



# Show Commands

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This chapter describes the Cisco NX-OS quality of service (QoS) **show** commands.

# show class-map type control-plane

To display control plane class map information, use the **show class-map type control-plane** command.

```
show class-map type control-plane [class-map-name]
```

<b>Syntax Description</b>	<i>class-map-name</i>	(Optional) Name of the control plane class map. The name is alphanumeric and case sensitive. The maximum length is 64 characters.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Any command mode
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.2(1)N1(1)	This command was introduced.

<b>Usage Guidelines</b>	This command does not require a license.
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**Examples** This example shows how to display control plane class map information:

```
switch# show class-map type control-plane

class-map type control-plane match-any copp-system-class-arp
  match protocol arp

class-map type control-plane match-any copp-system-class-bgp
  match protocol bgp

class-map type control-plane match-any copp-system-class-bridging
  match protocol bridging

class-map type control-plane match-any copp-system-class-cdp
  match protocol cdp

class-map type control-plane match-any copp-system-class-default
  match protocol default

<--Output truncated-->
switch#
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>class-map type control-plane</b>	Creates or configures a control plane class map.

# show class-map type network-qos

To display type network-qos class maps, use the **show class-map type network-qos** command.

**show class-map type network-qos** [*class-map-name*]

<b>Syntax Description</b>	<i>class-map-name</i>	Name of the class map. The name can be a maximum of 40 alphanumeric characters.
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**Command Default** Displays all type network-qos class maps if no class map name is specified.

**Command Modes** Any command mode

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.2(1)N1(1)	This command was introduced.

**Usage Guidelines** If you do not specify the type, the command displays all the class maps configured in the system.

**Examples** This example shows how to display all type network-qos class maps:

```
switch(config)# show class-map type network-qos
```

```
Type network-qos class-maps
=====

class-map type network-qos s1
  match qos-group 2

class-map type network-qos s2
  match qos-group 3

class-map type network-qos s3
  match qos-group 4

class-map type network-qos s4
  match qos-group 5

class-map type network-qos cu1
  match qos-group 2

class-map type network-qos cu2
  match qos-group 3

class-map type network-qos cu3
  match qos-group 4

class-map type network-qos cu4
```

## show class-map type network-qos

```

    match qos-group 5

class-map type network-qos new
    match qos-group 2

class-map type network-qos class7
    match qos-group 5

class-map type network-qos class-0
    match qos-group 2

class-map type network-qos ip-based
    match qos-group 5

class-map type network-qos class-1-2
    match qos-group 3

class-map type network-qos class-4-7
    match qos-group 4

class-map type network-qos cos-based
    match qos-group 2

class-map type network-qos class-fcoe
    match qos-group 1

class-map type network-qos class-flood
    match qos-group 2

class-map type network-qos cos-based-3
    match qos-group 3

class-map type network-qos cos-based-4
    match qos-group 4

class-map type network-qos class-default
    match qos-group 0

class-map type network-qos class-multicast

class-map type network-qos class-ip-multicast
    match qos-group 5

switch(config)#

```

### Related Commands

Command	Description
<b>class-map</b>	Creates or modifies a class map.

# show class-map type qos

To display type qos class maps, use the **show class-map type qos** command.

**show class-map type qos** [*class-map-name*]

<b>Syntax Description</b>	<i>class-map-name</i>	Named class map. The name <i>class-default</i> is reserved. The name can be a maximum of 40 alphanumeric characters.
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<b>Command Default</b>	Displays all type qos class maps if no class map name is specified.
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<b>Command Modes</b>	Any command mode
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
		5.2(1)N1(1)

**Examples** This example shows how to display a specific class map:

```
switch# show class-map type qos class-4-6
```

```
Type qos class-maps
=====

class-map type qos class-4-6
  match cos 5
```

```
switch#
```

This example shows how to display all type qos class maps:

```
switch# show class-map type qos
```

```
Type qos class-maps
=====

class-map type qos match-any class-fcoe
  match cos 3

class-map type qos match-any class-default
  match any

class-map type qos match-any class-all-flood
  match all flood

class-map type qos match-any class-ip-multicast
  match ip multicast
```

```
switch#
```

■ show class-map type qos

Related Commands	Command	Description
	class-map	Creates or modifies a class map.

# show class-map type queuing

To display type queuing class maps, use the **show class-map type queuing** command.

**show class-map type queuing** [*class-map-name*]

<b>Syntax Description</b>	<i>class-map-name</i>	Named class map. The name can be a maximum of 40 alphanumeric characters.
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<b>Command Default</b>	Displays all type queuing class maps if no class map name is specified.
------------------------	---

<b>Command Modes</b>	Any command mode
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Command History	Release	Modification
	5.2(1)N1(1)	This command was introduced.

**Examples** This example shows how to display all type queuing class maps:

```
switch# show class-map type queuing

Type queuing class-maps
=====

class-map type queuing class-fcoe
  match qos-group 1

class-map type queuing class-default
  match qos-group 0

class-map type queuing class-all-flood
  match qos-group 2

class-map type queuing class-ip-multicast
  match qos-group 2

switch#
```

Related Commands	Command	Description
	<b>class-map</b>	Creates or modifies a class map.

# show copp status

To display the Control Plane Policing (CoPP) configuration status, use the **show copp status** command.

## show copp status

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

**Command Default** None

**Command Modes** Any configuration mode

Command History	Release	Modification
	5.2(1)N1(1)	This command was introduced.

**Usage Guidelines** This command does not require a license.

**Examples** This example shows how to display the CoPP configuration status information:

```
switch# show copp status
Last Config Operation: class class-default
Last Config Operation Timestamp: 05:06:14 UTC Jan  1 2009
Last Config Operation Status: Success
Policy-map attached to the control-plane: copp-system-policy-default

switch#
```

Related Commands	Command	Description
	<b>clear copp statistics</b>	Clears the CoPP statistics.
	<b>show running-config copp</b>	Displays CoPP configuration information in the running configuration.



# show interface flowcontrol

To display the detailed listing of the flow control settings on all interfaces, use the **show interface flowcontrol** command.

**show interface flowcontrol** [*module number*]

<b>Syntax Description</b>	<b>module number</b>	(Optional) Displays flow control settings on all interfaces on a specified module. The <i>module number</i> range is from 1 to 3.
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<b>Command Default</b>	None
------------------------	------

<b>Command Modes</b>	EXEC mode
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.2(1)N1(1)	This command was introduced.

**Usage Guidelines** You can use this command to display the flow control information for the following interfaces:

- Layer 2 interface
- Layer 3 interface



**Note** Use the **no switchport** command to configure an interface as a Layer 3 interface, and then use the **flowcontrol** command to configure flow control for the interface.

## Examples

This example shows how to display the flow control settings on all interfaces on a switch:

```
switch# show interface flowcontrol
```

```
-----
Port          Send FlowControl  Receive FlowControl  RxPause TxPause
              admin    oper              admin    oper
-----
Eth1/1        off     off              off     off          0         0
Eth1/2        off     off              off     off          0         0
Eth1/3        off     off              off     off          0         0
Eth1/4        off     off              off     off          0         0
Eth1/5        off     off              off     off          0         0
Eth1/6        off     off              off     off          0         0
Eth1/7        off     off              off     off          0         0
-----
```

## ■ show interface flowcontrol

```
Eth1/8      off      off      off      off      0          0
Eth1/9      off      off      off      off      0          0
Eth1/10     off      off      off      off      0          0
Eth1/11     off      off      off      off      0          0
--More--
switch#
```

# show hardware profile tcam feature qos

To display the the limits of the QoS TCAMs, use the **show hardware profile tcam feature-qos** command.

**show hardware profile tcam feature qos *tcam-size***

<b>Syntax Description</b>	<b>tcam-size</b>	Interface QoS TCAM limit. The <i>tcam-size</i> can be from 7- 446 entries.
<b>Command Default</b>	None	
<b>Command Modes</b>	Global configuration mode	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.2(1)N1(1)	This command was introduced.
<b>Usage Guidelines</b>	No interface policy entry should be present after the interface_qos limit in the QoS region of any TCAM.	
<b>Examples</b>	<p>This example shows how to set the interface QoS TCAM limit to 20 entries:</p> <pre>switch(config)# <b>configure terminal</b> switch(config)# <b>hardware profile tcam feature interface-qos limit 20</b> switch(config)# <b>show hardware profile tcam feature qos</b> Feature                Limit ----- Interface                20 vlan-qos + global-qos  428  switch(config)# <b>copy running-config startup-config</b></pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>hardware profile tcam feature interface-qos limit</b>	Configures the QoS TCAM limit

# show interface priority-flow-control

To display the priority flow control details for a specified interface, use the **show interface priority-flow-control** command.

**show interface** [**ethernet** *slot*[/*QSFP-module*]/*port*] **priority-flow-control**

## Syntax Description

**ethernet** (Optional) Specifies the Ethernet interface and its slot number and port number. The slot number is from 1 to 255. The *QSFP-module* number is from 1 to 4. The port number is from 1 to 128.

**Note** The *QSFP-module* number applies only to the QSFP+ Generic Expansion Module (GEM).

## Command Default

None

## Command Modes

Any command mode

## Command History

Release	Modification
6.0(2)N1(1)	Support for the QSFP+ GEM was added.
5.2(1)N1(1)	This command was introduced.

## Usage Guidelines

You can use this command to display the priority flow control information for the following interfaces:

- Layer 2 interface
- Layer 3 interface



**Note** Use the **no switchport** command to configure an interface as a Layer 3 interface, and then use the **flowcontrol** command to configure flow control for the interface.

If you do not specify an interface, the **show interface priority-flow-control** command will display the priority flow control information for all interfaces (Layer 2, Layer 3).

## Examples

This example shows how to display the priority flow control details for a specified interface:

```
switch# show interface ethernet 1/2 priority-flow-control
=====
Port                Mode Oper (VL bmap)  RxPPP    TxPPP
=====
Ethernet1/2        Auto On  (9)         4088353  1890
switch#
```

The interface specified is Ethernet 1/2, the PFC mode is set to negotiate PFC capability, the operation is on, and packets transmitted is 1890.

This example shows how to display the priority flow control information for a specified Layer 3 interface:

```
switch# show interface ethernet 1/5 priority-flow-control
=====
Port                Mode Oper (VL bmap)  RxPPP      TxPPP
=====
Ethernet1/5         On  On  (0)           0           0
switch#
```

This example shows how to display the priority flow control information for all interfaces:

```
switch# show interface priority-flow-control
=====
Port                Mode Oper (VL bmap)  RxPPP      TxPPP
=====
Ethernet1/1         Auto Off           0           0
Ethernet1/2         Auto Off           0           0
Ethernet1/3         Auto Off           0           0
Ethernet1/4         Auto Off           0           0
Ethernet1/5         On  On  (0)           0           0
Ethernet1/6         Auto Off           0           0
Ethernet1/7         Auto Off           0           0
Ethernet1/8         Auto Off           0           0
Ethernet1/9         Auto Off           0           0
Ethernet1/10        Auto Off           0           0
Ethernet1/11        Auto Off           0           0
Ethernet1/12        Auto Off           0           0
Ethernet1/13        Auto Off           0           0
Ethernet1/14        Auto Off           0           0
Ethernet1/15        Auto Off           0           0
Ethernet1/16        Auto Off           0           0
Ethernet1/17        Auto Off           0           0
Ethernet1/18        Auto Off           0           0
Ethernet1/19        Auto Off           0           0
Ethernet1/20        Auto Off           0           0
Ethernet1/21        Auto Off           0           0
Ethernet1/22        Auto Off           0           0
Ethernet1/23        Auto Off           0           0
Ethernet1/24        Auto Off           0           0
Ethernet1/25        Auto Off           0           0
Ethernet1/26        Auto Off           0           0
Ethernet1/27        Auto Off           0           0
Ethernet1/28        Auto Off           0           0
Ethernet1/29        Auto Off           0           0
Ethernet1/30        Auto Off           0           0
Ethernet1/31        Auto Off           0           0
Ethernet1/32        Auto Off           0           0
Ethernet3/1         Auto Off           0           0
Ethernet3/2         Auto Off           0           0
Ethernet3/3         Auto Off           0           0
Ethernet3/4         Auto Off           0           0
Ethernet3/5         Auto Off           0           0
Ethernet3/6         Auto Off           0           0
Ethernet3/7         Auto Off           0           0
Ethernet3/8         Auto Off           0           0
Ethernet3/9         Auto Off           0           0
Ethernet3/10        Auto Off           0           0
Ethernet3/11        Auto Off           0           0
```

## show interface priority-flow-control

```

Ethernet3/12      Auto Off      0      0
Ethernet3/13      Auto Off      0      0
Ethernet3/14      Auto Off      0      0
Ethernet3/15      Auto Off      0      0
Ethernet3/16      Auto Off      0      0
Ethernet3/17      Auto Off      0      0
Ethernet3/18      Auto Off      0      0
Ethernet3/19      Auto Off      0      0
Ethernet3/20      Auto Off      0      0
Ethernet3/21      Auto Off      0      0
Ethernet3/22      Auto Off      0      0
Ethernet3/23      Auto Off      0      0
Ethernet3/24      Auto Off      0      0
Ethernet3/25      Auto Off      0      0
Ethernet3/26      Auto Off      0      0
Ethernet3/27      Auto Off      0      0
Ethernet3/28      Auto Off      0      0
Ethernet3/29      Auto Off      0      0
Ethernet3/30      Auto Off      0      0
Ethernet3/31      Auto Off      0      0
Ethernet3/32      Auto Off      0      0
Ethernet100/1/1   Auto Off      0      0
Ethernet100/1/2   Auto Off      0      0
Ethernet100/1/3   Auto Off      0      0
Ethernet100/1/4   Auto Off      0      0
Ethernet100/1/5   Auto Off      0      0
Ethernet100/1/6   Auto Off      0      0
Ethernet100/1/7   Auto Off      0      0
Ethernet100/1/8   Auto Off      0      0
Ethernet100/1/9   Auto Off      0      0
Ethernet100/1/10  Auto Off      0      0
Ethernet100/1/11  Auto Off      0      0
Ethernet100/1/12  Auto Off      0      0
Ethernet100/1/13  Auto Off      0      0
Ethernet100/1/14  Auto Off      0      0
Ethernet100/1/15  Auto Off      0      0
Ethernet100/1/16  Auto Off      0      0
switch#

```

### Related Commands

Command	Description
<b>no switchport</b>	Configures a Layer 3 routed interface.
<b>priority-flow-control</b>	Sets the PFC mode for the selected interface.

# show interface untagged-cos

To display the untagged class of service (CoS) values for a specified interface, use the **show interface untagged-cos** command.

```
show interface untagged-cos [module module_no]
```

Syntax Description	module	(Optional) Displays the interfaces on this module of the switch chassis.
	<i>module_no</i>	Module number in the switch chassis. The range is from 1 to 18.

**Command Default** None

**Command Modes** EXEC mode

Command History	Release	Modification
	5.2(1)N1(1)	This command was introduced.

## Examples

This example shows how to display the untagged CoS values for interfaces:

```
switch# show interface untagged-cos
=====

Interface      Untagged-CoS
=====

port-channel1
port-channel3  2
port-channel5  5
port-channel6
port-channel12
port-channel15
port-channel20
port-channel24
port-channel25
port-channel33
port-channel41
port-channel44
--More--
switch#
```

This example shows how to display the untagged CoS values for all interfaces (Layer 2, Layer 3):

```
switch# show interface untagged-cos
S3(config-if)# show int untagged-cos
=====

Interface      Untagged-CoS
=====

port-channel100
```

## ■ show interface untagged-cos

```

port-channel127
port-channel128
Ethernet1/1
Ethernet1/2
Ethernet1/3
Ethernet1/4
Ethernet1/5 3
Ethernet1/6
Ethernet1/7
Ethernet1/8
Ethernet1/9
Ethernet1/10
Ethernet1/11
Ethernet1/12
:
<--snip-->
Ethernet3/31
Ethernet3/32
Ethernet100/1/1
Ethernet100/1/2
<--Output truncated-->
switch#

```

**Related Commands**

Command	Description
<b>untagged cos</b>	Sets a CoS value for untagged Ethernet frames.



# show policy-map

To display policy maps, use the **show policy-map** command.

```
show policy-map [type {network-qos | qos | queuing}] [policy-map-name]
```

Syntax Description	type	(Optional) Specifies the component type to display.
	<b>network-qos</b>	Displays policy maps of type network-qos.
	<b>qos</b>	Displays policy maps of type qos only.
	<b>queuing</b>	Displays policy maps of type queuing only.
	<i>policy-map-name</i>	(Optional) Named policy map. The name can be a maximum of 40 alphanumeric characters.

**Command Default** None

**Command Modes** Any command mode

Command History	Release	Modification
	5.2(1)N1(1)	This command was introduced.

**Usage Guidelines** When you enter the **show policy-map** command with no arguments or keywords, the system also displays the Control Plane Policing (CoPP) information.

**Examples** This example shows how to display a named network-qos policy map:

```
switch# show policy-map type network-qos my_pnq
```

```
Type network-qos policy-maps
=====

policy-map type network-qos my_pnq
  class type network-qos cl_nq
    multicast-optimize
    queue-limit 20480 bytes
    mtu 1500
  class type network-qos class-fcoe
    pause no-drop
    mtu 2158
  class type network-qos class-default
    mtu 1500
switch#
```

## ■ show policy-map

Related Commands	Command	Description
	<b>policy-map</b>	Creates or modifies a policy map.

# show policy-map interface

To display the service policy maps configured on the interfaces, use the **show policy-map interface** command.

```
show policy-map interface [ethernet slot[/QSFP-module]/port | port-channel channel-number]
[input | output] [type {qos | queuing}]
```

Syntax Description		
<b>ethernet</b>	(Optional)	Displays policy maps assigned to Ethernet interfaces.
<i>slot</i> [/ <i>QSFP-module</i> ]/ <i>port</i>		Ethernet interface slot number and port number. The slot number is from 1 to 255. The <i>QSFP-module</i> number is from 1 to 4. The port number is from 1 to 128.
	<b>Note</b>	The <i>QSFP-module</i> number applies only to the QSFP+ Generic Expansion Module (GEM).
<b>port-channel</b>	(Optional)	Displays policy maps assigned to EtherChannels.
<i>channel-number</i>		EtherChannel number. The number is from 1 to 4096.
<b>input</b>	(Optional)	Displays policy maps assigned to input traffic only.
<b>output</b>	(Optional)	Displays policy maps assigned to output traffic only.
<b>type</b>	(Optional)	Specifies the component type to display.
<b>qos</b>		Displays policy maps of type qos only.
<b>queuing</b>		Displays policy maps of type queuing only.

**Command Default** None

**Command Modes** Any command mode

Command History	Release	Modification
	5.2(1)N1(1)	This command was introduced.

**Usage Guidelines** Statistics are on by default.

**Examples** This example shows how to display policy maps assigned to a specified interface:

```
switch(config)# show policy-map interface ethernet 2/10
```

This example shows how to display QoS policy maps assigned to a specified interface:

```
switch# show policy-map interface ethernet 3/1 type qos
```

```
Global statistics status : disabled
```

```
Ethernet3/1
```

```

Service-policy (qos) input:  s
policy statistics status:   disabled

Class-map (qos):  s1 (match-any)
  Match: cos 0
  set qos-group 2

Class-map (qos):  class-1-2 (match-any)
  Match: cos 1-2
  set qos-group 3

Class-map (qos):  class-4-5 (match-any)
  Match: cos 4-5
  set qos-group 4

Class-map (qos):  class-6 (match-any)
  Match: cos 6
  set qos-group 5

Class-map (qos):  class-fcoe (match-any)
  Match: cos 3
  set qos-group 1

Class-map (qos):  class-default (match-any)
  Match: any
  set qos-group 0

switch#

```

This example shows how to display the policy maps assigned to the output traffic of a specified interface:

```
switch# show policy-map interface ethernet 3/1 output
```

```

Global statistics status :  disabled

Ethernet3/1

Service-policy (queuing) output:  pqe1
policy statistics status:   disabled

Class-map (queuing):  cqe1 (match-any)
  Match: qos-group 2
  bandwidth percent 20

Class-map (queuing):  cqe2 (match-any)
  Match: qos-group 3
  priority

Class-map (queuing):  cqe3 (match-any)
  Match: qos-group 4
  bandwidth percent 20

Class-map (queuing):  cqe4 (match-any)
  Match: qos-group 5
  bandwidth percent 40

Class-map (queuing):  class-fcoe (match-any)
  Match: qos-group 1
  bandwidth percent 10

Class-map (queuing):  class-default (match-any)
  Match: qos-group 0

```

```
bandwidth percent 5
```

```
switch#
```

This example shows how to display the policy maps assigned to the input traffic of a virtual Ethernet interface:

```
switch# show policy-map interface vethernet 10 input type queuing
```

```
Global statistics status : disabled
```

```
Vethernet10
```

```
Service-policy (queuing) input: p2
policy statistics status: disabled
```

```
Class-map (queuing): class-default (match-any)
Match: qos-group 0
bandwidth percent 50
shape 30 kbps
```

```
switch#
```

#### Related Commands

Command	Description
<b>policy-map</b>	Creates or modifies a policy map.
<b>service-policy (virtual Ethernet interface)</b>	Attaches a policy map to a virtual Ethernet interface.

# show policy-map interface brief

To display policy maps applied to interfaces in a brief format, use the **show policy-map interface brief** command.

## show policy-map interface brief

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

**Command Default** None

**Command Modes** Any command mode

Command History	Release	Modification
	5.2(1)N1(1)	This command was introduced.

**Examples** This example shows how to display assigned policy maps in a brief format:

```
switch(config)# show policy-map interface brief
```

```

Interface      [Status]:INP QOS      INP QUE      OUT QUE
=====
port-channel1  [Active]:p1           pqe1         pqe1
port-channel3  [Active]:s            pqe1         pqe1
port-channel5  [Active]:s            pqe1         pqe1
port-channel6  [Active]:s            pqe1         pqe1
port-channel12 [Active]:p12         p12-in      p12-out
port-channel15 [Active]:s            pqe1         pqe1
port-channel20 [Active]:s            pqe1         pqe1
port-channel24 [Active]:p4           pqe1         pqe1
port-channel25 [Active]:p4           pqe1         pqe1
port-channel33 [Active]:s            pqe1         pqe1
port-channel41 [Active]:s            pqe1         pqe1
port-channel44 [Active]:s            pqe1         pqe1
port-channel48 [Active]:s            pqe1         pqe1
port-channel101 [Active]:s           pqe1         pqe1
port-channel102 [Active]:p4
port-channel103 [Active]:p4
port-channel104 [Active]:p4
port-channel105 [Active]:p4
port-channel106 [Active]:p4
port-channel107 [Active]:p4
--More--
switch(config)#
```

This example shows how to display assigned policy maps in a brief format:

```
switch# show policy-map interface brief
S3(config-if)# show policy-map interface brief
```

```

Interface/VLAN [Status]:INP QOS      OUT QOS      INP QUE      OUT QUE
=====
port-channel100 [Active]:default-in-po          default-in-po default-out-p
port-channel127 [Active]:default-in-po          default-in-po default-out-p
port-channel128 [Active]:default-in-po          default-in-po default-out-p
Ethernet1/1      [Active]:default-in-po          default-in-po default-out-p
Ethernet1/2      [Active]:default-in-po          default-in-po default-out-p
Ethernet1/3      [Active]:default-in-po          default-in-po default-out-p
Ethernet1/4      [Active]:default-in-po          default-in-po default-out-p
Ethernet1/5      [Active]:default-in-po          default-in-po default-out-p
Ethernet1/6      [Active]:default-in-po          default-in-po default-out-p
:
<Snip>
:
Ethernet3/31     [Active]:default-in-po          default-in-po default-out-p
Ethernet3/32     [Active]:default-in-po          default-in-po default-out-p
Ethernet100/1/1 [Active]:default-in-po          default-in-po default-out-p
Ethernet100/1/2 [Active]:default-in-po          default-in-po default-out-p
Ethernet100/1/3 [Active]:default-in-po          default-in-po default-out-p
<--Output truncated-->
switch#

```

**Related Commands**

Command	Description
<b>policy-map</b>	Creates or modifies a policy map.
<b>show policy-map</b>	Displays policy maps.

# show policy-map interface control-plane

To display the control-plane policy maps applied to interfaces, use the **show policy-map interface control-plane** command.

## show policy-map interface control-plane

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

**Command Default** None

**Command Modes** Any command mode

Command History	Release	Modification
	5.2(1)N1(1)	This command was introduced.

## Examples

This example shows how to display assigned control-plane policy maps:

```
switch# show policy-map interface control-plane
control Plane

service-policy input: copp-system-policy-default

class-map copp-system-class-igmp (match-any)
match protocol igmp
police cir 1024 kbps , bc 65535 bytes
conformed 0 bytes; action: transmit
violated 0 bytes; action: drop

class-map copp-system-class-pim-hello (match-any)
match protocol pim
police cir 1024 kbps , bc 4800000 bytes
conformed 0 bytes; action: transmit
violated 0 bytes; action: drop

class-map copp-system-class-bridging (match-any)
match protocol bridging
police cir 20000 kbps , bc 4800000 bytes
conformed 0 bytes; action: transmit
violated 0 bytes; action: drop

class-map copp-system-class-arp (match-any)
match protocol arp
<--Output truncated-->
switch(config)#
```



Related Commands	Command	Description
	<b>policy-map</b>	Creates or modifies a policy map.
	<b>show policy-map</b>	Displays policy maps.

# show policy-map system

To display all active policy maps in the system, use the **show policy-map** system command.

```
show policy-map system [type {network-qos | qos [input] | queuing [input | output]}]
```

Syntax Description	type	(Optional) Specifies the component type to display.
	<b>network-qos</b>	Displays policy maps of type network-qos only.
	<b>qos</b>	Displays policy maps of type qos only.
	<b>input</b>	(Optional) Displays policy maps assigned to input traffic.
	<b>queuing</b>	Displays policy maps of type queuing only.
	<b>output</b>	(Optional) Displays policy maps assigned to output traffic.

**Command Default** All policy maps

**Command Modes** EXEC mode

Command History	Release	Modification
	5.2(1)N1(1)	This command was introduced.

**Usage Guidelines** If you do not specify a policy map type and name, the system displays all the active policy maps in the system.

**Examples** This example shows how to display all active policy maps in the system:

```
switch# show policy-map system

Type network-qos policy-maps
=====

policy-map type network-qos s
  class type network-qos s2      match qos-group 3

    mtu 4000
  class type network-qos s1      match qos-group 2

    mtu 5000
    set cos 0
    multicast-optimize
    pause no-drop
  class type network-qos s3      match qos-group 4

    mtu 9216
  class type network-qos s4      match qos-group 5
```

```
    mtu 9216
class type network-qos class-fcoe      match qos-group 1

    pause no-drop
    mtu 2158
class type network-qos class-default  match qos-group 0

    mtu 1500

Service-policy (qos) input:  s
policy statistics status:  disabled

Class-map (qos):  s1 (match-any)
  Match: cos 0
  set qos-group 2

Class-map (qos):  class-1-2 (match-any)
  Match: cos 1-2
  set qos-group 3

Class-map (qos):  class-4-5 (match-any)
  Match: cos 4-5
  set qos-group 4

Class-map (qos):  class-6 (match-any)
  Match: cos 6
  set qos-group 5

Class-map (qos):  class-fcoe (match-any)
  Match: cos 3
  set qos-group 1

Class-map (qos):  class-default (match-any)
  Match: any
  set qos-group 0

Service-policy (queuing) input:  pqe1
policy statistics status:  disabled

Class-map (queuing):  cqe1 (match-any)
  Match: qos-group 2
  bandwidth percent 20

Class-map (queuing):  cqe2 (match-any)
  Match: qos-group 3
  priority

Class-map (queuing):  cqe3 (match-any)
  Match: qos-group 4
  bandwidth percent 20

Class-map (queuing):  cqe4 (match-any)
  Match: qos-group 5
  bandwidth percent 40

Class-map (queuing):  class-fcoe (match-any)
  Match: qos-group 1
  bandwidth percent 10

Class-map (queuing):  class-default (match-any)
  Match: qos-group 0
  bandwidth percent 5
```

```

Service-policy (queuing) output:  pqe1
policy statistics status:  disabled

Class-map (queuing):  cqe1 (match-any)
  Match: qos-group 2
  bandwidth percent 20

Class-map (queuing):  cqe2 (match-any)
  Match: qos-group 3
  priority

Class-map (queuing):  cqe3 (match-any)
  Match: qos-group 4
  bandwidth percent 20

Class-map (queuing):  cqe4 (match-any)
  Match: qos-group 5
  bandwidth percent 40

Class-map (queuing):  class-fcoe (match-any)
  Match: qos-group 1
  bandwidth percent 10

Class-map (queuing):  class-default (match-any)
  Match: qos-group 0
  bandwidth percent 5

switch#

```

This example shows how to display active network-qos policy maps in the system:

```

switch# show policy-map system type network-qos

Type network-qos policy-maps
=====

policy-map type network-qos s
  class type network-qos s2      match qos-group 3

  mtu 4000
  class type network-qos s1      match qos-group 2

  mtu 5000
  set cos 0
  multicast-optimize
  pause no-drop
  class type network-qos s3      match qos-group 4

  mtu 9216
  class type network-qos s4      match qos-group 5

  mtu 9216
  class type network-qos class-fcoe  match qos-group 1

  pause no-drop
  mtu 2158
  class type network-qos class-default  match qos-group 0

  mtu 1500
switch#

```

Related Commands	Command	Description
	show policy-map	Displays all policy maps.

# show policy-map type control-plane

To display control plane policy map information, use the **show policy-map type control-plane** command.

```
show policy-map type control-plane [expand] [name policy-map-name]
```

Syntax Description	expand	(Optional) Displays expanded control plane policy map information.
	<b>name</b> <i>policy-map-name</i>	(Optional) Specifies the name of the control plane policy map. The name is case sensitive and can be a maximum of 64 alphanumeric characters.

Command Default	None
-----------------	------

Command Modes	Any command mode
---------------	------------------

Command History	Release	Modification
	5.2(1)N1(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
------------------	--

Examples	This example shows how to display control plane policy map information:
----------	---

```
switch# show policy-map type control-plane

policy-map type control-plane copp-system-policy-customized
  class copp-system-class-igmp
    police cir 1024 kbps bc 65535 bytes
  class copp-system-class-pim-hello
    police cir 1024 kbps bc 4800000 bytes
  class copp-system-class-bridging
    police cir 20000 kbps bc 4800000 bytes
  class copp-system-class-arp
    police cir 1024 kbps bc 3600000 bytes
  class copp-system-class-dhcp
    police cir 1024 kbps bc 4800000 bytes
  class copp-system-class-mgmt
    police cir 12000 kbps bc 4800000 bytes
  class copp-system-class-lacp
    police cir 1024 kbps bc 4800000 bytes
  class copp-system-class-lldp
    police cir 2048 kbps bc 4800000 bytes
  class copp-system-class-udld
    police cir 2048 kbps bc 4800000 bytes
<--Output truncated-->
switch#
```

This example shows how to display control plane policy map information in expanded format:

```
switch# show policy-map type control-plane expand
```

**Related Commands**

Command	Description
<b>policy-map type control-plane</b>	Creates or configures a control plane policy map.

# show policy-map vlan

To display VLAN policy maps, use the **show policy-map vlan** command.

```
show policy-map vlan [vlan-number]
```

Syntax Description	vlan-number	Displays the QoS policies configured on the specified VLAN.
--------------------	-------------	---

Command Default	None
-----------------	------

Command Modes	Any command mode
---------------	------------------

Command History	Release	Modification
	5.2(1)N1(1)	This command was introduced.

Usage Guidelines	You must configure the interface QoS limit and policy map before using the <b>show policy-map vlan</b> command. The TCAM must have enough free entries to configure the service policy on the VLAN.
------------------	---

Examples	This example shows how to display the QoS policies configured on the specified VLAN:
----------	--

```
switch# show policy-map vlan 101

Service-policy (qos) input: vpq1
=====

policy status statistics: disabled
  class-map (qos): vcq2 (match-any)
    match: cos 2
    match: precedence 1
    set cos-group 2
    set prec 2

  class-map (qos): vcq4 (match-any)
    match: access-group ipacl1-vq
    match: prec 7
    set cos-group 4

  class-map (qos): vcq4 (match-any)
    match: cos 1
    set cos-group 3

  class-map (qos): vcq4 (match-any)
    match: any
    set cos-group 0
switch#
```



**Related Commands**

<b>Command</b>	<b>Description</b>
<b>policy-map</b>	Creates or modifies a policy map.

# show queuing interface

To display the queuing information on interfaces, use the **show queuing interface** command.

**show queuing interface** [**ethernet** *slot*[/*QSFP-module*]/*port*]

Syntax Description		
<b>ethernet</b>	(Optional) Specifies that queuing information to be displayed for an Ethernet interface.	
<i>slot</i>	Slot number of the Ethernet interface. The range is from 1 to 255.	
<i>QSFP-module</i>	The <i>QSFP-module</i> number is from 1 to 4.	
	<b>Note</b> The <i>QSFP-module</i> number applies only to the QSFP+ Generic Expansion Module (GEM).	
<i>port</i>	Port number of the Ethernet interface. The range is from 1 to 128.	

**Command Default** Displays the queuing information for all interfaces.

**Command Modes** EXEC mode

Command History	Release	Modification
	6.0(2)N1(1)	Support for the QSFP+ GEM was added.
	5.2(1)N1(1)	This command was introduced.

## Examples

This example shows how to display the queuing information for all interfaces:

```
switch# show queuing interface
Ethernet1/1 queuing information:
  TX Queuing
    qos-group  sched-type  oper-bandwidth
      0         WRR        73
      1         WRR        0
      2         WRR        1
      3         WRR        6
      4         WRR        20
      5         priority   0

  RX Queuing
    qos-group 0
    q-size: 25600, HW MTU: 9280 (9216 configured)
    drop-type: drop, xon: 0, xoff: 160
    Statistics:
      Pkts received over the port           : 0
      Ucast pkts sent to the cross-bar      : 0
      Mcast pkts sent to the cross-bar     : 0
      Ucast pkts received from the cross-bar : 0
      Pkts sent to the port                 : 0
      Pkts discarded on ingress             : 0
      Per-priority-pause status             : Rx (Inactive), Tx (Inactive)
```

```
qos-group 1
q-size: 76800, HW MTU: 2240 (2158 configured)
drop-type: no-drop, xon: 128, xoff: 240
Statistics:
  Pkts received over the port          : 0
  Ucast pkts sent to the cross-bar     : 0
  Mcast pkts sent to the cross-bar     : 0
  Ucast pkts received from the cross-bar : 0
  Pkts sent to the port                : 0
  Pkts discarded on ingress            : 0
  Per-priority-pause status            : Rx (Inactive), Tx (Inactive)

qos-group 2
q-size: 20480, HW MTU: 9280 (9216 configured)
drop-type: drop, xon: 0, xoff: 128
Statistics:
  Pkts received over the port          : 0
  Ucast pkts sent to the cross-bar     : 0
  Mcast pkts sent to the cross-bar     : 0
  Ucast pkts received from the cross-bar : 0
  Pkts sent to the port                : 0
  Pkts discarded on ingress            : 0
  Per-priority-pause status            : Rx (Inactive), Tx (Inactive)

qos-group 3
q-size: 20480, HW MTU: 9280 (9216 configured)
drop-type: drop, xon: 0, xoff: 128
Statistics:
  Pkts received over the port          : 0
  Ucast pkts sent to the cross-bar     : 0
  Mcast pkts sent to the cross-bar     : 0
  Ucast pkts received from the cross-bar : 0
  Pkts sent to the port                : 0
  Pkts discarded on ingress            : 0
  Per-priority-pause status            : Rx (Inactive), Tx (Inactive)

qos-group 4
q-size: 20480, HW MTU: 9280 (9216 configured)
drop-type: drop, xon: 0, xoff: 128
Statistics:
  Pkts received over the port          : 0
  Ucast pkts sent to the cross-bar     : 0
  Mcast pkts sent to the cross-bar     : 0
  Ucast pkts received from the cross-bar : 0
  Pkts sent to the port                : 0
  Pkts discarded on ingress            : 0
  Per-priority-pause status            : Rx (Inactive), Tx (Inactive)

qos-group 5
q-size: 81920, HW MTU: 9280 (9216 configured)
drop-type: no-drop, xon: 128, xoff: 230
Statistics:
  Pkts received over the port          : 0
  Ucast pkts sent to the cross-bar     : 0
  Mcast pkts sent to the cross-bar     : 0
  Ucast pkts received from the cross-bar : 0
  Pkts sent to the port                : 0
  Pkts discarded on ingress            : 0
  Per-priority-pause status            : Rx (Inactive), Tx (Inactive)

Total Multicast crossbar statistics:
  Mcast pkts received from the cross-bar : 0
```

```

Ethernet1/2 queuing information:
  TX Queuing
    qos-group  sched-type  oper-bandwidth
      0         WRR        73
      1         WRR        0
      2         WRR        1
      3         WRR        6
      4         WRR        20
      5         priority   0
<---output truncated--->
switch#

```

This example shows how to display the queuing information on Ethernet interface 1/2:

```

switch# show queuing interface ethernet 1/2
Ethernet1/2 queuing information:
  TX Queuing
    qos-group  sched-type  oper-bandwidth
      0         WRR        73
      1         WRR        0
      2         WRR        1
      3         WRR        6
      4         WRR        20
      5         priority   0

  RX Queuing
    qos-group 0
    q-size: 25600, HW MTU: 9280 (9216 configured)
    drop-type: drop, xon: 0, xoff: 160
    Statistics:
      Pkts received over the port           : 0
      Ucast pkts sent to the cross-bar      : 0
      Mcast pkts sent to the cross-bar     : 0
      Ucast pkts received from the cross-bar : 1851526994
      Pkts sent to the port                 : 1851527000
      Pkts discarded on ingress             : 0
      Per-priority-pause status            : Rx (Inactive), Tx (Inactive)

    qos-group 1
    q-size: 76800, HW MTU: 2240 (2158 configured)
    drop-type: no-drop, xon: 128, xoff: 240
    Statistics:
      Pkts received over the port           : 0
      Ucast pkts sent to the cross-bar      : 0
      Mcast pkts sent to the cross-bar     : 0
      Ucast pkts received from the cross-bar : 0
      Pkts sent to the port                 : 0
      Pkts discarded on ingress             : 0
      Per-priority-pause status            : Rx (Inactive), Tx (Inactive)

    qos-group 2
    q-size: 20480, HW MTU: 9280 (9216 configured)
    drop-type: drop, xon: 0, xoff: 128
    Statistics:
      Pkts received over the port           : 0
      Ucast pkts sent to the cross-bar      : 0
      Mcast pkts sent to the cross-bar     : 0
      Ucast pkts received from the cross-bar : 0
      Pkts sent to the port                 : 0
      Pkts discarded on ingress             : 0
      Per-priority-pause status            : Rx (Inactive), Tx (Inactive)

--More--
switch#

```

Table 1 describes the significant fields shown in the display.

**Table 1** *show queuing interface Field Descriptions*

Field	Description
Ethernet ...	Ethernet interface information.
qoS-group	Information about QoS groups configured on the switch.
sched-type	Type of schedule.
WRR	Weighted round robin(WRR). Queue eight for scheduling.
Priority	Priority of the queue.
q-size	Queue size.
drop-type	Queue drop type can be either drop or no-drop.
MTU	Maximum transmit unit (MTU) for the queue.
Xon	Transmission on at this threshold.
Xoff	Transmission off at this threshold.

#### Related Commands

Command	Description
<b>hardware buffer-threshold</b>	Configures the hardware buffer threshold.
<b>hardware queue-limit</b>	Configures the hardware queue limit.
<b>show fex</b>	Displays all configured Fabric Extender chassis connected to the switch.

# show running-config copp

To display Control Plane Policing (CoPP) configuration information in the running configuration, use the **show running-config copp** command.

**show running-config copp [all]**

<b>Syntax Description</b>	<b>all</b> (Optional) Displays configured and default information.
---------------------------	--

<b>Command Default</b>	None
------------------------	------

<b>Command Modes</b>	Any command mode
----------------------	------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.2(1)N1(1)	This command was introduced.

<b>Usage Guidelines</b>	This command does not require a license.
-------------------------	--

<b>Examples</b>	This example shows how to display the configured CoPP information in the running configuration:
-----------------	---

```
switch# show running-config copp
```

This example shows how to display the configured and default CoPP information in the running configuration:

```
switch# show running-config copp all
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>control-plane</b>	Enters the control-plane configuration mode.
	<b>copy running-config startup-config</b>	Copies the running configuration to the startup configuration file.
	<b>show startup-config aclmgr</b>	Displays the ACL startup configuration.
	<b>show startup-config copp</b>	Displays the CoPP configuration information in the startup configuration file.

# show running-config ipqos

To display information about the running-system configuration for quality of service (QoS), use the **show running-config ipqos** command.

**show running-config ipqos [all]**

<b>Syntax Description</b>	<b>all</b> (Optional) Displays configured and default information.				
<b>Command Default</b>	None				
<b>Command Modes</b>	EXEC mode				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>5.2(1)N1(1)</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	5.2(1)N1(1)	This command was introduced.
Release	Modification				
5.2(1)N1(1)	This command was introduced.				

**Usage Guidelines** Use this command to view a list of default and configured class maps and policy maps and the policies attached to interfaces.

**Examples** This example shows how to display QoS information:

```
switch# show running-config ipqos

!Command: show running-config ipqos
!Time: Thu Sep  9 06:26:49 2010

version 5.2(1)N1(1)
class-map type qos class-fcoe
  match cos 4
class-map type qos match-all 1
  match cos 1
class-map type qos match-all 2
  match cos 2
class-map type qos match-all 3
  match cos 3
class-map type qos match-all 4
class-map type qos match-any 5
  match cos 5,7
class-map type qos match-all arp
  match protocol dhcp
  match protocol arp
  match cos 3
class-map type qos match-all cos
  match cos 5
class-map type qos match-all dot
  match access-group name dot
class-map type qos match-all my_class
```

```

    match dscp 3
    match precedence 0
    match protocol dhcp
class-map type qos match-all new
    match protocol netbios
:
<snip>
class-map type queuing my_qclass
    match qos-group 3
class-map type queuing Video-Signalling
    match qos-group 4
class-map type queuing class-ip-multicast
    match qos-group 4
policy-map type qos 5
    class 5
        set qos-group 2
    class Video
        set qos-group 3
policy-map type qos my_policy
    class my_class
        set precedence 5
        set dscp 5
    class myQAll
        set precedence 3
        set dscp 48
:
<snip>
policy-map type network-qos my_policy1
    class type network-qos my_class1
        pause no-drop buffer-size 143680 pause-threshold 58860 resume-threshold 3840
    class type network-qos class-fcoe
        pause no-drop
        mtu 2158
    class type network-qos class-default
:
<snip>
system qos
    service-policy type qos input voice
    service-policy type network-qos Network
    service-policy type queuing output Queu
    service-policy type queuing input Queue

<--output truncated-->
switch#

```

**Related Commands**

Command	Description
<b>copy running-config startup-config</b>	Copies the running configuration to the startup configuration file.
<b>show class-map</b>	Displays information about class maps.
<b>show policy-map</b>	Displays information about policy maps.



# show startup-config copp

To display the Control Plane Policing (CoPP) configuration information in the startup configuration, use the **show startup-config copp** command.

## **show startup-config copp**

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

**Command Default** None

**Command Modes** Any command mode

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.2(1)N1(1)	This command was introduced.

**Usage Guidelines** This command does not require a license.

**Examples** This example shows how to display the CoPP information in the startup configuration:

```
switch# show startup-config copp
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>control-plane</b>	Enters the control-plane configuration mode.
	<b>copy running-config startup-config</b>	Copies the running configuration to the startup configuration file.
	<b>show running-config copp</b>	Displays the CoPP configuration information in the running configuration.

# show startup-config ipqos

To display quality of service (QoS) configuration information in the startup configuration, use the **show startup-config ipqos** command.

**show startup-config ipqos [all]**

<b>Syntax Description</b>	<b>all</b> (Optional) Displays configured and default information.				
<b>Command Default</b>	None				
<b>Command Modes</b>	EXEC mode				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>5.2(1)N1(1)</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	5.2(1)N1(1)	This command was introduced.
Release	Modification				
5.2(1)N1(1)	This command was introduced.				

## Examples

This example shows how to display the QoS information in the startup configuration file:

```
switch# show startup-config ipqos

!Command: show startup-config ipqos
!Time: Thu Sep  9 07:42:33 2010
!Startup config saved at: Tue Sep  7 08:45:03 2010

version 5.0(2)N1(1)
class-map type qos class-fcoe
  match cos 4
class-map type qos match-all 1
  match cos 1
class-map type qos match-all 2
  match cos 2
class-map type qos match-all 3
  match cos 3
class-map type qos match-all 4
class-map type qos match-any 5
  match cos 5,7
class-map type qos match-all arp
  match protocol dhcp
  match protocol arp
  match cos 3
class-map type qos match-all cos
  match cos 5
class-map type qos match-all dot
  match access-group name dot
class-map type qos match-all new
  match protocol netbios
class-map type qos match-all rtp
  match ip rtp 2000-40000
class-map type qos match-all dscp
  match dscp 46
```

```

    match precedence 7
    match protocol arp
class-map type qos match-all Video
    match dscp 34
class-map type qos match-all Voice
    match dscp 40,46
class-map type qos match-all class1
    match ip rtp 2000
class-map type qos match-all class2
    match cos 1
class-map type qos match-all class3
    match protocol arp
class-map type qos match-all class4
    match protocol dhcp
class-map type qos match-all class5
    match protocol ldp
:
:
<--output truncated--

switch#

```

**Related Commands**

Command	Description
<b>copy running-config startup-config</b>	Copies the running configuration to the startup configuration file.
<b>show class-map</b>	Displays information about class maps.
<b>show policy-map</b>	Displays information about policy maps.

# show wrr-queue cos-map

To display the mapped class of service (CoS) values to egress queues, use the **show wrr-queue cos-map** command.

## show wrr-queue cos-map

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

**Command Default** None

**Command Modes** EXEC mode

Command History	Release	Modification
	5.2(1)NI(1)	This command was introduced.

**Examples** This example shows how to display the CoS values that are mapped to the egress queue:

```
switch# show wrr-queue cos-map
MCAST Queue ID      Cos Map
0                    0 1
1                    2
2                    3 4 5
3                    6 7
switch#
```

Related Commands	Command	Description
	wrr-queue cos-map	Maps class of service (CoS) values to select one of the egress queues.