



## Audio Video Bridging Commands

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# show avb domain

To display the status of Audio Video Bridging (AVB) domain, use the **show avb domain** command.

**show avb domain**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None

**Command Modes** Any command mode

## Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

## Examples

This example shows how to display the status of the AVB domain:

```
switch# show avb domain
```

```
AVB Class-A
  Priority Code Point    : 3
  VLAN                   : 2
  Core ports             : 2
  Boundary ports        : 0
```

```
AVB Class-B
  Priority Code Point    : 2
  VLAN                   : 2
  Core ports             : 2
  Boundary ports        : 0
```

```
-----
Interface   State      Delay    PCP  VID  Information
-----
Eth2/1      up         30ns
  Class-A   core           3    2    Info
  Class-B   core           2    2    Info
-----
```

```

Eth2/3      up      43ns      Info
  Class-A   core      3 2      Info
  Class-B   core      2 2      Info

```

**Table 1: show avb domain Field Descriptions**

Field	Description
Priority Code Point	The 3-bit PCP value in the Ethernet frames for the given class.
VLAN	The VLAN that is used to send or receive AVB data traffic.
Core ports	Number of core ports on the system.
Boundary ports	Number of boundary ports on the system.

**Related Commands**

Command	Description
<b>show ptp clock</b>	Displays the properties of the local clock.
<b>show ptp clocks foreign-masters-record</b>	Displays the state of foreign masters known to the PTP process.
<b>show ptp corrections</b>	Displays the last few PTP corrections.
<b>show ptp delay</b>	Displays the link delay and residence delay status of the PTP interfaces.
<b>show ptp parent</b>	Displays the properties of the PTP parent.
<b>show ptp port</b>	Displays the status of the PTP port.
<b>show ptp time-property</b>	Displays the properties of the PTP clock.
<b>Show avb streams</b>	Displays the status of the incoming and outgoing interfaces in the AVB streams.

# show avb streams

To display the status of the incoming and outgoing interfaces in the Audio Video Bridging (AVB) streams, use the **show avb streams** command.

**show avb streams**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None

**Command Modes** Any command mode

## Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

## Examples

This example shows how to display the status of the incoming and outgoing interfaces in the AVB streams.

```
switch# show avb streams
```

```
Stream ID:      0001.0002.0008:128      Incoming Interface:      Eth2/3
```

```
  Destination   : ffff.0003.0008
```

```
  Class         : A
```

```
  Rank          : 0
```

```
  Bandwidth     : 25600 Kbit/s
```

```
  Outgoing Interfaces:
```

```
-----
```

Interface	State	Time of Last Update	Information
Eth2/1	Ready	Tue Apr 07 18:45:25.205 UTC	----

```
-----
```

**Table 2: show avb streams Field Descriptions**

Field	Description
Stream ID	Stream ID of this entry.
Incoming Interface	Interface on which the stream traffic is coming in and where the registered talker is.

Field	Description
Destination	If no talker was received for this stream, the destination MAC address of the stream may be zero.
Class	Class of this stream (A or B).
Rank	Rank of this stream.
Bandwidth	The stream bandwidth computed from the registered talker.
Outgoing interfaces	The Interface or interfaces where the stream traffic is being transmitted.

### Related Commands

Command	Description
<b>show ptp clock</b>	Displays the properties of the local clock.
<b>show ptp clocks foreign-masters-record</b>	Displays the state of foreign masters known to the PTP process.
<b>show ptp corrections</b>	Displays the last few PTP corrections.
<b>show ptp delay</b>	Displays the link delay and residence delay status of the PTP interfaces.
<b>show ptp parent</b>	Displays the properties of the PTP parent.
<b>show ptp port</b>	Displays the status of the PTP port.
<b>show ptp time-property</b>	Displays the properties of the PTP clock.
<b>Show avb domain</b>	Displays the status of Audio Video domain.

# show msrp memory

To display information about the Multiple Stream Reservation Protocol (MSRP) memory modules, use the **show msrp memory** command.

**showmsrpmemory**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None.

**Command Modes** Any command mode.

Release	Modification
7.3(0)D1(1)	This command was introduced.

## Examples

This example shows how to display information about the Multiple Stream Reservation Protocol (MSRP) memory modules. The field descriptions are self-explanatory.

```
switch# show msrp memory

MSRP Chunk Allocation:
=====
Chunk size: 64 Max elem: 1000 State: Unused
Size: 0 Allocs: 102 Frees: 102 Fails: 0
-----
Chunk size: 256 Max elem: 1000 State: Unused
Size: 0 Allocs: 0 Frees: 0 Fails: 0
-----
Chunk size: 1024 Max elem: 100 State: Unused
Size: 0 Allocs: 0 Frees: 0 Fails: 0
-----
Chunk size: 2048 Max elem: 50 State: Unused
Size: 0 Allocs: 0 Frees: 0 Fails: 0
-----
Chunk size: 4096 Max elem: 25 State: Unused
Size: 0 Allocs: 0 Frees: 0 Fails: 0
-----
Chunk size: 8192 Max elem: 25 State: Allocated
Size: 58432 Allocs: 11 Frees: 0 Fails: 0
-----

MSRP Heap Allocation:
=====
Size: 0 Allocs: 5 Frees: 5 Fails: 0

MSRP Type Allocation:
=====
Mem Type: NONE
Size: 0 Allocs: 0 Frees: 0 Fails: 0
-----
Mem Type: BUFFER
Size: 0 Allocs: 96 Frees: 96 Fails: 0
```

```
-----  
Mem Type: STRING  
Size: 0 Allocs: 11 Frees: 11 Fails: 0  
-----  
Mem Type: PORT  
Size: 58432 Allocs: 11 Frees: 0 Fails: 0  
-----  
Mem Type: ATTR  
Size: 0 Allocs: 0 Frees: 0 Fails: 0  
-----
```

**Related Commands**

Command	Description
<b>show msrp port</b>	Displays information about the MSRP port database.
<b>show msrp streams</b>	Displays information about the MSRP streams.
<b>show msrp trace</b>	Displays information about the MSRP trace buffer content.

# show msrp port

To display information about the Multiple Stream Reservation Protocol (MSRP) port database, use the **show msrp port** command.

**show msrp port** [**bandwidth** | **detail** | **domain**] **interface***slot / port*

## Syntax Description

<b>bandwidth</b>	Displays the bandwidth information.
<b>detail</b>	Displays a detailed output.
<b>domain</b>	Displays the Audio Video Bridging (AVB) domain information.
<b>interface</b> <i>interface-name slot/port</i>	Displays the interface.

## Command Default

None

## Command Modes

Any command mode

## Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

## Examples

This example shows how to display information about the MSRP port database:

```
switch# show msrp port
Port: Eth2/1    Admin: admin up    Oper: up
  MTU: 1500    Bandwidth: 1000000 Kbit/s    DLY: 10 us    mode: Trunk
gPTP status: Enabled
AVB readiness state: Ready
  Per-class value          Class-A    Class-B
  -----
Tx srClassVID             2          2
Rx srClassVID             2          2
Domain State              Core       Core
VLAN STP State            FWD       FWD
```



```

Reservable BW (Kbit/s)      250000      500000
Reserved BW (Kbit/s)       28608       615072
Applied QOS BW (percent)   3           62

```

**Table 3: Show msrp port Field Descriptions**

Field	Description
Port	Short name of the port.
Admin	Administrative state of the port.
Oper	Operational state of the port.
MTU	Maximum Transmission Unit of the port.
Bandwidth	Maximum output bandwidth of the port.
DLY	Port delay.
Mode	Port mode (Access or Trunk)
AVB readiness status	Readiness of the port to establish AVB neighbourships.
Tx srClassVID	The Stream Reservation VLAN ID (srClassVID) that is sent in domain declarations.
Rx srClassVID	The Stream Reservation VLAN ID (srClassVID) that is received in domain registrations.
Domain state	Indicates the domain state, whether it is core or boundary.
VLAN STP state	The state of STP forwarding on the VLAN on the port. The VLAN is the one listed under the field "Tx srClassVID".
Reservable BW	The bandwidth that has already been reserved on this port.
Reserved BW	The bandwidth that has already been reserved on this port. <b>Note</b> Stream Reservation Class-B can reserve bandwidth from Stream Reservation Class-A pool since Class-B has less stringent traffic requirements than Class-A.

Field	Description
Applied QOS BW	Reserved bandwidth, as a percentage of total port bandwidth. This percentage is programmed into the QOS shaper.

## Examples

This example shows how to display information about the MSRP domain:

```
switch# show msrp port domain
```

```
-----
Ethernet      Local PCP/VLAN      Peer PCP/VLAN      AVB Core
Interface      A | B              A | B              A | B
-----
Eth2/1         3/2 | 2/2          3/2 | 2/2          Yes | Yes
Eth2/3         3/2 | 2/2          3/2 | 2/2          Yes | Yes
```

**Table 4: Show msrp port Field Descriptions**

Field	Description
Ethernet Interface	The Layer 2 port.
Local PCP/VLAN	The administrative PCP and VLAN values that are transmitted by this port.
Peer PCP/VLAN	Operational state of the port.
AVB Core	Indicates if this port is an AVB core port. The values are "Yes" or "No".

## Examples

This example shows how to display bandwidth information about the MSRP:

```
switch# show msrp port bandwidth
```

```
-----
Ethernet      Capacity      Assigned      Available      Reserved
Interface      (Kbit/s)      A | B          A | B          A | B
-----
Eth2/1         1000000       25 | 50       10 | 10       3 | 62
Eth2/3         1000000       25 | 50       25 | 75       0 | 0
```

**Table 5: show msrp port bandwidth Field Description**

Field	Description
Interface	The Layer 2 port.
Capacity	The output bandwidth of the port in kbits per second.

Field	Description
Available	The percentage of port bandwidth available for next allocation.
Reserved	The percentage of port bandwidth already reserved.

## Examples

This example shows how to display a detailed information about the Multiple Stream Reservation Protocol (MSRP). The field descriptions are self-explanatory.

```
switch# show msrp port detail
Port: Eth1/2 Admin: admin up Oper: up
Intf handle: 0x1a001000 Intf index: 0x1a001000
Location: 0/1, Handle: 0x1001000100000001
MTU: 1500 Bandwidth: 1000000 Kbit/s DLY: 10 us mode: Trunk
LastRxMAC: A0:EC:F9:CC:60:5
gPTP status: Enabled, asCapable
Residence delay: 5000 ns
Peer delay: 388 ns (Updated Sun Jan 04 03:22:50.883 UT)
AVB readiness state: Ready
Per-class value Class-A Class-B
-----
Tx srClassVID 2 2
Rx srClassVID 2 2
Domain State Core Core
VLAN STP State FWD FWD
Reservable BW (Kbit/s) 250000 500000
Reserved BW (Kbit/s) 67008 0
Applied QOS BW (percent) 7 0
VLAN 0x1: EN FWD
VLAN 0x2: EN FWD
Registered Talker: count 0
Declared Talker: count 1
Handle 0x100100010000000F
Declared Talker, Talker Advertise
Stream: 0001.0001.0001:1, handle 100100010000000D
Port handle 0x1001000100000001, vlan: 2
MRP: 5/0/931622142/0/0
```

```
Registered Listener: count 1
Handle 0x1001000100000010
Registered Listener, Listener Ready
Stream: 0001.0001.0001:1, handle 100100010000000D
Port handle 0x1001000100000001, vlan: 2
MRP: 0/0/931622141/0/0
Declared Listener: count 0
TX counters
MSRP Frames: 42758
Talker Attributes:
attr msg: 42710
attr leave all: 16586
attr vector: 42676
attr: 42676
attr timeouts: 0
attr errors: 0
Talker Failed Attributes:
attr msg: 16586
attr leave all: 16586
attr vector: 0
attr: 0
attr timeouts: 0
attr errors: 0
Listener Attributes:
attr msg: 16586
attr leave all: 16586
attr vector: 0
attr: 0
attr timeouts: 1
attr errors: 0
Domain Attributes:
attr msg: 42750
attr leave all: 16586
attr vector: 42750
attr: 85500
attr timeouts: 0
attr errors: 0
```

```

RX counters
MSRP Frames: 46235
MSRP Frames with error: 0
Talker Attributes:
attr msg: 13081
attr leave all: 13081
attr vector: 13081
attr: 0
attr timeouts: 0
attr errors: 0
Talker Failed Attributes:
attr msg: 13081
attr leave all: 13081
attr vector: 13081
attr: 0
attr timeouts: 0
attr errors: 0
Listener Attributes:
attr msg: 0
attr leave all: 13081
attr vector: 46111
attr: 46046
attr timeouts: 1
attr errors: 0
Domain Attributes:
attr msg: 46227
attr leave all: 13081
attr vector: 46227
attr: 92454
attr timeouts: 2
attr errors: 0

```

**Related Commands**

Command	Description
<b>show msrp port</b>	Displays information about the MSRP port database.

Command	Description
<b>show msrp streams</b>	Displays information about the MSRP streams.
<b>show msrp trace</b>	Displays information about the MSRP trace buffer content.

## show msrp trace

To display information about the Multiple Stream Reservation Protocol (MSRP) trace buffer content, use the **show msrp trace** command.

```
show msrp trace
```

**Syntax Description** This command does not have any arguments or keywords.

**Command Default** None

**Command Modes** Any command mode

Command History	Release	Modification
	7.3(0)D1(1)	This command was introduced.

### Examples

This example shows how to display information about the MSRP streams:

```
switch# show msrp streams
```

```
Legend: R = Registered, D = Declared.
```

```
-----
Stream ID Talker Listener
Advertise Fail Ready ReadyFail AskFail
R | D R | D R | D R | D R | D
-----
```

```
0001.0001.0001:2 1 | 0 0 | 1 0 | 0 0 | 0 0 | 0
```

**Table 6: show msrp stream Field Descriptions**

Field	Description
Stream ID	Short name of the port.
Talker	The per-attribute-direction count of the number of talkers (Registered or Declared).
Listener	The per-attribute-direction count of the number of listeners (Registered or Declared).

**Examples**

This example shows how to display information about the MSRP trace buffer content: The field descriptions are sel-explanatory.

```
switch# show msrp trace
```

```
[03/06/70 13:42:05.537 EST d5bd 12499] STP: (Eth1/1): STP changed to DISABLED fo
r vlan 2888
[03/06/70 13:42:05.537 EST d5be 12499] STP: (Eth1/1): STP changed to BLK for vla
n 2889
[03/06/70 13:42:05.537 EST d5bf 12499] STP: (Eth1/1): STP changed to DISABLED fo
r vlan 2889
[03/06/70 13:42:05.537 EST d5c0 12499] STP: (Eth1/1): STP changed to BLK for vla
n 2890
```

**Related Commands**

Command	Description
<b>show msrp memory</b>	Displays information about the MSRP memory modules.
<b>show msrp port</b>	Displays information about the MSRP port database.
<b>show msrp streams</b>	Displays information about the MSRP streams.



# show msrp streams

To display information about the Multiple Stream Reservation Protocol (MSRP) streams, use the **show msrp streams** command.

**show msrp streams**[*brief* | *details* | *dst-mac* | *src-mac* | *stream-id*]

## Syntax Description

<b>brief</b>	Displays stream information briefly.
<b>details</b>	Displays the detailed stream information.
<b>dst-mac</b>	Displays the stream destination MAC address.
<b>src-mac</b>	Displays the stream source MAC address.
<i>stream-id</i>	Displays streams that are specific the stream ID.

## Command Default

None

## Command Modes

Any command mode

## Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

## Examples

This example shows how to display information about the MSRP streams:

```
switch# show msrp streams
```

```
Legend: R = Registered, D = Declared.
```

```
-----
Stream ID Talker Listener
Advertise Fail Ready ReadyFail AskFail
R | D R | D R | D R | D R | D
```

```
-----
0001.0001.0001:2 1 | 0 0 | 1 0 | 0 0 | 0 0 | 0
```

**Table 7: show msrp stream Field Descriptions**

Field	Description
Stream ID	Short name of the port.

Field	Description
Talker	The per-attribute-direction count of the number of talkers (Registered or Declared).
Listener	The per-attribute-direction count of the number of listeners (Registered or Declared).

## Examples

This example shows how to display brief information about the MSRP streams. The field descriptions are self-explanatory.

```
switch# show msrp streams brief
```

Legend: R = Registered, D = Declared.

```
-----
Stream ID           Destination           Bandwidth   Talkers   Listeners   Fail
                   Address              (Kbit/s)   R | D     R | D
-----
0001.0002.0003:123  ffff.0003.0003       38400      1 | 1     0 | 0       No
0001.0002.0004:124  ffff.0003.0004       512000    1 | 1     0 | 0       No
0001.0002.0005:125  ffff.0003.0005       128000    1 | 1     0 | 0       No
0001.0002.0006:126  ffff.0003.0006       128000    1 | 1     0 | 0       No
0001.0002.0007:127  ffff.0003.0007       1152000   1 | 1     0 | 0       Yes
0001.0002.0008:128  ffff.0003.0008       25600     1 | 1     0 | 0       No
-----
```

## Examples

This example shows how to display detailed information about the Multiple Stream Reservation Protocol (MSRP) streams. The field descriptions are self-explanatory.

```
switch# show msrp streams detail
```

```
Stream ID: 0001.0001.0001:1
Stream Age: 00:00:16 (since Thu Jan 01 01:42:34.484 UTC)
Create Time: Thu Jan 01 01:42:34.484 UTC
Destination Address: 3333.0000.0001
VLAN Identifier: 2
Data Frame Priority: 3 (Class A)
MaxFrameSize: 1000
MaxIntervalFrames: 1 frames/125us
Stream Bandwidth: 64000 Kbit/s
Rank: 0
Received Accumulated Latency: 99
Stream Attributes Table:
-----
Interface Attr State Direction Type
-----
Eth1/1 Register Talker Advertise
Attribute Age: 00:00:16 (since Thu Jan 01 01:42:34.484 UTC)
MRP Applicant: Very Anxious Observer, send None
MRP Registrar: In
Accumulated Latency: 99
----
Eth1/2 Declare Talker Advertise
Attribute Age: 00:00:16 (since Thu Jan 01 01:42:34.484 UTC)
MRP Applicant: Quiet Active, send None
MRP Registrar: In
Accumulated Latency: 5479
----
Eth1/2 Register Listener Ready
Attribute Age: 00:00:04 (since Thu Jan 01 01:42:46.083 UTC)
MRP Applicant: Very Anxious Observer, send None
MRP Registrar: In
-----
```

```
Eth1/1 Declare Listener Ready  
Attribute Age: 00:00:04 (since Thu Jan 01 01:42:46.093 UTC)  
MRP Applicant: Quiet Active, send None  
MRP Registrar: In
```

**Related Commands**

Command	Description
<b>show msrp memory</b>	Displays information about the MSRP memory modules.
<b>show msrp port</b>	Displays information about the MSRP port database.
<b>show msrp trace</b>	Displays information about the MSRP trace buffer content.

## show msrp trace

To display information about the Multiple Stream Reservation Protocol (MSRP) trace buffer content, use the **show msrp trace** command.

**show msrp trace**

### Syntax Description

This command does not have any arguments or keywords.

### Command Default

None

### Command Modes

Any command mode

### Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

### Examples

This example shows how to display information about the MSRP streams:

```
switch# show msrp streams
```

```
Legend: R = Registered, D = Declared.
```

```
-----
Stream ID Talker Listener
Advertise Fail Ready ReadyFail AskFail
R | D R | D R | D R | D R | D
-----
```

```
0001.0001.0001:2 1 | 0 0 | 1 0 | 0 0 | 0 0 | 0
```

**Table 8: show msrp stream Field Descriptions**

Field	Description
Stream ID	Short name of the port.
Talker	The per-attribute-direction count of the number of talkers (Registered or Declared).
Listener	The per-attribute-direction count of the number of listeners (Registered or Declared).

**Examples**

This example shows how to display information about the MSRP trace buffer content: The field descriptions are sel-explanatory.

```
switch# show msrp trace

[03/06/70 13:42:05.537 EST d5bd 12499] STP: (Eth1/1): STP changed to DISABLED fo
r vlan 2888
[03/06/70 13:42:05.537 EST d5be 12499] STP: (Eth1/1): STP changed to BLK for vla
n 2889
[03/06/70 13:42:05.537 EST d5bf 12499] STP: (Eth1/1): STP changed to DISABLED fo
r vlan 2889
[03/06/70 13:42:05.537 EST d5c0 12499] STP: (Eth1/1): STP changed to BLK for vla
n 2890
```

**Related Commands**

Command	Description
<b>show msrp memory</b>	Displays information about the MSRP memory modules.
<b>show msrp port</b>	Displays information about the MSRP port database.
<b>show msrp streams</b>	Displays information about the MSRP streams.

`show msrp trace`