

EXAM PREPARATION MATERIAL

Practice files designed to help you understand exam patterns, question styles and the overall assessment format.

IMPORTANT NOTE



Please note that these files may not be up to date. However, the questions will help you understand the exam format and typical question patterns.



Stay connected with our support team for the latest file updates and exam-related information.

Question: 1

What are two characteristics of RPC API calls? (Choose two.)

- A. They can be used only on network devices.
- B. They use only UDP for communications.
- C. Parameters can be passed to the calls.
- D. They must use SSL/TLS.
- E. They call a single function or service.

Answer: CE

Explanation:

Reference: <https://pubs.opengroup.org/onlinepubs/9629399/chap6.htm>

Question: 2

Which two actions do Python virtual environments allow users to perform? (Choose two.)

- A. Simplify the CI/CD pipeline when checking a project into a version control system, such as Git.
- B. Efficiently port code between different languages, such as JavaScript and Python.
- C. Run and simulate other operating systems within a development environment.
- D. Quickly create any Python environment for testing and debugging purposes.
- E. Quickly create an isolated Python environment with module dependencies.

Answer: DE

Explanation:

Reference: <https://realpython.com/python-virtual-environments-a-primer/>

Question: 3

What are two benefits of leveraging Ansible for automation of Cisco IOS XE Software? (Choose two.)

- A. Ansible playbooks are packaged and installed on IOS XE devices for automatic execution when an IOS device reboots.
- B. All IOS XE operating systems include Ansible playbooks for basic system administration tasks.
- C. It is a device-independent method for automation and can be used with any type of device or operating system.
- D. Ansible playbooks can be written from the IOS XE EXEC command line to configure the device itself.
- E. It does not require any modules of software except SSH to be loaded on the network device.

Answer: CE

Explanation:

Reference: <https://developer.cisco.com/learning/modules/intro-ansible-iosxe/ansible->

[overview/step/4](#)

Question: 4

Refer to the exhibit.

```
return val— (
  "alertId": "643451796765672516",
  "alertType": "appliances went down",
  "deviceMac": "eO:55:3d:6c:cl:7a",
  "deviceName": "MX65 cl:7a",
  "deviceSerial": "Q2QN-58EA-XXXX",
  "deviceUri": "https://nl43.meraki.com/Branch-l/n/.../manage/nodes/new wired status" "networkId": "L1234567890", "networkName":
  "Branch 1", "networkUrl": "https://nl43.meraki.com/Branch-l/n/.../manage/nodes/wired status", "occuredAt": "2018-11-
  10T18:45:20.000000Z", "organizationId": "1234567", "organizationName": "Meraki Demo", "organizationUrl":
  "https://nl43.meraki.com/o/.../manage/organization/overview", "sentAt": "2018-11-10T18:50:30.479982Z", "SharedSecret": "asdf1234",
  "version": "0.1"
```

The task is to create a Python script to display an alert message when a Meraki MX Security Appliance goes down. The exhibit shows sample data that is received. Which Python snippet displays the device name and the time at which the switch went down?

- A. with return val: print("The Switch: "+deviceName+ ", went down at: "+occurredAt)
 - B print("The Switch: "+return val.deviceName+ ", \ went down at: "+return val.occurredAt)
 - C. print("The Switch: "+return_val['deviceName']+ ", \ went down at: "+return_val['occurredAt'])
- ^ with items as return val:
- ```
print("The Switch: "+items.deviceName+ ", went down at: "+items.occurredAt)
```

A. Option A B. Option B C. Option C D. Option D

**Answer: C**

Explanation:

## Question: 5

Refer to the exhibit.

```
"alertData": {
 "countNode": 1,
 "bssids": (
 "aa:bb:co:dd:ee:f f", "11:22:33:44:55:66"
),
 "minFirstSeen": 1548512334,
 "maxLastSeen": 1548512802,
 "countIsContained": 0, "reason": "Seen on IAN", "wiredMac": "aa:bb:cc:dd:ee:f0" h "alertId": "629378047939282802",
 "alertType": "Air Marshal -Roque AP detected", "occuredAt": "2019-01-26T14:18:54.000000Z", "organizationId": "123456",
 "organizationName": "Organization", "organizationUrl": "https://nl.meraki.com/o/.../manage/organization/overview"
 "networkId": "L_123456789012345678", "networkName": "Network", "networkUrl":
```

```
"https://nl.meraki.com/.../manage/nodes/list", "version": "0.1" "SharedSecret": "supersecret", "sentAt: "2019-01-26T14:35:20.442869Z",
```

The goal is to write a Python script to automatically send a message to an external messaging application when a rogue AP is detected on the network. The message should include the broadcast SSID that is in the alert. A function called “send\_to\_application” is created, and this is the declaration:

```
send_to_application(message)
```

The exhibit also shows the data that is received by the application and stored in the variable return\_val. Which Python code completes the task?

```
A bssids =return_val["bssids"]
 for number in range(return_val["alertData"]["countNode"]) send to application
 ("ALERT: detected a bssid on the network: "+ return_val["alertData"][bssids][number])

B bssids =return_val["bssids"]
 for value in bssids:
 send_to_application ("ALERT: detected a bssid on the network: "+value)

C count = return_val["alertData"]["countNode"]
 bssids =return_val["alertData"][count]["bssids"]
 for value in bssids:
 send_to_application ("ALERT: detected a bssid on the network: "+value)

D bssids =return_val["alertData"]["bssids"] for value in bssids:
 send_to_application ("ALERT: detected a bssid on the network: "+value)
```

A. Option A B. Option B C. Option C D. Option D

**Answer: D**

Explanation:

For number in range value is required for the application to send the alert. Bssids are also included.

### Question: 6

Which two features are foundations of a software-defined network instead of a traditional network? (Choose two.)

- A. control plane and data plane are tightly coupled
- B. build upon a robust software stack
- C. requires device by device-level configurations
- D. automated through expressed intent to a software controller
- E. requires significant physical hardware resources

**Answer: BD**

Explanation:

In traditional networks, control plane and data plane are coupled tightly. It also requires device by device configurations and of course, it uses physical hardware resources to function. Whereas, SDN is based on a software stack. In Cisco SDNs are automated through expressed intent to a software controller.

### Question: 7

A new project called "device\_status" must be stored in a central Git repository called "device\_status" with the first file named "device\_status.py". The Git repository is created using the account python\_programmer. Which set of commands inserts the project into Git?

- A. 

```
git init
git add device_status.py
git commit -m "Initial Revision"
git remote add origin \
 https://git.cisco.com/python_programmer/device_status.git
git push -u origin master
```
- B. 

```
git init
git remote add origin \
 https://git.cisco.com/python_programmer/device_status.git
git add device_status.py
git pull
```
- C. 

```
git init
git remote add origin \
 https://git.cisco.com/python_programmer/device_status.git
git add device_status.py
git commit -m "Initial Revision"
git pull -u origin master
```
- D. 

```
git init
git add device_status.py
git remote add python_programmer/device_status
git push
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer: A**

Explanation:

Reference: <https://help.github.com/en/github/importing-your-projects-to-github/adding-an-existing-project-to-github-using-the-command-line>

### Question: 8

What are two characteristics of synchronous calls to APIs? (Choose two.)

- A. They can be used only with certain programming languages.

- B. They make your application less portable, so asynchronous calls are preferred.
- C. They can add perceived latency to your application if data is not received.
- D. They block until a response is returned from the servers.
- E. They do not block while waiting for the API to be processed.

**Answer: CD**

Explanation:

Reference: <https://docs.cloudmgmt.cisco.com/display/40API/Synchronous+and+Asynchronous+APIs>

### Question: 9

Refer to the exhibit.

```
neighbors = ['s1', 's2', 's3']
switch = {'hostname': 'nexus', 'os': '7.0.3', 'neighbors': neighbors}
print(switch['neighbors'][1])
```

What is the result when running the Python scripts?

- A. s1
- B. s2
- C. s1, s2, s3
- D. s3

**Answer: B**

Explanation:

```
1 neighbors - ['s1', 's2', *s3]
2 switch {'hostname*:'nexus','os':'7.0.3','neighbors':'neighbors'
3 prwt(smtch['neighbors']][1])
```

3 74 v

hi

### CommandLine Arguments

Result

CPU Time: 0.02 sec(s), Memory: 7604 kilobyte(«)

S2

### Question: 10

Refer to the exhibit.

```
{
 "Cisco-IOS-XR-ifmgr-cfg:interface-configurations": {
 "interface-configuration": [
 {
 "active": "act",
 "interface-name": "Loopback0",
 "description": "PRIMARY ROUTER LOOPBACK"
 }
]
 }
}
```

Which type of YANG container is described by the JSON instance provided?

- A. interface-configurations
- B. active
- C. interface-name
- D. description

**Answer: A**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r7-0/programmability/configuration/guide/b-programmability-cg-asr9000-70x/b-programmability-cg-asr9000-70x\\_chapter\\_011.html](https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r7-0/programmability/configuration/guide/b-programmability-cg-asr9000-70x/b-programmability-cg-asr9000-70x_chapter_011.html)

### Question: 11

Refer to the exhibit.

```
module: Cisco-IOS-XE-vlan-oper
+--ro vlans
 +--ro vlan* [id]
 +--ro id uint16
 +--ro name? string
 +--ro status? vlan-iso-xe-oper:vlan-status-type
 +--ro ports* []
 | +--ro interface? string
 I +--ro subinterface? uint32
 +--ro vlan-interfaces* [interface]
 +--ro interface string
 +--ro subinterface uint32
```

Which NETCONF protocol operation is used to interact with the YANG model?

- A. <edit-config>
- B. <get>
- C. <get-config>
- D. <copy-config>

**Answer: B**

Explanation:

Reference: <https://www.cisco.com/c/en/us/td/docs/routers/crs/software/crs-r6-4/programmability/configuration/guide/b-programmability-cg-crs-64x.pdf>

### Question: 12

Refer to the exhibit.

```
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="101">
 <get>
 <filter>
 <native xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-native">
 <ntp>
```

```

<server xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-ntp">
 <server-list>
 <ip-address>10.11.10.65</ip-address>
 </server-list>
</server>
</ntp>
</native>
<ntp-oper-data xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-ntp-oper">
 <ntp-status-info>
 <ntp-associations>
 <peer-stratum/>
 </ntp-associations>
 </ntp-status-info>
</ntp-oper-data>
</filter>
</get>
</rcp>

```

How many YANG models does the NETCONF <get> operation interact with?

- A. one
- B. two C. three D. four

**Answer: B**

Explanation:

The get operation tag is at the beginning of the document. It interacted only with NTP and its related services. There get operation interacted only with one model.

### Question: 13

Which statement describe the difference between OpenConfig and native YANG data models?

- A. Native models are designed to be independent of the underlying platform and are developed by vendors and standards bodies, such as the IETF.
- B. Native models are developed by individual developers and designed to apply configurations on platforms.
- C. OpenConfig models are developed by vendors and designed to integrate to features or configurations that are relevant only to that platform.
- D. Native models are developed by vendors and designed to integrate to features or configurations that are relevant only to that platform.

**Answer: D**

Explanation:

Reference: <https://www.cisco.com/c/en/us/products/collateral/switches/nexus-9000-series-switches/white-paper-c11-741518.html>

### Question: 14

Refer to the exhibit.

```

import requests
import sys

requests.packages.urllib3.disable_warnings()

HOST = '10.1.2.3'
PORT = 9443
USER = 'user'
PASS = 'password'

def main():
 url = "https://{h}:{p}/restconf/data/Cisco-IOS-XE-native:native/hostname".format(h=HOST, p=PORT)
 headers = {'Content-Type': 'application/ ',
 'Accept': 'application/ '}
 response = requests.get(url, auth=(USER, PASS),
 headers=headers, verify=False)
 print(response.text)

if __name__ == '__main__':
 sys.exit(main())

```

An engineer creates a Python script using RESTCONF to display hostname information. The code must be completed so that it can be tested. Which string completes the highlighted areas in the exhibit?

- A. yang-data+json
- B. yang +json
- C. yang.data+json
- D. json

**Answer: A**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/166/b\\_166\\_programmability\\_cg/restconf\\_prog\\_int.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/166/b_166_programmability_cg/restconf_prog_int.html)

### Question: 15

Which statement is true for Cisco IOS XE Software?

- A. RESTCONF supports JSON and XML and NETCONF supports XML.
- B. RESTCONF supports XML and NETCONF supports JSON and XML.
- C. RESTCONF and NETCONF supports JSON and XML.
- D. RESTCONF supports XML and NETCONF supports JSON.

**Answer: A**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/169/b\\_169\\_programmability\\_cg/restconf\\_programmable\\_interface.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/169/b_169_programmability_cg/restconf_programmable_interface.html)

### Question: 16

Which curl command is used to update the SNMP community of network ID "1234567" to read-only?

```
curl -L -H 'X-Cisco-Meraki-API-Key: <key>' \
-H 'Content-Type: application/json' \
-X PUT --data-binary '{ \
 "access": "users", \
 "communitystring": "readonly" }' \
'https://api.meraki.com/api/v0/networks/1234567/snmpsettings'
```

```
curl -L -H 'X-Cisco-Meraki-API-Key: <key>' \
-H 'Content-Type: application/json' \
-X PUT --data-binary '{ \
 "access": "community", \
 "communitystring": "readonly" }' \
'https://api.meraki.com/api/v0/networks/1234567/snmpSettings'
```

```
curl -L -H 'X-Cisco-Meraki-API-Key: <key>' \
-H 'Content-Type: application/json' \
-X PUT --data-binary '{ \
 "access": "users", \
 "username": "snmp", \
 "passphrase": "readonly" }' \
'https://api.meraki.com/api/v0/networks/1234567/snmpSettings'
```

```
curl -L -H 'X-Cisco-Meraki-API-Key: <key>' \
-H 'Content-Type: application/json' \
-X POST --data-binary '{ \
 "access": "community", \
 "communitystring": "readonly" }' \
'https://api.meraki.com/api/v0/networks/1234567/snmpSettings'
```

- A. Option A B. Option B C. Option C D. Option D

**Answer: B**

Explanation:

PUT is used to update the snmp network ID. The access has to be community and not users. Therefore, option B is correct.

### Question: 17

Refer to the exhibit.

```
module: ietf-ip
augment /if:interfaces/if:interface: +--rw ipv4!
 I +--rw enabled? boolean
 I +--rw forwarding? boolean
 I +--rw mtu? uint16
 I +--rw address* [ip]
 I +--rw ip
 1 | 4--rw (subnet) inet:ipv4-address-no-zone
 1 1 1 +--i(prefix-length)
 Illi 4--rw prefix-length?
 1 1 1 +--:(netmask) uint8
 I | | 4--rw netmask?
 I | | +--ro origin? yang:dotted-guad (ipv4-non-contiguous-netmasks)? ip-address-
 1 4--rw neighbor* [ip] origin
 I 4--rw ip inet:ipv4-address-no-zone
 | +--rw link-layer-address yang:phys-address
```

Which NETCONF statement type is represented by +--rw address\* [ip]?

- A. list
- B. leaf-list
- C. container
- D. submodule

**Answer: A**

Explanation:

Symbols after data node names: "?" means an optional node, "!" means a presence container, and "\*" denotes a list and leaf-list.

### Question: 18

The automation engineer must replace device configuration using RESTCONF. How is this configured using the Python library Requests?

- A. delete()
- B. post()
- C. put()
- D. patch()

**Answer: C**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/166/b\\_166\\_programmability\\_cg/restconf\\_prog\\_int.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/166/b_166_programmability_cg/restconf_prog_int.html)

### Question: 19

Which two Netmiko methods are used to configure a device? (Choose two.)

- A. send\_config()
- B. send\_control\_from\_file()
- C. send\_config\_set()
- D. send\_command()
- E. send\_config\_from\_file()

**Answer: CE**

Explanation:

Reference: <https://pynet.twb-tech.com/blog/automation/netmiko.html>

### Question: 20

Refer to the exhibit.

```
- name: Create VRFs as defined by local_vrfs
 ios_vrf:
 vrfs: "{{ local_vrfs }}"
 state:
 register: addvrf
```

An engineer creates an Ansible playbook to configure VRF information using a local\_vrfs variable.

The code must be completed so that it can be tested. Which string completes the code?

- A. present
- B. up
- C. on
- D. active

**Answer: A**

Explanation:

Reference: [https://docs.ansible.com/ansible/latest/modules/ios\\_vrf\\_module.html](https://docs.ansible.com/ansible/latest/modules/ios_vrf_module.html)

## Question: 21

DRAG DROP

Drag and drop the commands to the Ansible playbook that applies configuration to an interface on a Cisco IOS XE device. Not all options are used.

**Answer Area**

ioscmd	interface	<pre>- name: configure interface settings   [ ]:   lines:     -ip address 172.31.1.1 255.255.255.0     -no shutdown     [ ]: interface GigabitEthernet1/0</pre>
parents	iosxe	
iosconfig	ios_config	

**Answer:**

Explanation:

```
name: configure interface settings
```

```
lines:
```

```
 -ip address 172.31.1.1 255.255.255.0
```

```
 -no shutdown
```

```
 []: interface GigabitEthernet1/0
```

Reference: <http://imxing.cn/?p=464>

## Question: 22

Refer to the exhibit.

```
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
 <establish-subscription
```

```
xmlns="urn:ietf:params:xml:ns:yang:ietf-event-notifications"
xmlns:yp="urn:ietf:params:xml:ns:yang:ietf-yang-push">
<stream>yp:yang-push</stream>
<yp:xpath-filter>/mdt-oper:mdt-oper-data/mdt-subscriptions</yp:xpath-filter>
<yp:
 >1000</yp:
>
</establish-subscription>
</rpc>
```

Which XML tag completes this NETCONF telemetry subscription with a Cisco IOS XE device?

- A. crontab
- B. cadence
- C. frequency
- D. period

**Answer: D**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1610/b\\_1610\\_programmability\\_cg/model\\_driven\\_telemetry.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1610/b_1610_programmability_cg/model_driven_telemetry.html)

### Question: 23

Which two statements are benefits of YANG-push telemetry data over traditional data collection methods? (Choose two.)

- A. The subscription requests use less bandwidth than SNMP polls.
- B. It uses UDP rather than TCP.
- C. You can precisely define data subscriptions.
- D. It scales better than SNMP.
- E. It is supported on more devices than SNMP.

**Answer: AC**

Explanation:

Reference: <https://tools.ietf.org/id/draft-song-ntf-01.html>

### Question: 24

Fill in the blank to complete the statement.

\_\_\_\_\_ is a solution for automating the configuration of a device when it is first powered on, using DHCP and TFTP.

**Answer: ZTP**

Explanation:

Reference: <https://developer.cisco.com/docs/ios-xe/#!day-zero-provisioning-quick-start-guide>

### Question: 25

Which tag is required when establishing a YANG-push subscription with a Cisco IOS XE device?

- A. <yp:period>
- B. <yp:subscription-result>
- C. <yp:subscription-id>
- D. <yp:xpath-filter>

**Answer: D**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1612/b\\_1612\\_programmability\\_cg/model\\_driven\\_telemetry.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1612/b_1612_programmability_cg/model_driven_telemetry.html)

### Question: 26

Refer to the exhibits.

```
front device info import ios xel from ncclient import manager import xmltodict
```

```
netconf_filter = open("filter-ietf-interfaces.xml").read()
```

```
if __name__ == '__main__':
```

```
 with manager.connect(host=ios xel("address"), port=ios+xel("port"), username=ios+xel("username"), password=ios+xel("password"),
 hostkey_verify=False) as m:
```

```
 netconfreply = m.get(netcongfilter)
```

```
 intf_details = xmltodict.parse(netconf_reply.xml)("rpc-reply")["data"] intfconfig = intf_details("interfaces")["interface"]
 intfinfo = intf_details("interfaces-state")["interface"]
```

```
 print("")
```

```
 print("Interface Details:")
```

```
 print(" Name: {}".format(intfconfig["name"]))
```

```
 print(" Description: {}".format(intfconfig["description"]))
```

```
 print(" Type: {}".format(intfconfig["type"]))
```

```
 print(" MAC Address: {}".format(intfinfo["phys-address"]))
```

```
 print(" Packet Input: {}".format(intfinfo["statistics"]["in-unicast-pkts"])) print(" Packet Output: {}".format(intf
 info["statistics"]["out-unicast-pkts"]))
```

```
<filter>
```

```
<interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
```

```
<interface>
```

```
<name>GigabitEthernet2</name>
```

```
</interface>
```

```
</interfaces>
```

```
<interfaces-state xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
```

```
<interface>
```

```
<name>GigabitEthernet2</name>
```

```
</interface>
```

```
</interfaces-state>
```

```
</filter>
```

An engineer creates a Python scripts using ncclient to display interface information. The code must be completed so that it can be tested. Which expression completes the highlighted section in the format call?

- A. intf\_info
- B. intf\_config
- C. intf\_get
- D. intf\_config[0]

**Answer: B**

Explanation:

The highlighted format cell for print is for the host.

Reference: [https://github.com/CiscoDevNet/dnac-python-path-trace/blob/master/path\\_trace.py](https://github.com/CiscoDevNet/dnac-python-path-trace/blob/master/path_trace.py)

### Question: 27

Refer to the exhibit.

```
from ncclient import manager with manager.connect (
 host='10.0.0.1', port=12022, username='cisco' ,
 password='cisco' , hostkey verify=False,
 allow_agent=False, look_for_keys=False,
 device_params={'name': 'iosxe'}),) as m:
```

What is the correct ncclient method to use to collect the running configuration of a Cisco IOS XE device that uses NETCONF?

- A. config=m.copy\_config(source='running')
- B. config=m.get(source='running')
- C. config=m.collect\_config(source='running')
- D. config=m.get\_config(source='running')

**Answer: D**

Explanation:

Reference: <https://ncclient.readthedocs.io/en/latest/>

### Question: 28

Fill in the blanks to complete this API request against the Cisco SD-WAN vManage Statistics API, which specified a deviceId of 260faff9-2d31-4312-cf96-143b46db0211, a local-color of biz-internet, and a remote-color of gold.

<https://vmanage-ip-address:8443/dataservice/device/app-route/statistics>? 260faff9-2d31-4312-cf96-143b46db0211 biz-internet gold

**Answer: deviceId= ,  
&local-color= ,  
&remote-color=**

Explanation:

Reference:

[https://sdwan-docs.cisco.com/Product\\_Documentation/Command\\_Reference/Command\\_Reference/vManage\\_REST\\_APIs/Real-Time\\_Monitoring\\_APIs/Application-Aware\\_Routing#Statistics](https://sdwan-docs.cisco.com/Product_Documentation/Command_Reference/Command_Reference/vManage_REST_APIs/Real-Time_Monitoring_APIs/Application-Aware_Routing#Statistics)

### Question: 29

What does the command boot ipxe forever switch 1 perform when executed on a Cisco IOS XE device?

- A. It continuously sends DHCP requests for iPXE until the device boots with an image.
- B. It continuously sends DNS requests for iPXE until the device restarts.
- C. It continuously sends DNS requests for iPXE until the device boots with an image.
- D. It continuously sends DHCP requests for iPXE until the device restarts.

**Answer: A**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3850/software/release/16-5/configuration\\_guide/prog/b\\_165\\_prog\\_3850\\_cg/ipxe.html](https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3850/software/release/16-5/configuration_guide/prog/b_165_prog_3850_cg/ipxe.html)

### Question: 30

The Cisco DNA Center Sites API must be used to add a device to a site, but only the site name is available. Which API call must be used to retrieve the site identifier so that the device can be properly added to the network?

- A. /dna/intent/api/site/siteId
- B. /dna/intent/api/site
- C. /dna/intent/api/v1/site
- D. /dna/intent/api/v1/site/siteName

**Answer: C**

Explanation:

Reference: <https://community.cisco.com/t5/networking-blogs/welcome-to-the-dna-center-api-support- community/ba-p/3663632>

### Question: 31

When a Grafana dashboard is built to receive network events from Cisco DNA Center, which integration bundle is enabled to send notifications?

- A. Basic ITSM CMDB Synchronization

- B. DNA Center Rest API
- C. Network Events for REST API Endpoint
- D. Network Issue Monitor and Enrichment for ITSM

**Answer: B**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-3/admin\\_guide/b\\_cisco\\_dna\\_center\\_admin\\_guide\\_1\\_3/b\\_dnac\\_admin\\_guide\\_1\\_2\\_10\\_chapter\\_010.html](https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-3/admin_guide/b_cisco_dna_center_admin_guide_1_3/b_dnac_admin_guide_1_2_10_chapter_010.html)

### Question: 32

Which field must be completed in Cisco DNA Center when a network discovery is initiated?

- A. SNMP read community string
- B. Enable password
- C. NETCONF port
- D. Discovery type

**Answer: A**

Explanation:

Reference: [https://www.cisco.com/c/dam/en\\_us/training-events/product-training/dnac-13/DNAC13\\_AddingDevicesByUsingDiscovery.pdf](https://www.cisco.com/c/dam/en_us/training-events/product-training/dnac-13/DNAC13_AddingDevicesByUsingDiscovery.pdf) (p.26)

### Question: 33

Webhook that are generated by Cisco DNA Center are REST calls with which properties?

- A. JSON payload delivered via PUT
- B. XML payload delivered via POST
- C. JSON payload delivered via POST
- D. XML payload delivered via PUT

**Answer: C**

Explanation:

Reference: <https://developer.cisco.com/docs/dna-center/#!using-id-values-in-rest-requests>

### Question: 34

Which two API calls are used to trigger a device configuration sync in Cisco DNA Center? (Choose two.)

- A. PUT /dna/intent/api/v1/network-device
- B. PUT /dna/intent/api/v1/network-device/sync-all
- C. PUT /dna/intent/api/v1/network-device/{networkDeviceId}/sync

- D. PUT /dna/intent/api/v1/network-device/sync
- E. POST /dna/intent/api/v1/network-device/{networkDeviceId}/sync

**Answer: AD**

Explanation:

Reference: <https://github.com/CiscoDevNet/DNAC-JAVA-SDK/tree/master/DnacAppApi>

### Question: 35

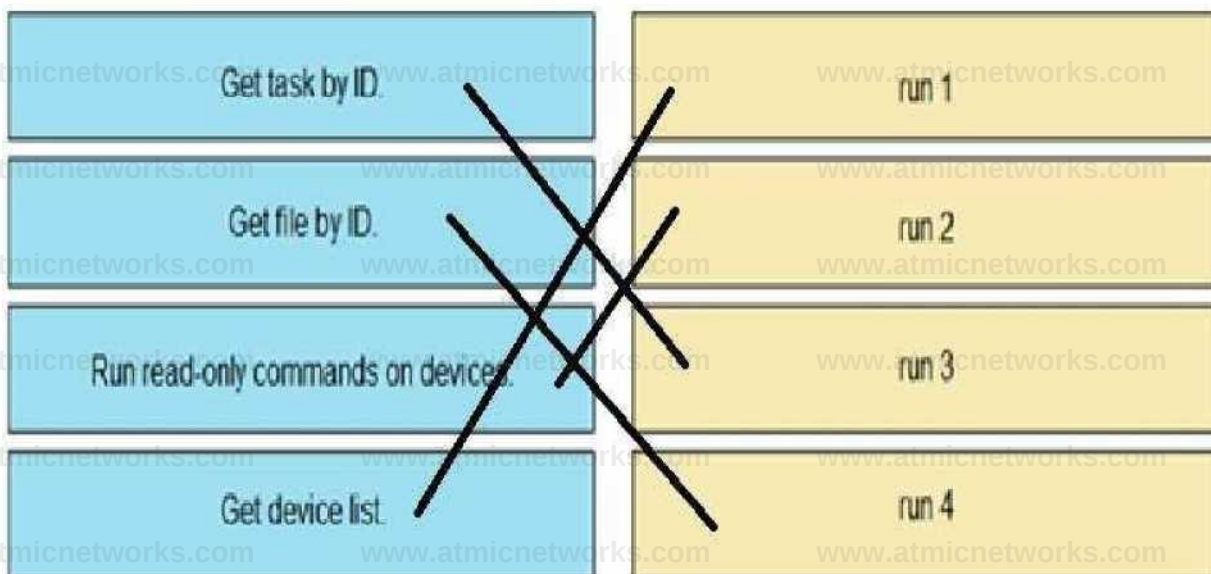
DRAG DROP

A Cisco DNA Center script must be written to retrieve a list of interfaces on a switch. Drag and drop the API calls that are needed to return the list of interfaces using the Command Running APIs from the left into the correct sequence on the right.

Get task by ID	run 1
Get file by ID	run 2
Run read-only commands on devices	run 3
Get device list.	run 4

**Answer:**

Explanation:



Reference: <https://blogs.cisco.com/developer/network-automation-cisco-dna-center-sdk-2>

### Question: 36

A network administrator must troubleshoot a network issue using Cisco DNA Center. Which API request helps to determine issue details, impacted hosts, or suggested actions for the resolution?

- A. /dna/intent/v1/issues
- B. /dna/intent/api/v1/issues
- C. /dna/intent/v1/issue-enrichment-details
- D. /dna/api/v1/client-health/issues

**Answer: C**

Explanation:

The intent/api/v1/issues request determine issue details, hosts impacted and suggests actions for resolution.

### Question: 37

Which two network assurance features are provided by the Cisco DNA Center API? (Choose two.)

- A. site health
- B. license compliance health
- C. client health
- D. Cisco APIC appliance health
- E. Cisco DNA Center appliance health

**Answer: A C**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-2/user-guide/b\\_dnac\\_ug\\_1\\_2/b\\_dnac\\_ug\\_1\\_2\\_chapter\\_010011.html](https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-2/user-guide/b_dnac_ug_1_2/b_dnac_ug_1_2_chapter_010011.html)

### Question: 38

In which direction does the Cisco DNA Center Intent API communicate?

- A. westbound
- B. eastbound
- C. northbound
- D. southbound

**Answer: C**

Explanation:

The Intent API is a Northbound REST API that exposes specific capabilities of the Cisco DNA Center platform. The Intent API provides policy-based abstraction of business intent, allowing focus on an outcome rather than struggling with individual mechanisms steps. The RESTful Cisco DNA Center Intent API uses HTTPS verbs (GET, POST, PUT, and DELETE) with JSON

structures to discover and control the network.

Reference: <https://developer.cisco.com/docs/dna-center/#!cisco-dna-center-platform-overview/intent-api>- northbound

### Question: 39

Which two features are characteristics of software-defined networks when compared to traditional infrastructure? (Choose two.)

- A. configured box-by-box
- B. changed manually
- C. use overlay networks
- D. designed to change
- E. require software development experience to manage

**Answer: CD**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data\\_Center/VMDC/SDN/SDN.html](https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/VMDC/SDN/SDN.html)

### Question: 40

Refer to the exhibit.

```
1 {
2 'data'
3 [
4 {
5 'count': 4,
6 'detailsURL': '',
7 'name': 'vEdge Hardware Health',
8 'status': 'error',
9 'statusList':
10 [
11 (
12 'count': 4,
13 'detailsURL': '/dataservice/device/hardwarehealth/detail?state=normal',
14 'message': '4 {normal-4, warning-0, error-0}',
15 'name*': 'normal*',
16 'status*': 'up*'
17)
18]
19 }
20]
21 }
```

Cisco SD-WAN deployment must be troubleshooted using vManage APIs. A call to vEdge Hardware Health API returns the data in the exhibit (only a portion is shown). If this JSON is converted to a Python dictionary and assigned to the variable “d”, how the status is accessed that is indicated on line 16?

- A. d[data][0][statusList][0][status]
- B. d['data']['statusList']['status']
- C. d{'data'}[0]['statusList'][0]['status']
- D. d['data'][0]['statusList'][0]['status']

**Answer: D**

Explanation:

The 0s in option AC and D are not logical in this scenario. The status tag already takes care of the error message.

### Question: 41

Information about a rebooted device needs to be displayed with an ID of 260faff9-2d31-4312-cf96-143b46db0211 using the Cisco SD-WAN vManage Administration APIs. The API documentation states that deviceId is a required request parameter. Fill in the blank to create the REST call.

`https://vmanage-ip-address:8443/dataservice/device/action/reboot [ ] 260faff9-2d31-4312-cf96-143b46db0211`

**Answer: ?deviceId=**

Explanation:

Reference: [https://sdwan-docs.cisco.com/Product\\_Documentation/Command\\_Reference/Command\\_Reference/vManage\\_REST\\_APIs/Software\\_Maintenance\\_APIs/Reboot\\_Device](https://sdwan-docs.cisco.com/Product_Documentation/Command_Reference/Command_Reference/vManage_REST_APIs/Software_Maintenance_APIs/Reboot_Device)

### Question: 42

What is the purpose of using the Cisco SD-WAN vManage Certificate Management API?

- A. to generate a CSR
- B. to allocate resources to the certificate server
- C. to request a certificate from the certificate server
- D. to enable vManage Center

**Answer: A**

Explanation:

Reference: <https://www.cisco.com/c/en/us/td/docs/routers/sdwan/configuration/sdwan-xe-gs-book/cisco-sd-wan-overlay-network-bringup.html>

### Question: 43

Which action allows for creating a Python script to pull inventory for Cisco SD-WAN Viptela devices using the Viptela library in the code?

- A. `from urllib.request import Viptela`
- B. `from viptela.devices import Viptela`
- C. `from viptela.viptela import Viptela`
- D. `from viptela.library import Viptela`

**Answer: C**

Explanation:

The vptela.devices import vptela can be used to put inventory from Cisco SD WAN vptela devices.

#### **Question: 44**

What is primary purpose of using the Cisco SD-WAN vManage Certificate Management API?

- A. to securely deploy vManage
- B. to report an issue to Cisco TAC
- C. to install signed certificates
- D. to contact Enterprise Certificate Authority

**Answer: A**

Explanation:

Reference: [https://sdwan-docs.cisco.com/Product\\_Documentation/vManage\\_Help/Release\\_17.1/Configuration/Certificates](https://sdwan-docs.cisco.com/Product_Documentation/vManage_Help/Release_17.1/Configuration/Certificates)

#### **Question: 45**

Fill in the blank to complete the URL for the Cisco SD-WAN API that retrieves a list of users that are logged into a device.

`http://<vmanage-ip-address>/dataservice/device/deviceid=<deviceid>`

**Answer: users?**

Explanation:

<https://vmanage-ip-address/dataservice/device/interface?deviceid=deviceid>

Reference: [https://sdwan-docs.cisco.com/Product\\_Documentation/Command\\_Reference/Command\\_Reference/vManage\\_REST\\_APIs/Real-Time\\_Monitoring\\_APIs/Interface](https://sdwan-docs.cisco.com/Product_Documentation/Command_Reference/Command_Reference/vManage_REST_APIs/Real-Time_Monitoring_APIs/Interface)

#### **Question: 46**

Which two API calls must be issued to attach a device template in Cisco SD-WAN? (Choose two.)

- A. "monitor device action status" GET API request with the device ID to display the status of the attach action
- B. "monitor device action status" GET API request with the process ID to display the status of the attach action
- C. PUT call to initiate the attach action
- D. POST call to initiate the attach action
- E. GET call to initiate the attach action

**Answer: BD**

Explanation:

Reference: [https://sdwan-docs.cisco.com/Product\\_Documentation/Command\\_Reference/Command\\_Reference/vManage\\_REST\\_APIs/Device\\_Configuration\\_APIs/Device\\_Templates](https://sdwan-docs.cisco.com/Product_Documentation/Command_Reference/Command_Reference/vManage_REST_APIs/Device_Configuration_APIs/Device_Templates)

**Question: 47**

During a network outage, a network administrator used the Cisco SD-WAN vManage Troubleshooting Dashboard APIs to troubleshoot the cause of the issue. Which detail is captured during troubleshooting with these APIs?

- A. VPN health
- B. public cloud resources
- C. connections summary
- D. OMP connection health

**Answer: C**

Explanation:

Reference: [https://sdwan-docs.cisco.com/Product\\_Documentation/Command\\_Reference/Command\\_Reference/vManage\\_REST\\_APIs/Troubleshooting\\_APIs/Dashboard](https://sdwan-docs.cisco.com/Product_Documentation/Command_Reference/Command_Reference/vManage_REST_APIs/Troubleshooting_APIs/Dashboard)

**Question: 48**

Refer to the exhibit.

```
{
 'data':
 [
 {
 'availableVersions': [],
 'chassisNumber': '4af9e049-0052-47e9-83af-81a5825f7ffe',
 'deviceIP': '4.4.4.60',
 'deviceModel': 'vedge-cloud',
 'deviceType': 'vedge',
 'host-name': 'vedge01',
 ...
 }
]
}
```

A Python script has been created that calls the Cisco SD-WAN vManage Device Inventory API to get the list of vEdges. The JSON data that returns to a Python dictionary has been converted and assigned to a variable named "d". A portion of the JSON is shown in the exhibit. Which code will complete the expression hostname= to access the hostname?

- A. d["data"][0]["host-name"]
- B. d[data][0][host-name]
- C. d("data")[0]("host-name")
- D. d["host-name"]["data"] {"0"}

**Answer: A**

Explanation:

The double-quotations are a necessary syntax of Python. And for the json portion doesn't use parentheses. It always uses brackets. d["data"][0]["host-name"] is the only logical answer.

### Question: 49

Fill in the blank to complete the URL for an API call to Cisco SD-WAN to display the history of the Bidirectional Forwarding Detection sessions that run on a vEdge router.

**https://<vmanage-ip-address>/dataservice/device/**

**deviceid=<deviceid>**

**Answer: bfd/history?**

Explanation:

<https://vmanage-ip-address/dataservice/device/bfd/synced/sessions?deviceId=deviceid>

Reference: [https://sdwan-docs.cisco.com/Product\\_Documentation/Command\\_Reference/Command\\_Reference/vManage\\_REST\\_APIs/Real-Time\\_Monitoring\\_APIs/BFD](https://sdwan-docs.cisco.com/Product_Documentation/Command_Reference/Command_Reference/vManage_REST_APIs/Real-Time_Monitoring_APIs/BFD)

### Question: 50

Refer to the exhibit.

`"https://vmanage-ip-address:8443/dataservice/template/policy/vsmart/activate/{policyId}"`

A Python script must be created to deactivate vSmart Policy Cisco SD-WAN vManage Configuration APIs. The documentation states the URL is as shown in the exhibit for this REST call using POST, and that "policyId" is a required request parameter. Which line of Python code makes this call, assuming the variable "s" is a valid Requests session object and the variable "policy-id" is the policyId?

- A. `s.port('https://vmanage:8443/dataservice/template/policy/vsmart/activate?policyId=%s' % policy_id)`
- B. `s.port('https://vmanage:8443/dataservice/template/policy/vsmart/activate/%s' % policy_id)`
- C. `s.port('https://vmanage:8443/dataservice/template/policy/vsmart/activate&policyId=%s' % policy_id)`
- D. `s.port('https://vmanage:8443/dataservice/template/policy/vsmart/activate/', data = {'policyId': policy_id})`

**Answer: B**

Explanation:

### Question: 51

A configuration has been made to add to every switch port a new port description. The script worked initially, but after a few seconds, an HTTP 429 status code was received. What causes this error message from the Meraki cloud?

- A. The wrong API key is used to query the data.
- B. The rate limit of the Cisco Meraki API is exceeded.
- C. The API key has expired.
- D. The device goes offline while you poll the API dashboard.

**Answer: B**

Explanation:

Reference: <https://community.meraki.com/t5/Developers-APIs/my-API-Limit-exceed-and-key-is-not-working/td-p/64034>

### Question: 52

Which Python snippet receives a Meraki webhook request?

- A** `@app.route('/mynet/webhook', methods=['PUT']) @app.accept_body(WebhookSchema) def receive_webhook(**kwargs): send_sms_alert(kwargs['alertType'])`
- B `@app.route('/mynet/webhook', methods=['GET']) @app.accept_body(WebhookSchema) def receive_webhook(**kwargs):`

```
send_sms_alert(kwargs['alertType'])
```

```
@app.route('/my-net/webhook', methods=['PATCH']) @app.accept_body(WebhookSchema)
def receive_webhook(**kwargs):
 send_sms_alert(kwargs['alertType'])
```

```
@app.route('/my-net/webhook', methods=['POST']) @app.accept_body(WebhookSchema)
def receive_webhook(**kwargs):
 send_sms_alert(kwargs['alertType'])
```

A. Option A B. Option B C. Option C D. Option D

**Answer: D**

Explanation:

Reference: <https://github.com/CiscoDevNet/dnav3-code/blob/master/intro-meraki/meraki-07-webhooks/webhookreceiver.py>

### Question: 53

Which two types of solution are built with the Meraki Location Scanning API? (Choose two.)

- A. networking automation
- B. mapping
- C. guest Wi-Fi
- D. Sense
- E. wayfinder

**Answer: BE**

Explanation:

Reference: <https://developer.cisco.com/meraki/build/wayfinding-mapwize/>

### Question: 54

Which URI with the request body of Request body:

{"name": "Test", "organizationId": "<org\_id>", "type": "appliance"} creates a new Meraki network called "Test", when using APIs?

- A. PUT [https://api.meraki.com/api/v0/organizations/<org\\_id>/networks](https://api.meraki.com/api/v0/organizations/<org_id>/networks)
- B. POST <https://api.meraki.com/api/v0/networks>
- C. POST [https://api.meraki.com/api/v0/organizations/<org\\_id>/networks/<net\\_id>](https://api.meraki.com/api/v0/organizations/<org_id>/networks/<net_id>)
- D. POST [https://api.meraki.com/api/v0/organizations/<org\\_id>/networks](https://api.meraki.com/api/v0/organizations/<org_id>/networks)

**Answer: D**

Explanation:

Reference: [https://documentation.meraki.com/zGeneral\\_Administration/Other\\_Topics/](https://documentation.meraki.com/zGeneral_Administration/Other_Topics/)

The\_Cisco\_Meraki\_Dashboard\_API

### Question: 55

With the MV Sense API, which REST endpoint provides LUX level?

- A. /merakimv/XXXX-XXXX-XXXX/light
- B. /merakimv/XXXX-XXXX-XXXX/raw\_detections
- C. /merakimv/XXXX-XXXX-XXXX/0
- D. /merakimv/XXXX-XXXX-XXXX/zones

**Answer: A**

Explanation:

Reference: <https://developer.cisco.com/meraki/mv-sense/#!mqtt/lux-light-levels>

### Question: 56

Which REST endpoint is used to create a Cisco Meraki network?

- A. POST /organizations/{organizationId}/networks
- B. PATCH /networks{networkId}
- C. PUT /organizations/{organizationId}/networks
- D. POST /networks{networkId}

**Answer: A**

Explanation:

Reference: [https://documentation.meraki.com/zGeneral\\_Administration/Other\\_Topics/](https://documentation.meraki.com/zGeneral_Administration/Other_Topics/)

The\_Cisco\_Meraki\_Dashboard\_API

### Question: 57

Which URI removes an administrator from a Meraki network using an API call?

- A. DELETE [https://api.meraki.com/api/v0/organizations/<org\\_id>/admins/<admin\\_id>](https://api.meraki.com/api/v0/organizations/<org_id>/admins/<admin_id>)
- B. DELETE [https://api.meraki.com/api/v0/admins/<admin\\_id>](https://api.meraki.com/api/v0/admins/<admin_id>)
- C. PUT [https://api.meraki.com/api/v0/organizations/<org\\_id>/admins/?delete=<admin\\_id>](https://api.meraki.com/api/v0/organizations/<org_id>/admins/?delete=<admin_id>)
- D. DELETE [https://api.meraki.com/api/v0/organizations/<org\\_id>/admins/<user>](https://api.meraki.com/api/v0/organizations/<org_id>/admins/<user>)

**Answer: A**

Explanation:

NOTE: The options are fundamentally wrong. The answer is correct. It should be  
api.meraki.com/api/v0/organizations/

Reference: [https://documentation.meraki.com/zGeneral\\_Administration/Other\\_Topics/](https://documentation.meraki.com/zGeneral_Administration/Other_Topics/)

The\_Cisco\_Meraki\_Dashboard\_API (see delete an administrator)

### Question: 58

Refer to the exhibit.

```
{
 "id": "L_123456",
 "organizationId": 1357924,
 "name": "Long Island Office", "timeZone": "America/Los_Angeles"
 "tags": "tag1 tag2",
 "type": "combined",
 "disableMyMerakiCom": false
}
```

Which two parameters are mandatory when the Cisco Meraki API is used to create a network? (Choose two.)

- A. timezone
- B. disableMyMerakiCom
- C. type
- D. tags
- E. organizationId

**Answer: CE**

Explanation:

Without organizationId and timezone, you will not be able to create a network. OrganizationId is necessary for the connection. Timezone is necessary for the network id.

### Question: 59

Which HTTP request is valid to create a new wireless network called "Demo Wireless Network" in the organization "QASD-EROA-MKAW"?

A POST /organizations/QASD-EROA-MKAW/networks

Host: https://api.meraki.com/api/v0 {

```
"name": "Demo Wireless Network", "organizationId": "QASD-EROA-MKAW", "type": "wireless" }
```

B POST /organizations/networks

Host: https://api.meraki.com/api/v0

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

{

"name": "Demo Wireless Network", "organizationId": "QASD-EROA-MKAW", "type": "combined" }

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

C POST /organizations/networks

www.atmicnetworks.com

Host: https://api.meraki.com/api/v0

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

{

"name": "Demo Wireless Network", "organizationId": "QASD-EROA-MKAW", "type": "wireless" }

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

www.atmicnetworks.com

□ POST /organizations/QASD-EROA-MKAW/networks

www.atmicnetworks.com

Host: https://api.meraki.com/api/v0

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www.atmicnetworks.com

www.atmicnetworks.com

{

"name": "Demo Wireless Network",

www.atmicnetworks.com

"type": "combined" }

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Explanation:

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer: A**

Reference:

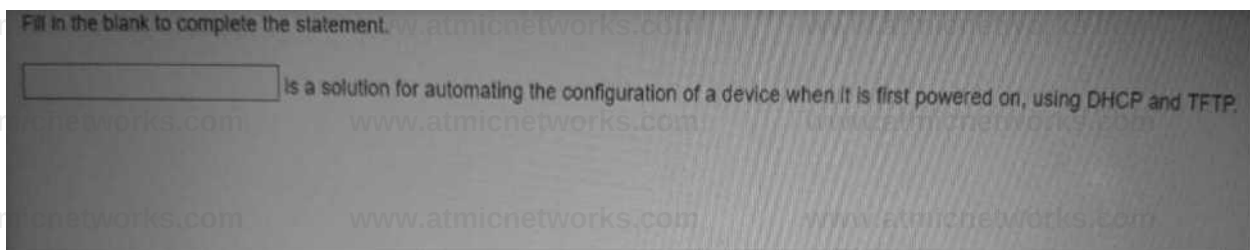
[https://documentation.meraki.com/zGeneral\\_Administration/Other\\_Topics/](https://documentation.meraki.com/zGeneral_Administration/Other_Topics/)

The\_Cisco\_Meraki\_Dashboard\_API

### Question: 60

**Answer: ZTP**

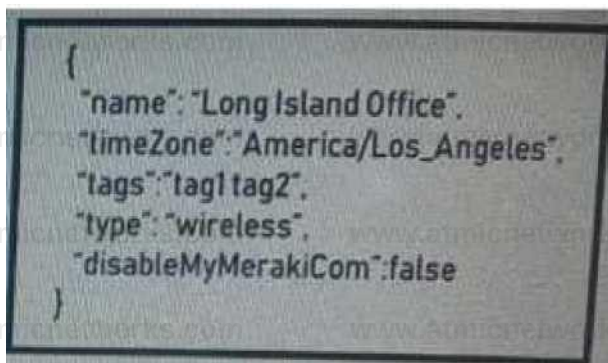
Fill in the blank to complete the statement.



Explanation:

### Question: 61

Refer to the Exhibit.



Which two parameters are mandatory when the Cisco Meraki API is used to create a network? (Choose two)

- A. tags
- B. name
- C. time zone
- D. type
- E. disableMyMerakiCom

**Answer: BD**

Explanation:

### Question: 62

When the Cisco DNA center intent API is used as part of an automation process what prompts receiving a HTTP 206 status code on a call?

- A. The client authentication credentials that are included with the request are missing or invalid.
- B. The client made a request that has been received but not yet acted upon.
- C. The client made a request for partial content matching a range header.
- D. The client request was successful, but there is no content associated with the request.

**Answer: C**

Explanation:

### Question: 63

Refer to the exhibit.

```
headers = {'Content-Type': 'application/yang-data+json',
 'Accept': 'application/yang-data+json'}

response =
requests.get("https://10.10.20.48:443/restconf/data/ietf-interfaces:interfaces",
 auth=("cisco", "cisco_1234!"),
 headers=headers,
 verify=False
)

i=0
for interface in interfaces:
 if "Loopback" in interface["name"]:
 print(interfaces[i]["ietf-ip:ipv4"]["address"][0]["ip"])
 i=i+1
```

A Python script is used to configure a Cisco IOS XE device. The script must be updated to print the IP addresses of all the loopback interfaces. Which statement should be added before the loop?

- A. `interfaces = response.json()["ietf-interfaces:interfaces"]`
- B. `interface = response.json()["ietf-interfaces:interfaces"]`
- C. `interface = response.json()["ietf-interfaces:interfaces"]["interface"]`
- D. `interfaces = response.json()["ietf-interfaces:interfaces"]["interface"]`

**Answer: A**

Explanation:

Reference: [https://blog.wimwauters.com/networkprogrammability/2020-04-04\\_restconf\\_python/](https://blog.wimwauters.com/networkprogrammability/2020-04-04_restconf_python/)

### Question: 64

What is a difference between OpenConfig and native YANG data models?

- A. Native models are developed by vendors and designed to intergrate to features or configurations that are relevant only to that platform.
- B. openconfig models are developed by venders and designed to integrate to features or configurations that are relevant only to that platform.
- C. Native models are designed to be independent of the underlying platform and are developed by vendors and standards bodies, such as the IETF.
- D. Native models are developed by individual developers and designed to apply configurations on platforms.

**Answer: A**

Explanation:

### Question: 65

Which environment must be enabled to complete the zero-touch provisioning process on a IOS XE device?

- A. TCL
- B. ZTP Open Service container
- C. EEM
- D. Guest shell

**Answer: D**

Explanation:

### Question: 66

Which function is available in NETCONF and unavailable is RESTCONF?

- A. Configuration changes are automatically activated.
- B. Uses the YANG data models to communicate.
- C. Support JSON and data encoding.
- D. Validates the content of a candidate datastore.

**Answer: B**

Explanation:

### Question: 67

When accessing the /device-detail endpoint in cisco DNA Center, what is an acceptable searchBy parameter value?

- A. Platform type

- B. IP address
- C. Software verison
- D. MAC address

**Answer: D**

Explanation:

### Question: 68

Which setting is used for the dampening period when configuring an on-change publication for YANG-push versus Openconfig?

- A. Null
- B. -1
- C. 0
- D. 1000

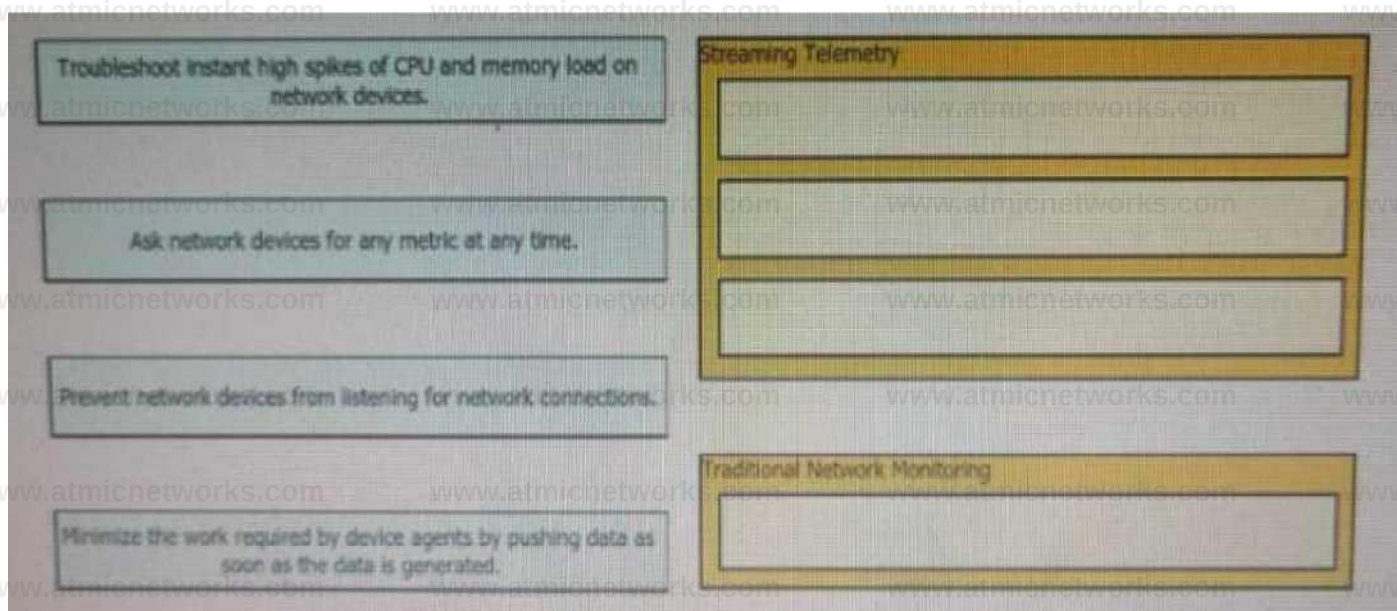
**Answer: C**

Explanation:

### Question: 69

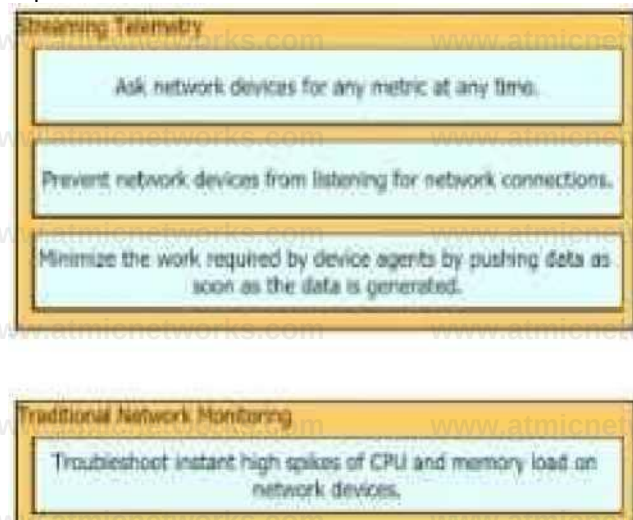
DRAG DROP

Drag and drop the characteristic from the left onto the monitoring type described on the right



**Answer:**

**Explanation:**



**Reference:**

[https://www.cisco.com/c/en/us/td/docs/iosxr/ncs5500/telemetry/70x/b-telemetry-cg-ncs5500-70x/b-telemetry-cg-ncs5500-70x\\_chapter\\_010.html](https://www.cisco.com/c/en/us/td/docs/iosxr/ncs5500/telemetry/70x/b-telemetry-cg-ncs5500-70x/b-telemetry-cg-ncs5500-70x_chapter_010.html)

**Question: 70**

Refer to the exhibit:

```

{
 "ietf-interfaces:interfaces": {
 "interface": {
 "name": "GigabitEthernet1",
 "description": "MANAGEMENT INTERFACE",
 "type": "iana-if-type:ethernetCsmacd",
 "enabled": true,
 "ietf-ip:ipv4": {
 "address": {
 "ip": "10.10.20.48",
 "netmask": "255.255.255.0"
 }
 },
 "ietf-ip:ipv6": {}
 }
 }
}

```

A RESTCONF GET request is sent to a Cisco IOS XE device. A portion of the response is shown in the exhibit. Which module name corresponds to the YANG model referenced in the request?

- A. left-intergaces:left-ipv4
- B. lana-if-type:enthernetCsmacd
- C. left-interface:interfaces
- D. left-interfaces

**Answer: C**

Explanation:

### Question: 71

Which two factors influence the location accuracy of a device using scanning APIs? (Choose two)

- A. AP placement
- B. Device manufacturer/OS
- C. Client device orientation
- D. Battery life of the device
- E. Amount of device antennas

**Answer: C, E**

Explanation:

### Question: 72

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing in the Ansible

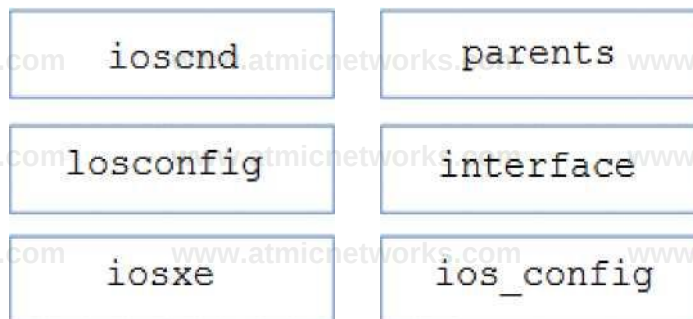
playbook to apply the configuration to an interface on a Cisco IOS XE device. Not all options are used.

**name: configure interface settings**

**lines:**

- ip address 172.31.1.1 255.255.255.0
- no shutdown

**: interface GigabitEthernet1/0**



**Answer:**

Explanation:

```
- name: configure interface settings
 ios_config:
 lines:
 - ip address 172.31.1.1 255.255.255.0
 - no shutdown
 parents: interface GigabitEthernet1/0
```

**Question: 73**

An engineer stored source code in a Git repository and is ready to develop a new feature. The production release is stored in the "master" branch. Which command create the new feature in a separate branch called "feature" and check out the new version?

```
git branch \
https://git.cisco.com/python_programmer/device_status:feature
git checkout device_status:feature

git remote add branch python_programmer/device_status:feature
git pull

git branch feature
git checkout feature

git remote add branch \
https://git.cisco.com/python_programmer/device_status:feature
git push
```

A. Option A B. Option B C. Option C D. Option D

**Answer: C**

Explanation:

Reference: <https://www.atlassian.com/git/tutorials/comparing-workflows/feature-branch-workflow>

#### Question: 74

Which two Cisco DNA center features are needed to add legacy on the platform? (Choose two.)

- A. Multivendor SDK support
- B. Trusted device profile update
- C. Device package creation
- D. Device package download
- E. Device profile replication

**Answer: A, D**

Explanation:

#### Question: 75

What are two characteristics of synchronous calls to APIs? (Choose two)

- A. They block until a response is returned from the servers.
- B. They make an application less portable, so asynchronous calls are preferred.
- C. They add perceived latency to an application if data is not received.
- D. Calls are limited to specific programming languages.
- E. They do not block while waiting for the API to be processed.

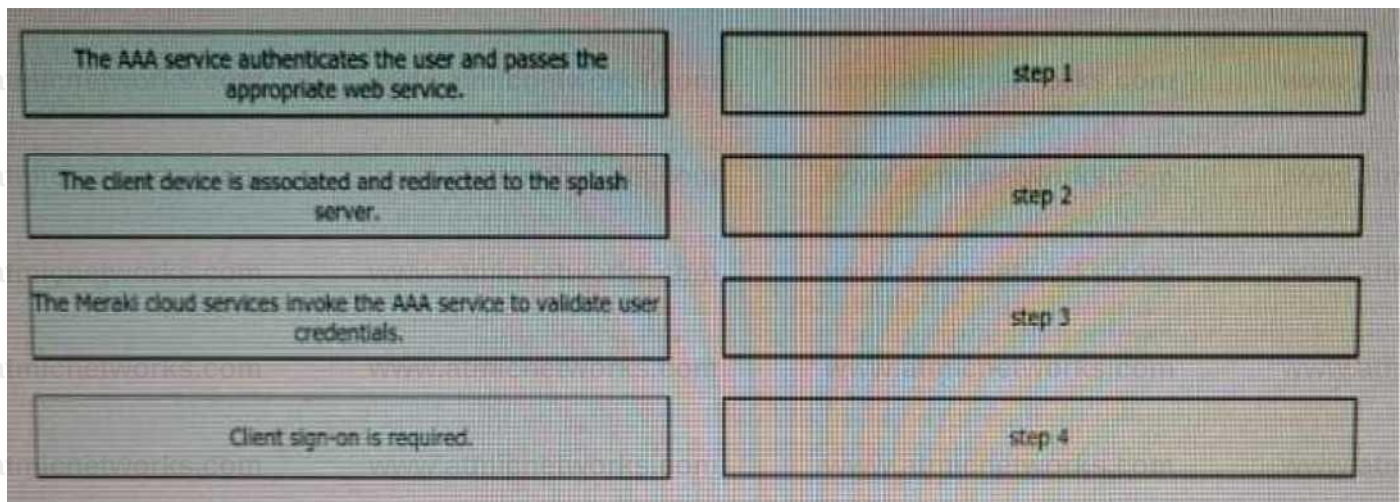
**Answer: A, C**

Explanation:

**Question: 76**

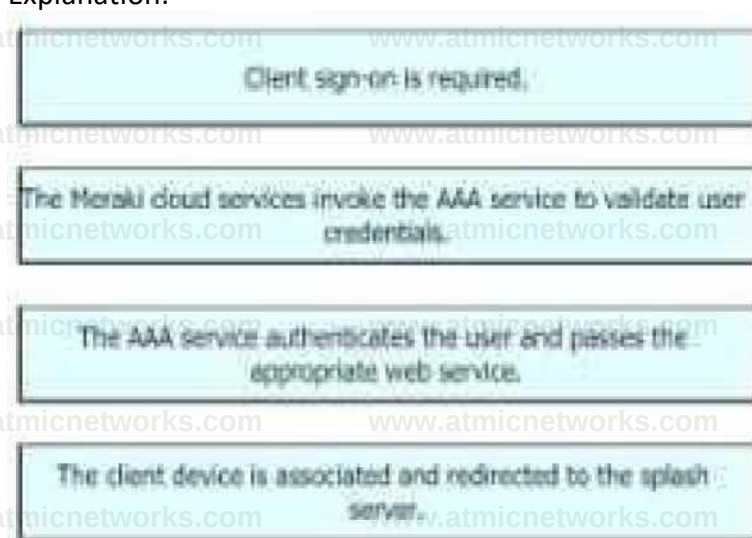
DRAG DROP

Drag and drop the steps from the left into the order on the right to create an end-to-end flow for Meraki Splash Screen using EXCAP.



**Answer:**

Explanation:



**Question: 77**

DRAG DROP

```
GET: https://dnacsrv/api/v1/network-device
{
 "response": [
 {
 "type": "Cisco Catalyst 9300 switch",
 "errorCode": null,
 "family": "Switches and Hubs",
 "location": "DC1",
 "role": "ACCESS",
 "macAddress": "a1:2b:30:40:41:50",
 "hostname": "cat_9k_1",
 "serialNumber": "FCW2136L0AK",
 "softwareVersion": "16.6.1",
 "locationName": null,
 "upTime": "13 days, 18:30:33.81",
 "softwareType": "IOS-XE",
 "collectionStatus": "Managed",
 "managementIpAddress": "10.10.22.66",
 "platformId": "C9300-24UX",
 "reachabilityStatus": "Reachable",
 "series": "Cisco Catalyst 9300 Series Switches",
 "snmpContact": "",
 "snmpLocation": ""
 }
]
}
```

Refer to the exhibit. A GET request is issued to the Cisco DNA Center REST API. Drag and drop the GET request URL subpaths from the left onto the objectives on the right. Not all options are used.

```
/api/v1/network-device?softwareType=IOS-XE&softwareVersion=16.4.2
```

```
/api/v1/network-device?location=DC2
```

```
/api/v1/network-device?(softwareType=IOS-XE) AND (softwareVersion=16.4.2)
```

```
/api/v1/network-device?family=Switches and Hubs
```

```
/api/v1/network-device?ipAddress=10.222.10.35
```

```
/api/v1/network-device?snmpLocation=DC2
```

```
/api/v1/network-device?managementIpAddress=10.222.10.35
```

```
/api/v1/network-device?family=cat_9k_1
```

List devices that are configured by using SNMP to be in the DC2 location

List device types

List the device that has an IP address of 10.222.10.35

Display Cisco IOS XE devices that have IOS version 16.4.2

**Answer:**

Explanation:

```
/api/v1/network-device?softwareType=IOS-XE&softwareVersion=16.4.2
```

```
/api/v1/network-device?location=DC2
```

```
/api/v1/network-device?(softwareType=IOS-XE) AND (softwareVersion=16.4.2)
```

```
/api/v1/network-device?family=Switches and Hubs
```

Reference:

[https://meraki.cisco.com/lib/pdf/meraki\\_whitepaper\\_captive\\_portal.pdf](https://meraki.cisco.com/lib/pdf/meraki_whitepaper_captive_portal.pdf)

### Question: 78

Which path do call begin with to implement Cisco DNA Center Intent APIs?

- A. /intent
- B. /dna/v1
- C. /dna/api/intent/v1
- D. /dna/system/api/v1/

**Answer: A**

Explanation:

### Question: 79

What is the purpose of using the Cisco SD-WAN vManage Certificate Management API?

- A. To securely deploy vManage
- B. To contact Enterprise certificate Authority
- C. To install signed certificates
- D. To report an issue to cisco TAC

**Answer: A**

Explanation:

### Question: 80

Refer to the exhibit.

```
https://ios-xe:9443/restconf/data/ietf-routing:routing/routing-
instance=default/
<routing-instance xmlns:"urn:ietf:params:xml:ns:yang:ietf-
routing" xmlns:rt="urn:ietf:params:xml:ns:yang:ietf-routing">
 <name>default</name>
 <description>default-vrf [read-only]</description>
 <routing-protocols>
 <routing-protocol>
 <type>static</type>
 <name>l</name>
 <static-routes>
 <ipv4 xmlns:"urn:ietf:params:xml:ns:yang:ietf-
ipv4-unicast-routing">
 <route>
 <destination-
prefix>0.0.0.0/0</destination-prefix>
 <next-hop>
 <outgoing-
interface>GigabitEthernet1</outgoing-interface>
 </next-hop>
 </route>
 </ipv4>
 </static-routes>
 </routing-protocol>
 </routing-protocols>
</routing-instance>
```

A RESTCONF GET request is sent to a Cisco IOS XE device. The base URL of the request and the response in XML format are shown in the exhibit. What is the YANG data node that is referenced in the response?

- A. Route is a leaf list
- B. Static-routes is a container
- C. Static-router is a list
- D. Routing-instance is a container

**Answer: B**

Explanation:

### Question: 81

A programmer is creating a Meraki webhook python script to send a message to webex teams. Which two elements should be configured to create this script? (Choose two.)

- A. gRPC credentials
- B. Webex teams access token
- C. XML formatted request
- D. User authentication count
- E. Webhook server secret

**Answer: B, E**

Explanation:

### Question: 82

Refer to the exhibit.

```
from ncclient import manager
with manager.connect(
 host='10.0.0.1',
 port=12022,
 username='cisco',
 password='cisco',
 hostkey_verify=False,
 allow_agent=False,
 look_for_keys=False,
 device_params={'name': 'iosxe'},
) as m:
```

Which ncclient method is used to collect the running configuration of a Cisco IOS XE device that uses NETCONF?

- A. config=m.copy\_config(source='running')
- B. config=m.get(source='running')
- C. config=m.collect\_config(source='running')
- D. config=m.get\_config(source='running')

**Answer: D**

Explanation:

**Question: 83**

What is a capability of MV sense MQTT API?

- A. Request and subscribe to historical, current, or real-time data
- B. Automate the configuration of networking device.
- C. Monitor the network and auto adjust for optimal performance
- D. Create email alerts for users that violate the security configuration

**Answer: A**

Explanation:

**Question: 84**

What are two characteristics of REST API calls? (Choose two.)

- A. Unencrypted
- B. Non-cacheable
- C. Stateless
- D. Implemented over http
- E. Parameters passed in the headers

**Answer: B, C**

Explanation:

**Question: 85**

```
Simple Application to run a few commands on a Cisco Device ipaddresses
= ['192.168.0.1', '192.168.0.5', '10.10.10.10'] username = "admin"
password = "cisco123"
commands_to_run=["show ver", "show ip interface brief"] Debug = True

for device in ipaddresses:
 print ("Logging into "+device+", using "+username+"/"+password)

 I We want to execute commands on our device only if Debug=True
 for commands in commands to run:

 print (" Executing "+commands+" on device: "+device)
```

Refer to the exhibit. What is the expected output from the Python code?

```

Logging into 192.168.0.1, using admin/cisco123
Logging into 192.168.0.5, using admin/cisco123
Logging into 10.10.10.10, using admin/cisco123
Executing show ver on device: 192.168.0.1
Executing show ip interface brief on device: 192.168.0.1
Executing show ver on device: 192.168.0.5
Executing show ip interface brief on device: 192.168.0.5
Executing show ver on device: 10.10.10.10
Executing show ip interface brief on device: 10.10.10.10

```

```

Logging into 192.168.0.1, using admin/cisco123
Logging into 192.168.0.5, using admin/cisco123
Logging into 10.10.10.10, using admin/cisco123

```

C. . . . .  
Simple Application to run a few commands on a Cisco Device

```

Logging into 192.168.0.1, using admin/cisco123
we want to execute commands on our device only if Debug=True Executing show ver on
device: 192.168.0.1
Executing show ip interface brief on device: 192.168.0.1
Logging into 192.168.0.5, using admin/cisco123
We want to execute commands on our device only if Debug=True Executing show ver on
device: 192.168.0.5
Executing show ip interface brief on device: 192.168.0.5
Logging into 10.10.10.10, using admin/cisco123
we want to execute commands on our device only if Debug=True Executing show ver on
device: 10.10.10.10
Executing show ip interface brief on device: 10.10.10.10

```

```

Logging into 192.168.0.1, using admin/cisco123
Executing show ver on device: 192.168.0.1
Executing show ip interface brief on device: 192.168.0.1 Logging into
192.168.0.5, using admin/cisco123
Executing show ver on device: 192.168.0.5
Executing show ip interface brief on device: 192.168.0.5 Logging into
10.10.10.10, using admin/cisco123
Executing show ver on device: 10.10.10.10
Executing show ip interface brief on device: 10.10.10.10

```

A. Option A B. Option B C. Option C D. Option D

**Answer: D**

Explanation:

**Question: 86**

A network administrator must troubleshoot a network issue using Cisco DNA Center. Which API request helps to determine issue details, impacted hosts, or suggested actions for the resolution?

- A. /dna/intent/v1/issues
- B. /dna/intent/api/v1/issues
- C. /dna/intent/v1/issue-enrichment-details
- D. /dna/api/v1/client-health/issues

**Answer: C**

**Explanation:**

**Question: 87**

**DRAG DROP**

Drag and drop the code from the bottom onto the box where the code is missing to construct a Python script to automate the process of updating the site-to-site VPN settings of the network. Not all options are used.

```
import requests
```

```
url = "https://api.meraki.com/api/v0/networks/{networkId}/"
```

```
payload = {
```

```
 "mode": "spoke", "hubs": [
 {"hubId": "N_4901849", "useDefaultRoute": True},
 {"hubId": "N_1892489", "useDefaultRoute": False}], "subnets": [
 {"localSubnet": "192.168.1.0/24", "useVpn": True},
 {"localSubnet": "192.168.128.0/24", "useVpn": True}] }
```

```
}
```

```
headers = {
```

```
 'Accept': '*/*',
 'Content-Type': 'application/json'
```

```
response = requests.request("PUT", url, headers=headers,
```

```
 data=payload)
```

```
print(response.text.encode('utf8'))
```

```
"useVpn": True networksVpn
```

```
data=payload siteToSiteVpn
```

**Answer:**

Explanation:

```

import requests

url = "https://api.meraki.com/api/v0/networks/{networkId}/siteToSiteVpn"

payload = {
 "mode": "spoke",
 "hubs": [
 {"hubId": "N_4901849", "useDefaultRoute": True},
 {"hubId": "N_1892489", "useDefaultRoute": False}
],
 "subnets": [
 {"localSubnet": "192.168.1.0/24", "useVpn": True},
 {"localSubnet": "192.168.128.0/24", "useVpn": True}
]
}

headers = {
 'Accept': '*/*',
 'Content-Type': 'application/json'
}

response = requests.request("PUT", url,
 headers=headers,
 data=payload)

print(response.text.encode('utf8'))

```

Reference: <https://developer.cisco.com/meraki/api-v1/#!get-network-appliance-vpn-site-to-site-vpn>

### Question: 88

When working with MV Sense APIs, which type of protocol is MQTT based upon?

- A. publish-subscribe messaging protocol
- B. simple mail transport protocol
- C. heavyweight messaging protocol
- D. computer vision protocol

**Answer: A**

Explanation:

Reference: <https://internetofthingsagenda.techtarget.com/definition/MQTT-MQ-Telemetry-Transport>

### Question: 89

What does Cisco DNA Center use to manage third-party devices?

- A. command runners

- B. multivendor SDK
- C. templates
- D. device packages

**Answer: B**

Explanation:

Reference: <https://developer.cisco.com/docs/dna-center/>

### Question: 90

```

- name: Create Int
 hosts: lab
 gather_facts: no
 vars:
 intlist:
 - 0
 - 1
 - 2
 tasks:
 - name: create int
 ios_interface:
 name: Loopback{{item}}
 enabled: true
```

Refer to the exhibit. Interfaces named Loopback0, Loopback1, and Loopback2 must be created and enabled on a Cisco IOS XE target device in the lab group. Which loop must be added to the end of the Ansible “create int” task?

- A. with\_items: “{{intlist}}”
- B. with\_parent: “{{intlist}}”
- C. with\_list: “{{intlist}}”
- D. with\_groups: “{{intlist}}”

**Answer: A**

Explanation:

### Question: 91

```
headers - {'Content-Type': 'application/yang-data+json', 'Accept': 'application/yang-data+json'}
```

```
data = OrderedDict([('ietf—interfaces:interface', OrderedDict([
 ('name', 'Loopback2'),
 ('type', 'iana-if-type:softwareLoopback'),
 ('ietf-ip:ipv4', OrderedDict([('address', [OrderedDict([('ip', '10.222.234.8'), ('netmask', '255.255.255.0')])])])])])])
```

), B )D

```
response =
requests.put("https://10.10.20.48:443/restconf/data/ietf-interfaces/interface=Loopback2" auth= ("cisco", "cisco 1234!"),
headers=headers, verify=False, json=data
```

Refer to the exhibit. A Python script is used to configure a Cisco IOS XE router. The Loopback2 interface currently has a description of Management2 and an IP address/netmask of 10.222.34.22/32. What is the result of executing the script?

- A. The interface description remains the same.
- B. The router rejects all commands and the configuration remains the same.
- C. The interface is removed from the configuration.
- D. The interface description is removed from the configuration.

**Answer: C**

Explanation:

### Question: 92

What is a capability of Cisco SD-WAN vManage Certificate Management API?

- A. deletes existing installed certificates
- B. distributes the root certificate to client devices
- C. generates SSL certificates
- D. creates certificate signing requests

**Answer: B**

Explanation:

### Question: 93

Refer to the exhibit.

```
- name: configure ntp
 ios_ntp:
 server: 10.1.1.20
 logging: false
 auth: false
```

NTP server 10.1.1.20 must be configured on the target Cisco IOS XE device without using authentication and logging. Which state should be added on a new line at the end of the Ansible task?

- A. state: true
- B. state: started
- C. state: present
- D. state: installed

Explanation:

**Question: 94**

**Answer: C**

```

https://ios-xe:9443/restconf/data/ietf-interfaces:interfaces/
interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
 <interface>
 <name>GigabitEthernet1</name>
 <description>DO NOT TOUCH ME</description>
 <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:ethernetCsmacd</type>
 <enabled>true</enabled>
 <ipv4 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
 <address>
 <ip>10.10.10.10</ip>
 <netmask>255.255.255.0</netmask>
 </address>
 </ipv4>
 <ipv6 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip"/>
 </interface>
 <interface>
 <name>GigabitEthernet2</name>
 <description>WAN Interface</description>
 <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:ethernetCsmacd</type>
 <enabled>true</enabled>
 <ipv4 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
 <address>
 <ip>172.16.12.K</ip>
 <netmask>255.255.255.0</netmask>
 </address>
 </ipv4>
 <ipv6 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip"/>
 </interface>
</interfaces>

```

Refer to the exhibit. A RESTCONF GET request is sent to a Cisco IOS XE device. The base URL of the request and the response in XML format are shown in the exhibit. What are the two YANG data nodes and modules referenced in the response? (Choose two.)

- A. description is a key field defined in the interface list
- B. The ethernetCsmacd type is imported from the iana-if-type module
- C. address is a container defined in the ietf-interfaces module
- D. ipv4 is a container defined in the ietf-ip module
- E. interface has the YANG data node type of container

**Answer: BE**

Explanation:

**Question: 95**

Which script binds a network to a template?

A)

```
import requests
```

```
url = "https://api.meraki.com/api/v0/networks/" \ "{{networkId}}/split" payload = {
 "configTemplateId": "N_23952905", "autoBind": True
}
headers = {
 'Accept': '*/*',
 'Content-Type': 'application/json' }
response = requests.request("POST", url, headers=headers, data=payload)
print(response.text.encode('utf8'))
```

B)

```
import requests
url = "https://api.meraki.com/api/v0/networks/" \ "{{networkId}}/bind"
payload = { "configTemplateId": "N_23952905", "autoBind": False }
headers = {
 'Accept': '*/*', 'Content-Type': 'application/json' }
response = requests.request("POST", url, headers=headers, data=payload)
print(response.text.encode('utf8'))
```

C)

```
import requests
url = "https://api.meraki.com/api/v0/networks/" \ "{{networkId}}/bind"
payload = { "configTemplateId": "N_23952905", "autoBind": False }
headers = {
 'Accept': '*/*', 'Content-Type': 'application/json' }
response = requests.request("PUT", url, headers=headers, data=payload)
print(response.text.encode('utf8'))
```

D)

```
import requests
url = "https://api.meraki.com/api/v0/networks/" \ "{{networkId}}/split" payload = {
 "configTemplateId": "N_23952905", "autoBind": True
}
headers = {
 'Accept': '*/*', 'Content-Type': 'application/json' }
response = requests.request("PUT", url, headers=headers, data=payload)
print(response.text.encode('utf8'))
```

A. Option A B. Option B C. Option C D. Option D

**Answer: D**

**Explanation:**

```
import requests
url = 'https://api.meraki.com/api/v0/networks/' \ "[networkId])/split"
payload = {
 "configTemplateId": "N_23952905", "autoBind": True
}
headers = {
 'Accept': '*/*',
 'Content-Type': 'application/json' }
response = requests.request("POST", url,
 headers=headers,
 data=payload)
print(response.text or "Error: %s" % response.status_code)
```

### Question: 96

An engineer needs to create a new network using the Meraki API. Which HTTP action to the URL [https://api.meraki.com/api/v0/organizations/<new\\_org\\_id>/networks](https://api.meraki.com/api/v0/organizations/<new_org_id>/networks) will result in a 201 response code?

- A. GET
- B. POST
- C. PUT
- D. ADD

**Answer: B**

Explanation:

Reference: <https://httpstatuses.com/201>

### Question: 97

What is a benefit of developing an application in a Python virtual environment?

- A. The application operates in multiple target systems simultaneously.
- B. The application supports concurrency or multithreading.
- C. The application operates across systems that have different operating systems.
- D. The development environment is isolated from Python projects that already exist.

**Answer: D**

Explanation:

Reference: <https://hackernoon.com/concurrent-programming-in-python-is-not-what-you-think-it-isb6439c3f3e6a>

### Question: 98

Which solution is used for automating the configuration of a device when it is first powered on, using DHCP and TFTP?

- A. PnP
- B. iPX
- C. SNMP
- D. ZTP

**Answer: D**

Explanation:

### Question: 99

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to perform the login operation and security



```
import requests
```

```
login_url = 'https://10.20.20.254:8443/j_security_check'
```

```
session = requests.session()
```

```
if b'<html>' in response.content: print('Login Failed') else:
 print('Login Success')
```

```
response = session.post(url=login_url, data=login_credentials, verify=False)
```

```
login_credentials = ('j_username':'admin','j_password':'admin')
```

```
response = session.get(url=login_url, data=login_credentials, verify=False)
```

```
login_credentials = {'username':'admin', 'password':'admin'}
```

```
response = session.post (url=login, data=credentials, verify=False)
```

```
login_credentials = {'j_username':'admin', 'j_password':'admin'}
```

**Answer:**

Explanation:

```
import requests
```

```
login_url = 'https://10.20.20.254:8443/j_security_check'
```

```
login_credentials = ('j_username':'admin', 'j_password':'admin')
```

```
session = requests.session()
```

```
response = session.get(url=login_url, data=login_credentials, verify=False)
```

```
if b'<html>' in response.content:
```

```
 print('Login Failed')
```

```
else:
```

```
 print('Login Success')
```

**Question: 100**

Refer to the exhibit.

```
POST https://aoi.meraki.com/aoi/v0/organizations/<org id>/networks
```

```
Request body: { "name": "Template", "organizationId": <org id>, "type": "" }
```

```
Response code: 201
```

```
Response body: { "id": <network id>, "name": "Template",
 "organization id": <org id>, "type": "
 ", "tags": null }
```

A template is provided to a junior developer to automate the creation of a network on the Meraki dashboard. The new network needs to have the id 123456789 and support only wired network connections. What type needs to be added to the API?

- A. switch
- B. wireless
- C. appliance
- D. systemsManager

**Answer: C**

Explanation:

### Question: 101

What is an advantage of software-defined networks as compared to traditional networks?

- A. They simplify operations by creating a concrete copy of the network.
- B. They reduce complexity by coupling the control and the data plane.
- C. They enable older hardware to be repurposed without an investment in new infrastructure.
- D. They deliver a distributed management architecture that provides better resilience to errors.

**Answer: D**

Explanation:

Reference: <https://www.ibm.com/services/network/sdn-versus-traditional-networking>

### Question: 102

DRAG DROP

```
$ pyang -f tree ietf-interfaces.yang module: ietf-interfaces
```

```
H ----rw interfaces
```

```
| +-rw interface '*' [name]
```

```
| +-rw name string
```

```
| +-rw description? string
```

```
| +-rw type identityref
```

```
| +-rw enabled? boolean
```

```
| 1 +-ro statistics
```

```
| +-ro discontinuity-time yang:date-and-time
```

```
H--ro in-unicast-pkts? yang:counter64
```

```
| +-ro in-broadcast-pkts? yang:counter64
```

```
x-ro interfaces-state
```

```
x-ro interface '*' [name]
```

```
 x-roname string
```

```
 x-rotype identityref
```

```
 x-roadmin-status enumeration {if-mib}?
```

```
 x-rooper-status enumeration
```

```
 x-rostatistics
```

```
 x-ro discontinuity-time yang:date-and-time
```

```
 x-ro in-octets? yang:counter64
```

```
 x-ro in-unicast-pkts? yang:counter64
```

Refer to the exhibit. Drag and drop the code from the bottom onto the box where the code is missing to complete the ncclient request that captures the operational data of the interfaces of a Cisco IOS XE device. Options may be used once, more than once, or not at all.



```

from ncclient import manager
import xml.dom.minidom

USERNAME = 'cisco'
PASSWORD = 'cisco'
HOST = '10.10.20.181'

data = '''
< [interfaces-state] xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
 < [interface] >
 < statistics ></statistics>
 </ [interface] >
</ [interfaces-state] >
'''

with manager.connect(host=HOST, password=PASSWORD, port=830, username=USERNAME,
 hostkey_verify=False, device_params={'name': 'iosxe'}) as m:
 c = m.get(filter=(" [subtree] ", data)).data_xml
 xml = xml.dom.minidom.parseString(c)
 xml_pretty_str = xml.toprettyxml()
 print(xml_pretty_str)

```

### Question: 103

DRAG DROP

Drag and drop the characteristics from the left onto the network types on the right.

centralized management	Traditional network	
more granular network security		
implements network functions on dedicated devices	Software-defined network	
closely coupled data and control planes		

**Answer:**

Explanation:

### Traditional network

implements network functions on dedicated devices

closely coupled data and control planes

### Software-defined network

centralized management

more granular network security

**Question: 104**

```

'version': "1.0", "response": [{
 "time": "2019-07-15T19:10:00.000+0000". "healthScore": 73.
 "totalCount": 11, "goodCount": 8, "unmonCount": 3,
 "fairCount": 0, "badCount": 0, "entity": null, "timeinMillis": 1563217800000
 "category": "Distribution".
 "totalCount": 2.
 "healthScore": 100,
 "goodPercentage": 100,
 "badPercentage": 0
 "fairPercentage": 0,
 "unmonPercentage": 0,
 "goodCount": 2.
 "badCount": 0, "fairCount": 0,
 "unmonCount": 0
 "measuredBy": -global", "latestMeasuredByEntity" null
 "latestHealthScore": 73, "monitoredDevices": 8,
 "monitoredHealthyDevices": 8. "monitoredUnHealthyDevices":
 0, "unMonitoredDevices" 3, "healthDistribution": [
 {
 "category": 'Access' "totalCount": 9, "healthScore": 100,
 "goodPercentage": 100, "badPercentage": 0,
 "fairPercentage": 0.
 "unmonPercentage": 0, "goodCount": 3, "badCount": 0,
 "fairCount": 0, "unmonCount": 0
 "category": "WLC",
 "totalCount": 2.
 "healthScore": 50,
 "goodPercentage": 0.
 "badPercentage": 0,
 "fairPercentage": 0.
 "unmonPercentage": 100,
 "goodCount": 1, "badCount":
 0, "fairCount" 0,
 "unmonCount": 1
 }
]
}]

```

Refer to the exhibit. Which device type is functioning in a degraded state?

- A. access point
- B. distribution switch
- C. access switch
- D. wireless LAN controller

**Answer: D**

Explanation:

**Question: 105**

```

'version': "1.0", "response": [{
 "time": "2019-07-15T19:10:00.000+0000". "healthScore": "category": "Distribution".
 73. "totalCount": 2.
 "totalCount": 11, "goodCount": 8, "unmonCount": 3, "healthScore": 100,
 "fairCount": 0, "badCount": 0, "entity": null, "timeinMillis": "goodPercentage": 100,
 1563217800000 "badPercentage": 0,
 "fairPercentage": 0,
 "unmonPercentage": 0,
 "measuredBy": -global", "latestMeasuredByEntity" null "goodCount": 2.
 "latestHealthScore": 73, "monitoredDevices": 8, "badCount": 0, "fairCount": 0,
 "monitoredHealthyDevices": 8. "monitoredUnHealthyDevices": "unmonCount": 0
 0, "unMonitoredDevices" 3, "healthDistribution": [
 {
 'category': 'Access' "totalCount": 9, "healthScore": 100, "category": "WLC",
 "goodPercentage": 100, "badPercentage": 0, "totalCount": 2.
 "fairPercentage": 0. "healthScore": 50,
 "unmonPercentage": 0, "goodCount": 3, "badCount": 0, "goodPercentage": 0.
 "fairCount": 0, "unmonCount": 0 "badPercentage": 0,
 "fairPercentage": 0.
 "unmonPercentage": 100,
 "goodCount": 1, "badCount":
 0, "fairCount" 0,
 "unmonCount": 1
 }
]
 }
]
}

```

Refer to the exhibit. Which device type is functioning in a degraded state?

- A. access point
- B. distribution switch
- C. access switch
- D. wireless LAN controller

**Answer: D**

Explanation:

### Question: 106

What is a capability of MV Sense MQTT API?

- A. request and subscribe to historical, current, or real-time data
- B. automate the configuration of networking devices
- C. monitor the network and auto adjust for optimal performance
- D. create email alerts for user that violate the security configuration

**Answer: A**

Explanation:

Reference: <https://developer.cisco.com/meraki/mv-sense/#!mv-sense-overview/introduction>

### Question: 107

Refer to the exhibit.

```
telemetry ietf subscription 154
encoding encode-ttl
filter xpath /memory-ios-xe-oper:memory-statistics/memory-statistic
source-vrf Mgmt-intf
stream yang-push
update-policy periodic 6000
```

The configuration commands are entered in CLI config mode to configure a static telemetry subscription on a Cisco IOS XE device. The commands are accepted by the device, but the consumer receives no telemetry data. a. Which change must be made to ensure that the consumer receives the telemetry data?

- A. The IP address of the receiver must be set.
- B. The stream type must be set to YANG.
- C. The update policy period must be shortened.
- D. The sender IP address must be set.

**Answer: A**

Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1610/b\\_1610\\_programmability\\_cg/model\\_driven\\_telemetry.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1610/b_1610_programmability_cg/model_driven_telemetry.html)

### Question: 108

Refer to the exhibit.



After executing the call, an engineer obtains the result of the Command Runner execution. The three commands show as blocklisted in the downloaded file. What is the cause of the error?

- A. The API user in Cisco DNA does not have write privileges on the devices.
- B. The engineer attempting to access the devices in Cisco DNA Center does not have privilege 15.
- C. The format of the JSON body must follow the CLI format.
- D. Command Runner supports only the show command and the read-only command.

**Answer: D**

Explanation:

**Question: 109**

```

module: Cisco-IOS-XE-interfaces-oper +-ro interfaces
 +-ro interface* [name]
 +-ro name string
 +-ro interface-type? interfaces-ios-xe-oper:ietf-intf-type
 +-ro admin-status? interfaces-ios-xe-oper:intf-state
 +-ro oper-status? interfaces-ios-xe-oper:oper-state
 +-ro last-change? yang:date-and-time
 +-ro if-index? int32
 +-ro phys-address? yang:mac-address
 +-ro higher-layer-if* string
 +-ro lower-layer-if* string
 +-ro speed? uint64
 +-ro statistics
 1 +- -ro discontinuity-time? yang:date-and-time
 1 +- -ro in-octets? uint64
 1 +- -ro in-unicast-pkts? uint64

```

Refer to the exhibit. What is a characteristic of the tree?

- A. three optional metrics
- B. two leaf-lists
- C. ten leaf-lists
- D. three containers

**Answer: D**

Explanation:

### Question: 110

Refer to the exhibit.

```

import requests

url = "https://api.meraki.com/api/v1/networks/EUAUTC/devices/remove"

payload = '{"serial": "0134-"}'

headers = {
 "Content-Type": "application/json",
 "Accept": "application/json",
 "X-Cisco-Meraki-API-Key": "6bec40cf$57de430a6flf2012345678a4fac9aa3"
}

```

```
print(response.text.encode(*ut £8 ' M
```

An engineer needs to remove the device with serial Q134\_06776318 FROM THE NETWORK 'ENAUTO by utilizing Meraki APIs. Which line of code must be added to the box where the code is missing to complete the python request?

```
fHportu a ^^UsiU.rhjutil^O^r. url. ttwilK^liuMth dnln - ptyIMd]
```

```
fttjwn tf a ^ (MM.fKMWOEiETC bMOtruMadart. ana = pa^j
```

```
HlfHRll ■ liqiMI&.Ffq«IHlfWSFi url dW n ptpiMd)
```

```
miwnH ■ rrqu^s rtquein DELEiE ml. hudwiahwciilu]
```

A. Option A B. Option B C. Option C D. Option D

**Answer: A**

Explanation:

**Question: 111**

POST	/device/tools/ping/{deviceIP}
POST	/device/tools/ping/{deviceIP}
POST	/device/tools/portopencolor/{deviceIP}
POST	/device/tools/reset/interface/{deviceIP}
POST	/device/tools/resetuser/{deviceIP}
POST	/device/tools/servicepath/{deviceIP}
POST	/device/tools/traceroute/{deviceIP}
POST	/device/tools/tunnelpath/{deviceIP}
GET	/device/cellular/connection
GET	/device/cellular/hardware
GET	/device/cellular/modem
GET	/device/cellular/network
GET	/device/cellular/profiles
GET	/device/cellular/radio
GET	/device/cellular/sessions
GET	/device/cellular/status
POST	/system/device/claimDevices
GET	/system/device/controllers/vedge/status
PUT	/system/device/decommission/{uuid}
POST	/system/device/fileupload
POST	/system/device/lifecycle/management/{uuid}
GET	/device/app-route/sla-class

Refer to the exhibit. End users cannot connect to the circular network, and the signal strength is poor. A missing or unknown APN status message is present and the modem status remains in low-power mode. Which addresses the issue?

- A. Use the device/cellular/status vManage resource URI to ensure sufficient radio signal strength.
- B. Use the system/device/controllers vManage resource URI to set the platform temperature.
- C. Use the device/app-route/statistics vManage resource URI to allow packets reachability to hosts.
- D. Use the device/tools'ping vManage resource URI to allow network device reachability.

**Answer: D**

Explanation:

### Question: 112

In the Cisco DNA Center Operational Tool API, which section of the intent API allows the retrieval of

keywords that are accepted by the CLI and enables the execution of read-only commands on network devices to retrieve their real-configuration?

- A. Device Inventory
- B. Command Runner
- C. Network Assurance
- D. Device Discovery

**Answer: D**

Explanation:

### Question: 113

On which device is the Cisco SD-WAN manage certificate management API able to install certificates?

- A. CSR 1000v
- B. vFog router
- C. load balancer
- D. vSmart

**Answer: C**

Explanation:

### Question: 114

When working with MV Sense APLS , upon which type of protocol is MQTT based?

- A. publish-subscribe messaging
- B. simple mail transport
- C. heavyweight messaging
- D. computer vision

**Answer: A**

Explanation:

### Question: 115

```
headers =
('Content-Type': 'application yang-data*json',
 'Accept': 'application/yang-data-*son')

data = OrderedDict([('ietf-interfaces:interface', OrderedDict([
 ('name', 'Loopback1'),
 ('type', 'iana-if-type:softwareLoopback') ,
 ('ietf-ip:ipv4',
 OrderedDict([
 ('address', (OrderedDict([('ip', '10.222.234.8'), ('netmask', '255.255.255.0')
]))
) i)
])])])
]>
>1)
```

```
response =
requests.put("https: 11.10.20.48:443 restconf data ietf-interfaces interfaces interface=Loopback2", auth=("cisco",
"cisco 1234!"), header s=header s, verify=False, json=data
```

Refer to the exhibit. A Python script is used to configure a Cisco IOS XE router. The Loopback2 interface currently has a description of Management and an IP address/netmask of 10.222.34.22/32. What is the result of executing the script?

- A. The interface description remains the same.
- B. The router rejects all commands, and the configuration remains the same.
- C. The interface is removed from the configuration.
- D. The interface description is removed from the configuration.

**Answer: A**

Explanation:

### Question: 116

#### DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to construct an noiliest request that shuts down an interface on a Cisco IOS XE device. Not all options are used.

```

from ncclient import manager
import xml.dom.minidom
USERNAME = 'cisco'
PASSWORD = 'cisco'
HOST = '10.10.20.181'
data = ''
<config>
 <native xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-native">
 <interface>
 <GigabitEthernet>
 <name>{INTF_NAME}</name>
 <shutdown/>
 </GigabitEthernet>
 </interface>
 </native>
</config>
'''

with manager.connect(host=HOST, password=PASSWORD, port=830,
 username=USERNAME, hostkey_verify=False,
) as m:
 c = m.edit_config(data.format(INTF_NAME='3'),
 format='xml',
)
 print(c)

```

device_params=({'name': 'iosxe'})
edit_config
target = 'running'

conn_params=({'name': 'cisco_iosxe'})
send_cmds
dst = 'running-config'

**Answer**

Explanation:

```

from ncclient import manager import xml.dom.minidom USERNAME = 'cisco' PASSWORD = 'cisco' HOST =
'10.10.20.191' data = * * * <config>
^native xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-naive"/* <interface>
 <GigabitEthernet>
 <name>{ INTF_NAME', </ name >
 <shutdown/>
 </GigabitEthernet> </interface>
</native>
</config> ♦♦ 1

with manager.connect(host=HOST, password=PASSWORD, port=830, username=USERNAME, hostkey_verify=False,
^device_params=(* nan-*: * ioaxe'})
 e = m. edit_config
 (data.format(INTF_NAME='3'),
 format3'xml', target = 'running
)
print(c)

```

### Question: 117

```

- name: reset lab
 hosts: lab
 gather_facts: no
 tasks:
 - name: task1
 ios_facts:
 gather_subset: all
 - name: task2
 ios_l3_interface:
 name: Loopback1
 state: absent
 when: '"pod-1" in ansible_net_hostname'
 - name: task3
 ios_l3_interface:
 name: Loopback2
 state: absent
 when: '"pod-2" in ansible_net_hostname'

```

Refer to the exhibit. The lab group consists of four Cisco IOS XE routers named pod-11, pod-12, and pod-22. What is the result of running the Ansible playbook to reset the lab?

- A. The IPv4 and IPv6 addresses for the Loopback1 interface are removed from pod-11 and pod-12.
- B. The IPv4 and IPv6 addresses for the Loopback2 interface are removed from all routers.
- C. The Loopback1 interface is removed from the pod-11 and pod-12 routers.
- D. The changes will occur on pod-21 and pod-22 If the loopback2 Interface is absent.

**Answer: C**

Explanation:

## Question: 118

### Monitoring - Alarms Details

/alarms/sta

Get alarm statistics

Implementation Notes Get alarm statistics.

Response Messages HTTP Status Code Reason

200 Success

400 Bad request

403 Forbidden

500 Internal Server Error

Request URL

https://sandbox-sdwan-l.cisco.co^:443/dataservice/alarms/stats Response Body

```
{
 "Correlation Engine": { "Added Events": 10
 b
 "link Update Correlator": ("Total Events": 8, 'Added Events": 8, 'Purged Alarms": 0, 'Threads': (
 "bfd-state-change": {
 "Current State": "Starting thread",
 "Current Events Counter": 0,
 "Ticks": 0, "Total Events Counter": 0, "Total 08 Counter": 0,
```

```

1 import requests, urllib3
2 import json
3
4 urllib3.disable_warnings()
5
6 url = "https://sandbox-sdwan-1.cisco.com"
7 headers = {"Content-Type": "application/x-www-form-urlencoded"}
8 credentials = {"j_username": "devnetuser", "j_password": "RG! Yw919_93"}
9 cookie_response = requests.post(url + "/j_security_check", headers=headers,
10 data=credentials, verify=False)
11
12
13
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```

Refer to the exhibit. An API request must display an alert message if change in OSPF neighbors is detected. Which code snippet must be added to complete the requests?

```

alarm stats = requests.post(url + "/dataservice/alarms/stats", cookies=cookie
response.cookies, verify=False)
if alarm stats.status code == 200:
 if json.loads(alarm stats.text)['Link Update Correlator']['ospf-neighbor-state-change']
['Total Events Counter'] != 0:
 print('OSPF neighbor change detected!')

alarm stats = requests.post(url +
 "Zdataservice/alarmsZstats",
 cookies=cookie response.cookies, verify=
False)
if alarm stats.status code == 200:
 if json.loads(alarm stats.text)['Link Update Correlator']['ospf-neighbor-state-change']
['Current State'] != 0:
 print('OSPF neighbor change detected!')
 alarm stats = requests.post(url +
 "/dataservice/alarms/stats",
 cookies=cookie response.cookies, verify=False)
 if alarm stats.status code == 200:
 if json.loads(alarm stats.text)
 ['Correlation Engine']
 ['ospf-neighbor-state-change']
 ['Current State'] != 0:
 print('OSPF neighbor change detected!')

alarm stats = requests.post(url + "/dataservice/alarms/stats", cookies=cookie
response.cookies, verify=False)
if alarm stats.status code == 200:
 if json.loads(alarm stats.text)['Correlation Engine']['ospf-neighbor-state-change']
['Total Events Counter'] != 0:
 print('OSPF neighbor change detected!')

```

A. Option A B. Option B C. Option C D. Option D

**Answer: A**

Explanation:

### Question: 119

```
srpe reply ecssage id="urn:uuid:S047f8fl-f911-483c-839d-2bbd5cf8bbeb" xmlns="urn:left sporans:xnl:ns:netconf:base:1.0"> {data*
 {interfaces xmlns=""urn:ictt:parans:xni:ns:yang:ietl interfaces""* {interface*
 <name>GigabitEthernet1/nanc>
 {description>«AHAGEHENT INTERFACE - DON'T TOUCH HE</description>
 {type xmlns:ianaift«"urn:ietf:parans:xnl:ns:yang:tana if-type">ianaift:ethcmetCs»acds/typc> {enabled*!ruec/enabled*
 <ipv4 xmlns-"urn:ietf:para»s:xal:ns:yang:ietf-ip">
 <address*
 <ip*10.18.20.48</ip>
 <netnask*2$S.2S5.2SS.0</netnask>
 {/address*
 {/ipv4»
 <ipv6 xmlns$="urn:let f:parous:x»l:ns:yang:iet f-ip"/> {/interface*
 {/interfaces* {/data*
s/rpc-reply*j
```

Refer to the exhibit. If the data included in the code was saved to a python variable named "example". Which line of code converts if for praising?

- py\_dict = xmltodict.parse(example)
- py\_dict = csv.read(example)
- py\_dict = json.loads(example)
- py\_dlct = yaml.load(exampie)

A. Option A B. Option B C. Option C D. Option D

**Answer: A**

Explanation:

### Question: 120

In which two use cases should a Python virtual environment be used? (choose two.)

- A. When developing multiple Python projects in the same environment that have the same Python package version requirements.
- B. When developing multiple Python projects in the same environment that have conflicting Python package versions.

- C. When developing the same Python application across multiple systems using the same application requirements.
- D. When creating a new project with several development environments in a multi-project development system across the infrastructure.
- E. When creating a new project that has a clean development environment in a multi-project development system.

**Answer: B, D**

Explanation:

**Question: 121**

What is a benefit software-defined networks when compared to traditional network?

- A. They improve information capture from the network by enabling model-driven telemetry, whereas traditional networks use SNMP for capturing logs from devices.
- B. They facilitate network management by replacing network services that run on dedicated hardware, whereas traditional networks use networking platforms to run and enforce policies.
- C. They simplify operations by providing policy enforcement across physical and virtual environments, whereas traditional network configuration occurs on the physical infrastructure.
- D. They reduce costs by enabling network functions to run on commodity servers, whereas traditional network functions run on physical servers.

**Answer: B**