

# Cisco

## Exam Questions 200-901

Developing Applications and Automating Workflows using Cisco Core Platforms (DEVASC)



#### NEW QUESTION 1

- (Exam Topic 2)

A developer needs a list of clients connected to a specific device in a Meraki network. After making a REST API call, the developer receives an unfamiliar response code. Which Cisco DevNet resource should be used to identify the meaning of the response code?

- A. API documentation
- B. Sandbox
- C. Learning Labs
- D. Code Exchange

**Answer: A**

#### NEW QUESTION 2

- (Exam Topic 2)

Which protocol runs over TCP port 23?

- A. SSH
- B. NETCONF
- C. HTTP
- D. Telnet

**Answer: D**

#### NEW QUESTION 3

- (Exam Topic 2)

A developer has created a new image to use in a Docker build and has added a tag for the image by using the command:

```
$ docker tag 84fe411926287 local/app:0.4
```

Which command must be executed next to build the Docker image using the tag?

- A. \$ docker build -p local/app:0.4
- B. \$ docker run -t local/app:0.4
- C. \$ docker run -p local/app:0.4
- D. \$ docker build -t local/app:0.4

**Answer: D**

#### NEW QUESTION 4

- (Exam Topic 2)

Refer to the exhibit.

```
1  - hosts: servers
2      tasks:
3
4      - name: task1
5          systemd:
6              name: webexbot
7              state: stopped
8
9      - name: task2
10         apt:
11             name: teamsbot
12
13     - name: task3
14         apt:
15             name: webexbot
16             state: absent
17             purge: yes
```

A developer must integrate a bot with an internal communication app. The developer wants to replace the webexbot package with the teamsbot package by using Ansible and prepares a playbook. In the first two tasks, the playbook stops the webexbot and verifies that the teamsbot is installed. What is accomplished in the last task of the workflow when the developer runs the Ansible playbook?

- A. stops the webexbot service and uninstalls it and retains its configuration files
- B. installs the webexbot and retains the configuration files
- C. uninstalls the webexbot package and removes its configuration files
- D. searches whether the purge package is available in the repository and uninstalls the webexbot package

**Answer: C**

#### NEW QUESTION 5

- (Exam Topic 2)

Refer to the exhibit.

### Generating Client ID and API Key:

- Log in to your AMP for Endpoints Console.
- Go to Accounts > Business Settings.
- Click Configure API Credentials under Features to generate the Client ID and secure API Key.

Once you have the API client ID and API key, you can make the API calls as follows:

```
https://<your_client_id>:<your_api_key>@<api_endpoint>
```

Alternatively you can use Basic HTTP Authentication. Base 64 encode the string ":", and send that prefixed with the string "Basic" as the authorization header. For instance, if your client\_id was 1234, and your api\_key was "atest", then it would be base64 encoded to "MTIzNDphdGVzdA==", and your header would be:

```
Authorization: Basic MTIzNDphdGVzdA==
```

The documentation outlines how to use credentials for the AMP API Which script successfully performs an API call using basic authentication?  
A)

```
import requests
amp_client_id = 'alb2c3d4e5f6g7h8i9j0'
amp_login_password = 'l0g1n_p@ssw0rd'
url = 'https://api.amp.cisco.com/v1/version'
request = requests.get(url,
    auth=(amp_client_id, amp_login_password))
print(request.json())
```

B)

```
import requests
amp_client_id = 'alb2c3d4e5f6g7h8i9j0'
amp_api_key = 'alb2c3d4-e5f6-g7h8-i9j0-k1l2m3n4o5p6'
url = 'https://api.amp.cisco.com/v1/version'
request = requests.get(url)
print(request.json())
```

C)

```
import requests
amp_auth_token = 'alb2c3d4e5f6g7h8i9j0 k1l2m3n4o5p6'
url = 'https://api.amp.cisco.com/v1/version'
request = requests.get(url,
    auth=(amp_auth_token))
print(request.json())
```

D)

```
import requests
amp_client_id = 'alb2c3d4e5f6g7h8i9j0'
amp_api_key = 'alb2c3d4-e5f6-g7h8-i9j0-k1l2m3n4o5p6'
url = 'https://api.amp.cisco.com/v1/version'
request = requests.get(url,
    auth=(amp_client_id, amp_api_key))
print(request.json())
```

A. Option

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

**Answer:** D

#### NEW QUESTION 6

- (Exam Topic 2)

A company wants to accelerate the adoption of technologies that will simplify its operations. Staff have different skill levels and are looking for a single site to find easy-to-consume beginner, intermediate, and advanced multidomain use cases. Which site should be used?

- A. DevNet Ecosystem Exchange
- B. DevNet Automation Exchange
- C. DevNet Creations
- D. DevNet Support Forum

**Answer:** D

#### NEW QUESTION 7

- (Exam Topic 2)

Refer to the exhibit.

```
import requests
from requests.auth import HTTPBasicAuth
from config import url, username, password
response = requests.login(url, auth=HTTPBasicAuth (username, password), verify=False)
print response.status_code
```

The script returns an output of 401. To use the supplied URL, an HTTP GET request must be sent with an Authorization header. The header value is a Base64 encoded concatenation of the username and password. Which action must be taken to return an output of 200?

- A. Change the verify=False setting in the request to verify=True to enable HTTP Basic authentication
- B. Modify the method from LOGIN to GET and supply the username ;password value as JSON payload
- C. Verify that the username and password values imported from the configuration file are still valid.
- D. Insert an Authorization header with the values username password from the supplied configuration file.

**Answer:** C

#### NEW QUESTION 8

- (Exam Topic 2)

What are two properties of private IP addresses? (Choose two.)

- A. They can be used to access the Internet directly.
- B. They are more secure than public IP addresses.
- C. They are not globally unique.
- D. They can be repeated within the same local network.
- E. They are controlled globally by an IP address registry.

**Answer:** BD

#### NEW QUESTION 9

- (Exam Topic 2)

Refer to the exhibit.

**API v1 documentation:**

Authentication and authorization: Bearer Token

Inventory endpoint: /api/v1/inventory

Method: GET

Response formats: text/html, application/json, application/html

**Token:**

dXNlcm5hbWU6cGFzc3dvcmQ=

**Api call:**

GET /api/v1/inventory HTTP/1.1

Host: example.com

**Response:**

HTTP/1.1 401 Unauthorized

An API call is constructed to retrieve the inventory in XML format by using the API. The response to the call is 401 Unauthorized. Which two headers must be added to the API call? (Choose two.)

- ☐ Accept: application/xml
- ☐ Content-Type: application/xml
- ☐ Authentication: Bearer dXNlcm5hbWU6cGFzc3dvcmQ=
- ☐ Bearer-Token: dXNlcm5hbWU6cGFzc3dvcmQ=
- ☐ Authorization: Bearer dXNlcm5hbWU6cGFzc3dvcmQ=

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

**Answer: BE**

**NEW QUESTION 10**

- (Exam Topic 2)

What is the purpose of a MAC address on a network device?

- A. unique network address that identifies the network interface of a device
- B. unique network interlace address that is provided by the DHCP server
- C. unique hardware address that identifies the network interface of a device
- D. unique hardware interface address that is provided by the central switch

**Answer: C**

**NEW QUESTION 10**

- (Exam Topic 2)



```
GET getNetworkHttpServers
https://api.meraki.com/api/v0/networks/:networkId/httpServers
List the HTTP servers for a network

AUTHORIZATION
API Key

This request is using an authorization helper from collection Meraki Dashboard
API
HEADERS
Accept
*/*
```

Refer to the exhibit. A developer is creating a Python script to obtain a list of HTTP servers on a network named office\_east by using the Cisco Meraki API. The request has these requirements:

- Must time out if the response is not received within 2 seconds.
- Must utilize client certificates and SSL certificate verification.
- Must utilize basic authentication that uses a username of admin and a password of cisco.
- Must save the response to an object named response.

Drag and drop the code snippets from the bottom onto the blanks in the code to meet the requirements. Not all options are used.

```
import requests
from requests.auth import HTTPBasicAuth
network = 'office east'
url = 'https://api.meraki.com/api/v0/networks/{}/httpServers'.format (network)
[ ] = requests.get(url=url, headers={ 'Accept': '*/*' },
verify='/etc/pki/tls/certs/ca.pem',
timeout= [ ] ,
[ ] =('/etc/pki/tls/certs/client.pem',
'/etc/pki/tls/certs/client.key'),
auth= [ ] ('admin', 'cisco'))
response.status_code
```

token

response

2

HTTPTokenAuth

HTTPBasicAuth

cert

- A. Mastered  
B. Not Mastered

**Answer:** A

**Explanation:**

Text Description automatically generated

Reference:

<https://community.cisco.com/t5/networking-blogs/authenticating-rest-api-calls-to-dnac-getting-started/ba-p/3658>

**NEW QUESTION 12**

- (Exam Topic 2)

What is a benefit of test-driven development?

- A. early customer involvement  
B. increased code quality  
C. faster releases that have minimal features  
D. strict adherence to product requirements

**Answer:** D

**NEW QUESTION 13**

- (Exam Topic 2)

What is a benefit of organizing code into modules?

- A. improves overall performance  
B. reduces the length of code  
C. enables code to be multifunctional  
D. enables the reuse of code

**Answer:** D

**NEW QUESTION 15**

- (Exam Topic 2)

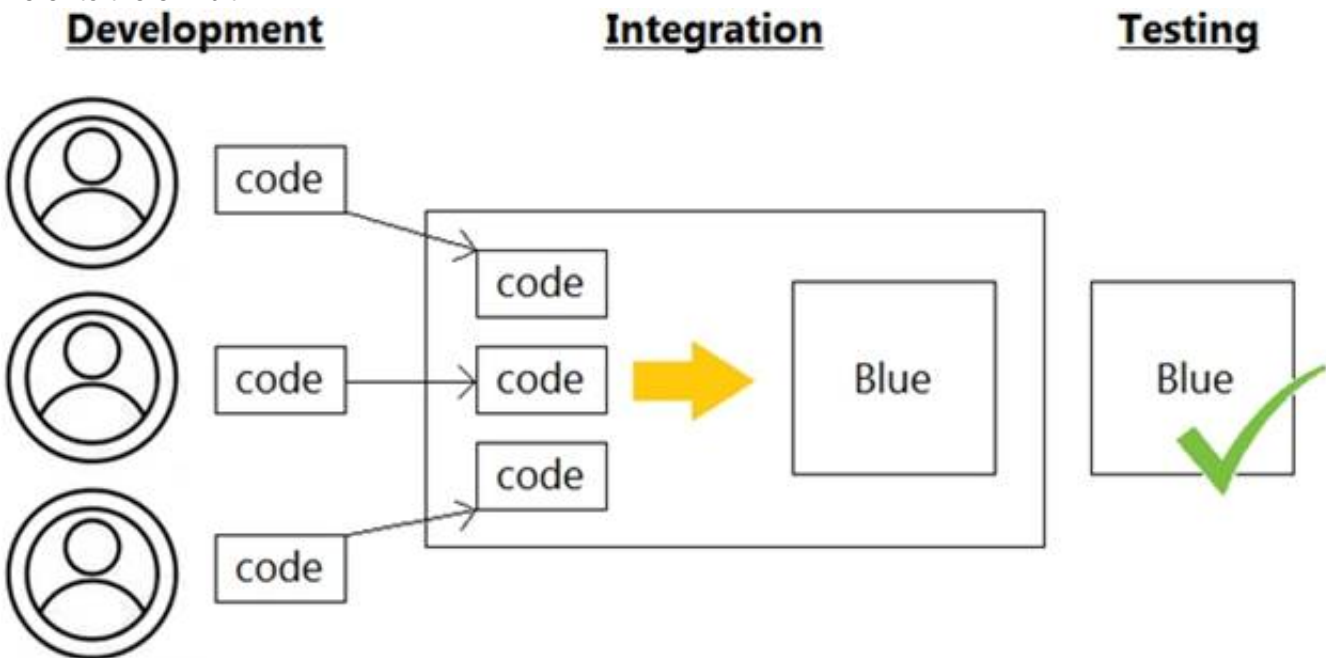
In which two ways is an application characterized when interacting with a webhook? (Choose two.)

- A. codec
- B. receiver
- C. transaction monitor
- D. processor
- E. listener

Answer: BE

NEW QUESTION 16

- (Exam Topic 2)  
Refer to the exhibit.



Which infrastructure automation method is shown?

- A. Waterfall
- B. CI/CD pipeline
- C. Agile
- D. Lean

Answer: C

NEW QUESTION 20

- (Exam Topic 2)  
Drag and drop the code snippets from the bottom into the Python script to write API output to a csv file. Not all options are used.

```
#!/usr/bin/env python3
import csv
import json
import 
#Create a request to grab info in api
response = requests. ('http://api.zippopotam.us/us/80301')

try:
    with open('80301.json', 'w') as outfile:
        json.dump(response.json(), outfile)
    print(.json())
except Exception as e:
    print(e)

with open('80301.csv', 'w') as outfile:
    json.dump(response.json(), outfile)
print(response.)
```

- |          |             |         |
|----------|-------------|---------|
| response | requests    | request |
| get      | status_code | status  |

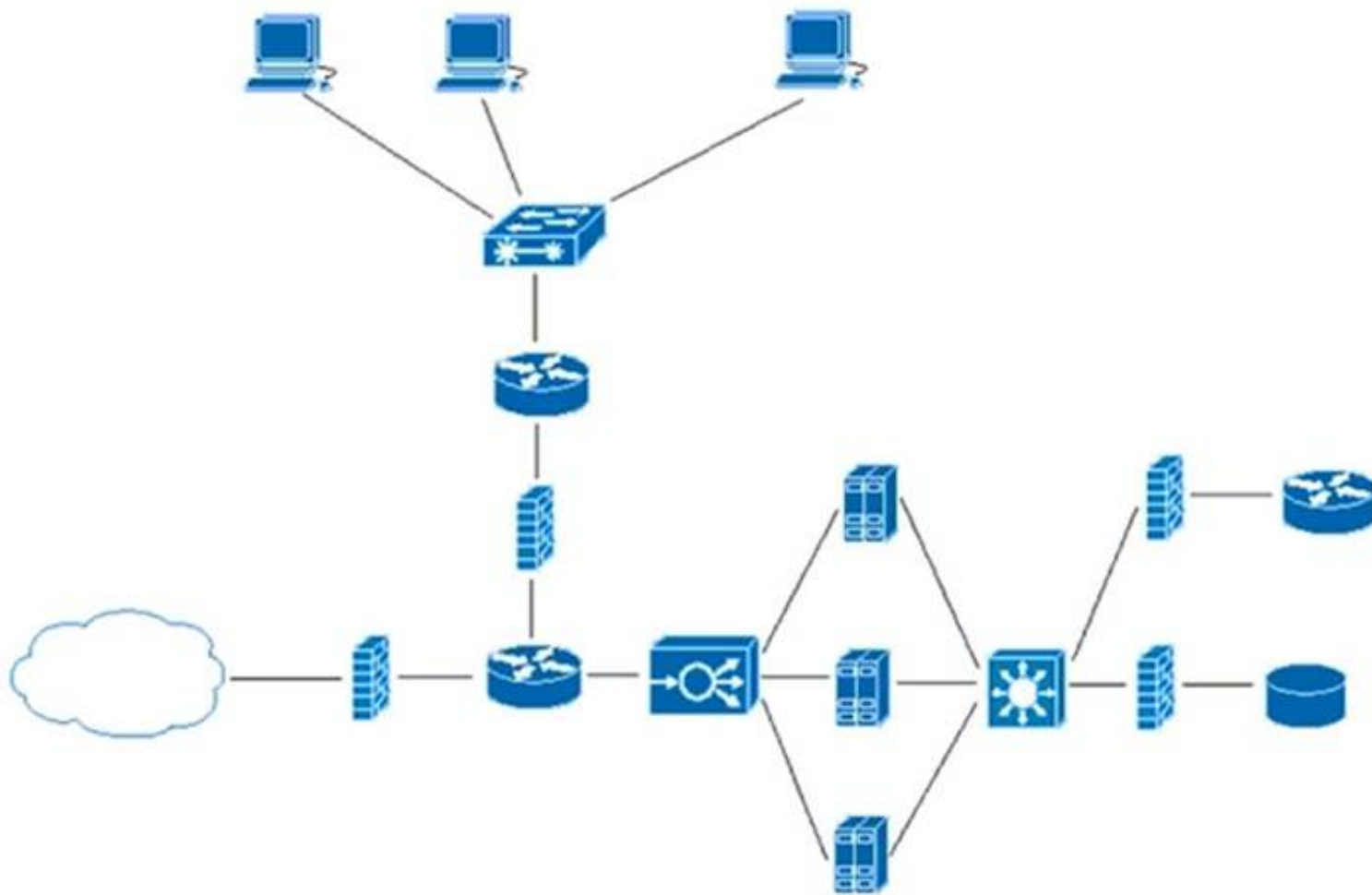
- A. Mastered
- B. Not Mastered

Answer: A

Explanation:  
Graphical user interface, text, application Description automatically generated

**NEW QUESTION 25**

- (Exam Topic 2)



Refer to the exhibit. What does the load balancer enable in the network topology?

- A. hosted application to access Internet services
- B. external requests to be routed to the application servers
- C. workstations to access the Internet
- D. application to access the database server

**Answer: C**

**NEW QUESTION 29**

- (Exam Topic 2)

What is the purpose of the first three pairs of digits in a MAC address?

- A. defines a routing identifier for the client
- B. indicates the IP address of the client in Hex
- C. defines packet forwarding priority sent or received by the adapter
- D. indicates vendor of the network card or adapter

**Answer: D**

**NEW QUESTION 31**

- (Exam Topic 2)

What are two benefits of model-driven programmability?

- A. model-driven APIs for abstraction and simplification
- B. single choice of transport, protocol, and encoding
- C. model-based, structured, and human friendly
- D. easier to design, deploy, and manage APIs
- E. models decoupled from transport, protocol, and encoding

**Answer: DE**

**NEW QUESTION 32**

- (Exam Topic 2)

What are two use case where webhooks are effective? (Choose two.)

- A. Close a session with a web server after a specific amount of time.
- B. Filter out information from a response to an API call
- C. Change the response format or content type of an API call.
- D. Inform a previously defined chat channel after a deployment fate.
- E. Send an email to a customer of an online store after payment is complete

**Answer: DE**

**NEW QUESTION 37**

- (Exam Topic 2)



Refer to the exhibit.

```
# base image
FROM alpine

# Install python and pip
RUN apk add --update py2-pip

# Install python modules needed by the python app
COPY requirements.txt /usr/src/app/
RUN pip install --no-cache-dir -r /usr/src/app/requirements.txt

#copy local files for the app to run
COPY app.py /usr/src/app/
COPY templates/index.html /usr/src/app/templates/

EXPOSE 8080

#run the application
CMD ["python", "/usr/src/app/app.py"]
```

Which function does the EXPOSE line perform when building an image from this Dockerfile?

- A. Local port 8080 of the container that launched with this docker image is accessible from co-hosted containers and external clients.
- B. Local port 8080 is not reachable at all because no IP address is specified along with the EXPOSE command of the Dockerfile.
- C. Local port 8080 is accessible from other containers running on the same docker host as the container that launched with this docker image.
- D. Local port 8080 of the container that launched with this docker image is accessible to external clients.

**Answer:** C

**Explanation:**

By default, the EXPOSE instruction does not expose the container's ports to be accessible from the host. In other words, it only makes the stated ports available for inter-container interaction.

Whereas publishing a port using either -P or -p exposes it, exposing a port using EXPOSE or --expose does not publish it.

So, while exposed ports can only be accessed internally, published ports can be accessible by external containers and services.

<https://www.whitesourcesoftware.com/free-developer-tools/blog/docker-expose-port/>

**NEW QUESTION 40**

- (Exam Topic 2)

A new application is being developed that must be hardware independent. The application includes an administrative component which is accessed using a Windows desktop GUI. Installation and management of the environment must be fully automated. Which application deployment type meets the requirements?

- A. bare metal
- B. virtual Python environment
- C. container
- D. virtual machine

**Answer:** C

**NEW QUESTION 42**

- (Exam Topic 2)

A developer creates a script that configured multiple Cisco IOS XE devices in a corporate infrastructure. The internal test environment is unavailable, and no maintenance window is available to test on a low-priority production environment. Which resource is used to test the code before it is applied to the production environment?

- A. Code Exchange
- B. Cisco DevNet Learning Labs
- C. Cisco DevNet Sandbox
- D. Cisco Support

**Answer:** C

**Explanation:**

Reference: <https://developer.cisco.com/site/sandbox/>

**NEW QUESTION 43**

- (Exam Topic 2)

Which tool is used to block all traffic to the domain by using a single API call?

- A. Cisco ISE
- B. Cisco Firepower
- C. Cisco AMP
- D. Cisco Umbrella

**Answer:** B

**NEW QUESTION 44**

- (Exam Topic 2)

class Native.Interface.FastEthernet

Bases: Entity

Class Hierarchy: Native Interface FastEthernet

This class represents configuration data.

FastEthernet IEEE 802.3

name(key)

type: str

pattern: ([0-9]/)([0-9]/)([1-3][0-9]4[0-8]([0-9])\[0-9]+)?

description

Interface specific description

type: str

pattern: \*

flowcontrol

Configure flow operation

type: Flowcontrol

isis

IS-IS commands

type: Isis

keepalive

Enable keepalive

type: bool

keepalive\_settings

type: KeepaliveSettings

Refer to the exhibit. Drag and drop the code snippets from the bottom to the blanks in the code to enable keepalive for the FastEthernet 2/0 interface. Not all options are used.

```
from ydk.services import CRUDService
from ydk.providers import NetconfServiceProvider as nc
from ydk.models.cisco_ios_xe import Cisco_IOS_XE_native as model
ip = '10.10.20.48'
prtcl = 'ssh'
user = 'developer'
psw = 'P@s$W0rD'
port = 830
provider = nc(address=ip, port=port, username=user, password=psw, protocol=prtcl)
crud = CRUDService()
```

```
interface.name = '2/0'
```

```
if interface data:
    print('Keepalive is enabled.')
else:
    print('Keepalive is not enabled.')
```

interface\_data = crud.update(provider, interface)

interface.keepalive = True

interface\_data = crud.read(provider, interface)

interface = model.Native.Interface.FastEthernet()

interface.FastEthernet.keepalive\_settings.keepalive = True

interface = model.Native.Interface()

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

```
from ydk.services import CRUDService
from ydk.providers import NetconfServiceProvider as nc
from ydk.models.cisco ios xe import Cisco IOS XE native as model
ip = '10.10.20.48'
prtc1 = 'ssh'
user = 'developer'
psw = 'P@s$W0rD'
port = 830
provider = nc(address=ip, port=port, username=user, password=psw, protocol=prtc1)
crud = CRUDService()

interface = model.Native.Interface.FastEthernet()

interface.name = '2/0'

interface.keepalive = True

interface_data = crud.read(provider, interface)

if interface_data:
    print('Keepalive is enabled.')
else:
    print('Keepalive is not enabled.')
```

```
interface_data = crud.update(provider, interface)
```

```
interface.FastEthernet.keepalive_settings.keepalive = True
```

```
interface = model.Native.Interface()
```

**NEW QUESTION 47**

- (Exam Topic 2)

A local Docker alpine image has been created with an image ID of a391665405fe and tagged as “latest”. Which command creates a running container based on the tagged image, with the container port 8080 bound to port 80 on the host?

- A. docker build -p 8080:80 alpine:latest
- B. docker exec -p 8080:80 alpine:latest
- C. docker start -p 8080:80 alpine:latest
- D. docker run -p 8080:80 alpine:latest

**Answer:** D

**Explanation:**

[https://docs.docker.com/get-started/02\\_our\\_app/](https://docs.docker.com/get-started/02_our_app/)

**NEW QUESTION 52**

- (Exam Topic 2)

What are two benefits of using VLANs? (Choose two.)

- A. limits the devices that can join the network
- B. segments the broadcast domain
- C. extends the broadcast domain
- D. allows all network devices to be accessible from any host on the network
- E. enables the logical grouping of devices that belong to different Layer 2 devices

**Answer:** BE

**NEW QUESTION 53**

- (Exam Topic 2)

Which platform is used to programmatically create a space and invite users for collaboration?

- A. Cisco Intersight
- B. Cisco Finesse
- C. Cisco Webex
- D. Cisco UCM

**Answer:** C

**NEW QUESTION 57**

- (Exam Topic 2)

Why is refactoring done during test-driven development?

- A. to enable larger objects and longer methods
- B. to improve maintainability and readability
- C. to ensure that the previous uses of the objects are explained
- D. to ensure the duplication of essential code



Answer: B

#### NEW QUESTION 60

- (Exam Topic 2)

Refer to the exhibit.



OWASP threat does this example demonstrate?

- A. Broken access control
- B. SQL injection
- C. Man-in-the-middle
- D. Cross-site-scripting

Answer: D

#### NEW QUESTION 63

- (Exam Topic 2)

Which HTTP response status code means "Forbidden"?

- A. 500
- B. 401
- C. 403
- D. 502

Answer: C

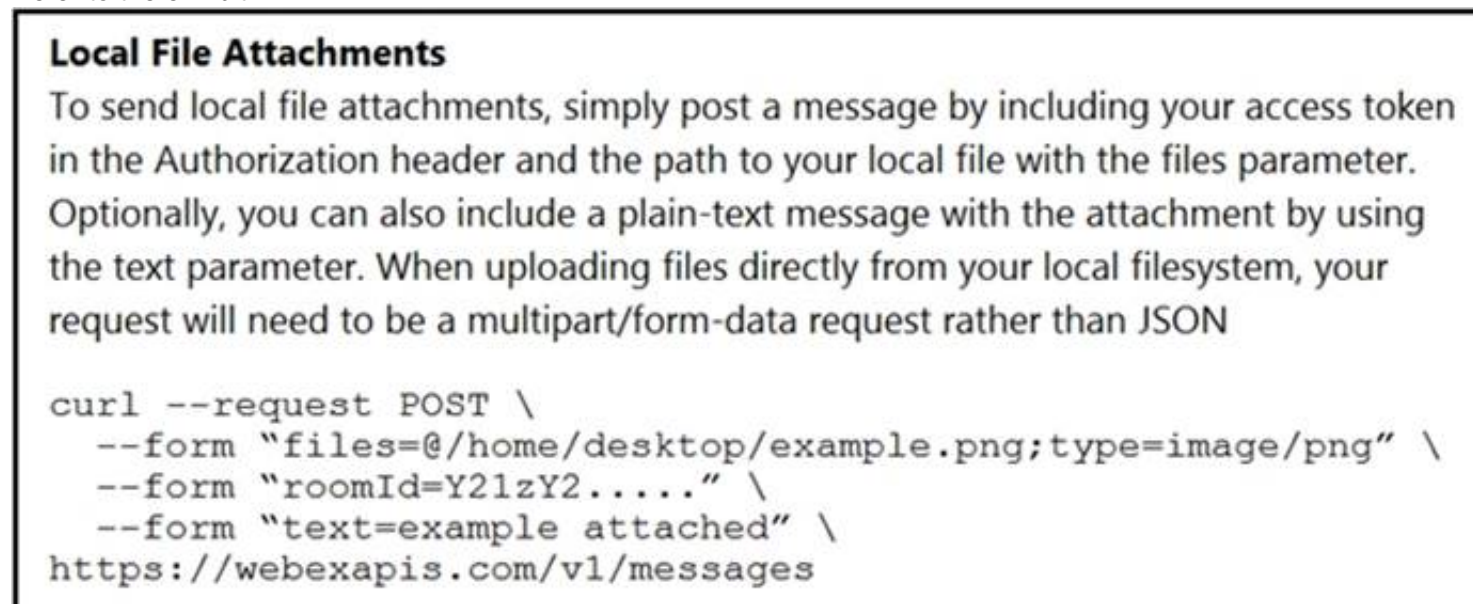
#### Explanation:

Reference: <https://developer.mozilla.org/en-US/docs/Web/HTTP/Status/403>

#### NEW QUESTION 65

- (Exam Topic 2)

Refer to the exhibit.



A developer needs to upload a local file by using the REST API. The developer gathers information according to the documentation and sends the request by using the cURL command in the exhibit but gets an error code. Which action should be followed to get valid response?

- A. change content type as JSON
- B. add the authorization header with the access token
- C. add a username-password combination to request command
- D. change request method as GET

Answer: B

#### Explanation:

Reference: <https://developer.webex.com/docs/api/basics>

#### NEW QUESTION 69

- (Exam Topic 2)

A developer is working on a feature for a new application. The changes in the existing branch named 'feat00304' must be integrated into a single commit with the current working primary branch named 'prodapp411926287'. Which git command must be used?

- A. git rebase --merge feat00304



- B. git merge --squash feat00304
- C. git push --rebase feat00304
- D. git checkout --squash feat00304

**Answer:** B

#### NEW QUESTION 70

- (Exam Topic 2)

Refer to the exhibit.

```
1  - hosts: servers
2    tasks:
3
4    - name: task1
5      apt:
6        name: apache2
7        state: absent
8
9    - name: task2
10     apt:
11       name: nginx
12       state: present
13
14    - name: task3
15     apt:
16       name: "*"
17       state: latest
```

A developer must check packages on web load balancers that use nginx packages. The developer updates the servers as required in Ansible inventory and prepares an Ansible playbook to automate this workflow on related servers. Which process is being automated by the Ansible playbook?

- A. verifying that nginx is installed only if apache2 is unavailable on the system, and then updating all the other packages
- B. verifying, without installing, that apache2 is unavailable and that nginx is installed, and then updating the repository to the latest version
- C. uninstalling the apache2 server, installing the nginx server, and then updating all the packages to the latest version
- D. installing nginx, uninstalling apache2, and then verifying that the package repository is at the latest version

**Answer:** B

#### NEW QUESTION 74

- (Exam Topic 2)

What is a difference between a synchronous API and an asynchronous API?

- A. An asynchronous API can make offline calls while synchronous APIs do not have this capability.
- B. Synchronous API calls are returned immediately while asynchronous calls do not guarantee an immediate response.
- C. Synchronous API calls require an authentication header to be sent while asynchronous calls do not require authentication.
- D. An asynchronous API can make a larger number of calls in a specified time period than a synchronous API.

**Answer:** B

#### Explanation:

Reference:

<https://stackoverflow.com/questions/36213948/what-is-the-difference-between-asynchronous-calls-and-callback>

#### NEW QUESTION 75

- (Exam Topic 2)

How are load balancers used in modern application deployment?

- A. Allow traffic to continue as new compute units are brought up and old compute units are taken down.
- B. Allow http and https traffic to continue as old compute units are discontinued before new units are brought up.
- C. Turn off traffic and take down compute units, then update and bring the compute units back up.
- D. Bring up new compute units, test the compute units, and switch the traffic from old units to new units.

**Answer:** D

#### NEW QUESTION 80

- (Exam Topic 2)

Refer to the exhibit.

```
>>> response_data = requests.get(base_url + request_url, cookies=cookies)
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'requests' is not defined
>>>
```

A Python code has been written to query a device. The executed code results in the error shown. Which action resolves the problem?

- A. import json
- B. requests("GET", base\_url + request\_url, cookies=cookies)
- C. pip install requests
- D. import requests

**Answer:** D

### NEW QUESTION 83

- (Exam Topic 2)

Refer to the exhibit.

```
--- README.md-repo 2019-10-06 21:15:59.000000000 +0100
+++ README.md      2019-10-06 21:07:35.000000000 +0100
@@ -88,8 +88,6 @@
     ``
-
-
-  ## Troubleshooting
-
-  ### CMake
@@ -162,4 +160,13 @@
-
-  ## References
-
-  +### Mosquitto
+
+  +* [github] (https://github.com/eclipse/mosquitto)
+  +* [homepage] (https://mosquitto.org)
+
+  +### MQTT
+
+  +* [organisation] (http://mgtt.org)
+
+  +
```

The output of the diff-u README.md-repo README.md command is shown. The original file was 165 lines long How many lines are in the edited copy of the file?

- A. 162
- B. 165
- C. 172
- D. 173

**Answer:** C

### NEW QUESTION 88

- (Exam Topic 2)

What is a functionality of the Waterfall method as compared to the Agile method for software development?

- A. Waterfall increases agility to implement faster while Agile promotes reliability.
- B. A phase begins after the previous phase has ended in Waterfall while Agile phases run in parallel.
- C. Customers get feedback during the process in Waterfall while they can see the result at the end in Agile.
- D. Requirements can be updated in Waterfall while in Agile it should be gathered in the beginning.

**Answer:** B

### NEW QUESTION 89

- (Exam Topic 2)

What does a load balancer distribute in a network environment?

- A. outgoing connections to the network
- B. incoming traffic across multiple servers
- C. different TCP connections to the routers
- D. traffic in the network by leveraging the switch architecture

**Answer:** B

**NEW QUESTION 90**

- (Exam Topic 2)

What is a benefit of organizing into modules?

- A. improves collaboration of the development team
- B. makes it easier to deal with large and complex systems
- C. enables the code to be broken down into layers
- D. enables the inclusion of more programming languages in the code

**Answer:** B

**Explanation:**

From Wikipedia ([https://en.wikipedia.org/wiki/Modular\\_programming](https://en.wikipedia.org/wiki/Modular_programming)) "Modular programming is closely related to structured programming and object-oriented programming, all having the same goal of facilitating the construction of large software programs and systems by decomposition into smaller pieces."

**NEW QUESTION 91**

- (Exam Topic 2)

Refer to the exhibit.

```
diff --git a/ciscoaxl/axl.py b/ciscoaxl/axl.py
index bc7727e..d66ef4d 100644
--- a/ciscoaxl/axl.py
+++ b/ciscoaxl/axl.py
@@ -99,7 +99,7 @@ class axl(object):
     :return: result dictionary
     """
     try:
-        return self.client.executeSQLUpdate(query)
+        return self.client.executeSQLUpdate(query) ['return']
     except Fault as e:
         return e

diff --git a/setup.py b/setup.py
index df79ef4..1470b05 100644
--- a/setup.py
+++ b/setup.py
@@ -5,7 +5,7 @@ with open("README.md", "r") as fh:

    setup(
        name="ciscoaxl",
-        version="0.14",
+        version="0.141",
        author="User 1",
        author_email="user1@example.com",
        description="Cisco CUCM AXL Library. Simple to use.",
```

Which two files are being edited in the unified diff? (Choose two.)

- A. README.md
- B. setup.py
- C. axl.py
- D. ciscoaxl.py
- E. index.py

**Answer:** BC

**NEW QUESTION 96**

- (Exam Topic 2)

What are two key capabilities of Cisco Finesse? (Choose two.)

- A. Finesse includes an RPC API that enables the development of custom gadgets.
- B. Agents access Finesse from a browser without needing to install or configure anything on the client machine.
- C. Finesse automatically collects telemetry data
- D. An OpenDNS utility is preconfigured and ready to use on Finesse.
- E. Gadget containers provide a seamless experience in a single user interface.

**Answer:** BE

**NEW QUESTION 97**

- (Exam Topic 1)

Which two statements describe the traits of an asynchronous API call? (Choose two.)



- A. The order in which API calls return can be guaranteed
- B. A call to an API does not block the code, but rather it allows application processing to continue
- C. The end user can experience latency or performance lag while waiting for the API call to return
- D. Code execution blocks or waits for the call to an API to return.
- E. A callback function typically is used to process the response from an API call

**Answer:** BE

#### NEW QUESTION 98

- (Exam Topic 1)

Which action resolves a 401 error in response to an HTTP GET that is issued to retrieve statement using RESTCONF on a CSR 1000V?

- A. Change the HTTP method to PUT.
- B. Change the transport protocol to HTTPS.
- C. Check the MIMF types in the HTTP headers.
- D. Check the authentication credentials.

**Answer:** D

#### NEW QUESTION 100

- (Exam Topic 1)

Which API is used to obtain data voicemail ports?

- A. Finesse gadgets
- B. Cisco Unified Communications manager
- C. Webex devices
- D. Webex teams

**Answer:** B

#### Explanation:

Cisco Unified Communications Manager (CUCM) provides API access to data management, call management, and voicemail integration. Source: Cisco DevNet Fundamental Course: <https://developer.cisco.com/certification/fundamentals/>

#### NEW QUESTION 104

- (Exam Topic 1)

What are two benefit of managing network configuration via APIs? (Choose two.)

- A. configuration on devices becomes less complex
- B. more security due to locking out manual device configuration
- C. increased scalability and consistency of network changes
- D. eliminates the need of legacy management protocols like SNMP
- E. reduction in network changes performed manually

**Answer:** CE

#### NEW QUESTION 106

- (Exam Topic 1)

Which device is a system that monitors and controls incoming and outgoing network traffic based on predetermined security rules?

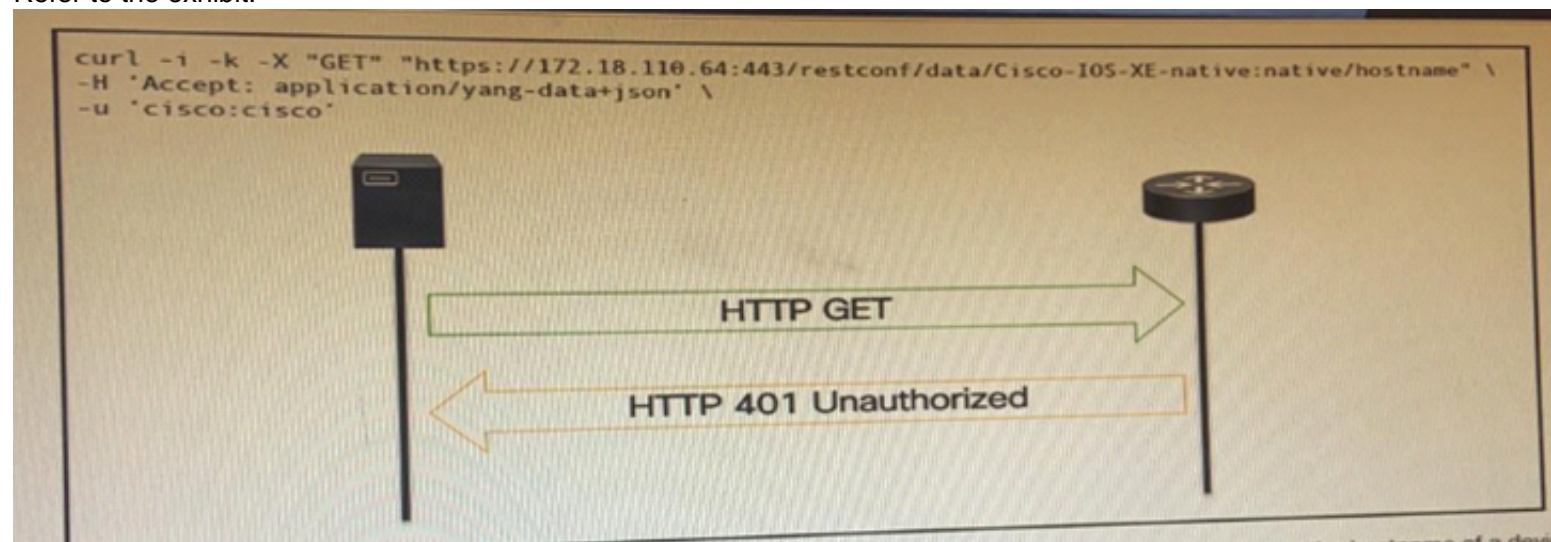
- A. Switch
- B. Router
- C. Firewall
- D. Load balancer

**Answer:** C

#### NEW QUESTION 107

- (Exam Topic 1)

Refer to the exhibit.



An administrator attempts to perform a GET using the Cisco IOS XE RESTCONF API to return the hostname of a device. The sequence diagram illustrated the HTTP message observed. Which change to the API request resolves the issue?



- A. Add Content-Type HTTP header with 'application/yang-data+json' using -H 'Content-Type: application/yang-data+json'.
- B. Use -u cisco: cisco instead of -u 'cisco: cisco'.
- C. Change the request method from -X "GET" to- X' POST".
- D. Remove the -H 'Accept: application/yang-data+json' HTTP header because it is not required.

**Answer:** B

#### NEW QUESTION 110

- (Exam Topic 1)

Drag and drop the functionalities from the left onto correct networking devices on the right.

ports are different broadcast domain by default	Firewall
ports can be in the same broadcast domain	Load Balancer
uses traffic inspection to make routing decisions	Router
blocks networks traffic by default	Switch

- A. Mastered
- B. Not Mastered

**Answer:** A

#### Explanation:

1 – D, 2 – C, 3 – A, 4 – B

Reference: <https://geek-university.com/ccna/broadcast-domain-explained/>

#### NEW QUESTION 111

- (Exam Topic 1)

Which action does the Git command git merge allow the development to perform?

- A. Combine multiple sequence of commits into one unified history.
- B. Push changes to the remote repository
- C. Switch between branches
- D. Create, list, rename, and delete branches

**Answer:** A

#### Explanation:

Reference: <https://www.atlassian.com/git/tutorials/using-branches/git-merge>

#### NEW QUESTION 116

- (Exam Topic 1)

A Company is looking for cloud deployment which will use the on-premise infrastructure, is user self-service, and easy to scale. Which cloud solution should be selected for these requirements?

- A. multi
- B. public
- C. private
- D. hybrid

**Answer:** C

#### NEW QUESTION 117

- (Exam Topic 1)

Refer to the exhibit.

```
$ diff -u5 fish.py cat.py
--- fish.py      2020-01-02 09:41:02.840000000 +0100
+++ cat.py       2020-01-02 09:41:06.8859999800 +0100
@@ -160,11 +160,12 @@

    @single_request_timeout.setter
    def single_request_timeout(self, value):
        """The timeout (seconds) for a single HTTP REST API request."""
        check_type(value, int, optional=True)
-       assert value is None or value > 0
+       if value is not None and value <= 0:
+           raise ValueError("single_request_timeout must be positive integer")
        self._single_request_timeout = value

    @property
    def wait_on_rate_limit(self)
        """Automatic rate-limit handling.
```

The output of a unified diff when comparing two versions of a python script is shown. Which two "single\_request\_timeout ()"

A.

```
file: cat.py

160
161     @single_request_timeout.setter
162     def single_request_timeout(self, value):
163         """The timeout (seconds) for a single HTTP REST API request."""
164         check_type(value, int, optional=True)
165         assert value is None or value > 0
166         if value is not None and value <= 0:
167             raise ValueError("single_request_timeout must be positive integer")
168         self._single_request_timeout = value
169
```

B.

```
file: fish.py

160
161     @single_request_timeout.setter
162     def single_request_timeout(self, value):
163         """The timeout (seconds) for a single HTTP REST API request."""
164         check_type(value, int, optional=True)
165         assert value is None or value > 0
166         self._single_request_timeout = value
167
```

C.

```
file: cat.py

160
161     @single_request_timeout.setter
162     def single_request_timeout(self, value):
163         """The timeout (seconds) for a single HTTP REST API request."""
164         check_type(value, int, optional=True)
165         if value is not None and value <= 0:
166             raise ValueError("single_request_timeout must be positive integer")
167         self._single_request_timeout = value
168
169
```

D.

```
file: fish.py

160
161     @single_request_timeout.setter
162     def single_request_timeout(self, value):
163         """The timeout (seconds) for a single HTTP REST API request."""
164         check_type(value, int, optional=True)
165         self._single_request_timeout = value
```

E.

```
file: cat.py
172
173 @single_request_timeout.setter
174 def single_request_timeout(self, value):
175     """The timeout (seconds) for a single HTTP REST API request."""
176     check_type(value, int, optional=True)
177     if value is not None and value <= 0:
178         raise ValueError("single_request_timeout must be positive integer")
179     self._single_request_timeout = value
180
```

- F. Option A
- G. Option B
- H. Option C
- I. Option D
- J. Option E

**Answer:** BC

#### NEW QUESTION 118

- (Exam Topic 1)

What are two security benefits of a Docker-based application?

- A. easier to patch because Docker containers include only dependencies that the application requires
- B. prevents information leakage that can occur when unhandled exceptions are returned in HTTP responses
- C. allows for separation of application that traditionally run in the same host
- D. natively secures access to secrets that are used by the running application
- E. guarantees container images are secured and free of vulnerabilities

**Answer:** AC

#### NEW QUESTION 120

- (Exam Topic 1)

Which response status code is used by a RESTful interface to indicate successful execution of a request?

- A. 200
- B. 404
- C. 405
- D. 500

**Answer:** A

#### NEW QUESTION 122

- (Exam Topic 1)

Which two query types does a client make to a DNS server? (Choose Two)

- A. AAAA
- B. ACK
- C. DISCOVER
- D. Inverse
- E. PTR

**Answer:** AE

#### NEW QUESTION 123

- (Exam Topic 1)

Which principle is a value from the manifesto for Agile software development?

- A. adhering to a plan over responding to requirements
- B. detailed documentation over working software
- C. processes and tools over teams and inter actions
- D. customer collaboration over contract negotiation

**Answer:** D

#### Explanation:

Reference: [https://www.cisco.com/c/dam/global/en\\_hk/solutions/collaboration/files/agile\\_product\\_development.pdf](https://www.cisco.com/c/dam/global/en_hk/solutions/collaboration/files/agile_product_development.pdf)

#### NEW QUESTION 126

- (Exam Topic 1)

Which two items are Cisco DevNet resources? (Choose two.)

- A. TAC support
- B. Bitbucket



- C. Sandbox
- D. Software research
- E. API Documentation

**Answer:** CE

**Explanation:**

Reference: <https://developer.cisco.com/>

**NEW QUESTION 131**

- (Exam Topic 1)

Which device is used to transport traffic from one broadcast domain to another broadcast domain?

- A. load balancer
- B. layer 2 switch
- C. router
- D. proxy server

**Answer:** C

**NEW QUESTION 136**

- (Exam Topic 1)

Which two statement describe the role of an artifact repository in a CI/CD pipeline? (Choose two.)

- A. An artifact repository allows to compare and merge changes in the source code of files involved in a build process.
- B. An artifact repository is needed only for CI/CD pipeline executed on a public cloud infrastructure.
- C. An artifact repository provides traceability, search, and management of binary files.
- D. An artifact repository is needed only for managing open source software.
- E. An artifact repository stores files needed and generated during the build process.

**Answer:** CE

**NEW QUESTION 139**

- (Exam Topic 1)

The project is migrated to a new codebase, the "old\_project" directory must be deleted. The directory has multiple read-only files, and it must be deleted recursively without prompting for confirmation. Which bash command must be used?

- A. `rm -rf old_project`
- B. `rm -r old_project`
- C. `rmdir -p old_project`
- D. `rmdir old_project`

**Answer:** A

**NEW QUESTION 140**

- (Exam Topic 1)

Refer to the exhibit.

**URL:** `https://<ASA_IP>/api/access/global/rules`

**Method:** POST

**Payload:**

```
{
  "destinationAddress": {
    "kind": "IPv4Address",
    "value": "10.1.1.1"
  },
  "remarks": [ ],
  "active": true
  "permit": true,
  "sourceAddress": {
    "kind": "IPv4Address",
    "value": "192.168.1.1"
  }
}
```

**Response Status Code:** 400 Bad Request

```
{
  "messages": [
    {
      "level": "Error",
      "code": "JSON-PARSE-ERROR",
      "details": "
        Unexpected character ('\"' (code 34)):"
    }
  ]
}
```

What caused the error in this API request?



- A. The API resource does not support the POST operation
- B. The API resource does not support JSON format payloads.
- C. The submitted JSON payload includes a field that is not supported by the API resource.
- D. The submitted JSON payload has a formatting issue

**Answer:** D

#### NEW QUESTION 143

- (Exam Topic 1)

Which model-driven programmability protocol does Cisco IOS XE Software support?

- A. CORBA
- B. SSH
- C. gNMI
- D. SOAP

**Answer:** C

#### Explanation:

Reference:

[https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1610/b\\_1610\\_programmability\\_cg/gnmi\\_](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1610/b_1610_programmability_cg/gnmi_)

#### NEW QUESTION 146

- (Exam Topic 1)

Which platform has an API that be used to obtain a list of vulnerable software on user devices?

- A. Cisco Umbrella
- B. Cisco Firepower
- C. Cisco Identity Services Engine
- D. Cisco Advanced Malware Protection

**Answer:** D

#### NEW QUESTION 149

- (Exam Topic 1)

In DNS, which record specifies an alias that refers to another name that ultimately resolves to an IP address?

- A. AAA
- B. SOA
- C. NS
- D. CNAME

**Answer:** D

#### Explanation:

Reference: <https://ns1.com/resources/dns-types-records-servers-and-queries>

#### NEW QUESTION 151

- (Exam Topic 1)

Which network device monitors incoming and outgoing traffic and decides whether to allow or block specific traffic based on a defined set of rules?

- A. switch
- B. load balancer
- C. reverse proxy
- D. firewall

**Answer:** D

#### NEW QUESTION 152

- (Exam Topic 1)

Which two statements are true about Cisco UCS manager, Cisco Intersight APIs? (Choose two.)

- A. Cisco Intersight API interactions can be encoded in XML or JSON and require an APIs key in the HTTP header for authentication.
- B. USC Director API interactions can be XML- or JSON-encoded and require an APLs key in the HTTP header for authentication.
- C. UCS manager API interactions are XML-encoded and require a cookie in the method for authentication.
- D. Cisco Intersight uses XML to encoded API interactions and requires an API key pair for authentication.
- E. UCS manager uses JSON to encode API interactions and utilizes Base64-encoded credentials in the HTTP header for authentication.

**Answer:** BC

#### Explanation:

Reference:

[https://www.cisco.com/c/en/us/td/docs/unified\\_computing/ucs/ucs-director/rest-api-getting-started-guide/6-5/cis](https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/ucs-director/rest-api-getting-started-guide/6-5/cis)

[https://www.cisco.com/c/en/us/td/docs/unified\\_computing/ucs/sw/api/b\\_ucs\\_api\\_book.pdf](https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/sw/api/b_ucs_api_book.pdf)

#### NEW QUESTION 157

- (Exam Topic 1)  
What are two advantages of YANG-based approaches for infrastructure automation? (Choose two.)

- A. directly maps to JavaScript
- B. multi-platform vendor abstraction
- C. designed to reflect networking concepts
- D. compiles to executables that run on network devices
- E. command line driven interface

Answer: BC

NEW QUESTION 162

- (Exam Topic 1)  
Which status code is used by a REST API to indicate that the submitted payload is incorrect?

- A. A.-400B.403C.405D.429

Answer: A

Explanation:  
Reference:  
<https://community.cisco.com/t5/application-centric/apic-rest-api-produces-inconsistent-response/td-p/2758230>

NEW QUESTION 163

- (Exam Topic 1)  
Refer to the exhibit.

List Rooms

List rooms.  
The `title` of the room for 1:1 rooms will be the display name of the other person.  
By default, lists rooms to which the authenticated user belongs.  
Long result sets will be split into `pages`.

GET /v1/rooms

Query Parameters

Name	Description
<code>teamId</code> string	List rooms associated with a team, by ID.
<code>type</code> string	List rooms by tape. <i>Possible values: direct, group</i>
<code>sortBy</code> string	Sort results. <i>Possible values: id, lastactivity, created</i>
<code>max</code> number	Limit the maximum number of rooms in the response.  Default: <code>100</code>

Fill in the blank to complete the query parameter and value so that the result set is returned in reverse chronological order (most recent first) based on when message were entered.

HTTP GET /v1/rooms \_\_\_\_\_

- A. Mastered  
B. Not Mastered

Answer: A

Explanation:  


#### NEW QUESTION 164

- (Exam Topic 1)

A function my\_func() returns True when it executes normally. Which python snippet tests my\_func()?

```
def test_func(self):  
    self.assertTrue(my_func())
```

```
def test_func(self):  
    self.assertRaises(my_func())
```

```
def test_func(self):  
    self.assertEqual(my_func(), '{true}')
```

```
def test_func(self):  
    self.assertFalse(my_func())
```

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

**Answer:** B

#### NEW QUESTION 165

- (Exam Topic 1)

Which two types of NAT are used in a network? (Choose two.)

- A. Static NAT
- B. Normal NAT
- C. Multicast NAT
- D. Dynamic NAT
- E. Router NAT

**Answer:** AD

#### Explanation:

Reference: <https://www.dummies.com/programming/networking/cisco/types-of-network-address-translation/>

#### NEW QUESTION 168

- (Exam Topic 1)

Which statement about authentication a RESTCONF API session with a router that runs Cisco IOS XE software is true?

- A. OAuth must be used.
- B. A token must be retrieved and the associated string must be embedded in the X-Auth-Token header.
- C. Basic authentication must be used.
- D. No authentication is required.

**Answer:** C

#### NEW QUESTION 169

- (Exam Topic 1)

What is the outcome of executing this command?

```
git clone ssh://john@exmaple.com/path/to/my-project_git
```

- A. Creates a local copy of a repository called "my project"
- B. Creates a copy of a branch called "my project"
- C. Initiates a new Git repository called "my project"
- D. Creates a new branch called "my project"

**Answer:** A

#### Explanation:

Reference: <https://www.atlassian.com/git/tutorials/setting-up-a-repository/git-clone>

#### NEW QUESTION 171

- (Exam Topic 1)

Which Cisco DevNet resource allows access to products in a development lab to explore, learn, and build application that use Cisco APLs?

- A. DevNet communities
- B. DevNet code Exchange
- C. DevNet Automation Exchange
- D. DevNet sandbox

Answer: D

**Explanation:**

Reference: <https://developer.cisco.com/site/sandbox/>

**NEW QUESTION 174**

- (Exam Topic 1)

Which task is performed because the test-driven development approach is being used?

- A. testing existing software before developing new code
- B. refactoring code that is covered by existing tests
- C. writing code without committing any coding violations
- D. creating test scenarios based on continuous development

Answer: B

**Explanation:**

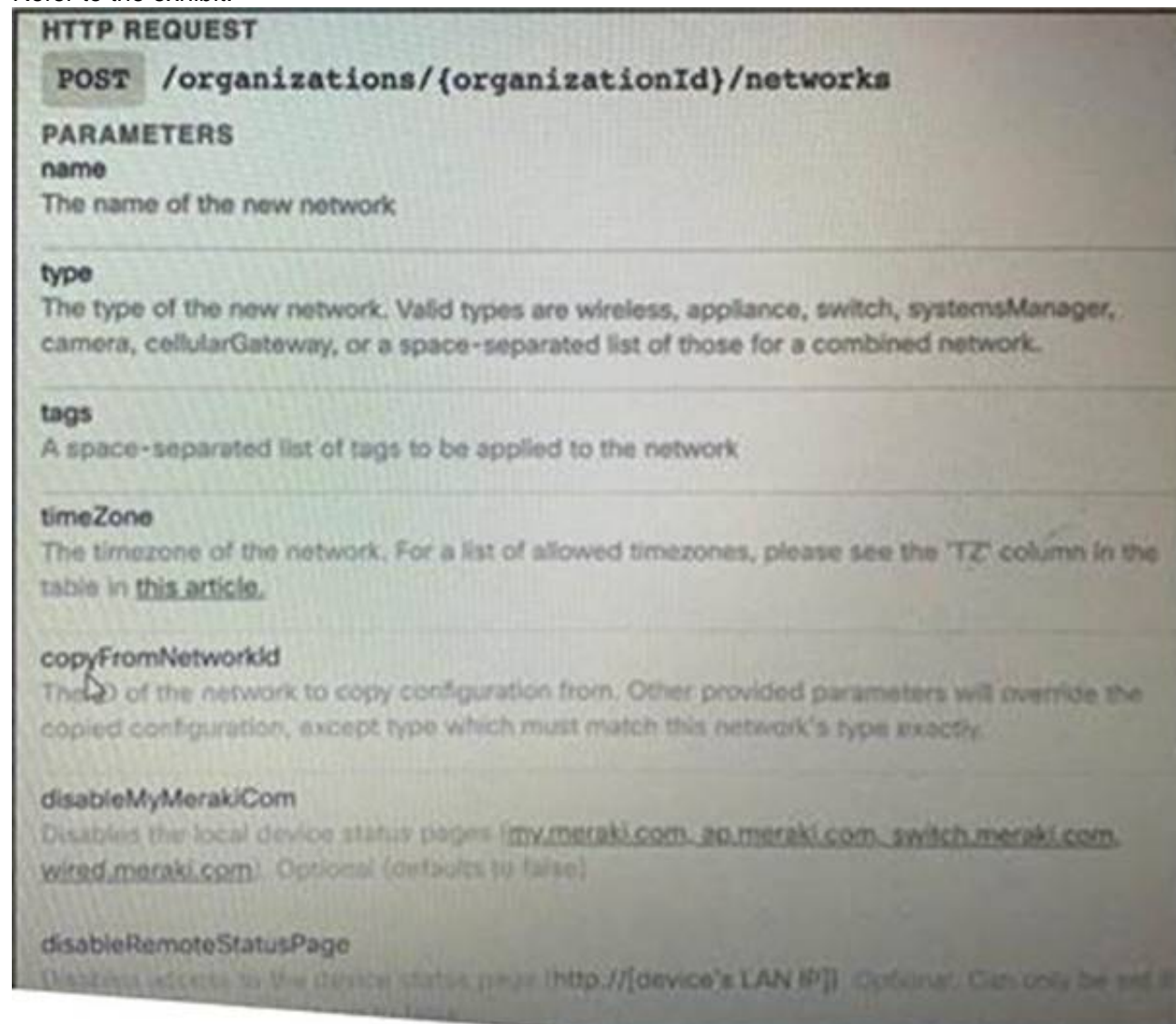
"The idea is that you build a test case first, before any software has been created or modified" but "testing existing software before developing new code" is the idea or goal, not the task five steps of TDD:

- Write a test
- Test fails
- Write some code
- Test passes
- Refactor

**NEW QUESTION 177**

- (Exam Topic 1)

Refer to the exhibit.



Drag and Drop the code from the bottom onto the box where the code is missing on the Meraki Python script to create a new network



```
base_url = "https://api.meraki.com/api/v0"
org_id = "123456789"
api_key = "1098hadpfsiapsf8ahf8ohp"
network_name = "New Network"
requests.post(
    base_url + "/" + [ ] + "/" + [ ] + "/networks",
    [ ] = {
        "X-Cisco-Meraki-API-Key": [ ],
        "Content-Type": "application/json"
    },
    data=json.dumps({ "[ ]": network_name,
                      "type": "wireless switch"
                    })
)
```

organizations

headers

api\_key

org\_id

name

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

```
base_url = "https://api.meraki.com/api/v0"
org_id = "123456789"
api_key = "1098hadpfsiapsf8ahf8ohp"
network_name = "New Network"
requests.post(
    base_url + "/" + organizations + "/" + org_id + "/networks",
    headers = {
        "X-Cisco-Meraki-API-Key": api_key,
        "Content-Type": "application/json"
    },
    data=json.dumps({ "name": network_name,
                      "type": "wireless switch"
                    })
)
```

NEW QUESTION 182

- (Exam Topic 1)

What are the two purposes for using a VLAN in a network? (Choose two)

- A. It is used to create the routing table.
- B. It creates a collection of MAC addresses.
- C. It is used for VM network traffic.
- D. It segments a network.
- E. It creates a broadcast domain.

Answer: DE

NEW QUESTION 185

- (Exam Topic 1)

Drag and drop the network automation interfaces from the left onto the transport protocols that they support on the right.

SSH

HTTP

HTTP/2

HTTPS

gRPC

NETCONF

RESTCONF

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:  
gRPC = C, NETCONF = A, RESTCONF = B, D OR

NEW QUESTION 188

- (Exam Topic 1)  
Which type of threat occur when an attacker can send hostile data to an interpreter within an application?

- A. Cross-site scripting
- B. Sensitive data exposure
- C. Broken authentication
- D. Injection

Answer: D

Explanation:  
Reference: [https://owasp.org/www-project-top-ten/OWASP\\_Top\\_Ten\\_2017/Top\\_10-2017\\_A1-Injection](https://owasp.org/www-project-top-ten/OWASP_Top_Ten_2017/Top_10-2017_A1-Injection)

NEW QUESTION 192

- (Exam Topic 1)  
Refer to the exhibit.

```
#!/bin/bash
<item 1>='date +%b-%d-%y'

<item 2>=/home/usr/path/backup-$BACKUPTIME.tar.gz

<item 3>=/home/usr/path/data_folder

tar -cpzf $DESTINATION $SOURCEFOLDER
```

Drag and drop the variables from the left onto the item numbers on the right that match the missing assignments in the exhibit.

BACKUPTIME

SOURCEFOLDER

DESTINATION

<item 1>

<item 2>

<item 3>

- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**

1 – A, 2 – C, 3 – B

Reference: <https://medium.com/@fotios.floros/linux-backup-script-1722cc9c2bf6> (use tar in order to create your backup file)

**NEW QUESTION 196**

- (Exam Topic 1)

Which product provides network controller-level management features?

- A. Cisco DNA Center
- B. Cisco NX-OS
- C. Cisco UCS Manager
- D. Cisco ISE

**Answer: A**

**Explanation:**

Reference: <https://www.cisco.com/c/en/us/products/cloud-systems-management/index.html>

**NEW QUESTION 199**

- (Exam Topic 1)

Fill in the blanks to complete the statement.

Cisco DNA provide the capability to send an HTTP \_\_\_\_\_ request to the API endpoint [https://DNA-c\\_API\\_ADDRESS/api/vi/network-device/](https://DNA-c_API_ADDRESS/api/vi/network-device/) and receive the network \_\_\_\_\_ list in \_\_\_\_\_ format.

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

Solution below as

Cisco DNA Center provides the capability to send an HTTP GET request to the API endpoint [https://DNA-c\\_API\\_ADDRESS/api/vi/network-device/](https://DNA-c_API_ADDRESS/api/vi/network-device/) and receive the network device list in JSON format

**NEW QUESTION 201**

- (Exam Topic 1)

On which network plane is routing protocol traffic handled?

- A. data plane
- B. management plane
- C. authentication plane
- D. control plane

**Answer: D**

**Explanation:**

Reference: [https://tools.cisco.com/security/center/resources/understanding\\_cppr](https://tools.cisco.com/security/center/resources/understanding_cppr)

**NEW QUESTION 204**

- (Exam Topic 1)

Refer to the exhibit.

```
<books>
  <science>
    <biology>10.00</biology>
    <geology>9.00</geology>
    <chemistry>8.00</chemistry>
  </science>
  <math>
    <calculus>20.00</calculus>
    <algebra>12.00</algebra>
  </math>
</books>
```

Which JSON is equivalent to the XML –encoded data?

```
A. [ {
  "books": {
    "science": {
      "biology": "10.00",
      "geology": "9.00",
      "chemistry": "8.00"
    },
    "math": {
      "calculus": "20.00",
      "algebra": "12.00"
    }
  }
} ]

B. {
  "books": [
    "science": {
      "biology": "10.00",
      "geology": "9.00",
      "chemistry": "8.00"
    },
    "math": {
      "calculus": "20.00",
      "algebra": "12.00"
    }
  ]
}

C. {
  "books": [
    "science": {
      "biology": "10.00",
      "geology": "9.00",
      "chemistry": "8.00"
    },
    "math": {
      "calculus": "20.00",
      "algebra": "12.00"
    }
  ]
}

D. {
  "books": [
    "science", {
      "biology": "10.00",
      "geology": "9.00",
      "chemistry": "8.00"
    },
    "math", {
      "calculus": "20.00",
      "algebra": "12.00"
    }
  ]
}
```

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

Answer: A

NEW QUESTION 207



- (Exam Topic 1)  
Drag and Drop the Bash commands from the left onto the correct actions on the right.

cd~	list files in directory sorted by edited date descending
cd/	create directory
ls -l	copy file
ls -t	change directory to user \$HOME
cp	create environment variable
cp -r	change directory to file system root
mv	move file
touch	create file
mkdir	copy directory
export	list files in directory with details

- A. Mastered  
B. Not Mastered

Answer: A

Explanation:  
1 - d, 2 - i, 3 - e, 4 - a, 5 - j, 6 - b, 7 - g, 8 - h, 9 - c, 10 - f

NEW QUESTION 212

- (Exam Topic 1)  
Drag and drop the Docker file instructions from the onto correct descriptions on the right. Not all options are used.

FROM ubuntu:12.04	informs Docker that the container listens on the specified network port(s) at runtime
VOLUME["/var/www","/var/log/apache2","/etc/apache2"]	creates a mount point with the specified name
RUN apt-get update && apt-get install -y --force-yes apache2	configures a container that runs as an executable
ENTRYPOINT["/usr/sbin/apache2ctl","-D","FOREGROUND"]	must be the first instruction in the Docker file
EXPOSE 1521	

- A. Mastered  
B. Not Mastered

Answer: A

Explanation:  
1 – E, 2 – B, 3 – D, 4 – A

NEW QUESTION 215

- (Exam Topic 1)  
Fill in the blanks to complete the cURL command that invokes a RESTful API to retrieve a resource in JSON format using OAuth.

```
curl -X [ ] -H "[ ]: application/json" \
-H "[ ]: Bearer AbCdEf123456" https://localhost/api/myresource
```

- A. Mastered  
 B. Not Mastered

**Answer:** A

**Explanation:**

```
curl -X GET -H "Accept: application/json" \
-H "Authorization: Bearer AbCdEf123456" https://localhost/api/myresource
```

Reference: <https://webcache.googleusercontent.com/search?q=cache:Se6d2trvMsEJ:https://blogs.cisco.com/developer/secu>

#### NEW QUESTION 217

- (Exam Topic 1)

Refer to the exhibit.

```

bash-3.2$ curl -H "Content-Type: application/json" -H "Authorization: Bearer
A - Fj2zzykEa09lic9GK2j8LtE1HklH6oRHPQdw1Pat60i7ndtHHnWzL2b5PQmG14Kk_B9ei5ISAClY7-
NarA-2n9H-tGgt-SxQ39iDejgcs" -i -d "{ \"roomId\":
B - \"Y2geK53sjELknosrC7SwQ5ZGL99pHgiuScB7DfNvU8Xx4wDKLiPORcEkryAnM3QmK9LQZsPOG4\"
, \"text\": \"test2\" }" -X POST https://api.ciscopark.com/v1/messages
D - HTTP/1.1 200 OK
Via: 1.1 linkerd
Transfer-Encoding: chunked
TrackingID: ROUTER_5E0FE283-63EB-01BB-00ED-806BF1BD00ED
E - Date: Sat, 01 Jan 2020 00:55:31 GMT
Server: Redacted
Content-Type: application/json; charset=UTF-8
Vary: Accept-Encoding
Strict-Transport-Security: max-age=63072000; includedSybDomains; preload

{"id": "
YcPjF3aVovyBYcbn7lSdesNkKcgN5tlExdc6dcnPtl4Va05NfCh9MG17j0tWXQLoIPuoJ73uu7JdoX
q9 ", "roomId": "
F - Y2geK53sjELknosrC7SwQ5ZGL99pHgiuScB7DfNvU8Xx4wDKLiPORcEkryAnM3QmK99LQZsP0G4
", "roomType": "group", "text": "test2", "personId": "
YcgYzL6XgtyfW81XXwqfKf7whfj23KuqWt4kLWkbb3JwEJBlVMZOkIvYDdFoppb0einNj111FcMyy5
wD", "personEmail": "user@webex.com", "created": "2020-01-01T00:55:32.492Z"}
bash-3.2$
    
```

Drag and drop the descriptors from the left onto the correct parts of the API request and response on the right.

Response Headers	A
HTTP Request	B
HTTP Response	C
Request Payload	D
Request Headers	E
Response Payload	F

- A. Mastered  
 B. Not Mastered

**Answer:** A

**Explanation:**

A – E, B – D, C – B, D – C, E – A, F – F

#### NEW QUESTION 220

- (Exam Topic 1)



Which detail is included in a routing table?

- A. IP protocol
- B. Broadcast address
- C. TCP or UDP port number
- D. Destination next hop or outgoing interface

**Answer: D**

**Explanation:**

Reference: <https://geek-university.com/ccna/routing-table-explained/>

#### NEW QUESTION 221

- (Exam Topic 1)

Fill in the blanks to complete the python script to request a service ticket using the APIC-EM rest API for the user "devnetuser".

```
import requests
import json
controller = 'devnetapi.cisco.com/sandbox/apic_em'
url = "https://" + controller + "/api/va/ticket"
payload = { 'username': ' ', 'password': '371274738' }
header = { 'Content-type': 'application/json' }
response =  post(url, data=json.dumps(payload), \
headers= , verify=False)
r_json = response.json()
print(r_json)
ticket = r_json["response"]["serviceTicket"]
print(ticket)
```

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

```
import requests
import json
controller = 'devnetapi.cisco.com/sandbox/apic_em'
url = "https://" + controller + "/api/va/ticket"
payload = { 'username': 'devnetuser', 'password': '371387657' }
header = { 'Content-type': 'application/json' }
response = requests.post(url, data=json.dumps(payload), \
headers=header, verify=False)
r_json = response.json()
print(r_json)
ticket = r_json["response"]["serviceTicket"]
print(ticket)
```

Reference: <https://developer.cisco.com/docs/apic-em/#!hello-world>

#### NEW QUESTION 226

- (Exam Topic 1)

A 401 HTTP response code is returned when calling a REST API. What is the error state identified by this response code?

- A. The server cannot process the request as it has detected an issue in the request syntax or body.
- B. The server accepted the request but the client is not authorized for this content.
- C. The request has not been accepted because it requires authentication.
- D. The server cannot find the requested resource because the path specified is incorrect.

**Answer: C**

**Explanation:**

Reference:

<https://blog.restcase.com/rest-api-error-codes-101/#:~:text=A%20401%20error%20response%20indicates,crede>

#### NEW QUESTION 229

- (Exam Topic 1)

Which mechanism is used to consume a RESTful API design when large amounts of data are returned?

- A. Data sets
- B. Scrolling
- C. Blobs
- D. Pagination

**Answer: D**

**Explanation:**

Reference: <https://nordicapis.com/everything-you-need-to-know-about-api-pagination/>

**NEW QUESTION 230**

- (Exam Topic 1)

What is the benefit of edge computing?

- A. It reduces network latency by moving processing closer to the data source.
- B. It simplifies security as devices and processing are brought closer together
- C. It removes the need for centralized data processing.
- D. It reduces data velocity from devices or other data sources.

**Answer:** A

**Explanation:**

Reference: <https://blogs.cisco.com/networking/time-to-get-serious-about-edge-computing>

**NEW QUESTION 231**

- (Exam Topic 1)

Which two NETCONF operations cover the RESTCONF GET operation? (Choose two.)

- A. <get>
- B. <edit>
- C. <get-update>
- D. <modify-config>
- E. <get-config>

**Answer:** AE

**Explanation:**

Reference:

<https://www.cisco.com/c/en/us/support/docs/storage-networking/management/200933-YANG-NETCONF-Conf>

**NEW QUESTION 233**

- (Exam Topic 1)

What is the purpose of the Cisco VIRL software tool?

- A. To verify configurations against compliance standards
- B. To simulate and model networks
- C. To automate API workflows
- D. To test performance of an application

**Answer:** B

**Explanation:**

Reference: <https://www.speaknetworks.com/cisco-virl-better-gns3/>

**NEW QUESTION 236**

- (Exam Topic 1)

Which is an advantage of using network programmability?

- A. It removes CLI access for devices.
- B. It provides for more scalable and replicable network provisioning.
- C. Manual configuration is faster.
- D. No cloud abstraction occurs.

**Answer:** B

**NEW QUESTION 240**

- (Exam Topic 1)

Which REST architectural constraint indicates that no client context should be stored on the server between requests?

- A. stateless
- B. uniform interface
- C. cacheable
- D. client-server

**Answer:** A

**Explanation:**

Reference: <https://developer.cisco.com/docs/nx-os/#!representational-state-transfer-rest>

**NEW QUESTION 245**

- (Exam Topic 1)

Drag and drop the network component names from the left onto the correct descriptions on the right. Not all options are used.



DNS server	contains a database of public IP addresses and their associated hostnames and often resolves or translates those names to IP addresses, as requested
firewall	enforces a set of rules about which data packets are allowed to enter or leave a network
reverse proxy	distributes network and application traffic across different servers
load balancer	retrieves resources on behalf of a client from one or more servers, then returns resources to the client, thus appearing as if they originated from the service itself
NAT gateway	

- A. Mastered  
B. Not Mastered

**Answer:** A

**Explanation:**

1 – A, 2 – B, 3 – D, 4 – C

#### NEW QUESTION 249

- (Exam Topic 1)

What is the first development task in test-driven development?

- A. Write code that implements a desired function.  
B. Write a failing test case for a desired function.  
C. Write a passing test case for existing code.  
D. Reverse engineer the code for a desired function.

**Answer:** B

**Explanation:**

Reference:

<https://technologyconversations.com/2013/12/20/test-driven-development-tdd-example-walkthrough/>

#### NEW QUESTION 253

- (Exam Topic 1)

What are two roles of an artifact repository in a CI/CD pipeline? (Choose two.)

- A. is required for CI/CD pipelines executed on a public cloud infrastructure  
B. is required for managing open source software  
C. stores files needed and generated during the build process  
D. allows for comparing and merging changes in the source code  
E. provides traceability, search, and management of binary files

**Answer:** CE

#### NEW QUESTION 257

- (Exam Topic 1)

Refer to the exhibit.

```
$ pyang -f tree Cisco-IOS-XE-native.yang
module: Cisco-IOS-XE-native
  +--rw native
    +--rw logging
      +--rw monitor|
        +--rw severity?  logging-level-type

$ curl --insecure -v -X PATCH \
  "https://ios-xe-mgmt-latest.cisco.com:9443/restconf/data/Cisco-IOS-XE-native:native" \
  -H 'Authorization: Basic ZGV2ZWxvcGVyOkMxc2NvMTIzNDU=' -H 'Accept: application/yang-data+json' \
  -H 'Content-Type: application/yang-data+json' \
  -d '{ "Cisco-IOS-XE-native:native" : { "logging" : { "monitor" : { "severity" : "alerts" }} } }'
> ...
< ...
< HTTP/1.1 204 No Content
```

The definition of the YANG module and a RESTCONF query sent to a Cisco Ioc XE device is shown. Which statement is correct if the RESTCONF interface

responds with a 204 status code?

- A. The query failed at retrieving the logging seventy level.
- B. The query failed to set the logging seventy level due to an invalid path.
- C. The query retrieved the logging seventy level.
- D. The query updated the logging seventy level or created it if not present on the device.

**Answer:** D

**Explanation:**

Reference:

[https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1611/b\\_1611\\_programmability\\_cg/restco](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1611/b_1611_programmability_cg/restco)

#### NEW QUESTION 261

- (Exam Topic 1)

Refer to the exhibit.

```
json_string = """
{
    "researcher": {
        "name": "Ford Perfect",
        "species": "Betelgeusian",
        "relatives": [
            {
                "name": "Zaphod Beeblebrox",
                "species": "Betelgeusian"
            }
        ]
    }
}
"""

my_json = json.loads(json_string)
```

Which python data structure does my\_json contain?

- A. List
- B. Json
- C. Map
- D. Dict

**Answer:** D

**Explanation:**

Reference:

<https://stackoverflow.com/questions/34764979/loading-python-string-with-u-as-json?noredirect=1&lq=1>

#### NEW QUESTION 266

- (Exam Topic 1)

How is a branch called "my-bug-fix" started to develop a fix needed in a product?

- A. git branch -b my-bug-fix
- B. git checkout -b my-bug-fix
- C. git checkout my-bug-fix
- D. git branch my-bug-fix

**Answer:** B

#### NEW QUESTION 267

- (Exam Topic 1)

Which line is an example of the start of a chunk from a unified diff?

- A. @@ -90,88 +20191008T1349@@
- B. @@ -20191007T1200 +88,90 @@
- C. @@ -20191007T1200 +20191008T1349@@
- D. @@ -88,10 +88,6 @@

**Answer:** D

**Explanation:**

Reference:

<https://unix.stackexchange.com/questions/252927/what-do-the-numbers-in-the-line-mean-in-output-of-diff>

#### NEW QUESTION 272

- (Exam Topic 1)  
Refer to the exhibit.

```
---
- hosts: CISCO_ROUTER_01
  gather_facts: true
  connection: network_cli

  tasks:
    - name: show conf
      ios_command:
        commands:
          - show conf
      register: config

    - name: save output to /etc/ansible/configs
      copy:
        content: "{{ config.stdout[0] }}"
        dest: "/etc/ansible/configs/show_conf_{{ inventory_hostname }}.txt"
```

What is the result of executing this Ansible playbook?

- A. The playbook copies a new start-up configuration to CISCO\_ROUTER\_01.
- B. The playbook backs up the running configuration of CISCO\_ROUTER\_01.
- C. The playbook backs up the start-up configuration of C1SCO\_ROUTER\_01.
- D. The playbook copies a new running configuration to CISCO\_ROUTER\_01.

Answer: C

#### NEW QUESTION 274

- (Exam Topic 3)

Drag and drop the code from the bottom onto the box where the code is missing to authenticate with the Cisco DNA Center REST API by using basic authentication. Then generate a token for later use. Not all options are used.

```
import requests
from requests.auth import HTTPBasicAuth

BASE_URL = 'https://sandboxdnac2.cisco.com'
AUTH_URL = '/dna/system/api/v1/'
USERNAME = 'admin'
PASSWORD = 'qwer1234!'

response = requests. (BASE_URL + AUTH_URL,
    auth=HTTPBasicAuth( , ))
token = response.json()['Token']
print(token)
```

auth/basic	/auth/token	post	get
USERNAME	Token	PASSWORD	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



```
import requests
from requests.auth import HTTPBasicAuth

BASE_URL = 'https://sandboxdnac2.cisco.com'
AUTH_URL = '/dna/system/api/v1/' + '/auth/token'
USERNAME = 'admin'
PASSWORD = 'qwer1234!'

response = requests.post(BASE_URL + AUTH_URL,
    auth=HTTPBasicAuth(USERNAME, PASSWORD))
token = response.json()['Token']
print(token)
```

auth/basic	/auth/token	post	get
USERNAME	Token	PASSWORD	

#### NEW QUESTION 276

- (Exam Topic 3)

When a Cisco IOS XE networking device is configured by using RESTCONF, what is the default data encoding method?

- A. application/yaml-data+json
- B. application/yang-data+json
- C. application/xml-data+json
- D. application/json-data+xml

**Answer: D**

#### NEW QUESTION 280

- (Exam Topic 3)

Which HTTP method is used by webhooks and notifies a listener about an event change?

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

**Answer: B**

#### NEW QUESTION 281

- (Exam Topic 3)

A developer must test the performance and reliability of an application. After functional and load tests are run, the application crashes due to traffic spikes from users. Which type of API constraint must be implemented to maintain reliability?

- A. rate limiting
- B. pagination
- C. payload limits
- D. filtering

**Answer: A**

#### NEW QUESTION 282

- (Exam Topic 3)

What is a capability of Ansible playbooks?

- A. They execute scheduled tasks regularly.
- B. They define the state for a device configuration.
- C. They collect SNMP logs from networking devices.
- D. They utilize the target device agent to execute.

**Answer: A**

#### NEW QUESTION 287

- (Exam Topic 3)

What is a characteristic of RPC APIs compared to REST APIs?



- A. Authentication is done over provisions for the service caller and vice versa for RPC API, and REST API uses HTTP headers for authentication.
- B. All communications between the client and server must be stateless for RPC API, and REST API is stateful.
- C. The architecture model for RPC API is resource-focused, and REST API is procedure-focused.
- D. The data payload must be in JSON format for RPC API, and REST API allows JSON and XML formats.

Answer: A

NEW QUESTION 291

- (Exam Topic 3)

```
user@host1:~/tmp$ cat Dockerfile
# Dockerfile to install traceroute
FROM ubuntu
MAINTAINER User One (userone@cisco.com)
RUN apt-get update && apt-get install traceroute
```

Refer to the exhibit. Drag and drop the Dockerfile contents from the left onto the functions on the right that create a container image to run traceroute to track network path to specific targets. Not all options are used.

document author

command to execute

Initializes a new build stage

copies new files or directories

sets the userid

FROM ubuntu

MAINTAINER User One (userone@cisco.com)

RUN apt-get update && apt-get install traceroute

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

document author

command to execute

Initializes a new build stage

copies new files or directories

sets the userid

Initializes a new build stage

document author

command to execute

NEW QUESTION 296

- (Exam Topic 3)

What is a capability of the AXL API?

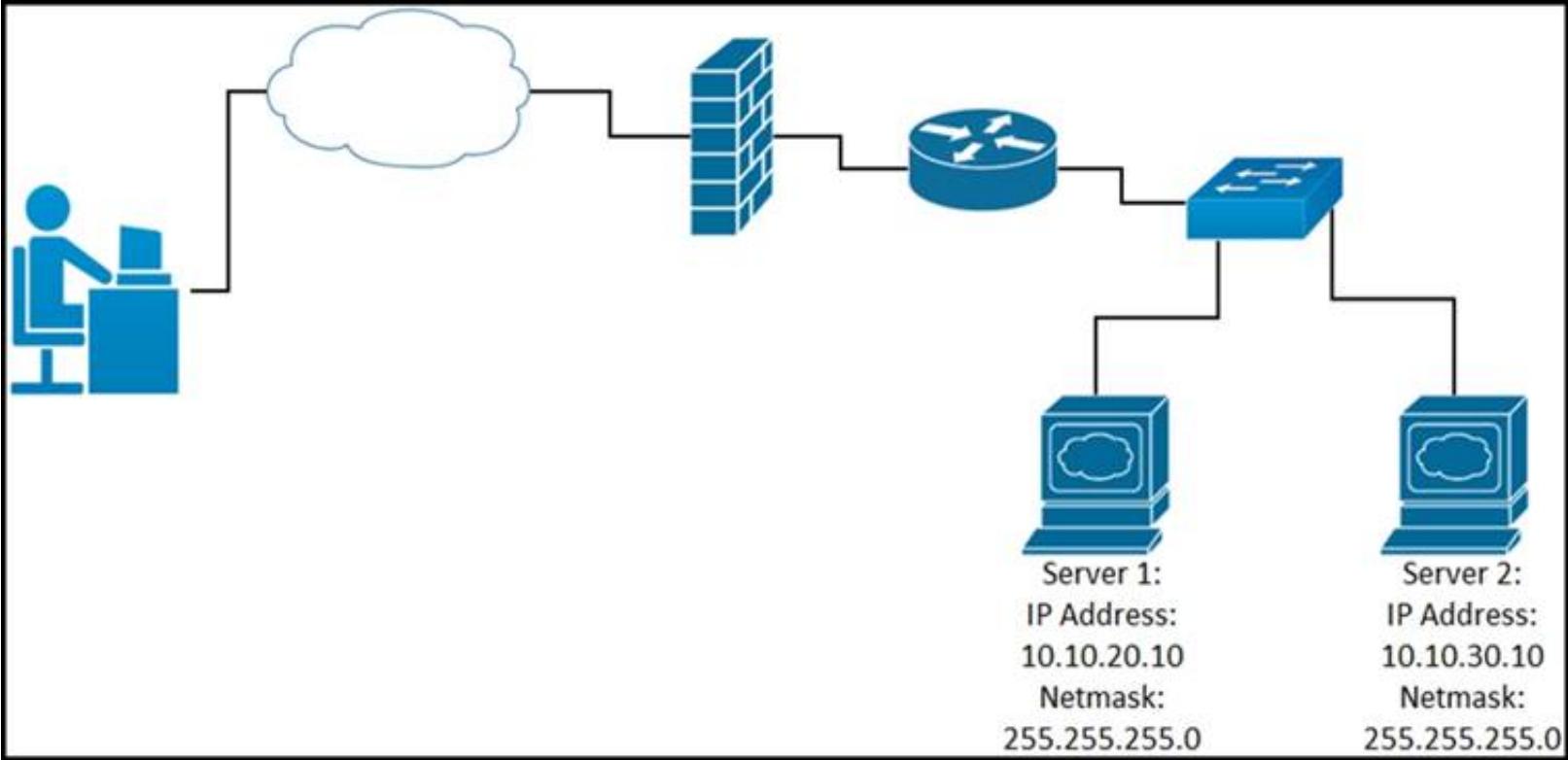
- A. It signs a user in to a phone that is configured for extension mobility.
- B. It pulls logs for the Cisco Tomcat service.
- C. It authenticates users who exist in Cisco Unified Communications Manager.

D. It provides support for HTTP and HTTPS communications.

Answer: C

NEW QUESTION 297

- (Exam Topic 3)  
Refer to the exhibit.



While developing a Cisco Webex bot, an application reaches the public IP address of the firewall, but traffic is forwarded to the IP address of server 1 instead of the IP address of server 2. What causes this issue?

- A. The proxy server that rewrites traffic is misconfigured.
- B. The router is sending the traffic to server 1 instead of server 2.
- C. The switch is forwarding IP traffic to the wrong VLAN.
- D. NAT is misconfigured on the firewall.

Answer: D

NEW QUESTION 300

- (Exam Topic 3)  
Which technology is responsible for resolving a host name to an IP address?

- A. DNS
- B. SNMP
- C. DHCP
- D. NTP

Answer: A

NEW QUESTION 302

- (Exam Topic 3)  
Drag and drop the capabilities from the left onto the Cisco Network Management Platforms that support the capabilities on the right.

receives AI/ML network performance insights, and uses guided issue remediation	Meraki
achieves automation through common policy for data center operations	Cisco DNA Center
establishes an overlay fabric to connect data centers, branches, and campuses through vManage	ACI
provisions and manages networks, networking devices, and clients through a fully managed cloud service	Cisco SD-WAN
supports multivendor networks through Network Element Drivers	NSO

A. Mastered

B. Not Mastered

Answer: A

Explanation:

receives AI/ML network performance insights, and uses guided issue remediation	provisions and manages networks, networking devices, and clients through a fully managed cloud service
achieves automation through common policy for data center operations	receives AI/ML network performance insights, and uses guided issue remediation
establishes an overlay fabric to connect data centers, branches, and campuses through vManage	achieves automation through common policy for data center operations
provisions and manages networks, networking devices, and clients through a fully managed cloud service	establishes an overlay fabric to connect data centers, branches, and campuses through vManage
supports multivendor networks through Network Element Drivers	supports multivendor networks through Network Element Drivers

NEW QUESTION 304

- (Exam Topic 3)

Drag and drop characteristics from the left onto the infrastructure management methodologies on the right.

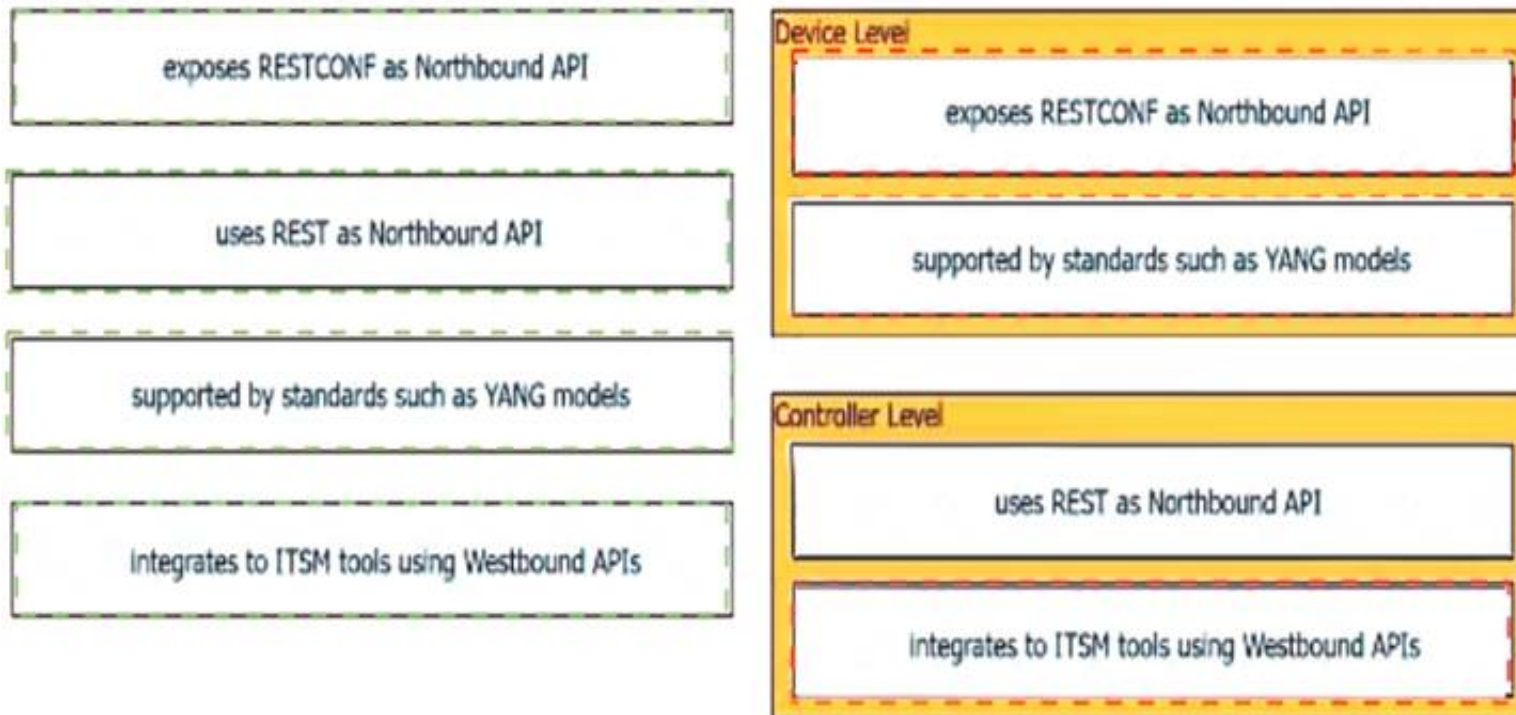
exposes RESTCONF as Northbound API	<div>Device Level</div> <div></div> <div></div>
uses REST as Northbound API	
supported by standards such as YANG models	<div>Controller Level</div> <div></div> <div></div>
integrates to ITSM tools using Westbound APIs	

A. Mastered  
B. Not Mastered

Answer: A

Explanation:





#### NEW QUESTION 309

- (Exam Topic 3)

A team of developers is responsible for a network orchestration application in the company. The responsibilities also include: developing and improving the application in a continuous manner deployment of the application and management of CI/CD frameworks monitoring the usage and problems and managing the performance improvements Which principle best describes this DevOps practice?

- A. responsible for IT operations
- B. automation of processes
- C. end-to-end responsibility
- D. quality assurance checks

**Answer: C**

#### NEW QUESTION 313

- (Exam Topic 3)

```
$ find /home/user/backup -mtime +30 -type f -print
$ find /home/user/backup -mtime +30 -type f -delete
```

Refer to the exhibit. An engineer is managing the network of an enterprise. The network is using a distributed deployment model. The enterprise uses database to store logs. The current policy requires logs to be stored if changes are made to the infrastructure in any of the devices on the data centers. Which workflow is being automated by the Bash script?

- A. returning backup files that are older than 30 days
- B. deleting backup files that are older than 30 days
- C. configuring the directory to delete files automatically
- D. automating deletion of all backup files every 30 days

**Answer: B**

#### NEW QUESTION 315

- (Exam Topic 3)

During which step of the CI/CD pipeline for infrastructure automation is code from multiple developers combined to compile and test different components?

- A. integration
- B. deployment
- C. development
- D. testing

**Answer: A**

#### NEW QUESTION 318

- (Exam Topic 3)

What is the function of an Ethernet switch in a networking environment?

- A. to switch a frame from one port to another port based on IP address
- B. to switch a frame from one port to another port based on MAC address
- C. to provide IP addressing to connected hosts
- D. to block unwanted traffic

**Answer: B**

#### NEW QUESTION 323

- (Exam Topic 3)

Drag and drop the functions from the left onto the networking devices on the right.



forwards by default	load balancer
distributes unicast traffic over devices	switch
uses traffic inspection to make forwarding decisions	firewall
distributes multicast traffic over devices	router

- A. Mastered  
B. Not Mastered

**Answer:** A

**Explanation:**

forwards by default	forwards by default
distributes unicast traffic over devices	distributes unicast traffic over devices
uses traffic inspection to make forwarding decisions	uses traffic inspection to make forwarding decisions
distributes multicast traffic over devices	distributes multicast traffic over devices

#### NEW QUESTION 325

- (Exam Topic 3)

Which command reverses the last commit without changing the index file or the working tree position?

- A. git revert HEAD  
B. git reset --hard HEAD~3  
C. git reset --soft HEAD^  
D. git revert

**Answer:** C

#### NEW QUESTION 329

- (Exam Topic 3)

What is a procedural component of CI/CD pipelines?

- A. Bundled artifacts must be generated.  
B. Every test must pass for the pipeline to continue its execution.  
C. Some tests fail without stopping the pipeline execution.  
D. The release label that identifies the build is optional.

**Answer:** B

**Explanation:**

In a CI/CD (Continuous Integration/Continuous Deployment) pipeline, a procedural component is a specific step or action that is carried out in a specific order as part of the pipeline process. One of the procedural components of a CI/CD pipeline is that every test must pass in order for the pipeline to continue its execution. If any test fails, the pipeline will stop and the issue must be addressed before the pipeline can continue. This is an important procedural component of a CI/CD pipeline because it ensures that the code being deployed is of high quality and meets the necessary standards before it is released.

#### NEW QUESTION 331

- (Exam Topic 3)

Users cannot access a webserver and after the traffic is captured, the capture tool shows an ICMP packet that reports "time exceeded in-transit". What is the cause of this webserver access issue?

- A. The large distance between the server and the users means that the packets require too much time to reach the destination.  
B. A router along the path is misrouting the packets in a wrong direction.  
C. A router along the path has the wrong time.  
D. The server is overloaded and the connection was not able to be processed in time.

**Answer:** B

**NEW QUESTION 333**

- (Exam Topic 3)

```
HTTPS/1.1 201 Created
Date: Tue, 08 Nov 2020 09:37:27 GMT
Server: example-server
Location: https://example.com/restconf/data\
        example-jukebox/library/dogbreed=Australian%20Cattle%20Dog
Last Modified: Tue 08 Nov 2020 09:37:27 GMT
ETag: "s1878124t4c"
```

Refer to the exhibit. Which RESTCONF request results in this response?

A.

```
GET /restconf/data/example-jukebox:jukebox/library HTTP/1.1
Host: example.com
Content-Type: application/yang-data-json

{
  "Example-jukebox:dogbreed" : [
    {
      "name" : "Australian Cattle Dog"
    }
  ]
}
```

B.

```
CONFIG /restconf/data/example-jukebox:jukebox/library HTTP/1.1
Host: example.com
Content-Type: application/yang-data-json

{
  "Example-jukebox:dogbreed" : [
    {
      "name" : "Australian Cattle Dog"
    }
  ]
}
```

C.

```
PUT /restconf/data/example-jukebox:jukebox/library HTTP/1.1
Host: example.com
Content-Type: application/yang-data-json

{
  "Example-jukebox:dogbreed" : [
    {
      "name" : "Australian Cattle Dog"
    }
  ]
}
```

D.

```
POST /restconf/data/example-jukebox:jukebox/library HTTP/1.1
Host: example.com
Content-Type: application/yang-data+json

{
  "Example:dogbreed" : [
    {
      "name" : "Australian Cattle Dog"
    }
  ]
}
```

**Answer: D**

**NEW QUESTION 337**

- (Exam Topic 3)

A developer creates a program in which an object maintains a list of classes based on the observer pattern. The classes are dependent on the object. Whenever

the state of the object changes, it notifies the dependent classes directly through callbacks. Which advantage of the observer pattern offers minimum dependencies and maximum flexibility between dependent objects or classes?

- A. tight coupling
- B. cohesion
- C. mediation
- D. loose coupling

Answer: D

#### NEW QUESTION 342

- (Exam Topic 3)

**/api/access/global/rules** API operations on global access rules. GET PUT PATCH POST DELETE

**Implementation Notes**  
Add a new global access rule.

**Parameters**

Parameter	Required	Description	Type	Data Type
body	true	Definition of the global access rule to be added.	body	ExtendedACE

**Response**  
Response Content Type application/json  
Response Object ExtendedACE

**ExtendedACE Model**

Field	Value	Description	Constraints
sourceAddress*	object	source address in the ace	None
destinationAddress*	object	destination address in the ace	None
kind*	string	The kind of this resource object.	None
dstSecurity	object	destination security group in the ace	None
dstSecurity. Value	string		None
active*	boolean	shows if the rule is active or inactive, default is active	None
destinationService*	object	destination service in the ace	None
permit*	boolean	shows if the action is permit or deny	None

Refer to the exhibit. Drag and drop the code from the bottom onto the box where the code is missing to complete the function that adds a new global access rule that denies traffic using the Cisco ASA REST API. Not all options are used.

```
import requests as req
def add_rule(token, asa_IP, dest v4Address):
    data = {
        "destinationAddress": {
            "kind": "IPv4Address",
            "value": dest v4Address
        },
        "destinationService": {
            "kind": "NetworkProtocol",
            "value": "ip"
        },
        ,
        "active": True,
        "sourceAddress": {
            "kind": "AnyIPAddress",
            "value": "any4"
        }
    }
    objectRequestUrl='https://'
    res = req.request(
        json=data,verify=False)
    print("Success.")
else:
    print("Failed")
```

if res.status\_code == 201:

if res.status\_code == 203:

+ asa\_IP + "/api/access/global/rules"

'POST', objectRequestUrl,

"permit": False,

+ asa\_IP = "/access/global/rules"

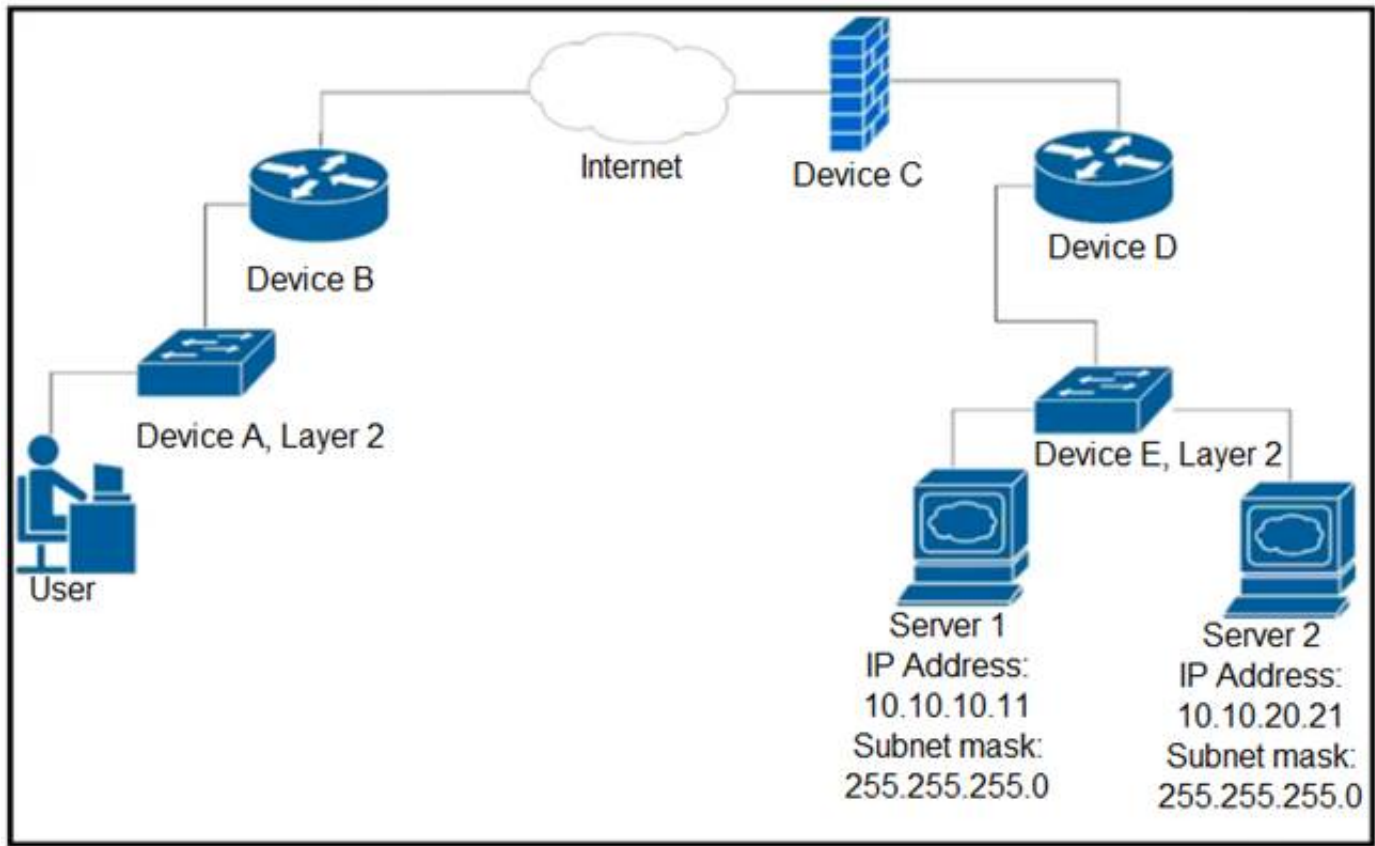
- A. Mastered
- B. Not Mastered

Answer: A



**Explanation:**  
Graphical user interface, text, application, email Description automatically generated

**NEW QUESTION 347**  
- (Exam Topic 3)  
Refer to the exhibit.



Up to which device does the communication server 1 and server 2 go?

- A. device B
- B. device C
- C. device D
- D. device E

**Answer:** C

**NEW QUESTION 351**  
- (Exam Topic 3)  
Drag and drop the code snippets from the bottom onto the blanks in the code to complete the happy path scenario. Not all options are used.

```
import member as m
import pytest
class Team:
    def __init__(self, name):
        self.name = name
        self.members = []
    def add_member(self, member):
        if member:
            if member not in self.members:
                [ ]
                return True
            else:
                [ ]
        else:
            [ ]

@pytest.fixture
def team():
    team = Team('Reds')
    yield team
    del team

@pytest.fixture
def member():
    member = m.Member('Chris George')
    yield member
    del member

@pytest.mark.usefixtures('team', 'member')
class TestHappyPathAddMemberToTeam:
    def test_add_member_to_team(self, team, member):
        assert [ ] is True
```

- return True
- team.add\_member(member)
- self.members.append(member)
- yield member
- return False
- member.add\_member()

- A. Mastered
- B. Not Mastered

**Answer:** A



**Explanation:**

```
import member as m
import pytest
class Team:
    def __init__(self, name):
        self.name = name
        self.members = []
    def add_member(self, member):
        if member:
            if member not in self.members:
                member.add_member()
                return True
            else:
                return False
        else:
            team.add_member(member)

@pytest.fixture
def team():
    team = Team('Reds')
    yield team
    del team
@pytest.fixture
def member():
    member = m.Member('Chris George')
    yield member
    del member
@pytest.mark.usefixtures('team', 'member')
class TestHappyPathAddMemberToTeam:
    def test_add_member_to_team(self, team, member):
        assert yield member is True
```

return True

team.add\_member(member)

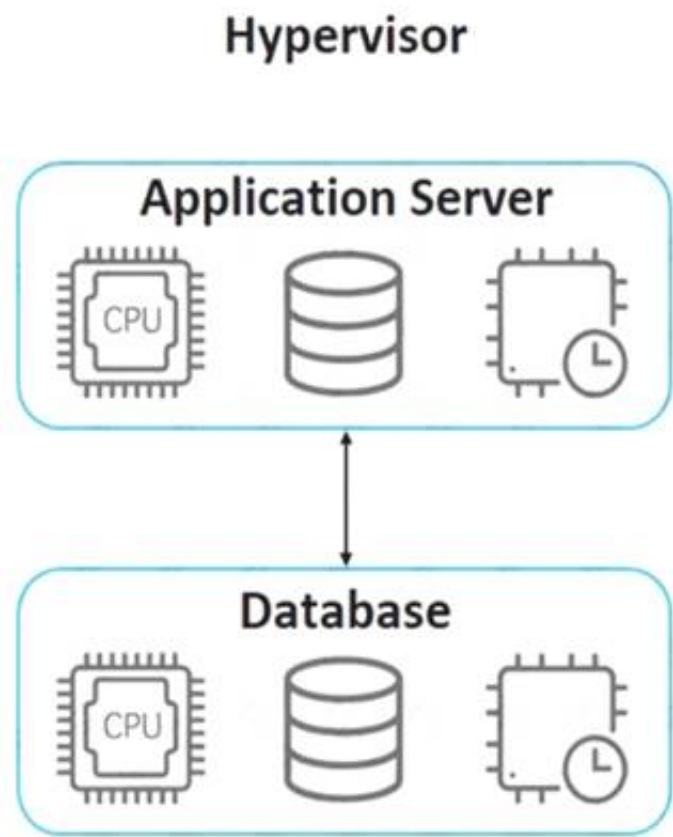
self.members.append(member)

yield member

return False

member.add\_member()

**NEW QUESTION 353**  
 - (Exam Topic 3)  
 Refer to the exhibit.



An application must be deployed on a server that has other applications installed. The server resources are to be allocated based on the deployment requirements. The OS for each application must be independent. Which type of deployment is used?

- A. hybrid
- B. virtual machines
- C. containers
- D. bare metal

**Answer: B**

**NEW QUESTION 358**  
 - (Exam Topic 3)

```
1 URL: https://example.com/restconf/data/Cisco-IOS-XE-native:native/logging/monitor
2 Method: POST
3
4 Headers: {'Content-type': 'application/yang-data+json', 'Accept': 'application/yang-data+json,
* application/yang-data.errors+json'}
5
6 Body:
7
8 {
9   "severity": "alerts"
10 }
```

Refer to the exhibit. Which HTTP code is returned after the RESTCONF query is executed?

- A. 201
- B. 204
- C. 302
- D. 304

**Answer: A**

#### NEW QUESTION 360

- (Exam Topic 3)

A developer attempts to refactor and improve the application code. It is noticed that the code contains several pieces of key information that could be a security threat if this code is accessible by those who are not authorized to this data. Which approach addresses the security concerns noticed by the developer?

- A. Host the application code on a machine located in a secure data center.
- B. Utilize environment variables for username and password details.
- C. Rely on the security teams' goodwill to not give access to those who do not need it.
- D. Move the hardware that the application is deployed on to a secure location.

**Answer: B**

#### NEW QUESTION 363

- (Exam Topic 3)

Refer to the exhibit.

##### HTTP Request

```
curl http://hello-api.info -v
```

##### HTTP Response

```
* Trying hello-app.info...
* TCP_NODELAY set
* Connected to hello-app.info (hello-app.info) port 80 (#0)
> GET / HTTP/1.1
> Host:hello-app.info
> User-Agent: curl/7.64.1
> Accept: */*
>

< HTTP/1.1 502 Bad Gateway
< Server: nginx/1.14.0 (Ubuntu)
< Date: Sat, 21 Nov 2020 11:09:54 GMT
< Content-Type: text/html
< Content-Length: 182
< Connection: keep-alive
```

A developer cannot reach the web application behind an NGINX load balancer. The developer sends a request to an application FQDN with cURL but gets an HTTP 502 response. Which action solves the problem?

- A. Fix errors in the server configuration, which is behind the load balancer.
- B. Bring up the load balancer to the active state.
- C. Fix errors in the cURL request sent by the client.
- D. Change the default gateway on the load balancer to an active one.

**Answer: A**

#### Explanation:

The HyperText Transfer Protocol (HTTP) 502 Bad Gateway server error response code indicates that the server, while acting as a gateway or proxy, received an invalid response from the upstream server.

<https://developer.mozilla.org/en-US/docs/Web/HTTP/Status/502#:~:text=The%20HyperText%20Transfer%20P>

#### NEW QUESTION 366

- (Exam Topic 3)

A development team is creating an application used for contactless payments. The application must: Be web-based Capture and process the credit card information for a purchase.

Which security action must the web application use to gather and process the private customer data?

- A. Enable RATs to monitor the web application remotely.
- B. Disable botnets to eliminate risks.
- C. Disable TLS to increase the connection speed.
- D. Enable the encryption of network traffic.

**Answer: D**

#### NEW QUESTION 370

- (Exam Topic 3)

```
1 import requests
2 def main():
3     def getCreds():
4         user = input('User: ')
5         pwd = Getpass('Pass: ')
6         return (user,pwd)
7
8     def login(ipaddr,user,pwd):
9         url = "https://{ipaddr}/api/aaaLogin.json".format(ipaddr=ipaddr)
10        data = '{"aaaUser":{"attributes":{"name":"%(user)s","pwd":"%(pwd)s"}}}'
11        % ("pwd":pwd,"user":user)
12        response = requests.post(url,data=data,verify=False)
13        cookie = response.headers['Set-Cookie']
14        return cookie
15
16    def getstuff(ipaddr,cookie):
17        headers = {"Cookie":cookie}
18        url = "https://{ipaddr}/api/node/class/fvTenant.json".format(ipaddr=ipaddr)
19        response = requests.get(url,headers=headers,verify=False)
20        grouplist = []
21        for x in response.json()["imdata"]:
22            grouplist.append(x["fvTenant"]["attributes"]["name"])
23        return ','.join(grouplist)
24
25    ipaddr = "192.168.255.2"
26    user,pwd = getCreds()
27    token = login(ipaddr,user,pwd)
28    return getstuff(ipaddr,cookie)
29
30 if __name__ == '__main__':
31     result = main()
32     print(result)
```

Refer to the exhibit. Which action does the script perform?

- A. It queries user credentials from Cisco IOS XE devices.
- B. It retrieves device identification from Cisco DNA Center.
- C. It exports SSID information from Meraki dashboard.
- D. It collects group information from ACI.

**Answer: D**

#### NEW QUESTION 371

- (Exam Topic 3)

Which port does HTTPS use by default?

- A. 433
- B. 443
- C. 803
- D. 883

**Answer: B**

#### NEW QUESTION 376

- (Exam Topic 3)

Refer to the exhibit.



```
module ietf-interface {
  namespace "urn:ietf:params:xml:ns:yang:ietf-interfaces";
  prefix if;
  import ietf-yang-types {
    prefix yang;
  }
  container interfaces-state {
    list interface {
      key "name";
      leaf name {
        type string;
      }
      leaf admin-status {
        type enumeration {
          enum up {
            value 1;
          }
          enum down {
            value 2;
          }
          enum testing {
            value 3;
          }
        }
      }
      leaf if-index {
        type int32 {
          range "1..2147483647"
        }
      }
      container statistics {
        leaf in-octets {
          type yang:counter64;
        }
        leaf in-unicast-pkts {
          type yang:counter64;
        }
      }
    }
  }
}
```

Which XML snippet has interface information that conforms to the YANG model?

A. Text Description automatically generatedB.

```
<interfaces-state
xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces"
xmlns:if="urn:ietf:params:xml:ns:yang:ietf-interfaces">
  <interface name="GigabitEthernet1">
    <admin-status>1</admin-status>
    <if-index>1</if-index>
    <statistics>
      <in-octets>408164820</in-octets>
      <in-unicast-pkts>728061</in-unicast-pkts>
    </statistics>
  </interface>
</interfaces-state>
```

Text

Description automatically generated

```
<interfaces-state
xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces"
xmlns:if="urn:ietf:params:xml:ns:yang:ietf-interfaces">
  <interface>
    <name>GigabitEthernet1</name>
    <admin-status>up</admin-status>
    <if-index>1</if-index>
    <in-octets>408164820</in-octets>
    <in-unicast-pkts>728061</in-unicast-pkts>
  </interface>
</interfaces-state>
```

B. Text Description automatically generated

```
<interfaces-state
xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces"
xmlns:if="urn:ietf:params:xml:ns:yang:ietf-interfaces">
  <interface>
    <name>GigabitEthernet1</name>
    <admin-status>up</admin-status>
    <if-index>1</if-index>
    <statistics>
      <in-octets>408164820</in-octets>
      <in-unicast-pkts>728061</in-unicast-pkts>
    </statistics>
  </interface>
</interfaces-state>
```

C. Text Description automatically generated

```
<interfaces-state
xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces"
xmlns:if="urn:ietf:params:xml:ns:yang:ietf-interfaces">
  <interface>
    <name>GigabitEthernet1</name>
    <admin-status>1</admin-status>>
    <if-index>1</if-index>
    <statistics>
      <in-octets>408164820</in-octets>
      <in-unicast-pkts>728061</in-unicast-pkts>
    </statistics>
  </interface>
</interfaces-state>
```

**Answer:** C

**Explanation:**

<https://datatracker.ietf.org/doc/id/draft-ietf-netmod-interfaces-cfg-01.txt> <admin-status>up</admin-status>

#### NEW QUESTION 379

- (Exam Topic 3)

What are two benefits of using classes over functions when writing applications? (Choose two.)

- A. improved readability
- B. increased compatibility
- C. variable reusability
- D. increased performance
- E. code organization

**Answer:** AC

#### NEW QUESTION 384

- (Exam Topic 3)

```
import requests
from requests.auth import HTTPBasicAuth

user= "user"
password= "PASSWORD"

token=requests.post('https://<DNAC ADRESS>/dna/system/api/v1/auth/token',
)
```

Refer to the exhibit. A developer must use a token to collect data from Cisco DNA Center API and prepares a Python script to send requests. Which line of code needs to be placed on the snippet where the code is missing to obtain a token from the Cisco DNA Center API?

- A. token=BasicAuth('user','password'))
- B. auth=BasicAuth('user','password'))
- C. auth=HTTPBasicAuth(user,password))
- D. token=HTTPBasicAuth(user,password))

**Answer:** C

#### NEW QUESTION 387



- (Exam Topic 3)

## Object Lookup

Use the `MoDirectory.lookupByDn` to look up an object within the MIT object tree by its distinguished name (DN). This example looks for an object called 'uni':

```
uniMo = moDir.lookupByDn('uni')
```

A successful lookup operation returns a reference to the object that has the specified DN.

You can also look up an object by class. This example returns a list of all objects of the class 'polUni':

```
uniMo = moDir.lookupByClass('polUni')
```

You can add a filter to a lookup to find specific objects. This example returns an object of class 'fvTenant' whose name is 'Tenant1':

```
tenant1Mo = moDir.lookupByClass("fvTenant", propFilter='and(eq(fvTenant.name, "Tenant1"))')
```

Refer to the exhibit. Drag and drop the code from the bottom onto the box where the code is missing to add a subnet to each bridge domain in the Ten1 tenant. Not all options are used.

```
from cobra.model import fv
from cobra.mit.request import ClassQuery, DnQuery
import cobra.mit.access
import cobra.mit.session

tenname = "Ten1"
ls = cobra.mit.session.LoginSession(
    'https://10.100.1.200', "admin", "Lab123!3")

aci = cobra.mit.access.MoDirectory(ls)
aci.login()
c = cobra.mit.request.ConfigRequest()

qry1 =  (f'uni/tn-{tenname}')
fvTenant = aci.query(qry1)[0]

qry2 =  ("fvBD")
qry2.propFilter = f'and(wcard(fvBD.dn, "{fvTenant.dn}") )'
fvBDs = aci.query(qry2)

i=0
for fvBD in fvBDs:
    fvsubnet = cobra.model.fv.Subnet(  , ip=f'10.114.{i}.1/24')
    c.addMo(fvBD)
    aci.  (c)
    i+=
```

fvBD

fvTenant

ClassQuery

bdname

DnQuery

ClassName

commit

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



```
from cobra.model import fv
from cobra.mit.request import ClassQuery, DnQuery
import cobra.mit.access
import cobra.mit.session

tenname = "Ten1"
ls = cobra.mit.session.LoginSession(
    'https://10.100.1.200', "admin", "Lab123!3")

aci = cobra.mit.access.MoDirectory(ls)
aci.login()
c = cobra.mit.request.ConfigRequest()

qry1 = DnQuery (f'uni/tn-{tenname}')
fvTenant = aci.query(qry1)[0]

qry2 = ClassQuery ("fvBD")
qry2.propFilter = f'and(wcard(fvBD.dn,"{fvTenant.dn}"))'
fvBDs = aci.query(qry2)

i=0
for fvBD in fvBDs:
    fvsubnet = cobra.model.fv.Subnet( fvBD , ip=f'10.114.{i}.1/24')
    c.addMo(fvBD)
    aci.commit (c)
    i+=1
```

fvBD

fvTenant

ClassQuery

bdname

DnQuery

ClassName

commit

### NEW QUESTION 392

- (Exam Topic 3)

```
#!/bin/bash
apt-get update
apt-get -y install git
cd Code/Network_Config
mkdir PRODUCTION
cd PRODUCTION
touch state.yml
vi state.yml
```

Refer to the exhibit. A network engineer executes the bash script shown. Which two things are achieved by running the script? (Choose two.)

- A. A directory called PRODUCTION is created.
- B. The engineer changes to the parent directory.
- C. A YAML file is created.
- D. A YAML file is removed.
- E. A directory called state.yml is created.

**Answer:** AC

### NEW QUESTION 393

- (Exam Topic 2)

Which Cisco product provides malware and content filtering through DNS?

- A. Cisco ASA Firepower module
- B. Cisco AMP
- C. Cisco ISE
- D. Cisco Umbrella

**Answer:** D

### NEW QUESTION 395

- (Exam Topic 2)

What is a benefit of using functions in the code for the development process?

- A. better user experience in the end product
- B. improves code performance
- C. easier to compile the code
- D. faster code development

**Answer:** D

### Explanation:

<https://www.techwalla.com/articles/the-advantages-disadvantages-of-using-functions-procedures-in-computer-p>

**NEW QUESTION 397**

- (Exam Topic 2)

Which configuration management tool has an agentless capability?

- A. Chef
- B. Puppet
- C. Ansible
- D. CFEngine

**Answer: C**

**NEW QUESTION 399**

- (Exam Topic 3)

Which TCP port is used to connect to a network device by using Telnet?

- A. 23
- B. 69
- C. 400
- D. 830

**Answer: A**

**NEW QUESTION 400**

- (Exam Topic 3)

Developer is working on a new feature and made changes on a branch named 'branch-413667549a-new'. When merging the branch to production, conflicts occurred. Which Git command must the developer use to recreate the pre-merge state?

- A. git merge -no-edit
- B. git merge -commit
- C. git merge -revert
- D. git merge -abort

**Answer: D**

**Explanation:**

<https://www.git-tower.com/learn/git/ebook/en/command-line/advanced-topics/merge-conflicts>

**NEW QUESTION 402**

- (Exam Topic 3)



Refer to the exhibit. Drag and drop the code from the bottom onto the box where the code is missing to construct a request that generates a security token and gets a list of network devices. Not all options are used.

```
import json, requests, urllib3
from requests.auth import HTTPBasicAuth
from config import host, username, password

headers = { 'content-type': "application/json", 'x-auth-token': "" }
def dna_api_auth(host, username, password):
    url = "https://{}/api/system/v1/auth/token".format(host)
    response = [ ] .post(url, auth=HTTPBasicAuth(username, password),
        headers=headers, verify=False)
    return response.json()["Token"]

def list_dna_devices(token):
    url = "https://{}/api/v1/network-device".format(host)
    headers["x-auth-token"] = token
    response = requests.get(url, headers=headers, verify=False)
    data = [ ] .json()
    for item in data['response']:
        print(item["hostname"])

token = [ ] (host, username, password)
[ ] (token)
```

- |          |                  |              |          |
|----------|------------------|--------------|----------|
| response | reply            | dna_api_auth | requests |
| json     | list_dna_devices | list devices |          |

- A. Mastered  
 B. Not Mastered

Answer: A

Explanation:

```
import json, requests, urllib3
from requests.auth import HTTPBasicAuth
from config import host, username, password

headers = { 'content-type': "application/json", 'x-auth-token': "" }
def dna_api_auth(host, username, password):
    url = "https://{}/api/system/v1/auth/token".format(host)
    response = requests .post(url, auth=HTTPBasicAuth(username, password),
        headers=headers, verify=False)
    return response.json()["Token"]

def list_dna_devices(token):
    url = "https://{}/api/v1/network-device".format(host)
    headers["x-auth-token"] = token
    response = requests.get(url, headers=headers, verify=False)
    data = response .json()
    for item in data['response']:
        print(item["hostname"])

token = dna_api_auth (host, username, password)
list_dna_devices (token)
```

- |          |                  |              |          |
|----------|------------------|--------------|----------|
| response | reply            | dna_api_auth | requests |
| json     | list_dna_devices | list devices |          |

#### NEW QUESTION 405

- (Exam Topic 3)

Which IP service is used to monitor the performance of network devices?

- A. SNMP  
 B. DHCP  
 C. DNS



D. NTP

**Answer:** A

#### NEW QUESTION 407

- (Exam Topic 3)

What is a comparison of YAML and JSON?

- A. YAML has a more consistent approach to representing data compared to JSON.
- B. JSON does not support comments and YAML does.
- C. YAML is a more verbose data structure compared to JSON.
- D. JSON has more common usage in configuration management tools compared to YAML.

**Answer:** B

**Explanation:**

Reference: <https://stackoverflow.com/questions/244777/can-comments-be-used-in-json>

Can I use comments in JSON? No, JSON is a data-only format. Comments in the form //, #, or /\* \*/, which are used in popular programming languages, are not allowed in JSON. You can add comments to JSON as custom JSON elements that will hold your comments, but these elements will still be data.

#### NEW QUESTION 411

- (Exam Topic 3)

```
import os
import requests

# username and password

API_USER_NAME = "devnetuser"
API_PASSWORD = os.environ['API_PASSWORD']

requests.get('https://api.cisco.com/end-service', auth=(API_USER_NAME, API_PASSWORD))
```

Refer to the exhibit. An engineer must authorize a REST API call. The API password is "Cisco123!". Which Bash command must be placed in the code to authorize the call?

- A. mkdir API\_PASSWORD=Cisco123!
- B. set API\_PASSWORD=Cisco123!
- C. cp API\_PASSWORD=Cisco123!
- D. export API\_PASSWORD=Cisco123!

**Answer:** D

#### NEW QUESTION 413

- (Exam Topic 3)

Which Cisco platform is used to manage data center infrastructure through third-party tools and system integrations?

- A. Cisco DNA Center
- B. Cisco UCS Manager
- C. Cisco Intersight
- D. Cisco UCS Director

**Answer:** D

#### NEW QUESTION 417

- (Exam Topic 3)

A developer has addressed a bug that was found in the production code of an application. A separate file named 'bug427896191v\_fix' has been created with the changes to the code. Which Git command must be used to incorporate the bug fix into the production code?

- A. git rebase
- B. git cat-file
- C. git merge-file
- D. git bisert

**Answer:** C

#### NEW QUESTION 420

- (Exam Topic 3)

A developer completed the creation of a script using Git. Before delivering it to the customer, the developer wants to be sure about all untracked files, without losing any information. Which command gathers this information?

- A. git clean -n
- B. git rm -f
- C. git clean -r
- D. git rm \*

**Answer:** A

**NEW QUESTION 422**

- (Exam Topic 3)

A customer's cloud services must:

Migrate services to another data center on demand. Save the operational state of the machine on demand. Support Windows and Linux GUIs.

Maximize hardware utilization.

Which type of deployment meets these requirements?

- A. bare metal
- B. container
- C. virtual machine
- D. Kubernetes

**Answer:** C

**NEW QUESTION 427**

- (Exam Topic 3)

A developer is working on a new feature in a branch named 'newfeat123456789' and the current working primary branch is named 'prim987654321'. The developer requires a merge commit during a fast forward

merge for record-keeping purposes. Which Git command must be used?

- A. git merge --no-ff newfeat123456789
- B. git commit --no-ff newfeat123456789
- C. git add --commit-ff newfeat123456789
- D. git reset --commit-ff newfeat123456789

**Answer:** A

**NEW QUESTION 432**

- (Exam Topic 3)

To which stage of development do Infrastructure as Code principles relate?

- A. manual configuration
- B. service provisioning
- C. physical deployment
- D. requirement collection

**Answer:** B

**NEW QUESTION 433**

- (Exam Topic 3)

A developer is developing a web application that uses username and password to authenticate to the next service. The user credentials must be available at any time in the application. The developer must choose and implement a secure method of storing the authentication credentials that are used in the automation code.

Which password handling method must be used to minimize the security risk?

- A. Store the username and password in a separate configuration file.
- B. Store the username and password in a vault.
- C. Store the passwords in a dictionary.
- D. Store the username and password in code.

**Answer:** B

**NEW QUESTION 436**

- (Exam Topic 3)

What is a benefit of using a code review process in application development?

- A. accelerates the deployment of new features in an existing application
- B. provides version control during code development
- C. enables the quick deployment of new code
- D. eliminates common mistakes during development

**Answer:** D

**NEW QUESTION 439**

- (Exam Topic 3)

Which Python function is used to parse a string that contains JSON data into a Python dictionary?

- A. json.dumps()
- B. json.to\_json()
- C. json.parse()
- D. json.loads()

**Answer:** D

**Explanation:**

loads() function is present in python built-in 'json' module. This function is used to parse the JSON string.

**NEW QUESTION 442**

- (Exam Topic 3)

A group of software developers wants to improve its collaboration with the operations team. The group wants to deliver release-ready code that merges code changes back to the main branch and runs the automated testing as often as possible. Which DevOps concept does this scenario represent?

- A. continuous delivery
- B. version control
- C. continuous integration
- D. continuous deployment

**Answer: C**

**NEW QUESTION 446**

- (Exam Topic 3)

```
import requests
from requests.auth import HTTPBasicAuth
BASE_URL = 'https://<IP ADDRESS or FQDN>'
AUTH_URL = '/dna/system/api/v1/auth/token'
TOKEN = '<TOKEN>'

headers = {'X-Auth-Token': TOKEN, 'Content-Type': 'application/json'}

DEVICES_COUNT_URL = '/dna/intent/api/v1/network-device/count'
DEVICES_URL = '/dna/intent/api/v1/network-device'
DEVICES_BY_ID_URL = '/dna/intent/api/v1/network-device/'

def devices_func(headers):
    response = requests.get(BASE_URL + DEVICES_COUNT_URL,
                            headers = headers, verify=False)
    return response.json()['response']

def devices_test(headers, query_string_params):
    response = requests.get(BASE_URL + DEVICES_URL, headers = headers,
                            params = query_string_params, verify=False)
    return response.json()['response']

def devices_info(headers, device_id):
    response = requests.get(BASE_URL + DEVICES_BY_ID_URL + device_id,
                            headers = headers, verify=False)
    return response.json()['response']

print(devices_func(headers))
print(devices_test(headers, {}))
print(devices_test(headers, {'hostname': 'CSR1Kv-01.devnet.local'}))
response = devices_test(headers, {'platformId': 'C9500-40X'})
print(devices_info(headers, response[0]['id']))
```

Refer to the exhibit. An engineer prepares a script to automate workflow by using Cisco DNA Center APIs to display:

total count of devices

list of the network devices

information of one device with a hostname filter

What is displayed in the final step after the Python script is executed?

- A. information about a device of type C9500-40x.
- B. filtered results by the hostname and the platformId C9500-40X
- C. information about the test devices
- D. list of devices with platformId C9500-40x

**Answer: B**

**NEW QUESTION 451**

- (Exam Topic 3)

Which two situations align with infrastructure as code principles? (Choose two.)

- A. nonreplicable snowflake servers
- B. release versions to specific hardware
- C. maximized configuration drift
- D. easily reproducible systems
- E. repeatable processes

**Answer: BD**

**NEW QUESTION 454**

- (Exam Topic 3)

A company wants to automate the orders processed on its website using API. The network device that supports the solution must:

- support XML encoding
- support distributed transactions



- > support YANG data models
- > be support software redundancy

Which requirement prevents the use of RESTCONF for the solution?

- A. software redundancy
- B. YANG data models
- C. distributed transactions
- D. XML encoding

Answer: C

NEW QUESTION 457

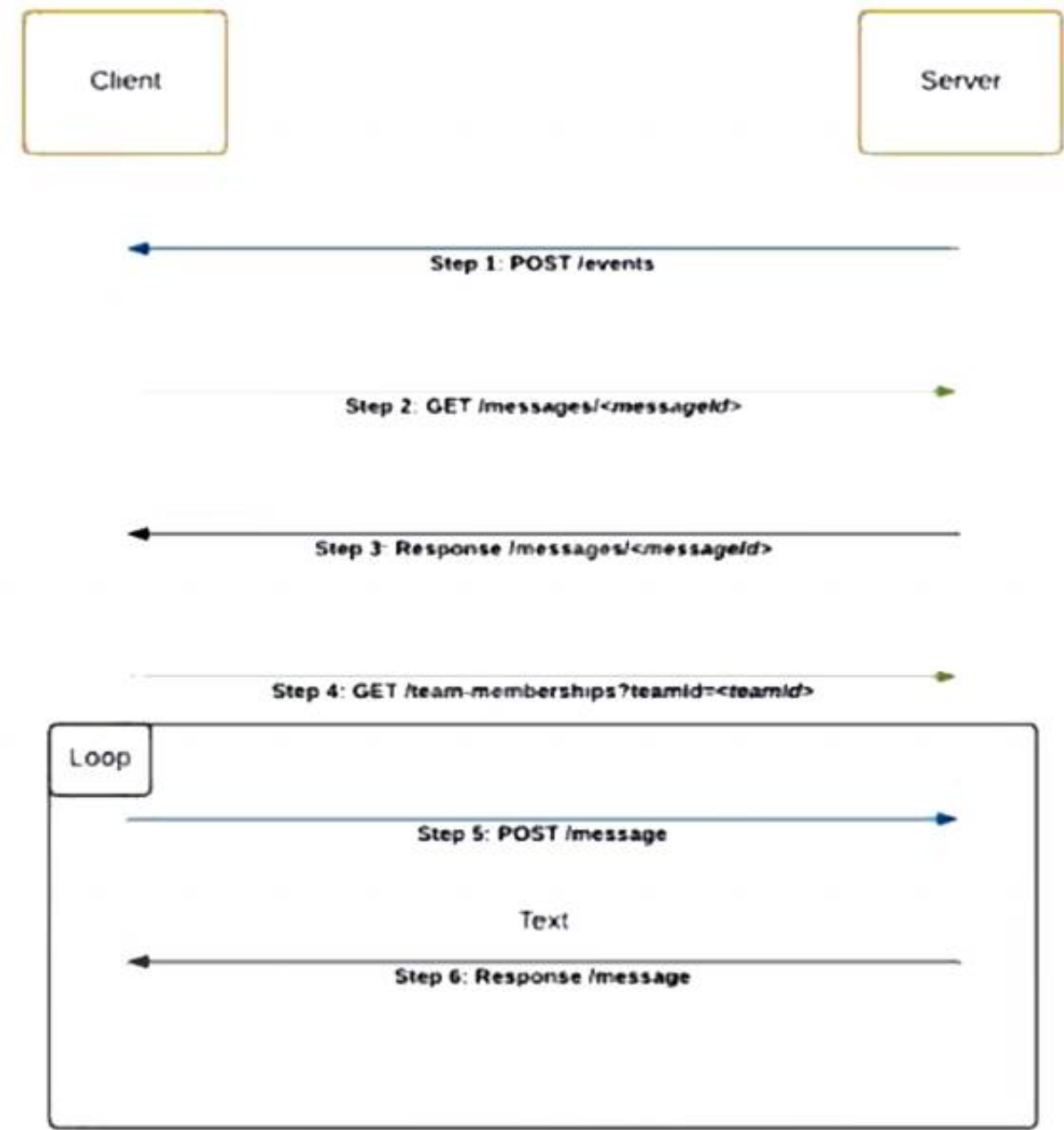
- (Exam Topic 3)  
What is a benefit of a CI/CD pipeline for infrastructure?

- A. removes manual errors
- B. enables manual steps
- C. removes the need for operations
- D. provides variety for deployments

Answer: A

NEW QUESTION 461

- (Exam Topic 3)



Refer to the exhibit. Which code snippet represents the sequence.

A.

```
@flask_app.route('/events', methods=['POST'])
def webex_teams_webhook_events():
    json_data = request.json['data']
    response = requests.get(MESSAGE_URL +
    json_data['id'], headers=headers)
    if response.json()['text'] == 'Alert':
        response = requests.get(Team_MEMBERSHIPS_URL,
        headers=headers, params=params)
        for info in response.json()['items']:
            data = {'personId': info['personId'], 'text':
            'Alert'}
            response = requests.post(MESSAGES_URL,
            headers=headers, params=params)
```

B. @flask\_app.route('/events', methods=['POST'])

```
def webex_teams_webhook_events():
    json_data = request.json['data']
    if response.json()['text'] == 'Alert':
        response = requests.get(MESSAGE_URL +
        json_data['id'], headers=headers)
        response = requests.get(Team_MEMBERSHIPS_URL,
        headers=headers, params=params)
        for info in response.json()['items']:
            data = {'personId': info['personId'],
            'text': 'Alert'}
            response = requests.post(MESSAGES_URL,
            headers=headers, params=params)
```

C. @flask\_app.route('/events', methods=['POST'])

```
def webex_teams_webhook_events():
    json_data = request.json['data']
    response = requests.post(MESSAGE_URL +
    json_data['id'], headers=headers)
    if response.json()['text'] == 'Alert':
        for info in response.json()['items']:
            response = requests.get(Team_MEMBERSHIPS_URL,
            headers=headers, params=params)
            data = {'personId': info['personId'], 'text':
            'Alert'}
            response = requests.get(MESSAGES_URL,
            headers=headers, params=params)
```

D. @flask\_app.route('/events', methods=['POST'])

```
def webex_teams_webhook_events():
    json_data = request.json['data']
    response = requests.get(Team_MEMBERSHIPS_URL,
    headers=headers, params=params)
    if response.json()['text'] == 'Alert':
        response = requests.get(MESSAGE_URL +
        json_data['id'], headers=headers)
        for info in response.json()['items']:
            data = {'personId': info['personId'], 'text':
            'Alert'}
            response = requests.post(MESSAGES_URL,
            headers=headers, params=params)
```

Answer: C

#### NEW QUESTION 463

- (Exam Topic 3)

Which protocol is used for clock synchronization between network devices?

- A. FTP
- B. NNTP
- C. BGP
- D. NTP

**Answer:** D

#### Explanation:

Network Time Protocol (NTP) is an internet protocol used to synchronize with computer clock time sources in a network. It belongs to and is one of the oldest parts of the TCP/IP suite. The term NTP applies to both the protocol and the client-server programs that run on computers.

#### NEW QUESTION 466

- (Exam Topic 3)

Which traffic is handled on the control plane?

- A. BGP
- B. SMB
- C. NTP
- D. NETCONF

**Answer:** A

#### NEW QUESTION 471

- (Exam Topic 3)

An engineer must configure Cisco Nexus devices and wants to automate this workflow. The engineer will use an Ansible playbook to configure devices through Cisco NX REST API. Before the code is run, which resource must be used to verify that the REST API requests work as expected?

- A. Cisco Open NX-OS
- B. Cisco NX-OS SDK
- C. Cisco Learning Labs
- D. Cisco Code Exchange for Nexus

**Answer:** C

#### NEW QUESTION 473

- (Exam Topic 3)

Which OWASP threat occurs when untrusted data is supplied as input to an interpreter as part of a command or query?

- A. broken authentication
- B. data exposure
- C. injection
- D. cross-site scripting

**Answer:** C

#### NEW QUESTION 478

- (Exam Topic 3)

An engineer needs to retrieve a list of locally available Firepower Threat Defense upgrade packages by using the Firepower Management Center REST API. The engineer uses a GET request with the URL:

/api/fmc\_platform/v1/updates/upgradepackages/f413afeb-e6f6-75f4-9169-6d9bd49s625e

What does "f413afeb-e6f6-75f4-9169-6d9bd49s625e" represent?

- A. container UUID
- B. package UUID
- C. domain UUID
- D. object UUID

**Answer:** B

#### Explanation:

"GET upgradepackages Request Type: GET

Description: Retrieves a list of locally available Firepower Threat Defense upgrade packages, including major upgrades, maintenances release upgrades, and hotfixes.

URL: /api/fmc\_platform/v1/updates/upgradepackages

URL for GET by ID: /api/fmc\_platform/v1/updates/upgradepackages/{package\_UUID}" Source:

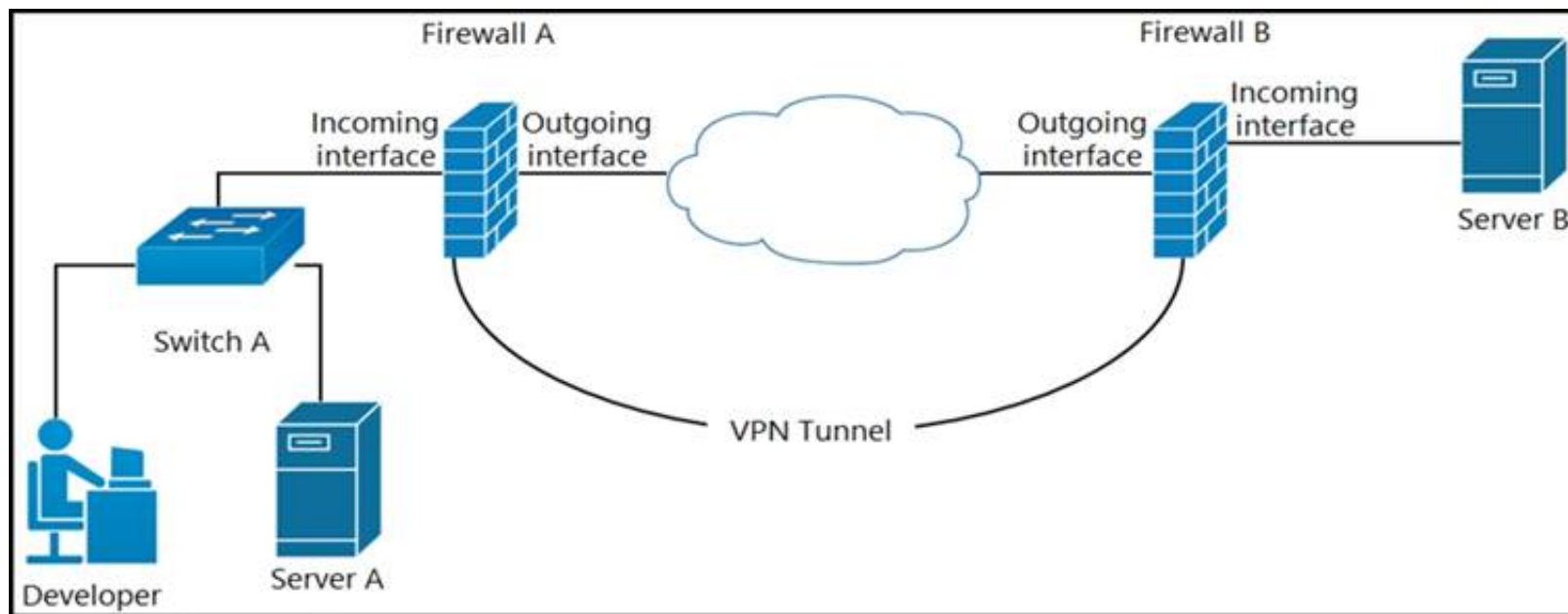
[https://www.cisco.com/c/en/us/td/docs/security/firepower/640/api/REST/Firepower\\_Management\\_Center\\_RES](https://www.cisco.com/c/en/us/td/docs/security/firepower/640/api/REST/Firepower_Management_Center_RES)

#### NEW QUESTION 482

- (Exam Topic 3)

Refer to the exhibit.





A developer can access the TLS REST API on server A, but cannot access the API on server B. The developer can ping server B. When the developer performs a packet capture on the TLS REST API port on server B, the capture shows that the packet arrived and the server responded. What causes the issue?

- A. Port 80 is blocked on the outgoing interface of firewall B.
- B. Port 443 is blocked on the outgoing interface of firewall A.
- C. Port 443 is blocked on the incoming interface of firewall B.
- D. Port 80 is blocked on the incoming interface of firewall A.

**Answer: C**

#### NEW QUESTION 484

- (Exam Topic 3)

An engineer needs to collect information about 20,000 Bluetooth clients using the Cisco Meraki API. The API returns only 1,000 results. One of the HTTP response headers has the data:

Link: <https://api.meraki.com/info/api/v0/networks/ABC/bluetoothClients?perPage=1000&startingAfter=1000>;rel=n>

Which RFC is implemented by the API to apply the restriction?

- A. RFC 5988 – Web Linking
- B. RFC 5890 – Response Constraints
- C. RFC 5005 – Feed Paging and Archiving
- D. RFC 5446 – Content Limits

**Answer: C**

#### NEW QUESTION 485

- (Exam Topic 3)

Which protocol runs over TCP port 830?

- A. NETCONF
- B. Telnet
- C. RESTCONF
- D. HTTP

**Answer: A**

#### NEW QUESTION 489

- (Exam Topic 3)

Which HTTP error code series relates to redirection?

- A. 400
- B. 500
- C. 200
- D. 300

**Answer: D**

#### Explanation:

1xx - Informational: The server has received the request and is continuing the process

2xx - Successful: The request was successful and the browser has received the expected information 3xx (Redirection): You have been redirected and the completion of the request requires further action

4xx (Client Error): The website or the page could not be reached, either the page is unavailable or the request contains bad syntax

5xx (Server Error): While the request appears to be valid, the server could not complete the request

#### NEW QUESTION 494

- (Exam Topic 3)

Why would a developer compare a current version of code to a previous version?

- A. to provide the single source of truth
- B. to troubleshoot code failures
- C. to track who made a change

D. to aid in collaboration

**Answer:** B

#### NEW QUESTION 496

- (Exam Topic 3)

What is the purpose of grouping devices in a VLAN?

- A. Devices communicate as if they are connected on the same wire.
- B. Multicast network traffic is limited to the VLAN connected devices.
- C. Unicast messages are limited to the clients connected on the same VLAN.
- D. Network traffic is load balanced between the devices connected to the VLAN.

**Answer:** B

#### NEW QUESTION 497

- (Exam Topic 3)

POST

/v1/meetings

Body Parameters

title

string Required

Meeting title. The title can be a maximum of 128 characters long.

agenda

string

Meeting agenda. The agenda can be a maximum of 2500 characters long.

password

string

Meeting password. Must conform to the site's password complexity settings. Read [password management](#) for details. If not specified, a random password conforming to the site's password rules will be generated automatically.

start

string Required

Date and time for the start of meeting in any [ISO 8601](#) compliant format. start cannot be before current date and time or after end. Duration between start and end cannot be shorter than 10 minutes or longer than 24 hours.

end

string Required

Date and time for the end of meeting in any [ISO 8601](#) compliant format. end cannot be before current date and time or before start. Duration between start and end cannot be shorter than 10 minutes or longer than 24 hours.

Refer to the exhibit. A bespoke meeting booking system must be integrated with Cisco Webex so that meetings are created automatically. Drag and drop the code from the bottom onto the box where the code is missing to create a sample meeting. Not all options are used.

```
import requests, json

[ ] = 'eyJhbGc ... yJbN8'

headers = {
    'Authorization': f'Bearer {token}',
    'Content-Type': 'application/json'
}

payload = {
    "title": "DevNet Webex Discussion",
    "password": "AGrtgl234",
    "start": "2020-11-10T15:00:00Z",
    "end": "2020-11-10T17:00:00Z",
    "enabledAutoRecordMeeting": False,
    "allowAnyUserToBeCoHost": False
}

response = requests.request(" [ ] ", f'{BASE_URL}/ [ ] ',
    headers=headers, data=json.dumps( [ ] ))
print(response.text.encode('utf8'))
```

payload	PUT	token
vl/meeting	vl/meetings	POST

- A. Mastered  
 B. Not Mastered

Answer: A

Explanation:

```
import requests, json

token = 'eyJhbGc ... yJbN8'

headers = {
    'Authorization': f'Bearer {token}',
    'Content-Type': 'application/json'
}

payload = {
    "title": "DevNet Webex Discussion",
    "password": "AGrtgl234",
    "start": "2020-11-10T15:00:00Z",
    "end": "2020-11-10T17:00:00Z",
    "enabledAutoRecordMeeting": False,
    "allowAnyUserToBeCoHost": False
}

response = requests.request(" POST ", f'{BASE_URL}/ vl/meetings ',
    headers=headers, data=json.dumps( payload ))
print(response.text.encode('utf8'))
```

payload	PUT	token
vl/meeting	vl/meetings	POST

#### NEW QUESTION 498

- (Exam Topic 3)

A company requires a new platform to store large volumes of log data that is generated in their assembly plant. The platform must be scalable, so the underlying technology must provide a path for fast deployment of new nodes for data and indexing? The data contains sensitive information, so specialist encryption tools must be used to secure the data. Which application deployment model meets the requirements?

- A. edge  
 B. private cloud  
 C. public cloud  
 D. hybrid cloud

Answer: D

Explanation:

A hybrid cloud combines the benefits of both a private cloud, which offers the ability to store sensitive data in a secure, dedicated environment, and a public cloud,



which offers the ability to scale quickly and easily by deploying new nodes as needed. With a hybrid cloud deployment, you could use specialist encryption tools to secure the sensitive data in the private cloud, and then take advantage of the scalability and flexibility of the public cloud to handle the large volumes of log data.

#### NEW QUESTION 502

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