

# Convert vEdge from vManage Mode to CLI Mode by vManage API

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## Introduction

This document describes how to convert vEdge from vManage mode to CLI mode by vManage API.

## Prerequisites

### Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Software-defined Wide Area Network (SD-WAN)
- Postman

### Components Used

The information in this document is based on these software and hardware versions:

- Cisco vManager version 20.9.4
- Cisco vEdge version 20.9.4
- Postman version 11.63.0

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## Background Information

- Cisco SD-WAN vManage API is a REST API interface for controlling, configuring, and monitoring the Cisco devices in an overlay network.
- REST architecture uses a stateless, client–server, cacheable communications protocol.
- REpresentational State Transfer (REST) is an architecture style for designing web-services applications.
- Test API calls can be tried out from swagger UI.
- Sometimes, it is impossible to modify the management mode of vedge through the GUI interface. In such cases, choosing to modify the management mode through the API is another feasible approach.
- The vManage API documentation is accessible via **[https://<vmanage\\_ip>:<port>/apidocs](https://<vmanage_ip>:<port>/apidocs)** for reference on available API calls.

## URL Structure Components

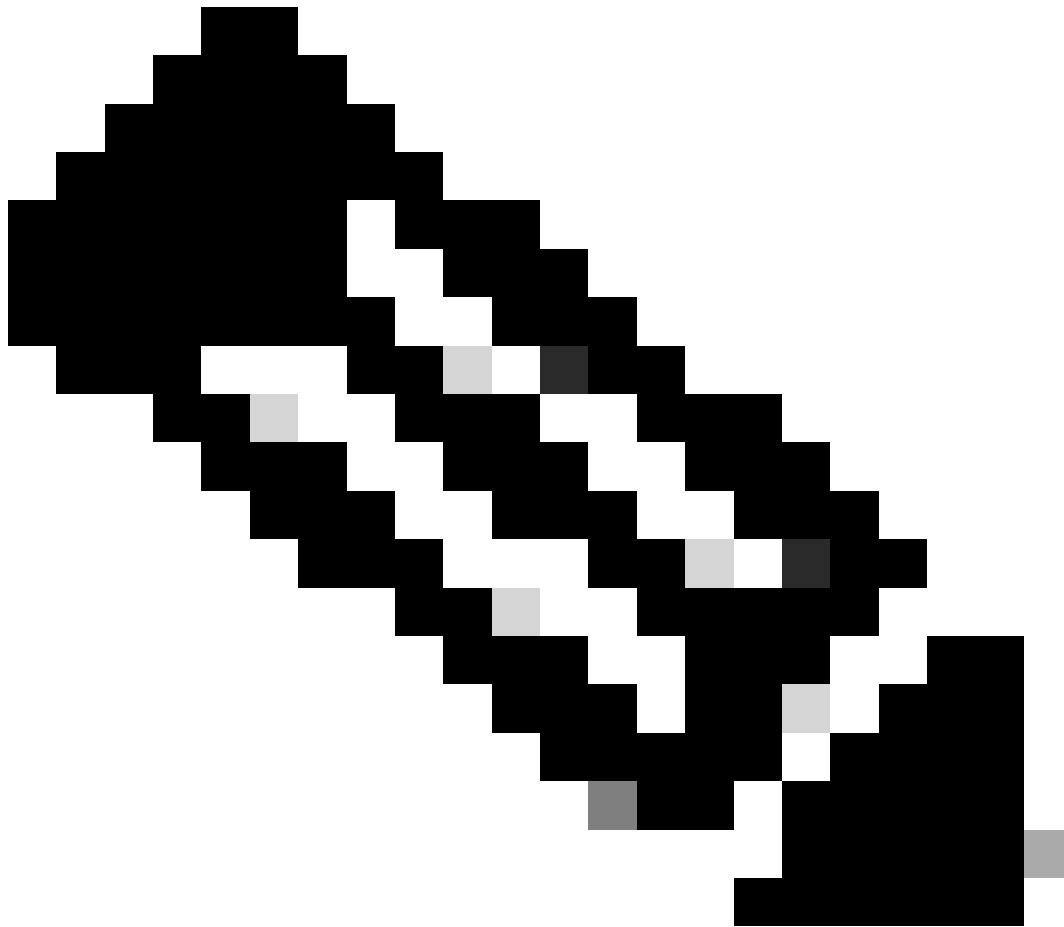
**[https://<vmanage\\_ip>:<port>/apidocs/#!/Configuration%20-%20Template%20Configuration/updateDeviceToCLIMode](https://<vmanage_ip>:<port>/apidocs/#!/Configuration%20-%20Template%20Configuration/updateDeviceToCLIMode)**

Command Properties	Command Syntax	Description
Protocol	http:// or https://	Protocol over which data is sent between client and server
Server or Host	<vmanage-ip:port>	Resolves to the IP and port to which to connect
Resource	/apidocs/#!/Configuration%20-%20Template%20Configuration/updateDeviceToCLIMode	The location of the data or object of interest

## Access Onboard API Documentation

vManage onboard API documentation is at the URL **[https://<vmanage\\_ip>:<port>/apidocs](https://<vmanage_ip>:<port>/apidocs)**. This documentation displays APIs available on the current software version.

This requires log in with valid vManage credentials. While multiple privilege levels can view documentation, only a **netadmin** user is able to execute all of them.

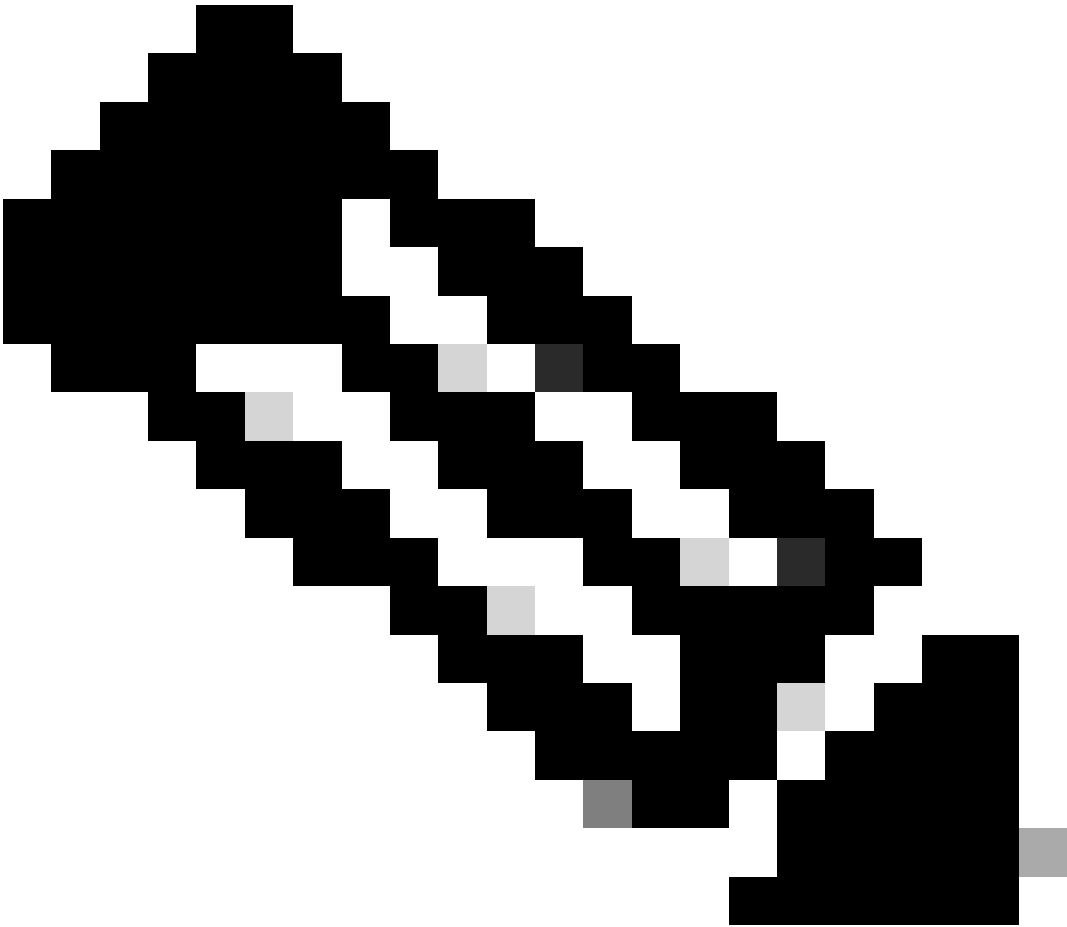


**Note:** The API documentation page is available to tenants in a multitenant environment, however, certain commands are restricted to the provider only.

vManage then displays a list of categories of available APIs. Click the desired category, followed by the API call itself, which displays these fields:

Description/Implementation Notes	Description of the operation performed.
Parameters	Required parameters to be specified for the API call.
Request Body (POST/PUT/DELETE)	Format of the request body.
Responses	Possible responses which vManage sends to the API. This includes HTTP status code, reason, and the possible response body.

Extensions	Valid extensions for the call.
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**Note:** From the 20.6 release, the system introduces these rate limits: Bulk API: 48 requests/minute  
All other API: 100 requests/second.



**Warning:** Real-time monitoring APIs are CPU intensive and must be used only for troubleshooting, not continuous monitoring.

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## Test APIs from the Documentation Tool

**Step 1:** Login to the vManage GUI to Check that the Management mode of vEdge is vManage

Warning: The configuration database administrator username and password is default and less secure. User is advised to update it. To know more on how to update it, click [here](#)

Search

Change Mode ▾ Upload WAN Edge List Export Bootstrap Configuration Sync Smart Account Add PAYG WAN Edges

Total Rows: 50

Chassis Number	Tags	Hostname	Site ID	Region ID	Mode	Device Status	Assigned Config Group	Assigned Template	Device Model	Draft Mode	Serial No./Token	R
CSR-09EE41D6-4EA9-EB58-B238-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - d478ef34728...	...
CSR-A2412C44-6641-12E5-D826-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - a9ce3130176...	...
CSR-040DA762-4648-610B-68B8-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - d04a75cd93...	...
CSR-56CA0042-786C-4049-10FC-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - 6094babe93...	...
CSR-67798B10-7747-D6D2-3D60-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - c180cbd992a...	...
CSR-C0053D02-0489-3E7D-229E-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - 56632cf11af...	...
CSR-68CF99E3-50FE-A03F-93CD-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - ab926fb01d7...	...
CSR-33A283CA-F197-1000-A7A1-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - 5bb89d37d1...	...
CSR-A0298AC7-2125-D6A1-C359-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - 9b1764d8c2...	...
b8e2d8d2-a751-8055-aa00-52c0ea...	<a href="#">Add Tag</a>	vedge-site300	300	-	vManage	In Sync	-	vedge-test	vEdge Cloud	Disabled	F4B2B1BC	rt ...
c680e2e2-1614-19a2-ecbc-7c0b71...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	vEdge Cloud	Disabled	Token - d4a62fd09a2...	...
14312970-8d72-1dc6-7059-2da67...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	vEdge Cloud	Disabled	Token - 2b5caad858e...	...

## Step 2: Modify the URL to Login Cisco SD-WAN vManage API

Login <https://10.124.x.x/apidocs/>

[vmanageapi.json](#) [Explore](#)

### Cisco SD-WAN vManage API 2.0.0 OAuth

[vmanageapi.json](#)

The vManage API exposes the functionality of operations maintaining devices and the overlay network

[Contact the developer](#)

[Commercial License](#)

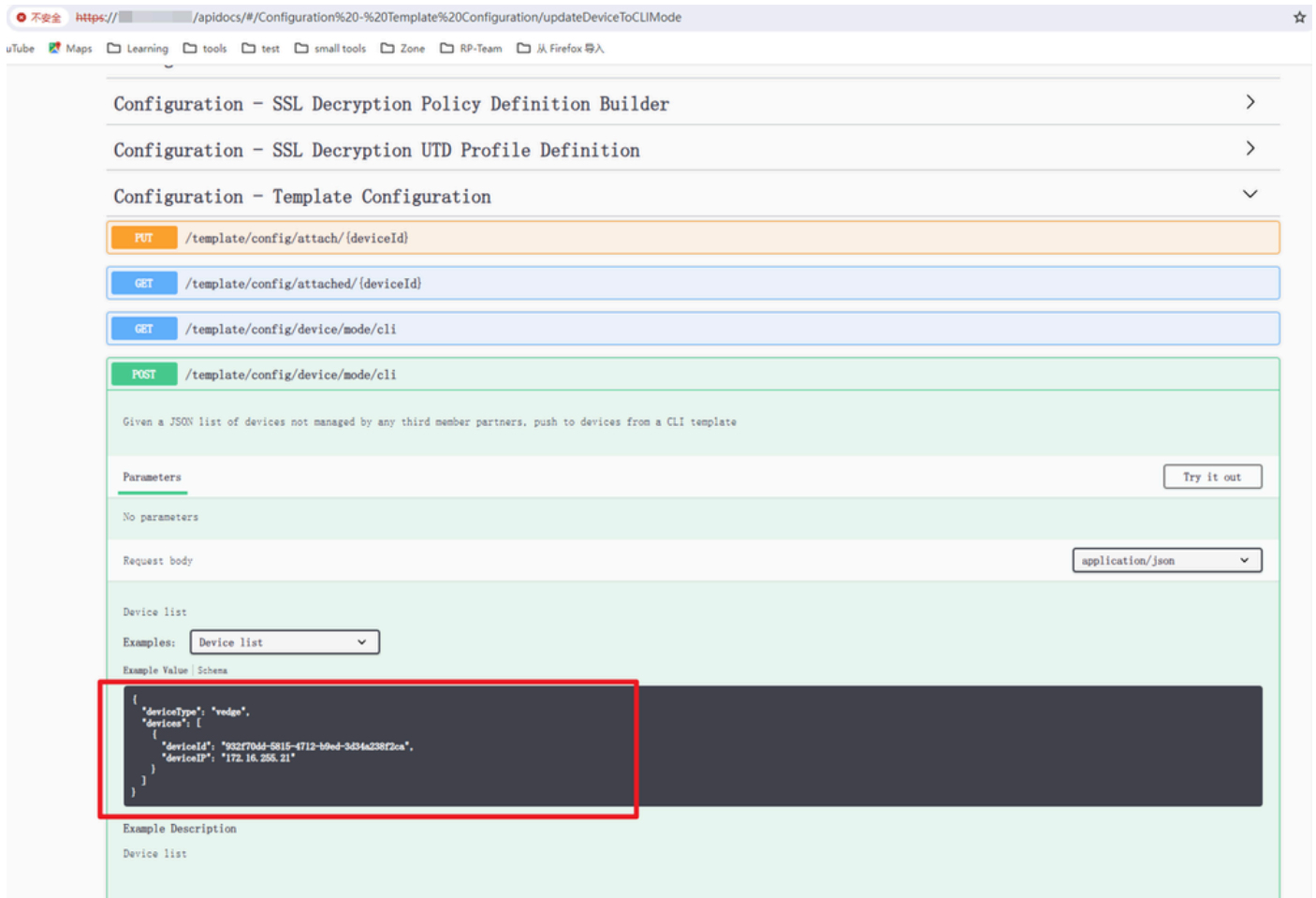
Servers

[/dataservice](#)

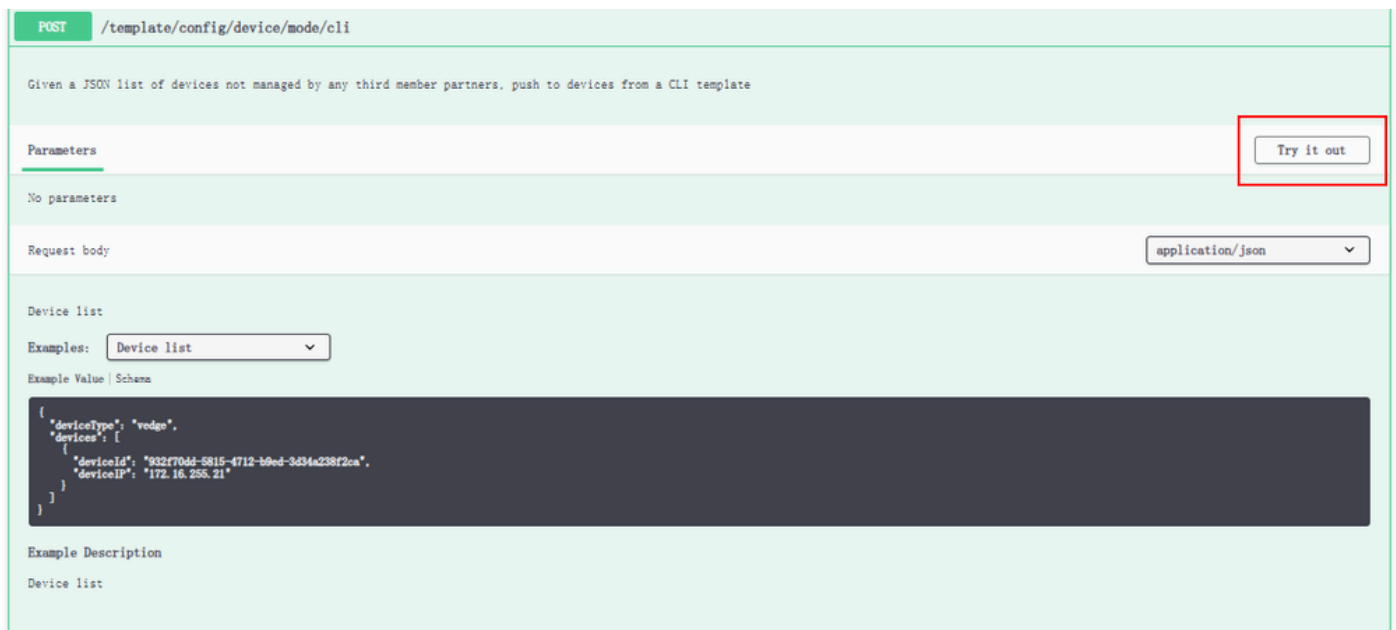
Filter by tag

- Administration - Audit Log
- Administration - User and Group
- Certificate Management - Device

## Step 3: Navigate to Configuration - Template Configuration in the Cisco SD-WAN vManage API



## Step 4: Click Try it out Button



## Step 5: Change DeviceId and DeviceIP

- deviceId == uuid
- deviceIP == local-system-ip

**POST** /template/config/device/mode/cli

Given a JSON list of devices not managed by any third member partners, push to devices from a CLI template

**Parameters** Cancel

No parameters

Request body application/json

Device list

Examples: [Modified value]

```
{
  "deviceType": "vedge",
  "devices": [
    {
      "deviceId": "b8e2d8d2-a751-8055-aa00-52c0eaf896ea",
      "deviceIp": "30.1.1.1"
    }
  ]
}
```

Example Description

Device list

**Execute**

## Step 6: Click Execute Button

## Step 7: Check vEdge mode in vManage GUI

The vedge management mode has been switched from vManage to CLI status.

Warning: The configuration database administrator username and password is default and less secure. User is advised to update it. To know more on how to update it, click [here](#)

Search

Change Mode ▾ Upload WAN Edge List Export Bootstrap Configuration Sync Smart Account Add PAYG WAN Edges

Total Rows: 50

Chassis Number	Tags	Hostname	Site ID	Region ID	Mode	Device Status	Assigned Config Group	Assigned Template	Device Model	Draft Mode	Serial No./Token	R
CSR-68CF99E3-50FE-A03F-93CD-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - ab926fb01d7...	- ***
CSR-33A283CA-F197-1000-A7A1-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - 58b89d37d1...	- ***
CSR-A0298AC7-2125-D6A1-C359-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - 9b1764d8c2...	- ***
b8e2d8d2-a751-8055-aa00-52c0ea...	<a href="#">Add Tag</a>	vedge-site300	300	-	CLI	In Sync	-	-	vEdge Cloud	Disabled	F4B281BC	R ***
c680e2e2-1614-19a2-ecbc-7c0b71...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	vEdge Cloud	Disabled	Token - d4a62f09a2...	- ***
14312970-8d72-1dc6-7059-2da67...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	vEdge Cloud	Disabled	Token - 2b5caad858e...	- ***
bbb0976e-f95d-5758-d9b1-7d259...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	vEdge Cloud	Disabled	Token - 0633aedd22...	- ***
16b80ddd-2eab-e0ac-257c-d1ddf8...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	vEdge Cloud	Disabled	Token - 242bcb4b48...	- ***
ce31c323-5d44-4126-ed40-463ee...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	vEdge Cloud	Disabled	Token - 80cdc4da1dc...	- ***

## Test APIs from the Postman Tool

### Step 1: Login to vManage and obtain the Session Cookie

Request method: **POST**

URL: **https://<vmanage-ip>/j\_security\_check**

Postman configuration

Headers: **Content-Type:application/x-www-form-urlencoded**

Body type: **x-ww-form-urlencoded**

Body content:

- **j\_username=admin**
- **j\_password=xxx**

POSTGet data

No environment

My Collection / Get data

Save

Share

POST

https://[redacted]/j\_security\_check

Send

Params

Authorization

Headers (10)

Body

Scripts

Settings

Cookies

Headers

9 hidden

	Key	Value	Description		Bulk Edit	Presets
<input type="checkbox"/>	Content-Type	application/x-www-form-urlencoded				
	Key	Value	Description			

POSTGet data

No environment

My Collection / Get data

Save

Share

POST

https://[redacted]/j\_security\_check

Send

Params

Authorization

Headers (10)

Body

Scripts

Settings

Cookies

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

	Key	Value	Description		Bulk Edit
<input checked="" type="checkbox"/>	j_username	admin			
<input checked="" type="checkbox"/>	j_password	[redacted]			
	Key	Value	Description		

After a successful login, vManage returns the Cookie of JSESSIONID; Cookies are saved automatically.

## Step 2: Obtain the CSRF Token

Request method: **GET**

URL: **https://<vmanage-ip>/dataservice/client/token**

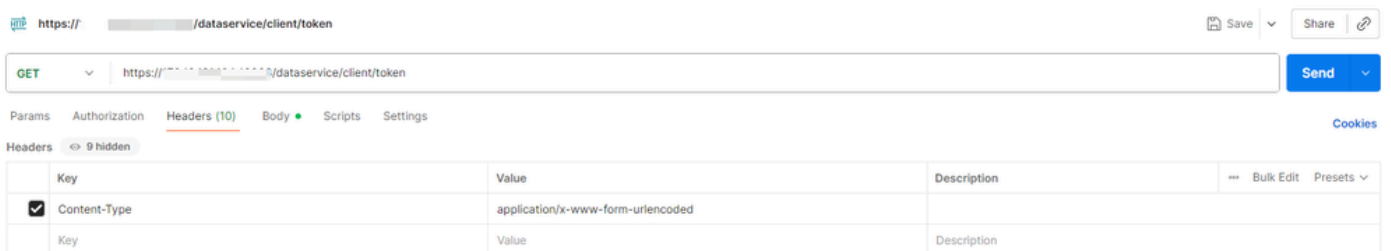
Postman configuration

Headers: **Content-Type:application/x-www-form-urlencoded**

Body type: **x-www-form-urlencoded**

Body content:

- **j\_username=admin**
- **j\_password=xxx**



## Step 3: Get the device UUID and IP

Request method: **GET**

URL: **https://<vmanage-ip>/dataservice/template/config/device/mode/vmanage?type=vedge**

Postman configuration

Headers:

- **Content-Type:application/json**
- **X-XSRF-TOKEN: E9C81862C46DA9F8C9A650272E8D577C415999496A990B771EEFB8F05C37DBEFA7759A2**

Body type: **x-www-form-urlencoded**

Body content:

- **j\_username=admin**
- **j\_password=xxx**

https://[redacted]/dataservice/template/config/device/mode/vmanage?type=vedge

GET https://[redacted]/dataservice/template/config/device/mode/vmanage?type=vedge

Params Authorization Headers (12) Body Scripts Settings

Headers 9 hidden

Key	Value	Description
accept	application/json	
Content-Type	application/json	
X-XSRF-TOKEN	E9C81862C46DA9F8C9A650272E8D577C415999496A990B771EEF8F05C3...	

Body Cookies (1) Headers (12) Test Results

200 OK · 483 ms · 911 B

{ } JSON Preview Visualize

```

{
  "data": [
    {
      "deviceIP": "101.1...",
      "uuid": "81ff28...",
      "configCloudxMode": "none",
      "host-name": "vedge2",
      "local-system-ip": "101.1..."
    },
    {
      "deviceIP": "101.1...",
      "uuid": "cfca8af1...",
      "configCloudxMode": "none",
      "host-name": "vedge5",
      "local-system-ip": "101.1..."
    }
  ]
}

```

Cisco SD-WAN Select Resource Group

Configuration · Devices

WAN Edge List Controllers

Search

Change Mode Upload WAN Edge List Export Bootstrap Configuration Sync Smart Account Add PAYG WAN Edges

Total Rows: 60

Chassis Number	Tags	Hostname	Site ID	Region ID	Mode	Device Status	Assigned Config Group	Assigned Template	Device Model	Draft Mode	Serial No./Token	R
81f286a-15af-fd99-552d-e2c0cb2...	Add Tag	vedge2	101	-	vManage	In Sync	-	vedge2--vpn10	vEdge Cloud	Disabled	93C464AC	ri ...
cfca8af1-8f4d-faba-ce0b-313f4c77...	Add Tag	vedge5	101	-	vManage	In Sync	-	vedge5-DIA	vEdge Cloud	Disabled	E23F6145	ri ...
f41d6d28-0d25-aef1-4e84-43611f6...	Add Tag	vedge6	101	-	vManage	In Sync	-	vedge6--vpn10	vEdge Cloud	Disabled	60F86063	ri ...
CBK-FB4F24BC-6E70-0060-96DA-F...	Add Tag	cedge1	101	-	vManage	In Sync	-	cedge1_tm	C8000v	Disabled	96593E3C	ri ...
CSR-59CC4CE3-2C1E-4461-BA3B~...	Add Tag	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - 3f1232edec8...	...

## Step 4: Unbind the configuration template of vEdge

Request method: POST

URL: **https://<vmanage-ip>/dataservice/template/config/device/mode/cli**

Postman configuration

Headers:

- **accept:application/json**
- **Content-Type:application/json**

- **X-XSRF-TOKEN:**  
**E9C81862C46DA9F8C9A650272E8D577C415999496A990B771EEFB8F05C37DBEFA7759A20816AC**

Body type: **raw (JSON)**

Body content:

**{"deviceType":"vedge","devices":[{"deviceId":"cfca8af1-8f4d-faba-xxx","deviceIP":"xxx"}]}**

https:// /dataservice/template/config/device/mode/cli

Save Share

POST https:// /dataservice/template/config/device/mode/cli Send

Params

Authorization

Headers (12)

Body

Scripts

Settings

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

JSON

1

{ "deviceType": "vedge", "devices": [ { "deviceId": "cfca8af1-8f4d-faba-xxx", "deviceIP": "xxx" } ] }

Cookies

Beautiful

Body Cookies (1) Headers (12) Test Results

{ } JSON

Preview

Visualize

1 {

2     "id": "device\_config\_mode\_cli-41cf906c-6121-44e2-be4c-8ebb0dfc643b"

3 }

200 OK

2.34 s

495 B

More

Cisco SD-WAN

Select Resource Group

Configuration · Devices

WAN Edge List

Controllers

Search

Change Mode Upload WAN Edge List Export Bootstrap Configuration Sync Smart Account Add PAYG WAN Edges

Total Rows: 60

Refresh

Settings

Chassis Number	Tags	Hostname	Site ID	Region ID	Mode	Device Status	Assigned Config Group	Assigned Template	Device Model	Draft Mode	Serial No./Token	R
b9c7f5c5-742b-f9d3-7358-b414ae...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	vEdge Cloud	Disabled	Token - ce1fa54853e...	...
CSR-A6712448-21D8-19FA-132D-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - b0deafce883...	...
310b62c3-165e-79c0-9798-098cf1...	<a href="#">Add Tag</a>	vedge3	102	-	CLI	In Sync	-	-	vEdge Cloud	Disabled	745C1AFE	n ...
CSR-BBFD53C8-E537-4D08-1D57-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - 41772f9e5a1...	...
cfca8af1-8f4d-faba-ce0b-313f4c77...	<a href="#">Add Tag</a>	vedge5	101	-	CLI	In Sync	-	-	vEdge Cloud	Disabled	E23F6145	n ...
b8af74fc-c4c6-f60e-1367-253da3e...	<a href="#">Add Tag</a>	vedge7	101	-	CLI	In Sync	-	-	vEdge Cloud	Disabled	9705F81C	n ...
5599467e-7bcd-c8f6-2678-cfe08d...	<a href="#">Add Tag</a>	vedge8	102	-	CLI	In Sync	-	-	vEdge Cloud	Disabled	CB023488	n ...
CSR-D08B4C64-3D34-9B3E-D8FA-...	<a href="#">Add Tag</a>	-	-	-	CLI	-	-	-	CSR1000v	Disabled	Token - 4c9f63fe1e7...	...

## Related Information

- [Use vManage On-board API Documentation for Research and Tests](#)
- [Cisco Developer vManage API Documentation](#)