



# Inter-rack Switch Control Network Commands on the Cisco IOS XR Software

---

This module provides command line interface (CLI) commands for configuring inter-rack switch control on the Cisco CRS Router.

- [clear controller switch , on page 2](#)
- [clear controller switch errdisable, on page 3](#)
- [clear controller switch inter-rack, on page 4](#)
- [show controllers switch, on page 5](#)
- [show controllers switch inter-rack ports, on page 7](#)
- [show controllers switch inter-rack statistics, on page 9](#)
- [show controllers switch inter-rack stp, on page 12](#)
- [show controllers switch inter-rack udld, on page 14](#)
- [show controllers switch stp location, on page 16](#)
- [show controllers switch stp ports, on page 19](#)
- [show controllers switch stp region, on page 21](#)
- [show controllers switch udld location, on page 22](#)
- [show controllers switch udld ports, on page 24](#)

# clear controller switch

To clear the statistics for the Broadcom switches for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card, use the **clear controller switch** command in administration EXEC mode.

**clear controller switch** *instance* **statistics all** **location** *node-id* | **location** *node-id* | **ports** *number*  
**location** *node-id*

Syntax Description	
<b>instance</b>	Switch instance identifier. The switch number is either 0 or 1.
<b>statistics</b>	Clears statistics for packets transmitted/received on switch ports.
<b>all</b>	Clears statistics for all ports.
<b>location</b> <i>node-id</i>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.
<b>ports</b> <i>number</i>	Clears statistics for a specific switch port.

**Command Default** No default behavior or values

**Command Modes** Administration EXEC

Command History	Release	Modification
	Release 3.4.1	This command was updated to include inter-rack switches.

**Usage Guidelines** The **clear controller switch** command is used to specify intra-rack switches.

Task ID	Task ID	Operations
	root-system	execute

## Examples

The following example shows how to clear the statistics for the Broadcom switches:

```
RP/0/0/CPU0:router(admin)# clear controller switch 1 statistics all location
f0/sc0/cpu0
```

# clear controller switch errdisable

To clear the err-disable state of the switch port for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card, use the **clear controller switch errdisable** command in administration EXEC mode.

**clear controller switch errdisable port FE | GE 0 | 1 location *node-id***

Syntax Description	port	Specifies the port.
	<b>FE</b>	Specifies the ports for the Fast Ethernet (FE).
	<b>GE</b>	Specifies the ports for the Gigabit Ethernet (GE).
	<b>0</b>	Specifies port number 0 for the backplane FE.
	<b>1</b>	Specifies port number 1 for the backplane FE.
	<b>location <i>node-id</i></b>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.

**Command Default** No default behavior or values

**Command Modes** Administration EXEC

Command History	Release	Modification
	Release 3.4.1	This command was updated to include inter-rack switches.

**Usage Guidelines** No specific guidelines impact the use of this command.

Task ID	Task ID	Operations
	root-system	execute

**Examples** The following example shows how to clear the error disable state for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card:

```
RP/0/RP0/CPU0:router(admin)## clear controller switch errdisable port GE 1
location f0/sc0/cpu0
```

## clear controller switch inter-rack

To clear the ISC switch counters, use the **clear controller switch inter-rack** command in administration EXEC mode.

**clear controller switch inter-rack errdisable ports allnumber | statistics all | portsnumber location node-id**

Syntax	Description
<b>errdisable</b>	Clears the err-disabled state of the port if the port was brought down by Unidirectional Link Detection (UDLD).
<b>ports</b>	Specifies the port.
<b>number</b>	Number for the port. The range is from 0 to 21.
<b>all</b>	Specifies all ports for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card.
<b>statistics</b>	Clears the statistics for the switch.
<b>all</b>	Specifies all of the ports.
<b>location node-id</b>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.

**Command Default** No default behavior or values

**Command Modes** Administration EXEC

Command History	Release	Modification
	Release 3.4.1	This command was introduced.

**Usage Guidelines** The **clear controller switch inter-rack** command is used to specify inter-rack switches.

Task ID	Task ID	Operations
	root-system	execute

**Examples** The following example shows how to clear statistics for all the ports for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card:

```
RP/0/RP0/CPU0:router(admin)# clear controller switch inter-rack statistics all
location f0/sc0/cpu0
```

# show controllers switch

To display the control Ethernet connection in the route processor (RP), use the **show controllers switch** command in administration EXEC mode.

**show controllers switch** *instance* **ports** | **statistics** **location** *node-id*

Syntax Description	Parameter	Description
	<i>instance</i>	Two intra-rack switches are present on the RP/SC. The instance is from 0 to 1 that identifies the specific switch.
	<b>ports</b>	Displays the port states as up, down, or err-disabled. The <b>ports</b> keyword displays control Ethernet switches, port states, statistics, and Spanning Tree Protocol (STP) information.
	<b>statistics</b>	Displays switch port statistics.
	<b>location</b> <i>node-id</i>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.

**Command Default** No default behavior or values

**Command Modes** Administration EXEC

Command History	Release	Modification
	Release 3.4.1	This command was introduced.

**Usage Guidelines** The **show controllers switch** command is used to specify intra-rack switches.

Task ID	Task ID	Operations
	fabric	read
	root-system	read

## Examples

The following sample output shows how to verify the control Ethernet connection on the RP:

```
RP/0/RP0/CPU0:router(admin)# show controllers switch 0 ports location 0/rp0/Cpu0

FE Port 0 : Up, STP State : FORWARDING (Connects to - 0/RP0)
FE Port 1 : Up, STP State : FORWARDING (Connects to - 0/RP1)
FE Port 2 : Down (Connects to - 0/FC0)
FE Port 3 : Down (Connects to - 0/FC1)
FE Port 4 : Down (Connects to - 0/AM0)
FE Port 5 : Down (Connects to - 0/AM1)
FE Port 6 : Down (Connects to - )
FE Port 7 : Down (Connects to - )
FE Port 8 : Down (Connects to - 0/SM0)
FE Port 9 : Up, STP State : FORWARDING (Connects to - 0/SM1)
FE Port 10 : Down (Connects to - 0/SM2)
```

**show controllers switch**

```

FE Port 11 : Down                (Connects to - 0/SM3)
FE Port 12 : Down                (Connects to - 0/SM4)
FE Port 13 : Down                (Connects to - 0/SM5)
FE Port 14 : Down                (Connects to - 0/SM6)
FE Port 15 : Down                (Connects to - 0/SM7)
GE Port 0 : Up, STP State : FORWARDING (Connects to - GE_0)
GE Port 1 : Up, STP State : FORWARDING (Connects to - Switch 1)

```

The following sample output shows how to verify the control Ethernet connection on intra-rack switches for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card:

```

RP/0/RP0/CPU0:router(admin)# show controllers switch 0 ports location f0/sc0/Cpu0

FE Port 0 : Up, STP State : FORWARDING (Connects to - F0/SC0)
FE Port 1 : Up, STP State : FORWARDING (Connects to - F0/SC1)
FE Port 2 : Down                    (Connects to - F0/FC0)
FE Port 3 : Down                    (Connects to - F0/FC1)
FE Port 4 : Down                    (Connects to - F0/AM0)
FE Port 5 : Down                    (Connects to - F0/AM1)
FE Port 6 : Down                    (Connects to - F0/LM0)
FE Port 7 : Down                    (Connects to - F0/LM1)
FE Port 8 : Down                    (Connects to - F0/SM0)
FE Port 9 : Down                    (Connects to - F0/SM1)
FE Port 10 : Down                   (Connects to - F0/SM2)
FE Port 11 : Down                   (Connects to - F0/SM3)
FE Port 12 : Down                   (Connects to - F0/SM4)
FE Port 13 : Down                   (Connects to - F0/SM5)
FE Port 14 : Down                   (Connects to - F0/SM6)
FE Port 15 : Down                   (Connects to - F0/SM7)
GE Port 0 : Up, STP State : FORWARDING (Connects to - GE_0)
GE Port 1 : Up, STP State : FORWARDING (Connects to - Switch 1)

```

**Table 1: show controllers switch Field Descriptions**

Field	Description
FE Port	Fast Ethernet (FE) port.
STP State	Spanning Tree Protocol (STP) state of the port.
GE Port	Gigabit Ethernet (GE) port.

# show controllers switch inter-rack ports

To display the inter-rack switch port states for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card, use the **show controllers switch inter-rack ports** command in administration EXEC mode.

**show controllers switch inter-rack ports all location *node-id***

Syntax Description	all	Displays all the ports for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card.
	location <i>node-id</i>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.

**Command Default** No default behavior or values

**Command Modes** Administration EXEC

Command History	Release	Modification
	Release 3.4.1	This command was introduced.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

The port numbers, which range from 0 to 21, correspond to those on the front panel.



**Note** The **show controllers switch inter-rack ports** command is applied only to the 22-port SCGE. When you use the **all** and **location** keywords, all other supported cards are displayed including the route processor (RP).

Task ID	Task ID	Operations
	fabric	read
	root-system	read
	admin	read

## Examples

The following example shows sample output of the control Ethernet connection for inter-rack switches on the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card:

```
RP/0/RP0/CPU0:router (admin) # show controllers switch inter-rack ports all location f0/sc0/CPU0

GE_Port_0 : Down
```

**show controllers switch inter-rack ports**

```
GE_Port_1 : Down
...
...
GE_Port_13 : Up
GE_Port_14 : Up
...
...
GE_Port_20 : Down
GE_Port_21 : Down
To_5618 : Up
Stacking : Up
```



## show controllers switch inter-rack statistics

To display the statistics on the ports of the inter-rack switches for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card, use the **show controllers switch inter-rack statistics** command in administration EXEC mode.

**show controllers switch inter-rack statistics** *interface number* | **all** **brief** | **detail** **location** *node-id*

Syntax Description		
<i>interface number</i>	Number for the Gigabit Ethernet interface. The range is from 0 to 21. The interface number identifies the specific front panel GE port on the 22-port SCGE.	
<b>all</b>	Displays statistics of all ports for inter-rack switches.	
<b>brief</b>	Displays transmit and receive statistics on the GE ports.	
<b>detail</b>	Displays MIB like detailed switch port statistics that include transmit, receive, and error packet counts.	
<b>location</b> <i>node-id</i>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.	

**Command Default** No default behavior or values

**Command Modes** Administration EXEC

Command History	Release	Modification
	Release 3.4.1	This command was introduced.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

Task ID	Task ID	Operations
	fabric	read
	root-system	read
	admin	read

### Examples

The following example shows sample output on the port statistics counters for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card:

```
RP/0/RP0/CPU0:router(admin)# show controllers switch inter-rack statistics all brief location
f0/sc0/cpu0
```

```
Port          Tx Frames    Tx Errors    Rx Frames    Rx Errors
```

## show controllers switch inter-rack statistics

```

-----
GE_Port_0 :      374423          0      1776848          0
GE_Port_1 :      251232          0      170742           0
GE_Port_2 :      857923          0      414409           0
GE_Port_3 :      239437          0      152772           0
GE_Port_4 :      166166          0       82031            0
GE_Port_5 :           0          0           0             0
GE_Port_6 :           0          0           0             0
...
...
GE_Port_16 :         0          0           0             0
GE_Port_17 :         0          0           0             0
GE_Port_18 :         0          0           0             0
GE_Port_19 :         0          0           0             0
GE_Port_20 :         0          0           0             0
GE_Port_21 :         0          0           0             0
To_5618   :      522072          0      293720           0
Stacking  :         1482          0           0             0
Stacking  :           0          0           0             0

```

The following example shows sample output for the detailed statistics per port for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card:

```
RP/0/RP0/CPU0:router(admin)# show controllers switch inter-rack statistics 0 detail location f0/sc0/cpu0
```

```
GE_Port_0
```

```

Rx fragment      :           0      Tx fragment      :           0
Rx unicast       :      1642337    Tx unicast       :      379927
Rx multicast     :         51619    Tx multicast     :      205950
Rx broadcast     :         91436    Tx broadcast     :      150357
Rx FCS error     :           0      Tx FCS error     :           0
Rx Pause         :           0      Tx Pause         :           0
Rx Undersize     :           0      Tx Oversize      :           0
Rx FFP drop      :           0      Tx CFI drop      :           0
Rx Control frame :           0      Tx Cell error    :           0
                  Tx Jabber      :           0
                  Tx excessive collision:           0
                  Tx tagged vlan   :           0
                  Tx abort         :           0

```

**Table 2: show controllers switch inter-rack statistics Field Descriptions**

Field	Description
Port	Logical port number. The range is from 0 to 21 and corresponds to the ports on the front panel.
Tx Frames	Transmit frame counter.
Tx Errors	Transmit cell error counter.
Rx Frames	Receive frame counter.
Rx Errors	Receive code error counter.
Rx fragment	Receive fragment counter.

Field	Description
Rx unicast	Receive unicast frame counter.
Rx multicast	Receive multicast frame counter.
Rx broadcast	Receive broadcast frame counter.
Rx FCS error	Receive FCS error frame counter.
Rx Pause	Receive pause frame counter.
Rx Undersize	Receive undersize frame counter.
Rx FFP drop	Packets dropped by FFP counter.
Rx Control frame	Receive control frame counter.
Tx fragment	Transmit fragment counter.
Tx unicast	Transmit unicast frame counter.
Tx multicast	Transmit multicast frame counter
Tx broadcast	Transmit broadcast frame counter
Tx FCS error	Transmit FCS error frame counter
Tx Pause	Transmit pause control frame counter.
Tx Oversize	Transmit oversize packet counter.
Tx CFI drop	Number of CFI packets dropped for this port.
Tx Cell error	Transmit cell error counter.
Tx Jabber	Transmit jabber counter.
Tx excessive collision	Transmit excessive collision frame counter.
Tx tagged vlan	Transmit tagged VLAN packet counter.
Tx abort	Transmit aborted packet counter.

# show controllers switch inter-rack stp

To display information for the spanning tree protocol (STP) of inter-rack switches for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card, use the **show controllers switch inter-rack stp** command in administration EXEC mode.

**show controllers switch inter-rack stp location** *node-id* | **ports** *interface number* **location** *node-id* | **region** *location* *node-id*

Syntax Description	Parameter	Description
	<b>location</b> <i>node-id</i>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.
	<b>ports</b> <i>interface number</i>	Displays the number for the Gigabit Ethernet interface. The range is from 0 to 21. The interface number that identifies the specific front panel GE port on the 22-port SCGE.
	<b>region</b>	Displays MST region configuration information that includes MST revision number, instance to VLAN mapping, and MST region name.

**Command Default** No default behavior or values

**Command Modes** Administration EXEC

Command History	Release	Modification
	Release 3.4.1	This command was introduced.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

Task ID	Task ID	Operations
	fabric	read
	root-system	read
	admin	read

## Examples

The following sample output displays information for STP:

```
RP/0/RP0/CPU0:router(admin)# show controllers switch inter-rack stp location f0/sc0/cpu0

##### MST    0 vlans mapped:    2-4094
Bridge        address 5246.48f0.20ff  priority      32768 (32768 sysid 0)
Root          this switch for the CIST
Operational   hello time 1, forward delay 6, max age 8, txholdcount 6
```

```

Configured    hello time 1, forward delay 6, max age 8, max hops 4

Interface      Role Sts Cost      Prio.Nbr Type
-----
##### MST 1 vlans mapped: 1
Bridge        address 5246.48f0.20ff priority 32769 (32768 sysid 1)
Root          this switch for MST1

Interface      Role Sts Cost      Prio.Nbr Type
-----
GE_13 Desg FWD 20000 128. 14 P2p
GE_14 Desg FWD 20000 128. 15 P2p
GE_15 Desg FWD 20000 128. 16 P2p
GE_17 Desg FWD 20000 128. 18 P2p
GE_22 Desg FWD 20000 128. 23 P2p

```

**Table 3: show controllers switch inter-rack stp Field Descriptions**

Field	Description
MST	Multiple Spanning Tree (MST).
vlans mapped	Number of VLANs mapped.
Bridge	Part of the bridge identifier and is taken as the most significant part of the bridge ID comparisons.
Root	MAC address of Root and Priority.
Operational	Operational STP parameters.
Configured	STP configured parameters.
Interface	Interface running STP.
Role	MSTP role that includes designated, alternate, root, and backup.
Sts	Spanning tree state (STS) that includes forwarding, blocking, and learning.
Cost	Cost associated with the port.
Prio.	Priority associated with the port.

## show controllers switch inter-rack uddl

To display the inter-rack connection for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card, use the **show controllers switch inter-rack uddl** command in administration EXEC mode.

**show controllers switch inter-rack uddl** *interface number* | **all** **location** *node-id*

Syntax Description	Parameter	Description
	<i>interface number</i>	Number for the Gigabit Ethernet interface. The range is from 0 to 21. The interface number identifies the specific front panel GE port on the 22-port SCGE.
	<b>all</b>	Displays statistics of all ports for inter-rack switches.
	<b>location</b> <i>node-id</i>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.

**Command Default** No default behavior or values

**Command Modes** Administration EXEC

Command History	Release	Modification
	Release 3.4.1	This command was introduced.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

Task ID	Task ID	Operations
	fabric	read
	root-system	read
	admin	read

### Examples

The following sample output shows who is connected to the inter-rack on the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card:

```
RP/0/RP0/CPU0:router (admin) # show controllers switch inter-rack uddl all location f0/sc0/cpu0

Interface Gig port# 13
---
...
Current bidirectional state: Bidirectional
Current operational state: Advertisement - Single neighbor detected
...
...
    Entry 1
    ---
```

```

...
Device name: 0_RP0_CPU0_Switch
Port ID: GE_Port_0
Neighbor echo 1 device: nodeF0_SC0_CPU0
Neighbor echo 1 port: Gig port# 13

```

**Table 4: show controllers switch inter-rack udd Field Descriptions**

Field	Description
Interface Gig port	Interface number that identifies the specific front panel GE port on the 22-port SCGE.
Current bidirectional state	Current bidirectional state of the port is undetermined, bidirectional, or unidirectional.
Current operational state	Port operational status that includes up or error-disabled.
Device name	Connected device or neighbor.
Port ID	Port ID.
Neighbor echo 1 device	Device ID of neighbor.
Neighbor echo 1 port	Port ID of neighbor.

## show controllers switch stp location

To display the STP information for intra-rack switches, use the **show controllers switch stp location** command in administration EXEC mode.

**show controllers switch stp location** *node-id*

<b>Syntax Description</b>	<i>node-id</i> The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
---------------------------	--

<b>Command Default</b>	No default behavior or values
------------------------	-------------------------------

<b>Command Modes</b>	Administration EXEC
----------------------	---------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 3.4.1	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
-------------------------	---

The spanning tree protocol (STP) runs on links between RPs and SCs.

<b>Task ID</b>	<b>Task ID</b>	<b>Operations</b>
	fabric	read
	root-system	read

### Examples

The following sample output shows how to verify information for the spanning tree for location 0/rp0/CPU0 on the RP:

```
RP/0/RP0/CPU0:router(admin)# show controllers switch stp location 0/rp0/Cpu0

##### MST 0 vlans mapped: 2-4094
Bridge      address 0011.93ef.e392  priority      36864 (36864 sysid 0)
Root        address 5246.48f0.20ff  priority      32768 (32768 sysid 0)
            port      GE_Port_0    path cost    0
Regional Root address 5246.48f0.20ff  priority      32768 (32768 sysid 0)
            internal cost 20000 rem hops 3
Operational hello time 1, forward delay 6, max age 8, txholdcount 6
Configured  hello time 1, forward delay 6, max age 8, max hops 4

Interface      Role Sts Cost      Prio.Nbr Type
-----
##### MST 1 vlans mapped: 1
Bridge      address 0011.93ef.e392  priority      36865 (36864 sysid 1)
Root        address 5246.48f0.20ff  priority      32769 (32768 sysid 1)
            port      GE_Port_0    cost          20000 rem hops 3
```



```

Interface      Role Sts Cost      Prio.Nbr Type
-----
FE_Port_1 Desg FWD  200000 128.   2 P2p
GE_Port_0 Root  FWD   20000 128.  49 P2p

```

The following sample output shows how to verify the connection on intra-rack switches for the 22-port SCGE card:

```
RP/0/RP0/CPU0:router(admin)# show controllers switch stp location f0/sc0/CPU0
```

```

##### MST 0 vlans mapped: 2-4094
Bridge      address 0800.453e.469a priority 36864 (36864 sysid 0)
Root        address 5246.48f0.20ff priority 32768 (32768 sysid 0)
            port GE_Port_0 path cost 0
Regional Root address 5246.48f0.20ff priority 32768 (32768 sysid 0)
            internal cost 20000 rem hops 3
Operational hello time 1, forward delay 6, max age 8, txholdcount 6
Configured  hello time 1, forward delay 6, max age 8, max hops 4

```

```

Interface      Role Sts Cost      Prio.Nbr Type
-----

```

```

##### MST 1 vlans mapped: 1
Bridge      address 0800.453e.469a priority 36865 (36864 sysid 1)
Root        address 5246.48f0.20ff priority 32769 (32768 sysid 1)
            port GE_Port_0 cost 20000 rem hops 3

```

```

Interface      Role Sts Cost      Prio.Nbr Type
-----

```

```

FE_Port_1 Desg FWD  200000 128.   2 P2p
GE_Port_0 Root  FWD   20000 128.  49 P2p

```

**Table 5: show controllers switch stp location Field Descriptions**

Field	Description
MST	Multiple Spanning Tree Protocol (MST).
vlans mapped	VLANs mapped to MST instance.
Bridge	MAC address of Bridge and Priority.
Root	MAC address of Root and Priority.
Regional Root	Root of the MST region.
Operational	Operational STP parameters.
Configured	STP configured parameters.
Interface	Interface running STP.
Role	MSTP role that includes designated, alternate, root, and backup.
Sts	Spanning tree state (STS) that includes forwarding, blocking, and learning.

**show controllers switch stp location**

<b>Field</b>	<b>Description</b>
Cost	Cost of path to root.
Prio.Nbr Type	Priority of switch port.

## show controllers switch stp ports

To display the Spanning Tree Protocol (STP) information for intra-rack switches, use the **show controllers switch stp ports** command in administration EXEC mode.

```
show controllers switch stp ports FE 0 | 1 | GE 0 | 1 location node-id
```

<b>Syntax Description</b>	<b>FE {0   1}</b>	Displays information for the Fast Ethernet (FE) port. Choose one of the following values: <ul style="list-style-type: none"> <li>• 0—FE port number 0.</li> <li>• 1—FE port number 1.</li> </ul>
	<b>GE {0   1}</b>	Displays information for the Gigabit Ethernet (GE) port. Choose one of the following values: <ul style="list-style-type: none"> <li>• 0—GE port number 0.</li> <li>• 1—GE port number 1.</li> </ul>
	<b>location</b> <i>node-id</i>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.

**Command Default** No default behavior or values

**Command Modes** Administration EXEC

Command History	Release	Modification
	Release 3.4.1	This command was introduced.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.



**Note** The port numbers must match the port numbers that are displayed on the front panel of the 22-port SCGE card.

Task ID	Task ID	Operations
	fabric	read
	root-system	read

### Examples

The following example shows the remote-end point that is connected to the GE link even if the remote endpoint is on a different chassis:

```
RP/0/RP0/CPU0:router(admin)# show controllers switch stp ports FE 1 location 0/rp0/CPU0
```

## show controllers switch stp ports

```

FE_Port_1 of MST1 is designated forwarding
Edge port:          no          (default) port guard :   none      (default)
Link type: point-to-point      (auto) bpdu filter: disable (default)
Boundary : internal          bpdu guard : disable (default)
Bpdus (MRecords) sent 9190, received 3

```

```

Instance Role Sts Cost      Prio.Nbr Vlans mapped
-----
1 Desg FWD 200000 128. 2 1

```

**Table 6: show controllers switch stp ports Field Descriptions**

Field	Description
GE Port	Gigabit Ethernet (GE) port.
STP State	Spanning Tree Protocol (STP) state of the port

# show controllers switch stp region

To display information for the spanning tree for the Multiple Spanning Tree (MST) region, use the **show controllers switch stp region** command in administration EXEC mode.

```
show controllers switch stp region location node-id
```

<b>Syntax Description</b>	<b>location</b> <i>node-id</i>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.
---------------------------	-----------------------------------	---

<b>Command Default</b>	No default behavior or values
------------------------	-------------------------------

<b>Command Modes</b>	Administration EXEC
----------------------	---------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 3.4.1	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
-------------------------	---

<b>Task ID</b>	<b>Task ID</b>	<b>Operations</b>
	fabric	read
	root-system	read

## Examples

The following example displays sample output from the **show controllers switch stp region** command:

```
RP/0/RP0/CPU0:router(admin)# show controllers switch stp region location 0/rp0/CPU0
```

```
Name      [STP_1]
Revision  1
Instances configured 2
```

```
-----
0        2-4094
1        1
-----
```

## show controllers switch uddl location

To display the Unidirectional Link Detection (UDLD) information for intra-rack switches, use the **show controllers switch uddl location** command in administration EXEC mode.

```
show controllers switch uddl locationn ode-id
```

<b>Syntax Description</b>	<i>node-id</i> The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
---------------------------	--

<b>Command Default</b>	No default behavior or values
------------------------	-------------------------------

<b>Command Modes</b>	Administration EXEC
----------------------	---------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 3.4.1	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
-------------------------	---

UDLD runs on links between RPs and SCs.

<b>Task ID</b>	<b>Task ID</b>	<b>Operations</b>
	fabric	read
	root-system	read

### Examples

The following sample output shows who is connected on the RP:

```
RP/0/RP0/CPU0:router(admin)# show controllers switch uddl location 0/rp0/CPU0

Interface GE_Port_0
...
...
Current bidirectional state: Bidirectional
Current operational state: Advertisement - Single neighbor detected
...
  Entry 1
  ---
  Device name: nodeF0_SC0_CPU0
  Port ID: Gig port# 13
  Neighbor echo 1 device: 0_RP0_CPU0_Switch
  Neighbor echo 1 port: GE_Port_0
```

The following sample output shows an intra-rack connection for the 22-port Shelf Controller Gigabit Ethernet (22-port SCGE) card:

```

RP/0/RP0/CPU0:router(admin)# show controllers switch udd location f0/sc0/CPU0

Interface GE_Port_0
---
...
Current bidirectional state: Bidirectional
Current operational state: Advertisement - Single neighbor detected
...

Entry 1
---
...
Current neighbor state: Bidirectional
Device name: nodeF0_SC0_CPU0
Port ID: Gig port# 22
Neighbor echo 1 device: F0_SC0_CPU0_Switch
Neighbor echo 1 port: GE_Port_0

```

**Table 7: show controllers switch udd location Field Descriptions**

Field	Description
Current bidirectional state	Current bidirectional state of the port is undetermined, bidirectional, or unidirectional.
Current operational state	Port operational status that includes up or error-disabled.
Current neighbor state	Neighbor state states that the link state is observed from the neighbor (undetermined, bidirectional, or unidirectional).
Device name	Connected device or neighbor.
Port ID	Port ID.
Neighbor echo 1 device	Device ID of neighbor.
Neighbor echo 1 port	Port ID of neighbor.

## show controllers switch udd ports

To display the information for Unidirectional Link Detection (UDLD) for a specified location, use the **show controllers switch udd ports** command in administration EXEC mode.

**show controllers switch udd ports FE 0 | 1 | GE 0 | 1 location *node-id***

<b>Syntax Description</b>	<b>FE {0   1}</b>	Displays information for the Fast Ethernet (FE) port. Choose one of the following values: <ul style="list-style-type: none"> <li>• 0—FE port number 0.</li> <li>• 1—FE port number 1.</li> </ul>
	<b>GE {0   1}</b>	Displays information for the Gigabit Ethernet (GE) port. Choose one of the following values: <ul style="list-style-type: none"> <li>• 0—GE port number 0.</li> <li>• 1—GE port number 1.</li> </ul>
	<b>location <i>node-id</i></b>	Specifies the specific RP/SC in the system in which the switches are present. This applies to location descriptions for the <i>node-id</i> argument as entered in the <i>rack/slot/module</i> notation.

**Command Default** No default behavior or values

**Command Modes** Administration EXEC

Command History	Release	Modification
	Release 3.4.1	This command was introduced.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

UDLD runs on links between RPs and SCs.

Task ID	Task ID	Operations
	fabric	read
	root-system	read

### Examples

The following example displays sample output from the **show controllers switch udd ports** command:

```
RP/0/RP0/CPU0:router(admin)# show controllers switch udd ports FE 1 location 0/rp0/CPU0

Interface FE_PORT_1
---
Port enable administrative configuration setting: Enabled
Port enable operational state: Enabled
```



```
Current bidirectional state: Bidirectional
Current operational state: Advertisement - Single neighbor detected
Message interval: 7
Time out interval: 5
```

```
Entry 1
---
Expiration time: 16
Device ID: 1
Current neighbor state: Bidirectional
Device name: 0_RP1_CPU0_Switch
Port ID: FE_PORT_0
Neighbor echo 1 device: 0_RP0_CPU0_Switch
Neighbor echo 1 port: FE_PORT_1
```

```
Message interval: 7
Time out interval: 5
CDP Device name: BCM_SWITCH
```

show controllers switch udd ports