Cambium Networks

cnMatrix QoS Parameters and Commands

Commands	Description	CLI Mode
priority-map <priority-map-Id(1-65535)>	Adds a Priority Map entry. Configures the priority map index for the incoming packet received over ingress port with specified incoming priority. Returns the Priority Map Configuration mode. The no form of the command deletes a Priority Map entry.	Global Configuration
map in-priority-type { vlanPri | dot1P <integer(0-1)> | ipDscp | vlanDEI } in-priority <integer(0-63)> regen-priority <integer(0-63)> [regen-color { green | yellow | red }] • in-priority-type - Configures the incoming priority type for the specified interface. The types are: - vlanPri – Sets the priority type to VLAN Priority. - dot1P <integer(0-1)> – VLAN Drop Eligibility Indicator. This value ranges from 0 to 1. - ipDscp – Sets the priority type to IP Differentiated Services Code Point. - vlanDEI – Sets the priority type to VLAN Drop Eligibility Indicator. • in-priority <integer(0-63)> - Configures the Incoming priority value determined for the received frame. This value ranges from 0 to 63. • regen-priority <integer(0-63)> - Configures the Regenerated priority value determined for the received frame. This value ranges from 0 to 63. • regen-color - Sets the type of the regenerated color. The types are: - green – Conform Action. - yellow – Exceed Action. - red – Violate Action.	Adds a Priority Map Entry for mapping an incoming priority to a regenerated priority	Priority Map Configuration
class-map <class-map-id(1-65535)>	Adds a Class Map entry. Configures an Index that enumerates the Classifier table entries. Returns the Class Map Configuration mode. The no form of the command deletes a Class Map entry.	Global Configuration
match access-group { mac-access-list <integer(0-65535)> | ip-access-list <integer(0-65535)> | priority-map <integer(0-65535)>}	Sets Class Map parameters using MAC	Class Map Configuration

Commands	Description	CLI Mode
• mac-access-list <integer(0-65535)> - Identifier of the MAC ACL. • ip-access-list <integer(0-65535)> - Identifier of the IP ACL. • priority-map <integer(0-65535)>- Identifier of the priority map.	ACL, IP ACL, or Priority Map.	
set class <integer(1-65535)> [pre-color { green | yellow | red | none }] [regen-priority <integer(0-7)> group-name <string(31)>] • <class integer(1-65535)> – Traffic CLASS to which an incoming frame pattern is classified. • pre-color { green | yellow | red | none } - Color of the packet prior to metering. This can be any one of the following: - none – Traffic is not pre-colored. - green – Traffic conforms to SLAs (Service Level Agreements. - yellow – Traffic exceeds the SLAs. - red – Traffic violates the SLAs. • regen-priority <integer(0-7)> - Regenerated priority value determined for the input CLASS. • group-name <string(31)>- Unique identification of the group to which an input CLASS belongs.	Sets CLASS for L2and/or L3 filters or Priority Map ID and adds a class to Priority Map entry with regenerated priority. The no form of the command deletes a class to Priority Map Table entry.	Class Map Configuration
meter <integer(1-65535)>	Creates a Meter. Configures an Index that enumerates the Meter entries. Returns the Meter Configuration mode. The no form of the command deletes a Meter.	Global Configuration
meter-type { srTCM | trTCM } [cir <integer(0-10485760)>] [cbs <integer(0-10485760)>] [eir <integer(0-10485760)>] [ebs <integer(0-10485760)>] • srTCM - Configures the meter type as Single Rate Three Color Marker Metering as defined by RFC 2697. Valid value for Given Meter Type are CIR, CBS and EBS • trTCM - Configures the meter type as Two Rate Three Color Marker Metering as defined by RFC 2698. Valid value for Given Meter Type are CIR, CBS, EIR, and EBS • cir <integer(0-10485760)> - Committed information rate. • cbs <integer(0-10485760)> - Committed burst size. • eir <integer(0-10485760)> - Excess information rate. • ebs <integer(0-10485760)> - Excess burst size.	Sets Meter parameters: CIR, CBS, EIR, EBS, meter type.	Meter Configuration
policy-map <integer(1-65535)>	Creates a policy map. Configures an Index that enumerates the policy-map table entries. Returns the Policy Map Configuration mode. The no form of the command deletes a policy map.	Global Configuration
set policy [class<integer(0-65535)>] [default-priority-type { none | { vlanPri <integer(0-7)>| dot1P <integer(0-7)> <integer(0-1)> | ipDscp <integer(0-63)> }}]	Sets CLASS for policy.	Policy Map Configuration

Commands	Description	CLI Mode
• class <integer(0-65535) - Specifies the Traffic CLASS for which the policy-map needs to be applied. • default-priority-type { none | { vlanPri <integer(0-7)>| dot1P <integer(0-7)> <integer(0-1)> | ipDscp <integer(0-63)> }}]- Sets the Per-Hop Behvior (PHB) type to be used for filling the default PHB for the policy-map entry. The types are: - none – Sets the PHB type as none. - vlanPri – Sets the PHB type as VLAN Priority. - dot1P <integer(0-7)> <integer(0-1)> – Sets the PHB type as dot1P. This value ranges from 0 to 7 for vlanpri and ranges from 0 to 1 for default DEI. - ipDscp <integer(0-63)> – Sets the PHB type as IP Differentiated Services Code Point.  NOTE: This value can be overwritten by the meter used for the policy-map.	The no form of the command sets the default value for interface in this policy.	
set meter <integer(1-65535)> [conform-action { set-cos-transmit <short(0-7)> set-de-transmit <short(0-1)> set-ip-dscp-transmit <short(0-63)> }] [exceed-action {drop | set-cos-transmit <short(0-7)> set-de-transmit <short(0-1)> | set-ip-dscp-transmit <short(0-63)> }] [violate-action {drop | set-cos-transmit <short(0-7)> set-de-transmit <short(0-1)> | set-ip-dscp-transmit <short(0-63)> }] [set-conform-newclass <integer(0-65535)>] [set-exceed-newclass <integer(0-65535)>] [set-violate-newclass <integer(0-65535)>] Available options: • conform-action { set-cos-transmit <short(0-7)> set-de-transmit <short(0-1)> set-ip-dscp-transmit <short(0-63)> } – Configures action to be performed on the packet, when the packets are found to be In profile (conform). Options are: - cos-transmit-set <short(0-7)> – Sets the VLAN priority of the outgoing packet. - de-transmit-set <short(0-1)> – Sets the VLAN drop eligible indicator of the outgoing packet. - set-cos-transmit <short(0-7)> - Sets the VLAN priority of the outgoing packet. - set-de-transmit <short(0-1)> - Sets the VLAN drop eligible indicator of the outgoing packet. - set-port <iftype> <ifnum> - Sets the new port value. - inner-vlan-pri-set <short(0-7)> - Sets the inner VLAN priority of the outgoing packet. - inner-vlan-de-set <short(0-1)> - Sets the inner VLAN DE of the outgoing packet. - set-inner-vlan-pri <short(0-7)> - Sets the inner VLAN priority of the outgoing packet. - set-inner-vlan-de <short(0-1)> - Sets the inner VLAN DE of the outgoing packet. - set-ip-prec-transmit - Sets the new IP Type of Service. . - set-mpls-exp-transmit - Sets the MPLS experimental bits of the outgoing packet	Sets Policy parameters such as Meter and Meter Actions. The no form of the command removes the Meter from the Policy and the Meter Actions.	Policy Map Configuration

Commands	Description	CLI Mode
- set-ip-dcp-transmit<short(0-63)> - Sets the new differentiated services code point value. • exceed-action {drop | set-cos-transmit <short(0-7)> set-de-transmit <short(0-1)> | set-ip-dscp-transmit <short(0-63)> } – - Action to be performed on the packet, when the packets are found to be In profile (exceed). Options are: - drop – Drops the packet. - cos-transmit-set <short(0-7)>- Sets the VLAN priority of the outgoing packet. - de-transmit-set <short(0-1)> - Sets the VLAN Drop Eligible indicator of the outgoing packet. - set-cos-transmit<short(0-7)> – Sets the VLAN priority of the outgoing packet. - set-de-transmit<short(0-1)> – Sets the VLAN Drop Eligible indicator of the outgoing packet. - inner-vlan-pri-set <short(0-7) - Sets the inner VLAN priority of the outgoing packet. - set-inner-vlan-de <short(0-1)> - Sets the inner VLAN DE of the outgoing packet. - set-mpls-exp-transmit<short(0-7)> – Sets the MPLS Experimental bits of the outgoing packet. - set-ip-prec-transmit<short(0-7)> – Sets the new IP TOS value. - set-ip-dscp-transmit<short(0-63)> – Sets the new DSCP value. • violate-action {drop | set-cos-transmit <short(0-7)> set-de-transmit <short(0-1)> | set-ip-dscp-transmit <short(0-63)> } - Action to be performed on the packet, when the packets are found to be out of profile. • set-conform-newclass<integer(0-65535)> – Represents the Traffic CLASS to which an incoming frame pattern is classified after metering. • set-exceed-newclass<integer(0-65535)> - Represents the Traffic CLASS to which an incoming frame pattern is classified after metering. • set-violate-newclass<integer(0-65535)> - Represents the Traffic CLASS to which an incoming frame pattern is classified after metering.		
shape-template <integer(1-65535)> [cir <integer(1-1000000)>] [cbs <integer(0-4095)>] Available options: • shape-template <integer(1-65535)> - Configures the shape Template Table index. This value ranges from 1 to 65535. • cir <integer(1-1000000)> - Configures the Committed information rate for packets through the queue. • cbs <integer(0-4095)>)> - Configures the Committed burst size for packets through the queue.	Creates a Shape Template. The no form of the command deletes a Shape Template.	Global Configuration

Commands	Description	CLI Mode
scheduler <integer(1-65535)> interface <iftype> <ifnum> [sched-algo {strict-priority | rr | wrr | strict-wrr}] Available options: • scheduler <integer(1-65535)> - Scheduler identifier that uniquely identifies the scheduler in the system/egress interface. • interface <iftype> <ifnum> - Interface type and port number. • sched-algo {strict-priority | rr | wrr | strict-wrr}]- Specifies the packet scheduling algorithm: - strict-priority – Packets from any source are matched. - rr – roundRobin - wrr – weightedRoundRobin - strict-wrr – strictWeightedRoundRobin	Creates a Scheduler and configures the Scheduler parameters. The no form of the command deletes a scheduler.	Global Configuration
queue-map class <integer(1-100)> queue-id <integer(1-8)> Available options: • class <integer(1-100)> - Configures the Input CLASS (associated with an incoming packet) that needs to be mapped to an outbound queue. • queue-id <integer(1-8)> - Configures the Queue identifier. NOTE: Class needs to be created using the set class command to configure this parameter.	Creates a Map for a Queue with a Class.	Global Configuration
set meter-stats {enable | disable} meter-id <integer(1-65535)> • enable - Enables counter status for the Meter Statistics • disable - Disables counter status for the Meter Statistics • meter-id <integer(1-65535)> - Specifies an Index that enumerates the Meter entries. NOTE: To enable or disable meter statistics to a specific meter-id, Meter id and Policy Map related configuration should be already created.	Enables or disables the Meter Statistics counter status.	Global Configuration
show qos global info	Displays QoS related global configurations.	Privileged EXEC
show priority-map [<priority-map-id (1-65535)>] • <priority-map-id (1-65535)> - priority map id	Displays the Priority Map entry.	Privileged EXEC
show class-map [<class-map-id(1-65535)>] • <class-map-id (1-65535)> - class map id	Displays the Class Map entry.	Privileged EXEC
show meter [<meter-id(1-65535)>] • <meter-id (1-65535)> - meter id	Displays the Meter entry.	Privileged EXEC
show policy-map [<policy-map-id(1-65535)>] • <policy-map-id (1-65535)> - policy map id	Displays the Policy Map entry.	Privileged EXEC
show shape-template [<shape-template-id(1-65535)>] • <shape-template-id (1-65535)> - shape template id	Displays the Shape Template configurations.	Privileged EXEC

Commands	Description	CLI Mode
show scheduler [interface <iftype> <ifnum>] • <policy-map-id (1-65535)> - policy map id	Displays the configured Scheduler.	Privileged EXEC
show queue [interface <iftype> <ifnum>]	Displays the queue configuration.	Privileged EXEC
show qos meter-stats [<integer(1-65535)>]	Displays the Meters statistics for conform, exceed and violate packets count.	Privileged EXEC
clear meter-stats [meter-id <integer(1-65535)>]	Clears the Meter Statistics.	Privileged EXEC
show qos queue-stats [interface <iftype> <ifnum>]		Privileged EXEC
qos trust {none | disable}		Global Configuration
show qos pbit-preference-over-Dscp [interface <iftype> <ifnum>]	Displays configured pbit reference for the tagged ports.	Privileged EXEC