Cisco APIC and Power Over Ethernet

Revised: March 8, 2024

New and Changed Information

The following table provides an overview of the significant changes up to the current release. The table does not provide an exhaustive list of all changes or of the new features up to this release.

Table 1: New Features and Changed Behavior

Cisco APIC Release	Feature	Description
5.1(1)	Decouple Power over Ethernet from VLANs and EPGs.	VLAN and EPG configurations are optional in the PoE policy.
4.2(1)	Cisco APIC and Power over Ethernet.	This guide is first released.

About Power Over Ethernet (PoE)

Power over Ethernet (PoE) provides the ability for the switch infrastructure to supply power over a copper Ethernet cable to an endpoint device. It enables scalable and manageable power delivery and simplifies deployments of devices such IP telephones, wireless access points, security cameras, and so on.

Power Sourcing Equipment (PSE) detects the presence of a Powered Device (PD), negotiates power requirements, and delivers power. PoE works on the same network cable that carries network traffic data. The Nexus 9000 platform switches act as the PSE devices to supply power to any device which may require it.

Power Over Ethernet Port States

Any switch port that has Power over Ethernet (PoE) enabled on it will have one of the following PoE states:

- `On` – PoE is enabled on the port, `Supplied Power` is taken from the power supply and `Delivered Power` is provided to the powered device (PD).
- `Pwr-deny` – PoE is enabled on the port but the power cannot be supplied due to user configuration restriction or insufficient power capacity of the Power Sourcing Equipment (PSE).
- `Faulty` – The port has experienced a fault condition. A faulty PoE port state may resolve on its own or it may require user intervention to correct the issue.

  In case of recoverable errors, the PoE daemon on the switch may be able to recover and reapply power based on configuration, class of the device, and installed power capacity. User intervention, such as changing admin status of the port, changing PoE-related interface configuration, and/or PD insertion and removal (OIR) can bring the port out of error state in case of recoverable errors.

  In case of non-recoverable errors, the PoE daemon on the switch will turn off power to the port.
- `Off` – PoE is disabled on the port. The port will function as a typical data port.

Power Over Ethernet Limitations

The Power Over Ethernet (PoE) feature has the following limitations:

- PoE is supported only on the N9K-C9348GC-FXP, N9K-C9358GY-FXP, and N9K-C93108TC-FX3P switches.
- PoE is supported in 802.3af and 802.3at modes only.
- The maximum power output per port is 30W.

Configuring Power Over Ethernet

The Power over Ethernet (PoE) feature is not enabled by default. You must enable PoE by creating a PoE Node policy. Until PoE is configured, the switch ports do not supply power and function as any typical Ethernet ports. If the device at the other end of the link is already powered-up via alternate power source, the port will operate like a typical Ethernet port. If a PoE device is connected to the port, the device will not receive power until PoE is enabled on that switch port. Once PoE is configured, all PoE ports will supply inline power.

You can create a PoE Node Policy in one of three ways:

- Using the Cisco APIC GUI, as described in Configuring PoE Using the Cisco APIC GUI, on page 3
- Using the NX-OS style CLI, as described in Configuring PoE Using the NX-OS-Style CLI, on page 5
- Using the REST API, as described in Configuring PoE Using the REST API, on page 7

Configuring PoE Using the Cisco APIC GUI

You can use the Cisco APIC GUI to configure the Power over Ethernet (PoE) settings.

Procedure

Step 1 Log in to your Cisco APIC.

Step 2 Create PoE node policy.

a) Navigate to **Fabric** > **Access Policies**.
b) Navigate to **Policies** > **Switch** > **PoE Node**.
c) Right-click **PoE Node** folder and choose **Create PoE Node Policy**.

You must specify the name for the PoE node policy. You can choose to specify the default consumption power or leave this setting at the default 4000 milliwatts.

Step 3 Create a PoE interface policy.

a) Navigate to **Fabric** > **Access Policies**.
b) Navigate to **Policies** > **Interface** > **PoE**.
c) Right-click **PoE** folder and choose **Create PoE Interface Policy**.
d) Configure the PoE settings.

You must configure the following settings for the PoE policy you are creating:

- **Name**: The name of the policy.
- **Host Mode**: Can be one of the following:
  - **Auto**: The switch automatically detects if the connected device requires power. If the switch discovers a powered device connected to the port and if the switch has enough power, it grants power.

- **Static**: The switch pre-allocates power to the port (even when no powered device is connected) and guarantees that power will be available for the port.
- **Never**: The switch disables powered-device detection and never powers the PoE port even if an unpowered device is connected.

- **Admin State**: Must be enabled for the PoE interface objects to be properly created.
- **Maximum Power**: Maximum power output of the port (in milliwatts).
- **Consumption**: Default power output (in milliwatts). This field appears only in the 4.2(1) release.
- **Port Priority High**: Specifies whether the port should be considered high priority for PoE.
- **Configure Port VLAN/EPG**: These options are supported beginning in the 5.1(1) release. You can choose one of the following values:
  - **Enable**: Shows the **PoE Vlan** and **EPG** fields.
  - **Disable**: Hides the **PoE Vlan** and **EPG** fields. If you do not configure the PoE VLAN, the Cisco APIC will not send any VLAN or EPG value.
- **PoE Vlan**: The VLAN to be configured on the port when a powered device is connected.

  Beginning in the 5.1(1) release, this field appears only if you chose **Enable** for the **Configure Port VLAN/EPG** buttons.
- **EPG**: The EPG to be configured on the port when a powered device is connected.

  Beginning in the 5.1(1) release, this field appears only if you chose **Enable** for the **Configure Port VLAN/EPG** buttons.
- **Policing Action**: Action to be taken when a powered device is connected. Can be configured to disable on error, log, or no action.

Step 4 Configure port policy group with PoE interface policy.

a) Navigate to **Fabric** > **Access Policies**.
b) Navigate to **Interfaces** > **Leaf Interfaces** > **Policy Groups** > **Leaf Access Port**.
c) Select an existing policy group or create a new one.

   If you are creating a new policy group, right-click the **Leaf Access Port** folder and choose **Create Leaf Access Port Policy Group**.

d) From the **PoE Interface Policy** dropdown menu, select the PoE policy you created in the previous step.

Step 5 Configure leaf interface profile with port policy group.

a) Navigate to **Fabric** > **Access Policies**.
b) Navigate to **Interfaces** > **Leaf Interfaces** > **Profiles**.
c) Select an existing profile or create a new one.

   If you are creating a new profile, right-click the **Profiles** folder and choose **Create Leaf Interface Profile**.

d) In the **Interface Selector** dialog, specify the name for the selector, interface IDs and the interface policy group you created in the previous step.

Step 6 Configure switch policy group with PoE node policy.

a) Navigate to **Fabric** > **Access Policies**.

b) Navigate to **Switches** > **Leaf Switches** > **Policy Groups**.
c) Select an existing policy group or create a new one.

   If you are creating a new policy group, right-click the **Policy Groups** folder and choose **Create Access Switch Policy Group**.

d) From the **PoE Node Policy** dropdown menu, select the PoE node policy you created in previous step.

Step 7 Configure leaf switch profile with switch policy group.

a) Navigate to **Fabric** > **Access Policies**.
b) Navigate to **Switches** > **Leaf Switches** > **Profiles**.
c) Select an existing leaf profile or create a new one.

   If you are creating a new policy group, right-click the **Profiles** folder and choose **Create Leaf Profile**.

d) In the **Associations** tab, check the interface selector profile you created in previous step.

Configuring PoE Using the NX-OS-Style CLI

You can use the NX-OS-style CLI to configure the Power over Ethernet (PoE) settings.

Note The CLI configuration is different when you enable or disable the PoE feature at the port level for integration with the Cisco Application Centric Infrastructure (ACI) policy framework.

No explicit **switchport voice-vlan** CLI configuration is supported on a per port basis. Instead, you must configure the PoE VLAN and EPG on ports on which you want the configuration for VoIP phones to receive voice-VLAN over LLDP.

Procedure

Step 1 Enter configuration mode.

Example:

```
apic1# configure
apic1(config)#
```

Step 2 Create a policy group.

Example:

```
apic1(config)# template policy-group mypol
```

Step 3 Configure port-level PoE policy in the policy group.

Example:

```
apic1(config-pol-grp-if)# switchport power-over-ethernet mypoe
```

Step 4 Configure power and EPG settings.

Example:

```
apic1(config-power-over-ethernet)# mode auto
apic1(config-power-over-ethernet)# max 20000
apic1(config-power-over-ethernet)# consumption 15000
apic1(config-power-over-ethernet)# priority high
apic1(config-power-over-ethernet)# vlan 2001
apic1(config-power-over-ethernet)# epg tenant tn1 application ap1 epg epg256
```

Note If you must configure PoE without voice VLAN and an EPG, do not specify the following commands:

```
apic1(config-power-over-ethernet)# vlan 2001
apic1(config-power-over-ethernet)# epg tenant tn1 application ap1 epg epg256
```

Step 5 Configure the leaf switch interface profile.

Example:

```
apic1(config)# leaf-interface-profile myprofile
```

Step 6 Configure the policy group for the leaf switch interface profile.

Example:

```
apic1(config-leaf-if-profile)# leaf-interface-group mygroup
```

Step 7 Specify ports for the interface group.

Example:

```
apic1(config-leaf-if-group)# interface ethernet 1/10-12
```

Step 8 Apply the policy on your interface group.

Example:

```
apic1(config-leaf-if-group)# policy-group mypol
apic1(config-leaf-if-group)# exit
apic1(config-leaf-if-profile)# exit
```

Step 9 Configure the leaf switch profile.

Example:

```
apic1(config)#
apic1(config)# leaf-profile myleafprofile
```

Step 10 Configure the leaf switch policy group and specify leaf switch nodes for the group.

Example:

```
apic1(config-leaf-profile)# leaf-group myleafgrp
apic1(config-leaf-group)# leaf 101
apic1(config-leaf-group)# exit
```

Step 11 Apply the interface policy on the leaf switch profile.

Example:

```
apic1(config-leaf-profile)# leaf-interface-profile myprofile
apic1(config-leaf-group)# exit
apic1(config)#
```

Configuring PoE Using the REST API

You can use the REST API to configure the Power over Ethernet (PoE) settings.

Procedure

Step 1 Create the PoE node policy.

Example:

```
<poeInstPol annotation="" consumption="4000" descr="" dn="uni/infra/poeInstP-PoE_PlcyGrp"
name="PoE_PlcyGrp" nameAlias="" ownerKey="" ownerTag="" pwrCtrl=""/>
```

Step 2 Create the PoE Interface Policy.

You must set the **adminSt** object property to `enabled` for the PoE policy to be properly created on the switch.

Example:

The following example XML code configures the PoE policy with the voice VLAN and EPG:

```
<poeIfPol annotation="" consumption="4000" descr="" dn="uni/infra/poeIfP-poeIfPolEx" max="7000"
mode="auto" name="poeIfPolEx" poeVoiceVlan="vlan-401" adminSt="enabled" policeAct="none" prioHigh="no">

    <poeRsPoeEpg annotation="" tDn="uni/tn-t0/ap-AP1/epg-EPG37_1_1"/>
</poeIfPol>
```

Example:

The following example XML code configures the PoE policy without the voice VLAN and EPG:

```
<poeIfPol adminSt="enabled" dn="uni/infra/poeIfP-poeIfPolEx" consumption="30000" max="30000" mode="auto"
 name="poeIfPolEx"/ >
```

Step 3 Associate the PoE policy.

Example:

```
<polUni>
    <infraInfra>
        <infraNodeP name="test">
            <infraLeafS name="test" type="range">
                <infraNodeBlk name="test" from_="130" to_="130"/>
                <infraRsAccNodePGrp tDn='uni/infra/funcprof/accnodepgrp-test' />
            </infraLeafS>
            <infraRsAccPortP tDn="uni/infra/accportprof-test"/>
        </infraNodeP>

        <infraAccPortP name="test">
            <infraHPortS name="pselc" type="range">
                <infraPortBlk name="blk" fromCard="1" toCard="1" fromPort="1" toPort="1"/>
                <infraRsAccBaseGrp tDn="uni/infra/funcprof/accportgrp-test" />
            </infraHPortS>
        </infraAccPortP>

        <infraFuncP>
            <infraAccPortGrp name="test">
                <infraRsPoeIfPol tnPoeIfPolName="poeIfPolEx" />
            </infraAccPortGrp>
           <infraAccNodePGrp annotation="" descr="" dn="uni/infra/funcprof/accnodepgrp-Node_PlcyGrp"
 name="Node_PlcyGrp" nameAlias="" ownerKey="" ownerTag="">
                <infraRsPoeInstPol annotation="" tnPoeInstPolName="PoE_PlcyGrp"/>
            </infraAccNodePGrp>
        </infraFuncP>
```

```
            <infraAttEntityP name="test">
                <infraRsDomP tDn="uni/vmmp-VMware/dom-mininet" />
            </infraAttEntityP>

        </infraInfra>
    </polUni>
```

Power Over Ethernet Switch Configuration Information

The following outputs provide sample PoE configuration on the switches..

Current PoE configuration on all ports

```
ifav9-leaf37# show power inline
Module Available  Used    Remaining
       (Watts)   (Watts)   (Watts)
------ ---------  ------  ---------
1      1250.0     575.2   674.8

Interface   Admin  Oper        Supplied  Delivered Device               IEEE  Max
                               (Watts)   (Watts)                       Class
---------   -----  ----        --------  --------- ------              ----- ---
Eth1/1      auto   on          7.3       6.4       Cisco IP Phone 8945 2     7.0
Eth1/2      auto   on          29.7      26.1      IEEE PD             4     27.0
Eth1/3      auto   on          19.1      16.8      IEEE PD             4     25.0
Eth1/4      auto   on          19.1      16.8      IEEE PD             4     20.0
Eth1/5      auto   on          34.1      30.0      IEEE PD             4     30.0
Eth1/6      auto   on          17.5      15.4      IEEE PD             3     20.0
Eth1/7      auto   on          22.7      20.0      IEEE PD             4     20.0
Eth1/8      auto   on          17.5      15.4      IEEE PD             3     20.0
Eth1/10     auto   on          8.0       7.0       iPECS LIP-9008; 0.0 2     20.0
Eth1/12     auto   on          22.7      20.0      IEEE PD             4     20.0
Eth1/13     auto   on          4.1       3.6       IEEE PD             1     4.0
Eth1/14     auto   on          28.2      24.8      IEEE PD             4     30.0
Eth1/15     auto   on          22.7      20.0      IEEE PD             4     20.0
Eth1/16     auto   on          19.1      16.8      IEEE PD             4     20.0
Eth1/17     auto   on          17.5      15.4      IEEE PD             3     20.0
Eth1/18     auto   on          19.1      16.8      IEEE PD             4     20.0
Eth1/19     auto   on          19.1      16.8      IEEE PD             4     20.0
Eth1/20     auto   on          19.1      16.8      IEEE PD             4     20.0
Eth1/21     auto   on          17.5      15.4      IEEE PD             3     20.0
Eth1/22     auto   on          8.0       7.0       IEEE PD             2     20.0
Eth1/23     auto   on          19.1      16.8      IEEE PD             4     20.0
Eth1/24     auto   on          17.5      15.4      IEEE PD             3     20.0
Eth1/25     auto   on          13.6      12.0      Cisco IP Phone 7975 3     20.0
Eth1/26     auto   on          34.1      30.0      IEEE PD             4     30.0
Eth1/27     auto   on          17.5      15.4      IEEE PD             3     20.0
Eth1/32     auto   on          29.7      26.1      IEEE PD             4     28.0
Eth1/34     auto   power-deny  0.0       0.0       NA                  NA    28.0
Eth1/37     auto   on          19.1      16.8      IEEE PD             4     20.0
Eth1/45     auto   on          19.1      16.8      IEEE PD             4     20.0
Eth1/46     auto   on          10.1      8.9       IEEE PD             4     20.0
Eth1/47     auto   on          19.1      16.8      IEEE PD             4     20.0
Eth1/49     auto   fault       0.0       0.0       n/a                 n/a   4.0
```

Current PoE power consumption on all ports

```
ifav9-leaf37# show power inline consumption
Interface            Consumption  Admin
                     Configured   Consumption (Watts)
----------           -----------  -------------------
Eth1/1               Yes          4.0
Eth1/2               Yes          4.0
Eth1/3               Yes          4.0
Eth1/4               Yes          4.0
Eth1/5               Yes          4.0
Eth1/6               Yes          4.0
Eth1/7               Yes          4.0
Eth1/8               Yes          4.0
Eth1/10              Yes          4.0
Eth1/12              Yes          4.0
Eth1/13              Yes          4.0
Eth1/14              Yes          4.0
Eth1/15              Yes          4.0
Eth1/16              Yes          4.0
Eth1/17              Yes          4.0
Eth1/18              Yes          4.0
Eth1/19              Yes          4.0
Eth1/20              Yes          4.0
Eth1/21              Yes          4.0
Eth1/22              Yes          4.0
Eth1/23              Yes          4.0
Eth1/24              Yes          4.0
Eth1/25              Yes          4.0
Eth1/26              Yes          4.0
Eth1/27              Yes          4.0
Eth1/32              Yes          4.0
Eth1/34              Yes          4.0
Eth1/37              Yes          4.0
Eth1/45              Yes          4.0
Eth1/46              Yes          4.0
Eth1/47              Yes          4.0
Eth1/49              Yes          4.0
```

Current PoE configuration on a single port

```
ifav9-leaf37# show power inline ethernet 1/1
Interface   Admin  Oper        Supplied  Delivered Device               IEEE  Max
                               (Watts)   (Watts)                       Class
---------   -----  ----        --------  --------- ------              ----- ---
Eth1/1      auto   on          7.3       6.4       Cisco IP Phone 8945 2     7.0

Interface   AdminPowerMax  AdminConsumption
            (Watts)        (Watts)
---------   -------------  ----------------
Eth1/1      7.0            7.0
```

PoE Port policing actions

```
ifav9-leaf37# show power inline police
Interface   Admin  Oper       Admin      Oper               Cutoff  Oper
            State  State      Police     Police             Power   Power
---------   -----  -----      ------     ------             ------  -----
Eth1/1      auto   on         none       n/a                6.4     5.1
Eth1/2      auto   on         none       n/a                26.1    16.3
Eth1/3      auto   on         none       n/a                16.8    10.5
Eth1/4      auto   on         none       n/a                16.8    7.7
Eth1/5      auto   on         none       n/a                30.0    8.5
Eth1/6      auto   on         none       n/a                15.4    5.4
```

```
Eth1/7      auto   on         none       n/a                  20.0    9.5
Eth1/8      auto   on         none       n/a                  15.4    5.5
Eth1/10     auto   on         none       n/a                  7.0     2.1
Eth1/12     auto   on         none       n/a                  20.0    13.1
Eth1/13     auto   on         none       n/a                  3.6     2.3
Eth1/14     auto   on         none       n/a                  24.8    8.4
Eth1/15     auto   on         none       n/a                  20.0    8.4
Eth1/16     auto   on         none       n/a                  16.8    7.7
Eth1/17     auto   on         none       n/a                  15.4    14.5
Eth1/18     auto   on         none       n/a                  16.8    10.4
Eth1/19     auto   on         none       n/a                  16.8    10.1
Eth1/20     auto   on         none       n/a                  16.8    8.3
Eth1/21     auto   on         none       n/a                  15.4    11.5
Eth1/22     auto   on         none       n/a                  7.0     4.4
Eth1/23     auto   on         none       n/a                  16.8    7.3
Eth1/24     auto   on         none       n/a                  15.4    11.1
Eth1/25     auto   on         none       n/a                  12.0    8.9
Eth1/26     auto   on         none       n/a                  30.0    16.8
Eth1/27     auto   on         none       n/a                  15.4    5.6
Eth1/32     auto   on         none       n/a                  26.1    15.7
Eth1/34     auto   power-deny none       n/a                  0.0     0.0
Eth1/37     auto   on         none       n/a                  16.8    10.2
Eth1/45     auto   on         none       n/a                  16.8    10.4
Eth1/46     auto   on         none       n/a                  8.9     4.7
Eth1/47     auto   on         none       n/a                  16.8    7.2
Eth1/49     auto   fault      none       n/a                  0.0     0.0
```

PoE port priority

```
ifav9-leaf37# show power inline priority
Interface            Admin  Oper       Priority
                     State  State
---------            -----  -----      -----
Eth1/1               auto   on         low
Eth1/2               auto   on         high
Eth1/3               auto   on         low
Eth1/4               auto   on         low
Eth1/5               auto   on         low
Eth1/6               auto   on         low
Eth1/7               auto   on         low
Eth1/8               auto   on         low
Eth1/10              auto   on         low
Eth1/12              auto   on         low
Eth1/13              auto   on         low
Eth1/14              auto   on         low
Eth1/15              auto   on         low
Eth1/16              auto   on         low
Eth1/17              auto   on         low
Eth1/18              auto   on         low
Eth1/19              auto   on         low
Eth1/20              auto   on         low
Eth1/21              auto   on         low
Eth1/22              auto   on         low
Eth1/23              auto   on         low
Eth1/24              auto   on         low
Eth1/25              auto   on         low
Eth1/26              auto   on         low
Eth1/27              auto   on         low
Eth1/32              auto   on         low
Eth1/34              auto   power-deny low
Eth1/37              auto   on         low
Eth1/45              auto   on         low
Eth1/46              auto   on         low
```

```
Eth1/47              auto   on         low
Eth1/49              auto   fault      low
```

PoE configuration event history of a port

```
ifav9-leaf37# vsh -c "show system internal poe event-history interface ethernet 1/1"

>>>>FSM: <Ethernet1/1> has 4 logged transitions<<<<<

1) FSM:<Ethernet1/1> Transition at 991000 usecs after Tue Oct 16 13:50:22 2018
    Previous state: [PORT_ST_POE_SHUT]
    Triggered event: [POE_PORT_EV_START_DETECTION]
    Next state: [PORT_ST_POE_DETECTING]

2) FSM:<Ethernet1/1> Transition at 712319 usecs after Tue Oct 16 13:50:23 2018
    Previous state: [PORT_ST_POE_DETECTING]
    Triggered event: [POE_PORT_EV_IEEE_PD_DETECTED]
    Next state: [PORT_ST_POE_DETECTED]

3) FSM:<Ethernet1/1> Transition at 927598 usecs after Tue Oct 16 13:50:23 2018
    Previous state: [PORT_ST_POE_DETECTED]
    Triggered event: [POE_PORT_EV_POWER_GOOD]
    Next state: [PORT_ST_POE_POWER_GOOD]

4) FSM:<Ethernet1/1> Transition at 767401 usecs after Tue Oct 16 13:52:13 2018
    Previous state: [PORT_ST_POE_POWER_GOOD]
    Triggered event: [POE_PORT_EV_POWER_ADJUST]
    Next state: [FSM_ST_NO_CHANGE]

    Curr state: [PORT_ST_POE_POWER_GOOD]
```

```
ifav9-leaf37# vsh -c "show system internal poe info ethernet 1/1"
Interface name        :   Eth1/1
Interface mode        :   auto
Interface Priority    :   low
Interface description :   Cisco IP Phone 8945
Policer action           :   none (policer is off)
Max power             :   7.0
Default power         :   4.0
PS supplied power     :   7.3
PD Base power         :   7.0
Port delivered power  :   6.4
Port consumption pwr  :   5.1
Max drawn power       :   5.9
Policer measured pwr  :   0.0
PD Class              :   IEEE 2
PD Discovery mode     :   IEEE
PD Detection status   :   Delivering
Num violations        :   0
```

PoE object information of a port

```
ifav9-leaf37# moquery -c poeIf -d "sys/poe/inst/if-[eth1/1]"
Total Objects shown: 1

# poe.If
id                       : eth1/1
absentCounter            : 0
adminSt                  : enabled
childAction              :
consumption              : 4000
cutoffPower              : 7955
deliveredPower           : 6400
descr                    :
```

```
devClass                 : IEEE PD - Class 2
devName                  : Cisco IP Phone 8945
dn                       : sys/poe/inst/if-[eth1/1]
invalidSignatureCounter  : 0
lcOwn                    : local
max                      : 7000
modTs                    : 2018-10-16T13:50:21.421-07:00
mode                     : auto
monPolDn                 : uni/infra/moninfra-default
name                     : node37_1_1
operSt                   : on
overloadCounter          : 0
poeEpg                   : uni/tn-t0/ap-AP1/epg-EPG37_1_1
poeVoiceVlan             : vlan-401
policeAct                : none
policeSt                 : na
policingPower            : 7000
portConsumption          : 5074
portPriority             : 0
powerDeniedCounter       : 0
prioHigh                 : no
rn                       : if-[eth1/1]
shortCounter             : 0
status                   :
suppliedPower            : 7273
used                     : 7955
```

```
ifav9-leaf37# moquery -c poeModule -d "sys/poe/inst/if-[eth1/1]/mac-30:30:3A:30:30:3A-[vlan-401]"
Total Objects shown: 1

# poe.Module
mac          : 30:30:3A:30:30:3A
vlan         : vlan-401
childAction  :
dn           : sys/poe/inst/if-[eth1/1]/mac-30:30:3A:30:30:3A-[vlan-401]
epg          : uni/tn-t0/ap-AP1/epg-EPG37_1_1
id           : eth1/1
modTs        : never
rn           : mac-30:30:3A:30:30:3A-[vlan-401]
status       :
vlanType     : access
```

List of faults on the switch

```
ifav9-leaf37# faults
Severity             : warning
Fault Code           : F3342
Cause                : feature-poe-config-fail-unrecoverable
Acknowledged         : no
Last Transition      : 2018-10-16T13:52:47.335-07:00
Dn                   : sys/poe/inst/if-[eth1/49]/fault-F3342

Severity             : warning
Fault Code           : F3342
Cause                : feature-poe-config-fail-unrecoverable
Acknowledged         : no
Last Transition      : 2018-10-16T16:23:00.738-07:00
Dn                   : sys/poe/inst/if-[eth1/34]/fault-F3342

Severity             : warning
Fault Code           : F3341
Cause                : feature-poe-config-fail-recoverable
Acknowledged         : no
Last Transition      : 2018-10-16T16:23:00.733-07:00
```

```
Dn                    : sys/poe/inst/if-[eth1/34]/fault-F3341

Total : 3
```

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