How to configure CPU ACL for Ethernet on DES-3200 A1 B1

1) **Create an CPU ACL profile for Ethernet:**
   create cpu access_profile profile_id 3 ethernet vlan source_mac FF-FF-FF-FF-FF-FF destination_mac FF-FF-FF-FF-FF-FF

   snmpset -v2c -c private 10.90.90.90
   1.3.6.1.4.1.171.12.9.4.1.1.2.3 i 1
   1.3.6.1.4.1.171.12.9.4.1.1.3.3 i 4
   1.3.6.1.4.1.171.12.9.4.1.1.4.3 x ffffffffffff
   1.3.6.1.4.1.171.12.9.4.1.1.5.3 x ffffffffffff
   1.3.6.1.4.1.171.12.9.4.1.1.8.3 i 4

2) **Create an CPU ACL rule in the profile created above:**
   config cpu access_profile profile_id 4 add access_id 10 ethernet vlan default source_mac 00-00-01-00-00-01 destination_mac 00-00-02-00-00-02 port 15 permit

   snmpset -v2c -c private 10.90.90.90
   1.3.6.1.4.1.171.12.9.5.1.1.3.3.5 s default
   1.3.6.1.4.1.171.12.9.5.1.1.4.3.5 x 000001000001
   1.3.6.1.4.1.171.12.9.5.1.1.5.3.5 x 000002000002
   1.3.6.1.4.1.171.12.9.5.1.1.8.3.5 i 2
   1.3.6.1.4.1.171.12.9.5.1.1.9.3.5 i 4
   1.3.6.1.4.1.171.12.9.5.1.1.10.3.5 x 0002000000000000

   - Explanation of port number:
     0002000000000000 = port 15
     Each character 0 can turn into binary 0000, which can stand for 4 ports.
     For example, character "2" turns into binary is "0010", which means port 3;
     Character "6" turns into binary is"0110", which means port s 2-3.
     Hence, if you want to select ports 15, which is binary 0000 0000 0000 0010 0000 0000 0000 0000 => 00020000]

3) **Delete an CPU ACL rule in the profile:**
   config cpu access_profile profile_id 3 delete access_id 5

   snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.9.5.1.1.9.3.5 i 6

4) **Delete an CPU ACL profile:**
   delete cpu access_profile profile_id 3

   snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.9.4.1.1.8.3 i 6

5) **Enable CPU ACL (CPU interface filtering):**
   enable cpu_interface_filtering

   snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.9.1.1.0 i 1

6) **Disable CPU ACL (CPU interface filtering):**
   disable cpu_interface_filtering

   snmpset -v2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.9.1.1.0 i 2

MIB: ACLMGMT-MIB

OIDs:

1.3.6.1.4.1.171.12.9.1.1

1.3.6.1.4.1.171.12.9.4.1.1.1

1.3.6.1.4.1.171.12.9.4.1.1.2

swCpuAclEthernetEntry
- swCpuAclEthernetProfileID
- swCpuAclEthernetUsevlan
- swCpuAclEthernetMacAddrMaskState
- swCpuAclEthernetSrcMacAddrMask
- swCpuAclEthernetDstMacAddrMask
- swCpuAclEthernetUse8021p
- swCpuAclEthernetUseEthernetType
- swCpuAclEthernetRowStatus
CpuAclIpTable
swCpuAclIpEntry
- swCpuAclIpProfileID
- swCpuAclIpUsevlan
- swCpuAclIpIpAddrMaskState

Object name	swCpuAclEthernetUsevlan
Object ID	1.3.6.1.4.1.171.12.9.4.1.1.2
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : enabled(1)
	2 : disabled(2)
Parent node	swCpuAclEthernetEntry
First child	None
Description	Specifies that the switch will examine the VLAN part of each packet header.

1.3.6.1.4.1.171.12.9.4.1.1.3

swCpuAclEthernetEntry
- swCpuAclEthernetProfileID
- swCpuAclEthernetUsevlan
- swCpuAclEthernetMacAddrMaskState
- swCpuAclEthernetSrcMacAddrMask
- swCpuAclEthernetDstMacAddrMask
- swCpuAclEthernetUse8021p
- swCpuAclEthernetUseEthernetType
- swCpuAclEthernetRowStatus
CpuAclIpTable
swCpuAclIpEntry
- swCpuAclIpProfileID
- swCpuAclIpUsevlan
- swCpuAclIpIpAddrMaskState
- swCpuAclIpSrcIpAddrMask
- swCpuAclIpDstIpAddrMask
- swCpuAclIpUseDSCP
- swCpuAclIpUseProtoType
- swCpuAclIpIcmpOption
- swCpuAclIpIgmpOption
- swCpuAclIpTcpOption
- swCpuAclIpUdpOption
- swCpuAclIpTCPorUDPSrcPortMask
- swCpuAclIpTCPorUDPDstPortMask

Object name	swCpuAclEthernetMacAddrMaskState
Object ID	1.3.6.1.4.1.171.12.9.4.1.1.3
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : other(1)
	2 : dst-mac-addr(2)
	3 : src-mac-addr(3)
	4 : dst-src-mac-addr(4)
Parent node	swCpuAclEthernetEntry
First child	None
Description	This object indicates the status of the MAC address mask.

other (1) – Neither source MAC addresses nor destination MAC addresses are masked.
dst-mac-addr (2) – Destination MAC addresses within received frames are to be filtered when matched with the MAC address entry of the table.
src-mac-addr (3) – Source MAC address within received frames are to be filtered when matched with the MAC address entry of the table.
dst-src-mac-addr (4) – Source or destination MAC addresses within received frames are to be filtered when matched with the MAC address entry of this table.

1.3.6.1.4.1.171.12.9.4.1.1.4

- swCpuAclEthernetMacAddrMaskState
- swCpuAclEthernetSrcMacAddrMask
- swCpuAclEthernetDstMacAddrMask
- swCpuAclEthernetUse8021p
- swCpuAclEthernetUseEthernetType
- swCpuAclEthernetRowStatus
CpuAclIpTable
swCpuAclIpEntry
- swCpuAclIpProfileID
- swCpuAclIpUsevlan
- swCpuAclIpIpAddrMaskState
- swCpuAclIpSrcIpAddrMask
- swCpuAclIpDstIpAddrMask

Object name	swCpuAclEthernetSrcMacAddrMask
Object ID	1.3.6.1.4.1.171.12.9.4.1.1.4
Module	ACLMGMT-MIB
Base syntax	Octet String
Composed syntax	MacAddress
Access	Read-Create
Status	Current
Value list	1 : 6..6
Parent node	swCpuAclEthernetEntry
First child	None
Description	This object specifies the MAC address mask for the source MAC address.

1.3.6.1.4.1.171.12.9.4.1.1.5

- swCpuAclEthernetMacAddrMaskState
- swCpuAclEthernetSrcMacAddrMask
- swCpuAclEthernetDstMacAddrMask
- swCpuAclEthernetUse8021p
- swCpuAclEthernetUseEthernetType
- swCpuAclEthernetRowStatus
CpuAclIpTable
swCpuAclIpEntry
- swCpuAclIpProfileID
- swCpuAclIpUsevlan
- swCpuAclIpIpAddrMaskState
- swCpuAclIpSrcIpAddrMask
- swCpuAclIpDstIpAddrMask

Object name	swCpuAclEthernetDstMacAddrMask
Object ID	1.3.6.1.4.1.171.12.9.4.1.1.5
Module	ACLMGMT-MIB
Base syntax	Octet String
Composed syntax	MacAddress
Access	Read-Create
Status	Current
Value list	1 : 6..6
Parent node	swCpuAclEthernetEntry
First child	None
Description	This object specifies the MAC address mask for the destination MAC address.

1.3.6.1.4.1.171.12.9.4.1.1.6

swCpuAclEthernetMacAddrMaskState	
swCpuAclEthernetSrcMacAddrMask	
swCpuAclEthernetDstMacAddrMask	
swCpuAclEthernetUse8021p	
swCpuAclEthernetUseEthernetType	
swCpuAclEthernetRowStatus	
CpuAclIpTable	
swCpuAclIpEntry	
swCpuAclIpProfileID	
swCpuAclIpUsevlan	
swCpuAclIpIpAddrMaskState	
swCpuAclIpSrcIpAddrMask	
swCpuAclIpDstIpAddrMask	
swCpuAclIpUseDSCP	

```
Object name      swCpuAclEthernetUse8021p
Object ID        1.3.6.1.4.1.171.12.9.4.1.1.6
Module           ACLMGMT-MIB

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

Parent node      swCpuAclEthernetEntry
First child      None
Description       Specifies if the switch will examine the 802.1p priority value in the frame's header
                  or not.
```

1.3.6.1.4.1.171.12.9.4.1.1.7

swCpuAclEthernetUse8021p	
swCpuAclEthernetUseEthernetType	
swCpuAclEthernetRowStatus	
CpuAclIpTable	
swCpuAclIpEntry	
swCpuAclIpProfileID	
swCpuAclIpUsevlan	
swCpuAclIpIpAddrMaskState	
swCpuAclIpSrcIpAddrMask	
swCpuAclIpDstIpAddrMask	
swCpuAclIpUseDSCP	
swCpuAclIpUseProtoType	
swCpuAclIpIcmpOption	
swCpuAclIpIgmpOption	
swCpuAclIpTcpOption	

```
Object name      swCpuAclEthernetUseEthernetType
Object ID        1.3.6.1.4.1.171.12.9.4.1.1.7
Module           ACLMGMT-MIB

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

Parent node      swCpuAclEthernetEntry
First child      None
Description       Specifies if the switch will examine the Ethernet type value in each frame's header
                  or not.
```

1.3.6.1.4.1.171.12.9.4.1.1.8

swCpuAclEthernetUse8021p	
swCpuAclEthernetUseEthernetType	
swCpuAclEthernetRowStatus	
CpuAclIpTable	
swCpuAclIpEntry	
swCpuAclIpProfileID	
swCpuAclIpUsevlan	
swCpuAclIpIpAddrMaskState	
swCpuAclIpSrcIpAddrMask	
swCpuAclIpDstIpAddrMask	
swCpuAclIpUseDSCP	
swCpuAclIpUseProtoType	
swCpuAclIpIcmpOption	
swCpuAclIpIgmpOption	
swCpuAclIpTcpOption	
swCpuAclIpUdpOption	
swCpuAclIpTCPorUDPSrcPortMask	
swCpuAclIpTCPorUDPDstPortMask	

```
Object name      swCpuAclEthernetRowStatus
Object ID        1.3.6.1.4.1.171.12.9.4.1.1.8
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      swCpuAclEthernetEntry
First child      None
Description       This object indicates the status of this entry.
```

1.3.6.1.4.1.171.12.9.5.1.1.1

CpuACLMaskDelAllState	
AclRuleMgmt	
CpuAclEtherRuleTable	
swCpuAclEtherRuleEntry	
swCpuAclEtherRuleProfileID	
swCpuAclEtherRuleAccessID	
swCpuAclEtherRuleVlan	
swCpuAclEtherRuleSrcMacAddress	
swCpuAclEtherRuleDstMacAddress	
swCpuAclEtherRule8021P	
swCpuAclEtherRuleEtherType	
swCpuAclEtherRulePermit	

```
CpuAclEtherRuleProfileID
3.6.1.4.1.171.12.9.5.1.1.1
CLMGMT-MIB

Integer
INTEGER
ead-Only
urrent

CpuAclEtherRuleEntry
ne
e ID of the software ACL mask entry, which is unique to the mask list. The maximum value of this object depends on the device.
```

1.3.6.1.4.1.171.12.9.5.1.1.2

```
CpuACLMaskDelAllState
AclRuleMgmt
CpuAclEtherRuleTable
  swCpuAclEtherRuleEntry
      swCpuAclEtherRuleProfileID
      swCpuAclEtherRuleAccessID
      swCpuAclEtherRuleVlan
      swCpuAclEtherRuleSrcMacAddress
      swCpuAclEtherRuleDstMacAddress
      swCpuAclEtherRule8021P
      swCpuAclEtherRuleEtherType
      swCpuAclEtherRulePermit
      swCpuAclEtherRuleRowStatus
```

Object name	swCpuAclEtherRuleAccessID
Object ID	1.3.6.1.4.1.171.12.9.5.1.1.2
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Only
Status	Current
Value list	1 : 1..65535
Parent node	swCpuAclEtherRuleEntry
First child	None
Description	The ID of the software ACL rule entry as it relates to swCpuAclEtherRuleProfileID.

1.3.6.1.4.1.171.12.9.5.1.1.3

```
swCpuAclEtherRuleEntry
    swCpuAclEtherRuleProfileID
    swCpuAclEtherRuleAccessID
    swCpuAclEtherRuleVlan
    swCpuAclEtherRuleSrcMacAddress
    swCpuAclEtherRuleDstMacAddress
    swCpuAclEtherRule8021P
    swCpuAclEtherRuleEtherType
    swCpuAclEtherRulePermit
    swCpuAclEtherRuleRowStatus
    swCpuAclEtherRulePort
    swCpuAclEtherRuleMatchVID
CpuAclIpRuleTable
```

Object name	swCpuAclEtherRuleVlan
Object ID	1.3.6.1.4.1.171.12.9.5.1.1.3
Module	ACLMGMT-MIB
Base syntax	Octet String
Composed syntax	SnmpAdminString
Access	Read-Create
Status	Current
Value list	1 : 1..32
Parent node	swCpuAclEtherRuleEntry
First child	None
Description	Specifies that the access rule will only apply to packets with the VLAN ID indexed by this VLAN name.

1.3.6.1.4.1.171.12.9.5.1.1.4

```
swCpuAclEtherRuleEntry
    swCpuAclEtherRuleProfileID
    swCpuAclEtherRuleAccessID
    swCpuAclEtherRuleVlan
    swCpuAclEtherRuleSrcMacAddress
    swCpuAclEtherRuleDstMacAddress
    swCpuAclEtherRule8021P
    swCpuAclEtherRuleEtherType
    swCpuAclEtherRulePermit
    swCpuAclEtherRuleRowStatus
    swCpuAclEtherRulePort
    swCpuAclEtherRuleMatchVID
CpuAclIpRuleTable
    swCpuAclIpRuleEntry
```

Object name	swCpuAclEtherRuleSrcMacAddress
Object ID	1.3.6.1.4.1.171.12.9.5.1.1.4
Module	ACLMGMT-MIB
Base syntax	Octet String
Composed syntax	MacAddress
Access	Read-Create
Status	Current
Value list	1 : 6..6
Parent node	swCpuAclEtherRuleEntry
First child	None
Description	Specifies that the access rule will only apply to the packets with this source MAC address.

1.3.6.1.4.1.171.12.9.5.1.1.5

```
    swCpuAclEtherRuleVlan
    swCpuAclEtherRuleSrcMacAddress
    swCpuAclEtherRuleDstMacAddress
    swCpuAclEtherRule8021P
    swCpuAclEtherRuleEtherType
    swCpuAclEtherRulePermit
    swCpuAclEtherRuleRowStatus
    swCpuAclEtherRulePort
    swCpuAclEtherRuleMatchVID
CpuAclIpRuleTable
    swCpuAclIpRuleEntry
    swCpuAclIpRuleProfileID
    swCpuAclIpRuleAccessID
```

ect name	swCpuAclEtherRuleDstMacAddress
ect ID	1.3.6.1.4.1.171.12.9.5.1.1.5
ule	ACLMGMT-MIB
e syntax	Octet String
posed syntax	MacAddress
ess	Read-Create
tus	Current
ue list	1 : 6..6
ent node	swCpuAclEtherRuleEntry
st child	None
cription	Specifies that the access rule will only apply to the packets with this destination MAC address.

1.3.6.1.4.1.171.12.9.5.1.1.6

- swCpuAclEtherRule8021P
- swCpuAclEtherRuleEtherType
- swCpuAclEtherRulePermit
- swCpuAclEtherRuleRowStatus
- swCpuAclEtherRulePort
- swCpuAclEtherRuleMatchVID
- CpuAclIpRuleTable
- swCpuAclIpRuleEntry
- swCpuAclIpRuleProfileID
- swCpuAclIpRuleAccessID
- swCpuAclIpRuleVlan
- swCpuAclIpRuleSrcIpaddress
- swCpuAclIpRuleDstIpaddress
- swCpuAclIpRuleDscp

Object name	swCpuAclEtherRule8021P
Object ID	1.3.6.1.4.1.171.12.9.5.1.1.6
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : -1..7
Parent node	swCpuAclEtherRuleEntry
First child	None
Description	Specifies that the access rule will only apply to packets with this 802.1p priority value. A value of -1 indicates that this node is not actively used.

1.3.6.1.4.1.171.12.9.5.1.1.7

- swCpuAclEtherRule8021P
- swCpuAclEtherRuleEtherType
- swCpuAclEtherRulePermit
- swCpuAclEtherRuleRowStatus
- swCpuAclEtherRulePort
- swCpuAclEtherRuleMatchVID
- CpuAclIpRuleTable
- swCpuAclIpRuleEntry
- swCpuAclIpRuleProfileID
- swCpuAclIpRuleAccessID
- swCpuAclIpRuleVlan
- swCpuAclIpRuleSrcIpaddress
- swCpuAclIpRuleDstIpaddress
- swCpuAclIpRuleDscp

Object name	swCpuAclEtherRuleEtherType
Object ID	1.3.6.1.4.1.171.12.9.5.1.1.7
Module	ACLMGMT-MIB
Base syntax	Octet String
Composed syntax	OCTET STRING
Access	Read-Create
Status	Current
Value list	1 : 2..2
Parent node	swCpuAclEtherRuleEntry
First child	None
Description	Specifies that the access rule will only apply to packets with this 802.1Q Ethernet type value in the packet header.

1.3.6.1.4.1.171.12.9.5.1.1.8

- swCpuAclEtherRule8021P
- swCpuAclEtherRuleEtherType
- swCpuAclEtherRulePermit
- swCpuAclEtherRuleRowStatus
- swCpuAclEtherRulePort
- swCpuAclEtherRuleMatchVID
- CpuAclIpRuleTable
- swCpuAclIpRuleEntry
- swCpuAclIpRuleProfileID
- swCpuAclIpRuleAccessID
- swCpuAclIpRuleVlan
- swCpuAclIpRuleSrcIpaddress
- swCpuAclIpRuleDstIpaddress
- swCpuAclIpRuleDscp
- swCpuAclIpRuleProtocol
- swCpuAclIpRuleType
- swCpuAclIpRuleCode
- swCpuAclIpRuleSrcPort
- swCpuAclIpRuleDstPort

Object name	swCpuAclEtherRulePermit
Object ID	1.3.6.1.4.1.171.12.9.5.1.1.8
Module	ACLMGMT-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Create
Status	Current
Value list	1 : deny(1)
	2 : permit(2)
Parent node	swCpuAclEtherRuleEntry
First child	None
Description	This object indicates if the result of the packet examination is to 'permit' or 'deny'. The default is 'permit'. permit - Specifies that packets that match the access profile are permitted to be forwarded by the switch. deny - Specifies that packets that match the access profile are not permitted to be forwarded by the switch and will be filtered.

1.3.6.1.4.1.171.12.9.5.1.1.9

swCpuAclEtherRule8021P
swCpuAclEtherRuleEtherType
swCpuAclEtherRulePermit
swCpuAclEtherRuleRowStatus
swCpuAclEtherRulePort
swCpuAclEtherRuleMatchVID
CpuAclIpRuleTable
swCpuAclIpRuleEntry
swCpuAclIpRuleProfileID
swCpuAclIpRuleAccessID
swCpuAclIpRuleVlan
swCpuAclIpRuleSrcIpaddress
swCpuAclIpRuleDstIpaddress
swCpuAclIpRuleDscp
swCpuAclIpRuleProtocol
swCpuAclIpRuleType
swCpuAclIpRuleCode
swCpuAclIpRuleSrcPort

```
Object name        swCpuAclEtherRuleRowStatus
Object ID          1.3.6.1.4.1.171.12.9.5.1.1.9
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        swCpuAclEtherRuleEntry
First child        None
Description        This object indicates the status of this entry.
```

1.3.6.1.4.1.171.12.9.5.1.1.10

swCpuAclEtherRuleRowStatus
swCpuAclEtherRulePort
swCpuAclEtherRuleMatchVID
CpuAclIpRuleTable
swCpuAclIpRuleEntry
swCpuAclIpRuleProfileID
swCpuAclIpRuleAccessID
swCpuAclIpRuleVlan
swCpuAclIpRuleSrcIpaddress
swCpuAclIpRuleDstIpaddress
swCpuAclIpRuleDscp
swCpuAclIpRuleProtocol
swCpuAclIpRuleType

```
Object name        swCpuAclEtherRulePort
Object ID          1.3.6.1.4.1.171.12.9.5.1.1.10
Module             ACLMGMT-MIB

Base syntax        Octet String
Composed syntax    PortList
Access             Read-Create
Status             Current
Value list         1 : 0..127

Parent node        swCpuAclEtherRuleEntry
First child        None
Description        Specifies that the access rule will only apply to port(s).
```

1.3.6.1.4.1.171.12.9.5.1.1.11

swCpuAclEtherRuleRowStatus
swCpuAclEtherRulePort
swCpuAclEtherRuleMatchVID
CpuAclIpRuleTable
swCpuAclIpRuleEntry
swCpuAclIpRuleProfileID
swCpuAclIpRuleAccessID
swCpuAclIpRuleVlan
swCpuAclIpRuleSrcIpaddress
swCpuAclIpRuleDstIpaddress
swCpuAclIpRuleDscp
swCpuAclIpRuleProtocol
swCpuAclIpRuleType
swCpuAclIpRuleCode

```
Object name        swCpuAclEtherRuleMatchVID
Object ID          1.3.6.1.4.1.171.12.9.5.1.1.11
Module             ACLMGMT-MIB

Base syntax        Integer
Composed syntax    INTEGER
Access             Read-Create
Status             Current
Value list         1 : 0..4094

Parent node        swCpuAclEtherRuleEntry
First child        None
Description        Specifies that the access rule will apply only to packets with
                   this VLAN ID.
```