NET-SNMP to set up the ISM Function in DES-3200 C1 series

The related OID located in **proprietaryMIB → Dlink-common-mgmt → McastVLAN.mib**

Following is the related OID for DES-3200 C1 series

Step1. Create ISM VLAN test (VID =2)

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.3.1.1.2.**2** x 74657374 1.3.6.1.4.1.171.12.64.3.1.1.13.**2** i 4

Object name	swISMVlanName
Object ID	1.3.6.1.4.1.171.12.64.3.1.1.2
Module	MCAST-VLAN-MIB
Base syntax	Octet String
Composed syntax	DisplayString
Access	Read-Create
Status	Current
Value list	1 : 0..32
Parent node	swISMVlanEntry
First child	None
Description	This indicates the VLAN name of the IGMP snooping multicast VLAN entry.

Object name	swISMVlanRowStatus
Object ID	1.3.6.1.4.1.171.12.64.3.1.1.13
Module	MCAST-VLAN-MIB
Base syntax	Integer
Composed syntax	RowStatus
Access	Read-Create
Status	Current
Value list	1 : active(1)
	2 : notInService(2)
	3 : notReady(3)
	4 : createAndGo(4)
	5 : createAndWait(5)
	6 : destroy(6)
Parent node	swISMVlanEntry
First child	None
Description	This indicates the status of this entry.

Step2. Add member port 1-5, source port 9-10, Replace source IP 10.90.90.150, remap_priority 7

→ **# config igmp_snooping multicast_vlan test state disable replace_source_ip 10.90.90.150 remap_priority 7 replace_priority**

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.3.1.1.2.**2** x 74657374 1.3.6.1.4.1.171.12.64.3.1.1.3.**2** x 00c0000000000000 1.3.6.1.4.1.171.12.64.3.1.1.4.**2** x f800000000000000 1.3.6.1.4.1.171.12.64.3.1.1.9.**2** x 0a5a5a96 1.3.6.1.4.1.171.12.64.3.1.1.13.**2** i 1 1.3.6.1.4.1.171.12.64.3.1.1.10.**2** i 7 1.3.6.1.4.1.171.12.64.3.1.1.11.**2** i 1

Example for add source ports :

Ex : snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.3.1.1.2.2 x 000000C000000000

| 00 | | 00 | | 00 | | C0 | | 00000000 |

| 00000000 | 00000000 | 00000000 | 11000000 |

| 1-8 port | 9-16 port | 17-24 port | 25-32 port |

Example for add member ports

Ex: snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.11.113.1.1.2.7.8.1.4.2 x FFC0000000000000

| FF | | C0 | | 00 | | 00 | | 00000000 |

| 11111111 | 11000000 | 00000000 | 00000000 |

| 1-8 port | 9-16 port | 17-24 port | 25-32 port |

Example for replace source IP

Ex: 10.90.90.150 = 0a5a5a96

10 = 0a = (0*16)+10 = 10

90 = 5a = (5*16)+10 = 90

150 = 96 = (9*16) + 6 = 150

Object name	swISMVlanSourcePort		Object name	swISMVlanMemberPort
Object ID	1.3.6.1.4.1.171.12.64.3.1.1.3		Object ID	1.3.6.1.4.1.171.12.64.3.1.1.4
Module	MCAST-VLAN-MIB		Module	MCAST-VLAN-MIB
Base syntax	Octet String		Base syntax	Octet String
Composed syntax	PortList		Composed syntax	PortList
Access	Read-Write		Access	Read-Write
Status	Current		Status	Current
Value list	1 : 0..127		Value list	1 : 0..127
Parent node	swISMVlanEntry		Parent node	swISMVlanEntry
First child	None		First child	None
Description	This indicates the port list of the source ports of the IGMP snooping multicast VLAN. The source ports will be set as tag ports of the VLAN entry and the IGMP control messages received from the member ports will be forwarded to the source ports.		Description	This indicates the port list of the member ports of the IGMP snooping multicast VLAN. The source ports will be set as untagged ports of the VLAN entry and the IGMP control messages received from the member ports will be forwarded to the source ports.

Object name	swISMVlanTagMemberPort		Object name	swISMVlanUntagSourcePort
Object ID	1.3.6.1.4.1.171.12.64.3.1.1.5		Object ID	1.3.6.1.4.1.171.12.64.3.1.1.6
Module	MCAST-VLAN-MIB		Module	MCAST-VLAN-MIB
Base syntax	Octet String		Base syntax	Octet String
Composed syntax	PortList		Composed syntax	PortList
Access	Read-Write		Access	Read-Write
Status	Current		Status	Current
Value list	1 : 0..127		Value list	1 : 0..127
Parent node	swISMVlanEntry		Parent node	swISMVlanEntry
First child	None		First child	None
Description	This indicates the port list of the tag member ports of the IGMP snooping multicast VLAN.		Description	This indicates the untagged member ports to add to the multicast VLAN.

Object name	swISMVlanRepSourceAddrType		Object name	swISMVlanRepSourceAddr
Object ID	1.3.6.1.4.1.171.12.64.3.1.1.8		Object ID	1.3.6.1.4.1.171.12.64.3.1.1.9
Module	MCAST-VLAN-MIB		Module	MCAST-VLAN-MIB
Base syntax	Integer		Base syntax	Octet String
Composed syntax	InetAddressType		Composed syntax	InetAddress
Access	Read-Write		Access	Read-Write
Status	Current		Status	Current
Value list	1 : unknown(0) 2 : ipv4(1) 3 : ipv6(2) 4 : ipv4z(3) 5 : ipv6z(4) 6 : dns(16)		Value list	1 : 0..255
Parent node	swISMVlanEntry		Parent node	swISMVlanEntry
First child	None		First child	None
Description	This is the type of multicast VLAN replacement address as specified by object 'swISMVlanRepSourceAddr'.		Description	This is the replacement address of this multicast VLAN.

Object name	swISMVlanRemapPriority		Object name	swISMVlanReplacePriority
Object ID	1.3.6.1.4.1.171.12.64.3.1.1.10		Object ID	1.3.6.1.4.1.171.12.64.3.1.1.11
Module	MCAST-VLAN-MIB		Module	MCAST-VLAN-MIB
Base syntax	Integer		Base syntax	Integer
Composed syntax	INTEGER		Composed syntax	INTEGER
Access	Read-Create		Access	Read-Create
Status	Current		Status	Current
Value list	1 : -1..7		Value list	1 : enabled(1) 2 : disabled(2)
Parent node	swISMVlanEntry		Parent node	swISMVlanEntry
First child	None		First child	None
Description	This is the priority value (0 to 7) to be associated with the data traffic to be forwarded on the multicast VLAN. When set to -1, the packet's original priority will be used.		Description	This specifies that a packet's priority will be changed by the switch based on the remap priority. This flag will only take effect when remap priority is set.

Step3. Enable Multicase VLAN on VID2

→ # config igmp_snooping multicast_vlan test state enable

snmpset -v2c –c private 10.90.90.90 1.3.6.1.4.1.171.12.64.3.1.1.7.**2** i 1

Object name	swISMVlanState
Object ID	1.3.6.1.4.1.171.12.64.3.1.1.7
Module	MCAST-VLAN-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : enabled(1) 2 : disabled(2)
Parent node	swISMVlanEntry
First child	None
Description	This can be used to enable or disable the IGMP snooping multicast VLAN.

Step4. IGMP Multicast VLAN Global State enabled

→ **# enable igmp_snooping multicast_vlan**

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.1.1.0 i 1

Object name	swISMVlanGlobalState
Object ID	1.3.6.1.4.1.171.12.64.1.1
Module	MCAST-VLAN-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : enabled(1)
	2 : disabled(2)
Parent node	swMcastVlanCtrl
First child	None
Description	This indicates the global state of the IGMP snooping multicast VLAN.

Step5. Create multicast profile

→ **# create igmp_snooping multicast_vlan_group_profile ism**

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.3.2.1.3.3.105.115.109 i 4

→ **# delete igmp_snooping multicast_vlan_group_profile profile_name ism**

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.3.2.1.3.3.105.115.109 i 6

→ **# create igmp_snooping multicast_vlan_group_profile rr**

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.3.2.1.3.2.114.114 i 4

→ **# delete igmp_snooping multicast_vlan_group_profile profile_name rr**

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.3.2.1.3.2.114.114 i 6

Object name	swISMVlanGroupProfName
Object ID	1.3.6.1.4.1.171.12.64.3.2.1.1
Module	MCAST-VLAN-MIB
Base syntax	Octet String
Composed syntax	DisplayString
Access	Read-Only
Status	Current
Value list	1 : 0..255
Parent node	swISMVlanGroupProfEntry
First child	None
Description	This indicates the name of the IGMP snooping multicast VLAN group profile.

Object name	swISMVlanGroupProfID
Object ID	1.3.6.1.4.1.171.12.64.3.2.1.2
Module	MCAST-VLAN-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Only
Status	Current
Parent node	swISMVlanGroupProfEntry
First child	None
Description	This indicates the index of the IGMP snooping multicast VLAN group profile.

Object name	swISMVlanGroupProfStatus
Object ID	1.3.6.1.4.1.171.12.64.3.2.1.3
Module	MCAST-VLAN-MIB
Base syntax	Integer
Composed syntax	RowStatus
Access	Read-Create
Status	Current
Value list	1 : active(1)
	2 : notInService(2)
	3 : notReady(3)
	4 : createAndGo(4)
	5 : createAndWait(5)
	6 : destroy(6)
Parent node	swISMVlanGroupProfEntry
First child	None
Description	This indicates the status of this entry.

Step6. Add address into multicast profile

→ **# config igmp_snooping multicast_vlan_group_profile ism add 239.0.0.1-239.0.0.100**

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.3.3.1.4.**3.105.115.109**.1.**4**.239.0.0.1.**4**.239.0.0.100 i 4

→ **# config igmp_snooping multicast_vlan_group_profile rr add 239.1.1.1-239.1.1.2**

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.3.3.1.4.**2.114.114**.1.**4**.239.1.1.1.**4**.239.1.1.2 i 4

> **105.115.109 = ascii code of chr "ism" to Dec**
>
> **114.114 = ascii code of chr "rr" to Dec**
>
> **3 = three characters of "ism", 2 = two characters of "rr" ,**
>
> **4 = characters of IP address x.x.x.x**
>
> **4 = createAndGo(4) ; 6 = destroy(6)**

Object name	swISMVlanGroupProfAddrType
Object ID	1.3.6.1.4.1.171.12.64.3.3.1.1
Module	MCAST-VLAN-MIB
Base syntax	Integer
Composed syntax	InetAddressType
Access	Read-Only
Status	Current
Value list	1 : unknown(0)
	2 : ipv4(1)
	3 : ipv6(2)
	4 : ipv4z(3)
	5 : ipv6z(4)
	6 : dns(16)
Parent node	swISMVlanGroupProfAddrEntry
First child	None
Description	This is the type of multicast address as specified by object 'swISMVlanGroupProfAddrToIp'.

Object name	swISMVlanGroupProfAddrStatus
Object ID	1.3.6.1.4.1.171.12.64.3.3.1.4
Module	MCAST-VLAN-MIB
Base syntax	Integer
Composed syntax	RowStatus
Access	Read-Create
Status	Current
Value list	1 : active(1)
	2 : notInService(2)
	3 : notReady(3)
	4 : createAndGo(4)
	5 : createAndWait(5)
	6 : destroy(6)
Parent node	swISMVlanGroupProfAddrEntry
First child	None
Description	This indicates the status of this entry.

Object name	swISMVlanGroupProfAddrStart
Object ID	1.3.6.1.4.1.171.12.64.3.3.1.2
Module	MCAST-VLAN-MIB
Base syntax	Octet String
Composed syntax	InetAddress
Access	Read-Only
Status	Current
Value list	1 : 0..255
Parent node	swISMVlanGroupProfAddrEntry
First child	None
Description	This specifies the multicast address list for this profile.

Object name	swISMVlanGroupProfAddrEnd
Object ID	1.3.6.1.4.1.171.12.64.3.3.1.3
Module	MCAST-VLAN-MIB
Base syntax	Octet String
Composed syntax	InetAddress
Access	Read-Only
Status	Current
Value list	1 : 0..255
Parent node	swISMVlanGroupProfAddrEntry
First child	None
Description	The specifies the multicast address list for this profile.

Step7. IGMP Multicast VLAN Forward Unmatched state enabled

→ **# config igmp_snooping multicast_vlan forward_unmatched enable**

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.64.1.3.0 i 1

Object name	swISMVlanForwardUnmatchedState
Object ID	1.3.6.1.4.1.171.12.64.1.3
Module	MCAST-VLAN-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : enabled(1)
	2 : disabled(2)
Parent node	swMcastVlanCtrl
First child	None
Description	This indicates the IGMP snooping multicast VLAN's forwarding state for Multicast VLAN unmatched packet.