

D-link Switch: DGS-3627 Firmware: R1 MIB File: V1

## How to use NET-SNMP – Access Control List (IP)

### The Location of Access Control List OID

The screenshot shows the D-Link MIB Compiler interface. The 'Browse Agent IP' field is set to 192.168.0.1. The 'ACLMGMT-MIB' table is selected in the left pane, and its contents are displayed in the right pane. The table is highlighted with a red box. The right pane shows a tree view of the MIB contents, with the 'swACLIpTable' and its entries highlighted by a red box.

MIB	Root ID
AAC-MIB	1.3.6.1.4.1.171.12.5
<b>ACLMGMT-MIB</b>	<b>1.3.6.1.4.1.171.12.9</b>
ACL-MIB	1.3.6.1.4.1.171.12.9
AGENT-GENERAL-DGS3627-MIB	1.3.6.1.4.1.171.12.1
AGENT-MIB	1.3.6.1.4.1.171.12.1
AUTH-MIB	1.3.6.1.4.1.171.12.3
BRIDGE-MIB	1.3.6.1.2.1.17
DES-2108-MIB	1.3.6.1.4.1.171
DES-2110-MIB	1.3.6.1.4.1.171
DES3026-L2MGMT-MIB	1.3.6.1.4.1.171.11.63.3.2
DES3526-L2MGMT-MIB	1.3.6.1.4.1.171.11.64.1.2
DES3550-L2MGMT-MIB	1.3.6.1.4.1.171.11.64.2.2
DES3828DC-L2MGMT-MIB	1.3.6.1.4.1.171.11.69.2.2
DES3828DC-L3MGMT-MIB	1.3.6.1.4.1.171.11.69.2.3
DES3828-L2MGMT-MIB	1.3.6.1.4.1.171.11.69.1.2
DES3828-L3MGMT-MIB	1.3.6.1.4.1.171.11.69.1.3
DES3828P-L2MGMT-MIB	1.3.6.1.4.1.171.11.69.3.3
DES3828P-L3MGMT-MIB	1.3.6.1.4.1.171.11.69.3.3
DES3852-L2MGMT-MIB	1.3.6.1.4.1.171.11.69.4.2
DES3852-L3MGMT-MIB	1.3.6.1.4.1.171.11.69.4.3
DGS3024-L2MGMT-MIB	1.3.6.1.4.1.171.11.68.1.2
DGS3024PRIMGMT-MIB	1.3.6.1.4.1.171.10.68
DGS3426-L2MGMT-MIB	1.3.6.1.4.1.171.11.70.1.2
DGS3612G-L2MGMT-MIB	1.3.6.1.4.1.171.11.70.9.2
DGS3627G-L2MGMT-MIB	1.3.6.1.4.1.171.11.70.8.2
DGS3627-L2MGMT-MIB	1.3.6.1.4.1.171.11.70.6.2
DGS3650-L2MGMT-MIB	1.3.6.1.4.1.171.11.70.5.2
DISMAN-PING-MIB	1.3.6.1.2.1.80
DISMAN-TRACEROUTE-MIB	1.3.6.1.2.1.81
DLINK-AGENT-MIB	1.3.6.1.4.1.171.12.1
DLINK-AUTH-MIB	1.3.6.1.4.1.171.12.3

- swACLEthernetProfileID
- swACLEthernetUsevlan
- swACLEthernetMacAddrMaskState
- swACLEthernetSrcMacAddrMask
- swACLEthernetDstMacAddrMask
- swACLEthernetUse8021p
- swACLEthernetUseEthernetType
- swACLEthernetRowStatus
- swACLEthernetOwner
- swACLIpTable
  - swACLIpEntry
    - swACLIpProfileID
    - swACLIpUsevlan
    - swACLIpAddrMaskState
    - swACLIpSrcIpAddrMask
    - swACLIpDstIpAddrMask
    - swACLIpUseDSCP
    - swACLIpUseProtoType
    - swACLIpIcmpOption
    - swACLIpIcmpOption
    - swACLIpTcpOption
    - swACLIpUdpOption
    - swACLIpTCPortUDPSrcPortMask
    - swACLIpTCPortUDPDstPortMask
    - swACLIpTCPFlagBit
    - swACLIpTCPFlagBitMask
    - swACLIpProtocolOption
    - swACLIpProtocol
    - swACLIpProtocolMask
    - swACLIpRowStatus
    - swACLIpOwner
- swACLPktContMaskTable
  - swACLPktContMaskEntry
    - swACLPktContMaskProfileID

MIB File: DLINK-AGENT-MIB

OID: 1.3.6.1.4.1.171.12.9

## ACL IP Table

Base syntax	Sequence Of swACLIpEntry
Access	Not_Accessible
Status	Current
Sequence	1:swACLIpProfileID - Integer 2:swACLIpIpAddrMaskState - Integer 3:swACLIpSrcIpAddrMask - IP Address 4:swACLIpDstIpAddrMask - IP Address 5:swACLIpUseDSCP - Integer 6:swACLIpUseProtoType - Integer 7:swACLIpTcpOption - Integer 8:swACLIpUdpOption - Integer 9:swACLIpTCPorUDPSrcPortMask - Octet String 10:swACLIpTCPorUDPdstPortMask - Octet String 11:swACLIpTCPFlagBit - Integer 12:swACLIpTCPFlagBitMask - Integer 13:swACLIpProtoIDOption - Integer 14:swACLIpProtoID - Integer 15:swACLIpProtoIDMask - Octet String 16:swACLIpRowStatus - Integer
Parent node	swAclMaskMgmt
First child	swACLIpEntry
Description	This table contain ACL mask of IP information. Access profiles will be created on the switch by row creation and to define which parts of each incoming frame's IP layer part of header the switch will examine. Masks can be entered that will be combined with the values the switch finds in the specified frame header fields.

Object name	swACLIpEntry
Object ID	1.3.6.1.4.1.171.12.9.2.2.1
Module	ACLMGMT-MIB
Base syntax	Sequence
Access	Not_Accessible
Status	Current
Index	1.swACLIpProfileID
Parent node	swACLIpTable
First child	swACLIpProfileID
Description	A list of information about ACL of IP Layer.

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### Show ACL IP Profile ID

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.1
```

```
Object name      swACLIpProfileID
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.1
Module          ACLMGMT-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Only
Status         Current
Value list     1 : 1..255

Parent node     swACLIpEntry
First child     None
Description    The ID of ACL mask entry ,and is unique in the mask list.
```

### Show ACL IP Use Vlan

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.2
```

```
Object name      swACLIpUsevlan
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.2
Module          ACL-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 IP layer vlan is examined or not.
```

## Show ACL IP Address Mask State

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.3
```

```
Object name      swACLIpIpAddrMaskState
Object ID        1.3.6.1.4.1.171.12.9.2.2.1.3
Module           ACL-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      This object indicates the status of IP address mask.
```

```
other(1) - Neither source IP address nor destination IP address are
masked.
dst-ip-addr(2) - recieved frames's destination IP address are
currently used to be filtered as it meets with the IP
address entry of the table.
src-ip-addr(3) - recieved frames's source IP address are currently
used to be filtered as it meets with the IP address entry of
the table.
dst-src-ip-addr(4) - recieved frames's destination IP address or
source IP address are currently used to be filtered as it meets
with the IP address entry of the table.
```

## Show ACL IP Src IP Address Mask

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.4
```

```
Object name      swACLIpSrcIpAddrMask
Object ID        1.3.6.1.4.1.171.12.9.2.2.1.4
Module           ACL-MIB
```

```
Base syntax      IP Address
Composed syntax  IpAddress
Access           Read-Create
Status           Current
```

```
Parent node      swACLIpEntry
First child      None
Description      This object Specifies IP address mask for the source IP address.
```

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### Show ACL IP Address Mask

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.5

```
Object name      swACLIpDstIpAddrMask
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.5
Module          ACL-MIB

Base syntax     IP Address
Composed syntax IpAddress
Access          Read-Create
Status          Current

Parent node     swACLIpEntry
First child     None
Description     This object Specifies the IP address mask for the destination IP
address.
```

### Show ACL IP Rule Dscp

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.6

```
Object name      swACLIpUseDSCP
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.6
Module          ACL-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 DSCP protocol is is examined or not.
```

### Show ACL IP Use Protocol Type

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.7

```
Object name      swACLIpUseProtoType
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.7
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access          Read-Create
Status          Current
Value list      1 : none(1)
                2 : icmp(2)
                3 : igmp(3)
                4 : tcp(4)
                5 : udp(5)
                6 : protocolId(6)

Parent node     swACLIpEntry
First child     None
Description     That object indicates which protocol will be examined.
```

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### Show ACL IP ICMP Option

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.8

```
Object name      swACLIpIcmpOption
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.8
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Create
Status         Current
Value list      1 : none(1)
                2 : type(2)
                3 : code(3)
                4 : type-code(4)

Parent node     swACLIpEntry
First child     None
Description     This object indicates which fields should be filled in of ICMP.
                none(1)- two fields are null.
                type(2)- type field should be filled in.
                code(3)- code field should be filled in.
                type-code(4)- not only type field but code field should be filled
                in.
```

### Show ACL IP IGMP Option

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.9

```
Object name      swACLIpIgmOption
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.9
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Create
Status         Current
Value list      1 : enable(1)
                2 : disable(2)

Parent node     swACLIpEntry
First child     None
Description     This object indicates Options of IGMP is examined or not.
```

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### Show ACL IP TCP Option

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.10
```

```
Object name      swACLIpTcpOption
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.10
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access          Read-Create
Status          Current
Value list      1 : other(1)
                2 : dst-addr(2)
                3 : src-addr(3)
                4 : dst-src-addr(4)

Parent node     swACLIpEntry
First child     None
Description     This object indicates the status of filtered address of TCP.

                other(1) - Neither source port nor destination port are
                masked.
                dst-addr(2) - recieved frames's destination port are
                currently used to be filtered .
                src-addr(3) - recieved frames's source port are currently
                used to be filtered .
                dst-src-addr(4) - both recieved frames's destination port and
                source port are currently used to be filtered .
```

### Show ACL IP UDP Option

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.11
```

```
Object name      swACLIpUdpOption
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.11
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access          Read-Create
Status          Current
Value list      1 : other(1)
                2 : dst-addr(2)
                3 : src-addr(3)
                4 : dst-src-addr(4)

Parent node     swACLIpEntry
First child     None
Description     This object indicates the status of filtered address of UDP .

                other(1) - Neither source port nor destination port are
                masked.
                dst-addr(2) - recieved frames's destination port are
                currently used to be filtered .
                src-addr(3) - recieved frames's source port are currently
                used to be filtered .
                dst-src-addr(4) - recieved frames's destination port or
                source port are currently used to be filtered.
```

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### Show ACL IP TCP Port UDP Src port Mask

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.12

```
Object name      swACLIpTCPorUDPSrcPortMask
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.12
Module          ACL-MIB

Base syntax     Octet String
Composed syntax OCTET STRING
Access          Read-Create
Status         Current
Value list     1 : 2..2

Parent node     swACLIpEntry
First child    None
Description     Specifies a TCP port mask for the source port if
                swACLIpUseProtoType is TCP Specifies a UDP port mask for the source
                port if swACLIpUseProtoType is UDP.
```

### Show ACL IP TCP Port UDP Dst port Mask

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.13

```
Object name      swACLIpTCPorUDPDstPortMask
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.13
Module          ACL-MIB

Base syntax     Octet String
Composed syntax OCTET STRING
Access          Read-Create
Status         Current
Value list     1 : 2..2

Parent node     swACLIpEntry
First child    None
Description     Specifies a TCP port mask for the destination port if
                swACLIpUseProtoType is TCP
                Specifies a UDP port mask for the destination port if
                swACLIpUseProtoType is UDP.
```

### Show ACL IP TCP Flag Bit

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.14

```
Object name      swACLIpTCPFlagBit
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.14
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access          Read-Create
Status         Current
Value list     1 : enable(1)
                2 : disable(2)

Parent node     swACLIpEntry
First child    None
Description     Specifies a TCP connection flag mask.
```



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### Show ACL IP TCP Flag Bit Mask

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.15
```

```
Object name      swACLIpTCPFlagBitMask
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.15
Module         ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Create
Status         Current
Value list     1 : 0..63

Parent node     swACLIpEntry
First child    None
Description    A value which indicates the set of TCP flags that this
              entity may potentially offers. The value is a sum. This
              sum initially takes the value zero, Then, for each flag, L,
              in the range 1 through 6, that this node performs
              transactions for, 2 raised to (L - 1) is added to the sum.
              Note that values should be calculated accordingly:

              Flag      functionality
              6         urg bit
              5         ack bit
              4         psh bit
              3         rst bit
              2         syn bit
              1         fin bit
              For example, if you want to enable urg bit and ack bit, you
              should set value  $48(2^{(5-1)} + 2^{(6-1)})$ .
```

### Show ACL IP Protocol ID Option

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.16
```

```
Object name      swACLIpProtoIDOption
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.16
Module         ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Create
Status         Current
Value list     1 : enable(1)
              2 : disable(2)

Parent node     swACLIpEntry
First child    None
Description    Specifies that the switch will examine each frame's Protocol ID
              field or not.
```

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### Show ACL IP Protocol ID

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.17
```

```
Object name      swACLIpProtoIDMask
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.17
Module          ACL-MIB

Base syntax      Octet String
Composed syntax  OCTET STRING
Access           Read-Create
Status           Current
Value list      1 : 4..4

Parent node      swACLIpEntry
First child      None
Description      Specifies that the rule applies to the IP protocol ID and the mask
                  options behind the IP header.
```

### Show ACL IP Protocol ID Mask

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.18
```

```
Object name      swACLIpRowStatus
Object ID       1.3.6.1.4.1.171.12.9.2.2.1.18
Module          ACL-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.
```

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IP Mask Information: 192.168.0.1

Option	UDP Option	TCP or UDP Source Port Mask	TCP or UDP Destination Port Mask	TCP Flag Bit	TCP Flag Bit Mask	Protocol ID Option	Protocol ID	Protocol ID Mask	Row Status
	other	0000	0000	disable	0	disable	255	00000000	active

Refresh  
Add  
Delete

IP Mask ID  TCP or UDP Srouce Port Mask   
IP Address Mask State  TCP or UDP Destination Port Mask

IP Mask Information: 192.168.0.1

Option	UDP Option	TCP or UDP Source Port Mask	TCP or UDP Destination Port Mask	TCP Flag Bit	TCP Flag Bit Mask	Protocol ID Option	Protocol ID	Protocol ID Mask	Row Status
	other	0000	0000	disable	0	disable	255	00000000	active

Refresh  
Add  
Delete

IP Mask ID  TCP or UDP Srouce Port Mask   
IP Address Mask State  TCP or UDP Destination Port Mask

## ACL IP Rule Table

Object name	swACLIpRuleTable
Object ID	1.3.6.1.4.1.171.12.9.3.2
Module	ACL-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 21:swACLIpRulePort - Octet String 22:swACLIpRuleRowStatus - Integer
Parent node	swAcIRuleMgmt
First child	swACLIpRuleEntry
Description	

Object name	swACLIpRuleEntry
Object ID	1.3.6.1.4.1.171.12.9.3.2.1
Module	ACL-MIB
Base syntax	Sequence
Access	Not_Accessible
Status	Current
Index	1:swACLIpRuleProfileID 2:swACLIpRuleAccessID
Parent node	swACLIpRuleTable
First child	swACLIpRuleProfileID
Description	

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### Show ACL IP Rule Profile ID

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.1

```
Object name      swACLIpRuleProfileID
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.1
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Only
Status         Current
Value list     1 : 1..255

Parent node     swACLIpRuleEntry
First child    None
Description    The ID of ACL mask entry ,and is unique in the mask list.
```

### Show ACL IP Rule Access ID

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.2

```
Object name      swACLIpRuleAccessID
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.2
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Only
Status         Current
Value list     1 : 0..65535

Parent node     swACLIpRuleEntry
First child    None
Description    The ID of ACL rule entry relate to swACLIpRuleProfileID.
               while row creation Set to 0 to indicate assign Access ID
               automatically for the ports in the swACLIpRulePort to create Rule
               entries for swACLIpRulePort accordingly.
               Set to 1-65535 indicates to create the exact access ID for the
               swACLIpRulePort and the swACLIpRulePort must set one port only
               otherwise the row creation will
               be fail.
```

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### Show ACL IP Rule Vlan

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.3

```
Object name      swACLIpRuleVlan
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.3
Module          ACL-MIB

Base syntax     Octet String
Composed syntax SnmpAdminString
Access         Read-Create
Status         Current
Value list     1 : 1..32

Parent node     swACLIpRuleEntry
First child    None
Description    Specifies that the access will apply to only to this VLAN.
```

### Show ACL IP Rule Src IP Address

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.4

```
Object name      swACLIpRuleSrcIpaddress
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.4
Module          ACL-MIB

Base syntax     IP Address
Composed syntax IpAddress
Access         Read-Create
Status         Current

Parent node     swACLIpRuleEntry
First child    None
Description    Specific an IP source address.
```

### Show ACL IP Rule Dst IP Address

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.5

```
Object name      swACLIpRuleDstIpaddress
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.5
Module          ACL-MIB

Base syntax     IP Address
Composed syntax IpAddress
Access         Read-Create
Status         Current

Parent node     swACLIpRuleEntry
First child    None
Description    Specific an IP destination address.
```

**D-link Switch: DGS-3627 Firmware: R1 MIB File: V1**

### Show ACL IP Rule Dscp

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.6

```
Object name      swACLIpRuleDscp
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.6
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Create
Status         Current
Value list     1 : 0..63

Parent node     swACLIpRuleEntry
First child    None
Description    Specific the value of dscp, the value can be configured 0 to 63
```

### Show ACL IP Rule Protocol

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.7

```
Object name      swACLIpRuleProtocol
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.7
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Only
Status         Current
Value list     1 : none(1)
               2 : icmp(2)
               3 : igmp(3)
               4 : tcp(4)
               5 : udp(5)
               6 : protocolId(6)

Parent node     swACLIpRuleEntry
First child    None
Description    Specifies the IP protocol which has been configured in
swACLIpEntry .
```

### Show ACL IP Rule Protocol

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.8

```
Object name      swACLIpRuleType
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.8
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Create
Status         Current
Value list     1 : 0..255

Parent node     swACLIpRuleEntry
First child    None
Description    Specific that the rule applies to the value of icmp type traffic.
```

**D-link Switch: DGS-3627 Firmware: R1 MIB File: V1**

### Show ACL IP Rule Code

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.9
```

```
Object name      swACLIpRuleCode
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.9
Module          ACL-MIB

Base syntax      Integer
Composed syntax INTEGER
Access          Read-Create
Status          Current
Value list      1 : 0..255

Parent node      swACLIpRuleEntry
First child      None
Description      Specific that the rule applies to the value of icmp code traffic.
```

### Show ACL IP Rule Src Port

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.10
```

```
Object name      swACLIpRuleSrcPort
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.10
Module          ACL-MIB

Base syntax      Integer
Composed syntax INTEGER
Access          Read-Create
Status          Current
Value list      1 : 0..65535

Parent node      swACLIpRuleEntry
First child      None
Description      Specific that the rule applies the range of tcp/udp source port
```



D-link Switch: DGS-3627 Firmware: R1 MIB File: V1

### Show ACL IP Rule Dst Port

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.11
```

```
Object name      swACLIpRuleDstPort
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.11
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Create
Status         Current
Value list     1 : 0..65535

Parent node     swACLIpRuleEntry
First child    None
Description    Specific the range of tcp/udp destination port range
```

### Show ACL IP Rule Flag Bits

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.12
```

```
Object name      swACLIpRuleFlagBits
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.12
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Create
Status         Current
Value list     1 : 0..63

Parent node     swACLIpRuleEntry
First child    None
Description    A value which indicates the set of TCP flags that this
                entity may potentially offers. The value is a sum. This
                sum initially takes the value zero, Then, for each flag, L,
                in the range 1 through 6, that this node performs
                transactions for, 2 raised to (L - 1) is added to the sum.
                Note that values should be calculated accordingly:

                Flag      functionality
                6         urg bit
                5         ack bit
                4         psh bit
                3         rst bit
                2         syn bit
                1         fin bit
                For example, it you want to enable urg bit and ack bit, you
                should set vlaue  $48(2^{(5-1)} + 2^{(6-1)})$ .
```

**D-link Switch: DGS-3627 Firmware: R1 MIB File: V1**

### Show ACL IP Rule Protocol ID

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.13
```

```
Object name      swACLIpRuleProtoID
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.13
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access          Read-Create
Status          Current
Value list      1 : 0..255

Parent node     swACLIpRuleEntry
First child     None
Description     Specific that the rule applies to the value of ip protocol id
traffic
```

### Show ACL IP Rule User Mask

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.14
```

```
Object name      swACLIpRuleUserMask
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.14
Module          ACL-MIB

Base syntax     Octet String
Composed syntax OCTET STRING
Access          Read-Create
Status          Current
Value list      1 : 4..4

Parent node     swACLIpRuleEntry
First child     None
Description     Specific that the rule applies to the ip protocol id and the range
of options behind the IP header.
```

**D-link Switch: DGS-3627 Firmware: R1 MIB File: V1**

### Show ACL IP Rule Enable Priority

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.15

```
Object name      swACLIpRuleEnablePriority
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.15
Module          ACL-MIB

Base syntax      Integer
Composed syntax INTEGER
Access          Read-Create
Status          Current
Value list      1 : enabled(1)
                2 : disabled(2)

Parent node      swACLIpRuleEntry
First child     None
Description     Specifies that the access will apply only to packets with
                priority value.
```

### Show ACL IP Rule Priority

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.16

```
Object name      swACLIpRulePriority
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.16
Module          ACL-MIB

Base syntax      Integer
Composed syntax INTEGER
Access          Read-Create
Status          Current
Value list      1 : 0..7

Parent node      swACLIpRuleEntry
First child     None
Description     Specific the priority will change to the packets while the
                swACLIpRuleEnablePriority is enabled .
```

### Show ACL IP Rule Replace Priority

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.17

```
Object name      swACLIpRuleReplacePriority
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.17
Module          ACL-MIB

Base syntax      Integer
Composed syntax INTEGER
Access          Read-Create
Status          Current
Value list      1 : enabled(1)
                2 : disabled(2)

Parent node      swACLIpRuleEntry
First child     None
Description     Specific the packets that match the access profile will changed the
                802.lp priority tag field by the switch or not .
```

**D-link Switch: DGS-3627 Firmware: R1 MIB File: V1**

### Show ACL IP Rule Enable Replace Dscp

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.18
```

```
Object name      swACLIpRuleEnableReplaceDscp
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.18
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Create
Status         Current
Value list     1 : enabled(1)
              2 : disabled(2)

Parent node     swACLIpRuleEntry
First child    None
Description    Indicate weather the DSCP field can be over-write or not.
```

### Show ACL IP Rule Enable Replace Dscp

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.19
```

```
Object name      swACLIpRuleRepDscp
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.19
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access         Read-Create
Status         Current
Value list     1 : 0..63

Parent node     swACLIpRuleEntry
First child    None
Description    specify a value to be written to the DSCP field of an incoming
packet

                that meets the criteria specified in the first part of the command.
                This value will over-write the value in the DSCP field of the packet.
```

D-link Switch: DGS-3627 Firmware: R1 MIB File: V1

### Show ACL IP Rule Permit

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.20

```
Object name      swACLIpRulePermit
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.20
Module          ACL-MIB

Base syntax     Integer
Composed syntax INTEGER
Access          Read-Create
Status          Current
Value list      1 : deny(1)
                2 : permit(2)
                3 : mirror(3)

Parent node     swACLIpRuleEntry
First child     None
Description     This object indicates resoult of examination is permit or
                deny;default is permit(1)
                permit - Specifies that packets that match the access profile are
                permitted to be forwarded by the switch.
                deny - Specifies that packets that do not match the access profile
                are not permitted to be forwarded by the switch and will be filtered.
                mirror - Specifies the packets that match the access profile are
                sent the copied one to the mirror port.
                Note : ACL mirror function will be worked after mirror enabled and
                mirror port has
                been configured.
```

### Show ACL IP Rule Port

snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.21

```
Object name      swACLIpRulePort
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.21
Module          ACL-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 will apply to only to port(s).
```

**D-link Switch: DGS-3627 Firmware: R1 MIB File: V1**

## Show ACL IP Rule Row Status

```
snmpwalk -v2c -c public 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.22
```

```
Object name      swACLIpRuleRowStatus
Object ID       1.3.6.1.4.1.171.12.9.3.2.1.22
Module          ACL-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.
```

**D-link Switch: DGS-3627 Firmware: R1 MIB File: V1**

IP Rule: 192.168.0.1

Profile ID	Access ID	Source IP Address	Destination IP Address	DSCP	Protocol	ICMP	IGMP	Source Port	Destination Port	Flag Bits	Protocol ID
1	1	192.168.0.10	0.0.0.0	255	none	dis...	dis...	255	255	0	255

1  
Refresh  
Edit  
Add

IP Rule: 192.168.0.1

ID	User Mask	Enable Priority	Priority	Replace Priority	Enable Replace DSCP	Replace DSCP	Permit	Port	RX Rate	TimeRange Name	Row Status
00000000	disabled	255	disabled	disabled	255	deny	0...	0			active

1  
Refresh  
Edit  
Add

## The Example of creating IP ACL

### Create a IP Profile

#### SNMP Command:

```
snmpset -v2c -c private 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.3.10 i 4  
1.3.6.1.4.1.171.12.9.2.2.1.4.10 a 255.255.255.255 1.3.6.1.4.1.171.12.9.2.2.1.5.10 a  
255.255.255.255 1.3.6.1.4.1.171.12.9.2.2.1.19.10 i 4
```

#### Step 1. Set up the ACL IP Address Mask State

```
snmpset -v2c -c private 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.3.10 i 4  
10 → Profile ID
```

#### Step 2. Set up the Source IP Mask

```
snmpset -v2c -c private 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.4.10 a 255.255.255.255  
255.255.255.255 → Source IP Mask
```

#### Step 3. Set up the Destination Mask

```
snmpset -v2c -c private 192.168.0.1 1.3.6.1.4.1.171.12.9.2.2.1.5.10 a 255.255.255.255  
255.255.255.255 → Destination IP Mask
```

#### Step 4. Create and go

```
snmpset -v2c -c private 192.168.0.1 1.3.6.1.4.1.171.12.9.1.1.19.10 i 4
```

### Create a IP Profile

#### SNMP Command:

```
snmpset -v2c -c private 192.168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.4.10.20 a 192.168.0.20  
1.3.6.1.4.1.171.12.9.3.2.1.5.10.20 a 192.168.0.30 1.3.6.1.4.1.171.12.9.3.2.1.20.10.20 i 1  
1.3.6.1.4.1.171.12.9.3.2.1.21.10.20 x 0002000000000000 1.3.6.1.4.1.171.12.9.3.2.1.24.10.20 i 4
```

#### Step 1. Set up Source IP

```
snmpset -v2c -c private .168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.4.10.20 a 192.168.0.20  
192.168.0.20 → Source MAC  
20 → Rule ID
```

#### Step 2. Set up Destination IP

```
snmpset -v2c -c private .168.0.1 1.3.6.1.4.1.171.12.9.3.2.1.5.10.20 a 192.168.0.30  
192.168.0.20 → Destination MAC
```

#### Step 3. Set the Rule Permit

```
snmpset -v2c -c private .168.0.1 1.3.6.1.4.1.171.12.9.3.1.1.20.10.20 i 1
```

#### Step 3. Enable Port 1

```
snmpset -v2c -c private .168.0.1 1.3.6.1.4.1.171.12.9.3.1.1.21.10.20 x 0002000000000000  
0002000000000000 → 0002 = 0000 0000 0000 0010 → Port 15
```

#### Step 4. Active the Rule

```
snmpset -v2c -c private .168.0.1 1.3.6.1.4.1.171.12.9.3.1.1.24.10.20 1 i 4
```