Stack Manager Commands

debug platform remote-commands

To enable debugging of remote commands, use the **debug platform remote-commands** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug platform remote-commands
no debug platform remote-commands

Syntax Description   This command has no arguments or keywords.

Command Default   Debugging is disabled.

Command Modes   Privileged EXEC

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines   The **undebug platform remote-commands** command is the same as the **no debug platform remote-commands** command.

When you enable debugging on a switch stack, it is enabled only on the stack master. To enable debugging on a stack member, you can start a session from the stack master by using the **session** *switch-number* privileged EXEC command. Enter the **debug** command at the command-line prompt of the stack member. You also can use the **remote command** *stack-member-number LINE* privileged EXEC command on the stack master switch to enable debugging on a member switch without first starting a session.

Related Topics

debug platform stack-manager

To enable debugging of the stack manager software, use the **debug platform stack-manager** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug platform stack-manager {all|rpc|sdp|sim|ssm|trace}
no debug platform stack-manager {all|rpc|sdp|sim|ssm|trace}

Syntax Description	**all**	Displays all stack manager debug messages.
	rpc	Displays stack manager remote procedure call (RPC) usage debug messages.
	sdp	Displays the Stack Discovery Protocol (SDP) debug messages.
	sim	Displays the stack information module debug messages.
	ssm	Displays the stack state-machine debug messages.
	trace	Traces the stack manager entry and exit debug messages.

Command Default Debugging is disabled.

Command Modes Privileged EXEC

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines This command is supported only on stacking-capable switches.

The **undebug platform stack-manager** command is the same as the **no debug platform stack-manager** command.

When you enable debugging on a switch stack, it is enabled only on the stack master. To enable debugging on a stack member, you can start a session from the stack master by using the **session** *switch-number* EXEC command. Enter the **debug** command at the command-line prompt of the stack member. You also can use the **remote command** *stack-member-number LINE* EXEC command on the stack master switch to enable debugging on a member switch without first starting a session.

Related Topics

reload

To reload the stack member and to apply a configuration change, use the **reload** command in privileged EXEC mode.

reload [{**/noverify**|**/verify**}] [{*LINE*|**at**|**cancel**|**in**|**slot** *stack-member-number*|**standby-cpu**}]

Syntax Description		
	/noverify	(Optional) Specifies to not verify the file signature before the reload.
	/verify	(Optional) Verifies the file signature before the reload.
	LINE	(Optional) Reason for the reload.
	at	(Optional) Specifies the time in hh:mm for the reload to occur.
	cancel	(Optional) Cancels the pending reload.
	in	(Optional) Specifies a time interval for reloads to occur.
	slot	(Optional) Saves the changes on the specified stack member and then restarts it.
	stack-member-number	
	standby-cpu	(Optional) Reloads the standby route processor (RP).

Command Default Immediately reloads the stack member and puts a configuration change into effect.

Command Modes Privileged EXEC

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines If there is more than one switch in the switch stack, and you enter the **reload slot** *stack-member-number* command, you are not prompted to save the configuration.

Examples This example shows how to reload the switch stack:

```
Device# reload
System configuration has been modified. Save? [yes/no]: y
Proceed to reload the whole Stack? [confirm] y
```

This example shows how to reload a specific stack member:

```
Device# reload slot 6
Proceed with reload? [confirm] y
```

This example shows how to reload a single-switch switch stack (there is only one member switch):

```
Device# reload slot 3
System configuration has been modified. Save? [yes/no]: y
Proceed to reload the whole Stack? [confirm] y
```

Related Topics

remote command

To monitor all or specified stack members, use the **remote command** privileged EXEC command.

remote **command** {**all***stack-member-number*} *LINE*

Syntax Description

all	Applies to all stack members.
stack-member-number	
LINE	The command to execute.

Command Modes

Privileged EXEC

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines

The commands that you use in the LINE command-to-execute string (such as **debug**, **show**, or **clear**) apply to a specific stack member or to the switch stack.

Examples

This example shows how to execute the **undebug** command on the switch stack:

```
Switch(config)# remote command all undebug all
Switch :1 :
------------
All possible debugging has been turned off
Switch :5 :
------------
All possible debugging has been turned off
Switch :7 :
------------
All possible debugging has been turned off
```

This example shows how to execute the **debug udld event** command on stack member 5:

```
Switch(config)# remote command 5 undebug all
Switch :5 :
------------
UDLD events debugging is on
```

Related Topics

session

To access a specific stack member use the **session** command in privileged EXEC mode on the stack master.

session *stack-member-number*

Syntax Description	*stack-member-number*	Stack member number to access from the stack master.

Command Default None

Command Modes Privileged EXEC

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines When you access the member, its member number is appended to the system prompt.

Use the **session** command from the master to access a member Device

Use the **session** command with **processor 1** from the master or a standalone switch to access the internal controller. A standalone Device is always member 1.

Examples This example shows how to access stack member 3:

```
Device# session 3
Device-3#
```

Related Topics

show platform stack compatibility configuration

To display switch stack compatibility information, use the **show platform stack compatibility configuration** command in privileged EXEC mode.

show platform stack compatibility configuration{**current**|**failure-log**|**mismatch** [**switch** *switch-number*]}

Syntax Description		
current	Displays currently configured system level features.	
failure-log	Displays non-baseline feature configuration failure log.	
mismatch	Displays configured non-baseline features that are causing a mismatch.	
switch *switch-number*	(Optional) Displays configured non-baseline features that are causing a mismatch for the specified switch. The range is 1 to 8.	

Command Default None

Command Modes Privileged EXEC

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines Use this command only when you are working directly with your technical support representative while troubleshooting a problem. Do not use this command unless your technical support representative asks you to do so.

This example shows how to display switch stack compatibility information:

```
Device# show platform stack compatibility configuration current
```

show platform stack compatibility feature

To display switch stack state machine and message trace feature compatibility information, use the **show platform stack compatibility feature** command in privileged EXEC mode.

show platform stack compatibility feature {**all**|**independent** [**feature-id** *feature-id*]|**interdependent** [**feature-id** *feature-id*]|**port** [**feature-id** *feature-id*]}

Syntax Description		
all	Displays all non-baseline features.	
independent	Displays switch-level independent features.	
feature-id *feature-id*	(Optional) Displays switch-level independent, system-level interdependent or port-level independent features with the specified feature ID.	
interdependent	Displays system-level interdependent features.	
port	Displays port-level independent features.	

Command Default None

Command Modes Privileged EXEC

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines The **show platform stack compatibility** commands display feature incompatibility information between stack members in a mixed stack. Compatibility checks ensure that features that are supported across members of a stack using a forwarding ASIC with different capabilities will function effortlessly and error free.

Use this command only when you are working directly with your technical support representative while troubleshooting a problem. Do not use this command unless your technical support representative asks you to do so.

This example shows how to display all non-baseline features:

```
Device# show platform stack compatibility feature all
            System Level Interdependent Features
=================================================================
1: FHRR hardware vlan entry sharing feature
2: Jumbo MTU Routing Support
3: VRF on PVLAN interface
4: Global VRF config with greater than MAX policies
5: Routing keyword in IPv6 ACL
6: Ahp keyword in IPv6 ACL
7: Unsupported prefixes in IPv6 ACL
8: Unicast Reverse Path Forwarding
9: Multiple FHRP support
10: Gateway Load Balancing ProtocolVLAN-based FSPAN
11: CTS tagging and role-based enforcement
12: SPAN support 4 source session
```

```
13: Unknown

               Switch Level Independent Features
==================================================================

               Port Level Independent Features
==================================================================
1: Routing keyword in IPv6 ACL
2: Ahp keyword in IPv6 ACL
3: Unsupported prefixes in IPv6 ACL
4: Port-based FSPAN
5: IPv6 QoS match protocol support
6: IPv6 QoS ipv6 named ACL support
```

show platform stack compatibility table

To display feature compatibility tables for the switch stack, use the **show platform stack compatibility table** command in privileged EXEC mode.

show platform stack compatibility table {all|independent|interdependent|port}

Syntax Description

all	Displays all feature compatibility tables.
independent	Displays a switch-level independent feature compatibility table.
interdependent	Displays a system-level interdependent feature compatibility table.
port	Displays a port-level independent feature compatibility table.

Command Default

None

Command Modes

Privileged EXEC

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines

The **show platform stack compatibility** commands display feature incompatibility information between stack members in a mixed stack. Compatibility checks ensure that features that are supported across members of a stack using a forwarding ASIC with different capabilities will function effortlessly and error free.

Use this command only when you are working directly with your technical support representative while troubleshooting a problem. Do not use this command unless your technical support representative asks you to do so.

This example shows how to display all feature compatibility tables:

```
Device# show platform stack compatibility feature all
      System Level Interdependent Feature Matrix
================================================================
1: FHRR hardware vlan entry sharing feature
   Supported by switch versions: 1 3 4
2: Jumbo MTU Routing Support
   Supported by switch versions: 1 3 4
3: VRF on PVLAN interface
   Supported by switch versions: 1 3 4
4: Global VRF config with greater than MAX policies
   Supported by switch versions: 1 3 4
5: Routing keyword in IPv6 ACL
   Supported by switch versions: 1 3 4
6: Ahp keyword in IPv6 ACL
   Supported by switch versions: 1 3 4
7: Unsupported prefixes in IPv6 ACL
   Supported by switch versions: 1 3 4
8: Unicast Reverse Path Forwarding
   Supported by switch versions: 1 3 4
9: Multiple FHRP support
```

```
        Supported by switch versions: 1 3 4
10: Gateway Load Balancing ProtocolVLAN-based FSPAN
        Supported by switch versions: 1 2 3 4
11: CTS tagging and role-based enforcement
        Supported by switch versions: 1 3 4
12: SPAN support 4 source session
        Supported by switch versions: 3
13: Unknown
        Supported by switch versions: 4


            Switch Level Independent Feature Matrix
================================================================


            Port Level Independent Feature Matrix
================================================================
1: Routing keyword in IPv6 ACL
        Supported by ASIC versions: 1 2 3
2: Ahp keyword in IPv6 ACL
        Supported by ASIC versions: 1 2 3
3: Unsupported prefixes in IPv6 ACL
        Supported by ASIC versions: 1 2 3
4: Port-based FSPAN
        Supported by ASIC versions: 1 2 3
5: IPv6 QoS match protocol support
        Supported by ASIC versions: 1 2 3
6: IPv6 QoS ipv6 named ACL support
        Supported by ASIC versions: 1 2 3
```

show platform stack manager

To display platform-dependent switch-stack information, use the **show platform stack manager** command in privileged EXEC mode.

show platform stack manager {**all**|**counters**|**trace** [{**cs** [**cs**]|**sdp** [**reverse**]|**state** [**reverse**]|**tdm**}]}

Syntax Description	

all	Displays all information for the entire switch stack.
counters	Displays the stack manager counters.
trace	Displays trace information.
cs	(Optional) Displays information about changes in stack-related trace messages.
sdp	(Optional) Displays Stack Discovery Protocol (SDP) information.
reverse	(Optional) Displays trace information in reverse chronological order (from recent to older chronological sequence).
state	(Optional) Displays stack state machine information.
tdm	(Optional) Displays information about topology discovery including a summary of the stacking over Ethernet state machine events and messages.

Command Default   None

Command Modes   Privileged EXEC

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines   Use this command only when you are working directly with your technical support representative while troubleshooting a problem. Do not use this command unless your technical support representative asks you to do so.

Note   This command is supported only on stacking-capable switches.

The summary information about the switch stack shows these states:

- Waiting—A switch is booting up and waiting for communication from other switches in the stack. The switch has not determined whether or not it is stack master.

  Stack members not participating in election remain in the waiting state until the stack master is elected and ready.

- Initializing—A switch has determined whether it is stack master. If not, the switch receives its system- and interface-level configuration from the stack master and loads it.
- Ready—The member has completed loading the system- and interface-level configurations and can forward traffic.
- Master Re-Init—The state immediately after a reelection and a different member is elected the stack master. The new stack master is reinitializing its configuration. This state applies only to the new stack master.
- Ver Mismatch—A switch in version mismatch mode. Version-mismatch mode is when a switch that joins the stack has a different stack protocol minor version number than the stack master.

A typical state transition for a stack member (including stack master) booting up is Waiting > Initializing > Ready.

A typical state transition for a stack member to stack master after an election is Ready > Master Re-Init > Ready.

A typical state transition for a stack member in version mismatch (VM) mode is Waiting > Ver Mismatch.

show switch

To display information that is related to the stack member or the switch stack, use the **show switch** command in EXEC mode.

Command Default

None

Command Modes

User EXEC

Privileged EXEC

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Examples

This example shows how to display summary stack information:

This example shows how to display detailed stack information:

This example shows how to display the member 6 summary information:

```
Device# show switch 6
Switch#  Role      Mac Address      Priority    State
-------------------------------------------------------
 6       Member    0003.e31a.1e00     1         Ready
```

This example shows how to display the neighbor information for a stack:

```
Device# show switch neighbors
 Switch #     Port A        Port B
 --------     ------        ------
     6         None           8
     8          6            None
```

This example shows how to display stack-port information:

```
Device# show switch stack-ports
 Switch #     Port A        Port B
 --------     ------        ------
    6          Down          Ok
    8           Ok          Down
```

Related Topics

reload, on page 4

remote command, on page 6

session, on page 7

switch stack port, on page 18

switch provision, on page 21

switch renumber, on page 23

stack-mac persistent timer

To enable the persistent MAC address feature, use the **stack-mac persistent timer** command in global configuration mode on the switch stack or on a standalone switch. To disable the persistent MAC address feature, use the **no** form of this command.

stack-mac persistent timer [{**0**_time-value_}]
no stack-mac persistent timer

Syntax Description	**0**	
	time-value	(Optional) Time period in minutes before the stack MAC address changes to that of the new stack master. The range is 1 to 60 minutes.

Command Default   Persistent MAC address is disabled. The MAC address of the stack is always that of the first stack master.

Command Modes   Global configuration

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines   The MAC address of the switch stack is determined by the MAC address of the stack master. In the default state (persistent MAC address disabled), if a new switch becomes stack master, the stack MAC address changes to the MAC address of the new stack master.

When persistent MAC address is enabled, the stack MAC address does not change for a time period. During that time, if the previous stack master rejoins the stack as a stack member, the stack retains its MAC address for as long as that switch is in the stack. If the previous stack master does not rejoin the stack during the specified time period, the switch stack takes the MAC address of the new stack master as the stack MAC address.

You can set the time period to be from 0 to 60 minutes.

- If you enter the command with no value, the default delay is 4 minutes.

- If you enter **0**, the stack continues to use the current stack MAC address until you enter the **no stack-mac persistent timer** command.

- If you enter a time delay of 1 to 60 minutes, the stack MAC address of the previous stack master is used until the configured time period expires or until you enter the **no stack-mac persistent timer** command.

Note   When you enter the **stack-mac persistent timer** command with or without keywords, a message appears warning that traffic might be lost if the old master MAC address appears elsewhere in the network domain. You should use this feature cautiously.

If you enter the **no stack-mac persistent timer** command after a switchover, before the time expires, the switch stack moves to the current stack master MAC address.

If the whole stack reloads, when it comes back up, the MAC address of the stack master is the stack MAC address.

Examples

This example shows how to configure the persistent MAC address feature, with the warning messages for each configuration. It also shows how to verify the configuration:

```
Device(config)# stack-mac persistent timer
WARNING: Use of an explicit timer value with the command is recommended.
WARNING: Default value of 4 minutes is being used.
WARNING: The stack continues to use the base MAC of the old Master
WARNING: as the stack-mac after a master switchover until the MAC
WARNING: persistency timer expires. During this time the Network
WARNING: Administrators must make sure that the old stack-mac does
WARNING: not appear elsewhere in this network domain. If it does,
WARNING: user traffic may be blackholed.

Device(config)# stack-mac persistent timer 0
WARNING: Stack MAC persistency timer value of 0 means that, after a
WARNING: master switchover, the  current  stack-mac  will  continue
WARNING: to be used indefinitely.
WARNING: The  Network  Administrators must  make  sure that the old
WARNING: stack-mac  does  not  appear  elsewhere in this network
WARNING: domain. If it does, user traffic may be blackholed.

Device(config)# stack-mac persistent timer 7
WARNING: The stack continues to use the base MAC of the old Master
WARNING: as the stack-mac after a master switchover until the MAC
WARNING: persistency timer expires. During this time the Network
WARNING: Administrators must make sure that the old stack-mac does
WARNING: not appear elsewhere in this network domain. If it does,
WARNING: user traffic may be blackholed.

Device(config)# end
Device(config)# show switch
Switch/Stack Mac Address : 0cd9.9624.dd80
Mac persistency wait time: 7 mins
                                      H/W   Current
Switch#  Role   Mac Address    Priority Version  State
----------------------------------------------------------
*1       Master 0cd9.9624.dd80    1      4       Ready
```

You can verify your settings by entering either of two privileged EXEC commands:

- **show running-config**—If enabled, `stack-mac persistent timer` and the time in minutes appears in the output.

- **show switch**—If enabled, `Mac persistency wait time` and the number of minutes appears in the output.

Related Topics

switch stack port

To disable or enable the specified stack port on the member, use the **switch** command in privileged EXEC mode on a stack member.

switch *stack-member-number* **stack port** *port-number* {**disable|enable**}

Syntax Description	*stack-member-number*	
	stack port *port-number*	Specifies the stack port on the member. The range is 1 to 2.
	disable	Disables the specified port.
	enable	Enables the specified port.

Command Default   The stack port is enabled.

Command Modes   Privileged EXEC

Command History	Release	Modification
	Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines   A stack is in the full-ring state when all members are connected through the stack ports and are in the ready state.

The stack is in the partial-ring state when the following occurs:

  • All members are connected through their stack ports but some are not in the ready state.
  • Some members are not connected through the stack ports.

Note   Be careful when using the **switch** *stack-member-number* **stack port** *port-number* **disable** command. When you disable the stack port, the stack operates at half bandwidth.

If you enter the **switch** *stack-member-number* **stack port** *port-number* **disable** privileged EXEC command and the stack is in the full-ring state, you can disable only one stack port. This message appears:

```
Enabling/disabling a stack port may cause undesired stack changes. Continue?[confirm]
```

If you enter the **switch** *stack-member-number* **stack port** *port-number* **disable** privileged EXEC command and the stack is in the partial-ring state, you cannot disable the port. This message appears:

```
Disabling stack port not allowed with current stack configuration.
```

Examples   This example shows how to disable stack port 2 on member 4:

```
Device# switch 4 stack port 2 disable
```

Related Topics

switch priority

To change the stack member priority value, use the **switch priority** command in mode on the stack master.

switch *stack-member-number* **priority** *new-priority-value*

Syntax Description	*stack-member-number*	
	new-priority-value	New stack member priority value. The range is 1 to 15.

Command Default
The default priority value is 1.

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines
The new priority value is a factor when a new stack master is elected. When you change the priority value the stack master is not changed immediately.

Examples
This example shows how to change the priority value of stack member 6 to 8:

```
Device switch 6 priority 8
Changing the Switch Priority of Switch Number 6 to 8
Do you want to continue?[confirm]
```

Related Topics

reload, on page 4
session, on page 7
show switch, on page 15
switch renumber, on page 23

switch provision

To supply a configuration to a new switch before it joins the switch stack, use the **switch provision** command in global configuration mode on the stack master. To delete all configuration information that is associated with the removed switch (a stack member that has left the stack), use the **no** form of this command.

switch *stack-member-number* **provision** *type*
no **switch** *stack-member-number* **provision**

Syntax Description		
	stack-member-number	
	type	Switch type of the new switch before it joins the stack.

Command Default The switch is not provisioned.

Command Modes Global configuration

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines For *type*, enter the model number of a supported switch that is listed in the command-line help strings.

To avoid receiving an error message, you must remove the specified switch from the switch stack before using the **no** form of this command to delete a provisioned configuration.

To change the switch type, you must also remove the specified switch from the switch stack. You can change the stack member number of a provisioned switch that is physically present in the switch stack if you do not also change the switch type.

If the switch type of the provisioned switch does not match the switch type in the provisioned configuration on the stack, the switch stack applies the default configuration to the provisioned switch and adds it to the stack. The switch stack displays a message when it applies the default configuration.

Provisioned information appears in the running configuration of the switch stack. When you enter the **copy running-config startup-config** privileged EXEC command, the provisioned configuration is saved in the startup configuration file of the switch stack.

⚠ **Caution** When you use the **switch provision** command, memory is allocated for the provisioned configuration. When a new switch type is configured, the previously allocated memory is not fully released. Therefore, do not use this command more than approximately 200 times, or the switch will run out of memory and unexpected behavior will result.

Examples This example shows how to provision a switch with a stack member number of 2 for the switch stack. The **show running-config** command output shows the interfaces associated with the provisioned switch.

```
Device(config)# switch 2 provision WS-xxxx
Device(config)# end
```

```
Device# show running-config | include switch 2
!
interface GigabitEthernet2/0/1
!
interface GigabitEthernet2/0/2
!
interface GigabitEthernet2/0/3
<output truncated>
```

You also can enter the **show switch** user EXEC command to display the provisioning status of the switch stack.

This example shows how to delete all configuration information about stack member 5 when the switch is removed from the stack:

```
Device(config)# no switch 5 provision
```

You can verify that the provisioned switch is added to or removed from the running configuration by entering the **show running-config** privileged EXEC command.

Related Topics

switch renumber

To change the stack member number, use the **switch renumber** command in mode on the stack master.

switch *current-stack-member-number* **renumber** *new-stack-member-number*

Syntax Description

current-stack-member-number
new-stack-member-number

Command Default   The default stack member number is 1.

Command History

Release	Modification
Cisco IOS Release 15.0(2)EX1	This command was introduced.

Usage Guidelines   If another stack member is already using the member number that you just specified, the stack master assigns the lowest available number when you reload the stack member.

Note   If you change the number of a stack member, and no configuration is associated with the new stack member number, that stack member loses its current configuration and resets to its default configuration.

Do not use the **switch** *current-stack-member-number* **renumber** *new-stack-member-number* command on a provisioned switch. If you do, the command is rejected.

Use the **reload slot** *current stack member number* privileged EXEC command to reload the stack member and to apply this configuration change.

Examples   This example shows how to change the member number of stack member 6 to 7:

Related Topics

switch renumber