

D-link Switch: DES-3526 Firmware: R4 MIB File: V4

How to use NET-SNMP –Q-Bridge (FDB including VLAN information)

The Location of FDB Table OID

The screenshot shows the D-Link MIB Compiler interface. The left pane displays a list of MIB files with their Root IDs. The Q-BRIDGE-MIB file is selected and highlighted with a red box. The right pane displays the contents of the selected MIB file, showing a tree structure of objects. The dot1qTpFdbTable and dot1qTpFdbEntry objects are highlighted with a red box.

MIB	Root ID
PdE-MIB	1.3.6.1.4.1.171.12.24
Q-BRIDGE-MIB	1.3.6.1.2.1.17.7
RADIUS-ACC-CLIENT-MIB	1.3.6.1.2.1.67.2.2
RADIUS-AUTH-CLIENT-MIB	1.3.6.1.2.1.67.1.2
RFC1155-SMI	0
RFC-1212	None
RFC1213-MIB	1.3.6.1.2.1.1
RFC-1215	None
RIP-MGMT-MIB	1.3.6.1.4.1.171.12.32
RIPv2-MIB	1.3.6.1.2.1.23
RMON-MIB	1.3.6.1.2.1.16
RSTP-MIB	1.3.6.1.2.1.17.11
SAFEGUARD-ENGINE-MIB	1.3.6.1.4.1.171.12.19
SINGLE-IP-MIB	1.3.6.1.4.1.171.12.8
SNMP-FRAMEWORK-MIB	1.3.6.1.6.3.10
SNMP-NOTIFICATION-MIB	1.3.6.1.6.3.13
SNMP-TARGET-MIB	1.3.6.1.6.3.12
SNMP-USER-BASED-SM-MIB	1.3.6.1.6.3.15
SNMPv2-CONF	None
SNMPv2-MIB	1.3.6.1.6.3.1
SNMPv2-SMI	0
SNMPv2-TC	None
SNMPv2-TM	1.3.6.1.6.1.1
SNMP-VIEW-BASED-ACM-MIB	1.3.6.1.6.3.16

- dot1qFdbEntry
 - dot1qFdbId
 - dot1qFdbDynamicCount
- dot1qTpFdbTable
 - dot1qTpFdbEntry
 - dot1qTpFdbAddress
 - dot1qTpFdbPort
 - dot1qTpFdbStatus
 - dot1qTpGroupTable
- dot1qTpGroupEntry
 - dot1qTpGroupAddress
 - dot1qTpGroupEgressPorts
 - dot1qTpGroupLearnT
- dot1qForwardAllTable
 - dot1qForwardAllEntry
 - dot1qForwardAllPorts
 - dot1qForwardAllStaticPorts
 - dot1qForwardAllForbiddenPorts
 - dot1qForwardUnregisteredTable
 - dot1qForwardUnregisteredEntry
 - dot1qForwardUnregisteredPorts
 - dot1qForwardUnregisteredStaticPorts
 - dot1qForwardUnregisteredForbiddenPorts
- dot1qStatic
 - dot1qStaticUnicastTable
 - dot1qStaticUnicastEntry
 - dot1qStaticUnicastAddress

MIB File: Q-BRIDGE-MIB
OID: 1.3.6.1.2.1.17.7.1.2.2

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Object name	dot1qTpFdbTable
Object ID	1.3.6.1.2.1.17.7.1.2.2
Module	Q-BRIDGE-MIB
Base syntax	Sequence Of dot1qTpFdbEntry
Access	Not_Accessible
Status	Mandatory
Sequence	1:dot1qTpFdbAddress - Octet String 2:dot1qTpFdbPort - Integer 3:dot1qTpFdbStatus - Integer
Parent node	dot1qTp
First child	dot1qTpFdbEntry
Description	A table that contains information about unicast entries for which the device has forwarding and/or filtering information. This information is used by the transparent bridging function in determining how to propagate a received frame.

Object name	dot1qTpFdbAddress
Object ID	1.3.6.1.2.1.17.7.1.2.2.1.1
Module	Q-BRIDGE-MIB
Base syntax	Octet String
Composed syntax	MacAddress
Access	Not_Accessible
Status	Mandatory
Value list	1 : 6..6
Parent node	dot1qTpFdbEntry
First child	None
Description	A unicast MAC address for which the device has forwarding and/or filtering information.

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Show FDB Port

Command:

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.2.1.17.7.1.2.2.1.2
```

The Return Value Example:

SNMPv2-SMI::mib-2.17.7.1.2.2.1.2.1.0.15.61.132.159.255 = INTEGER: 0

SNMPv2-SMI::mib-2.17.7.1.2.2.1.2.1.0.192.159.134.194.92 = INTEGER: 1

SNMPv2-SMI::mib-2.17.7.1.2.2.1.2.2.0.21.242.169.11.194 = INTEGER: 23

2 → Vlan Number

23 → Port Number

0.21.242.169.11.194 (Decimal) → 00-15-F2-A9-0B-C2 (Hex) → MAC Address

```
C:\Documents and Settings\james>snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.2.1.17.7.1.2.2.1.2
SNMPv2-SMI::mib-2.17.7.1.2.2.1.2.1.0.15.61.132.159.255 = INTEGER: 0
SNMPv2-SMI::mib-2.17.7.1.2.2.1.2.1.0.192.159.134.194.92 = INTEGER: 1
SNMPv2-SMI::mib-2.17.7.1.2.2.1.2.2.0.21.242.169.11.194 = INTEGER: 23
```

Object name	dot1qTpFdbPort
Object ID	1.3.6.1.2.1.17.7.1.2.2.1.2
Module	Q-BRIDGE-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Only
Status	Mandatory
Value list	1 : 0..65535
Parent node	dot1qTpFdbEntry
First child	None
Description	Either the value '0', or the port number of the port on which a frame having a source address equal to the value of the corresponding instance of dot1qTpFdbAddress has been seen. A value of '0' indicates that the port number has not been learned but that the device does have some forwarding/filtering information about this address (e.g. in the dot1qStaticUnicastTable). Implementors are encouraged to assign the port value to this object whenever it is learned even for addresses for which the corresponding value of dot1qTpFdbStatus is not learned(3).

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Object name	dot1qTpFdbStatus
Object ID	1.3.6.1.2.1.17.7.1.2.2.1.3
Module	Q-BRIDGE-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Only
Status	Mandatory
Value list	1 : other(1) 2 : invalid(2) 3 : learned(3) 4 : self(4) 5 : mgmt(5)
Parent node	dot1qTpFdbEntry
First child	None
Description	The status of this entry. The meanings of the values are: other(1) - none of the following. This may include the case where some other MIB object (not the corresponding instance of dot1qTpFdbPort, nor an entry in the dot1qStaticUnicastTable) is being used to determine if and how frames addressed to the value of the corresponding instance of dot1qTpFdbAddress are being forwarded. invalid(2) - this entry is no longer valid (e.g., it was learned but has since aged out), but has not yet been flushed from the table.

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Show FDB Status

Command:

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.2.1.17.7.1.2.2.1.3
```

Object name	dot1qTpFdbStatus
Object ID	1.3.6.1.2.1.17.7.1.2.2.1.3
Module	Q-BRIDGE-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Only
Status	Mandatory
Value list	1 : other(1) 2 : invalid(2) 3 : learned(3) 4 : self(4) 5 : mgmt(5)
Parent node	dot1qTpFdbEntry
First child	None
Description	The status of this entry. The meanings of the values are: other(1) - none of the following. This may include the case where some other MIB object (not the corresponding instance of dot1qTpFdbPort, nor an entry in the dot1qStaticUnicastTable) is being used to determine if and how frames addressed to the value of the corresponding instance of dot1qTpFdbAddress are being forwarded. invalid(2) - this entry is no longer valid (e.g., it was learned but has since aged out), but has not yet been flushed from the table.