

How to use NET-SNMP to manage VLAN on DES-3528/52

MIB File: Q-Bridge MIB

The Location of 802.1q Current/Static Table OID

AGENT-GENERAL-MIB	1.3.6.1.4.1.171....
DES3526-L2MGMT-MIB	1.3.6.1.4.1.171....
DES3828-SWL3MGMT-MIB	1.3.6.1.4.1.171....
DGS3627-L2MGMT-MIB	1.3.6.1.4.1.171....
DGS3627-SWL3MGMT-MIB	1.3.6.1.4.1.171....
IF-MIB	1.3.6.1.2.1.31
IP-MAC-BIND-MIB	1.3.6.1.4.1.171....
LLDP-MIB	1.0.8802.1.1.2
Q-BRIDGE-MIB	1.3.6.1.2.1.17.7
RFC1155-SMI	0
RFC-1212	None
RFC1213-MIB	1.3.6.1.2.1.1
RFC-1215	None
SNMPv2-CONF	None
SNMPv2-SMI	0
SNMPv2-TC	None
SNMPv2-TM	1.3.6.1.6.1.1

MIB File: Q-BRIDGE-MIB

OID: 1.3.6.1.2.1.17.7

802.1Q Vlan Current Table

Object name	dot1qVlanCurrentTable
Object ID	1.3.6.1.2.1.17.7.1.4.2
Module	Q-BRIDGE-MIB
Base syntax	Sequence Of dot1qVlanCurrentEntry
Access	Not_Accessible
Status	Mandatory
Sequence	1:dot1qVlanTimeMark - TimeTicks 2:dot1qVlanIndex - Gauge 3:dot1qVlanFdbId - Gauge 4:dot1qVlanCurrentEgressPorts - Octet String 5:dot1qVlanCurrentUntaggedPorts - Octet String 6:dot1qVlanStatus - Integer 7:dot1qVlanCreationTime - TimeTicks
Parent node	dot1qVlan
First child	dot1qVlanCurrentEntry
Description	A table containing current configuration information for each VLAN currently configured into the device by (local or network) management, or dynamically created as a result of GVRP requests received.

Object name	dot1qVlanTimeMark
Object ID	1.3.6.1.2.1.17.7.1.4.2.1.1
Module	Q-BRIDGE-MIB
Base syntax	TimeTicks
Composed syntax	TimeFilter
Access	Not_Accessible
Status	Mandatory
Parent node	dot1qVlanCurrentEntry
First child	None
Description	A TimeFilter for this entry. See the TimeFilter textual convention to see how this works.

Object name	dot1qVlanIndex
Object ID	1.3.6.1.2.1.17.7.1.4.2.1.2
Module	Q-BRIDGE-MIB
Base syntax	Gauge
Composed syntax	VlanIndex
Access	Not_Accessible
Status	Mandatory
Parent node	dot1qVlanCurrentEntry
First child	None
Description	The VLAN-ID or other identifier referring to this VLAN.

Show 802.1q Vlan Fdb Id

Command:

```
snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.2.1.17.7.1.4.2.1.3
```

Object name	dot1qVlanFdbId
Object ID	1.3.6.1.2.1.17.7.1.4.2.1.3
Module	Q-BRIDGE-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Mandatory
Parent node	dot1qVlanCurrentEntry
First child	None
Description	The Filtering Database used by this VLAN. This is one of the dot1qFdbId values in the dot1qFdbTable. This value is allocated automatically by the device whenever the VLAN is created: either dynamically by GVRP, or by management, in dot1qVlanStaticTable. Allocation of this value follows the learning constraints defined for this VLAN in dot1qLearningConstraintsTable.

Show 802.1q Vlan Current Egress Ports

Command:

```
snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.2.1.17.7.1.4.2.1.4
```

The Return Value Example:

SNMPv2-SMI::mib-2.17.7.1.4.2.1.4.0.1 = Hex-STRING: FF FF E0 03 FF FF F0 00

SNMPv2-SMI::mib-2.17.7.1.4.2.1.4.0.5 = Hex-STRING: 00 00 03 00 00 00 00 00

Object name	dot1qVlanCurrentEgressPorts
Object ID	1.3.6.1.2.1.17.7.1.4.2.1.4
Module	Q-BRIDGE-MIB
Base syntax	Octet String
Composed syntax	PortList
Access	Read-Only
Status	Mandatory
Parent node	dot1qVlanCurrentEntry
First child	None
Description	The set of ports which are transmitting traffic for this VLAN as either tagged or untagged frames.

Show 802.1q Vlan Current Untagged Ports

Command:

```
snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.2.1.17.7.1.4.2.1.5
```

Object name	dot1qVlanCurrentUntaggedPorts
Object ID	1.3.6.1.2.1.17.7.1.4.2.1.5
Module	Q-BRIDGE-MIB
Base syntax	Octet String
Composed syntax	PortList
Access	Read-Only
Status	Mandatory
Parent node	dot1qVlanCurrentEntry
First child	None
Description	The set of ports which are transmitting traffic for this VLAN as untagged frames.

Show 802.1q Vlan Status

Command:

```
snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.2.1.17.7.1.4.2.1.6
```

Object name	dot1qVlanStatus
Object ID	1.3.6.1.2.1.17.7.1.4.2.1.6
Module	Q-BRIDGE-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Only
Status	Mandatory
Value list	1 : other(1) 2 : permanent(2) 3 : dynamicGvrp(3)
Parent node	dot1qVlanCurrentEntry
First child	None
Description	This object indicates the status of this entry. other(1) - this entry is currently in use but the conditions under which it will remain so differ from the following values. permanent(2) - this entry, corresponding to an entry in dot1qVlanStaticTable, is currently in use and will remain so after the next reset of the device. The port lists for this entry include ports from the equivalent dot1qVlanStaticTable entry and ports learnt dynamically. dynamicGvrp(3) - this entry is currently in use

Show 802.1q Vlan Status

Command:

```
snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.2.1.17.7.1.4.2.1.7
```

Object name	dot1qVlanCreationTime
Object ID	1.3.6.1.2.1.17.7.1.4.2.1.7
Module	Q-BRIDGE-MIB
Base syntax	TimeTicks
Composed syntax	TimeTicks
Access	Read-Only
Status	Mandatory
Parent node	dot1qVlanCurrentEntry
First child	None
Description	The value of sysUpTime when this VLAN was created.

802.1Q Vlan Static Table

Object name	dot1qVlanStaticTable
Object ID	1.3.6.1.2.1.17.7.1.4.3
Module	Q-BRIDGE-MIB
Base syntax	Sequence Of dot1qVlanStaticEntry
Access	Not_Accessible
Status	Mandatory
Sequence	1:dot1qVlanStaticName - Octet String 2:dot1qVlanStaticEgressPorts - Octet String 3:dot1qVlanForbiddenEgressPorts - Octet String 4:dot1qVlanStaticUntaggedPorts - Octet String 5:dot1qVlanStaticRowStatus - Integer
Parent node	dot1qVlan
First child	dot1qVlanStaticEntry
Description	A table containing static configuration information for each VLAN configured into the device by (local or network) management. All entries are permanent and will be restored after the device is reset.

Show 802.1q Vlan Static Name

Command:

```
snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.2.1.17.7.1.4.3.1.1
```

Object name	dot1qVlanStaticName
Object ID	1.3.6.1.2.1.17.7.1.4.3.1.1
Module	Q-BRIDGE-MIB
Base syntax	Octet String
Composed syntax	SnmpAdminString
Access	Read-Create
Status	Mandatory
Value list	1 : 0..32
Parent node	dot1qVlanStaticEntry
First child	None
Description	An administratively assigned string, which may be used to identify the VLAN.

Show 802.1q Vlan Static Egress Ports

Command:

```
snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.2.1.17.7.1.4.3.1.2
```

Object name	dot1qVlanStaticEgressPorts
Object ID	1.3.6.1.2.1.17.7.1.4.3.1.2
Module	Q-BRIDGE-MIB
Base syntax	Octet String
Composed syntax	PortList
Access	Read-Create
Status	Mandatory
Parent node	dot1qVlanStaticEntry
First child	None
Description	The set of ports which are permanently assigned to the egress list for this VLAN by management. Changes to a bit in this object affect the per-port per-VLAN Registrar control for Registration Fixed for the relevant GVRP state machine on each port. A port may not be added in this set if it is already a member of the set of ports in dot1qVlanForbiddenEgressPorts. The default value of this object is a string of zeros of appropriate length, indicating not fixed.

Show 802.1q Vlan Forbidden Egress Ports

Command:

```
snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.2.1.17.7.1.4.3.1.3
```

Object name	dot1qVlanForbiddenEgressPorts
Object ID	1.3.6.1.2.1.17.7.1.4.3.1.3
Module	Q-BRIDGE-MIB
Base syntax	Octet String
Composed syntax	PortList
Access	Read-Create
Status	Mandatory
Parent node	dot1qVlanStaticEntry
First child	None
Description	The set of ports which are prohibited by management from being included in the egress list for this VLAN. Changes to this object that cause a port to be included or excluded affect the per-port per-VLAN Registrar control for Registration Forbidden for the relevant GVRP state machine on each port. A port may not be added in this set if it is already a member of the set of ports in dot1qVlanStaticEgressPorts. The default value of this object is a string of zeros of appropriate length, excluding all ports from the forbidden set.

Show 802.1q Vlan Static Untagged Ports

Command:

```
snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.2.1.17.7.1.4.3.1.4
```

Object name	dot1qVlanStaticUntaggedPorts
Object ID	1.3.6.1.2.1.17.7.1.4.3.1.4
Module	Q-BRIDGE-MIB
Base syntax	Octet String
Composed syntax	PortList
Access	Read-Create
Status	Mandatory
Parent node	dot1qVlanStaticEntry
First child	None
Description	The set of ports which should transmit egress packets for this VLAN as untagged. The default value of this object for the default VLAN (dot1qVlanIndex = 1) is a string of appropriate length including all ports. There is no specified default for other VLANs. If a device agent cannot support the set of ports being set then it will reject the set operation with an error. An example might be if a manager attempts to set more than one VLAN to be untagged on egress where the device does not support this IEEE 802.1Q option.

Show 802.1q VLAN Static Row Status

Command:

```
snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.2.1.17.7.1.4.3.1.5
```

Object name	dot1qVlanStaticRowStatus
Object ID	1.3.6.1.2.1.17.7.1.4.3.1.5
Module	Q-BRIDGE-MIB
Base syntax	Integer
Composed syntax	RowStatus
Access	Read-Create
Status	Mandatory
Value list	1 : active(1) 2 : notInService(2) 3 : notReady(3) 4 : createAndGo(4) 5 : createAndWait(5) 6 : destroy(6)
Parent node	dot1qVlanStaticEntry
First child	None
Description	This object indicates the status of this entry.

The Example of creating a VLAN

→ create a vlan (VID:5 , Vlan Names: v5) and add 17-24 ports into it.

Command

```
snmpset -v2c -c private 10.90.90.90 1.3.6.1.2.1.17.7.1.4.3.1.1.5 s v5 1.3.6.1.2.1.17.7.1.4.3.1.2.5 x 0000ff 1.3.6.1.2.1.17.7.1.4.3.1.4.5 x 0000ff 1.3.6.1.2.1.17.7.1.4.3.1.5.5 i 4
```

(Please make sure untagged port don't belong to multi VLAN, or the command will show error message)

Exalpination

To Set up Vlan ID and Vlan Name

```
snmpset -v2c -c private 10.90.90.90 1.3.6.1.2.1.17.7.1.4.3.1.1.5 s v5
```

5 → VID

v5 → Vlan name

To decide which Egress port belong to the vlan

```
snmpset -v2c -c private 192.168.0.1 1.3.6.1.2.1.17.7.1.4.3.1.2.5 x 0000ff
```

0000ff → add **Egress** port 17-24

To decide which Untagged port belong to the vlan

```
snmpset -v2c -c private 192.168.0.1 1.3.6.1.2.1.17.7.1.4.3.1.4.5 x 0000ff
```

Create and Go

```
snmpset -v2c -c private 192.168.0.1 1.3.6.1.2.1.17.7.1.4.3.1.5.5 i 4
```

4 → create and go

The Example of adding a tag port in VLAN

→ create a vlan (VID:5 , Vlan Names: v5) and add port 1, 9-16 into it.

```
snmpset -v2c -c private 10.90.90.90 1.3.6.1.2.1.17.7.1.4.3.1.1.5 s v5 1.3.6.1.2.1.17.7.1.4.3.1.2.5 x 80FFFF
```