

cnMatrix VLAN Parameters and Commands

Commands	Description	CLI Mode
<code>vlan <vlan-id></code>	Creates a VLAN and enters into the config-VLAN mode in which VLAN specific configurations are done and sets the VLAN in active mode.	Global Configuration
<code>name <vlan name string></code>	Configures name for the VLAN.	Config-VLAN
<code>protocol-vlan</code>	Enables protocol-VLAN based membership classification on all ports of the switch.	Global Configuration
<code>map protocol {ip novell netbios appletalk other <aa:aa or aa:aa:aa:aa> {enet-v2 snap llcOther snap8021H snapOther} protocols-group <Group id integer(0-2147483647)> TBD</code>	Creates a protocol group with a specific protocol and encapsulation frame type combination.	Global Configuration
<code>ports [add] [(gigabitethernet/extreme-ethernet/port-channel)]</code>	Configures a VLAN entry with the required member ports, untagged ports and/or forbidden ports, and activates the VLAN.	Config-VLAN
<code>ports [add] ([<interface-type> <0/a-b,0/c,...>] [<interface-type> <0/a-b,0/c,...>] [port-channel <a,b,c-d>]) [untagged <interface-type> <0/a-b,0/c,...>] [<interface-type> <0/a-b,0/c,...>] [port-channel <a,b,c-d>][all]]] [forbidden <interface-type> <0/a-b,0/c,...>] [<interface-type> <0/a-b,0/c,...>] [port-channel <a,b,c-d>]</code> <interface-type> parameter can have the following values: <ul style="list-style-type: none"> • gigabitethernet • extreme-ethernet • port-channel 	Configures a VLAN entry with the required member ports, untagged ports and/or forbidden ports, and activates the VLAN. The VLAN can also be activated using the <code>vlan active</code> command.	Config-VLAN
<code>vlan active</code>	Activates a VLAN in the switch.	Config-VLAN
<code>switchport access vlan <vlanid (1-4094)></code>	Configures the PVID (Port VLAN Identifier) on a port.	Interface Configuration (Physical / Port Channel)
<code>switchport acceptable-frame-type {all tagged untaggedAndPrioritytagged }</code> Available options: <ul style="list-style-type: none"> • all - configures the acceptable frame type as all. • tagged - configures the acceptable frame type as tagged. • untaggedAndPrioritytagged - configures the acceptable frame type as untagged and priority tagged. 	Configures the type of VLAN dependent BPDU frames such as GMRP BPDU that the port should accept during the VLAN membership configuration.	Interface Configuration (Physical / Port Channel)

Commands	Description	CLI Mode
<pre>switchport ingress-filter</pre>	Enables ingress filtering feature on the port.	Interface Configuration (Physical / Port Channel)
<pre>port protocol-vlan</pre>	Enables protocol-VLAN based membership classification in a port.	Interface Configuration (Physical Interface)
<pre>switchport map protocols-group <Group id integer(0-2147483647)> vlan <vlan-id></pre> <p>Available options:</p> <ul style="list-style-type: none"> • <Group id integer(0-2147483647)> - configures a unique group ID that is already created with the specified protocol type and encapsulation frame type. 	Maps the configured protocol group to a particular VLAN ID for an interface.	Interface Configuration (Physical / Port Channel)
<pre>switchport mode { access trunk hybrid {private-vlan {promiscuous host }} {dynamic {auto desirable}} }</pre> <p>Available options:</p> <ul style="list-style-type: none"> • access - configures the port as access port that accepts and sends only untagged. • trunk - configures the port as trunk port that accepts and sends only tagged frames. • hybrid - configures the port as hybrid port that accepts and sends both tagged and untagged frames. 	Configures the mode of operation for a switch port.	Interface Configuration (Physical / Port Channel)
<pre>debug vlan { [{fwd priority redundancy}([initshut] [mgmt] [data] [ctpl] [dump] [os] [failall] [buffer] [all])] [switch <context_name>] [{ <short (0-7)> alerts critical debugging emergencies errors informational notification warnings] }</pre> <p>Available options:</p> <ul style="list-style-type: none"> • fwd - sets the submodule as VLAN forward module, for which the tracing is to be done as per the configured debug levels. • priority - sets the submodule as VLAN priority module, for which the tracing is to be done as per the configured debug levels. • redundancy - sets the submodule as VLAN redundancy module, for which the tracing is to be done as per the configured debug levels. • initshut - generates debug statements for init and shutdown traces. • switch <context_name> - configures the tracing of the VLAN submodule for the specified context. • mgmt - generates debug statements for management traces. 	Enables the tracing of the VLAN sub module as per the configured debug levels.	Privileged Exec

Commands	Description	CLI Mode
<ul style="list-style-type: none"> • <code>dump</code> - Generates debug statements for packet dump traces. • <code>failall</code> - generates debug statements for all kind of failure traces. • <code>buffer</code> - generates debug statements for VLAN buffer related traces. • <code>ctpl</code> - generates debug statements for control path traces. • <code>os</code> - generates debug statements for OS resource related traces. • <code>data</code> - generates debug statements for data path traces. 		
<pre>show vlan [brief id <vlan-range> summary ascending]</pre>	Displays VLAN entry related information of all active VLANs and VLANs (that are not active) for which the port details are configured.	Privileged Exec
<pre>show vlan device info</pre>	Displays the VLAN global information that is applicable to all VLANs created in the switch / all contexts.	Privileged Exec
<pre>show vlan protocols-group</pre>	Displays all entries in the protocol group table.	Privileged Exec
<pre>show protocol-vlan</pre>	Displays all entries in the port protocol table.	Privileged Exec
<pre>show mac-address-table [vlan <vlan-range>]</pre>	Displays all static / dynamic unicast and multicast MAC entries created in the MAC address table for the specified VLANs alone.	Privileged Exec
<pre>show mac-address-table static unicast [vlan <vlan-range>] [address <aa:aa:aa:aa:aa:aa>] [interface <interface-type> <interface-id>] Available options:</pre> <ul style="list-style-type: none"> • <code>vlan <vlan-range></code> - displays all static unicast MAC address entries created in the FDB table for the specified VLANs alone. • <code>address <aa:aa:aa:aa:aa:aa></code> - displays all static unicast MAC address entries created in the FDB table for the specified unicast MAC address. • <code>interface</code> - displays all static unicast MAC address entries for the specified interface. 	Displays all static unicast MAC address entries created in the FDB table.	Privileged Exec
<pre>show mac-address-table dynamic unicast [vlan <vlan-range>] [address <aa:aa:aa:aa:aa:aa>] [interface <interface-type> <interface-id>] Available options:</pre> <ul style="list-style-type: none"> • <code>vlan <vlan-range></code> - displays all dynamically learnt unicast entries from the MAC address table for the specified VLANs alone. • <code>address <aa:aa:aa:aa:aa:aa></code> - displays all 	Displays all dynamically learnt unicast entries from the MAC address table.	Privileged Exec

Commands	Description	CLI Mode
<p>dynamically learnt unicast entries from the MAC address table for the specified unicast MAC address.</p> <ul style="list-style-type: none"> • <code>interface</code> - displays all dynamically learnt unicast entries from the MAC address table for the specified interface. 		
<pre>show mac-address-table dynamic multicast [vlan <vlan-range>] [address <aa:aa:aa:aa:aa:aa>] [{interface <interface-type> <interface-id>}]</pre> <p>Available options:</p> <ul style="list-style-type: none"> • <code>vlan <vlan-range></code> - displays all dynamically learnt multicast entries from the MAC address table for the specified VLANs alone. • <code>address <aa:aa:aa:aa:aa:aa></code> - displays all dynamically learnt multicast entries from the MAC address table for the specified unicast MAC address. • <code>interface</code> - displays all dynamically learnt multicast entries from the MAC address table for the specified interface. 	<p>Displays all dynamically learnt multicast entries from the MAC address table.</p>	<p>Privileged Exec</p>
<pre>show mac-address-table aging-time</pre>	<p>Displays the ageing time configured for the MAC address table.</p>	<p>Privileged Exec</p>
<pre>clear mac-address-table dynamic [interface {port-channel <port-channel-id (1-65535)> <interface-type> <interface-id>}] [vlan <vlan_id>]</pre> <p>Available options:</p> <ul style="list-style-type: none"> • <code>port-channel <port-channel-id (1-65535)></code> - Clears the FDB entries for the specified port channel interface. • <code><interface-type></code> - Clears the FDB entries for the specified type of interface. • <code>gigabitethernet</code> • <code><vlan_id></code> - VLAN ID is a unique value that represents the specific VLAN. 	<p>Clears the dynamically learnt MAC Addresses.</p>	<p>Global Configuration</p>
<pre>debug vlan global</pre>	<p>Enables tracing in VLAN sub module and generates debug statements for global traces for the specified severity levels.</p>	<p>Privileged Exec</p>