

How to configure ACL and Flow Meter via NETSNMP in DGS-3120 series

The OIDs are defined in “ACLMGMT-MIB”.

swACLIpTable

Object name	swACLIpTable
Object ID	1.3.6.1.4.1.171.12.9.2.2
Module	ACLMGMT-MIB
Base syntax	Sequence Of swACLIpEntry
Access	Not_Accessible
Status	Current
Sequence	1:swACLIpProfileID - Integer 2:swACLIpUsevlan - Integer 3:swACLIpIpAddrMaskState - Integer 4:swACLIpSrcIpAddrMask - IP Address 5:swACLIpDstIpAddrMask - IP Address 6:swACLIpUseDSCP - Integer 7:swACLIpUseProtoType - Integer 8:swACLIpIcmpOption - Integer 9:swACLIpIcmpOption - Integer 10:swACLIpTcpOption - Integer 11:swACLIpUdpOption - Integer 12:swACLIpTCPorUDPSrcPortMask - Octet String 13:swACLIpTCPorUDPdstPortMask - Octet String 14:swACLIpTCPFlagBit - Integer 15:swACLIpTCPFlagBitMask - Integer 16:swACLIpProtoIDOption - Integer 17:swACLIpProtoID - Integer 18:swACLIpProtoIDMask - Octet String 19:swACLIpRowStatus - Integer 20:swACLIpOwner - Integer

swACLIpUsevlan

Object name	swACLIpUsevlan
Object ID	1.3.6.1.4.1.171.12.9.2.2.1.2
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : enabled(1) 2 : disabled(2)
Parent node	swACLIpEntry
First child	None
Description	This object indicates if the IP layer VLAN part is examined or not.

swACLIpIpAddrMaskState

Object name	swACLIpIpAddrMaskState
Object ID	1.3.6.1.4.1.171.12.9.2.2.1.3
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : other(1) 2 : dst-ip-addr(2) 3 : src-ip-addr(3) 4 : dst-src-ip-addr(4)
Parent node	swACLIpEntry
First child	None
Description	<p>This object indicates the status of IP address mask.</p> <p>other (1) - Neither source IP address nor destination IP address are masked.</p> <p>dst-ip-addr (2) - Destination IP addresses within received frames are to be filtered when matched with the IP address entry of the table.</p> <p>src-ip-addr (3) - Source IP addresses within received frames are to be filtered when matched with the IP address entry of the table.</p> <p>dst-src-ip-addr (4) - Destination or source IP addresses within received frames are to be filtered when matched with the IP address entry of the table.</p>

swACLIpSrcIpAddrMask

Object name	swACLIpSrcIpAddrMask
Object ID	1.3.6.1.4.1.171.12.9.2.2.1.4
Module	ACLMGMT-MIB
Base syntax	IP Address
Composed syntax	IpAddress
Access	Read-Create
Status	Current
Parent node	swACLIpEntry
First child	None
Description	<p>This object specifies the IP address mask for the source IP address.</p>

swACLIpUseDSCP

Object name	swACLIpUseDSCP
Object ID	1.3.6.1.4.1.171.12.9.2.2.1.6
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : enabled(1) 2 : disabled(2)
Parent node	swACLIpEntry
First child	None
Description	This object indicates if the DSCP protocol in the packet header is to be examined or not.

swACLIpRowStatus

Object name	swACLIpRowStatus
Object ID	1.3.6.1.4.1.171.12.9.2.2.1.19
Module	ACLMGMT-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	swACLIpEntry
First child	None
Description	This object indicates the status of this entry.

swACLIpProfileName

Object name	swACLIpProfileName
Object ID	1.3.6.1.4.1.171.12.9.2.2.1.23
Module	ACLMGMT-MIB
Base syntax	Octet String
Composed syntax	DisplayString
Access	Read-Create
Status	Current
Value list	1 : 1..32
Parent node	swACLIpEntry
First child	None
Description	The name of the ACL mask entry unique to the mask list.

swACLIpRuleTable

Object name	swACLIpRuleTable
Object ID	1.3.6.1.4.1.171.12.9.3.2
Module	ACLMGMT-MIB
Base syntax	Sequence Of swACLIpRuleEntry
Access	Not_Accessible
Status	Current
Sequence	1:swACLIpRuleProfileID - Integer 2:swACLIpRuleAccessID - Integer 3:swACLIpRuleVlan - Octet String 4:swACLIpRuleSrcIpaddress - IP Address 5:swACLIpRuleDstIpaddress - IP Address 6:swACLIpRuleDscp - Integer 7:swACLIpRuleProtocol - Integer 8:swACLIpRuleType - Integer 9:swACLIpRuleCode - Integer 10:swACLIpRuleSrcPort - Integer 11:swACLIpRuleDstPort - Integer 12:swACLIpRuleFlagBits - Integer 13:swACLIpRuleProtoID - Integer 14:swACLIpRuleUserMask - Octet String 15:swACLIpRuleEnablePriority - Integer 16:swACLIpRulePriority - Integer 17:swACLIpRuleReplacePriority - Integer 18:swACLIpRuleEnableReplaceDscp - Integer 19:swACLIpRuleRepDscp - Integer 20:swACLIpRulePermit - Integer

swACLIpRuleSrcIpaddress

Object name	swACLIpRuleSrcIpaddress
Object ID	1.3.6.1.4.1.171.12.9.3.2.1.4
Module	ACLMGMT-MIB
Base syntax	IP Address
Composed syntax	IpAddress
Access	Read-Create
Status	Current
Parent node	swACLIpRuleEntry
First child	None
Description	Specifies an IP source address.

swACLIpRulePermit

Object name	swACLIpRulePermit
Object ID	1.3.6.1.4.1.171.12.9.3.2.1.20
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : deny(1) 2 : permit(2) 3 : mirror(3) 4 : set-drop-precedence(5) 5 : rspan(6)
Parent node	swACLIpRuleEntry
First child	None
Description	This object indicates if the result of the packet examination is 'permit' or 'deny'. The default is 'permit'. permit - Specifies that packets matching the access profile are permitted to be forwarded by the switch. deny - Specifies that packets matching the access profile are not permitted to be forwarded by the switch and will be filtered. mirror - Specifies the packets matching the access profile are copied to the mirror port. Note : The ACL mirror function will work after the mirror is enabled and the mirror has been configured. set-drop-precedence - Specifies the packets that match the access profile are set

swACLIpRulePort

Object name	swACLIpRulePort
Object ID	1.3.6.1.4.1.171.12.9.3.2.1.21
Module	ACLMGMT-MIB
Base syntax	Octet String
Composed syntax	PortList
Access	Read-Create
Status	Current
Value list	1 : 0..127
Parent node	swACLIpRuleEntry
First child	None
Description	Specifies that the access rule will only apply to port(s). This object and swACLIpRuleVID can not be set together.

swACLIpRuleRowStatus

Object name	swACLIpRuleRowStatus
Object ID	1.3.6.1.4.1.171.12.9.3.2.1.22
Module	ACLMGMT-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	swACLIpRuleEntry
First child	None
Description	This object indicates the status of this entry.

swAclRateTable

Object name	swAclRateTable
Object ID	1.3.6.1.4.1.171.12.9.6.3
Module	ACLMGMT-MIB
Base syntax	Sequence Of swAclRateEntry
Access	Not_Accessible
Status	Current
Sequence	1:swAclRateProfileID - Integer 2:swAclRateAccessID - Integer 3:swAclRate - Integer 4:swAclBurstSize - Integer 5:swAclRateActionForRateExceed - Integer 6:swAclRateRemarkDscp - Integer 7:swAclRateRowStatus - Integer
Parent node	swAclMeteringMgmt
First child	swAclRateEntry
Description	This table is used to configure the single rate two color metering function. The access rule must first be created before the parameters of this function can be applied. Users may set the preferred bandwidth for this rule, in Kbps; once the bandwidth has been exceeded, overflow packets will be either dropped or set for a drop precedence, depending on user configuration.

swAclRate

Object name	swAclRate
Object ID	1.3.6.1.4.1.171.12.9.6.3.1.3
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Parent node	swAclRateEntry
First child	None
Description	Specifies the committed bandwidth in Kbps for the flow. NOTE: Users must set the swAclRateActionForRateExceed object to activate this entry.

swAclBurstSize

Object name	swAclBurstSize
Object ID	1.3.6.1.4.1.171.12.9.6.3.1.4
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Parent node	swAclRateEntry
First child	None
Description	This specifies the burst size for the single rate two color mode. The unit is Kbytes. That is to say, 1 means 1kbytes. The set value range is 0..n, the value n is determined by project. This parameter is an optional parameter. The default value is 4kbytes.

swAclRateActionForRateExceed

Object name	swAclRateActionForRateExceed
Object ID	1.3.6.1.4.1.171.12.9.6.3.1.5
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : other(1) 2 : drop-packet(2) 3 : remark-dscp(3)
Parent node	swAclRateEntry
First child	None
Description	Specifies the action to take for those packets exceeding the committed rate. NOTE: Users must also set the swAclRate to activate this entry.

swAclRateRowStatus

Object name	swAclRateRowStatus
Object ID	1.3.6.1.4.1.171.12.9.6.3.1.7
Module	ACLMGMT-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	swAclRateEntry
First child	None
Description	This object indicates the status of this entry.

[Test Procedures]

CLI command :

```
# create access_profile profile_id 1 profile_name 1 ip source_ip_mask  
255.255.255.255
```

Corresponding NETSNMP set.request :

```
snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.9.2.2.1.2.1 i 2  
1.3.6.1.4.1.171.12.9.2.2.1.3.1 i 3 1.3.6.1.4.1.171.12.9.2.2.1.4.1 a 255.255.255.255  
1.3.6.1.4.1.171.12.9.2.2.1.6.1 i 2 1.3.6.1.4.1.171.12.9.2.2.1.19.1 i 4  
1.3.6.1.4.1.171.12.9.2.2.1.23.1 s 31
```


CLI command :

config access_profile profile_id 1 add access_id 1 ip source_ip 10.1.2.202 port 7
permit

Corresponding NETSNMP set.request :

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.9.3.2.1.4
.1.1 a 10.1.2.202 1.3.6.1.4.1.171.12.9.3.2.1.20.1.1 i 2 1.3.6.1.4.1.171.12.9.3.2.1.21.1.1
x
02000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000 1.3.6.1.4.1.171.12.9.3.2.1.22.1.1 i 4

CLI command :

config flow_meter profile_id 1 access_id 1 rate 4096 burst_size 4 rate_exceed
drop_packet

Corresponding NETSNMP set.request :

snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.9.6.3.1.3.1.1 i 4096
1.3.6.1.4.1.171.12.9.6.3.1.4.1.1 i 4 1.3.6.1.4.1.171.12.9.6.3.1.5.1.1 i 2
1.3.6.1.4.1.171.12.9.6.3.1.7.1.1 i 4