



Cisco Developers Connect

May 23rd 2024, Seoul Korea

순서

- SD-WAN 소개 & 아키텍처
- RestAPI 소개 기본
- LAB1 (Postman)
- LAB2 (Python)

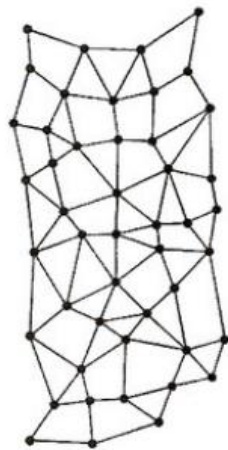


Cisco SD-WAN 소개 & Architecture



Software Define Network

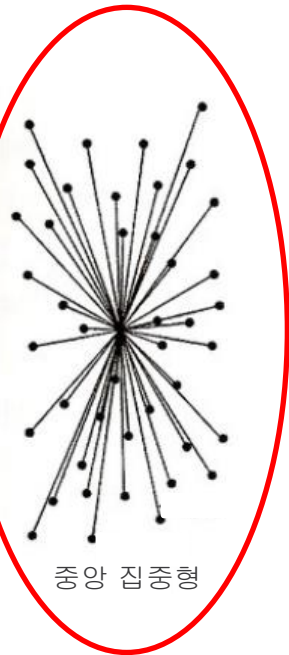
S.D.N | ★ 중앙 집중 메인터넌스를 통한 일관되고 효율적인 관리 기능 구현



Mesh 형



분산 집중형



중앙 집중형

Cisco Software Define Network

S.D.N | ★ Cisco는 Data Center 부터 End User까지 모든 통신망의 유일한 SDN 통합 솔루션을 제공

Cisco SDN

ACI

Data Center

1. 데이터센터 이노베이션
2. 서버 어플리케이션 배포/관리 효율화

Nexus 스위치/UCS 기반



SD-Access

Enterprise/Campus

1. 유저망(유/무선, IPT, IoT 등) 이노베이션
2. 보안/정책관리 운영 편의성 극대화
3. 머신 러닝/모니터링 고도화
4. 작업 감소 장애율 저감

Catalyst 스위치/AP 기반



SD-WAN

WAN

1. 전용회선 비용감소
2. 원격 관리 포인트 감소
3. HW에 유연한 서비스 수용

ENCS/라우터/Viptela/Meraki기반



Cisco SD-WAN

Cisco SD-WAN | Control 및 Data Plane으로 분리되며, 중앙 일괄 관리 및 업데이트

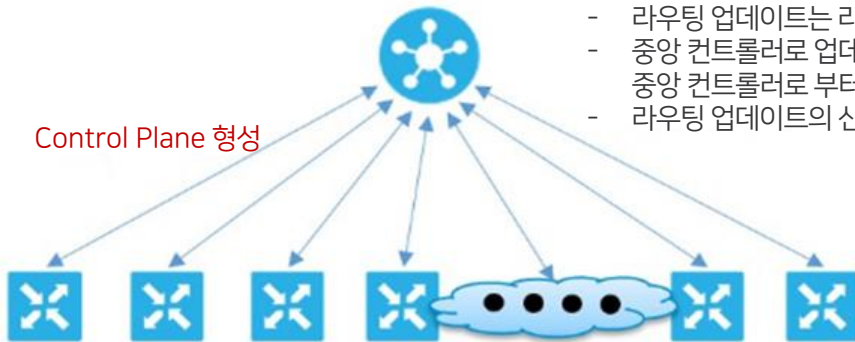
일반 Layer3
라우터



- 라우팅 업데이트 (Hop-by-Hop)
- 순차적인 라우팅 업데이트
- 라우터끼리 업데이트

SD-WAN
중앙
컨트롤러

Control Plane 형성



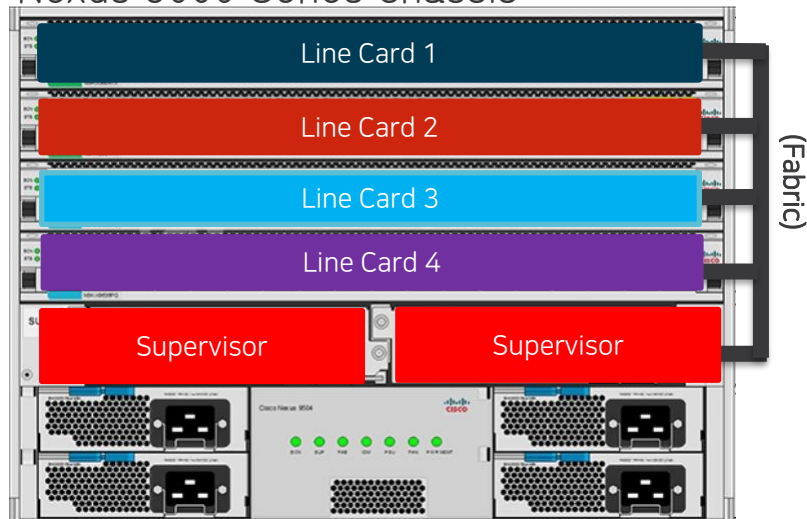
- 라우팅 업데이트는 라우터 사이에서 직접 이루어지지 않음
- 중앙 컨트롤러로 업데이트 및 중앙 컨트롤러로부터 동시 업데이트를 받음
- 라우팅 업데이트의 신속성

SD-WAN
라우터

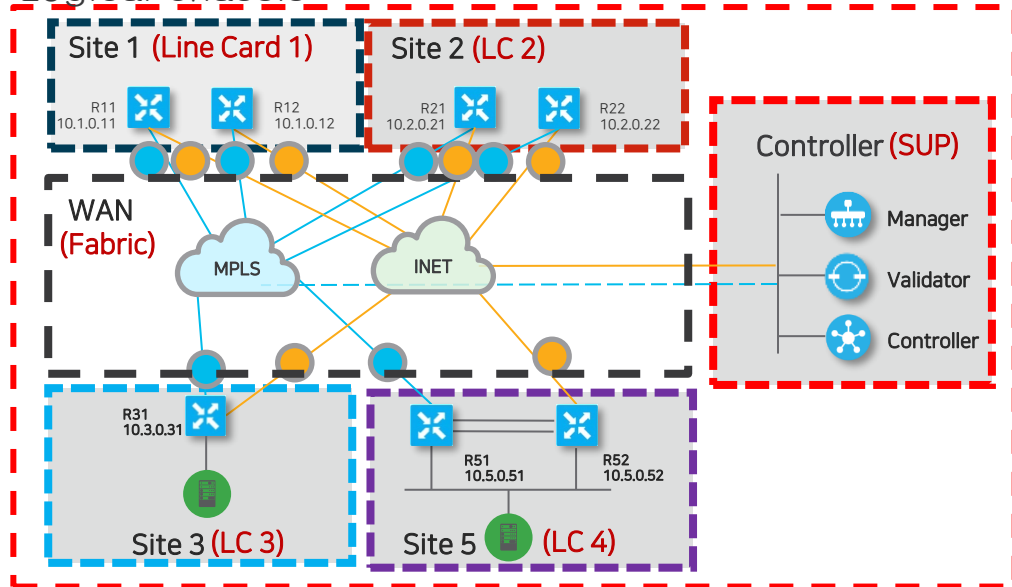
Cisco SD-WAN

Cisco SD-WAN | 하나의 거대한 ISP 구간, 또는 기업간의 WAN 통신 구간을 하나의 Chassis 급 백본 스위치와 같이 운영,
모든 자원의 완벽한 가용성 및 확장성을 가져가며, 모든 관리 구간의 간소화

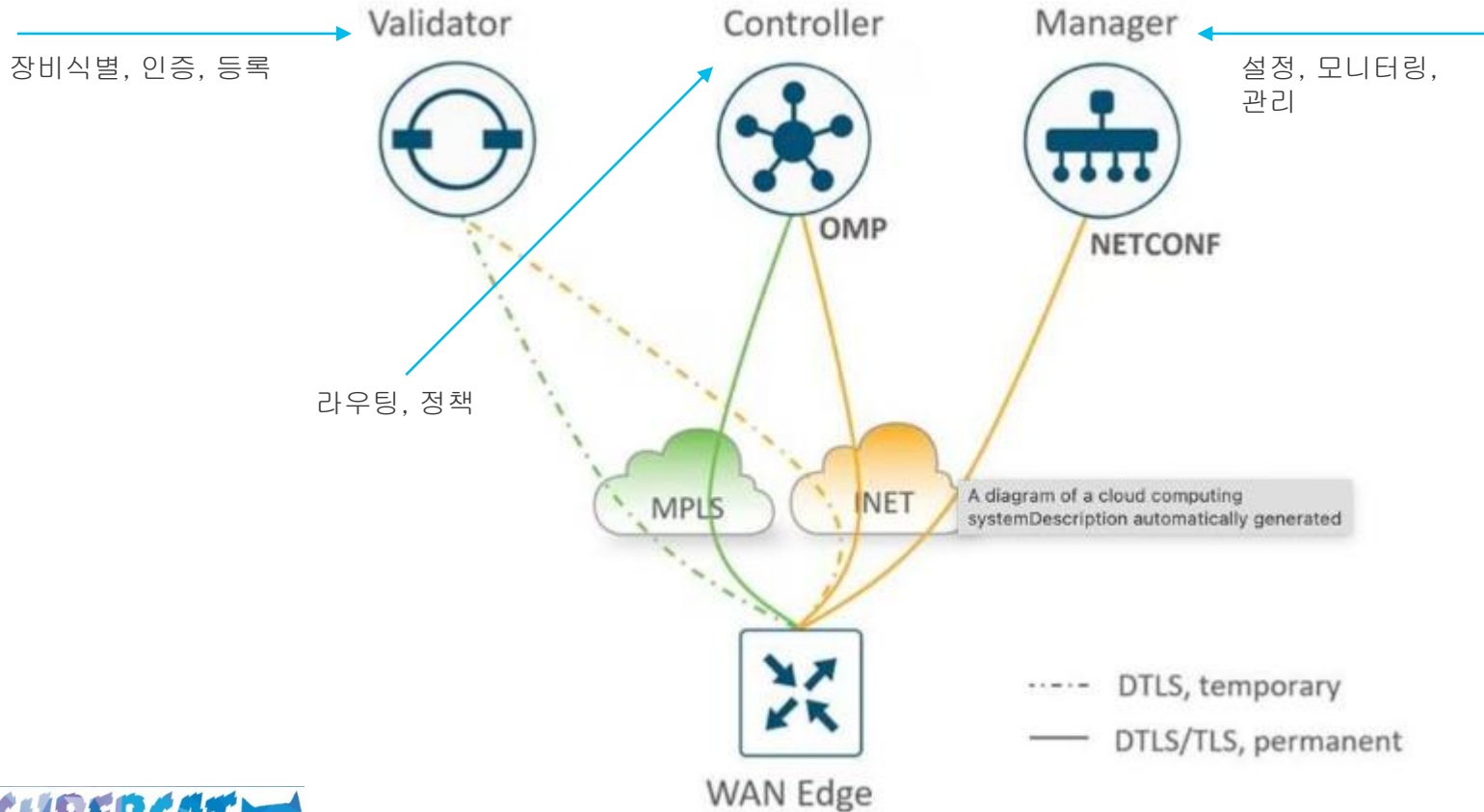
Nexus 9000 Series chassis



Logical chassis

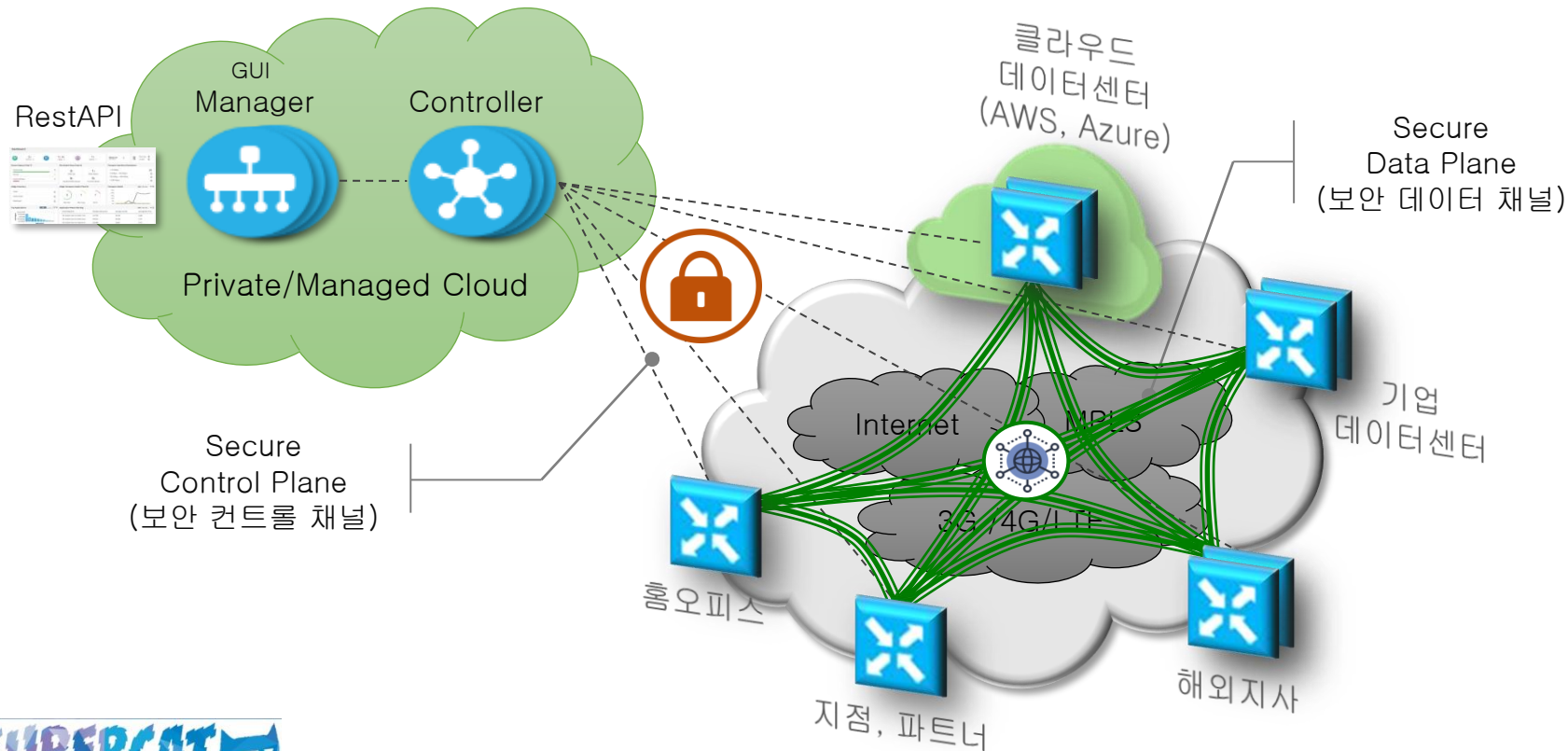


Cisco SD-WAN



Cisco SD-WAN

Cisco SD-WAN | 완벽한 End-to-End 통신 경로 보호 및 완전한 End-to-End 보안 터널링 생성 자동화



Cisco SD-WAN

통합된 보안 | 모든 거점에서 멀티 클라우드로 보다 안전한 접속과 유연한 보안 실현

모든 거점에서 멀티 클라우드로 보다 안전한 접속과 유연한 보안 실현

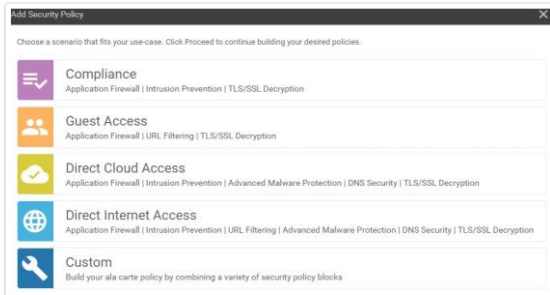
1

라우팅과 보안 기술을 통합해 거점부터 클라우드까지 보다 안전하게 접속

2

대시 보드 화면으로 보안 정책 설정 및 일괄 운영, 보안 상황 모니터링까지 가능

[보안 정책 설정, 일괄 적용]



대표 보안 기능 서비스



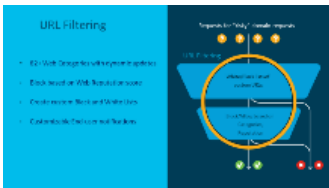
어플리케이션 방화벽



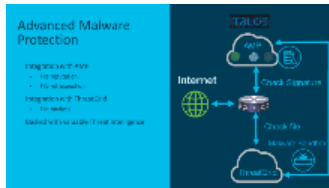
IPS / IDS



URL 필터링



고도의 멀웨어 방어 (Cisco AMP)

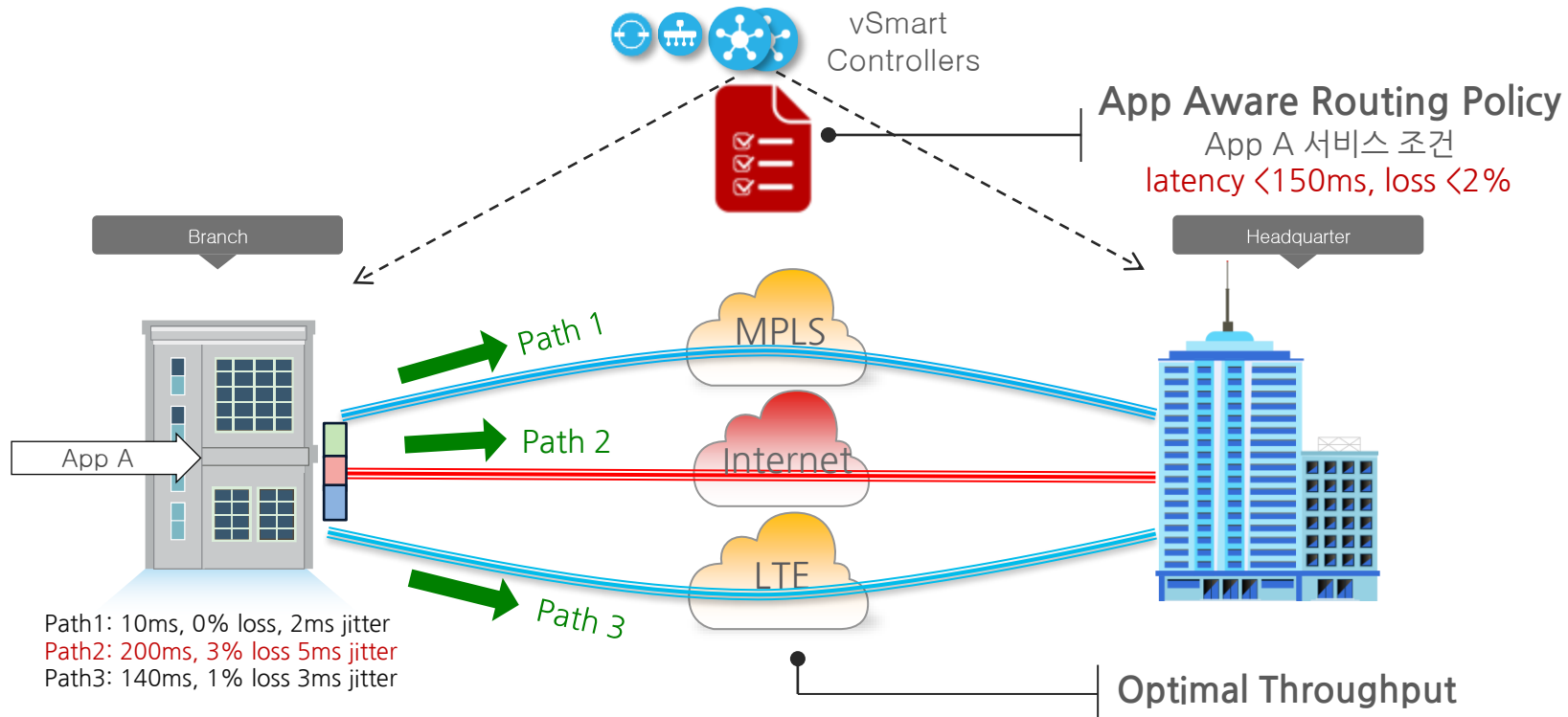


DNS 보안 (Cisco Umbrella)



Cisco SD-WAN

회선 최적화 | 동일한 비용으로 더 효율적인 회선 사용 - application aware routing (AAR)



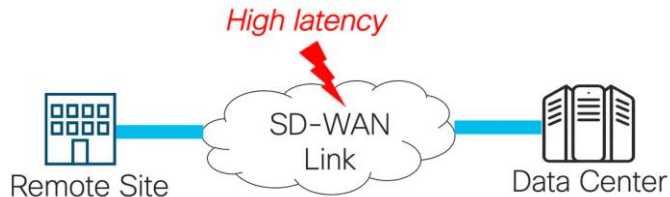
Cisco SD-WAN

Zero Touch Provisioning (ZTP)

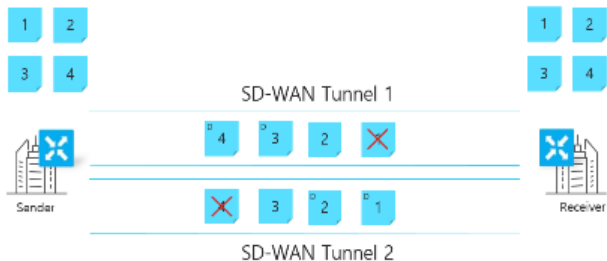


케이블 꽂기만 하면 완료

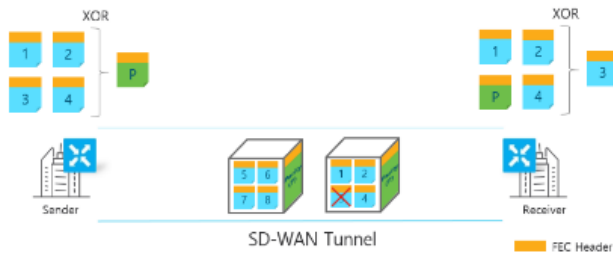
* TCP Optimization (가속기) – 해외 사이트 및 Latency 개선 특화



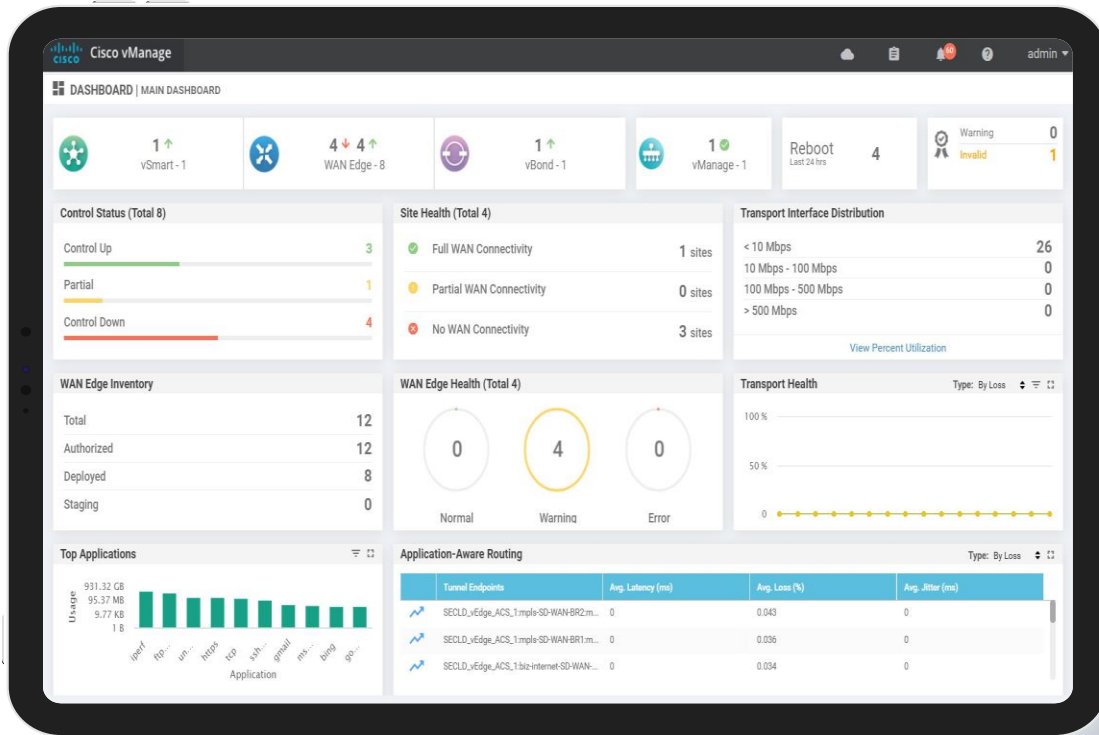
* Packet Duplication (패킷복제 전송)– Video, 화상회의 Packet 특화



* FEC(Forwarding Error Correction) – 가장 확실한 오류 제어 기능



운영 편의성 | 통합 장비 상태 관리 제공 확인



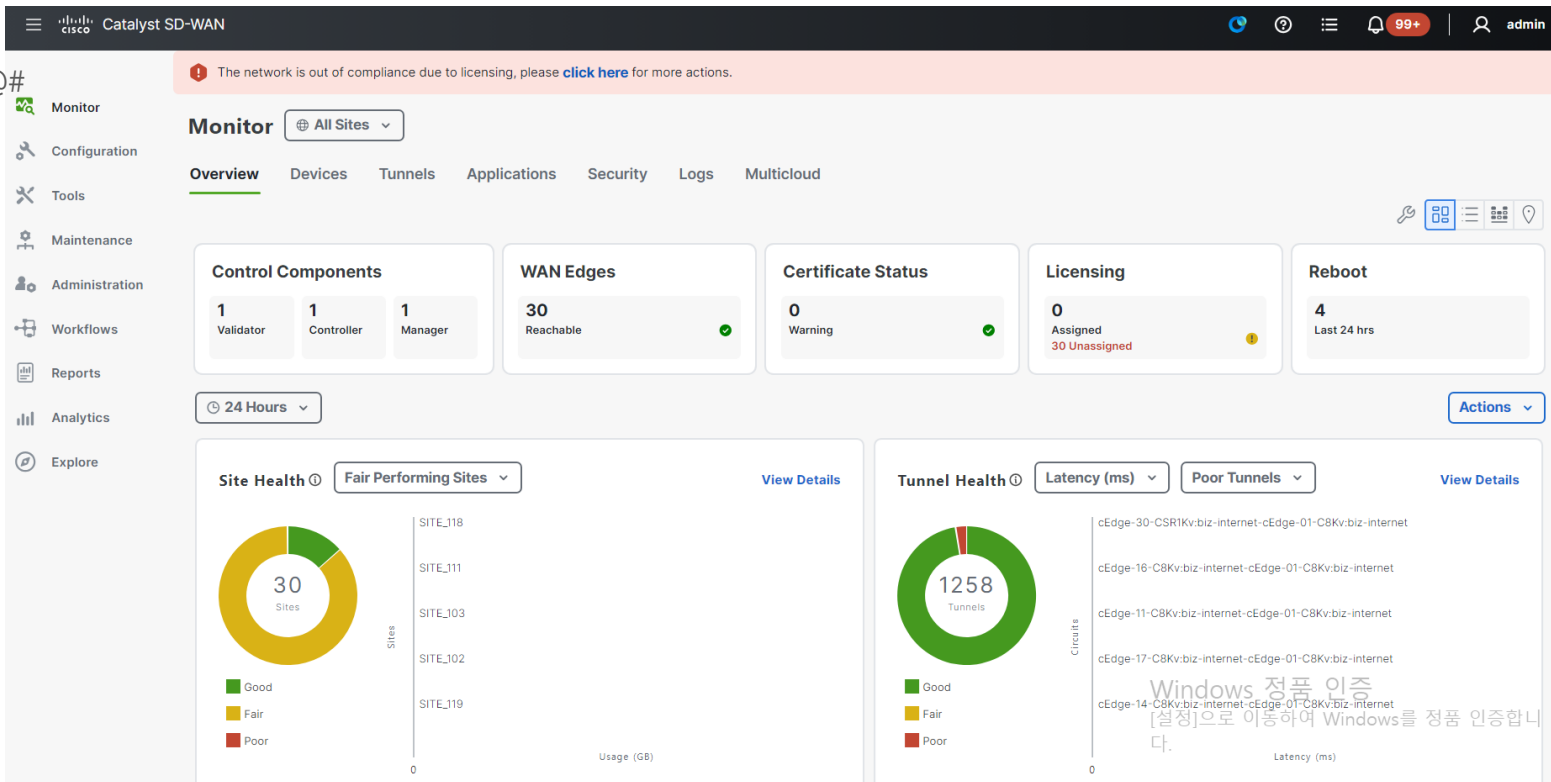
모든 지점

- 네트워크 현황
- 어플리케이션 품질
- 향후 상태 예측

Dashboard

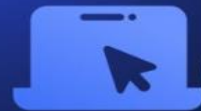
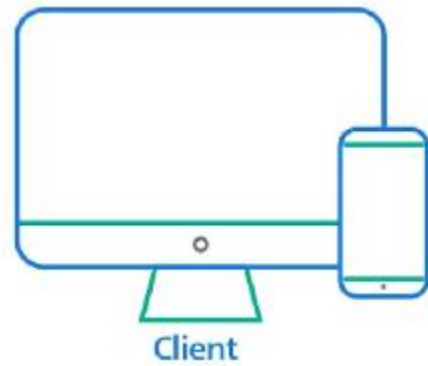
192.168.13.21:8443

Devnetxx/Cisco123!@#



RestAPI 소개 기본





client

Get/Post/Put/Delete

JSON / XML

REST
API



database

REST API MODEL

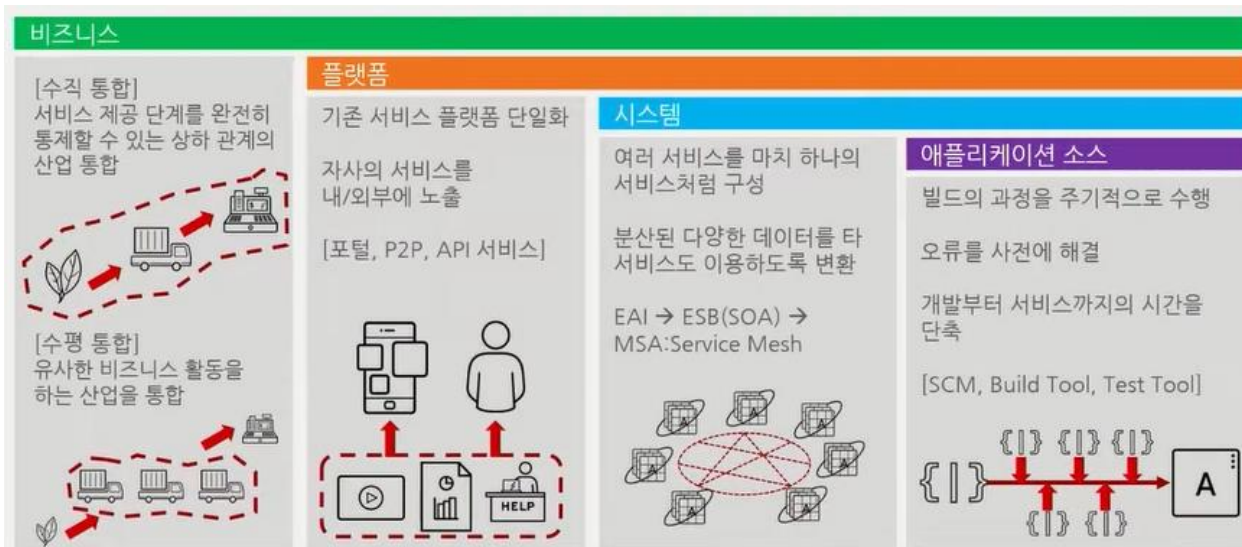


- Application Programming InterFace

- 어플리케이션을 사용할수 있도록 제어기능을 제공하는 인터페이스

- 외부에 오픈이 된 서비스로 보안 및 인증 중요

- IT의 소프트웨어의 통합, 인수등에 따른 서비스&비즈니스의 통합



'관측'을 검색하세요

기상자료개방포털이란? 데이터 기후통계분석 간행물 소통과 참여

Open-API

Home > 데이터 > Open-API

Open-API

■ 자료설명

기상청에서 제공하는 Open-API 목록을 조회하고 활용 신청할 수 있도록 링크를 제공합니다.

> Open-API 이용방법

기상자료 개방포털 접속

Open-API 목록 확인

Open-API 이용방법 확인 및 신청

Open-API를 이용 어플리케이션 제작

> Open-API 활용신청 방법

- 공공데이터포털 이용가이드를 참고하시기 바랍니다.
- 공공데이터포털: data.go.kr

> 참고사항

- 기상청 오픈API 서비스 방식이 공공데이터포털 게이트웨이 모듈 적용 방식(GW)으로 전환됨에 따라 **기존 서비스는 2020년 7월 28일 이후 폐기되었습니다.**
- 기존 서비스를 이용하는 경우, **공공데이터포털에서 새로 전환된 서비스를 신규로 활용신청**하여 이용하시기 바랍니다.
- 기존 서비스 이용 여부 확인 방법
- 호출 주소가 'http://newsky2.kma.go.kr/~' 또는 'http://data.kma.go.kr/~' 인 경우 기존 서비스 이용 중

인천국제공항공사 Open API 활용신청 페이지(<http://openapi.airport.kr/pubc>) 접속 후 아이디/비밀번호 사용하여 로그인한다.

OPEN API

공유자원활용

공유자원활용 시스템입니다.
다양한 데이터와 프로그램을 공유하거나
정보를 수집할 수 있습니다.

아이디

비밀번호

* 아이디 및 비밀번호는 영문 대소문자를 구별하나 입력 시 주의하시기 바랍니다.

1. 타인의 정보 및 주민등록번호를 도용하여 가입하는 경우 3년 이하의 징역 또는 1천만원 이하의 벌금에 처해지게 됩니다.
실명인증제를 통하여 건강하고 안전한 인터넷 환경유를 조성합니다.

[기상자료개방포털\[데이터:오픈 API\] \(kma.go.kr\)](http://kma.go.kr)

사용하고자하는 공유자원 API 목록을 조회한다.


OpenAPI활용가이드_인천국제공항공사[통합본5.2].docx - 5 -

외에도 소셜미디어, 지도, 결제시스템, 클라우드, 쇼핑 및 전자상거래, 건강관리정보 OpenAPI(?): RestAPI를 사용하기 위한 구조와 기능을 문서화 및 명세 (Swagger)

SD-WAN Swagger

192.168.13.21:8443/apidocs

devnetXX/Cisco123!@#

 [Explore](#)

Cisco SD-WAN vManage API 2.0.0 OAS3

[vmanageapi.json](#)

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

[Contact the developer](#)
[Commercial License](#)

Servers

/dataservice ▾

Administration - Audit Log	>
Administration - User and Group	>
AI Assistant Service - Dialog	>
AI Assistant Service - Enabled	>
AI Assistant Service - Feedback	>
AI Assistant Service - Session	>
AI Assistant Service - Suggestion	>
API Count	>
Certificate Management - Device	>

Monitor > Devices > session status

Monitor

Configuration

Tools

Maintenance

Administration

Workflows

Reports

Analytics

Explore

Overview

Devices

Tunnels

Applications

Security

VPN

Logs

Multicloud

SD-AVC Cloud Connector

Compliance

Hostname	Device Model	Site Name	System IP	Health ⓘ	Reachability	Control ⓘ	BFD	TLOC	Up Since	CPU Load
vmanage	Manager	SITE_100	1.1.1.1	✔	↑	32 / 32	0 / -	8 / 8	May 10, 2024 10:35 AM	3.66%
vsmart	Controller	SITE_100	1.1.1.2	✔	↑	33 / 33	0 / -	2 / 2	May 09, 2024 10:50 PM	2.03%
vbond	Validator	-	1.1.1.3	✔	↑	40 / 40	0 / -	- / -	May 09, 2024 10:46 PM	2.07%
cEdge-01-C8Kv	C8000v	SITE_101	1.1.1.101	⚠	↑	2 / 2	29 / 29	1 / 1	May 22, 2024 02:40 AM	41.27%
cEdge-02-C8Kv	C8000v	SITE_102	1.1.1.102	⚠	↑	2 / 2	29 / 29	1 / 1	May 10, 2024 03:29 PM	39.9%
cEdge-03-C8Kv	C8000v	SITE_103	1.1.1.103	⚠	↑	2 / 2	29 / 29	1 / 1	May 10, 2024 04:06 PM	36.35%
cEdge-04-C8Kv	C8000v	SITE_104	1.1.1.104	⚠	↑	2 / 2	29 / 29	1 / 1	May 10, 2024 04:18 PM	40.17%
cEdge-05-C8Kv	C8000v	SITE_105	1.1.1.105	⚠	↑	2 / 2	29 / 29	1 / 1	May 10, 2024 04:18 PM	38%

Configuration

Tools

Maintenance

Administration

Workflows

Reports

Analytics

Explore

Configuration Groups

Policy Groups

Service Insertion

Topology

Cloud OnRamp for SaaS

Cloud OnRamp for Multicloud

Devices

Network Hierarchy

Certificates

Certificate Authority

Templates

Policies

Security

Unified Communications

Network Design

Cloud onRamp for IaaS

Application Catalog

Configuration

WAN Edge List

Control Components

Unclaimed WAN Edges

WAN Edge List (30)

Q Search Table

Export Bootstrap Configuration

Sync Smart Account

Add PAYG WAN Edges

Upload WAN Edge List

As of: May 22, 2024 12:4

Chassis Number	Site Name	Hostname	Tags	Config Locked	Managed By	Device St
C8K-2770F511-FE79-44CB-A513-B642973559E8	SITE_101	cEdge-01-C8Kv	Add Tag	No	Unmanaged	In Sync
C8K-9DCA28F4-A908-7A2B-BD8F-9F1010ECB39F	SITE_102	cEdge-02-C8Kv	Add Tag	No	Unmanaged	In Sync
C8K-F6E3C511-AC90-2177-6191-754A6E4DABDC	SITE_103	cEdge-03-C8Kv	Add Tag	No	Unmanaged	In Sync

Configuration > Template > Template status

Configuration

Tools

Maintenance

Administration

Workflows

Reports

Analytics

Explore

Configuration Groups

Policy Groups

Service Insertion

Topology

Cloud OnRamp for SaaS

Cloud OnRamp for Multicloud

Devices

Network Hierarchy

Certificates

Certificate Authority

Templates

Policies

Security

Unified Communications

Network Design

Cloud onRamp for IaaS

Application Catalog

Configuration

Device Templates

Feature Templates

Q

Search

Create Template

Template Type

Non-Default

Name	Description	Type	Device Mod...	Device Role ...	Feature Templates	Draft Mode	Devices Attached	Update
cEdge-01-C8Kv	101	CLI	C8000v		0	Disabled	0	admin
cEdge-02-C8Kv	102	CLI	C8000v		0	Disabled	0	admin
cEdge-03-C8Kv	103	CLI	C8000v		0	Disabled	0	admin
cEdge-04-C8Kv	104	CLI	C8000v		0	Disabled	0	admin

Total Rows: 31

Configuration

Device Templates

Feature Templates

Q Search

Add Template ➡

Template Type **Non-Default** ▾

Name

Description

- ☐ ASR1001-HX
- ☐ ASR1001-X
- ☐ ASR1002-HX
- ☐ ASR1002-X
- ☐ ASR1006-X
- ☐ C1101-4P
- ☐ C1101-4PLTEP
- ☐ C1101-4PLTEPW*
- ☐ C1109-2PLTEGB
- ☐ C1109-2PLTEUS
- ☐ C1109-2PLTEVZ
- ☒ C1109-4PLTE2P ➡
- ☐ C1109-4PLTE2PW*
- ☐ C1111-4P
- ☐ C1111-4PLTEEA
- ☐ C1111-4PLTELA
- ☐ C1111-4PW*

Cisco AAA

Cisco BFD

Cisco NTP

Cisco OMP

Cisco Security

Cisco System

Global Settings

VPN

Cisco Secure Internet Gateway (SIG)

WAN

Cisco VPN

Cisco VPN Interface Ethernet

Management

WAN

LAN

Configuration

Device Templates

Feature Templates

Q Search

Create Template

Template Type Non-Default

Name	Description	Type	Device Mod...	Devic
cEdge-01-C8Kv	101	CLI	C8000v	
cEdge-02-C8Kv	102	CLI	C8000v	
cEdge-03-C8Kv	103	CLI	C8000v	
cEdge-04-C8Kv	104	CLI	C8000v	

Configuration

Device Templates

Feature Templates

Device Model*

C8000v

Device Role*

Template Name*

Description*

Basic Information

Transport & Management VPN

Service VPN

Cellular

Additional Templates

Basic Information

Cisco System *

Default_BootStrap_Cisco_Sys...

Cisco Logging *

Default_BootStrap_Cisco_System_Template
Default_System_Cisco_V01
Factory_Default_Cisco_System_Template
Factory_Default_DC1_System
Factory_Default_Dynamic_Retail_Branch_S
Factory_Default_Retail_Branch_System

Factory Default DC1 System

Factory_Default_DC1_System

Create Template

View Template

Configuration

Device Templates

Feature Templates

Search

Create Template

Template Type Non-Default

Total Rows: 31



Name	Description	Type	Device Mod...	Device Role ...	Feature Templates	Draft Mode	Devices Attached	Updated By	Last Updated	Template Status
cEdge-01-C8Kv	101	CLI	C8000v		0	Disabled	0	admin	22 May 2024 1...	In Sync
cEdge-02-C8Kv	102	CLI	C8000v		0	Disabled	0	admin	22 May 2024 1...	In Sync
cEdge-03-C8Kv	103	CLI	C8000v		0	Disabled	0	admin	22 May 2024 1...	In Sync
cEdge-04-C8Kv	104	CLI	C8000v		0	Disabled	0	admin	22 May 2024 1...	In Sync
cEdge-05-C8Kv	105	CLI	C8000v		0	Disabled	0	admin	22 May 2024 1...	In Sync
cEdge-06-C8Kv	106	CLI	C8000v		0	Disabled	0	admin	22 May 2024 1...	In Sync
cEdge-07-C8Kv	107	CLI	C8000v		0	Disabled	0	admin	22 May 2024 1...	In Sync
cEdge-08-C8Kv	108	CLI	C8000v		0	Disabled	1	admin	22 May 2024 1...	In Sync

- Edit
- View
- Delete
- Copy
- Enable Draft Mode
- Attach Devices
- Export CSV

Attach Devices

Attach device from the list below

Available Devices Select All

All

Search

Name	Device IP
cEdge-01-C8Kv	1.1.1.101
cEdge-02-C8Kv	1.1.1.102
cEdge-03-C8Kv	1.1.1.103
cEdge-04-C8Kv	1.1.1.104
cEdge-05-C8Kv	1.1.1.105
cEdge-06-C8Kv	1.1.1.106
cEdge-07-C8Kv	1.1.1.107
cEdge-08-C8Kv	1.1.1.108



0 Items Selected

Selected Devices

All

Search

Name	Device IP
------	-----------

Attach Devices

Attach device from the list below

Available Devices Select All

All

Search

Name	Device IP
cEdge-02-C8Kv	1.1.1.102
cEdge-03-C8Kv	1.1.1.103
cEdge-04-C8Kv	1.1.1.104
cEdge-05-C8Kv	1.1.1.105
cEdge-06-C8Kv	1.1.1.106
cEdge-07-C8Kv	1.1.1.107
cEdge-08-C8Kv	1.1.1.108
cEdge-09-C8Kv	1.1.1.109



1 Items Selected

Selected Devices Select All

All

Search

Name	Device IP
cEdge-01-C8Kv	1.1.1.101

Device Group (1)



Q Search Table

As of: May 22, 2024 02:40 PM

Status	Message	Chassis Number	Device Model	Hostname	System IP	Site ID	vManage IP	Action
In progress	Generating configuration fro...	C8K-2770F511-FE79-44CB-A513-B642973559E8	C8000v	cEdge-01-C8Kv	1.1.1.101	101	1.1.1.1	

Device Group (1)



Q Search Table

As of: May 22, 2024 02:40 PM

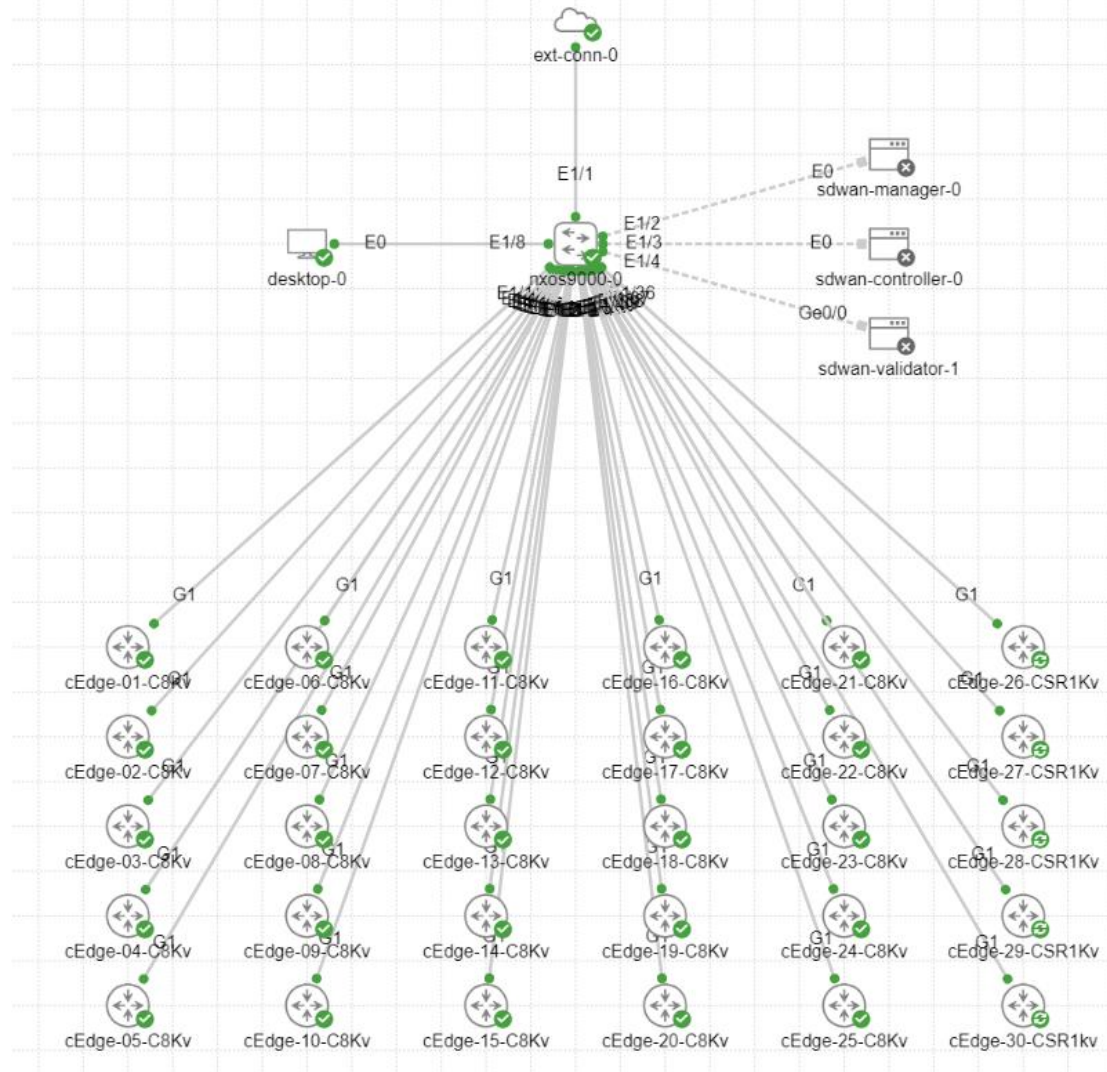
Status	Message	Chassis Number	Device Model	Hostname	System IP	Site ID	vManage IP	Action
Success	Template successfully attac...	C8K-2770F511-FE79-44CB-A513-B642973559E8	C8000v	cEdge-01-C8Kv	1.1.1.101	101	1.1.1.1	

LAB1 (Postman)

- 인증 및 토큰 취득
- (Get) Fabric Device
- (Get) Devices Status
- (Get) Devices Counters
- ...
- (Post) Template Attach



LAB 구성도



Device	System-ip	Site	ID	
cEdge-01	1.1.1.101	101	Devnet01	
cEdge-02	1.1.1.102	102	Devnet02	강해나 님
cEdge-03	1.1.1.103	103	Devnet03	권택용 님
cEdge-04	1.1.1.104	104	Devnet04	김성 님
cEdge-05	1.1.1.105	105	Devnet05	김수민 님
cEdge-06	1.1.1.106	106	Devnet06	김종선 님
cEdge-07	1.1.1.107	107	Devnet07	노지우 님
cEdge-08	1.1.1.108	108	Devnet08	신영대 님
cEdge-09	1.1.1.109	109	Devnet09	심명보 님
cEdge-10	1.1.1.110	110	Devnet10	안남섭 님
cEdge-11	1.1.1.111	111	Devnet11	양현욱 님
cEdge-12	1.1.1.112	112	Devnet12	이소연 님
cEdge-13	1.1.1.113	113	Devnet13	이영수 님
cEdge-14	1.1.1.114	114	Devnet14	이유정 님
cEdge-15	1.1.1.115	115	Devnet15	이주영 님

Device	System-ip	Site	ID	
cEdge-16	1.1.1.116	116	Devnet16	이현중 님
cEdge-17	1.1.1.117	117	Devnet17	임건우 님
cEdge-18	1.1.1.118	118	Devnet18	정순강 님
cEdge-19	1.1.1.119	119	Devnet19	전병찬 님
cEdge-20	1.1.1.120	120	Devnet20	정성욱 님
cEdge-21	1.1.1.121	121	Devnet21	정현우 님
cEdge-22	1.1.1.122	122	Devnet22	하유정 님
cEdge-23	1.1.1.123	123	Devnet23	홍민석 님
cEdge-24	1.1.1.124	124	Devnet24	
cEdge-25	1.1.1.125	125	Devnet25	
cEdge-26	1.1.1.126	126	Devnet26	
cEdge-27	1.1.1.127	127	Devnet27	
cEdge-28	1.1.1.128	128	Devnet28	
cEdge-29	1.1.1.129	129	Devnet29	
cEdge-30	1.1.1.130	130	Devnet30	

Postman collection

<https://www.postman.com/kkyc3/workspace/my-workspace/collection/34445127-ff3def5a-c066-45a6-b6ef-b7fb45066ce8?action=share&creator=34445127&active-environment=34445127-1ab0c157-bb61-46f3-af3c-accd69011ec4>



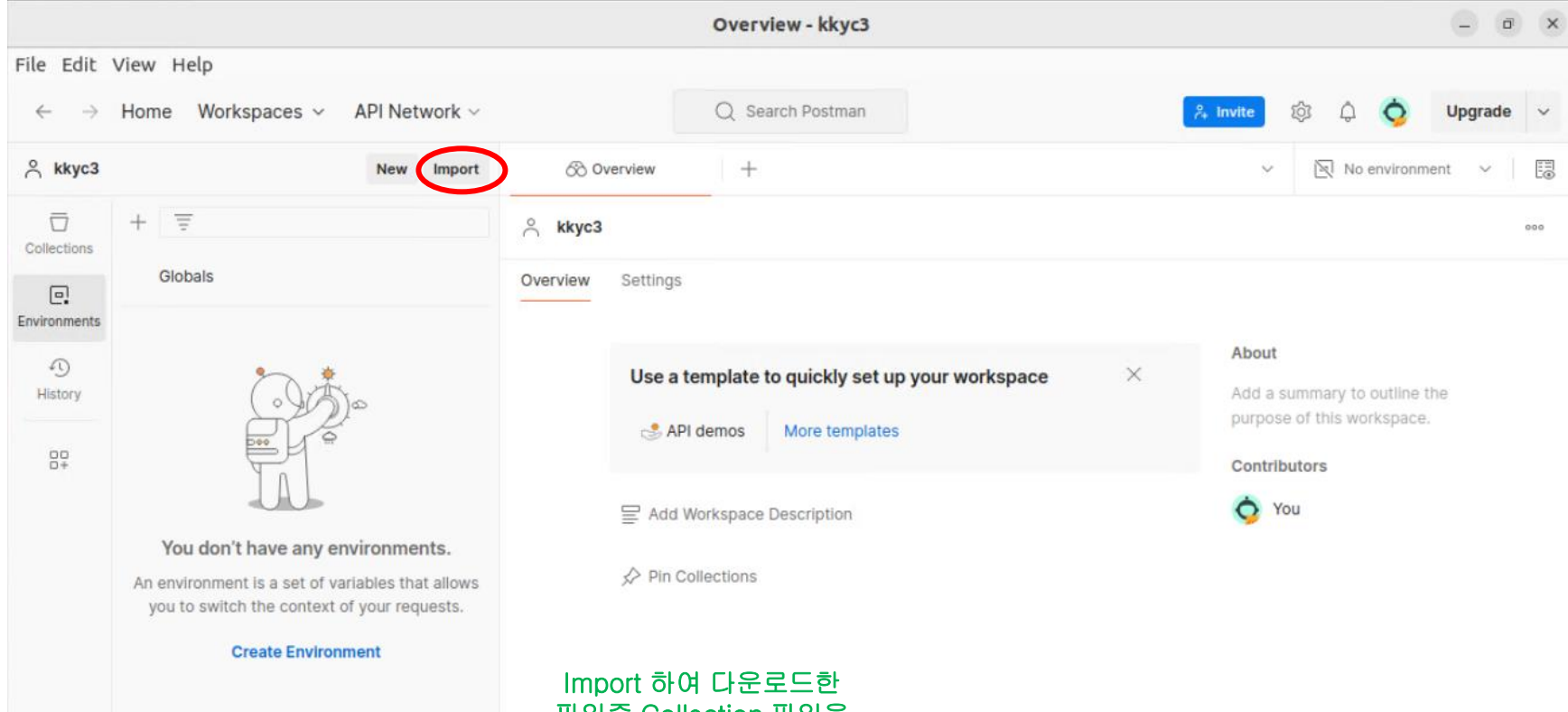
SD-WAN RestAPI.postman_collection_20240522

Postman environments

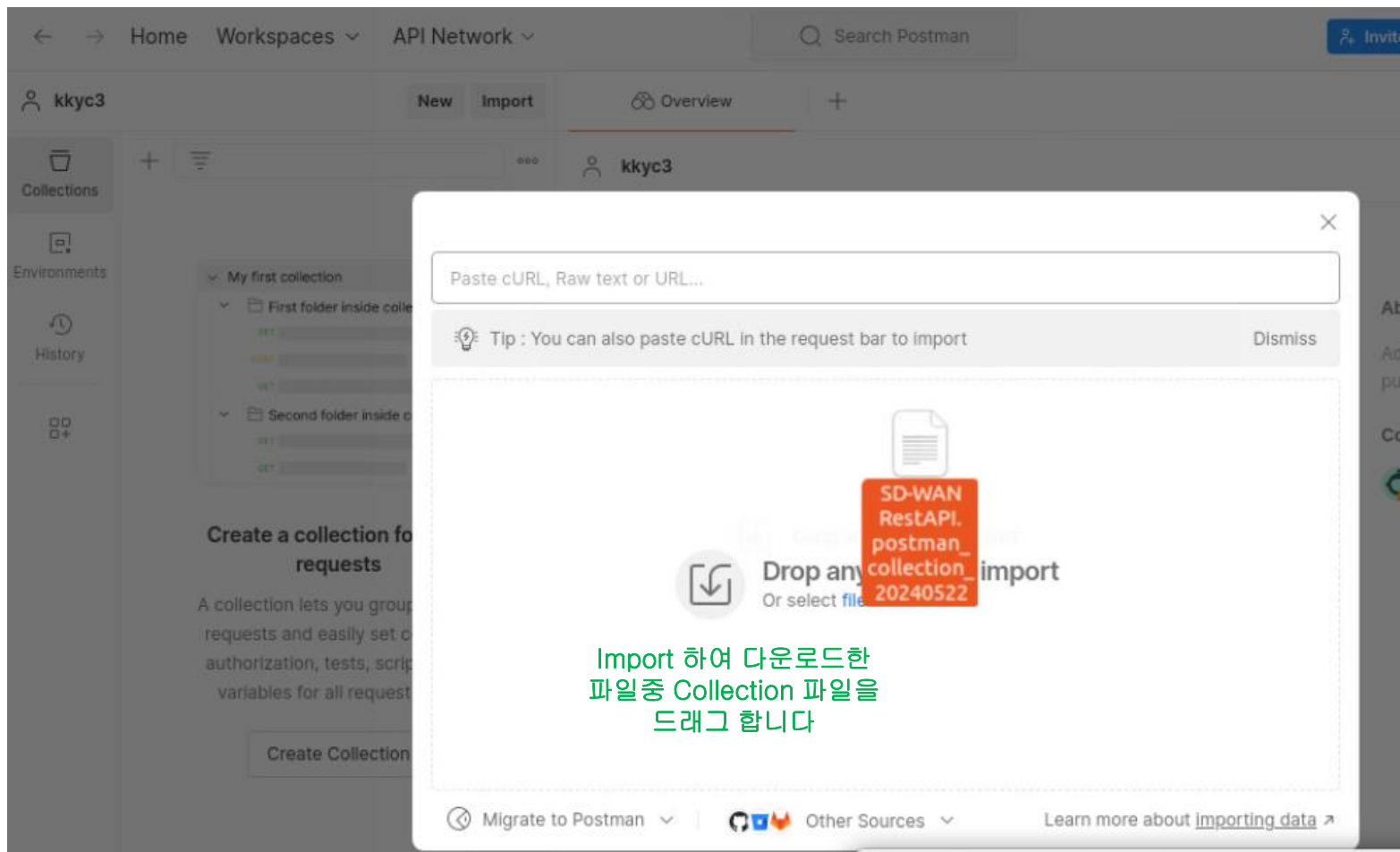
<https://www.postman.com/kkyc3/workspace/my-workspace/environment/34445127-1ab0c157-bb61-46f3-af3c-accd69011ec4?action=share&creator=34445127&active-environment=34445127-1ab0c157-bb61-46f3-af3c-accd69011ec4>



SD-WAN_RestAPI_Env.postman_environment.json



Import 하여 다운로드한
파일중 Collection 파일을
드래그 합니다



← → Home Workspaces ▾ API Network ▾

kkyc3 New **Import** Overview SD-WAN RestAPI

Drop files anywhere to import

Collections +


Environments

History

Globals

Overview Authorization Scripts Variables Run

동일하게 import하여 environments 파일을 드래그합니다.



You don't have any environments.

An environment is a set of variables that allows you to switch the context of your requests.

Create Environment

SD-WAN RestAPI

Make things easier for your teammates with a description.

[View complete documentation →](#)

kkyc3 New Import Overview SD-WAN RestAPI +

Collections + -

Globals

Environments

History

SD-WAN RestAPI Share

Paste cURL, Raw text or URL...

💡 Tip : You can also paste cURL in the request bar to import Dismiss

동일하게 import하여 environments 파일을 드래그합니다.

You don't have any environments

An environment is a set of variables you can use to switch the context of your API requests.

Create Environment

anywhere to import

anywhere to import

SD-WAN RestAPI Env. postman_environment.tjson

Migrate to Postman Other Sources Learn more about [importing data](#)

kkyc3

NewImport

Collections

Environments

History

Globals

SD-WAN_RestAPI_Env

Overview

SD-WAN_RestAPI

SD-WAN_RestAPI_Env

SD-WAN_RestAPI_Env

Fork0

Filter variables

	Variable	Type	Initial value	Current value
<input checked="" type="checkbox"/>	vmanage	default	192.168.13.21	192.168.13.21
<input checked="" type="checkbox"/>	j_username	default	Devnet(XX)	Devnet(XX)
<input checked="" type="checkbox"/>	j_password	default	Cisco123!@#	Cisco123!@#
<input checked="" type="checkbox"/>	port	default	8443	8443
<input checked="" type="checkbox"/>	X-XSRF-TOKEN	default		
<input checked="" type="checkbox"/>	templateID	default		
<input checked="" type="checkbox"/>	DeviceID	default		
	Add new variable			

자신의 계정을 입력합니다
Devnet01 ~ Devnet30

kkyc3 New Import

Collections

SD-WAN RestAPI

POST 0. Authentication Copy

GET 0. Token

GET 1. Fabric Devices

GET 2. Devices Status

GET 3. Device Counters

GET 4. Interface statistics

GET 5. Template Feature

GET 6. Template Feature Type

GET 7. vEdge Template Policy

GET 8. TemplateID

GET 9. DeviceID

POST 10. Attach

Overview POST 0. Authentication Copy SD-WAN_RestAPI_Env + No environment

SD-WAN RestAPI / 0. Authentication Copy

POST https://{{vmanage}}:{{port}}/_security_check

Params Auth Headers (9) Body Scripts Settings

Query Params

Key	Value	Description	Bulk Edit
Key	Value	Description	

Response

No pinned environments for this collection

✓ No environment

SD-WAN_RestAPI_Env

No environment -> SD-WAN_RestAPI_Env로 변경합니다

The screenshot shows the Postman interface with a collection named 'SD-WAN RestAPI'. The item '0. Authentication Copy' is selected. The URL is 'https://{{vmanage}}:{{port}}/j_security_check'. The 'Send' button is circled in red. A red arrow points from the 'Send' button to the '200 OK' status in the test results section.

SD-WAN RestAPI / 0. Authentication Copy

POST https://{{vmanage}}:{{port}}/j_security_check

Params Auth Headers (10) Body Scripts Settings

Query Params

Key	Value	Description
Key	Value	Description

Body Cookies (1) Headers (10) Test Results

200 OK 167 ms 443 B Save as example

Pretty Raw Preview Visualize Text

1. Authentication 진행 -> 200 OK 확인

SD-WAN RestAPI / 0. Token

GET https://{vmanage}://{port}/dataservice/client/token

Send

Params Auth Headers (7) Body Scripts Settings

Query Params

Key	Value	Description
Key	Value	Description

Body Cookies (1) Headers (13) Test Results

200 OK 21 ms 560 B Save as example

Pretty Raw Preview Visualize JSON

```
1 96751F7AA4DBF75713198C3A09757E4303FBE9FD8915ED31040328C3345745252F55C9F532522E47AB09218D55741E10238D
```

2. Token 진행 -> 200 OK 확인 -> Token 값 복사후 상단에 표기된 변수값 입력

Overview | POST 0. Authentication | SD-WAN_RestAPI | GET 0. Token | SD-WAN_RestAPI_Env

SD-WAN_RestAPI_Env Edit

Variable	Initial value	Current value
vmanage	192.168.13.21	192.168.13.21
j_username	admin	admin
j_password	Cisco123!@#	Cisco123!@#
port	8443	8443
X-XSRF-TOKEN		

templateID

Globals

Body Cookies

Pretty

1 96751

2

자동으로 들어갈 수 있으나
값이 없거나 틀린지 확인후
X-XSRF-TOKEN 변수에 넣어줍니다

SD-WAN_RestAPI_Env

Variable	Initial value	Current value
j_password	Cisco123!@#	Cisco123!@#
port	8443	8443
X-XSRF-TOKEN		iF532522E47AB09218D55741E10238D
templateID		
DeviceID		

Globals

2. Token 진행 -> 200 OK 확인 -> Token 값 복사후 상단에 표기된 변수값 입력

kkyc3

NewImport

Collections

SD-WAN RestAPI

POST 0. Authentication Copy

GET 0. Token

GET 1. Fabric Devices

GET 2. Devices Status

GET 3. Device Counters

GET 4. Interface statistics

GET 5. Template Feature

GET 6. Template Feature Type

GET 7. vEdge Template Policy

GET 8. TemplateID

GET 9. DeviceID

POST 10. Attach

Environments

History

SD-WAN RestAPI / 1. Fabric Devices

Save

GEThttps://{{vmanage}}:{{port}}/dataservice/device

Send

ParamsAuthHeaders (8)BodyScriptsSettings

Query Params

Key	Value	Description	Bulk Edit
Key	Value	Description	

BodyCookies (1)Headers (13)Test Results

PrettyRawPreviewVisualizeJSON

101

```
374 {
375   "deviceId": "1.1.1.101",
376   "system-ip": "1.1.1.101",
377   "host-name": "cEdge-01-C8Kv",
378   "reachability": "reachable",
379   "status": "normal",
380   "personality": "vedge",
381   "device-type": "vedge",
382   "timezone": "UTC +0000",
383   "device-groups": [
384     "No groups"
```

Windows 정품
[설정]으로 이동하여
다

1~7까지는 Get(조회) 호출입니다
정보조회 이후 자신의 device 넘버로
find 하여 정보값을 확인할수있습니다

New Import < [CONFLIK GET 0. Tok GET 1. Fab GET 2. De GET 3. De GET 8. Ter > + - SD-WAN_RestAPI_Env

+ SD-WAN RestAPI

- POST 0. Authentication Copy
- GET 0. Token
- GET 1. Fabric Devices
- GET 2. Devices Status
- GET 3. Device Counters
- GET 4. Interface statistics
- GET 5. Template Feature
- GET 6. Template Feature Type
- GET 7. vEdge Template Policy
- GET 8. TemplateID**
- GET 9. DeviceID
- POST 10. Attach

HTTP SD-WAN RestAPI / 8. TemplateID

GET https://192.168.13.21:8443/dataservice/template/device

Send

Params Auth Headers (7) Body Scripts Settings Cookies

Query Params

Key	Value	Description	Bulk Edit
Key	Value	Description	

Body Cookies (1) Headers (13) Test Results 200 OK 47 ms 20.09 KB Save as example

Pretty Raw Preview Visualize JSON

```
177 "templateClass": "cedge",
178 "configType": "file",
179 "templateId": "c1ab0e45-7bbb-47aa-aa9a-27507fee130a",
180 "factoryDefault": false,
181 "templateName": "cEdge-01-C8Kv",
182 "devicesAttached": 0,
183 "templateDescription": "101",
184 "draftMode": "Disabled",
185 "lastUpdatedOn": 1716305869662,
186 "templateAttached": 0
```

8. Templateid 취득,
자신의 사이트 ID를 검색하여
Templateid 값을 복사합니다.

Windows 정품 인
[설정]으로 이동하여 Win

GET

Params Auth

Query Params

Key
Key

Variable	Initial value	Current value
port	8443	8443
X-XSRF-TOKEN		96751F7AA4DBF75713198C3A09757E430 3FBE9FD8915ED31040328C3345745252 F55C9F532522E47AB09218D55741E1023 8D

templateID



DeviceID

Token 값과 마찬가지로
templateID 값에 추가합니다

GET

Params Auth

Query Params

Key
Key

Variable	Initial value	Current value
port	8443	8443
X-XSRF-TOKEN		96751F7AA4DBF75713198C3A09757E430 3FBE9FD8915ED31040328C3345745252 F55C9F532522E47AB09218D55741E1023 8D

templateID

c1ab0e45-7bbb-47aa-aa9a-
27507fee130a



DeviceID

Globals

Add

Body Cookies

No global variables

SD-WAN RestAPI / 9. DeviceID

GET

Params Auth Headers (8) Body Scripts Settings

Query Params

<input checked="" type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	site-id	101			
	Key	Value	Description		

Body Cookies (1) Headers (13) Test Results

200 OK 232 ms 4.66 KB Save as example

Pretty Raw Preview Visualize JSON

```

261 "timezone": "UTC +0000",
262 "device-groups": [
263   "No groups"
264 ],
265 "lastupdated": 1716388915853,
266 "bfdSessionsUp": 29,
267 "domain-id": "1",
268 "board-serial": "320B1205",
269 "certificate-validity": "Valid",
270 "max-controllers": 20,
271 "uuid": "C6K-2770F511-FE79-44CB-A513-B642973559E8",
272 "bfdSessions": "29",
  
```

Windows 정품
[설정]으로 이동하여
다.

9. DeviceID 취득,
호출값을 자신의 사이트 ID로 변경하여
Send 합니다 스크롤하여 하단부의
uuid : 값을 복사합니다.

GET 0. Tok GET 1. Fab GET 2. Dev GET 3. Dev GET 8. Ter GET 9. Dev SD-WAN_RestAPI_Env Edit

SD-WAN

GET

Params Au

Query Params

☒ Key

☒ site-i

Key

templateID

DeviceID

Globals

Variable	Initial value	Current value
X-XSRF-TOKEN		96751F7AA4DBF75713198C3A09757E430 3FBE9FD8915ED31040328C3345745252 F55C9F532522E47AB09218D55741E1023 8D
templateID		c1ab0e45-7bbb-47aa-aa9a- 27507fee130a
DeviceID		

Body Cookies

9. 비어있는 DeviceID 에
변수를 입력합니다

SD-WAN SD-WAN_RestAPI_Env Edit

POST

Params Auth

Query Params

Key

Key

templateID

DeviceID

Globals

Variable	Initial value	Current value
X-XSRF-TOKEN		96751F7AA4DBF75713198C3A09757E430 3FBE9FD8915ED31040328C3345745252 F55C9F532522E47AB09218D55741E1023 8D
templateID		c1ab0e45-7bbb-47aa-aa9a- 27507fee130a
DeviceID		C8K-2770F511-FE79-44CB-A513- B642973559E8

Response

No global variables

	Key	Value	Description	...	Bulk Edit
	Key	Value	Description		

10. Attach 를 클릭한수 Body 를 클릭합니다

kkyc3 New Import < GET 1. Fab GET 2. De GET 3. De GET 8. Ter GET 9. De POST 10. SD-WAN_RestAPI_Env

Collections + SD-WAN RestAPI

- POST 0. Authentication Copy
- GET 0. Token
- GET 1. Fabric Devices
- GET 2. Devices Status
- GET 3. Device Counters
- GET 4. Interface statistics
- GET 5. Template Feature
- GET 6. Template Feature Type
- GET 7. vEdge Template Policy
- GET 8. TemplateID
- GET 9. DeviceID
- POST 10. Attach

HTTP SD-WAN RestAPI / 10. Attach Save Send

POST https://192.168.13.21:8443/dataservice/template/device/config/attachcli

Params Auth Headers (10) Body Scripts Settings Cookies Beautify

raw JSON

```
1 {
2   "deviceTemplateList": [
3     {
4       "templateId": "{{templateID}}",
5       "device": [
6         {
7           "csv-status": "complete",
8           "csv-deviceId": "{{DeviceID}}",
9           "csv-deviceIP": "192.168.13.xxx",
10          "csv-host-name": "cEdge-xx-C8Kv",
11        }
12      ],
13      "isEdited": false,
14      "isMasterEdited": false,
15      "isDraftDisabled": false
16    }
17  ]
18 }
```

192.168.13.XXX(101~130)
cEdge-xx-C8Kv (01~25)
cEdge-xx-CSR1KV (26~30)

10. 자신의 Device 의 정보로 하드코딩 값을 변경합니다.

The screenshot shows the vManager interface. On the left is a sidebar menu with icons and labels: Configuration (with a blue arrow pointing to the right), Tools, Maintenance, Administration, Workflows, Reports, Analytics, and Explore. To the right of this sidebar is a secondary menu under 'Configuration' with the following items: Configuration Groups, Policy Groups, Service Insertion, Topology, Cloud OnRamp for SaaS, Cloud OnRamp for Multicloud, **Devices** (highlighted in blue with a checkmark and a blue arrow pointing to the table below), Network Hierarchy, Certificates, Certificate Authority, Templates, Policies, and Security.

Below the 'Devices' menu item is a table with the following data:

C8K-2770F511-FE79-44CB-A513-B642973559E8	SITE_101	cEdge-01-C8Kv	Add Tag ▾	No	Unmanaged
--	----------	---------------	---------------------------	----	-----------

Below the table, there are two more menu items: Cloud onRamp for IaaS and Application Catalog.

10. vManager에서 자신의 장비 status 을 확인합니다
Configuration > Devices > cEdge-xx-C8Kv 상태확인

kkyc3 New Import

Collections

SD-WAN RestAPI

- POST 0. Authentication Copy
- GET 0. Token
- GET 1. Fabric Devices
- GET 2. Devices Status
- GET 3. Device Counters
- GET 4. Interface statistics
- GET 5. Template Feature
- GET 6. Template Feature Type
- GET 7. vEdge Template Policy
- GET 8. TemplateID
- GET 9. DeviceID
- POST 10. Attach

10. Send 후에는 진행이 빨라서
진행과정이 확인이 안될수있습니다

SD-WAN RestAPI / 10. Attach

POST https://192.168.13.21:8443/dataservice/template/device/config/attachcli

Send

Params Auth Headers (10) Body Scripts Settings

raw JSON

```
1 {
2   "deviceTemplateList": [
3     {
4       "templateId": "{{templateID}}",
5       "device": [
6         {
7           "csv-status": "complete",
8           "csv-deviceId": "{{DeviceID}}",
9           "csv-deviceIP": "192.168.13.101",
10          "csv-host-name": "cEdge-01-C8Kv"
11        }
12      ]
13    }
14  ]
15 }
```

Body Cookies (1) Headers (13) Test Results

200 OK 101 ms 538 B Save as example

Pretty Raw Preview Visualize JSON

```
1 {
2   "id": "push_file_template_configuration-fc2ac31e-88e5-4722-a279-4241f4916c6d"
3 }
```


The network is out of compliance due to licensing, please [click here](#) for more actions.

Push CLI Template Configuration | Validation success

Total Task: 1 | In progress : 1

Device Group (1)

Q Search Table

Status	Message	Chassis Number
In progress	Device has pulled the confi...	C8K-2770F511-FE79-44CB-A513-B642973559E8

Push CLI Template Configuration | Validation success

Total Task: 1 | Success : 1

Device Group (1)

Q Search Table

Status	Message	Chassis Number
Success	Template successfully attac...	C8K-2770F511-FE79-44CB-A513-B642973559E8

10. Send 후에는 진행이 빨라서
진행과정이 확인이 안될수있습니다

Monitor

Configuration

Tools

Maintenance

Administration

Workflows

Reports

Analytics

Explore

Configuration

WAN Edge List

Control Components

Unclaimed WAN Edges

WAN Edge List (30)

Q Search Table

Export Bootstrap Configuration

Sync Smart Account

Add PAYG WAN Edges

Upload WAN Edge List

Chassis Number	Site Name	Hostname	Tags	Config Locked	Managed By ⓘ
C8K-2770F511-FE79-44CB-A513-B642973559E8	SITE_101	cEdge-01-C8Kv	Add Tag ▼	Yes	Template cEdge-01-C8Kv
C8K-9DCA28F4-A908-7A2B-BD8F-9F1010ECB39F	SITE_102	cEdge-02-C8Kv	Add Tag ▼	No	Unmanaged
C8K-F6E3C511-AC90-2177-6191-754A6E4DABDC	SITE_103	cEdge-03-C8Kv	Add Tag ▼	No	Unmanaged

10. 자신의 장비가 **Unmanaged**에서 **Template** 모드로 변경된것을 확인합니다.

LAB2 (Python)

- Postman에서 Python 코드 변경
- (Get) 코드 변경 및 적용
- (Post) 코드 변경 및 적용



kkyc3

New

Import

<

SD-WAN

GET 0. Tok

GET 8. Ter

GET 9. De1

POST 10. .

GET 2. De1

>

+

▾

SD-WAN_RestAPI_Env ▾

API Network ▾

Collections

Environments

History

+

≡

⋮

SD-WAN RestAPI

POST 0. Authentication Copy

GET 0. Token

GET 1. Fabric Devices

GET 2. Devices Status

GET 3. Device Counters

GET 4. Interface statistics

GET 5. Template Feature

GET 6. Template Feature Type

GET 7. vEdge Template Policy

GET 8. TemplateID

GET 9. DeviceID

POST 10. Attach

HTTP SD-WAN RestAPI / 2. Devices Status

Save

▾

GET ▾

https://{{vmanage}}:{{port}}/dataservice/device/monitor

Send ▾

Params

Auth

Headers (7)

Body

Scripts

Settings

Cool

Code

</>

Query Params

Key	Value	Description	⋮ Bulk Edit
Key	Value	Description	

Get 호출 선택 및 Code 아이콘 클릭

Response ▾

kkyc3

NewImport

collections

ironments

history

oo+

+

SD-WAN RestAPI

POST 0. Authentication Copy

GET 0. Token

GET 1. Fabric Devices

GET 2. Devices Status

GET 3. Device Counters

GET 4. Interface statistics

GET 5. Template Feature

GET 6. Template Feature Type

GET 7. vEdge Template Policy

GET 8. TemplateID

GET 9. DeviceID

POST 10. Attach

<SD-W. GET 0. Tok GET 8. Ter GET 9. De POST 10. GET 2. De >+SD-WAN_RestAPI_Env

HTTPSD-WAN... / 2. Devices StatusSave

GEThttps://{{vmanage}}:...Send

ParamsQuery Params

	Key	Value	Bulk Edit
	Key	Value	Description

Response

Code snippet

cURL

```
1 curl --location 'https://192.168.13.21:8443/dataservice/device/monitor' \  
2 --header 'Cookie: JSESSIONID=vpzM07kMkoasw8XJpKHxk0M_DisSItcqSLYg3NE9.3f532f651428c87d9f5ffac6df683336b509fa55c2aa59e86773aa0149ea2165'
```

cURL을 -> Python Request로 변경

kkyc3 New Import

SD-WAN RestAPI

- POST 0. Authentication Copy
- GET 0. Token
- GET 1. Fabric Devices
- GET 2. Devices Status
- GET 3. Device Counters
- GET 4. Interface statistics
- GET 5. Template Feature
- GET 6. Template Feature Type
- GET 7. vEdge Template Policy
- GET 8. TemplateID
- GET 9. DeviceID
- POST 10. Attach

SD-WAN... / 2. Devices Status

GET https://{vmanage}:/... Send

Params

Query Params

Key	Value	Description
Key	Value	Description

Response

Code snippet

Python - Requests

- OCaml - Cohttp
- PHP - cURL
- PHP - Guzzle
- PHP - HTTP_Request2
- PHP - pecl_http
- PowerShell - RestMethod
- Python - http.client
- ☒ Python - Requests

```
13.21:8443/monitor"
...koasw8XJpKHxkOM_Di
...ffac6df683336b509fa
...9ea2165'
...est("GET", url,
...headers=headers, data=payload)
11
12 print(response.text)
13
```

cURL을 -> Python Request로 변경



SD-WAN... / 2. Devices Status



Save



GET



https://{vmanage}...

Send



Params



...

Query Params

	Key	Value	... Bulk Edit
	Key	Value	Description

Response



Code snippet

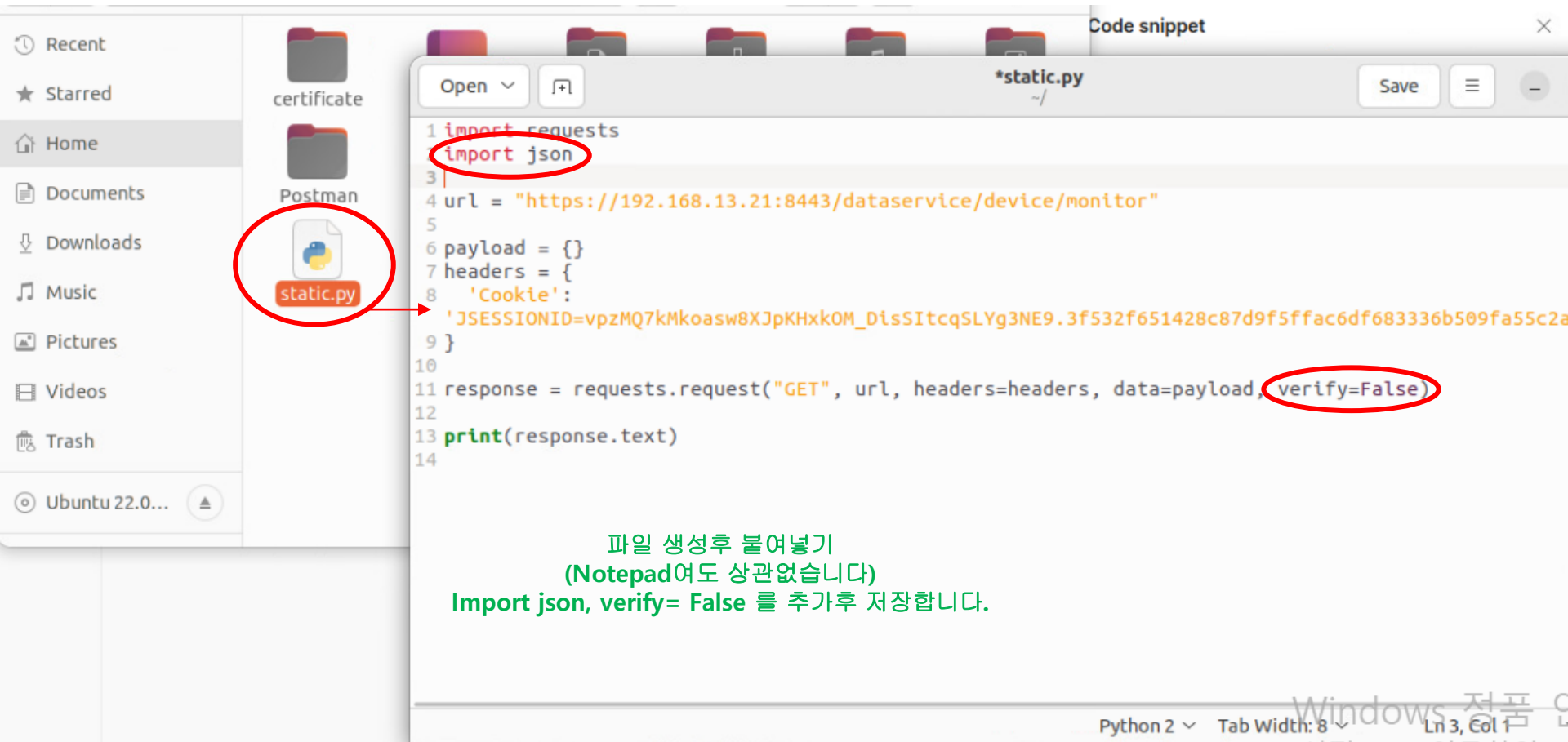


Python - Requests

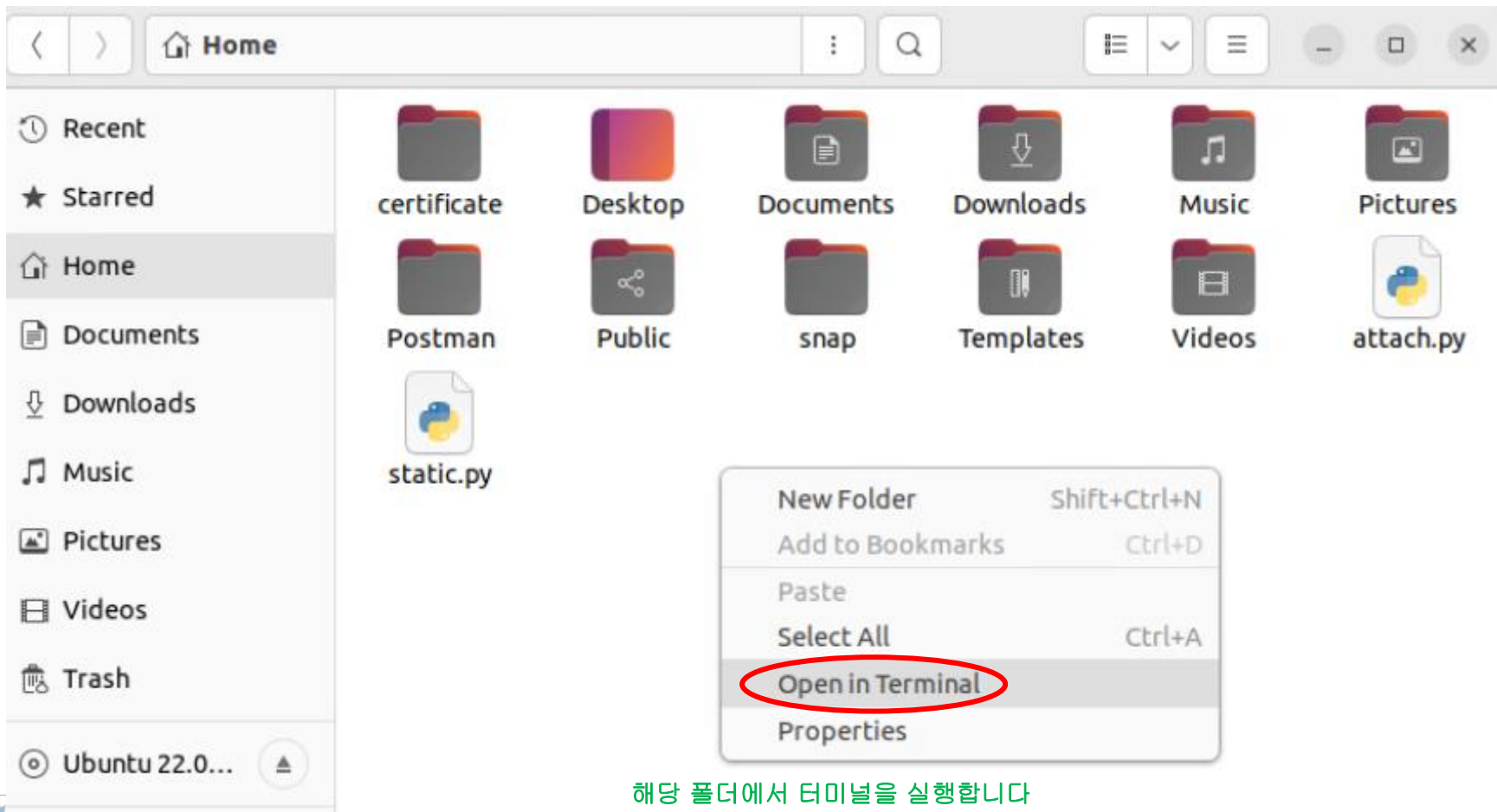


복사합니다.

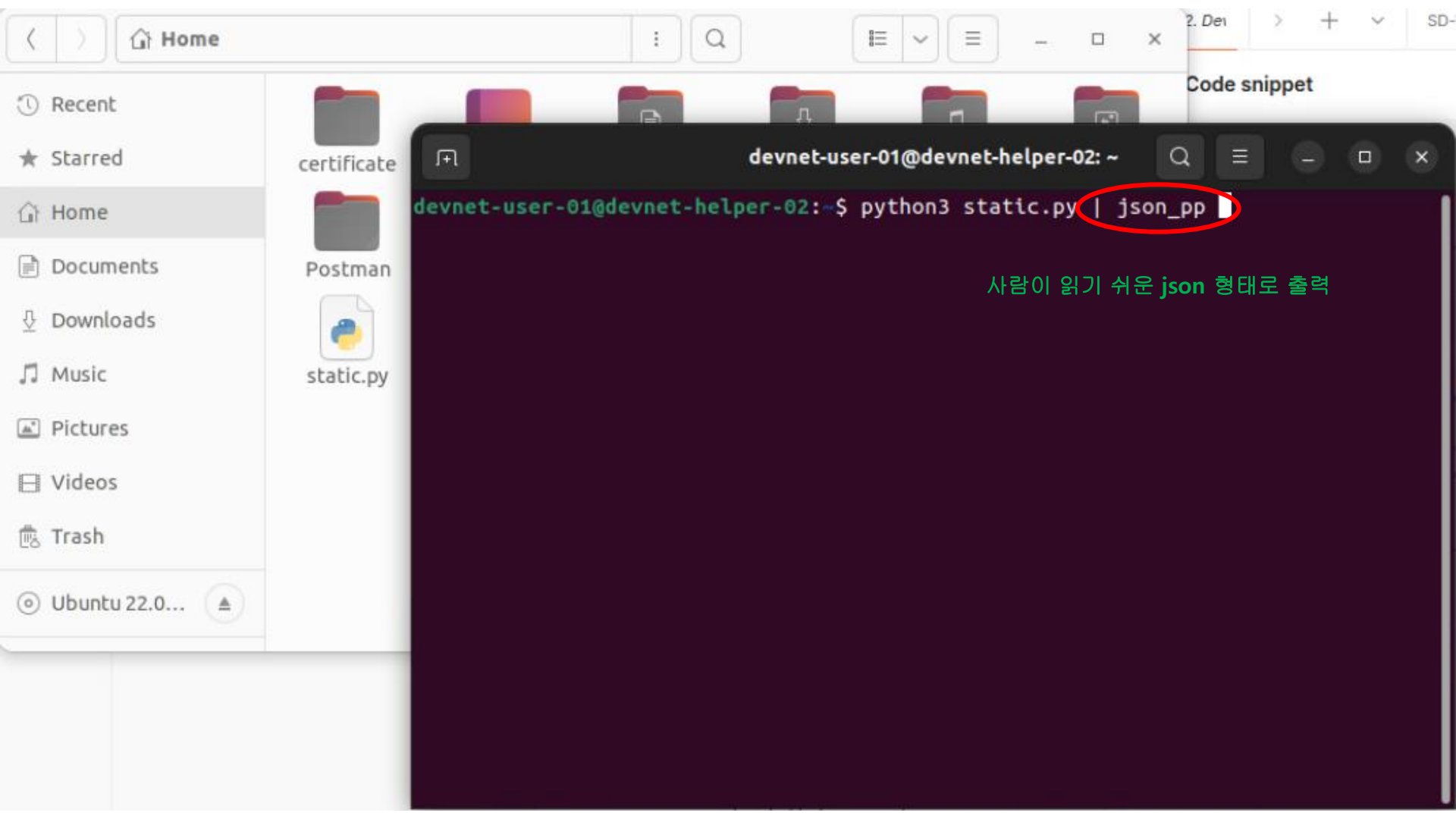
```
1 import requests
2
3 url = "https://192.168.13.21:8443/
  dataservice/device/monitor"
4
5 payload = {}
6 headers = {
7     'Cookie':
8         'JSESSIONID=vpzMq7kMkoasw8XJpKHxkOM_D1
9         sSItcqSLYg3NE9.
10         3f532f651428c87d9f5ffac6df683336b509fa
11         55c2aa59e86773aa0149ea2165'
12 }
13 response = requests.request("GET", url,
14                             headers=headers, data=payload)
15 print(response.text)
```



파일 생성후 붙여넣기
(Notepad여도 상관없습니다)
Import json, verify= False 를 추가후 저장합니다.



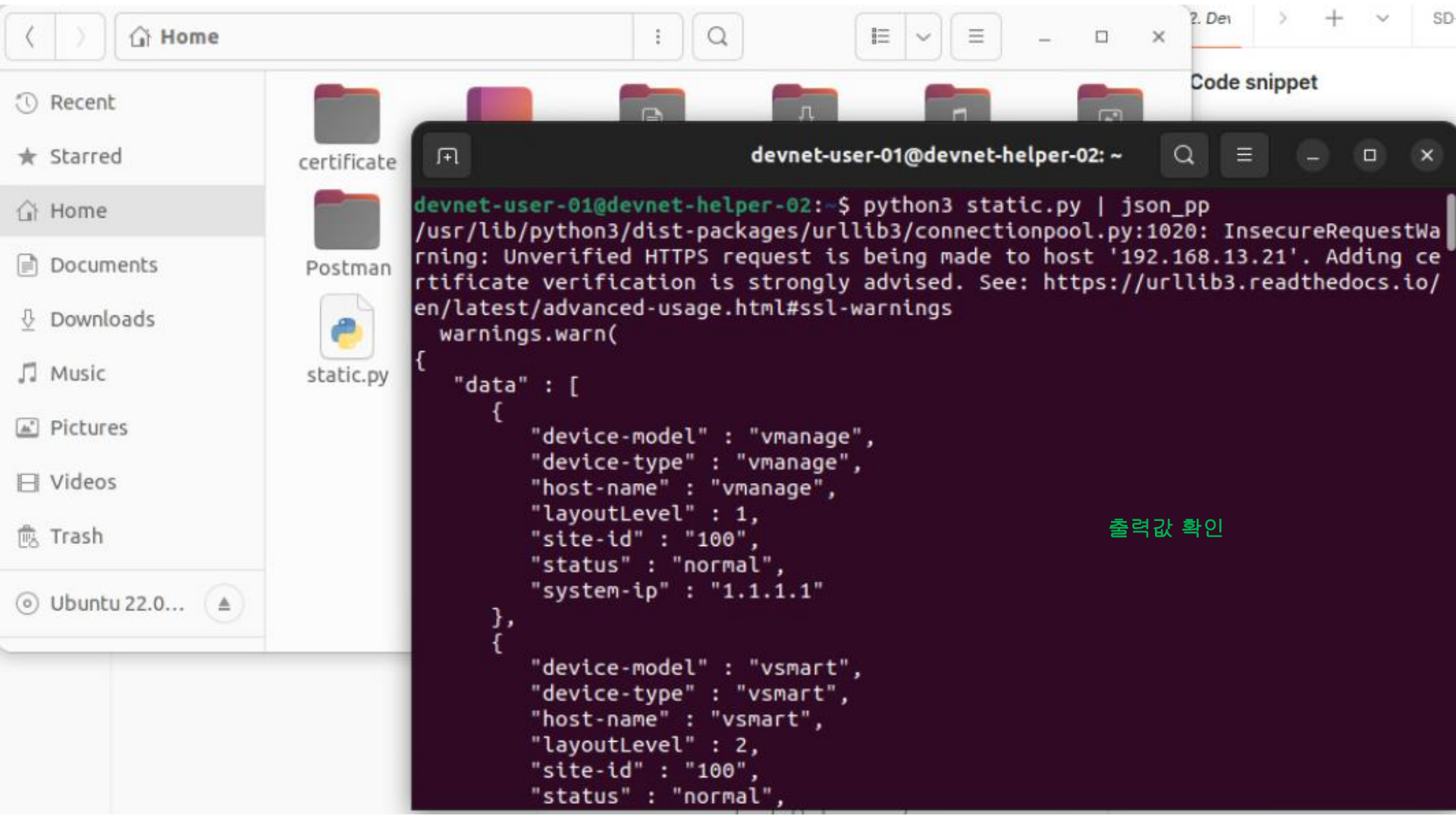
해당 폴더에서 터미널을 실행합니다



devnet-user-01@devnet-helper-02: ~

devnet-user-01@devnet-helper-02:~\$ python3 static.py | json_pp

사람이 읽기 쉬운 json 형태로 출력



```
devnet-user-01@devnet-helper-02: ~  
devnet-user-01@devnet-helper-02:~$ python3 static.py | json_pp  
/usr/lib/python3/dist-packages/urllib3/connectionpool.py:1020: InsecureRequestWarning: Unverified HTTPS request is being made to host '192.168.13.21'. Adding certificate verification is strongly advised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#ssl-warnings  
warnings.warn(  
{  
  "data" : [  
    {  
      "device-model" : "vmanage",  
      "device-type" : "vmanage",  
      "host-name" : "vmanage",  
      "layoutLevel" : 1,  
      "site-id" : "100",  
      "status" : "normal",  
      "system-ip" : "1.1.1.1"  
    },  
    {  
      "device-model" : "vsmart",  
      "device-type" : "vsmart",  
      "host-name" : "vsmart",  
      "layoutLevel" : 2,  
      "site-id" : "100",  
      "status" : "normal",
```

출력값 확인

kkyc3

New Import

SD-WAN RestAPI / 10. Attach

POST 0. Authentication Copy

GET 0. Token

GET 1. Fabric Devices

GET 2. Devices Status

GET 3. Device Counters

GET 4. Interface statistics

GET 5. Template Feature

GET 6. Template Feature Type

GET 7. vEdge Template Policy

GET 8. TemplateID

GET 9. DeviceID

POST 10. Attach

Body

raw JSON Beautify

```
1 {
2   "deviceTemplateList": [
3     {
4       "templateId": "{{templateID}}",
5       "device": [
6         {
7           "csv-status": "complete",
8           "csv-deviceId": "{{DeviceID}}",
9           "csv-deviceIP": "192.168.13.101",
10          "csv-host-name": "cEdge-01-C8Kv"
11        }
12      ]
13    }
14  ]
15}
```

Body 200... 101 ms 538 B Save as example

Pretty JSON

```
1 {
2   "id":
3     "push_file_template_configuration-f
4     c2ac31e-88e5-4722-a279-4241f4916c6d
5     "
6 }
```

Code snippet

Python - Requests

```
1 import requests
2 import json
3
4 url = "https://192.168.13.21:8443/
5     dataservice/template/device/config/
6     attachcli"
7
8 payload = json.dumps({
9     "deviceTemplateList": [
10       {
11         "templateId":
12           "c1ab0e45-7bbb-47aa-aa9a-27507fee
13           130a",
14         "device": [
15           {
16             "csv-status": "complete",
17             "csv-deviceId":
18               "C8K-2770F511-FE79-44CB-A513-
19               B642973559E8",
20             "csv-deviceIP": "192.168.13.
21               101",
22             "csv-host-name":
23               "cEdge-01-C8Kv"
24           }
25         ]
26       }
27     ],
28     "isEdited": False,
29     "isMasterEdited": False,
30     ...
31 }
```

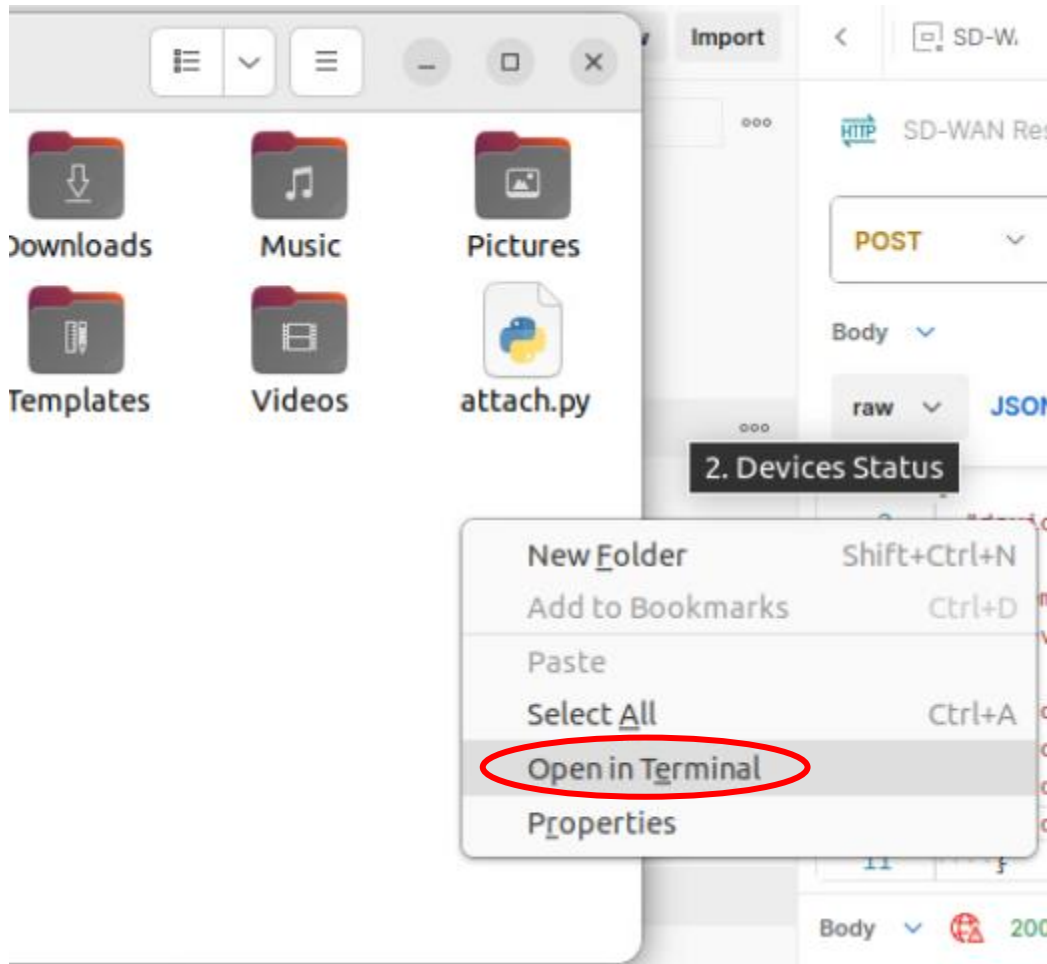

Open ~/
Save

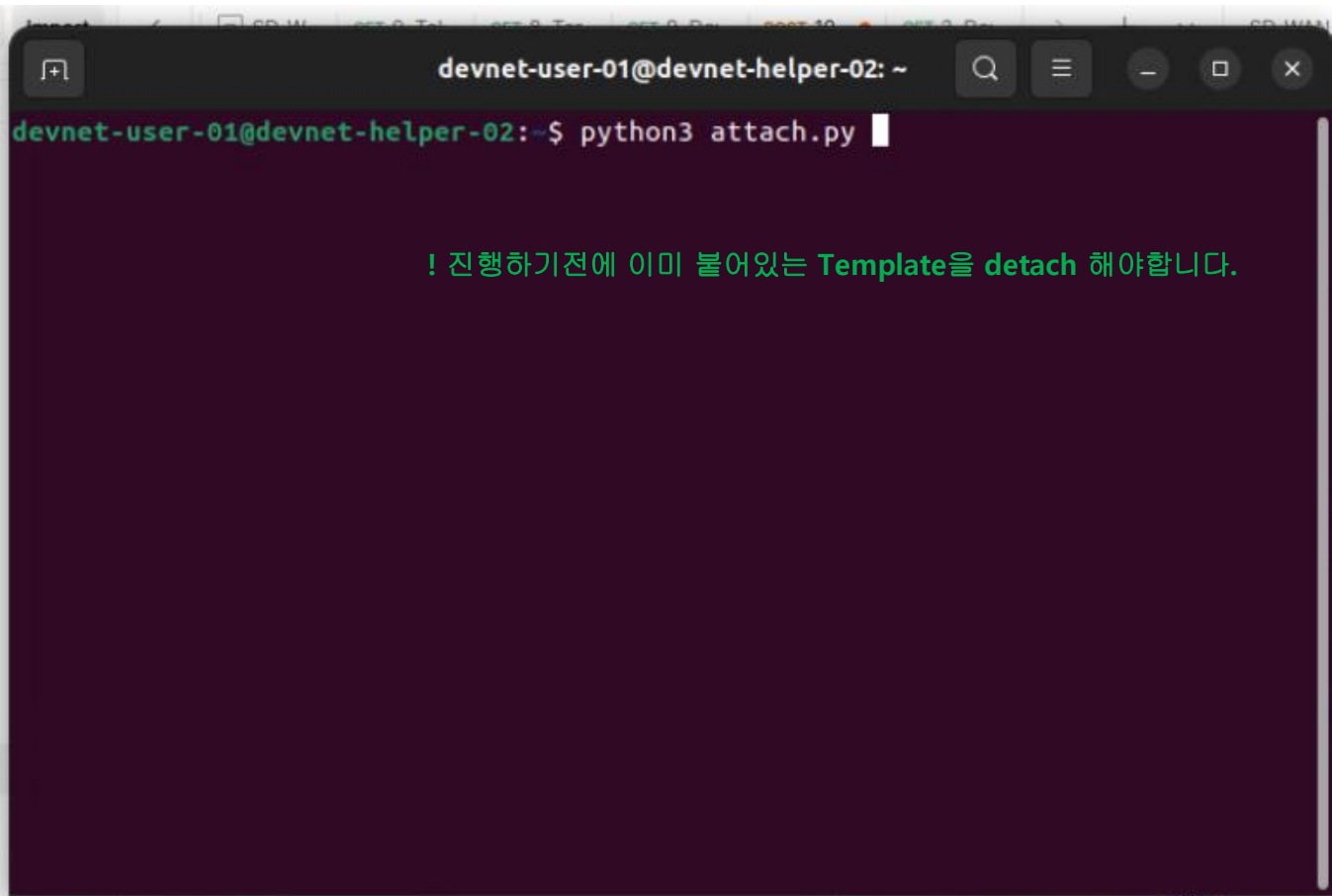
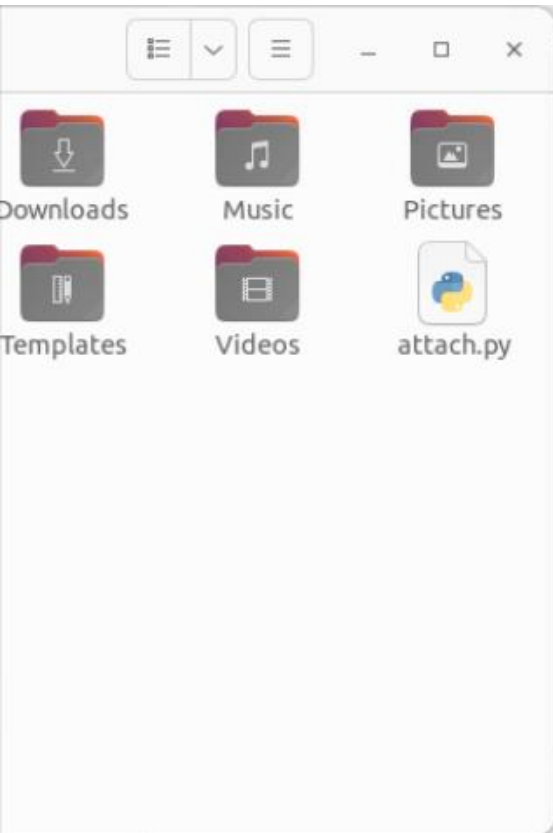
Home Workspaces API

Downloads Music Pictures
plates Videos attach.py

```
1 import requests
2 import json
3
4 url = "https://192.168.13.21:8443/dataservice/template/device/config/attachcli"
5
6 payload = json.dumps({
7     "deviceTemplateList": [
8         {
9             "templateId": "c1ab0e45-7bbb-47aa-aa9a-27507fee130a",
10            "device": [
11                {
12                    "csv-status": "complete",
13                    "csv-deviceId": "C8K-2770F511-FE79-44CB-A513-B642973559E8",
14                    "csv-deviceIP": "192.168.13.101",
15                    "csv-host-name": "cEdge-01-C8Kv"
16                }
17            ],
18            "isEdited": False,
19            "isMasterEdited": False,
20            "isDraftDisabled": False
21        }
22    ]
23 })
24 headers = {
25     'X-XSRF-TOKEN':
26     '0137FFCD69B48CAD4A5F4FAE24B0782AA5C1F9C4DA8E8AFA4CBF24BDAD5A61AA0A9BE5EBE158ABECDFCB8DD9DE403FB37
27     'Content-Type': 'application/json',
28     'Cookie':
29     'JSESSIONID=vpzMq7kMkoasw8XJpKHxkOM_Dis5ItcqSLYg3NE9.3f532f651428c87d9f5ffac6df683336b509fa55c2aa5
30 }
31 response = requests.request("POST", url, headers=headers, data=payload, verify=False)
32 print(response.text)
33
```

"attach.py" selected (979 bytes)





cEdge-01-C8Kv	101	CLI	C8000v	0	Disabled	1	admin	22 May 2024 12:37:49 AM ...	In Sync	...
cEdge-02-C8Kv	102	CLI	C8000v	0	Disabled	0	admin	22 May 2024 12:37:56 AM ...	In Sync	Edit
cEdge-04-C8Kv	104	CLI	C8000v	0	Disabled	0	admin	22 May 2024 12:39:11 AM ...	In Sync	View
cEdge-05-C8Kv	105	CLI	C8000v	0	Disabled	0	admin	22 May 2024 12:39:38 AM...	In Sync	Delete
cEdge-06-C8Kv	106	CLI	C8000v	0	Disabled	0	admin	22 May 2024 12:40:02 AM...	In Sync	Copy
cEdge-07-C8Kv	107	CLI	C8000v	0	Disabled	0	admin	22 May 2024 12:40:29 AM...	In Sync	Enable Draft Mode
cEdge-08-C8Kv	108	CLI	C8000v	0	Disabled	0	admin	22 May 2024 12:40:53 AM...	In Sync	Attach Devices
cEdge-09-C8Kv	109	CLI	C8000v	0	Disabled	0	admin	22 May 2024 12:41:18 AM ...	In Sync	Detach Devices
										Export CSV
										Change Device Values

Detach device from the list below

Available Devices

All
Search

Name	Device IP
cEdge-01-C8Kv	1.1.1.101

Selected Devices

All
Search

Name	Device IP
------	-----------

0 Items Selected

Detach
Cancel

192.168.13.21:8443
ID : DevnetXX
Pass : Cisco123!@#

Detach device from the list below

Available Devices

All
Search

Name	Device IP
No data available	

Selected Devices

All
Search

Name	Device IP
cEdge-01-C8Kv	1.1.1.101

1 Items Selected

Detach
Cancel

Device Group (1)

Q Search Table

Stop Scheduled Tasks

As of: May 23, 2024 01:44 AM

Status	Message	Hostname	Device Type	System IP	Site ID	vManage IP	Action
Scheduled	Device config mode - CLI S...	cEdge-01-C8Kv	vedge	1.1.1.101	101	1.1.1.1	

Items per page: 10 1 - 1 of 1

Device Group (1)

Q Search Table

As of: May 23, 2024 01:44 AM

Status	Message	Hostname	Device Type	System IP	Site ID	vManage IP	Action
In progress	Changing device configurati...	cEdge-01-C8Kv	vedge	1.1.1.101	101	1.1.1.1	

Device Group (1)

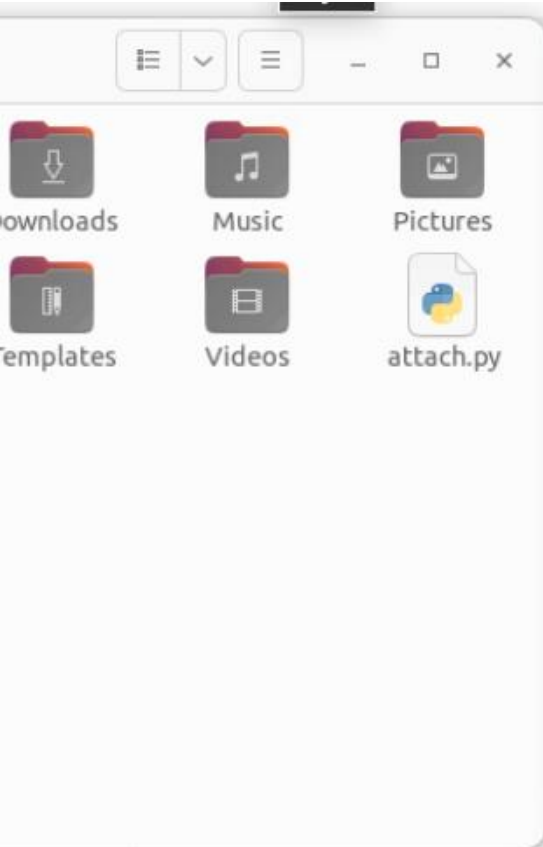
Q Search Table

As of: May 23, 2024 01:44 AM









Status	Message	Hostname	Device Type	System IP	Site ID	vManage IP	Action
Success	Done - Device config mode ...	cEdge-01-C8Kv	vedge	1.1.1.101	101	1.1.1.1	


Chassis Number	Site Name	Hostname	Tags	Config Locked	Managed By	Device Status	Version	Reachability	Actions
C8K-2770F511-FE79-44CB-A513-B642973559E8	SITE_101	cEdge-01-C8Kv	Add Tag	No	Unmanaged	In Sync	17.14.01a.0.1470	↑	...

자신의 장비 Unmanaged를 확인





```
devnet-user-01@devnet-helper-02: ~  
devnet-user-01@devnet-helper-02:~$ python3 attach.py  
/usr/lib/python3/dist-packages/urllib3/connectionpool.py:1020: InsecureRequestWarning: Unverified HTTPS request is being made to host '192.168.13.21'. Adding certificate verification is strongly advised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#ssl-warnings  
  warnings.warn(  
{"id": "push_file_template_configuration-d132cea2-80ee-4ecc-8e4a-54482c7b1c83"}  
devnet-user-01@devnet-helper-02:~$
```



Devnet




Active (1)

Completed (43)

 Search 

Last Updated: 23 May 2024 1:45:24 am  

Sort by Start Time

 Push CLI Template Configuration (Total...

In progress: 1

Start: 23 May 2024 1:47:38 am

By: devnet01 From: 192.168.13.92

Device Group (1)

Q Search Table

As of: May 23, 2024 01:45 AM

Status	Message	Chassis Number ↑	Device Model	Hostname	System IP	Site ID	vManage IP	Action
Success	Template successfully attac...	C8K-2770F511-FE79-44CB-A513-B642973559E8	C8000v	cEdge-01-C8Kv	1.1.1.101	101	1.1.1.1	

WAN Edge List (30)

Q Search Table

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

As of: May 23, 2024 01:45 AM

Chassis Number	Site Name	Hostname	Tags	Config Locked	Managed By ⓘ	Device Status	Version	Reachability	Actions
C8K-2770F511-FE79-44CB-A513-B642973559E8	SITE_101	cEdge-01-C8Kv	Add Tag ▾	Yes	Template cEdge-01-C8Kv	In Sync	1714.01a.01470	↑	...





Thank you

