



*Cisco  
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SuperCAT*

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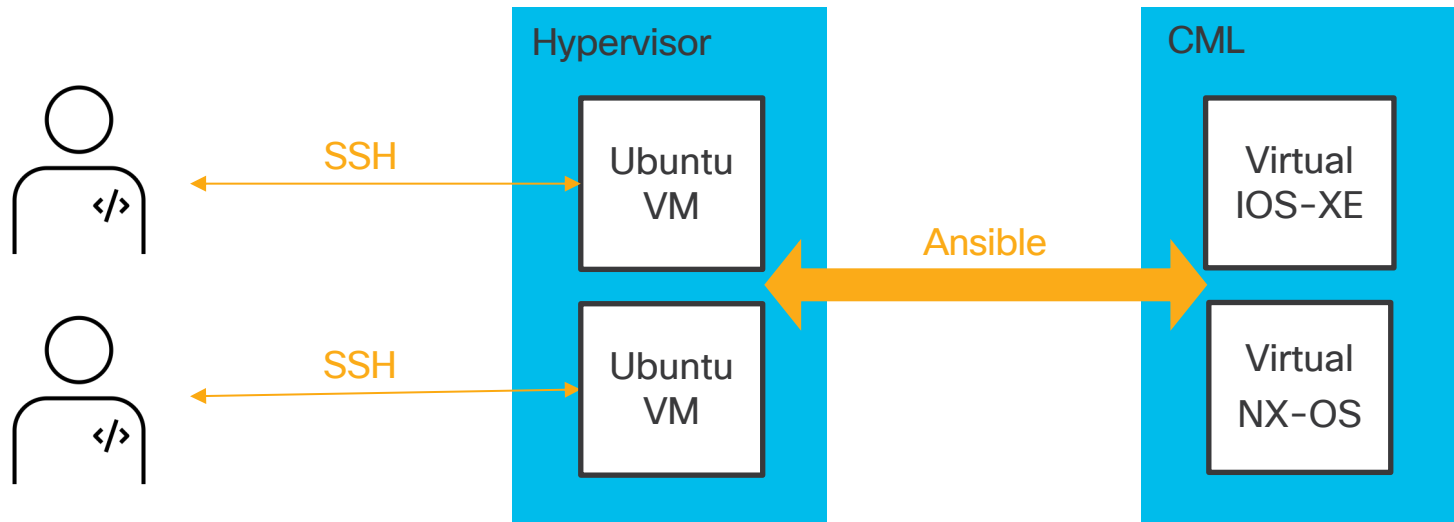
# Ansible 실습 환경 소개

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# Ansible 실행 환경



# CML(Cisco Modeling Labs) 이란?

The screenshot displays the Cisco Modeling Labs (CML) Workbench interface. At the top, there's a navigation bar with 'Cisco Modeling Labs | Workbench', a 'CML TEST' dropdown, and links for 'DASHBOARD', 'TOOLS', and 'KIDKIM'. Below this is a toolbar with various icons for navigation and editing. The main workspace shows a network topology with three main components: a 'FW' (Firewall) node, a 'Backbone-1' node, and a 'Backbone-2' node. The 'FW' node is connected to 'Backbone-1' and 'Backbone-2'. The 'Backbone-1' node is connected to 'Backbone-2'. The 'FW' node is also connected to a 'Border-1' node. The 'Backbone-1' node is connected to a 'Border-2' node. The 'FW' node is labeled 'BGP 65010 OSPF 0'. The 'Backbone-1' node is labeled 'BGP 65020'. The 'Backbone-2' node is labeled 'BGP 65020'. The 'Border-1' node is labeled 'BGP 65020'. The 'Border-2' node is labeled 'BGP 65020'. The interface also shows a terminal window at the bottom left, displaying the configuration for 'Border-1'.

```
Border-1#
Border-1#
Border-1#
Border-1#
Border-1#
Border-1#config t
Enter configuration commands, one per line. End with CNTL/Z.
Border-1(config)#
Border-1(config)#
```

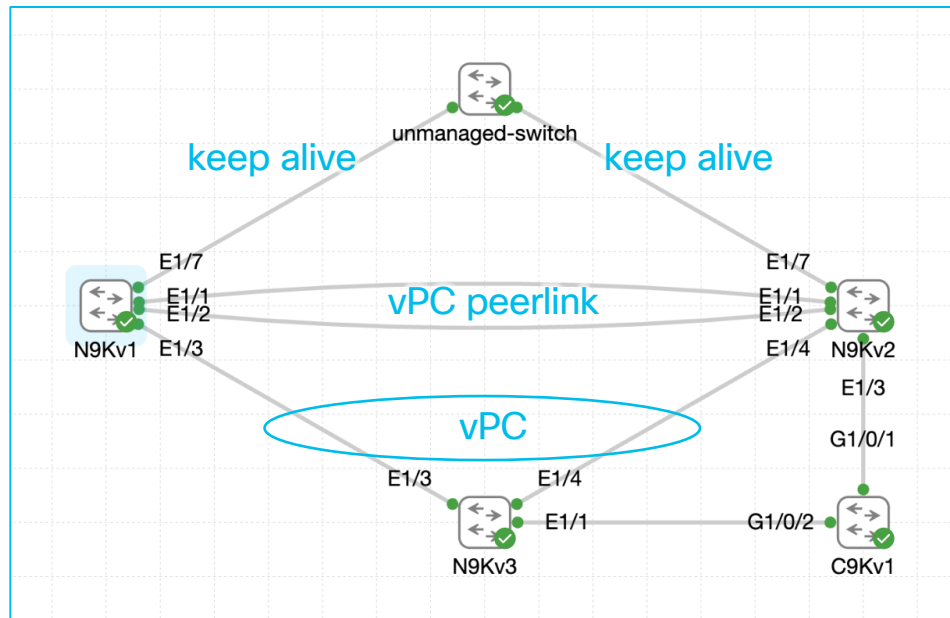
At the bottom of the interface, there's a status bar showing CPU usage (5.69%), MEMORY usage (18.99%), and DISK usage (0.94%). There are also buttons for 'APPLY', 'RESET', and 'OK'.

- VIRL 계승
- 실제 장비와 거의 같은 이미지를 사용
- 외부 네트워크와 연결 가능
- 패킷 확인 기능
- Link condition 설정 기능

## Link Condition

Bandwidth	0	kbps	0	ms
Jitter	0	ms	0	%
<input type="checkbox"/> Enable				
APPLY		RESET		

# CML virtual switch 구성



- N9Kv 3대: vPC (Virtual Port-Channel) 구성
- C9Kv 1대: 단독으로 동작
- 각 switch의 mgmt 인터페이스가 외부와 연결
- MGMT IP
  - N9Kv1: 192.168.14.11
  - N9Kv2: 192.168.14.12
  - N9Kv3: 192.168.14.13
  - C9Kv: 192.168.14.14
- ID/PW: admin/Cisco123!@#

접속하셔서 설정 변경 하시면 안됩니다!

# Ubuntu VM 접속 정보

- WiFi SSID: CISCO-SDA-GUEST
  - ID/PW: guest1 / 1234Qwer
- Ubuntu VM IP: 192.168.13.1XX
  - XX는 자리 번호
  - 예) 1번: 192.168.13.101
  - 25번: 192.168.13.125
  - ID/PW: devnet/1234Qwer

# Ubuntu VM 접속 확인 1

- ssh [devnet@192.168.13.1XX](#)
  - 비밀번호: 1234Qwer
- sudo su
  - 비밀번호: 1234Qwer
- ansible --version

```
(base) kidkim@KIDKIM-M-G9YJ ~ % ssh devnet@192.168.13.140
devnet@192.168.13.140's password:
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.5.0-17-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

Expanded Security Maintenance for Applications is not enabled.

19 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***
Last login: Tue Feb 20 19:44:18 2024 from 10.225.4.2
devnet@devnet-virtual-machine:~$
devnet@devnet-virtual-machine:~$ sudo su
[sudo] password for devnet:
root@devnet-virtual-machine:/home/devnet#
root@devnet-virtual-machine:/home/devnet# ansible --version
ansible [core 2.16.3]
  config file = None
  configured module search path = ['/root/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/local/lib/python3.10/dist-packages/ansible
  ansible collection location = /root/.ansible/collections:/usr/share/ansible/collections
  executable location = /usr/local/bin/ansible
  python version = 3.10.12 (main, Nov 20 2023, 15:14:05) [GCC 11.4.0] (/usr/bin/python3)
  jinja version = 3.1.3
  libyaml = True
root@devnet-virtual-machine:/home/devnet#
```

## Ubuntu VM 접속 확인 2

- ping 192.168.14.11
- ping 8.8.8.8

```
root@devnet-virtual-machine:/home/devnet# ping 192.168.14.11
PING 192.168.14.11 (192.168.14.11) 56(84) bytes of data.
64 bytes from 192.168.14.11: icmp_seq=1 ttl=254 time=1.17 ms
64 bytes from 192.168.14.11: icmp_seq=2 ttl=254 time=1.62 ms
64 bytes from 192.168.14.11: icmp_seq=3 ttl=254 time=1.29 ms
^C
--- 192.168.14.11 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2003ms
rtt min/avg/max/mdev = 1.165/1.357/1.618/0.191 ms
root@devnet-virtual-machine:/home/devnet#
root@devnet-virtual-machine:/home/devnet# ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=56 time=29.3 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=56 time=29.4 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=56 time=31.3 ms
^C
--- 8.8.8.8 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2002ms
rtt min/avg/max/mdev = 29.250/29.976/31.280/0.923 ms
root@devnet-virtual-machine:/home/devnet#
```





Thank you

