



# Multichassis Multilink PPP Commands

---

This chapter describes the commands used to configure Multichassis Multilink PPP (MMP).

For information about configuring MMP, see the “Configuring Multichassis Multilink PPP” chapter in the *Dial Solutions Configuration Guide*.

## sgbp group

To define a named stack group and make this router a member of that stack group, use the **sgbp group** global configuration command.

**sgbp group** *name*

### Syntax Description

*name* Name of the stack group the system belongs to.

### Default

Disabled. No stack group name is provided.

### Command Mode

Global configuration

### Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

Define the same stack group name across all the stack members.

### Example

In the following example, this system is made a member of the stack group named *stackq*:

```
sgbp group stackq
```

### Related Commands

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

**sgbp member**

**sgbp seed-bid**

## sgbp member

To specify the host name and IP address of a router or access server that is a peer member of a stack group, use the **sgbp member** global configuration command.

```
sgbp member peer-name [peer-ip-address]
```

### Syntax Description

<i>peer-name</i>	Host name of the peer member.
<i>peer-ip-address</i>	(Optional) IP address of the peer member. If the domain name system (DNS) can perform a lookup on the <i>peer-name</i> value, the IP address is not required. Otherwise, it must be specified.

### Default

Disabled. When enabled, names and IP addresses of peer routers or access servers in the stack group are not provided.

### Command Mode

Global configuration

### Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

Use this command to specify the names of peer hosts (other hosts, not the one being configured) in the specified stack group after you have entered the **sgbp group** command.

### Example

The following example configures the current router to recognize the three routers (*yoda*, *han*, and *darth*) as peer members of the *starfleet* stack group:

```
sgbp group starfleet
sgbp member yoda 10.69.5.2
sgbp member han 172.16.6.3
sgbp member darth 192.165.15.4
```

### Related Commands

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

**sgbp group**  
**sgbp seed-bid**

## sgbp ppp-forward

To enable forwarding of PPP calls—in addition to Multilink PPP calls—to the winner of the SGBP bid, use the **sgbp ppp-forward** global configuration command.

**sgbp ppp-forward**

### Syntax Description

This command has no arguments and keywords.

### Default

This command is disabled by default.

### Command Mode

Global configuration

### Usage Guidelines

This command first appeared in Cisco IOS Release 11.3.

When this command is enabled, both PPP and PPP multilink calls are projected to the winner of the SGBP bid. By default, only Multilink PPP calls are forwarded.

### Example

The following partial example enables forwarding of PPP calls, as well as MLP calls, to the winner of the SGBP bidding:

```
sgbp ppp-forward
```

### Related Commands

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

**sgbp member**

**sgbp seed-bid**

## sgbp seed-bid

To set the bidding level that a stack group member can bid with for a bundle, use the **sgbp seed-bid** global configuration command.

```
sgbp seed-bid { default | offload | forward-only | bid }
```

### Syntax Description

<b>default</b>	If set across all members of a stack group, indicates that the member which receives the first call for a certain user always wins the bid and hosts the master bundle interface. All subsequent calls to the same user received by another stack group member will <i>project</i> to this stackgroup member. This is the default.
<b>offload</b>	Indicates that this router is a relatively higher powered stack group member, is to function as an offload server, and host the master bundle interface.
<b>forward-only</b>	Indicates that this router or access server is to forward calls to another system and never wins the bid to host a master interface. This router or access server should hang up—instead of answering a call—if all the offload servers are down.
<i>bid</i>	Bid level, an integer in the range 0 through 9999.

### Default

The **default** keyword; no bid-level integer value is set.

### Command Mode

Global configuration

### Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

In the case of equivalent stack group members stacked to receive calls in a rotary group across multiple PRIs, use **sgbp seed-bid default** *across all stack members*. The stack member that receives the first call for a certain user always wins the bid and hosts the master bundle interface. All subsequent calls to the same user received by another stack member will project to this stack member. If the multiple calls come in concurrently over multiple stack members, the SGBP tie-breaking mechanism will break the tie.

To leverage the relative higher power of one stack member over another, you can set the designated stack member (of higher CPU power) as offload server with **sgbp seed-bid offload**. The bid that is sent is the precalibrated per-platform bid approximating the CPU power, minus the *bundle load*. In this case, the offload server hosts the master bundle. All calls from other stack members get projected to this stack member. One or more offload servers can be defined—if the bids are equal, the SGBP tie-breaking mechanism will break the tie.

The interfaces that received the calls are projected to the master bundle interface and are considered children of the master bundle interface for the call. See the output of the **show ppp multilink** for an example of master bundle interface (shown as “Master link”) and the children of it.

You can also manually designate bid values with the **sgbp seed-bid** command. This value overrides the **default** or **offload** setting. The bid sent out is the user-configured value minus the *bundle load*. The *bundle load* is defined as the number of active bundles on the stack member. In effect, the more current active bundles on a router, the lower its bid for an additional bundle.

If you have assorted or exactly the same platforms and for some reason want to designate one or more as offload servers, you can *manually* set the bid value to be significantly higher than the rest. For example, you might use **sgbp seed-bid 9999**. To determine the initial bid value associated with your particular platform, use **show sgbp** command. This method allows you to manually designate the bid values when you have assorted platforms and want to designate one or more platforms as offload servers; for example, one Cisco 4700 (given the highest seed-bid), two Cisco 4000s and one Cisco 7000.

To check the bid value currently assigned on the system, use the **show sgbp queries** command.

### Related Commands

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

**sgbp group**  
**sgbp member**  
**show sgbp queries**

## show sgbp

To display the status of the stack group members, use the **show sgbp** EXEC command.

```
show sgbp
```

### Syntax Description

This command has no keywords or arguments.

### Command Mode

EXEC

### Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

### Sample Display

The following is sample output from the **show sgbp** command:

```
systema# show sgbp

Group Name: stack State: 0 Ref: 0xC07B060
Member Name: systemb State: ACTIVE Id: 1
Ref: 0xC14256F
Address: 1.1.1.1 Tcb: 0x60B34538

Member Name: systemc State: ACTIVE Id: 2
Ref: 0xA24256D
Address: 1.1.1.2 Tcb: 0x60B34439

Member Name: systemd State: IDLE Id: 3
Ref: 0x0
Address: 1.1.1.3 Tcb: 0x0
```

Table 119 describes the fields in the **show sgbp** command output display.

**Table 119 Show SGBP Command Output Field Description**

Field	Description
Group Name	Name of the stack group.
State	Status of the group or its member. The values are 0 for the stack group itself, and either ACTIVE or IDLE for each of the members of the group.
Member Name	Name of a specific host defined as a member of this stack group.
Id	Identifier used for each member of the group; typically the final digit of the host's IP address on the network they share.
Address	IP address of the stack group member.

## show sgbp queries

To display the current seed bid value, use the **show sgbp queries** EXEC command.

```
show sgbp queries
```

### Syntax Description

This command has no arguments or keywords.

### Command Mode

EXEC

### Usage Guidelines

This command first appeared in Cisco IOS Release 11.2.

### Sample Display

The following example shows a bid of 50 from this system. Peers queried the system for the bid, the bid was accepted, and a connection was opened from a peer in the stack group:

```
systema# show sgbp queries

Seed bid: default, 50

Bundle: book State: Query_from_peers OurBid: 50
1.1.1.2      State: Open_from_peer  Bid: 050 Retry: 0
```

Table 120 describes the fields in the **show sgbp queries** command sample display output.

**Table 120 Show SGBP Queries Command Output Field Descriptions**

Field	Description
Seed bid	The initial bid; in this case, the default 50.
Bundle	Name of the MMP bundle.
State	Activity that occurred. In this case, a peer queried this system for its bid for the specified bundle.
OurBid	What this system bid for the bundle. It bid 50.
1.1.1.2	The peer's IP address.
State Bid Retry	Activity that occurred on the bid. In this case, the stack-group peer 1.1.1.2 accepted this system's bid of 50 for the bundle and opened a connection with this system. Since the peer opened a connection, no retry was needed.