



# Configuring the Cisco APIC Using the REST API

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## Configuring the Cisco APIC Cluster

### 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

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**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.

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### 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

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**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/>
```

## Fabric Initialization and Switch Discovery

### Switch Discovery

#### 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="XXXXXXXX"
      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="XXXXXXXX"
      name="tier-2-leaf1" nodeId="101"/>
  </fabricNodeIdentPol>
</ctrlrInst>
</polUni>
```

```

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

```

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## Graceful Insertion and Removal (GIR) Mode

### 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

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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>

```

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### 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

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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>
```

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