

How to configure STP via NETSNMP in DES-3526 or DES-3200 series?

[Test F/W Version]

DES-3526 => R5.01.B65 & R6.00.B54

DES-3200 => R1.50.B010

[Customer's Request]

1. Instance Priority
2. Port External Path Cost
3. STP Per Port Status

[OID]

The OIDs are defined in "MSTP-MIB" (MSTP.mib).

swMSTPInstPriority

Object name	swMSTPInstPriority
Object ID	1.3.6.1.4.1.171.12.15.2.3.1.12
Module	MSTP-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : 0..61440
Parent node	swMSTPInstanceCtrlEntry
First child	None
Description	The priority of the instance. The priority must be divisible by 4096

swMSTPPortExternalPathCost

Object name	swMSTPPortExternalPathCost
Object ID	1.3.6.1.4.1.171.12.15.2.4.1.5
Module	MSTP-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : 0..200000000
Parent node	swMSTPPortEntry
First child	None
Description	The contribution of this port to the path cost of paths towards the CIST root which include this port.

swMSTPSTPPortEnable

Object name	swMSTPSTPPortEnable
Object ID	1.3.6.1.4.1.171.12.15.2.4.1.4
Module	MSTP-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : enabled(1) 2 : disabled(2)
Parent node	swMSTPPortEntry
First child	None
Description	The enabled/disabled status of the port.

Test Example

[Topology]

DES-3526_Root_Priority_8192 (port 1) --- (port 1) DES-3200-26_Priority_16384

[Configuration]

For both DES-3526, F/W R6.00.B54 & DES-3200-26, F/W R1.50.B010

reset config

enable stp

[Test Procedures & Results]

swMSTPInstPriority

```
snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.15.2.3.1.12.0 i 8192
```

instance_id : 0

```

DES-3526:admin#
DES-3526:admin#show stp instance_id 0
Command: show stp instance_id 0

STP Instance Settings
-----
Instance Type       : CIST
Instance Status    : Enabled
Instance Priority   : 32768(bridge priority : 32768, sys ID ext : 0 )

STP Instance Operational Status
-----
Designated Root Bridge : 16384/1C-BD-B9-60-80-00
External Root Cost    : 200000
Regional Root Bridge  : 32768/00-01-02-03-04-00
Internal Root Cost    : 0
Designated Bridge     : 16384/1C-BD-B9-60-80-00
Root Port            : 1

C:\WINDOWS\system32\cmd.exe

C:\>snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.15.2.3.1.12.0 i 8192
SNMPv2-SMI::enterprises.171.12.15.2.3.1.12.0 = INTEGER: 8192

C:\>

DES-3526:admin#show stp instance_id 0
Command: show stp instance_id 0

STP Instance Settings
-----
Instance Type       : CIST
Instance Status    : Enabled
Instance Priority   : 8192 (bridge priority : 8192 , sys ID ext : 0 )

STP Instance Operational Status
-----
Designated Root Bridge : 8192 /00-01-02-03-04-00
External Root Cost    : 0
Regional Root Bridge  : 8192 /00-01-02-03-04-00
Internal Root Cost    : 0
Designated Bridge     : 8192 /00-01-02-03-04-00
Root Port            : None
Max Age              : 20
Forward Delay        : 15
Last Topology Change : 12
Topology Changes Count : 1

```

swMSTPPortExternalPathCost

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.15.2.4.1.5.1 i 100000

```

DES-3526:admin#show stp ports 1
Command: show stp ports 1
MSTP Port Information
-----
Port Index       : 1 , Hello Time: 2 /2 , Port STP enabled
Restricted role  : False , Restricted TCN : False
External PathCost : Auto /200000 , Edge Port : False/No , P2P : Auto /Yes
Port Forward BPDU : disabled
BPDU Type       : RSTP

Msti  Designated Bridge  Internal PathCost  Prio  Status  Role
-----
0     2000/000102030400  200000             128   Forwarding  Designated

C:\WINDOWS\system32\cmd.exe

C:\>snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.15.2.4.1.5.1 i 100000
SNMPv2-SMI::enterprises.171.12.15.2.4.1.5.1 = INTEGER: 100000

C:\>

DES-3526:admin#show stp ports 1
Command: show stp ports 1
MSTP Port Information
-----
Port Index       : 1 , Hello Time: 2 /2 , Port STP enabled
Restricted role  : False , Restricted TCN : False
External PathCost : 100000 /100000 , Edge Port : False/No , P2P : Auto /Yes
Port Forward BPDU : disabled
BPDU Type       : RSTP

Msti  Designated Bridge  Internal PathCost  Prio  Status  Role
-----
0     2000/000102030400  200000             128   Forwarding  Designated

```

swMSTPSTPPortEnable

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.15.2.4.1.4.2 i 2

⇒ **enabled (1)**

disabled (2)

```
DES-3526:admin#show stp ports 2
Command: show stp ports 2
MSTP Port Information
-----
Port Index      : 2      , Hello Time: 2 /2 , Port STP enabled
Restricted role  : False , Restricted TCN : False
External PathCost : Auto /200000 , Edge Port : False/No , P2P : Auto /Yes
Port Forward BPDU : disabled
BPDU Type : RSTP

Msti  Designated Bridge  Internal PathCost  Prio  Status  Role
-----
0     N/A              200000            128   Disabled Disabled

C:\WINDOWS\system32\cmd.exe

C:\>snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.15.2.4.1.4.2 i 2
SNMPv2-SMI::enterprises.171.12.15.2.4.1.4.2 = INTEGER: 2

C:\>_

DES-3526:admin#show stp ports 2
Command: show stp ports 2
MSTP Port Information
-----
Port Index      : 2      , Hello Time: 2 /2 , Port STP disabled
Restricted role  : False , Restricted TCN : False
External PathCost : Auto /200000 , Edge Port : False/No , P2P : Auto /Yes
Port Forward BPDU : disabled
BPDU Type : RSTP

Msti  Designated Bridge  Internal PathCost  Prio  Status  Role
-----
0     N/A              200000            128   Disabled Disabled
```