

MSTP MIB – mstpVlanTable

SNMP get-next

- **snmp get-next returns the next MIB object and its value in the OID tree of the agent.**
- **Mostly used when all instance indices are not known to SNMP Manager**
- **#get-next sysUpTime**
- **system. sysUpTime.0 = Timeticks:
(1199126817)**

Closer look at OID tree

- **system.sysObjectID.0 = OID: enterprises.Cisco.5.45**
 - **system.sysUpTime.0 = Timeticks: (1199126817) 138 days, 18:54:28**
 - **system.sysContact.0 = "admin"**
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- **Where is OID for “sysUpTime” in the above tree ?**
 - **Inference – Non existent OID can be used with get-next to fetch the next object in the OID tree in lexicographical order.**

Sample MSTP mappings

Instance	VLAN mappings
0	5-10,21
1	15-20
2	1-4
3	11-14

mstpVlanTable

INDEX (max-vlan,min-vlan)

Instance	VLAN mappings	Max-VLANs	Min-VLANs
0	5-10,21	10 and 21	5 and 21
1	15-20	20	15
2	1-4	4	1
3	11-14	14	11

Ordering by INDEX ie max-vlan, min-vlan :
4.1,10.5,14.11,20.15 and 21.21

OID sub-tree

- **mstpVlanEntry.mstpVlanInstance.4.1 =2**
- **mstpVlanEntry.mstpVlanInstance.10.5 =0**
- **mstpVlanEntry.mstpVlanInstance.14.11 =3**
- **mstpVlanEntry.mstpVlanInstance.20.15 =1**
- **mstpVlanEntry.mstpVlanInstance.21.21 =0**

where mstpVlanInstance provides VLAN range to MSTI mapping

- **Suitable only for continuous ranges**
- **More entries for discontinuous VLAN ranges – not compact and more tree elements**
- **Suitable for finding MSTI given VLAN id**

get-next on mstpVlanTable -(1)

- **mstpVlanEntry.mstpVlanInstance.4.1 =2**
 - **mstpVlanEntry.mstpVlanInstance.10.5 =0**
 - **mstpVlanEntry.mstpVlanInstance.14.11 =3**
 - **mstpVlanEntry.mstpVlanInstance.20.15 =1**
 - **mstpVlanEntry.mstpVlanInstance.21.21 =0**
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- **Task : Given VLAN 15 find mstpVlanTable**
#get-next mstpVlanEntry.mstpVlanInstance.15

get-next on mstpVlanTable -(2)

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→ mstpVlanEntry.mstpVlanInstance.4.1 =2

→ mstpVlanEntry.mstpVlanInstance.10.5 =0

→ mstpVlanEntry.mstpVlanInstance.14.11 =3

←----mstpVlanEntry.mstpVlanInstance.15

→ mstpVlanEntry.mstpVlanInstance.20.15 =1

→ mstpVlanEntry.mstpVlanInstance.21.21 =0

- get-next retrieves the following entry
mstpVlanEntry.mstpVlanInstance.20.15 =1
- The result entry provides info about the VLAN range
ie 15-20 and the corresponding MSTI ie 1