



# Cisco Nexus 7000 Series NX-OS Audio Video Bridging Command Reference

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# CONTENTS

# CHAPTER 1 Audio Video Bridging Commands 1

show avb domain 2

show avb streams 4

show msrp memory 6

show msrp port 8

show msrp trace 15

show msrp streams 17

show msrp trace 20

Contents



# **Audio Video Bridging Commands**

- show avb domain, page 2
- show avb streams, page 4
- show msrp memory, page 6
- show msrp port, page 8
- show msrp trace, page 15
- show msrp streams, page 17
- show msrp trace, page 20

# 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 Info

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.

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

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

#### **Command History**

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

Command	Description
show msrp port	Displays information about the MSRP port database.
show msrp streams	Displays information about the MSRP streams.
show msrp trace	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 | interfaces lot | port

#### **Syntax Description**

bandwidth	Displays the bandwidth information.
detail	Displays a detailed output.
domain	Displays the Audio Video Bridging (AVB) domain information.
interface interface-name slot/port	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 readyness state: Ready
    Per-class value
                                 Class-A
                                             Class-B
    Tx srClassVID
    Rx srClassVID
                                             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.  Note Stream Reservation Class-B can reserve bandwidth from Stream Reservation Class-A pool since Class-B has less stringent traffic requirements that Class-A.

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

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 (Kbit/s)	Assigned A   B	Available A   B	Reserved A   B
Eth2/1 Eth2/3	1000000	25   50 25   50	10   10 25   75	3   62

### 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.

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

```
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 readyness 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 0x10010001000000F
Declared Talker, Talker Advertise
Stream: 0001.0001.0001:1, handle 10010001000000DD
Port handle 0x1001000100000001, vlan: 2
MRP: 5/0/931622142/0/0
```

switch# show msrp port detail

```
Registered Listener: count 1
Handle 0x1001000100000010
Registered Listener, Listener Ready
Stream: 0001.0001.0001:1, handle 10010001000000D
Port handle 0x100100010000001, 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
```

Command	Description
show msrp port	Displays information about the MSRP port database.

Command	Description
show msrp streams	Displays information about the MSRP streams.
show msrp trace	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

0001.0001.0001:2 1 | 0 0 | 1 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).

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

Command	Description
show msrp memory	Displays information about the MSRP memory modules.
show msrp port	Displays information about the MSRP port database.
show msrp streams	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**

brief	Displays stream information briefly.
details	Displays the detailed stream information.
dst-mac	Displays the stream destination MAC address.
src-mac	Displays the stream source MAC address.
stream-id	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

0001.0001.0001:2 1 | 0 0 | 1 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).

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

Command	Description
show msrp memory	Displays information about the MSRP memory modules.
show msrp port	Displays information about the MSRP port database.
show msrp trace	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

0001.0001.0001:2 1 | 0 0 | 1 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).

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

Command	Description
show msrp memory	Displays information about the MSRP memory modules.
show msrp port	Displays information about the MSRP port database.
show msrp streams	Displays information about the MSRP streams.

show msrp trace