with different transmit and receive bandwidths. The **bandwidth receive** command permits this type of asymmetric operation. For example, for ADSL, the lower layer detects the two bandwidth values and configures the IDB accordingly. Other interface drivers, particularly serial interface cards on low- and midrange-platforms) can operate in this asymmetric bandwidth mode but cannot measure their clock rates. In these cases, administrative configuration is necessary for asymmetric operations.

Examples

The following example shows how to set the full bandwidth for DS3 transmissions:

```
Router(config)# interface serial 0  
Router(config-if)# bandwidth 44736
```

The following example shows how to set the receive bandwidth:

```
Router(config)# interface serial 0  
Router(config-if)# bandwidth receive 1000
```

Related Commands

Command	Description
show interfaces	Displays statistics for all interfaces configured on the router.
show ipv6 interface	Displays statistics for all interfaces configured on the IPv6 router.