

Power On Auto Provisioning (POAP)

The following are the Power On Auto Provisioning (POAP) REST APIs:

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Status

The following table details the API Response code, status and, the HTTPS methods.

Status Code	Status	API's HTTPS Method or HTTPS Method
200	OK	GET
202	Accepted	POST PUT DELETE
400	Bad Request	GET POST PUT DELETE

Status Code	Status	API's HTTPS Method or HTTPS Method
401	Unauthorized	GET POST PUT DELETE
403	Forbidden	GET POST PUT DELETE
404	Not Found	GET POST PUT DELETE
405	Method Not Allowed	GET POST PUT DELETE
500	Internal Server Error	GET POST PUT DELETE

List Servers

Resource Name /poap/servers

Description List POAP image/config servers

https Method GET

URL https://dcnm-ip/rest/poap/servers
https://dcnm-ip/rest/poap/servers?detail=true

Parameter

Parameter	Type	Description

Return Value Format: JSON
Type: Object

Attribute Name	Type	Description
poap-servers		By default, a list of POAP image/config server names is displayed. If "detail=true" a list of POAP image/config server-objects including server-name and URI is displayed.

Create a Server

Resource Name /poap/servers

Description Create a new POAP image/config server

https Method POST

URL https://dcnm-ip/rest/poap/servers

Parameter

Parameter	Type	Description
poap-servers		POAP image/config server-object including server-name, URI, hostname/ipaddress, path, username and password.

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description
poap-server-name		POAP image/config server name.

Get Servers

Resource Name /poap/servers/server-name

Description Get the POAP image/config servers

https Method GET

URL https://dcnm-ip/rest/poap/servers/server-name

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
poap-server		POAP image/config server-object including server-name and URI.

Update Servers

Resource Name /poap/servers/server-name

Description Update the POAP image/config servers

https Method PUT

URL https://dcnm-ip/rest/poap/servers/server-name

Parameter

Parameter	Type	Description
poap-server		POAP image/config-server-object including server-name,hostname/ipaddress, path,username and password.

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description

Delete Servers

Resource Name /poap/servers/server-name

Description Delete the POAP image/config servers

https Method DELETE

URL https://dcnm-ip/rest/poap/servers/server-name

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description

List Switch Definitions

Resource Name /poap/switch-definitions

Description List the POAP switch definitions

https Method GET

URL <https://dcnm-ip/rest/poap/switch-definitions>
<https://dcnm-ip/rest/poap/switch-definitions?detail=true>
<https://dcnm-ip/rest/poap/switch-definitions?search-string=<search-string>&start-index=<start-index>&size=<size>>

Parameter

Parameter	Type	Description

Return Value Format: JSON
Type: Object

Attribute Name	Type	Description
Switch-definitions		By default, a list of serial- numbers is displayed. If "detail=true", then a list of switch-definition objects including serial-numbers, status(saved and publish later/published/saved and publishing/error), system-image, kick-start-image, image-server-uri, config-server-uri, template-name, parameter-values with a list of name, type, value corresponding to the template is displayed.

Create Switch Definitions

Resource Name /poap/switch-definitions

Description Create POAP switch definitions

https Method POST

URL https://dcnm-ip/rest/poap/switch-definitions

Parameter

Parameter	Type	Description
Switch-definitions		Displays a list of serial-numbers, system-image, kick-start-image, image-server-uri, config-server-uri, template-name, poap-settings-name, parameter-values with a list of name, type, value corresponding to the template , and publish=true/false. For more information, see the example below.

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description
switch-numbers		List of serial numbers.

Example

Format: JSON

The example below shows how to publish a POAP definition (/rest/poap/published-switch-definitions/<serialNumber>) which are created using the API 1, 2, and 3.

API 1

/rest/poap/switch-definitions (POST)

```
{
```

```

"serialNumber": "example123",
"switchName": " example-123",
"deviceType": "N7K",
"mgmtIp": "5.5.5.5",
"username": "admin",
"password": "test123",
"lanGroup": 2,
"configServerId": 1,
"imageServerId": 1,
"systemImageName": "n7k_sys.bin",
"kickstartImageName": "n7k_kick.bin"
}

```

API 2

/rest/templates/populate-template/Example_Simple (POST)

```

{
  "templateParams": {
    "SWITCH_NAME": "example-123",
    "ADMIN_USERNAME": "admin",
    "ADMIN_PASSWORD": "test123",
    "MGMT_IP": "5.5.5.5",
    "MGMT_PREFIX": "24",
    "DEFAULT_GATEWAY": "5.5.5.1",
    "CONSOLE_TIMEOUT": "0",
    "CONSOLE_SPEED": "9600"
  }
}

```

Note:

- Use the "id" from /rest/poap/switch-definitions(POST) API's response as "poapDeviceId"
- Use the "startupConfig" from /rest/templates/populate-template/<templateName> (POST) API's response as "templateContent"

API 3

/rest/poap/templates (POST)

```

{
  "poapDeviceId": 24770,
  "templateName": "Example_Simple",
  "templateContent": "hostname example-123\n\nno password strength-check\nusername admin\npassword test123\nrole network-admin\n\nnsnmp-server user admin network-admin\nauth md5\n\npriv test123\n\n\nvrf context management\nip route 0.0.0.0/0\n\n\n5.5.5.1\n\n\ninterface mgmt0\n\n\nvrf member management\n\n\nno cdp enable\n\n\nno lldp transmit\n\n\nno lldp receive\n\n\nip address 5.5.5.5/24\n\n\nno shutdown\n\n\nline console\n\n\nexec-timeout 0\n\n\n",
  "templateNVPairs": {
    "SWITCH_NAME": "rajan-123",
    "ADMIN_USERNAME": "admin",
    "ADMIN_PASSWORD": "test123",
    "MGMT_IP": "5.5.5.5",
    "MGMT_PREFIX": "24",
    "DEFAULT_GATEWAY": "5.5.5.1",
    "CONSOLE_TIMEOUT": "0",
    "CONSOLE_SPEED": "9600"
  }
}

```

API 4

/rest/poap/published-switch-definitions/example123 (POST)

```
{  
}
```

API 5

/rest/templates/perform-shallow-discovery (POST)

```
[  
  {  
    "mgmtIp": "5.5.5.5",  
    "username": "admin",  
    "password": "test123",  
    "lanGroup": 2  
  }  
]
```

Publish Switch Definitions

Resource Name /poap/published-switch-definitions/{serial-number}

Description Publish list of switch-definitions to the Repository server.

https Method POST

URL https://dcnm-ip/rest/poap/published-switch-definitions/{serial-number}

Parameter

Parameter	Type	Description

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description

Get a Switch Definition

Resource Name /poap/switch-definitions/{serial-number}

Description Get a switch definition.

https Method GET

URL https://dcnm-ip/rest/poap/switch-definitions/{serial-number}

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
switch-definition		Displays a list of serial-numbers, system-image, kick-start-image, image-server-uri, config-server-uri, template-name and parameter-values with a list of name, type, value corresponding to the template .

Update a Switch Definition

Resource Name /poap/switch-definitions/serial-number

Description Update a switch-definition.

https Method PUT

URL https://dcnm-ip/rest/poap/switch-definitions/{ serial-number }

Parameter

Parameter	Type	Description
switch-definition		Displays a list of serial-numbers, system-image, kick-start-image, image-server-uri, config-server-uri, template-name and parameter-values with a list of name, type, value corresponding to the template , and publish=true/false.

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description

Delete a Switch Definition

Resource Name /poap/switch-definitions/serial-number

Description Delete a switch-definition.

https Method DELETE

URL https://dcnm-ip/rest/poap/switch-definitions/{serial-number}

Parameter

Parameter	Type	Description

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description

Get a POAP Template

Resource Name /poap/templates/{template-name}

Description Get a POAP template.

https Method GET

URL https://dcnm-ip/rest/poap/templates/{template-name}

Parameter

Parameter	Type	Description
Serial-number	S	Device serial-number

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description
Poap-template	O	Poap template object

Create a POAP Template

Resource Name /poap/templates

Description Create a POAP template.

https Method POST

URL https://dcnm-ip/rest/poap/templates

Parameter

Parameter	Type	Description
Poap-template	O	Poap template object

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
Poap-template-name	O	Poap template name

Update a POAP Template

Resource Name /poap/templates/{template-name}

Description Update a POAP template.

https Method PUT

URL https://dcnm-ip/rest/poap/templates/{template-name}

Parameter

Parameter	Type	Description
Poap-template	O	Poap template object

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description

Delete a POAP Template

Resource Name /poap/templates/{template-name}

Description Delete a POAP template.

https Method POST

URL https://dcnm-ip/rest/poap/templates/{template-name}

Parameter

Parameter	Type	Description
Poap-template-name	S	Poap template name

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description

Get All Published Templates

Resource Name /poap/templates?published=true

Description Get all the published templates.

https Method GET

URL https://dcnm-ip/rest/templates?published=true

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
templates	O	Returns all the published template names, if published=true. Returns all the templates if published=false.

Generate Template Startup Config

Resource Name /templates/populate-template/{template-name}

Description Generates template for startup config.

https Method POST

URL https://dcnm-ip/rest/templates/populate-template/{template-name}

Example

Request Body:

```
{
  "templateParams":{
    "SWITCH_NAME":"r-123",
    "ADMIN_USERNAME":"admin",
    "ADMIN_PASSWORD":"test123",
    "MGMT_IP":"10.0.0.0",
    "MGMT_PREFIX":"24",
    "DEFAULT_GATEWAY":"10.0.0.1",
    "CONSOLE_TIMEOUT":"0",
    "CONSOLE_SPEED":"9600"
  }
}
```

Response Body:

```
{
  "startupConfig":"hostname r-123\n\nno password strength-check\nusername admin password
test123 role network-admin\n\nsnmp-server user admin network-admin auth md5 test123 priv
test123 \n\nvrf context management\n ip route 0.0.0.0/0 10.0.0.1\n\ninterface mgmt0\n vrf
member management\n no cdp enable\n no lldp transmit \n no lldp receive \n ip address
10.0.0.0/24\n no shutdown\n\nline console\n\n exec-timeout 0\n"
}
```

Parameter

Parameter	Type	Description
templateParams	O	<p>Template parameters with values. You will get the templateParams in get template data API response. It returns the template parameters with default values.</p> <p>The object should contain key-value pairs whose keys align with the Parameters field in the Get Configuration Template method.</p>

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
startupConfig	S	Return startup config

Get Group Navigation

Resource Name /templates/groups

Description Get all the groups.

https Method GET

URL https://dcnm-ip/rest/templates/groups

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
memDbId, name, navType	S	Return group/scope details

Perform Shallow Discovery

Resource Name /templates/perform-shallow-discovery

Description All the devices provided in payload will be discovered into DCNM.

https Method POST

URL https://dcnm-ip/rest/templates/perform-shallow-discovery

Parameter

Parameter	Type	Description
POAP	A	Serial Number, Management IP, Lan Group, User Name and Password need to provide in payload.

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description

Create Multiple POAP Definitions

Resource Name /poap/definitions

Description Simple and Single API to create multiple POAP definitions w/ discovery.

if you use this single API, the following separate APIs are not required.

- Create the switch definition without template— /rest/poap/switch-definitions (POST)
- Generate the startup configuration— /rest/templates/populate-template/<template-name> (POST)
- Associate the template and startup configuration with the switch definition— /rest/poap/templates (POST)
- Publish the switch definition— /rest/poap/published-switch-definitions/<serial-number> (POST)
- Discover the switch in Cisco DCNM— /rest/templates/perform-shallow-discovery (POST)

https Method POST

URL https://dcnm-ip/rest/poap/definitions

Parameter

Parameter	Type	Description
Request Payload	A	Array of switchDetails and templateDetails.

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description
Response Object	O	POAP Device Serial Number and the Status

Example

The following example shows how to create two POAP definitions using this API:

```
Request: {
  "switchDetails": [
    {
      "serialNumber": "SerialNo1",
      "switchName": "Switch-1",
      "systemImageName": "sys.bin",
      "kickstartImageName": "kick.bin",
      "imageServerId": 1,
    }
  ]
}
```

```

        "configServerId":1,
        "deviceType":"N9K",
        "mgmtIp":"80.0.0.10",
        "username":"admin",
        "password":"cisco123",
        "lanGroup":2,
        "publish":"true"
    },
    {
        "serialNumber":"SerialNo2",
        "switchName":"Switch-2",
        "systemImageName":"sys.bin",
        "kickstartImageName":"kick.bin",
        "imageServerId":1,
        "configServerId":1,
        "deviceType":"N9K",
        "mgmtIp":"80.0.0.11",
        "username":"admin",
        "password":"cisco123",
        "lanGroup":2,
        "publish":"true"
    }
],
"templateDetails":[
    {
        "templateParams":{
            "SWITCH_NAME":"Switch-1",
            "ADMIN_USERNAME":"admin",
            "ADMIN_PASSWORD":"cisco123",
            "MGMT_IP":"80.0.0.10",
            "MGMT_PREFIX":"24",
            "DEFAULT_GATEWAY":"80.0.0.1",
            "CONSOLE_TIMEOUT":"0",
            "CONSOLE_SPEED":"9600"
        },
        "templateName":"Example_Simple_v6"
    },
    {
        "templateParams":{
            "SWITCH_NAME":"Switch-2",
            "ADMIN_USERNAME":"admin",
            "ADMIN_PASSWORD":"cisco123",
            "MGMT_IP":"80.0.0.11",
            "MGMT_PREFIX":"24",
            "DEFAULT_GATEWAY":"80.0.0.1",
            "CONSOLE_TIMEOUT":"0",
            "CONSOLE_SPEED":"9600"
        },
        "templateName":"Example_Simple_v6"
    }
]
}

```

Response:

```

{
    "SerialNo2": "Success",
    "SerialNo1": "Success"
}

```