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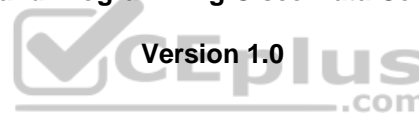
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300-635

Automating and Programming Cisco Data Center Solutions



#### Sections

1. Network Programmability Foundation
2. Controller Based Data Center Networking
3. Data Center Device-centric Networking
4. Data Center Compute

**Exam A****QUESTION 1**

Which two benefits of using network configuration tools such as Ansible and Puppet to automate data center platforms are valid? (Choose two.)

- A. consistency of systems configuration
- B. automation of repetitive tasks
- C. ability to create device and interface groups
- D. ability to add VLANs and routes per device
- E. removal of network protocols such as Spanning Tree

**Correct Answer:** AB

**Section: Network Programmability Foundation Explanation**

**Explanation/Reference:**

**QUESTION 2**

DRAG DROP

A file named myfunc.py has been edited. Drag and drop the steps from the left that ensure that this file is committed to the local Git repository and verify its status into the correct order on the right. Not all options are used.

**Select and Place:**

**Correct Answer:**

**Section: Network Programmability Foundation Explanation**

**Explanation/Reference:**

Reference: [https://readwrite.com/2013/10/02/github-for-beginners-part-2/?\\_cf\\_chl\\_jschl\\_tk\\_\\_=e918efffa2ee8aeb3abb1b5617f66d8987836398-1586068682-0-AeVy3GS0NA9UH\\_pJsYAvz5KnFuslBBmjSd0ZXoAUXHjnyZwLG\\_SCEEnegStx1xJaR0Y6a0Nbq13x0Q62s9J\\_soJUIEEE2maoAUc7y3AsMTLw9XmyIMX0lszsWwM0Poi5zYE26UF1vcFtFM8l\\_frNE9Nmrf-jdb6YRQ8D4iURVdQ2QbphQr8qLJ\\_8JcZlaqfklMgvXxUwqHI9i8pyW3yhne34kYZtye\\_pSC25ZPU3rQXXtkfOY0hRote1eJoT81LvqJ69hGUvIYv9DGMBwTTk24EwNaBbjCjPLj8lKUZaJZzaOfh\\_ADJ44fCDYs5YAJ11HOS-BeS9jFQ89h2dOpajnYlckKae2Y8MsNtGI97g-XeMm-yG6l8bR0A392YT\\_1f8w](https://readwrite.com/2013/10/02/github-for-beginners-part-2/?_cf_chl_jschl_tk__=e918efffa2ee8aeb3abb1b5617f66d8987836398-1586068682-0-AeVy3GS0NA9UH_pJsYAvz5KnFuslBBmjSd0ZXoAUXHjnyZwLG_SCEEnegStx1xJaR0Y6a0Nbq13x0Q62s9J_soJUIEEE2maoAUc7y3AsMTLw9XmyIMX0lszsWwM0Poi5zYE26UF1vcFtFM8l_frNE9Nmrf-jdb6YRQ8D4iURVdQ2QbphQr8qLJ_8JcZlaqfklMgvXxUwqHI9i8pyW3yhne34kYZtye_pSC25ZPU3rQXXtkfOY0hRote1eJoT81LvqJ69hGUvIYv9DGMBwTTk24EwNaBbjCjPLj8lKUZaJZzaOfh_ADJ44fCDYs5YAJ11HOS-BeS9jFQ89h2dOpajnYlckKae2Y8MsNtGI97g-XeMm-yG6l8bR0A392YT_1f8w)

**QUESTION 3**

A set of automation scripts work with no issue from a local machine, but an experiment needs to take place with a new package found online.

How is this new package isolated from the main code base?

- A. Add the new package to your requirements.txt file.
- B. Create a new virtual machine and perform a pip install of the new package.
- C. Perform a pip install of the new package when logged into your local machine as root.
- D. Create a new virtual environment and perform a pip install of the new package.

**Correct Answer:** D

**Section: Network Programmability Foundation Explanation**

**Explanation/Reference:**

**QUESTION 4** Which two statements about gRPC are true?

(Choose two.)

- A. It is an IETF draft.
- B. It is an IETF standard.
- C. It runs over SSH.
- D. It is an open source initiative.
- E. It runs over HTTPS.

**Correct Answer:** AE

**Section:** Network Programmability Foundation Explanation

**Explanation/Reference:**

**QUESTION 5** Which statement about synchronous and asynchronous API calls is true?

- A. Synchronous API calls wait to return until a response has been received.
- B. Synchronous communication is harder to follow and troubleshoot.
- C. Synchronous API calls must always use a proxy server.
- D. Asynchronous communication uses more overhead for client authentication.

**Correct Answer:** C

**Section:** Network Programmability Foundation Explanation

**Explanation/Reference:**

**QUESTION 6** What are two main guiding principles of REST?  
(Choose two.)

- A. cacheable
- B. trackable
- C. stateless
- D. single-layer system
- E. stateful

**Correct Answer:** AC

**Section:** Network Programmability Foundation Explanation

**Explanation/Reference:**

**QUESTION 7**

DRAG DROP

Drag and drop the code to complete an Ansible playbook that creates a new tenant. Not all options are used.

**Select and Place:**

**Correct Answer:**

**Section:** Controller Based Data Center Networking  
**Explanation**

**Explanation/Reference:**

Reference: [https://docs.ansible.com/ansible/2.4/aci\\_tenant\\_module.html](https://docs.ansible.com/ansible/2.4/aci_tenant_module.html)

**QUESTION 8**

Refer to the exhibit.



```
mo_dir = cobra.mit.access.MoDirectory(cobra.mit.session.LoginSession(apic_url, username, password))
mo_dir.login()
cq = cobra.mit.access.ClassQuery('fvCEP')
cq.subtree = 'full'
objlist = mo_dir.query(cq)
for mo in objlist:
    print "MAC: " + mo.mac + "|" + "IP: " + mo.ip
```

Which action does the execution of this ACI Cobra Python code perform?

- A. It prints all LLDP neighbor MAC and IP addresses.
- B. It prints all Cisco Discovery Protocol neighbor MAC and IP addresses.
- C. It prints all endpoint MAC and IP addresses.
- D. It prints all APIC MAC and IP addresses.

**Correct Answer: C**

**Section: Controller Based Data Center Networking**

**Explanation**

**Explanation/Reference:**

#### QUESTION 9

Refer to the exhibit.



```
def add_tenant():
    token = apic_login.aaaLogin()
    for tenant in range (1,10):
        try:
            response = requests.post(
                url=constant.APIC_URL + "/api/node/mo/uni/tn-exam%s.json" % (tenant),
                headers={
                    "Cookie": "APIC-cookie=" + token,
                    "Content-Type": "application/json; charset=utf-8",
                },
                data=json.dumps({
                    "fvTenant": {
                        "attributes": {
                            "status": "created",
                            "dn": "uni/tn-exam%s" % (tenant),
                            "name": "exam%s" % (tenant),
                            "rn": "tn-exam%s" % (tenant)
                        },
                        "children": [
                        ]
                    }
                })
            )
            print('Response HTTP Status Code: {status_code}'.format(
                status_code=response.status_code))
            print('Response HTTP Response Body: {content}'.format(
                content=response.content))
        except requests.exceptions.RequestException:
            print('HTTP Request failed')
    add_tenant()
```



Assuming a new ACI instance, what is the result when this script is run?

- A. Ten objects are created and subsequently deleted.
- B. Nine objects are created.
- C. An exception is thrown.
- D. Ten objects are created.

**Correct Answer:** D

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

#### QUESTION 10

Which Ansible playbook fragment returns the fewest queried ACI endpoint groups?

```
- name: GET EPGs
aci_epg:
  host: "{{ inventory_hostname }}"
  username: "{{ username }}"
  password: "{{ password }}"
  validate_certs: no
  state: query
```

```
- name: GET EPGs
aci_epg:
  host: "{{ inventory_hostname }}"
  username: "{{ username }}"
  password: "{{ password }}"
  validate_certs: no
  tenant: prod_tenant
  state: query
  ap: internet
```

```
- name: GET EPGs
aci_epg:
  host: "{{ inventory_hostname }}"
  username: "{{ username }}"
  password: "{{ password }}"
  validate_certs: no
  tenant: prod_tenant
  state: query
  epg: web
```



A.

B. C.

```
- name: GET EPGs
  aci_epg:
    host: "{{ inventory_hostname }}"
    username: "{{ username }}"
    password: "{{ password }}"
    validate_certs: no
    tenant: prod_tenant
    state: query
    ap: internet
    epg: web
```

D.

**Correct Answer:** D

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

#### QUESTION 11

How is an ACI class name composed?

- A. :Method
- B. ClassName:Method
- C. Package:ClassName
- D. MitName:Method



**Correct Answer:** C

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

#### QUESTION 12



```
import requests

USER = "admin"
PASS = "password"
APIC = 'https://apic.supereats.com'

OPERATION = 'api/aaaLogin.json'
DATA = {"aaaUser": {"attributes": {"name": USER, "pwd": PASS}}}
RESPONSE = requests.post(APIC+OPERATION, json=DATA, verify=False)

TOKEN = RESPONSE.json()["imdata"][0]["aaaLogin"]["attributes"]["token"]
COOKIE = {'APIC-cookie': TOKEN}

OPERATION = 'api/aaaLogout.json'
DATA = {
    "aaaLogout": {
        "attributes": {
            "token": TOKEN
        }
    }
}
RESPONSE = requests.post(APIC+OPERATION, json=DATA, cookies=COOKIE, verify=False)
```



Which Python snippets create an application policy named OrderProcess that contains two application endpoint groups under Tenant SuperEats using direct calls to the ACI REST API? Assume that authentication and library imports are

```
OPERATION = 'api/node/mo/uni.json'
DATA = {
    "FVTenant": {"attributes": {"name": "SuperEats"},
    "children": [{"FVAp": {"attributes": {"name": "OrderProcess"},
        "children": [
            {"FVAEPg": {"attributes": {"name": "app"}}},
            {"FVAEPg": {"attributes": {"name": "web"}}}
        ]
    }
    ]}
}
RESPONSE = requests.post(APIC+OPERATION, json=DATA, cookies=COOKIE)
```

correct. A.



```
OPERATION = 'api/node/mo/uni.json'
DATA = {
    "fvTenant": {"attributes": {"name": "SuperEats"},
    "children": [{"fvAp": {"attributes": {"name": "OrderProcess"},
        "children": [
            {"fvAEPg": {"attributes": {"name": "app"}}},
            {"fvAEPg": {"attributes": {"name": "web"}}}
        ]
    }
    ]}
}
RESPONSE = requests.get(APIC+OPERATION, cookies=COOKIE)
```

```
OPERATION = 'api/node/mo/uni.json'
DATA = {
    "fvTenant": {"attributes": {"rn": "SuperEats"},
    "children": [{"fvAp": {"attributes": {"rn": "OrderProcess"},
        "children": [
            {"fvAEPg": {"attributes": {"rn": "app"}}},
            {"fvAEPg": {"attributes": {"rn": "web"}}}
        ]
    }
    ]}
}
RESPONSE = requests.post(APIC+OPERATION, json=DATA, cookies=COOKIE)
```

```
OPERATION = 'api/node/mo/uni.json'
DATA = {
    "fvTenant": {"attributes": {"name": "SuperEats"},
    "children": [{"fvAp": {"attributes": {"name": "OrderProcess"},
        "children": [
            {"fvAEPg": {"attributes": {"name": "app"}}},
            {"fvAEPg": {"attributes": {"name": "web"}}}
        ]
    }
    ]}
}
RESPONSE = requests.post(APIC+OPERATION, json=DATA, cookies=COOKIE)
```

B. C.

D.

**Correct Answer:** D

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 13**

Refer to the exhibit.

```
https://APIC_IP/api/class/11PhysIf.xml?query-target-filter=eq(11PhysIf.speed,"10G")
```

Which two statements are true about this API GET request to the ACI APIC? (Choose two.)

- A. The API call creates a new 10G interface in the APIC.
- B. The API call reads information from a managed object.
- C. The API response is encoded in JSON.
- D. The API call reads information from an object class.
- E. The API response is encoded in XML.

**Correct Answer:** BE

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 14** Which two items are types of application isolation options available when Kubernetes is deployed with the ACI CNI plug-in? (Choose two.)

- A. VM Isolation
- B. Cluster Isolation
- C. Server Isolation
- D. Process Isolation
- E. Namespace Isolation

**Correct Answer:** BE

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 15** Which two components are attributes of an ACI MIT managed object? (Choose two.)

- A. MO
- B. RN
- C. UNI
- D. DN
- E. URL

**Correct Answer:** BD

**Section: Controller Based Data Center Networking**

**Explanation**

**Explanation/Reference:**

**QUESTION 16** How should the Kubernetes manifests be modified to allow Kubernetes environment integration with Cisco ACI?

- A. The metadata section must contain the Cisco APIC management IP.
- B. The manifest does not have to be changed, but the Kubernetes object is not discovered by Cisco ACI if this is not defined in the manifest.
- C. The manifests must include ACI EPG reference.
- D. No change is needed to perform this action.

**Correct Answer:** D

**Section: Controller Based Data Center Networking**

**Explanation**



**Explanation/Reference:**

**QUESTION 17**

DRAG DROP

Drag and drop the correct code snippets into the Python code to create a new application profile "WebApp" using the ACI REST API. Not all options are used.

**Select and Place:**

**Correct Answer:**

**Section: Controller Based Data Center Networking**

**Explanation**

**Explanation/Reference:**

**QUESTION 18** Which Python code creates a VRF in an ACI tenant using the Cobra SDK?

- A. Vrf(fvTenant(uniMo, 'CustA'), 'CustA\_VRF')
- B. Ctx(Tenant(uniMo, 'CustA'), 'CustA\_VRF')
- C. Vrf(Tenant(uniMo, 'CustA'), 'CustA\_VRF')
- D. Ctx(fvTenant(uniMo, 'CustA'), 'CustA\_VRF')

**Correct Answer:** B

**Section: Controller Based Data Center Networking**  
**Explanation**

**Explanation/Reference:**

**QUESTION 19**  
DRAG DROP

Drag and drop the correct YAML components from the bottom onto the correct blanks within the Ansible playbook to create a new application profile called "DbApp" using the Ansible ACI module. Not all options are used.

**Select and Place:**

**Correct Answer:**

**Section: Controller Based Data Center Networking**  
**Explanation**

**Explanation/Reference:**

Reference:

[https://docs.ansible.com/ansible/latest/modules/aci\\_ap\\_module.html](https://docs.ansible.com/ansible/latest/modules/aci_ap_module.html)

**QUESTION 20**  
Refer to the exhibit.



```
from acitoolkit.acitoolkit import (
    AppProfile, BridgeDomain, Context,
    EPG, Session, Subnet, Tenant
)

def create_tenant():
    session = Session(
        "https://apic", "admin", "ciscopsdt"
    )
    session.login()
    my_tenant = Tenant("DevNet_Tenant")
    my_vrf = Context("DevNet_VRF", my_tenant)
    my_bd = BridgeDomain("DevNet_BD", my_tenant)
    my_bd.add_context(my_vrf)
    my_subnet = Subnet("DevNet_Subnet", my_bd)
    my_subnet.set_scope("public")
    my_subnet.set_addr("10.10.10.1/24")
    my_app = AppProfile("DevNet_App", my_tenant)
    my_epg = EPG("DevNet_EPG", my_app)
    my_epg.add_bd(my_bd)
    session.push_to_apic(
        my_tenant.get_url(),
        my_tenant.get_json()
    )

if __name__ == '__main__':
    create_tenant()
```



Which two actions does this Python code perform with the Cisco ACI? (Choose two.)

- A. It creates a subnet "DevNet\_Subnet" inside VRF "DevNet\_VRF" located in ACI tenant "DevNet\_Tenant" and sets the scope to "private".
- B. It creates a subnet "DevNet\_Subnet" inside AppProfile "DevNet\_App" located in ACI tenant "DevNet\_Tenant" and sets the network address to "10.10.10.1/24".
- C. It creates an EPG "DevNet\_EPG" inside AppProfile "DevNet\_App" located in ACI tenant "DevNet\_Tenant" and link the EPG with BridgeDomain "DevNet\_BD".
- D. It creates a subnet "DevNet\_Subnet" inside VRF "DevNet\_VRF" located in ACI tenant "DevNet\_Tenant" and sets the network address to "10.10.10.1/24".
- E. It creates an EPG "DevNet\_EPG" inside VRF "DevNet\_VRF" located in ACI tenant "DevNet\_Tenant" and link the EPG with BridgeDomain "DevNet\_BD".

**Correct Answer:** CD

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 21**

What is the default data encoding for the response output of the ACI APIC API inspector?

- A. CSV
- B. JSONC. XML
- D. YAML

**Correct Answer:** B

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 22**

Which Kubernetes container network interface provides intent-based networking from the same pane of glass that VMs and bare-metal servers are managed?

- A. ACI CNI plug-in
- B. Contiv CNI plug-in
- C. Ingress CNI plug-in
- D. Calico CNI plug-in

**Correct Answer:** A

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 23** What is a key characteristic of an ACI policy model?

- A. Logical and concrete domains are separated.
- B. All configuration is carried out against concrete entities.
- C. It allows communications with newly connected devices.
- D. Network administrators configure logical and physical system resources directly.

**Correct Answer:** A

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 24**

Refer to the exhibit.



```
from cobra.mit.access import MoDirectory
from cobra.mit.session import LoginSession
from cobra.model.pol import Uni
from cobra.model.fv import Tenant
from cobra.mit.request import ConfigRequest

uri = 'https://APIC_IP/'
user = 'APIC_USERNAME'
pw = 'APIC_PW'

ls = LoginSession (uri , user, pw)
md = MoDirectory(ls)
md.login ()

topMo = Uni(' ')


c = ConfigRequest()
c.addMo(fvTenant)
md.commit(c)

md.logout()
```



The code should create a new tenant named Cisco via the Cobra SDK, which shows up after the execution of this script in the APIC dashboard.

Which code must be inserted into the red box to create this tenant?

- A. fvTenant = NewTenant(name='Cisco')
- B. tenant = Tenant(topMo, name='Cisco')
- C. fvTenant = Tenant(topMo, name='Cisco')
- D. fvTenant = Tenant('Cisco')

**Correct Answer:** C

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 25** When should the API Inspector be used?

- A. to send an API request to the APIC
- B. to learn or identify the sequence of API calls for a specific operation in the APIC GUI
- C. to verify the XML structure of an object based on a specific operation in the APIC GUI



D. to launch an Ansible playbook

**Correct Answer:** C

**Section:** Controller Based Data Center Networking

**Explanation**

**Explanation/Reference:**

#### QUESTION 26

Refer to the exhibit.

```
switch(config)# telemetry
switch(config-telemetry)# sensor-group 100
switch(config-tm-sensor)# path sys/intf/phys-[eth1/1] depth 0
switch(config-tm-sensor)# destination-group 100
switch(config-tm-dest)# ip address 1.2.3.4 port 50004
switch(config-tm-dest)# ip address 1.2.3.4 port 50005
switch(config-tm-sensor)# destination-group 200
switch(config-tm-dest)# ip address 5.6.7.8 port 50001 protocol HTTP encoding JSON
switch(config-tm-dest)# ip address 1.4.8.2 port 50003
switch(config-tm-dest)# subscription 100
switch(config-tm-sub)# snsr-grp 100 sample-interval 10000
switch(config-tm-sub)# dst-grp 100
switch(config-tm-sub)# dst-grp 200
```

Where and how often does the subscription stream data for Ethernet port 1/1?

- A. to four different destinations every 10000 microseconds
- B. to four different destinations every 100 milliseconds
- C. to four different destinations every 10 seconds
- D. to four different destinations every 10000 seconds



**Correct Answer:** C

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

#### QUESTION 27

Refer to the exhibit.

```
switch(config)# telemetry
switch(config-telemetry)# sensor-group 100
switch(config-tm-sensor)# path sys/bgp depth 0
switch(config-tm-sensor)# destination-group 100
switch(config-tm-dest)# ip address 1.2.3.4 port 50003
switch(config-tm-dest)# subscription 100
switch(config-tm-sub)# snsr-grp 100 sample-interval 50000
switch(config-tm-sub)# dst-grp 100
```

How often is the subscription stream for sys/bgp going to be sent?

- A. 5 sec
- B. 5 msec
- C. 5000 sec
- D. 5 min

**Correct Answer:** A

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 28** What is the network bootstrap program used by Cisco NX-OS iPXE?

- A. NETBOOT
- B. NX-OS iPXE
- C. iPXE-POAP
- D. Mini-OS

**Correct Answer:** A

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 29** Which action allows Docker daemon persistence during switchover on the Cisco Nexus 9500 Series Switches running Cisco NX-OS?

- A. Change the Docker configuration to include the live restore option.
- B. Copy the dockerpart file manually to the standby supervisor after performing the switchover.
- C. Copy the dockerpart file manually to the standby supervisor before performing the switchover.
- D. The system takes automatic action.

**Correct Answer:** C

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 30** Using the NX-API CLI JSON-RPC interface, which two Python data structure and requests call create an SVI? (Choose two.) A.

```
requests.post(url, data=json.dumps(payload), headers={'content-type':  
'application/json-rpc'}, auth=(username, password))
```

```
requests.post(url, data=json.dumps(payload), headers={'content-type':  
'application/json'}, auth=(username, password))
```

B.

```
payload = {
  "jsonrpc": "2.0", "method": "cli_conf",
  "params": {
    "command": "conf t; interface vlan " + id,
    "version": 1},
  "id": 1
}
```

```
payload = [
  {
    "jsonrpc": "2.0", "method": "cli",
    "params": {"cmd": "conf t", "version": 1},
    "id": 1
  },
  {
    "jsonrpc": "2.0", "method": "cli",
    "params": {"cmd": "interface vlan " + id, "version": 1},
    "id": 2
  }
]
```

```
payload = {
  "jsonrpc": "2.0", "method": "cli_conf",
  "params": {"cmd": "interface vlan " + id, "version": 1},
  "id": 1
}
```

C.

D.

E.

**Correct Answer:** AD  
**Section:** Data Center Device-centric Networking  
**Explanation**

**Explanation/Reference:**

### QUESTION 31

Refer to the exhibit.

#### Switch configuration

```
!Command: show running-config
!
feature hsrp
!
ip access-list allow_http_traffic
 10 permit tcp any any eq www
!
vrf context management
 ip route 0.0.0.0/0 192.168.151.2
!
interface mgmt0
 ip address 192.168.251.129 255.255.255.0
 vrf member management
```

#### Ansible playbook

```
---
- name: Vlan Provisioning
  hosts: nxos
  gather_facts: no

  vars:
    nxos_provider:
      username: "{{ un }}"
      password: "{{ pwd }}"
      transport: nxapi
      host: "{{ inventory_hostname }}"

  tasks:

    - name: CREATE VLANS AND ASSIGN A NAME, USING VLAN_ID
      nxos_vlan:
        vlan_id: "{{ item.vlan_id }}"
        name: "{{ item.name }}"
        provider: "{{ nxos_provider }}"
      with_items:
        - vlan_id: 2
          name: Native
        - vlan_id: 15
          name: Web
        - vlan_id: 20
          name: App
        - vlan_id: 30
          name: DB
```

#### Playbook output

\$ ansible-playbook playbook.yml

```
PLAY [Vlan Provisioning] *****
*****
*****

TASK [CREATE VLANS AND ASSIGN A NAME, USING VLAN_ID]*****
*****
failed: [192.168.252.129] (item={'vlan_id': 2, 'name': 'Native'}) => {"ansible_facts": {'discovered_interpreter_python': "/usr/bin/python"}, "ansible_loop_var": "item", 'changed': false, 'item': 'name': 'Native', "vlan_id": 2}, "msg": "Request failed: <urlopen error [Errno 61] Connection 'refused>' "status": -1, "url": "http://192.168.251.129:80/ins"}
```

The exhibit shows a Cisco NX-OS switch configuration, an Ansible playbook, and the output of running this playbook. The playbook failed due to error "msg' 'Request failed <urlopen error [Errno 61] Connection refused>', 'status' -1, 'url' "http://192.168.251.129:80/ins".

Which Cisco NX-OS configuration command resolves this failure?

- A. **feature nxapi**
- B. **http-server enabled**
- C. **interface mgmt0; ip access-group allow\_http\_traffic in**
- D. **feature http**

**Correct Answer:** A

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 32** Which NX-API request queries the MAC address table? A.

```
{
  "jsonrpc": "1.0",
  "method": "cli",
  "params": {
    "cmd": "show mac address-table",
    "version": 1
  },
  "id": 1
}
```

```
{
  "jsonrpc": "2.0",
  "method": "cli",
  "params": {
    "command": "show mac address-table",
    "version": 1
  },
  "id": 1
}
```

B.

```
{  
  "jsonrpc": "2.0",  
  "method": "cli_show",  
  "params": {  
    "cmd": "show mac address-table",  
    "version": 1  
  },  
  "id": 1  
}
```

```
{  
  "jsonrpc": "2.0",  
  "method": "cli",  
  "params": {  
    "cmd": "show mac address-table",  
    "version": 1  
  },  
  "id": 1  
}
```



C.

D.



**Correct Answer:** D

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 33** Which two bootstrap technologies are supported by Cisco NX-OS platforms? (Choose two.)

- A. iPXE
- B. PNP
- C. POAP
- D. BOOTP
- E. DHCP

**Correct Answer:** AC

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 34**

Refer to the exhibit.



```
[admin@guestshell ~]$ pwd
/home/admin
[admin@guestshell ~]$
[admin@guestshell ~]$
[admin@guestshell ~]$ more deltacounter.py
#!/isan/bin/python

from cli import *
import sys, time

ifName = sys.argv[1]
delay = 2
count = 5
cmd = 'show interface ' + ifName + ' counters'

out = json.loads(clid(cmd))
rxuc = int(out['TABLE_rx_counters']['ROW_rx_counters'][0]['eth_inucast'])
rxmc = int(out['TABLE_rx_counters']['ROW_rx_counters'][1]['eth_inmcast'])
rxbc = int(out['TABLE_rx_counters']['ROW_rx_counters'][1]['eth_inbcast'])
txuc = int(out['TABLE_tx_counters']['ROW_tx_counters'][0]['eth_outucast'])
txmc = int(out['TABLE_tx_counters']['ROW_tx_counters'][1]['eth_outmcast'])
txbc = int(out['TABLE_tx_counters']['ROW_tx_counters'][1]['eth_outbcast'])
print ('row rx_ucast rx_mcast rx_bcast tx_ucast tx_mcast tx_bcast')
print ('=====')
print ('    %8d %8d %8d %8d %8d %8d' % (rxuc, rxmc, rxbc, txuc, txmc, txbc))
print ('=====')

i = 0
while (i < count):
    time.sleep(delay)
    out = json.loads(clid(cmd))
    rxucNew = int(out['TABLE_rx_counters']['ROW_rx_counters'][0]['eth_inucast'])
    rxmcNew = int(out['TABLE_rx_counters']['ROW_rx_counters'][1]['eth_inmcast'])
    rxbcNew = int(out['TABLE_rx_counters']['ROW_rx_counters'][1]['eth_inbcast'])
    txucNew = int(out['TABLE_tx_counters']['ROW_tx_counters'][0]['eth_outucast'])
    txmcNew = int(out['TABLE_tx_counters']['ROW_tx_counters'][1]['eth_outmcast'])
    txbcNew = int(out['TABLE_tx_counters']['ROW_tx_counters'][1]['eth_outbcast'])
    i += 1
    print ('%-3d %8d %8d %8d %8d %8d %8d' % \
        (i, rxucNew - rxuc, rxmcNew - rxmc, rxbcNew - rxbc, txucNew - txuc, txmcNew - txmc,

```

The script is called deltacounters.py and it is currently inside a Guest Shell container running inside a Cisco NX-OS switch.

Which Cisco NX-OS command results in a successful execution of this script?

A. python /home/admin/bootflash:deltacounters.py ethernet1/1

- B. show python bootflash:deltacounters.py ethernet1/1
- C. guestshell run python /home/admin/deltacounter.py ethernet1/1
- D. guestshell execute python /home/admin/deltacounter.py ethernet1/1

**Correct Answer: C**

**Section: Data Center Device-centric Networking**

**Explanation**

**Explanation/Reference:**

#### QUESTION 35

Refer to the exhibit.

```
switch#
switch#
switch#
switch# run bash
      ^
% Invalid command at "^" marker.
switch#
switch#
```

Which configuration change command must be run on the Cisco NX-OS device to make this command work?

- A. enable bash-shell
- B. bash-shell enable
- C. service bash-shell
- D. feature bash-shell

**Correct Answer: D**

**Section: Data Center Device-centric Networking**

**Explanation**

**Explanation/Reference:**

#### QUESTION 36

During the process of starting a Python network telemetry collector, which command starts the Cisco **bigmuddy-network-telemetry-collector** from GitHub?

- A. model driven telemetry
- B. telemetry\_receiver.py --ip-address <addr> --port <port>
- C. telemetry\_receiver.py --destination <port> --url <url>
- D. streaming telemetry

**Correct Answer: B**

**Section: Data Center Device-centric Networking**

**Explanation**

**Explanation/Reference:**

#### QUESTION 37

When the Cisco **bigmuddy-network-telemetry-collector** from GitHub is used, which command displays only the message headers?

- A. --print B.
- all
- C. --brief
- D. --print-all

**Correct Answer:** C

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 38** What are two differences between SNMP and model-driven telemetry? (Choose two.)

- A. SNMP uses a continuous stream model.
- B. SNMP uses a push model.
- C. SNMP uses a pull model.
- D. Model-driven telemetry uses a pull model.
- E. Model-driven telemetry uses a push model.

**Correct Answer:** CE

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 39** What is a feature of model-driven telemetry?

- A. randomizes the data out of the network
- B. continuously streams data out of the network
- C. randomizes the data coming to the network
- D. continuously pulls data out of the network

**Correct Answer:** B

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 40**

DRAG DROP

After a Cisco Nexus switch interface is enabled and in the up state, an engineer must automate the configuration of the interface descriptions using the EEM Python Module.

Drag and drop the steps the engineer must take from the left into the correct order on the right.

**Select and Place:**



event syslog pattern "IF_UP"	step 1
exit	step 2
event manager applet link monitor	step 3
conf t	step 4
action 1 cli command "source cdp_description.py"	step 5

Correct Answer:

event syslog pattern "IF_UP"	conf t
exit	event manager applet link monitor
event manager applet link monitor	event syslog pattern "IF_UP"
conf t	action 1 cli command "source cdp_description.py"
action 1 cli command "source cdp_description.py"	exit

Section: Data Center Device-centric Networking  
Explanation

Explanation/Reference:

Reference: <https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/datamodels/configuration/xr-16/data-models-xr-16-book/python-scripting-for-eem.html>

#### QUESTION 41

Which Ansible playbook creates a new VLAN 10 named Web?

```
- name: Provision VLAN
hosts: accessswitches
gather_facts: no

vars:
  nxos_provider:
    username: "{{ un }}"
    password: "{{ pwd }}"

tasks:
  - name: Create VLAN And Assign A Name
    nxos_vlan:
      vlan_id: 10
      name: Web
      provider: "{{ nxos_provider }}"
```

```
- name: Provision VLAN
hosts: accessswitches
gather_facts: no

vars:
  nxos_provider:
    username: "{{ un }}"
    password: "{{ pwd }}"
    transport: nxapi
    host: "{{ inventory_hostname }}"

tasks:
  - name: Create VLAN And Assign A Name
    vlan_id: 10
    name: Web
    provider: "{{ nxos_provider }}"
```



A.

B.





```
- name: Provision VLAN
hosts: accessswitches
gather_facts: no

vars:
  nxos_provider:
    username: "{{ un }}"
    password: "{{ pwd }}"
    transport: nxapi
    host: "{{ inventory_hostname }}"

tasks:
  - name: Create VLAN And Assign A Name
    nxos_vlan:
      interfaces: vlan-10
      name: Web
```

```
- name: Provision VLAN
hosts: accessswitches
gather_facts: no

vars:
  nxos_provider:
    username: "{{ un }}"
    password: "{{ pwd }}"
    transport: nxapi
    host: "{{ inventory_hostname }}"

tasks:
  - name: Create VLAN And Assign A Name
    nxos_vlan:
      vlan_id: 10
      name: Web
      provider: "{{ nxos_provider }}"
```



C.



D.

**Correct Answer:** D

**Section:** Data Center Device-centric Networking

**Explanation**

**Explanation/Reference:**

**QUESTION 42**

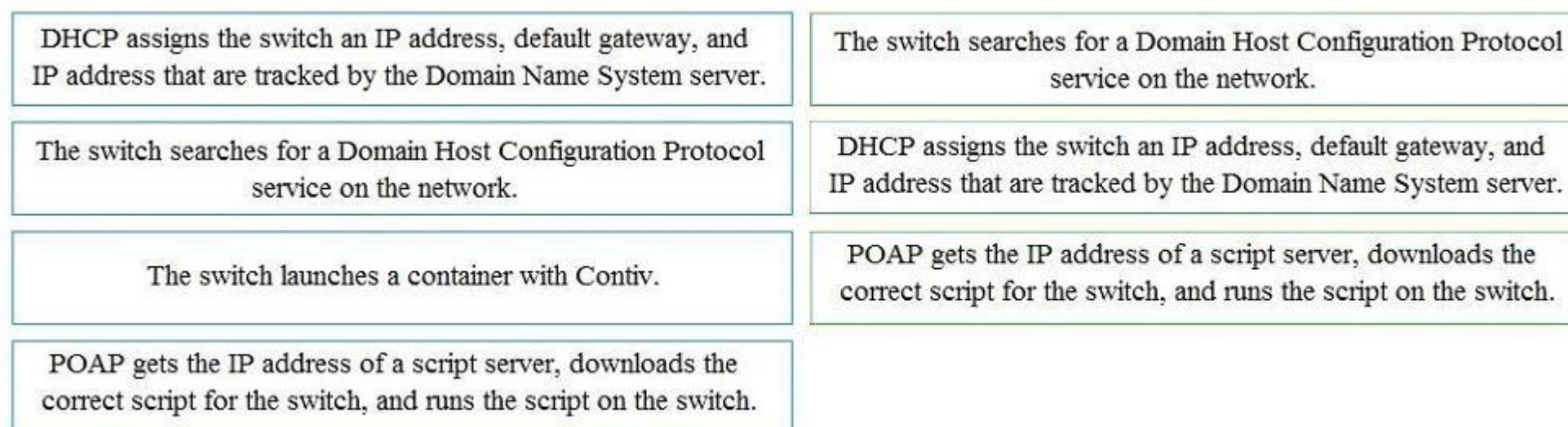
DRAG DROP

When a switch boots it does not find its startup-config file. Drag and drop the steps that Power-On Auto Provisioning goes through to configure the switch for remote management from the left into the correct order on the right. Not all options are used.

**Select and Place:**

DHCP assigns the switch an IP address, default gateway, and IP address that are tracked by the Domain Name System server.	step 1
The switch searches for a Domain Host Configuration Protocol service on the network.	step 2
The switch launches a container with Contiv.	step 3
POAP gets the IP address of a script server, downloads the correct script for the switch, and runs the script on the switch.	

**Correct Answer:**



#### Section: Data Center Device-centric Networking

##### Explanation

##### Explanation/Reference:

Reference: [https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/6-x/fundamentals/configuration/guide/b\\_Cisco\\_Nexus\\_9000\\_Series\\_NX-OS\\_Fundamentals\\_Configuration\\_Guide/b\\_Cisco\\_Nexus\\_9000\\_Series\\_NX-OS\\_Fundamentals\\_Configuration\\_Guide\\_chapter\\_011.pdf](https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/6-x/fundamentals/configuration/guide/b_Cisco_Nexus_9000_Series_NX-OS_Fundamentals_Configuration_Guide/b_Cisco_Nexus_9000_Series_NX-OS_Fundamentals_Configuration_Guide_chapter_011.pdf)

**QUESTION 43** What are two capabilities of the DCNM REST API? (Choose two.)

- A. uses the dcnm-token header for requests authentication after initial basic authentication
- B. uses basic authentication without encoding for username and password
- C. supports HTTP until release 11.0(1)
- D. uses bearer key authorization
- E. is separated into Classic LAN, LAN Fabric, Media Controller, and SAN Management categories



**Correct Answer:** AE

**Section: Data Center Compute**

##### Explanation

##### Explanation/Reference:

**QUESTION 44** Which two capabilities apply to the DCNM API? (Choose two.)

- A. DCNM provides an XML-based SOAP API.
- B. DCNM requires a license to use the API.
- C. Some features of DCNM must be configured through the GUI.
- D. All API operations can be performed using the DCNM GUI.
- E. DCNM provides a REST-based API.

**Correct Answer:** AE

**Section: Data Center Compute**

##### Explanation

##### Explanation/Reference:

**QUESTION 45**

Which Cisco UCS PowerTool commands initiate a Cisco UCS Manager connection? A.

```
$ucsm_creds = New-Object -TypeName System.Management.Automation.PSCredential  
"admin", $(SecureString -PlainText "MySecretPassword")  
  
Connect-Ucs -Name myucsm.example.com -Credential $ucsm_creds
```

```
$ucsm_creds = New-Object -TypeName System.Management.Automation.PSCredential  
-ArgumentList "admin", $(ConvertTo-SecureString -Force -AsPlainText "MySecretPassword")  
  
Connect-Ucs -Name myucsm.example.com -Credential $ucsm_creds
```

```
$ucsm_creds = New-Object -TypeName System.Management.Automation.PSCredential  
-ArgumentList username "admin", password:$(ConvertTo-SecureString "MySecretPassword")  
  
Connect-Ucs -Name myucsm.example.com -Credential $ucsm_creds
```

```
$ucsm_creds = New-Object -TypeName System.Management.Automation.PSCredential  
-ArgumentList $(ConvertTo-SecureString -Force -AsPlainText "admin:MySecretPassword")  
  
Connect-Ucs -Name myucsm.example.com -Credential $ucsm_creds
```

B. C.



D.

**Correct Answer:** B

**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**

**QUESTION 46**

Refer to the exhibit.

```
Dn
--
sys/chassis-4/blade-1
sys/chassis-4/blade-3
sys/chassis-4/blade-5
sys/chassis-4/blade-7
sys/chassis-5/blade-1
```

Which two Cisco UCS PowerTool commands provide this output? (Choose two.)

- A. Get-UcsServer | Select-Object Dn
- B. Get-UcsRack Systems | Select-Object Dn
- C. Get-UcsBlade | Select-Object Dn
- D. Get-UcsRackUnit | Select-Object Dn
- E. Get-UcsSystems | Select-Object Dn

**Correct Answer:** AC

**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**



**QUESTION 47** What is a description of a Cisco UCS Director script module?

- A. function to convert internal workflow tasks into Python scripts
- B. place to store custom workflow scripts, jars, and custom lists of values for use in custom workflow tasks
- C. place to store external scripts that are not related to Cisco UCS Director
- D. place to store imported scripts, Bash, and custom Python code for use in custom workflow tasks

**Correct Answer:** B

**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**

**QUESTION 48** Which procedure accesses the REST API browser within Cisco UCS Director?

- A. Send an HTTP GET request to **https://[UCS Director IP]/api/get\_resources/**.
- B. Log in as the user **REST/user** to access the REST API interface.
- C. Enable the Developer menu. Select **Orchestration** in the UI, then select the **REST API** browser tab.
- D. Select the API browser from the Cisco UCS Director End User Portal catalog of services.

**Correct Answer:** C

**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**

**QUESTION 49** Which step must be taken to enable the REST API browser within Cisco UCS Director?

- A. Edit the user profile and enable developer options.
- B. Raise a case with TAC.
- C. The REST API browser is automatically enabled in Cisco UCS Director when a Power User is created.
- D. Log in as the user "REST".

**Correct Answer:** A

**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**

**QUESTION 50**

Refer to the exhibit.

```
1  from ucsmsdk.ucshandle import UcsHandle
2  from ucsmsdk.mometa.fabric.FabricVlan import FabricVlan
3
4  handle = UcsHandle("corpucsm.example.com", "admin", "MySecretPassword")
5  handle.login()
6
7  fabric_lan_dn = handle.query_dn("fabric/lan")
8  newvlan = FabricVlan(parent_mo_or_dn=fabric_lan_dn,
9                        name="vlan10",
10                       id="10")
11
12  handle.add_mo(newvlan)
13
14  handle.logout()
```

Which change allows the code to configure VLAN 10 in the Cisco UCS?

- A. Lines 8 and 9 should have a line continuation \ at the end.
- B. Line 13 should include "**handle.commit()**".
- C. Line 4 should include transport 443 option.
- D. Line 3 should add an import for **query\_dn**.

**Correct Answer:** C

**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**

**QUESTION 51** Which programming language are the Cisco UCS Director custom workflow tasks written in?

- A. C++
- B. Python
- C. Java
- D. Cloupia Script

**Correct Answer:** C  
**Section:** Data Center Compute  
**Explanation**

**Explanation/Reference:**

**QUESTION 52** Which authentication method is used when the REST API of the Cisco UCS Director is accessed?

- A. **Bearer** ((Bearer Token))
- B. HTTP Basic Auth
- C. **RestAuth:** ((User's Auth Token))
- D. **X-Cloupia-Request-Key:** ((User's Auth Token))

**Correct Answer:** B  
**Section:** Data Center Compute  
**Explanation**

**Explanation/Reference:**

**QUESTION 53**  
DRAG DROP

Drag and drop the items to complete the request to retrieve the current firmware of Cisco UCS devices from the Cisco Intersight API. Not all items are used.

**Select and Place:**

**Correct Answer:**

**Section:** Data Center Compute  
**Explanation**

**Explanation/Reference:**

Reference: <https://developer.cisco.com/codeexchange/github/repo/CiscoUcs/intersight-python/>

**QUESTION 54**  
Refer to the exhibit.





```
1 ---
2 # Playbook: VLAN configuration using the [ucs] hosts group
3 - hosts: ucs
4   connection: local
5   gather_facts: no
6   tasks:
7     - name: Configure VLAN
8
9       hostname: "{{ ucs_hostname }}"
10      username: "{{ ucs_username }}"
11      password: "{{ ucs_password }}"
12      state: "{{ ucs_state }}"
13      name: vlan10
14      id: '10'
15      native: 'no'
```

Which Ansible module is needed in line 8 to create a new VLAN 10 on the hosts defined in the "ucs" group?

- A. vlan
- B. ucs\_vlans
- C. vlans
- D. nxos\_vlans

**Correct Answer:** B

**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**

#### QUESTION 55

DRAG DROP

A co-worker is using Cisco Intersight to determine the maximum available memory per server for their company's data center. Drag and drop the code to complete the Cisco Intersight API call that provides the desired results. Not all options are used.

**Select and Place:**

**Correct Answer:**

**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**

#### QUESTION 56

Which two components are required from the Cisco Intersight REST API Authentication? (Choose two.)



- A. SHA256 hash of the message body and message headers.
- B. SHA256 hash of the message body, including empty message bodies.
- C. RSA private key with a key size of 2048.
- D. RSA private key with a key size of 1024.
- E. SHA384 hash of the message body, excluding empty message bodies.

**Correct Answer:** AC

**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**

**QUESTION 57** Which two statements apply to authentication when using the Cisco Intersight API? (Choose two.)

- A. Each API Key can be assigned specific roles but not privileges.
- B. Secret Key is only available at API Key creation time.
- C. An API Key is composed of a Key ID and Secret Key.
- D. The user credentials for the cisco.com accounts are shared with the Cisco Intersight Web Service.
- E. An API Key is composed of a keyId and sessionCookie.

**Correct Answer:** BC

**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**

**QUESTION 58** Which two statements describe the authentication method used with Cisco Intersight REST API Requests? (Choose two.)

- A. The REST API request contains a base64-encoded signature of the message content and headers.
- B. The REST API request message body is encoded as a SHA384 hash and then signed with the API Key ID.
- C. The Cisco Intersight Web service verifies the signature of incoming request with the RSA public key for the API Key ID.
- D. The incoming REST API request is challenged by the Cisco Intersight Web service with a request for the RSA private key.
- E. The message body is encoded as a SHA256 hash if the message body is not empty and then signed with the API Key ID.

**Correct Answer:** AD

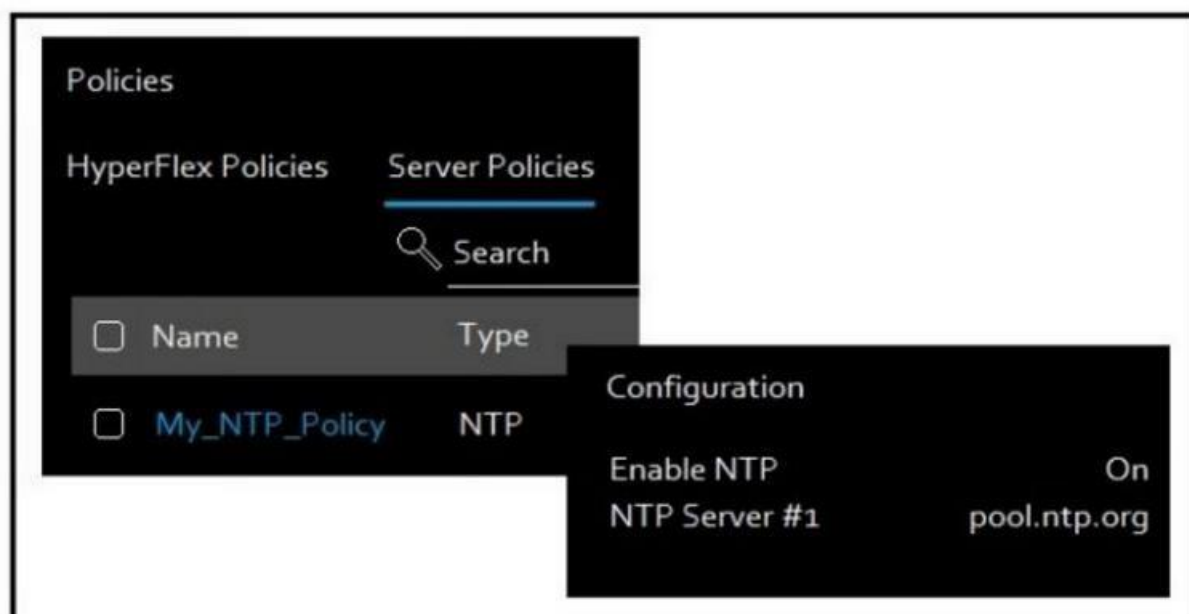
**Section:** Data Center Compute

**Explanation**

**Explanation/Reference:**

**QUESTION 59**

Refer to the exhibit.



Cisco Intersight has an NTP server policy called My\_NTP\_Policy configured that contains a single NTP server pool entry "pool.ntp.org".

Which Cisco Intersight API call adds an additional NTP server (10.20.0.1) to the My\_NTP\_Policy server policy? A.

#### HTTP POST Method

URL: `https://intersight.com/api/v1/ntp/Policies/`

Bodytext:

```
{
  "NtpServers": "10.20.0.1"
}
```

#### HTTP PATCH Method

URL: `https://intersight.com/api/v1/ntp/Policies/{My_NTP_Policy MOID}`

Bodytext:

```
{
  "NtpServers":[
    "pool.ntp.org",
    "10.20.0.1"
  ]
}
```

B.

#### HTTP PUT Method

URL: <https://intersight.com/api/v1/ntp/Policies/>

Bodytext:

```
{  
  "NtpServers": [  
    "10.20.0.1"  
  ]  
}
```

#### HTTP PATCH Method

URL: [https://intersight.com/api/v1/ntp/Policies/{My\\_NTP\\_Policy\\_MOID}](https://intersight.com/api/v1/ntp/Policies/{My_NTP_Policy_MOID})

Bodytext:

```
{  
  "NtpServers": "10.20.0.1"  
}
```

C.

D.

**Correct Answer:** B  
**Section:** Data Center Compute  
**Explanation**

**Explanation/Reference:**

**QUESTION 60**

A server profile with the string "WEST15" in its name must have the string "WEST15" changed to "LXT14". For example, server profile "VMHOST-WEST15-01" would need to be changed to "VMHOST-LXT14-01".

Using the Cisco Intersight REST API in a Python script, which two GET API requests are used to retrieve just the server profile with the string "WEST15" in the name and the correct body for the API request to update the name? Assume the variable "sp\_name" contains the name of the retrieved server profile. (Choose two.)

- A. GET https://intersight.com/api/v1/server/Profiles?\$select=Name&\$filter=contains(Name, 'WEST15')
- B. GET https://intersight.com/api/v1/server/Profiles?\$select=Name&\$filter=Name in('WEST15')
- C. BODY = { "Name": sp\_name.format('WEST15', 'LXT14') }
- D. GET https://intersight.com/api/v1/server/Profiles?\$select=Name&\$filter=startswith(Name, 'WEST15')
- E. BODY = { "Name": sp\_name.replace('WEST15','LXT14') }

**Correct Answer:** AE  
**Section:** Data Center Compute  
**Explanation**

**Explanation/Reference:**

