Configuring the Cisco APIC Using the REST API

Expanding the APIC Cluster Using the REST API

The cluster drives its actual size to the target size. If the target size is higher than the actual size, the cluster size expands.

Procedure

Step 1 Set the target cluster size to expand the APIC cluster size.

Example:

```
POST
https://<IP address>/api/node/mo/uni/controller.xml
<infraClusterPol name='default' size=3/>
```

Step 2 Physically connect the APIC controllers that you want to add to the cluster.

Contracting the APIC Cluster Using the REST API

The cluster drives its actual size to the target size. If the target size is lower than the actual size, the cluster size contracts.

Procedure

Step 1 Set the target cluster size so as to contract the APIC cluster size.

Example:

```
POST
https://<IP address>/api/node/mo/uni/controller.xml
<infraClusterPol name='default' size=1/>
```

Step 2 Decommission APIC3 on APIC1 for cluster contraction.

Example:

```
POST
https://<IP address>/api/node/mo/topology/pod-1/node-1/av.xml
<infraWiNode id=3 adminSt='out-of-service'/>
```

Step 3 Decommission APIC2 on APIC1 for cluster contraction.

Example:

```
POST
https://<IP address>/api/node/mo/topology/pod-1/node-1/av.xml
<infraWiNode id=2 adminSt='out-of-service'/>
```

Switching Over Active APIC with Standby APIC Using REST API

Use this procedure to switch over an active APIC with standby APIC using REST API.

Procedure

Switch over active APIC with standby APIC.

```
URL for POST: https://ip
address/api/node/mo/topology/pod-initiator_pod_id/node-initiator_id/av.xml
Body: <infraWiNode id=outgoing_apic_id targetMbSn=backup-serial-number/>
where initiator_id = id of an active APIC other than the APIC being replaced.
pod-initiator_pod_id = pod ID of the active APIC
backup-serial-number = serial number of standby APIC
```

Example:

```
https://ip address/api/node/mo/topology/pod-1/node-1/av.xml
<infraWiNode id=2 targetMbSn=FCH1750V00Q/>
```

Registering an Unregistered Switch Using the REST API

Use this procedure to register a switch from the **Nodes Pending Registration** tab on the **Fabric Membership** work pane using the REST API.

Note This procedure is identical to "Adding a Switch Before Discovery Using the REST API". When you apply the code, the system determines if the node exists and, if not, adds it. If the node does exist, the system registers it.

Procedure

Add a switch description.

Example:

```
POST
https://<IP address>/api/policymgr/mo/uni.xml

<!-- /api/policymgr/mo/uni.xml -->
<polUni>
<ctrlrInst>
    <fabricNodeIdentPol>
        <fabricNodeIdentP  nodeType="tier-2-leaf" podId="1" serial="XXXXXXXXX"
        name="tier-2-leaf-leaf1" nodeId="101"/>

    </fabricNodeIdentPol>
</ctrlrInst>
</polUni>
```

Adding a Switch Before Discovery Using the REST API

Use this procedure to add a switch to the **Nodes Pending Registration** tab on the **Fabric Membership** work pane using the REST API.

Note This procedure is identical to "Registering an Unregistered Switch Using the REST API". When you apply the code, the system determines if the node exists and, if not, adds it. If the node does exist, the system registers it.

Procedure

Add a switch description.

Example:

```
POST
https://<IP address>/api/policymgr/mo/uni.xml

<!-- /api/policymgr/mo/uni.xml -->
<polUni>
<ctrlrInst>
    <fabricNodeIdentPol>
```

```
        <fabricNodeIdentP  nodeType="tier-2-leaf" podId="1" serial="XXXXXXXXX"
        name="tier-2-leaf1" nodeId="101"/>

    </fabricNodeIdentPol>
</ctrlrInst>
</polUni>
```

Removing a Switch to Maintenance Mode Using the REST API

Use this procedure to remove a switch to maintenance mode using the REST API.

Procedure

Remove a switch to maintenance mode.

Example:

```
POST
https://<IP address>/api/node/mo/uni/fabric/outofsvc.xml

<fabricOOServicePol
    descr=""
    dn=""
    name="default"
    nameAlias=""
    ownerKey=""
    ownerTag="">
  <fabricRsDecommissionNode
      debug="yes"
      dn=""
      removeFromController="no"
      tDn="topology/pod-1/node-102"/>
</fabricOOServicePol>
```

Inserting a Switch to Operational Mode Using the REST API

Use this procedure to insert a switch to operational mode using the REST API.

Procedure

Insert a switch to operational mode.

Example:

```
POST
https://<IP address>/api/node/mo/uni/fabric/outofsvc.xml

<fabricOOServicePol
```

```
    descr=""
    dn=""
    name="default"
    nameAlias=""
    ownerKey=""
    ownerTag="">
  <fabricRsDecommissionNode
      debug="yes"
      dn=""
      removeFromController="no"
      tDn="topology/pod-1/node-102"
      status="deleted"/>
</fabricOOServicePol>
```

Configuring a Remote Location Using the REST API

This procedure explains how to create a remote location using the REST API.

```
<fileRemotePath name="local" host="‘host or ip" protocol="‘ftp|scp|sftp" remotePath="‘path to
 folder" userName="‘uname" userPasswd="‘pwd" />
```

Sending an On-Demand Tech Support File Using the REST API

Procedure

Step 1 Set the remote destination for a technical support file using the REST API, by sending a POST with XML such as the following example:

Example:

```
<fileRemotePath userName="" remotePort="22" remotePath="" protocol="sftp" name="ToSupport"
 host="192.168.200.2"
dn="uni/fabric/path-ToSupport" descr="">

<fileRsARemoteHostToEpg tDn="uni/tn-mgmt/mgmtp-default/oob-default"/>

</fileRemotePath>
```

Step 2 Generate an on-demand technical support file using the REST API by sending a POST with XML such as the following:

Example:

```
<dbgexpTechSupOnD upgradeLogs="no" startTime="unspecified" name="Tech_Support_9-20-16"
  exportToController="no" endTime="unspecified" dn="uni/fabric/tsod-Tech_Support_9-20-16"
descr=""
  compression="gzip" category="forwarding" adminSt="untriggered">
    <dbgexpRsExportDest tDn="uni/fabric/path-ToSupport"/>
    <dbgexpRsTsSrc tDn="topology/pod-1/node-102/sys"/>
    <dbgexpRsTsSrc tDn="topology/pod-1/node-103/sys"/>
    <dbgexpRsTsSrc tDn="topology/pod-1/node-101/sys"/>
    <dbgexpRsData tDn="uni/fabric/tscont"/>
</dbgexpTechSupOnD>
```

```
<fabricFuncP>
    <fabricCtrlrPGrp name="default">
        <fabricRsApplTechSupOnDemand tnDbgexpTechSupOnDName=" Tech_Support_9-20-16"/>
    </fabricCtrlrPGrp>
</fabricFuncP>
```

Finding Your Switch Inventory Using the REST API

This section explains how to find your switch model and serial numbers using the REST API

Procedure

Find your switch inventory as follows:

Example:

```
GET
https://192.0.20.123/api/node/mo/topology/pod-1.json?query-target=children&target-subtree-class=fabricNode
```

The following response is returned:

```
response:
  {
     "totalCount":"8",
     "imdata":
     [{
         "fabricNode":{
           "attributes":{
              "adSt":"on",
              "childAction":"",
              "delayedHeartbeat":"no",
              "dn":"topology/pod-1/node-103",
              "fabricSt":"active",
              "id":"103",
              "lcOwn":"local",
              "modTs":"2016-10-08T14:49:35.665+00:00",
              "model":"N9K-C9396PX",
              "monPolDn":"uni/fabric/monfab-default",
              "name":"leaf3",
              "nameAlias":"",
              "role":"leaf",
              "serial":"TEP-1-103",
              "status":"","uid":"0",
              "vendor":"Cisco Systems, Inc",
              "version":""}
             }
     },{
         "fabricNode":{
           "attributes":{
             "adSt":"on",
             "childAction":"",
             "delayedHeartbeat":"no",
             "dn":"topology/pod-1/node-105",
             "fabricSt":"active",
             "id":"105",
             "lcOwn":"local",
             "modTs":"2016-10-08T14:47:52.011+00:00",
```

```
            "model":"N9K-C9508",
            "monPolDn":"uni/fabric/monfab-default",
            "name":"spine2",
            "nameAlias":"",
            "role":"spine",
            "serial":"TEP-1-105","status":"",
            "uid":"0",
            "vendor":"Cisco Systems, Inc",
            "version":""
         ...
    [TRUNCATED]
         ...
}
```

Configuring the Cisco APIC Using the REST API