CHAPTER **1**

Cisco Dynamic Fabric Automation REST API

Introduction

The Cisco Dynamic Fabric Automation (DFA)REST APIs for third party applications enables you to programmatically control Cisco Dynamic Fabric Automation (DFA). The REST API supports POAP (Power On Auto Provisioning), Auto Config and Cable plan features.

POAP allows devices to boot up with temporary IP address (assigned by DHCP server), to download the POAP boot-up script (also assigned by DHCP server) which will further download the required kick-start and system image, and the device configuration file from the specific TFTP server indicated in the boot-up script.

In the Cisco Dynamic Fabric Automation architecture, the virtual machine (VM) facing interface on leaf switches is automatically configured and de-configured by the auto config. It detects the server/VM boot-up, retrieves pre-defined network parameters from the asset database, and applies the generated configuration. When the VM is moved or shutdown, the auto config also updates/removes the dynamic configuration.

Cable plan provides a Netmap of port-to-port cable connectivity data that can be imported into the switches of the DFA. The XML cable plan acts as a lookup table, and if a port is not connected to its corresponding destination port as per the plan, the switch should flag an error and notify the customers.

All the REST API operations can also be performed using the DCNM GUI as DCNM uses these REST APIs to render the GUI.

For more information about Cisco Dynamic Fabric Automation, see the *Cisco DFA Application Programmer's Guide*.

Software Architecture

In a DFA datacenter, Cisco DCNM will be the central point of management for the fabric and for the network auto-configuration. PoAP templates are used to auto-configure the spine and leaf network devices and configuration profiles are used to auto-configure the organizations, networks and services.

DCNM works as the network controller in conjunction with any instances of compute/storage orchestrators and service controllers to provide an open and extensible integrated virtual and physical network. Organizations and networks can be created directly using the Cisco DCNM GUIs or through the compute/storage orchestrators. In both cases the external APIs discussed in this document are used to retrieve information and create/retrieve/update/delete configuration profile instances into the network

Asset Database (LDAP). The leaf devices in turn fetch configuration from the Asset Database and self-configure themselves. Service controllers like PNSC can also get organization/network information from DCNM through the APIs, as well as update the configuration profiles for services integration.

The general workflow is as follows:

- Create Organizations and Partitions
- As part of this, edge services may be automatically deployed
- Create Segments
- As part of this, segment services may be automatically deployed
- Deploy application workload

Throughout this process the network and network services can be automated using DFA. For an animated description of the DFA architecture and workflow refer to http://www.youtube.com/watch?v=MNnv2Y_k6EY.

The architecture is depicted in Figure 1-1.

Figure 1-1   Architecture

Note   You can also use your own REST based clients to integrate with third party orchestrators.

REST APIs

DCNM will provide REST API, and the REST approach emphasizes on using the resource name as part of the URL. In this release, the response of the REST API will be encoded in JSON format (see http://www.json.org for validation).

The query parameters for the HTTP GET will be appended to the URL after the symbol "?"; the input for the HTTP POST/PUT/DELETE will be specified in the payload with the URL-encoded. REST APIs support both HTTP and HTTPS.

This section contains the high level description for the REST API, during implementation the REST APIs are subject to change.

DCNM REST API supports "application/json" for the Content-Type.

The following parameter types are mentioned in this document:

A - Array

S - String

O – Object

Authentication

The Authentication REST APIs can be used by an external application to authenticate itself to the DCNM in order to programmatically control the DFA cluster. After calling logon to get the token, all the subsequent REST API requests need to set the DCNM-Token field with the token in the HTTP header.

.

Logon

Resource Name   `/logon`

Description   Logon to DCNM server to authenticate the user. Once the authentication is complete, a token will be returned as the response. All API calls to the DCNM server should use this token until it is expired or invalid. The logon API uses "username:password" with base64 encoded in HTTP Authorization header. For example, "`Authorization: Basic QWxhZGRpbjpvcGVuIHNlc2FtZQ==`" will return the token in the payload.

HTTP Method   POST

URL   https://dcnm-ip/rest/logon

Parameter

Parameter	Type	Description
Expiration	S	Token expiry duration.

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Dcnm-Token	S	Details of the token.

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
500	Internal Server Error

Logout

Resource Name   `/logout`

Description   Logout from the DCNM server. Once you have logged out, the token will be invalid. You must set the token in the Authorization header while using this API.

HTTP Method   POST

URL   https://dcnm-ip/rest/logout

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
500	Internal Server Error

Auto Config

The relationship between Organization, Partition and the Network is depicted in Figure 1-2.

Figure 1-2   Auto Config

Organization

Attributes	Type	Require
organizationName	String	Mandatory
description	String	Optional
orchestrationSource	String	Optional

Partition

Attributes	Type	Require
partitionName	String	Mandatory
partitionSegmentId	String	Mandatory
description	String	Optional
serviceNodeIpAddress	String	Optional
organizationName	String	Mandatory

Network

Attributes	Type	Require
organizationName	String	Mandatory
dvsId	String	Optional
staticIpStart	String	Optional
staticIpEnd	String	Optional
vSwitchControllerNetworkId	String	Optional
networkName	String	Mandatory
segmentId	String	Mandatory
vlanId	String	Mandatory
mobilityDomainId	String	Mandatory
description	String	Optional
profileName	String	Mandatory
vSwitchControllerId	String	Optional
configArg	String	Optional
partitionName	String	Mandatory
dhcpScope	subnet	Optional
	gateway	Optional
	ipRange	Optional

Profile

Attributes	Type	Require
forwardingMode	String	Mandatory
profileName	String	Mandatory
description	String	Optional
configCommands	String	Mandatory

List Organizations

Resource Name   `/auto-config/organizations`

Description   Displays a list of Organizations.

HTTP Method   GET

URL   https://dcnm-ip/rest/auto-config/organizations

https://dcnm-ip/rest/auto-config/organizations?detail=true

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Organizations	A	By default, a list of organization names is displayed. If "detail=true", then a list of Organization objects is displayed.

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Create an Organization

Resource Name

`/auto-config/organizations`

Description

Enables you to create a new organization.

HTTP Method

POST

URL

https://dcnm-ip/rest/auto-config/organizations

Parameter

Parameter	Type	Description
Organization	O	Organization object

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
Organization-name	S	New organization name

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Get an Organization

Resource Name   `/auto-config/organizations/organization-name`

Description   Enables you to get an organization.

HTTP Method   GET

URL   https://dcnm-ip/rest/auto-config/organizations/organization-name

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Oganization-	O	Organization object

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Update an Organization

Resource Name

`/auto-config/organizations/organization-name`

Description

Enables you to update an organization.

HTTP Method

PUT

URL

https://dcnm-ip/rest/auto-config/organizations/organization-name

Parameter

Parameter	Type	Description
Organization	O	Organization object

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Delete an Organization

Resource Name   `/auto-config/organizations/organization-name`

Description   Enables you to delete a organization.

HTTP Method   DELETE

URL   https://dcnm-ip/rest/auto-config/organizations/organization-name

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

List Partitions

Resource Name   `/auto-config/organizations/organization-name/partitions`

Description   Displays a list of partitions.

HTTP Method   GET

URL   https://dcnm-ip/rest/auto-config/organizations/organization1/partitions

https://dcnm-ip/rest/auto-config/organizations/organization1/partitions?detail=true

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Partitions	A	By default, a list of partition names is displayed. If "detail=true", then a list of partition objects is displayed.

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Create a Partition

Resource Name   `/auto-config/organizations/organization-name/partitions`

Description   Enables you to create a new partition.

HTTP Method   POST

URL   https://dcnm-ip/rest/auto-config/organizations/organization1/partitions

Parameter

Parameter	Type	Description
Partition-object	O	Partition object

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
partition-name	S	Partition name

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Get a Partition

Resource Name   `/auto-config/organizations/organization-name/partitions/partition-name`

Description   Enables you to get a partition.

HTTP Method   GET

URL   https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition-name

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Partition	O	Partition object

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Update a Partition

Resource Name   `/auto-config/organizations/organization-name/partitions/partition-name`

Description   Update a partition.

HTTP Method   PUT

URL   https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition-namee

Parameter

Parameter	Type	Description
Partition	O	Partition object

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Delete a Partition

Resource Name	`/auto-config/organizations/organization-name/partitions/partition-name`
Description	Delete a partition.
HTTP Method	DELETE
URL	https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition-name

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

List Networks

Resource Name	/auto-config/organizations/organization-name/partitions/partition-name/networks
Description	List of networks.
HTTP Method	GET
URL	https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition1/networks
	https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition1/networks?detail=true

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
Networks	A	By default, a list of segment IDs for l2 segments, a list of VLAN IDs, and Mobility Domain IDs for the VLAN Mobility Domain is displayed. If "detail=true", then list of network objects is displayed

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Create a Network

Resource Name

`/auto-config/organizations/organization-name/partitions/partition-nam`
`e/networks`

Description

Create a new network.

HTTP Method

POST

URL

https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition1/networks

Parameter

Parameter	Type	Description
Network	O	Network object

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
SegmentID or VLANID + MobilityDomainID	S	Segment ID for l2 segments or VLAN ID and Mobility Domain ID for VLAN Mobility Domain is displayed.

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Get a Network

Resource Name   `/auto-config/organizations/organization-name/partitions/partition-name/networks/{network-id}`

Description   Get a network.

HTTP Method   GET

URL   https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition1/networks/segment/20010

https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition1/networks/vlan/10/mobility-domain/mydomain

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Network	O	Network object

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Update a Network

Resource Name   `/auto-config/organizations/organization-name/partitions/partition-nam
e/networks/{network-id}`

Description   Update a network.

HTTP Method   PUT

URL   https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition1/networks/segme
nt/20010

https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition1/networks/vlan/1
0/mobility-domain/mydomain

Parameter

Parameter	Type	Description
Network	O	Network object

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Delete a Network

Resource Name   `/auto-config/organizations/organization-name/partitions/partition-nam e/networks/{network-id}`

Description   Delete a network.

HTTP Method   DELETE

URL   https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition1/networks/segme nt/20010

https://dcnm-ip/rest/auto-config/organizations/organization-name/partitions/partition1/networks/vlan/1 0/mobility-domain/mydomain

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

List Profiles

Resource Name   `/auto-config/profiles`

Description   List of profiles.

HTTP Method   GET

URL   `https://dcnm-ip/rest/autoconfig/profiles`

`https://dcnm-ip/rest/autoconfig/profiles?detail=true`

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Profiles	A	By default, a list of profileNames is displayed. If "detail=true", then a list of profile objects is displayed.

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Create a Profile

Resource Name   `/auto-config/profiles`

Description   Create a new profile.

HTTP Method   POST

URL   https://dcnm-ip/rest/auto-config/profiles

Parameter

Parameter	Type	Description
Profile	O	Profile object

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
ProfileName	S	Profile name

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Get a Profile

Resource Name   `/auto-config/profiles/profile-name`

Description   Get a profile.

HTTP Method   GET

URL   https://dcnm-ip/rest/auto-config/profiles/{profile-name}

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Profile	O	Profile object

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Update a Profile

Resource Name   `/auto-config/profiles/profile-name`

Description   Update a profile.

HTTP Method   PUT

URL   https://dcnm-ip/rest/auto-config/profiles/profile-name

Parameter

Parameter	Type	Description
Profile	O	Profile object

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Delete a Profile

Resource Name

`/auto-config/profiles/profile-name`

Description

Delete a profile.

HTTP Method

DELETE

URL

https://dcnm-ip/rest/auto-config/profiles/{profile-name}

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Get Auto Config Settings

Resource Name	`/auto-config/settings`

Description	Get auto config settings.

HTTP Method	GET

URL	https://dcnm-ip/rest/auto-config/settings

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
Auto-config-settings	O	The following auto config settings objects are displayed: ldapServer, ldapUserName, ldapPassWord, partitionIdRange, segmentIdRange, amqpServer, amqpPort, amqpVirtualHost, amqpUserName, amqpPassWord, amqpExchangeName, xmppServer, xmppUserName, xmppPassWord, xmppGroup, xmppNickName, xmppResponseTimeout, useLocalDhcp, dhcpPrimarySubnet, enableAmqpNotification.

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden

404	Not Found
405	Method Not Allowed
500	Internal Server Error

Update Auto Config Settings

Resource Name   `/auto-config/settings`

Description   Update auto config settings.

HTTP Method   PUT

URL   https://dcnm-ip/rest/auto-config/settings

Parameter

Parameter	Type	Description
Auto-config-settings	O	The following auto config settings object are displayed: ldapServer, ldapUserName, ldapPassWord, partitionIdRange, segmentIdRange, amqpServer, amqpPort, amqpVirtualHost, amqpUserName, amqpPassWord, amqpExchangeName, xmppServer, xmppUserName, xmppPassWord, xmppGroup, xmppNickName, xmppResponseTimeout, useLocalDhcp, dhcpPrimarySubnet, enableAmqpNotification.

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Cable Plan

Capture a Cable Plan

Resource Name	`/cable-plans/discovery`
Description	Extract a cable plan base on the switches discovered by DCNM.
HTTP Method	GET
URL	https://dcnm-ip/rest/cable-plans/discovery

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
cable-plan-name	S	Name of the cable plan

Status Code

200	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Generate a Cable Plan

Resource Name	/cable-plans/poap

Description	Generate a cable plan base on the POAP switch definitions from DCNM

HTTP Method	GET

URL	https://dcnm-ip/rest/cable-plans/poap

Parameter

Parameter	Type	Description

Return Value

Format: JSON

Type: Object

Attribute Name	Type	Description
cable-plan-name	S	Name of the cable plan

Status Code

200	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Save a Cable Plan

Resource Name   `/cable-plans`

Description   Save a cable plan into the DCNM database.

HTTP Method   POST

URL   https://dcnm-ip/rest/cable-plans

Parameter

Parameter	Type	Description
cable-plan-object	O	Cable-plan-object including cable-plan-name, source-device, source-device-type, source-port, dest-device, dest-device-type, dest-port.

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Delete a Cable Plan

Resource Name   `/cable-plans`

Description   Delete cable plan base on the POAP switch definitions from DCNM.

HTTP Method   DELETE

URL   https://dcnm-ip/rest/cable-plans

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Get a Cable Plan

Resource Name   `/cable-plans`

Description   Get a cable plan

HTTP Method   GET

URL   https://dcnm-ip/rest/cable-plans

https://dcnm-ip/rest/cable-plans?detail=true

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
cable-plan	O	By default returns cable-plan information, if "detail=true", then will return CablePlan object.

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Get a Cable Plan From Device

Resource Name   `/cable-plans/device-xml`

Description   Get a cable plan from devices in XML

HTTP Method   POST

URL   https://dcnm-ip/rest/cable-plans/device-xml

Parameter

Parameter	Type	Description
Ip-addresses	S	The Switch IP Address list which derives the cable plan.

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
cable-plan-info	S	Cable plans in XML

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

View Cable Plan From Device

Resource Name   `/cable-plans/device-raw`

Description   Get cable plan from devices and return in raw format

HTTP Method   POST

URL   https://dcnm-ip/rest/cable-plans/device-raw

Parameter

Parameter	Type	Description
Ip-addresses	S	The Switch IP Address list which derives the cable plan

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Cable-plan-info	S	Cable plans in raw format

Status Code

200	OK
202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Import a Cable Plan

Resource Name	`/cable-plans/import`

Description   Returns Cable Plan object of imported cable plan file.

HTTP Method   POST

URL   https://dcnm-ip/rest/cable-plans/import

Parameter

Parameter	Type	Description
cable-plan	S	You must provide a Name for the cable plan and the cable plan content in the payload.

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Cable-plan-object	O	Cable plan object

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Export a Cable Plan

Resource Name `/cable-plans/xml`

Description Export a cable plan from DCNM in XML format

HTTP Method GET

URL https://dcnm-ip/rest/cable-plans/xml

Parameter

Parameter	Type	Description
Cable-plan	S	Name of the cable plan.

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description
Cable-plan-object	S	Name of the cable plan and content in XML format in the payload.

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Deploy a Cable Plan

Resource Name   `/cable-plans/fabric`

Description   Deploy a cable plan to all the spine and leaf devices

HTTP Method   POST

URL   hhttps://dcnm-ip/rest/cable-plans/fabric

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Revoke a Cable Plan

Resource Name	`/cable-plans/revoke`

Description	Revoke a cable plan from all the spine and leaf devices

HTTP Method	POST

URL	https://dcnm-ip/rest/cable-plans/revoke

Parameter

Parameter	Type	Description

Return Value Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

DHCP

List POAP Scopes

Resource Name   `/poap/dhcp/scopes`

Description   List of POAP DHCP scopes

HTTP Method   GET

URL   https://dcnm-ip/rest/poap/dhcp/scopes

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
Poap-scopes	A	A list of scope objects including scope name, ip-range, default-lease-time, max-lease-time, tftp-server-ip-address, tftp-server-username, tftp-server-password, boot-script-path is displayed.

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Create a POAP Scope

Resource Name   `/poap/dhcp/scopes`

Description   Create a new DHCP scope for POAP.

HTTP Method   POST

URL   https://dcnm-ip/rest/poap/dhcp/scopes

Parameter

Parameter	Type	Description
Poap-scope		Displays a list of POAP scope objects including scope name and ip-range, default-lease-time, max-lease-time, tftp-server-ip-address, tftp-server-username, tftp-server-password, boot-script-path.

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description
scope-name	S	DHCP scope name.

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Update a POAP Scope

Resource Name   `/poap/dhcp/scopes/{scope-name}`

Description   Update a DHCP scope for POAP.

HTTP Method   PUT

URL   https://dcnm-ip/rest/poap/dhcp/scopes/{scope-name}

Parameter

Parameter	Type	Description
Poap-scope	O	Displays a list of POAP scope objects including scope name and switch-settings, switch-settings includes ip-range, default-lease-time, max-lease-time, tftp-server-ip-address, tftp-server-username, tftp-server-password, boot-script-path

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Delete a POAP Scope

Resource Name   `/poap/dhcp/scopes/{scope-name}`

Description   Delete a DHCP scope for POAP.

HTTP Method   DELETE

URL   https://dcnm-ip/rest/poap/dhcp/scopes/{scope-name}

Parameter

Parameter	Type	Description

Return Value   Format: JSON

Type: Object

Attribute Name	Type	Description

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Power On Auto Provisioning (POAP)

List Servers

Resource Name   `/poap/servers`

Description   List POAP image/config servers

HTTP 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.

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Create a Server

Resource Name   `/poap/servers`

Description   Create a new POAP image/config server

HTTP Method   POST

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

Parameter

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

Return Value   Format: JSON

Type: Object

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

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Get Servers

Resource Name   `/poap/servers/server-name`

Description   Get the POAP image/config servers

HTTP 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.

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Update Servers

Resource Name   `/poap/servers/server-name`

Description   Update the POAP image/config servers

HTTP 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

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Delete Servers

Resource Name   `/poap/servers/server-name`

Description   Delete the POAP image/config servers

HTTP 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

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

List Switch Definitions

Resource Name	/poap/switch-definitions

Description	List the POAP switch definitions

HTTP 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.

Status Code

200	OK
400	Bad Request

401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Create Switch Definitions

Resource Name   `/poap/switch-definitions`

Description   Create POAP switch definitions

HTTP 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.

Return Value   Format: JSON

Type: Object

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

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Publish Switch Definitions

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

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

HTTP 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

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Get a Switch Definition

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

Description Get a switch definition.

HTTP 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 .

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Update a Switch Definition

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

Description   Update a switch-definition.

HTTP 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

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Delete a Switch Definition

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

Description   Delete a switch-definition.

HTTP 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

Status Code

202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Get a POAP Template

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

Description   Get a POAP template.

HTTP 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

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Create a POAP Template

Resource Name   `/poap/templates`

Description   Create a POAP template.

HTTP 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

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Update a POAP Template

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

Description   Update a POAP template.

HTTP 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

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error

Delete a POAP Template

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

Description   Delete a POAP template.

HTTP 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

Status Code

200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
500	Internal Server Error