



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

**[www.atmicnetworks .com](http://www.atmicnetworks.com)**

Warning: Keep connected with our support team  
for latest updates

### Question: 1

A developer has created an application based on customer requirements. The customer needs to run the application with the minimum downtime. Which design approach regarding high-availability applications, Recovery Time Objective, and Recovery Point Objective must be taken?

- A. Active/passive results in lower RTO and RPO. For RPO, data synchronization between the two data centers must be timely to allow seamless request flow.
- B. Active/passive results in lower RTO and RPO. For RPO, data synchronization between the two data centers does not need to be timely to allow seamless request flow.
- C. Active/active results in lower RTO and RPO. For RPO, data synchronization between the two data centers does not need to be timely to allow seamless request flow.
- D. Active/active results in lower RTO and RPO. For RPO, data synchronization between the two data centers must be timely to allow seamless request flow.

**Answer: A**

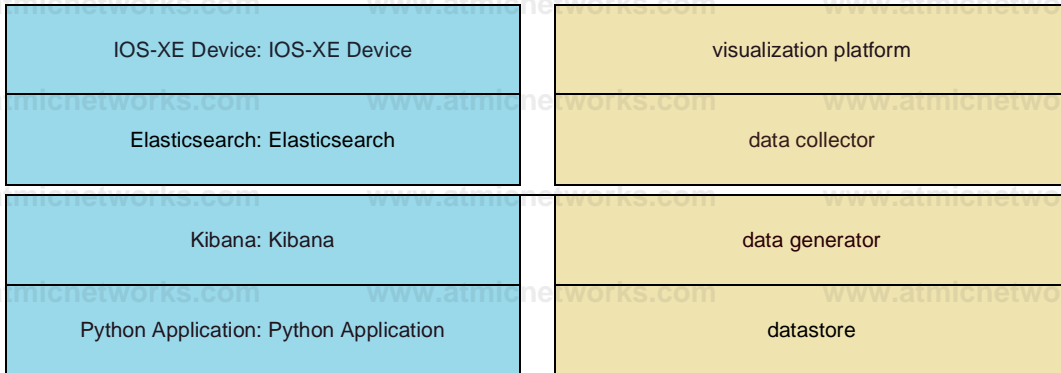
Explanation:

### Question: 2

DRAG DROP

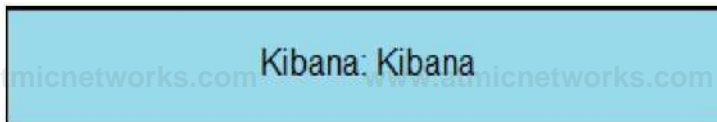
An application is being built to collect and display telemetry streaming data

a. Drag and drop the elements of this stack from the left onto the correct element functions on the right.



**Answer:**

Explanation:



Python Application: Python Application

IOS-XE Device: IOS-XE Device

Elasticsearch: Elasticsearch

**Question: 3**

A cloud native project is being worked on in which all source code and dependencies are written in Python, Ruby, and/or JavaScript. A change in code triggers a notification to the CI/CD tool to run the CI/CD pipeline.

Which step should be omitted from the pipeline?

- A. Deploy the code to one or more environments, such as staging and/or production.
- B. Build one or more containers that package up code and all its dependencies.
- C. Compile code.
- D. Run automated tests to validate the correctness.

**Answer: C**

Explanation:

#### **Question: 4**

Which two statements are considered best practices according to the 12-factor app methodology for application design? (Choose two.)

- A. Application code writes its event stream to stdout.
- B. Application log streams are archived in multiple replicated databases.
- C. Application log streams are sent to log indexing and analysis systems.
- D. Application code writes its event stream to specific log files.
- E. Log files are aggregated into a single file on individual nodes.

**Answer: AC**

Explanation:

#### **Question: 5**

An organization manages a large cloud-deployed application that employs a microservices architecture. No notable issues occur with downtime because the services of this application are redundantly deployed over three or more data center regions. However, several times a week reports are received about application slowness. The container orchestration logs show faults in a variety of containers that cause them to fail and then spin up brand new.

Which action must be taken to improve the resiliency design of the application while maintaining current scale?

- A. Update the base image of the containers.
- B. Test the execution of the application with another cloud services platform.
- C. Increase the number of containers running per service.
- D. Add consistent "try/catch(exception)" clauses to the code.

**Answer: A**

Explanation:

### Question: 6

How should a web application be designed to work on a platform where up to 1000 requests per second can be served?

- A. Use algorithms like random early detection to deny excessive requests.
- B. Set a per-user limit (for example, 5 requests/minute/user) and deny the requests from the users who have reached the limit.
- C. Only 1000 user connections are allowed; further connections are denied so that all connected users can be served.
- D. All requests are saved and processed one by one so that all users can be served eventually.

**Answer: B**

Explanation:

### Question: 7

An organization manages a large cloud-deployed application that employs a microservices architecture across multiple data centers. Reports have received about application slowness. The container orchestration logs show that faults have been raised in a variety of containers that caused them to fail and then spin up brand new instances.

Which two actions can improve the design of the application to identify the faults? (Choose two.)

- A. Automatically pull out the container that fails the most over a time period.
- B. Implement a tagging methodology that follows the application execution from service to service.
- C. Add logging on exception and provide immediate notification.
- D. Do a write to the datastore every time there is an application failure.
- E. Implement an SNMP logging system with alerts in case a network link is slow.

**Answer: BC**

Explanation:

**Question: 8**

Which two situations are flagged by software tools designed for dependency checking in continuous integration environments, such as OWASP? (Choose two.)

- A. publicly disclosed vulnerabilities related to the included dependencies
- B. mismatches in coding styles and conventions in the included dependencies
- C. incompatible licenses in the included dependencies
- D. test case failures introduced by bugs in the included dependencies
- E. buffer overflows to occur as the result of a combination of the included dependencies

**Answer: AE**

Explanation:

**Question: 9**

A network operations team is using the cloud to automate some of their managed customer and branch locations. They require that all of their tooling be ephemeral by design and that the entire automation environment can be recreated without manual commands. Automation code and configuration state will be stored in git for change control and versioning. The engineering high-level plan is to use VMs in a cloud- provider environment then configure open source tooling onto these VMs to poll, test, and configure the remote devices, as well as deploy the tooling itself.

Which configuration management and/or automation tooling is needed for this solution?

- A. Ansible
- B. Ansible and Terraform
- C. NSO
- D. Terraform
- E. Ansible and NSO

**Answer: B**

Explanation:

**Question: 10**

DRAG DROP

Drag and drop the git commands from the left into the correct order on the right to create a feature

branch from the master and then incorporate that feature branch into the master.

git branch -d feature	step 1
git checkout -b feature master	step 2
git checkout master	step 3
git push origin master	step 4
git merge --no-ff feature	step 5

**Answer:**

Explanation:

git checkout -b feature master
git checkout master
git merge --no-ff feature
git branch -d feature
git push origin master

**Question: 11**

An application is hosted on Google Kubernetes Engine. A new JavaScript module is created to work with the existing application. Which task is mandatory to make the code ready to deploy?

- A. Create a Dockerfile for the code base.
- B. Rewrite the code in Python.
- C. Build a wrapper for the code to "containerize" it.

D. Rebase the code from the upstream git repo.

**Answer: A**

Explanation:

**Question: 12**

DRAG DROP

Drag and drop the steps from the left into the correct sequence on the right to describe how to use Git to maintain the current HEAD and revert back to a previous commit, while undoing all intermediate commits.

git commit -m 'Revert to 56e05fced commit'	step 1
git reset -soft HEAD@{1}	step 2
git log	step 3
git reset -hard 56e05fced	step 4
git status	step 5

**Answer:**

Explanation:

git status

git log

git reset -soft HEAD@{1}

git reset -hard 56e05fced

git commit -m "Revert to 56e05fced commit"

**Question: 13**

Which database type should be used with highly structured data and provides support for ACID transactions?

- A. time series
- B. document
- C. graph
- D. relational

**Answer: D**

Explanation:

**Question: 14**

Where should distributed load balancing occur in a horizontally scalable architecture?

- A. firewall-side/policy load balancing
- B. network-side/central load balancing
- C. service-side/remote load balancing
- D. client-side/local load balancing

**Answer: D**

Explanation:

**Question: 15**

Which two statements about a stateless application are true? (Choose two.)

- A. Different requests can be processed by different servers.
- B. Requests are based only on information relayed with each request.
- C. Information about earlier requests must be kept and must be accessible.
- D. The same server must be used to process all requests that are linked to the same state.
- E. No state information can be shared across servers.

**Answer: AB**

Explanation:

**Question: 16**

Which statement about microservices architecture is true?

- A. Applications are written in a single unit.
- B. It is a complex application composed of multiple independent parts.
- C. It is often a challenge to scale individual parts.
- D. A single faulty service can bring the whole application down.

**Answer: B**

Explanation:

**Question: 17**

DRAG DROP

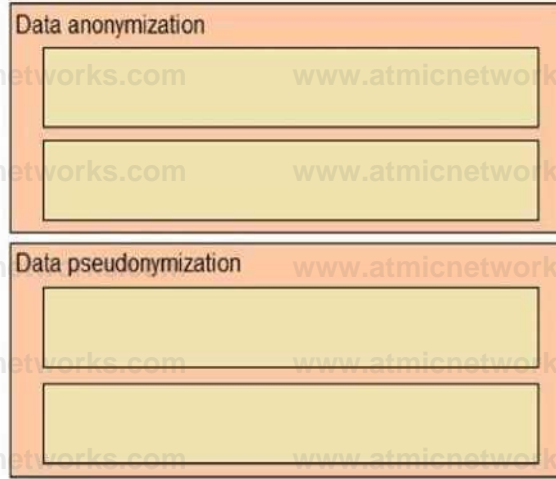
Drag and drop the characteristics from the left onto the correct data processing techniques on the right, in the context of GDPR.

processing of personal data in such a manner that the personal data can no longer be attributed to a specific data subject without the use of additional information.

data stripped of sufficient elements such that the data subject can no longer be identified

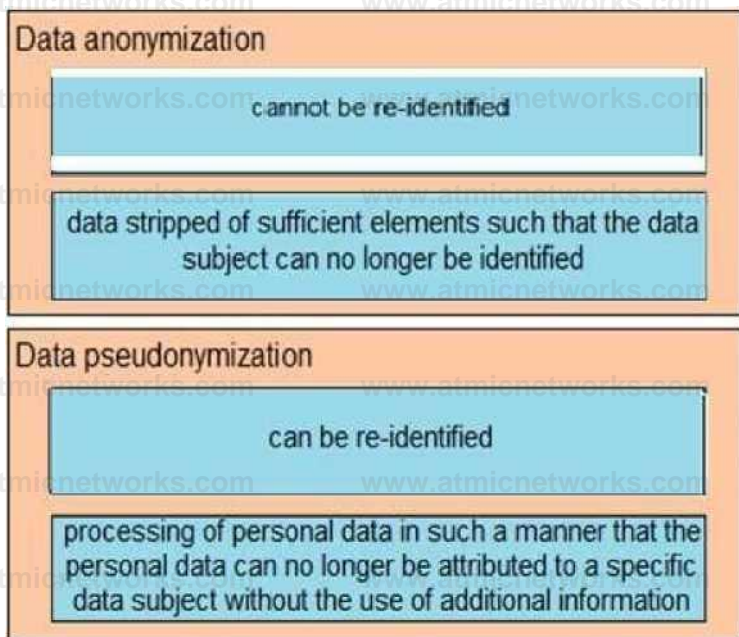
can be re-identified

cannot be re-identified



**Answer:**

**Explanation:**



**Question: 18**

Which two data encoding techniques are supported by gRPC? (Choose two.)

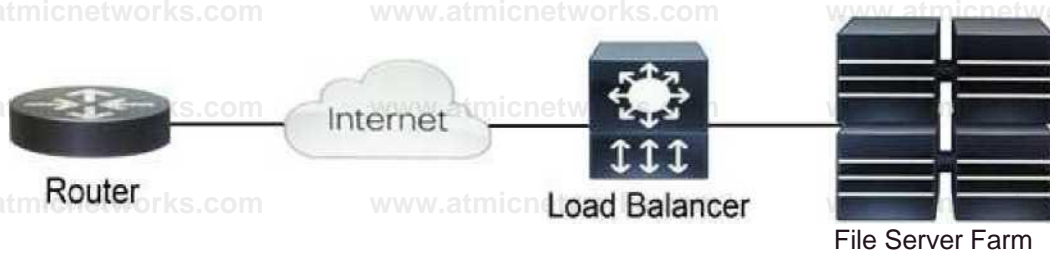
- A. XML
- B. JSON
- C. ASCII
- D. ProtoBuf
- E. YAML

**Answer: BD**

Explanation:

**Question: 19**

Refer to the exhibit.



Which two functions are performed by the load balancer when it handles traffic originating from the Internet destined to an application hosted on the file server farm? (Choose two.)

- A. Terminate the TLS over the UDP connection from the router and originate an HTTPS connection to the selected server.
- B. Terminate the TLS over the UDP connection from the router and originate an HTTP connection to the selected server.
- C. Terminate the TLS over the TCP connection from the router and originate an HTTP connection to the selected server.
- D. Terminate the TLS over the TCP connection from the router and originate an HTTPS connection to the selected server.
- E. Terminate the TLS over the SCTP connection from the router and originate an HTTPS connection to the selected server.

**Answer: CD**

Explanation:

**Question: 20**

Which transport protocol is used by gNMI?

- A. HTTP/2
- B. HTTP 1.1
- C. SSH
- D. MQTT

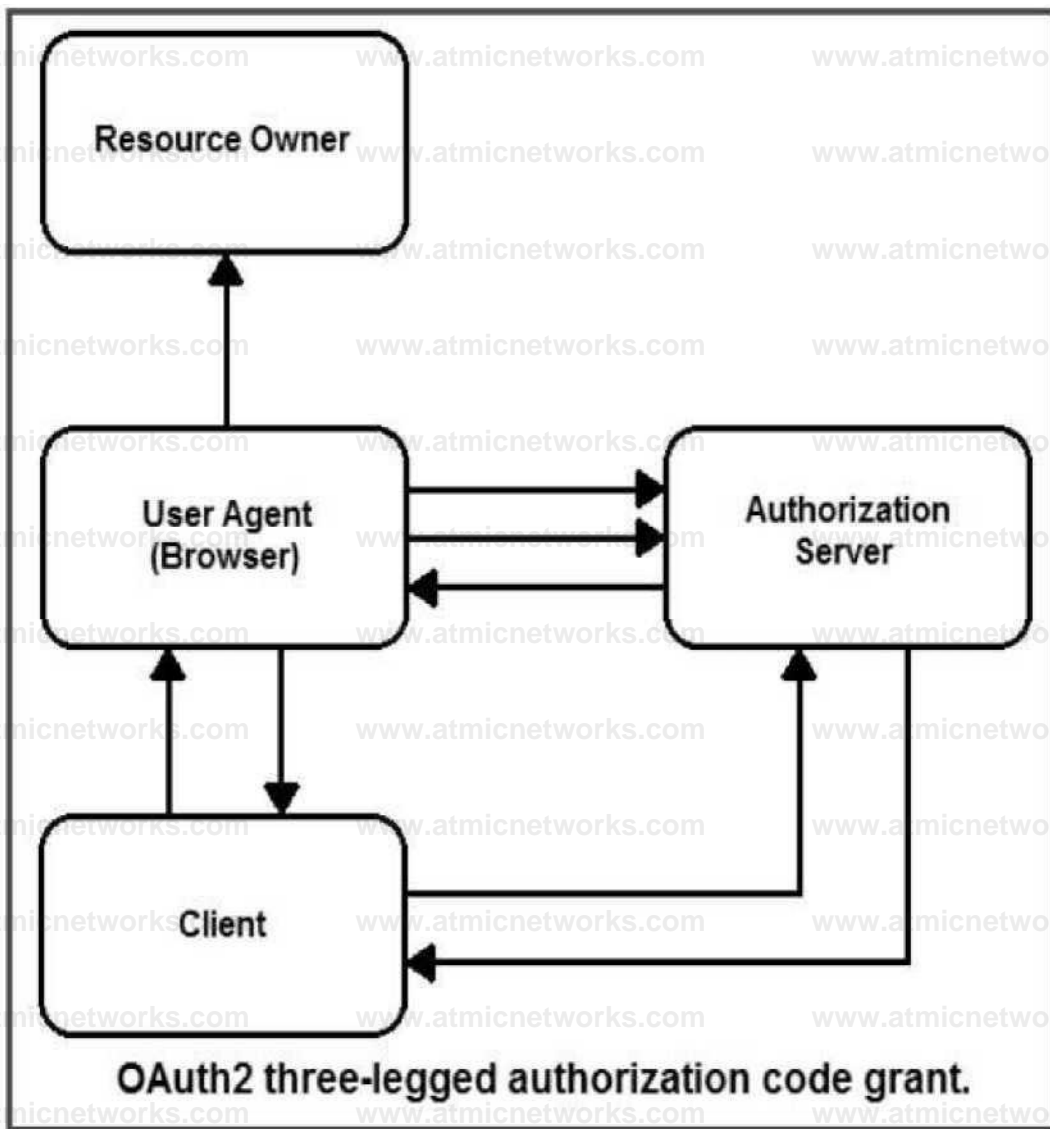
**Answer: A**

Explanation:

**Question: 21**

DRAG DROP

Refer to the exhibit.



Drag and drop the steps from the left into the correct order of operation on the right for a successful

OAuth2 three-legged authorization code grant flow.

Client initiates the flow

step 1

The authorization server authenticates the client, validates details sent, and responds with an access token

step 2

The authorization server redirects the user-agent back to the client using the redirection URI provided

step 3

The authorization server authenticates the resource owner

step 4

The client requests an access token from the authorization server's token endpoint

step 5

**Answer:**

**Explanation:**

Client initiates the flow

The authorization server authenticates the resource owner

The authorization server redirects the user-agent back to the client using the redirection URI provided

The client requests an access token from the authorization server's token endpoint

The authorization server authenticates the client, validates details sent, and responds with an access token.

**Question: 22**

Which two methods are API security best practices? (Choose two.)

- A. Use tokens after the identity of a client has been established.
- B. Use the same operating system throughout the infrastructure.
- C. Use encryption and signatures to secure data.
- D. Use basic auth credentials over all internal API interactions.
- E. Use cloud hosting services to manage security configuration.

**Answer: AC**

Explanation:

**Question: 23**

DRAG DROP

Refer to the exhibit.

GET

/dna/intent/api/v1/wireless/profile Get Wireless Profile

Gets either one or all the wireless network profiles if no name is provided for network-profile.

#### Parameters

Name	Description
profileName string (query)	<i>Default value:</i>

#### Responses

Code	Description
200	<i>The request was successful. The result is contained in the response body.</i>

#### Example Value Model

```
[
  {
    "profileDetails": {
      "name": "string",
      "sites": [
        "string"
      ],
      "ssidDetails": [
        {
          "name": "string",
          "type": "Guest",
          "enabledFabric": true,
          "flexConnect": {
            "enableFlexConnect": true,
            "localToVlan": 0
          },
          "InterfaceName": "string"
        }
      ]
    }
  }
]
```

```

import requests import json

def get_dnac_wireless_profiles():
    try:
        url — "https://sandboxdnac2.cisco.com/dna/intent/api/v1" \ +
            "/wireless/profile?<item 2>=ChicagoCampus]"
        print(token) payload - {} headers - ( 'x-auth-token': token )

        response = requests.request("GET", url, headers=headers, data = payload) response.raise_for_status()
        return response.json()[0][<item 2>][<item 3>] \
            (<item 4>)[<item 5>]"<item 6>"
    except Exception as e: print(e)

def create_dnac_token():
    try:
        url - "https://sandboxdnac2.cisco.com/dna/system/api/v1/auth/token"

        payload - {} headers = { 'Authorization': 'Basic ZGV2bmV0dXNlcjpaXNjbzEyMyE= ', 'Content-
        Type': 'application/json' }

        response - requests.request("POST", url, headers=headers, data - payload) response.raise_for_status() return
        response.json()["Token"]
    except Exception as e: print(e)

if name — "_____ main": token - creatednactoken() print(get dnac wireless profiles())

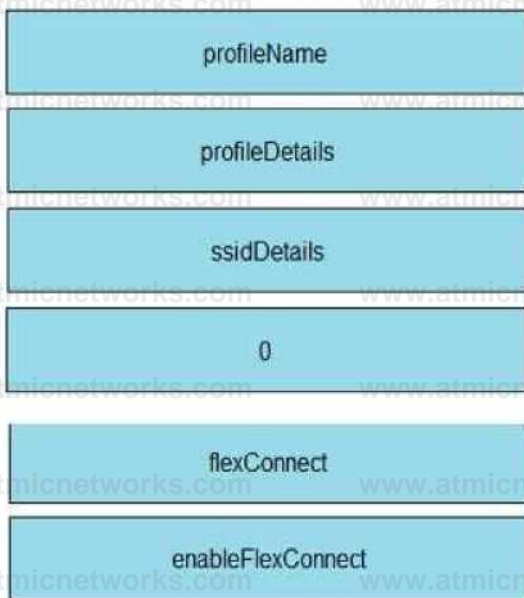
```

The Python script is supposed to make an API call to Cisco DNA Center querying a wireless profile for the "ChicagoCampus" and then parsing out its enable FlexConnect value. Drag and drop the parts of the Python code from the left onto the item numbers on the right that match the missing sections in the exhibit.

0	<item 1>
ssidDetails	<item 2>
profileDetails	<item 3>
profileName	<item 4>
flexConnect	<item 5>
enableFlexConnect	<item6>

**Answer:**

**Explanation:**



**Question: 24**

A developer has completed the implementation of a REST API, but when it is executed, it returns a 401 error message. What must be done on the API to resolve the issue?

- A. Access permission to the resource must be granted, before the request.

- B. Configure new valid credentials.
- C. The requested API endpoint does not exist, and the request URL must be changed.
- D. Additional permission must be granted before the request can be submitted.

**Answer: B**

Explanation:

### Question: 25

Refer to the exhibit.

Paginating the Results

By adding the page-size operator to the query URI you can divide the query results into groups (pages) of objects using the following syntax. The operand specifies the number of objects in each group.

`page-size = number-of-objects-per-page`

By adding the page operator in the query URI, you can specify a single group to be returned using the following syntax. The pages start from number 0.

`page = page-number`

This example shows you how to specify 15 fault instances per page in descending order, returning only the first page:

Many faults have occurred in the ACI environment and a sample of them needs to be examined. Which API call retrieves faults 30 through 45?

- A. GET `https://apic-ip-address/api/class/faultInfo.json?order-by=faultinst.severity|desc&page=1&page-size=15`
- B. GET `https://apic-ip-address/api/class/faultInfo.json?order-by=faultinst.severity|desc&page=2&page-size=15`
- C. GET `https://apic-ip-address/api/class/faultInfo.json?order-by=faultinst.severity|desc&page=30`

D. GET https://apic-ip-address/api/class/faultInfo.json?order-by=faultinst.severity|desc&page=2&page-size=30

**Answer: B**

Explanation:

### Question: 26

Refer to the exhibit.

```
curl --insecure -H "Accept: application/json" -H "Content-Type application/json" -d @token_data https://ast0072-pod.cisco.com:33333/api/fdm/latest/fdm/token
```

The cURL POST request creates an OAuth access token for authentication with FDM API requests. What is the purpose of the file “@token\_data” that cURL is handling?

- A. This file is a container to log possible error responses in the request.
- B. This file is given as input to store the access token received from FDM.
- C. This file is used to send authentication related headers.
- D. This file contains raw data that is needed for token authentication.

**Answer: D**

Explanation:

### Question: 27

DRAG DROP

Drag and drop the expressions from below onto the code to implement error handling. Not all options are used.

```

base_url = "https://apl.nwraki.com/api/v0"
posturl = "%9/networks/«s/statioRoutos" * ((str(base_url), str(networked)))
headers = {
    'x-cisco-meraki-api-key': api_key,
    'Content-Type': 'application/json'
}
routes = [
    {
        "subnet": "10.16.4.0/52",
        "gatewayIp": "10.1.0.20",
        "name": "ROUTE 1", "enabled": true
    },
    {
        "subnet": "10.253.254.0/24",
        "gatewayIp": "10.1.0.20",
        "name": "ROUTE2", "enabled": true
    }
]

```

```

for route in routes:
    print("Adding static: " + str(route['subnet']))
    response = requests.post(posturl, json=route, headers=headers)
    if response.status_code == 201:
        print("Done!")
    else:
        print("Failed to add static: " + str(route['subnet']) + "\n" + response.text)

```

if response = 601:	else:	when:
--------------------	-------	-------

if response == 201:	elif:
---------------------	-------

### Answer:

Explanation:

```

headers = {
    'x-cisco-meraki-api-key': api_key, 'Content-Type': 'application/json' }
routes = [
    { "subnet": "10.16.4.0/22", "gatewayIp": "10.1.0.20", "name": "ROUTE1",
      "enabled": true
    },
    {
        "subnet": "10.253.254.0/24",
        "gatewayIp": "10.1.0.20", "name": "ROUTE2", "enabled": true
    },
    {
        "subnet": "10.168.0.0/21",
        "gatewayIp": "10.1.0.20", "name": "ROUTE 3", "enabled": true } ]

for route in routes:
    print("Adding static: " + str(route['subnet']))
    response = requests.post(posturl, json=route, headers=headers)
    if response.status_code == 201:
        print("Done!")
    else:
        print("Failed to add static: " + str(route['subnet']) + "\n" + response.text)

```

### Question: 28

User report that they can no longer process transactions with the online ordering application, and the logging dashboard is displaying these messages.

Fri Jan 10 19:37:31.123 EST 2020 [FRONTEND] INFO: Incoming request to add item to cart from user  
45834534858

Fri Jan 10 19:37:31 247 EST 2020 [BACKEND] INFO: Attempting to add item to cart

Fri Jan 10 19:37:31 250 EST 2020 [BACKEND] ERROR: Failed to add item: MYSQLDB ERROR:  
Connection refused

What is causing the problem seen in these log messages?

- A. The database server container has crashed.
- B. The backend process is overwhelmed with too many transactions.
- C. The backend is not authorized to commit to the database.
- D. The user is not authorized to add the item to their cart.

**Answer: A**

Explanation:

## Question: 29

Refer to the exhibit.

Sfilter {stng}

query

Filter criteria for documents to return A URI with a Sfilter System Query Option identifies a subset of the Entries from the Collection of Entries identified by the Resource Path section of the URI The subset is determined by selecting only the Entries that satisfy the predicate expression specified by the query option The expression language that is used in Sfilter operators supports references to properties and literals. The literal values can be strings enclosed in single quotes, numbers and boolean values (true or false) or any of the additional literal representations shown in the Abstract Type System section. Query examples: Sfilter=Name eq 'Bob' \$filter=Tags/any(t t/Key eq 'Site') \$filter=Tags/any(t: t/Key eq 'Site' and t/Value eq "London')

GET /api/v1/compute/RackUnits?\$filter=Tags/any (t:t/Key eq 'Site')

An Intersight API is being used to query RackUnit resources that have a tag keyword set to

“Site”. What is the expected output of this command?

- A. list of all resources that have a tag with the keyword “Site”
- B. error message because the Value field was not specified
- C. error message because the tag filter should be lowercase
- D. list of all sites that contain RackUnit tagged compute resources

**Answer: A**

Explanation:

**Question: 30**

A user is receiving a 429 Too Many Requests error. Which scheme is the server employing that causes this error?

- A. rate limiting
- B. time outs
- C. caching
- D. redirection

**Answer: A**

Explanation:

**Question: 31**

DRAG DROP

```

I** get_dnac devices!).
I <itea 1>.
^UM^'""^*^^^!^^^
payload • () header* • { l 'Content-Type' l 'application/json',
'Accept': application/json', ' 'x-auth-token'i token
I >
reeponee - requests.request("CET", url, headers=headers, data = eayload, response.raise for status!)
*P*yload)
return response.text
<lt« 2>! print(e) if *tr(<iter J>) in str(e);
create dnac token()
elif str(<itM <>) in str(e) and i < RETRIES;
b*ckoff_retry(getdnac devices)

def create dnac token)): try:
url ■ "httpst//sandboxdnac.cisco.coa/dna/syysa/api/v1/auth/token* pay load ■ {}
headers • (
'<itea S>*i 'Basic XGV2h«V0dXNlcjpOaXNjbiEyRyt-', Content-Type':
'application/json'
}
response ■ requests.request ("POST", url, headers=headers, data ■ payload)
response.raise_for_st*tu*(> return response.json))('Token*j except Exception as e:
print (a)
if atrf cites. £>) in *tr(e): eye.exit!'Server Unavailable")
def backoff_retry(func_retryj: print("in backoff") tine.sleep!backoff)
backoff "2

tunc retry!)

it naa«_ • *__Mln__ token “ create_dnac_token() while True:
print(get dnac devices())

```

Refer to the exhibit Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the exhibit to complete the script to implement control flow.

Refer to the exhibit. Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the exhibit to complete the script to implement control flow

<code>requests.status_codes.codes.TOO_MANY_REQUESTS</code>	<item 1>
<code>requests.status_codes.codes.SERVER_ERROR</code>	<item 2>
<code>requests.status_codes.codes.UNAUTHORIZED</code>	<item 3>
<code>try</code>	<item 4>
<code>Authorization</code>	<item 5>
<code>except Exception as e</code>	<item 6>

**Answer:**

**Explanation:**

try

except Exception as e

requests.status\_codes.codes.UNAUTHORIZED

requests.status\_codes.codes.TOO\_MANY\_REQUESTS

Authorization

requests.status\_codes.codes.SERVER\_ERROR

**Question: 32**

DRAG DROP

Refer to the exhibit.

```

import request import Json import sys token - **

def get dnac devices (): <item 1>:
    url - "https://sandboxdnac.claco.com/diia/intetit/api/vi/ietwork-device"

    print(token) payload » {} headers - ( 'Content-Typo'; 'application/json', "Accept":
    'application/json', 'x-auth-token': token

    response - requests.request("GET", url, headers=headers, data - payload)
    response.raiseforstatus() re turn re spouse.text

    )

    print(e) _____ if str (<!*•• 3> in
    str(e) : _oroatednactoken_[l -

def create dnac token () : try:
    url - "https://sandboxdnac.clsoo.com/dna/system/api/vl/auth/token"
    payload - {} headers - (<item 4>): 'Basic ZGVjbmVodXNlcjpaXNjbzEyMyE-',
    'Content-Type': 'application/json' 1

    response - requests.request("POST", url, headers=headers, data - payload) response.
    raf sotorstatus () return response.json()["Token"]
    except Exception as e: print (e)
    if str (<item 5> in str(e):
        sys.exit("DNAC Service is not reachable")

If name — "__ nalti *: token -create dnac_token() print(get_dnac_devices())

```

Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the exhibit to complete the script to implement control flow.

except Exception as e	<item 1 >
try	<item 2>
Authorization	<item 3>
request status_codes codes 5ERVER_ERRORR	<item 4>
request statLis_codes.codes.UNAUTHORIZED	<item 5>

## Answer:

Explanation:

```
try
```

```
except Exception as e
```

```
request.status_codes.codes.UNAUTHORIZED
```

```
Authorization
```

```
request.status_codes.codes.SERVER_ERROR
```

## Question: 33

Meraki Dashboard API Response

Response Status Code 200

Response Link Header

```
<https://n6.meraki.com/api/v0/organizations/681155/devices ?perPage=3&startingAfter-
```

```
0000-0000-0000>; rel-first,
```

```
<https://n6.meraki.com/api/v0/organizations/681155/devices?perPage=3
```

```
&startingAfter=Q2EK-3UBE-RRUY>; rel-next,
```

```
<https://n6.meraki.com/api/v0/organizations/681155/devices?endingBefore =zzzz-zzzz zzzz&perPage=3>;
```

rel-last Response Body

```
{
```

```
  'name': '\\\\'
```

```
  "serial": "Q2CV-V49B -RCMZ",
```

```
  "mac": "0c:8d:db:95:aa:39",
```

```
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"networkid": "L-566327653141846927",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"model11": "MV71",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"address": "430 E Cactus Ave .\nLas Vegas, NV 89183",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"lat": 36.00017,
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"lng": -115.15302,
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"notes": "",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"tagsn": "",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"lanip": "192.168.0.25",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
' configurationUpdatedAt": "2019-08-08T02:15:36Z", ' firmware11 : "ca.rnera-3-3011
},
{
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"ncune": "Alex's MR84 - 1"1
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"serial": "Q2EK-2LYB-PCZP",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"mac": 'eO: 55:3d:10:56:8a", "networkid": "L 566327653141846927",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"model": "MR84",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"address": "11 ,
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"lat": 39.9482993357826,
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"lng": -82.9895675461739,
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"notes": "",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"tags": " ",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"lanip": null,
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"configurationVpdatedAt": "2018-02-03T11:02:37Z",
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
"firmware11 : "Not running configured version"
},
{
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
```

```
"name": "Vegas Living Room MR84 11",
"serial": "Q2EK-3UBE-RRUY",
"mac": "e0:55:3d:10:5a:ca", "networkid": "L_566327653141846927" 1
"model": "MR84",
"address": "430 E Cactus Ave.\nLas Vegas, NV 89183", "lat": 36.00015,
"lng": -115.15308,
"notes": "",
"tags": "11
1
"lanip": "192.168.0.20",
"configurationUpdatedAt": "2018-09-29T12:23:21Z",
' firmware': "Not running configured version"
```

Refer to the exhibit.

```
import request
import json
meraki_api_key = "<api key>"
url =
"https://api.meraki.com/api/v0/organizations/12345567890/devices" headers = {
    "X-Cisco-Meraki-API-Key": meraki_api_key,
}
params = {
    "perPage": 3
}
res = requests.get(url, headers=headers, params=params) formatted_message = ""
```

Meraki Dashboard API Response

```
Response Status Code : ()
Response Link Header : ()
Response Body : ()
```

```
"".format(res.statuscode, res.headers.get('Link'), json.dumps(res.json(), indent=4)) print
(formattedmessage)
<https://n6.meraki.com/api/v0/organizations/1234567890/devices?perPage=3&startingAfter=0000-
0000-0000>; rel=first,
<https://n6.meraki.com/api/v0/organizations/1234567890/devices?perPage=3&startingAfter=Q2EK-
3UBE-RRUY>; rel=next,
<https://n6.meraki.com/api/v0/organizations/1234567890/devices?
endingBefore=zzzz-zzzz-zzzz&perPage=3>; rel=last
```

Which line of code must be added to this code snippet to allow an application to pull the next set of paginated items?

- A. `requests.get(url, links=['next']['url'])`
- B. `requests.get(url, headers=links['next']['url'])`
- C. `requests.get(res.links['next']['url'], headers=headers)`
- D. `requests.get(res.headers.get('Link')['next']['url'], headers=headers)`

**Answer: C**

Explanation:

### Question: 34

An Etag header is included in the HTTP response for an API resource. What are two benefits of using the value of the Etag for future interactions involving the same API resource? (Choose two.)

- A. caching and optimization of response payloads
- B. creating conditional requests
- C. categorizing and comparing this API resource with others
- D. checking the integrity of the resource
- E. requesting the list of operations authorized for this resource

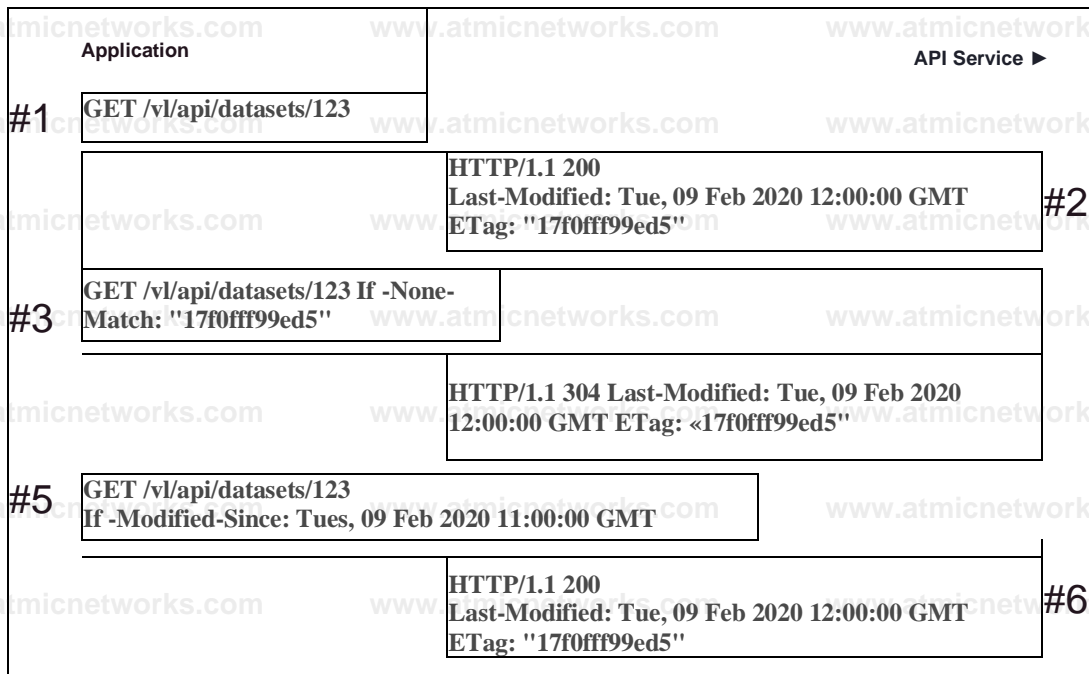
**Answer: AB**

Explanation:

- The ETag HTTP response header is an identifier for a specific version of a resource. It lets caches be MORE efficient and save bandwidth, as a web server does not need to resend a full response if the content has not changed. Additionally, etags help prevent simultaneous updates of a resource from overwriting each other ("mid-air collisions").
- The ETag or entity tag is part of HTTP, the protocol for the World Wide Web. It is one of several mechanisms that HTTP provides for Web cache validation, which allows a client to make conditional requests.

### Question: 35

Refer to the exhibit.



An application uses an API to periodically sync a large data set. Based on the HTTP message sequence provided, which statements are true about the caching behavior seen in the scenario? (Choose two.)

- The full dataset was transmitted to the client twice.
- The dataset changed sometime between message #4 and #5.
- A partial dataset was transmitted to the client in message #4.
- The dataset did not change during the scenario.

E. Messages #3 and #5 are equivalent.

**Answer: AD**

Explanation:

**Question: 36**

DRAG DROP

Refer to the exhibit.

### Description

The add Networkobject operation handles configuration related to `let.vc` : - : model.  
This API call is not allowed on the standby unit in an HA pair.

### HTTP request

URL

## POST /api/fdm/v4/object/networks

### Data Parameters

Parameter	Required	Type	Description
name	True	string	A string that is the name of the network object
description	False	string	A string containing the description information. Field level constraints: length must be between 0 and 200 (inclusive). (Note: Additional constraints might exist)
subType	True	string	An enum value that specifies the network object type. HOST - A host type. NETWORK - A network type. FQDN - A FQDN type. RANGE - A range type. Field level constraints; cannot be null. (Note: Additional constraints might exist)
value	True	string	A string that defines the address content for the object For HOST objects, this is a single IPv4 or IPv6 address without netmask or prefix For NETWORK objects, this is an IPv4 or IPv6 network address with netmask (in CIDR notation) or prefix. For FQDN objects, this is a Fully qualified domain name. For RANGE objects, this is IPv4 or IPv6 addresses separated by Field level constraints: cannot be null, must match pattern <code>*((?!:))*\$</code> (Note: Additional constraints might exist)
isSystemDefined	False	boolean	A Boolean value. TRUE or FALSE(the default). The TRUE value indicated that this Network object is a system defined object
dnsResolution	False	string	DNS Resolution type can be IPV4.ONLY, IPV6.ONLY or IPV4.ANDJPV6.
type	True	string	A UTF8 string, all letters lower-case, that represents the class type. This corresponds to the class name.

```
curl -X <item 1> -H "Authorization: Bearer exwsxads-sadadsOasOdO-lw-l-lw-lw" --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{ "name": "171.168.1.z", "value": "<item 2>", "subType": "<item 3>", "type": "<item 4>" }' https://ast0072-pod.cisco.com:33333/api/fdm/v4/object/<item 5>
```

Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the cURL exhibit to complete the cURL request to FirePower Device Manager API to create objects. Not all code snippets are used.

HOST	<item 1>
POST	<item 2>
NETWORK	<item 3>
networks	<item 4>
networkobject	<item 5>
171.168.1.0/24	
False	
isSystemDefined	

**Answer:**

Explanation:

POST
171.168.1.0/24
NETWORK
networkobject
networks

**Question: 37**

Which RFC5988 (Web Linking) relation type is used in the Link header to control pagination in APIs?

- A. rel="index"
- B. rel="page"
- C. rel="next"
- D. rel="section"

**Answer: C**

Explanation:

**Question: 38**

A client is written that uses a REST API to interact with a server. Using HTTPS as the transport, an HTTP request is sent and received an HTTP response. The response contains the HTTP response status code: 503 Service Unavailable.

Which action is the appropriate response?

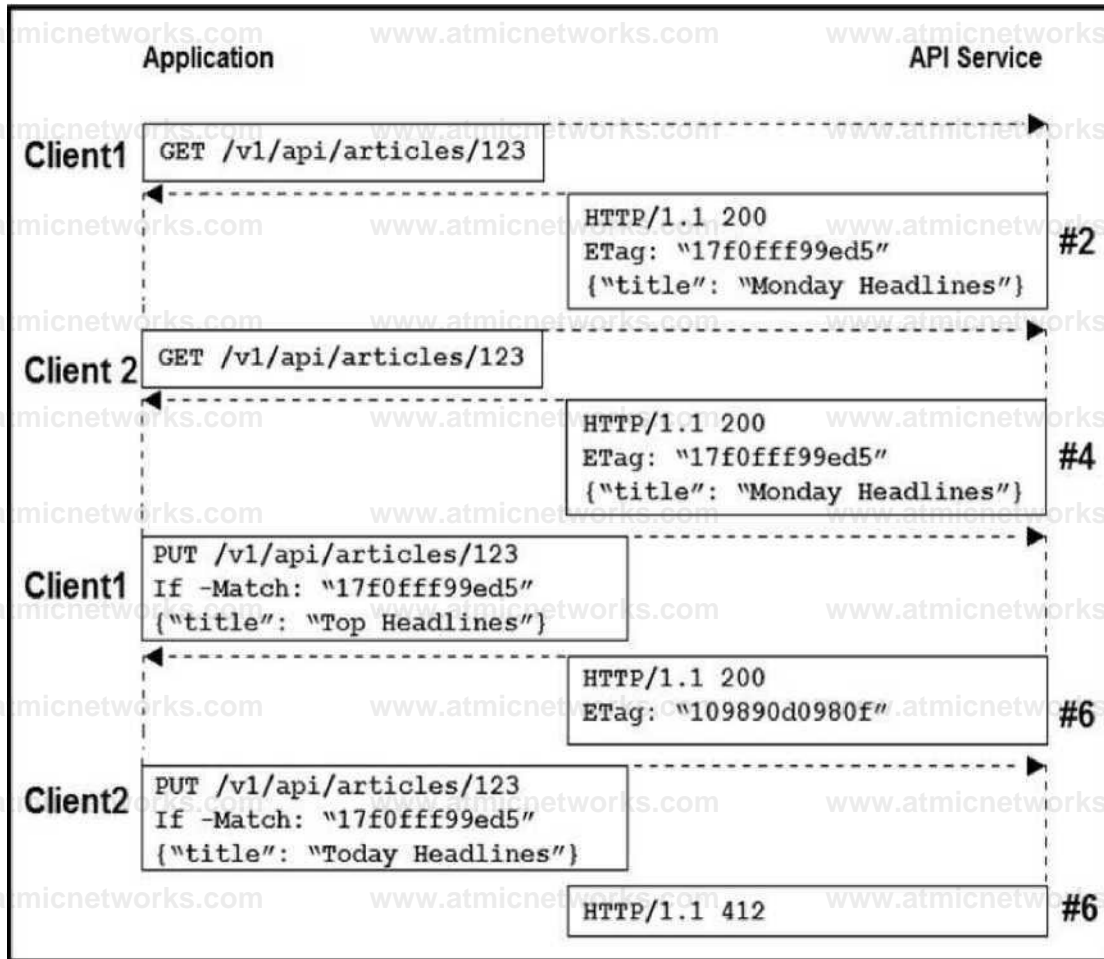
- A. Add an Authorization header that supplies appropriate credentials and sends the updated request.
- B. Resend the request using HTTP as the transport instead of HTTPS.
- C. Add an Accept header that indicates the content types that the client understands and send the updated request.
- D. Look for a Retry-After header in the response and resend the request after the amount of time indicated.

**Answer: D**

Explanation:

## Question: 39

Refer to the exhibit.



Two editors are concurrently updating an article's headline from their mobile devices. What results from this scenario based on this REST API sequence?

- A. The article is marked as "Conflicted"
- B. The article headline is "Monday Headlines"
- C. The article headline is "Today Headlines"
- D. The article headline is "Top Headlines"

**Answer: D**

Explanation:

## Question: 40

Refer to the exhibit.

```
response = requests.get(url)
if response.status_code != 200:
    error_message = "Unexpected HTTP Response code: {}".format(response.status_code)
    raise Exception(error_message)
data = response.json()
```

This snippet of a script has recently started exiting abnormally with an exception stating "Unexpected HTTP Response code: 429".

Which solution handles rate limiting by the remote API?

- A. 

```
response = requests.get(url)
if response.status_code == 429:
    backoff_seconds = int(response.headers['Retry-After'])
    sleep(backoff_seconds)
elif response.status_code != 200:
    error_message = "Unexpected HTTP Response code: {}".format(response.status_code)
    raise Exception(error_message)
data = response.json()
```
- B. 

```
response = requests.get(url)
if response.status_code != 200 and response.status_code != 429:
    error_message = "Unexpected HTTP Response code: {}".format(response.status_code)
    raise Exception(error_message)
data = response.json()
```
- C. 

```
response = requests.get(url)
if response.status_code != 200 and response.status_code != 429:
    backoff_seconds = int(response.headers['Retry-After'])
    sleep(backoff_seconds)
error_message = "Unexpected HTTP Response code: {}".format(response.status_code)
raise Exception(error_message)
data = response.json()
```
- D. 

```
response = requests.get(url)
if response.status_code == 429:
    backoff_seconds = int(response.headers['Retry-After'])
    sleep(backoff_seconds)
response = requests.get(url)
elif response.status_code != 200:
    error_message = "Unexpected HTTP Response code: {}".format(response.status_code)
    raise Exception(error_message)
data = response.json()
```

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

**Answer: D**

Explanation:

**Question: 41**

An application uses OAuth to get access to several API resources on behalf of an end user. What are two valid parameters to send to the authorization server as part of the first step of an authorization code grant flow? (Choose two.)

- A. URI to which the authorization server will send the user-agent back when access is granted or denied
- B. list of the API resources that the application is requesting to access
- C. secret that was generated by the authorization server when the application registered as an OAuth integration
- D. list of scopes that correspond to the API resources to which the application is requesting to access
- E. name of the application under which the application registered as an OAuth integration

**Answer: AC**

Explanation:

**Question: 42**

DRAG DROP

Refer to the exhibit.

```
import threading
import requests

def get_device_list(endpoint, apikey):
    url = "https://api.meraki.com/api/v0/networks/" + endpoint
    hdr = {'x-cisco-meraki-api-key': format(str(apikey)), 'Content-Type':
    'application/json'}
    response = requests.get(url=url, headers=hdr)
    print(response.json())

if name = " main ":
    # creating thread
    thread = <item 1>(<item2>=get_device_list,

<item 3>=("NETWORK_ID/devices", "API_TOKEN"))

    thread.<item 4>
    thread.<item 5>
```

Python threading allows a developer to have different parts of a program run concurrently and simplify a design. Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the exhibit to create a thread instance.

join()  
threading.Thread  
start()  
target  
args

<item 1>  
<item 2>  
<item 3>  
<item 4>  
<item 5>

**Answer:**

Explanation:

threading.Thread  
target  
args  
start()  
join()

**Question: 43**

DRAG DROP

A developer is creating a Python script to use the Webex Teams REST API to list joined spaces, and gracefully handle and print the errors it receives. Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the exhibit to complete the script.

import requests

url = "https://api.ciscospark.com/v1/rooms'

bearer - "BEARER\_TOKEN\_HERE"

headers = {"content-type": "application/json", "Authorization": "Bearer " + bearer }

<item 1>:

response = requests.get(url, headers=headers, verify=False)

response.<item 2>

<item 3> requests.exceptions.HTTPError as err:

if response.status\_code = <item 4>:

print("Check Bearer Token")

elif response.status\_code = <item 5>:

print("Check API Endpoint uri")

elif response.statuscode = 500:

print("Server Error, Try again Later") else:

print("HTTP Error") + str(err)

401	<item 1 >
404	<item 2>
try	<item 3>
except	<item 4>
raise_for_status()	<item 5>

**Answer:**

Explanation:



**Question: 44**

DRAG DROP

Refer to the exhibit.

```
#!/usr/bin/python3
import requests, sys

head = { 'Content-Type': '<item 1>',
        'Authorization': 'Bearer NWU4NjQOODJkZTIzM...4-ad72cae0e10f' }

res = requests.post(url='https://api.ciscopark.com/v1/<item 2>', headers = head,
                    json = { '<item 3>': sys.argv[1] })
spaceld = res.json()['id']

members = [ 'johndoe@example.com', 'janedoe@example.com' ]
for member in members:
    res = requests.post(url='https://api.ciscopark.com/v1/<item 4>' headers =
                        head, json = { 'roomId' spaceld, '<item 5>': member})
```

Refer to the exhibit above and click on the resource tabs in the top left corner to view resources to help with this question.

## Create a Room

Creates a room. The authenticated user is automatically added as a member of the room. See the [Memberships API](#) to learn how to add more people to the room.

To create a 1:1 room, use the [Create Messages](#) endpoint to send a message directly to another person by using the `toPersonId` or `toPersonEmail` parameters.

**POST** /v1/rooms

### Body Parameters

**title**

string **Required**

A user-friendly name for the room.

**teamId**

string

The ID for the team with which this room is associated.

## Create a Membership

Add someone to a room by Person ID or email address; optionally making them a moderator.

**POST** /v1/memberships

### Body Parameters

**roomId**

string **Required**

The room ID.

**personId**

string

The person ID.

**personEmail**

string

The email address of the person.

**isModerator**

boolean

Whether or not the participant is a room moderator.

A developer is creating a Python Script that will use the Webex Teams REST API to automatically

create a new collaboration space with him and his team leads on-demand via a Linux terminal command. Drag and drop the code snippets from the left onto the numbers on the right that match the missing sections in the exhibit to complete the script. Not all code snippets are used.

application/xml	<item 1>
application/json	<item 2>
name	<item 3>
userName	<item 4>
title	<item 5>
personEmail	
/members	
/memberships	
/rooms	
/spaces	

**Answer:**

Explanation:

application/json

/rooms

title

/memberships

personEmail

**Question: 45**

DRAG DROP

Refer to the exhibit.

## Create a Message

Post a plain text or **rich text** message, and optionally, a **file attachment** attachment, to a room.

The `files` parameter is an array, which accepts multiple values to allow for future expansion, but currently only one file may be included with the message.

**POST** /v1/messages

### Body Parameters

**roomId**

string

The room ID of the message.

**toPersonId**

string

The person ID of the recipient when sending a private 1:1 message.

**toPersonEmail**

string

The email address of the recipient when sending a private 1:1 message.

**text**

string

The message, in plain text. If `markdown` is specified this parameter may be *optionally* used to provide alternate text for UI clients that do not support rich text. The maximum message length is 7439 bytes.

**markdown**

string

The message, in Markdown format. The maximum message length is 7439 bytes.

```
#!/bin/bash
```

```
curl<item 1> https://api.Giscopark.com/v1/messages \
```

```
-H '<item 2>' \
```

```
-H '<item 3> NMU4NjQOYWUtNjy P. . . Ieb6574-ad72oae0e10f'\
```

```
-d '{<item 4>: "cisco@usa.net", "text": "Intruder Alert!"}'
```

Refer to the exhibit. A system administrator has installed a Linux-based alarm system in their home that can execute a Bash shell script when an intruder is detected. Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the exhibit to create a chat-ops script that will notify of alarms via the Webex Teams REST API. Not all code snippets are used.

toPersonEmail	<item 1>
userName	<item 2>
-X POST	<item 3>
-XPUT	<item 4>
Content-Type: application/json	

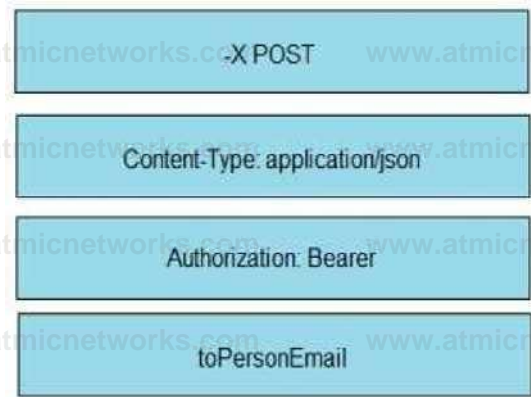
Content-Type: application/xml

Authorization: Basic

Authorization: Bearer

**Answer:**

Explanation:



**Question: 46**

DRAG DROP

Refer to the exhibit.

```

RETRIES = 6
i = 0
backoff = 1

while True:
    try:
        response = requests.request(*args, **kwargs)
        response.raise_for_status()
        return response
    except Exception as e:
        if (response.status_code != <item 1>) or i == <item 2> return response

        time.sleep(<item 3>)

        <item 4> *= 2
        <item 5> += 1

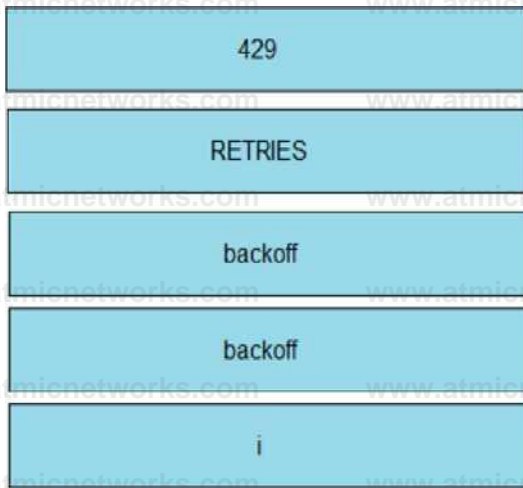
```

Refer to the exhibit. The self-service Webex Teams bot is failing when many users attempt to interact with it at the same time. Drag and drop the code snippets from the left onto the correct item numbers on the right that match the missing sections in the exhibit to complete this code to handle this high-load situation.

429	<item 1>
backoff	<item 2>
backoff	<item 3>
RETRIES	<item 4>
i	<item 5>

**Answer:**

**Explanation:**



### Question: 47

DRAG DROP

Refer to the exhibit.

```
import request, time
bearer = "BEARER_TOKEN_HERE"
url = 'https://api.ciscopark.com/v1/rooms'
headers = {'content-type': 'application/yang-data+json',
           'accept': 'application/yang-data+json',
           "Authorization": "Bearer "+bearer}

while True:
    response = requests.get(url, headers=headers, verify=False) status = <item 1>
    if(status == 200):
        print("Success")
        break
    elif(status == <item 2>):
        sleep_time = int(<item 3>)
        print('Too Many requests. Sleeping for ', sleep_time, '<item 4>')
        time.sleep(sleep_time)
    else:
        print("Error code" + str(status) + "detected.") break
```

A developer is creating a Python script to use the Webex Teams REST API to list joined spaces, retry after the server-specified amount of time if a “Too many requests” response is received, and print any other error that is received. Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the exhibit to complete the script. Not all code snippets are used.

405  
429  
minutes  
seconds  
response.headers['Retry-After']  
response.header  
response.status\_code  
response.status

<item 1>  
<item 2>  
<item 3>  
<item 4>

**Answer:**

Explanation:

response.status\_code  
429  
response.headers['Retry-After']  
seconds

## Question: 48

Refer to the exhibit.

Responding to Events

After creating a bot, you can use its access token with the Webex REST APIs to perform actions as the bot, such as [sending a message](#) with an interactive [card](#) to someone. To respond to events within Webex Teams, such as someone sending your bot a message or adding it to a group space, you'll need to configure webhooks. Webhooks will let you know when an activity has occurred so you can take action. Check out the [Webhooks Guide](#) for more information about configuring webhooks.

With cards, you can give your users even more ways to interact with your bot or service, right in the Webex Teams clients. See the [Cards Guide](#) for more information.

Differences Between Dots and People

One key difference between Webex Teams Bots and regular users is that, in group rooms, bots only have access to messages in which they are mentioned. This means that messages created with webhooks only fire when the bot is mentioned in a room.

Also, [listing messages](#) requires that you specify a special `?mentionedPeople=me` query parameter.

```
GET /messages?mentionedPeople=me&roomId=SOME_INTERESTING_ROOM
Authorization: Bearer THE_BOTS_ACCESS_TOKEN
```

Bot Frameworks & Tools

There are several bot frameworks that can greatly simplify the bot development process by abstracting away the low-level communications with the Webex REST API, such as creating and sending API requests and configuring webhooks. Instead, you can focus on building the interaction and business logic of your bot.

Flint is an open source bot framework with support for regex pattern matching for messages and more.

Which set of API requests must be executed by a Webex Teams bot after receiving a webhook callback to process messages in a room and reply with a new message back to the same room?

**A GET /message&roomId=<ROOM\_ID>**

**POST /messages**  
**{"roomId": "<ROOM\_ID>", "text": "<MESSAGE>"}**

**B GET /messages&mentionedPeople=me&roomId=<ROOM\_ID>**

**PUT /messages**  
**{"roomId": "<ROOM\_ID>", "text": "<MESSAGE>"}**

**c GET /message&roomId=<ROOM\_ID>**

**PUT /messages**

**{"roomId":"<ROOM\_ID>","text":<MESSAGE>"}**

**d GET /messages&mentionedPeople=me&roomId=<ROOM\_ID>**

**POST /messages {"roomId":"<ROOM\_ID>","text":<MESSAGE>"}**

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: D**

Explanation:

**Question: 49**

Which snippet presents the correct API call to configure, secure, and enable an SSID using the Meraki API?

A)

```
curl-X PUT \  
-url 'https://api.meraki.com/api/v0/networks/:networkId/ssids/2' \  
- H 'X-Cisco-Meraki-API-Key: 15da0c6ffff295f16267f88f98694cf29a86ed87' \  
- H 'Accept: application/json' \  
- H 'Content-type: application/json' \  
-data-raw '{  
  "name": "My SSID",  
  "enabled": false,  
  "authMode": "psk",  
  "encryptionMode": "wpa",  
  "psk": "meraki123",  
  "wpaEncryptionMode": "WPA1 and WPA2"
```

B)

```
curl -X PUT \
  -url 'https://api.meraki.com/api/v0/networks/:networkId/ssids/2' \
  -H 'X-Cisco-Meraki-API-Key: 15da0c6ffff295f16267f88f98694cf29a86ed87' \
  -H 'Accept: application/json' \
  -H 'Content-type: application/json' \
  -data-raw '{
    "name": "My SSID",
    "enabled": true,
    "authMode": "psk",
    "encryptionMode": "wpa",
    "psk": "meraki123",
    "wpaEncryptionMode": "WPA1 and WPA2"
  }'
```

C)

```
curl-X PUT \
- url 'https://api.meraki.com/api/v0/networks/:networkId/ssids/2' \
- H 'X-Cisco-Meraki-API-Key: 15da0c6ffff295f16267f88f98694cf29a86ed87' \
- H 'Accept: application/json' \
- H 'Content-type: application/json' \
-data-raw '{
"enabled": true,
"useVlanTagging": true
}
```

D)

```
curl-X PUT \
-url 'https://api.meraki.com/api/v0/networks/:networkId/ssids/2' \
- H 'X-Cisco-Meraki-API-Key: 15da0c6ffff295f16267f88f98694cf29a86ed87' \
- H 'Accept: application/json' \
- H 'Content-type: application/json' \
-data-raw '{
"name": "My SSID",
"enabled": true,
}
```

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

**Answer: B**

Explanation:

**Question: 50**

FILL BLANK

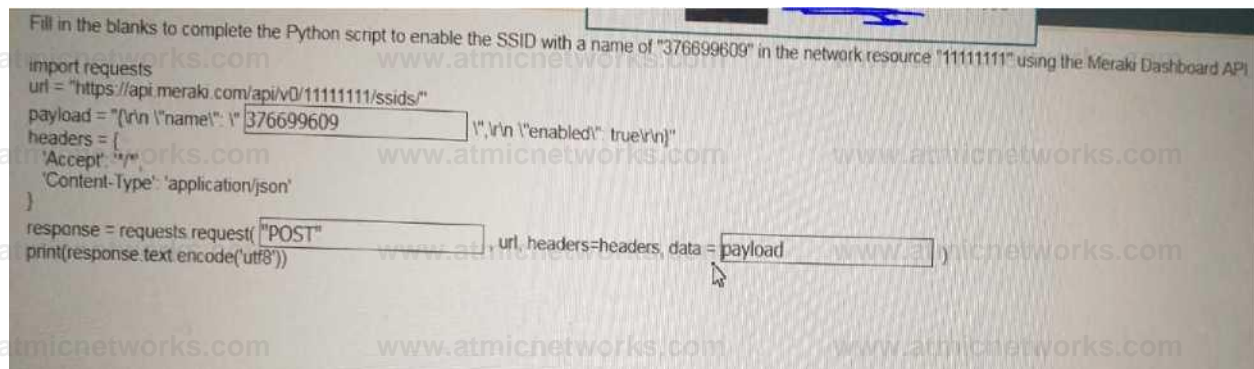
Fill in the blanks to complete the Python script to enable the SSID with a name of "371767916" in the network resource "11111111" using the Meraki Dashboard API.

```
import requests
url = "https://apimeraki.com/api/v0/11111111/ssidsT
payload = "{\r\n Vname: V | _____ | r,Mn Venabledr true\r\n}"
headers = {
    'Accept: 'T',
    'Content-Type': 'application/json'
}
response = requests request( _____ , url, headers=headers, data = _____ )
print(response.text encode('utf8'))
```

**Answer: See explanation below**

Explanation:

1. 371767916
2. 'PUT'
3. payload



## Question: 51

DRAG DROP

Drag and drop the code onto the snippet to update a SSID in Meraki using the Dashboard API. Not all options are used.

```
base_url = "https://api.meraki.com/api/v0"
network_id = "N_1234567890"
requests.put(
    [ ] + " /networks/" + [ ] + "/ssids/0",
    headers = {
        "X-Cisco-Meraki-API-Key": [ ],
        "Content-Type": "[ ]"
    },
    data = json.dumps({
        "number": 0,
        "name": ssid,
        "enabled": True,
        "authMode": "psk",
        "psk": [ ],
        "[ ]": "wpa",
        "wpaEncryptionMode": "WPA2 only"
    })
)
```

- application/json
- organization\_id
- network\_id
- wireless\_password
- base\_url
- api\_key
- encryptionMode

**Answer:**

Explanation:

```

base_url = "https://api.meraki.com/api/v0"
network_id = "N_1234567890"
requests.put(
    [base_url] + " /networks/" + [network_id] + "/ssids/0",
    headers = {
        "X-Cisco-Meraki-API-Key": [api_key] ,
        "Content-Type": " [application/json] "
    },
    data = json.dumps ({
        "number": 0,
        "name": ssid,
        "enabled": True,
        "authMode": "psk",
        "psk": [wireless_password] ,
        " [encryptionMode] ": "wpa",
        "wpaEncryptionMode": "WPA2 only"
    })

```

### Question: 52

DRAG DROP

Refer to the exhibit.

```

def process_all_pages(url):
    data = []
    try:
        response = requests.get(url)
        if <item 1> == 200:
            while <item 2>:
                response = requests.get(<item 3>)
                response.raise_for_status()
                data.append(response.json())
            return data
    except Exception as e:
        print("Server returned non-200 OK response during pagination")

```

Drag and drop the parts of the Python code from the left onto the item numbers on the right that match the missing sections in the exhibit that consumes REST API pagination.

```
response.status_code
```

```
response.links['next']['url']
```

```
response.headers.get('Link')
```

```
<item 1>
```

```
<item 2>
```

```
<item 3>
```

### Answer:

#### Explanation:

```
response.status_code
```

```
response.headers.get('Link')
```

```
response.links['next']['url']
```

The correct URL from next page can be retrieved by using `response.links['next']['url']`. The use of `response.headers.get('Link')` could be easily replaced by an infinite loop like `'while True:'` and it would be the same. They're just testing our knowledge here. The trick here is that once we reach the last page, `response.links['next']['url']` within the `'try'` context will fail and we'll move to the `'except'` clause and the program will exit.

### Question: 53

DRAG DROP

Refer to the exhibit.

```

<item 1> python:3.6-alpine
<item 2> .com
<item 3> pip install -r requirements.txt
<item 4> 5001
<item 5> ["python", "app.py"]

```

Drag and drop the correct parts of the Dockerfile from the left onto the item numbers on the right that match the missing sections in the exhibit to complete the Dockerfile to successfully build and deploy a container running a Python application. Not all parts of the Dockerfile are used.

ENV	<item 1 >
CMD	<item 2>
RUN	<item 3>
COPY	<item 4>
VOLUME	<item 5>

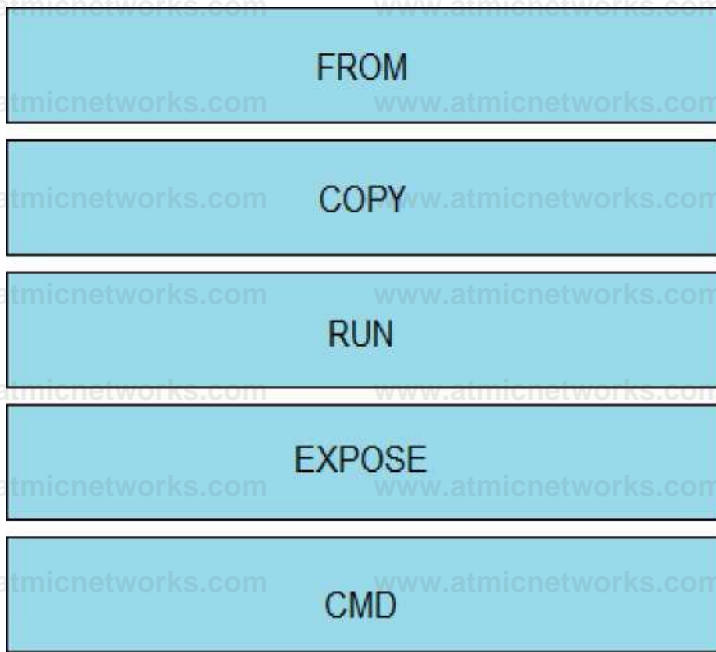
FROM

WORKDIR

EXPOSE

**Answer:**

Explanation:



FROM python:3.6-alpine

COPY . .

RUN pip install -r requirements.txt

EXPOSE 5001

CMD ["python", "app.py"]

### Question: 54

The UCS Python SDK includes modules for Service Profile template creation. Which two UCS Service Profile template types are supported? (Choose two.)

- A. initial-template
- B. updating-template
- C. abstract-template
- D. attached-template

E. base-template

**Answer: AB**

Explanation:

**Question: 55**

A container running a Python script is failing when it reaches the integration testing phase of the CI/CD process. The code has been reviewed thoroughly and the build process works on this container and all other containers pass unit and integration testing.

What should be verified to resolve the issue?

- A. that the correct port is exposed in the Dockerfile
- B. that the necessary modules and packages are installed on build
- C. that the script is running from the right directory
- D. that the Python version of the container image is correct

**Answer: A**

Explanation:

**Question: 56**

Click on the GET Resource button above to view resources that will help with this question.

### "Greater Than" Operator

The **gt** operator returns true if the left operand is greater than the right operand, otherwise it returns false. The **gt** operator accepts numeric, dates and string values.

**Example:** Query RackUnit resources where AvailableMemory is greater than 98304MB:

```
GET /api/v1/compute/RackUnits?$filter=AvailableMemory gt 98304
```

**Example:** Query Audit log records where "CreationTime" is greater than '2018-06-20T05:31:38.862Z'. The date must be specified in UTC time without quotes.

```
GET /api/v1/aaa/AuditRecords?$filter=CreateTime gt 2018-06-20T05:31:38.862Z
```

### "Less Than" Operator

The **lt** operator returns true if the left operand is less than the right operand, otherwise it returns false. The **lt** operator accepts numeric, dates and string values.

**Example:** Query RackUnit resources where AvailableMemory is less than 98304MB:

```
GET /api/v1/compute/RackUnits?$filter=AvailableMemory lt 98304
```

### "Greater Than Or Equal" Operator

The **ge** operator returns true if the left operand is greater than or equal to the right operand, otherwise it returns false. The **ge** operator accepts numeric, dates and string values.

**Example:** Query RackUnit resources where AvailableMemory is greater than or equal to 98304MB:

```
GET /api/v1/compute/RackUnits?$filter=AvailableMemory ge 98304
```

### "Less Than Or Equal" Operator

The **le** operator returns true if the left operand is less than or equal to the right operand, otherwise it returns false. The **le** operator accepts numeric, dates and string values.

**Example:** Query RackUnit resources where AvailableMemory is less than or equal to 98304MB:

```
GET /api/v1/compute/RackUnits?$filter=AvailableMemory le 98304
```

### "And" Operator

The **and** operator returns true if both the left and right operands evaluate to true, otherwise it returns false.

**Example:** Query RackUnit resources where the Model property is equal to 'UCSC-C240-M5SN' and thy server has more than 64GB of memory;

```
GET /api/v1/compute/RackUnits?$filter=Model eq 'UCSC-C240-M5SN' and AvailableMemory gt 65000
```

### "Or" Operator

The **or** operator returns true if either the left or right operand evaluate to true, otherwise it returns false.

**Example:** Query RackUnit resources where the Model property is equal to 'UCSC-C240-M5SN' **or** the Model property is equal to 'UCSC-C240-M5SN'. Use the \$select keyword to reduce the size of the output JSON document.

### "Not" Operator

The **not** operator returns true if the operand returns false, otherwise it returns false.

**Example:** Query RackUnit resources where the model property is not ('HX220C-M5SX' or 'HX220C-M5S'). The example shows how grouping parenthesis can be used to set the operator precedence.

```
GET /api/v1/compute/RackUnits?$select=Vendor,Model,Serial&top=10&$filter=not (Model eq 'HX220C-M5SX' or Model eq 'HX220C-M5S')
```

### "In" Operator

The **in** operator returns true if the left operand is equal to one of the values specified in the right operand, otherwise it returns false. The **in** operator accepts numeric and string values.

Values must be specified as a comma-separated list enclosed in parenthesis.

**Example:** Query RackUnit resources where the Model is either 'HX220C-M5SX' or 'UCSC-C240-M5SN'.

```
GET /api/v1/compute/RackUnits?$filter=Model in ('HX220C-M5SX','UCSC-C240-M5SN')
```

## String Functions

### "contains" Function

The **contains** function has the following signature:

boolean contains(s string, subst string)

The **contains** function returns true if the second parameter string value is a substring of the first parameter string value, otherwise it returns false.

**Example:** Query RackUnit resources where the value of the 'Model' property contains 'C240'

```
GET /api/v1/RackUnits?$filter=contains(Model, 'C240')
```

### "startsWith" Function

The **startswith** function has the following signature:

boolean startswith(s string, subst string)

The **startswith** function returns true if the first parameter string value starts with the second parameter string value, otherwise it returns false.

**Example:** Query RackUnit resources where the value of the 'Model' property starts with the prefix 'UCSC-C240'

```
GET /api/v1/RackUnits?$filter=startswith(Model, 'UCSC-C240')
```

### "endsWith" Function

The **endswith** function has the following signature:

boolean endswith(string, suffix string)

The **endswith** function returns true if the first parameter string value ends with the second parameter string value, otherwise it returns false.

**Example:** Query RackUnit resources where the value of the 'Model' property ends with the suffix 'M5'

```
GET /api/v1/RackUnits?$filter=endswith(Model, 'M5')
```

### "tolower" Function

The **tolower** function has the following signature:

string tolower(string)

An engineer is managing a DC with 6000 Cisco UCS servers installed and running. The engineer has been asked to identify all resources where the model is in the UCSB family and the available memory is less than or equal to 5 GB.

Which REST API call accomplishes this task?

A. GET/api/v1/compute/RackUnits?\$select=Vendor,Model,Serial&\$filter=not(Model eq 'UCSC') and AvailableMemory le 5000

- B. GET/api/v1/compute/RackUnits?\$select=Vendor,Model,Serial&\$filter=Model eq 'UCSB' and AvailableMemory lt 5000
- C. GET/api/v1/compute/RackUnits?\$select=Vendor,Model,Serial&\$filter=contains(Model, UCSB') and AvailableMemory lt 5000
- D. GET/api/v1/compute/RackUnits?\$select=Vendor,Model,Serial&\$filter=contains(Model, UCSB') and AvailableMemory le 5000

**Answer: D**

Explanation:

**Question: 57**

AppGigabitEthernet interface is used as data port for a container on a Cisco Catalyst 9000 Series

Switch. Which two interface configuration options should be used? (Choose two.)

- A. trunk interface
- B. bridged virtual interface
- C. SPAN port
- D. management interface
- E. subinterface

**Answer: AC**

Explanation:

**Question: 58**

Which two types of storage are supported for app hosting on a Cisco Catalyst 9000 Series Switch? (Choose two.)

- A. external USB storage
- B. internal SSD
- C. CD-ROM
- D. SD-card
- E. bootflash

**Answer: AB**

Explanation:

### Question: 59

Refer to the exhibit.

```
import http.client
conn = http.client.HTTPSConnection("dnac.cisco.com")
headers = (
    '_runsync': "true",
    '_timeout': "30",
    '_persistbapioutput': "true",
)
conn.request("^|", '7dna/intent/apiiv1/j ____ ?timestamp=10000",
             headers=headers)
res = conn.getresponse()
data = res.read()
print(data.decode('utf-8'))
```

Which configuration of method and parameter retrieves the health of a laptop connected to the network from Cisco DNA Center?

- A. PUT; network-health;

- B. GET; client-health;
- C. GET; network-device;
- D. POST; network-device;

**Answer: B**

Explanation:

Get Overall Client Health

GET

/dna/intent/api/v1/client-health

Returns Overall Client Health information by Client type (Wired and Wireless) for any given point of time

<https://developer.cisco.com/docs/dna-center/api/1-3-3-x/#!intent-api-v1-3-3-x>

### Question: 60

On a Cisco Catalyst 9300 Series Switch, the guest shell is being used to create a service within a container. Which change is needed to allow the service to have external access?

- A. Apply ip nat overload on VirtualPortGroup0.
- B. Apply ip nat inside on Interface VirtualPortGroup0.
- C. Apply ip nat outside on Interface VirtualPortGroup0.
- D. Apply ip nat inside on Interface GigabitEthernet1.

**Answer: B**

Explanation:

### Question: 61

Refer to the exhibit.

```
headers = ( _____ )
try:
    response = requests.get("https://sandboxnac.cisco.com/dna/intent/api/v1/wireless/profile",
        headers=headers, verify=False)
except requests.exceptions.RequestException as cerror:
    print("Error processing request", cerror)
    sys.exit(1)
```

Which code snippet is required in the headers to successfully authorize wireless information from Cisco DNA Center?

- A. headers = {'X-auth-token': 'fa8426a0-8eaf-4d22-8e13-7c1b16a9370c'}
- B. headers = {'Authorization': 'Basic YWRtaW46R3JhcGV2aW5IMQ=='}  
C. headers = {'Authorization': 'Bearer ASDNFALKJER23412RKDALSNKF'}
- D. headers = {'Content-type': 'application/json'}

**Answer: A**

Explanation:

### Question: 62

Into which two areas are AppDynamics APIs categorized? (Choose two.)

- A. application-centric
- B. analytics-events
- C. database-visibility
- D. platform-side
- E. agent-side

**Answer: DE**

Explanation:

## Question: 63

Refer to the exhibit.

```
node 'default' {
  cisco_yang_netconf { 'my-config' :
    target => '<vrf xmlns="http://cisco.com/ns/yang/Cisco-IOS-XR-infra-rsi-cfg"/>'
    source => '<vrf xmlns="http://cisco.com/ns/yang/Cisco-IOS-XR-infra-rsi-cfg"> <vrf>
      <vrf-name>VOIP</vrf-name>
      <create/>
      <description>Voice over IP</description>
      <vpn-id>
        <vpn-oui>875</vpn-oui>
        <vpn-index>3</vpn-index>
      </vpn-id>
    </vrf>
    <vrf>
      <vrf-name>INTERNET</vrf-name>
      <create/>
      <description>Generic external traffic</description>
      <vpn-id>
        <vpn-oui>875</vpn-oui>
        <vpn-index>22</vpn-index>
      </vpn-id>
    </vrf>
  </vrf>
}
mode => _____,
force => _____,
```

This script uses ciscoyang to configure two VRF instances on a Cisco IOS-XR device using the Yang NETCONF type.

Which two words are required to complete the script? (Choose two.)

- A. ensure
- B. commit

C. false

D. replace

E. none

**Answer: CD**

Explanation:

### Question: 64

There is a requirement to securely store unique usernames and passwords. Given a valid username, it is also required to validate that the password provided is correct. Which action accomplishes this task?

A. Encrypt the username, hash the password, and store these values.

B. Hash the username, hash the password, and store these values.

C. Encrypt the username, encrypt the password, and store these values.

D. Hash the username, encrypt the password, and store these values.

**Answer: A**

Explanation:

Explanation

### Question: 65

While developing an application following the 12-factor app methodology, which approach should be used in the application for logging?

A. Write a log to a file in the application directory.

B. Write a log to a file in /var/log.

C. Write the logs buffered to stdout.

D. Write the logs unbuffered to stdout.

**Answer: D**

Explanation:

Explanation

### Question: 66

An application has initiated an OAuth authorization code grant flow to get access to an API resource on behalf of an end user.

Which two parameters are specified in the HTTP request coming back to the application as the end user grants access? (Choose two.)

- A. access token and a refresh token with respective expiration times to access the API resource
- B. access token and expiration time to access the API resource
- C. redirect URI a panel that shows the list of permissions to grant
- D. code that can be exchanged for an access token
- E. state can be used for correlation and security checks

**Answer: AB**

Explanation:

Explanation

### Question: 67

A web application is susceptible to cross-site scripting. Which two methods allow this issue to be mitigated? (Choose two.)

- A. Use only drop downs.
- B. Limit user input to acceptable characters.

- C. Encrypt user input on the client side.
- D. Use AES encryption to secure the script.
- E. Remove all HTML/XML tags from user input.

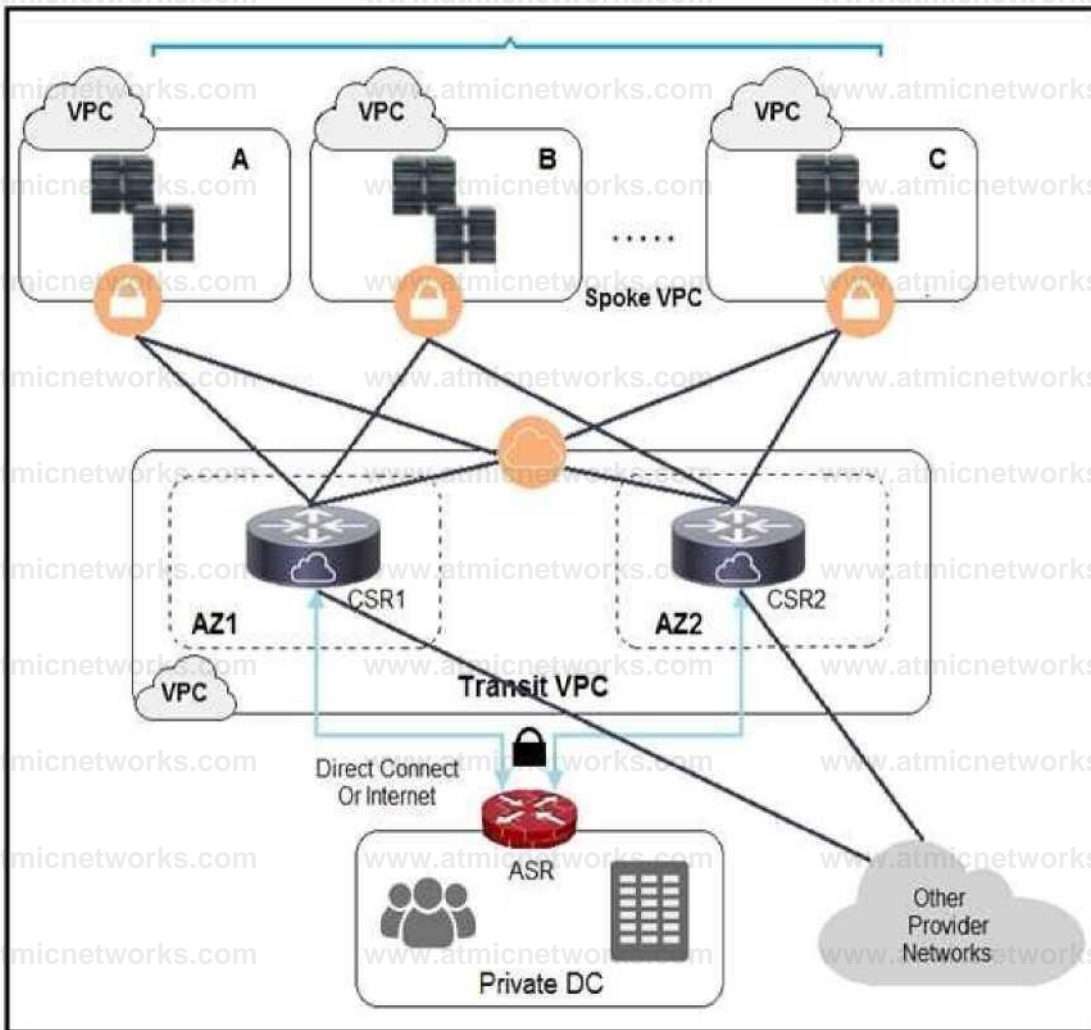
**Answer: BE**

Explanation:

[https://cheatsheetseries.owasp.org/cheatsheets/Cross Site Scripting Prevention Cheat Sheet.html](https://cheatsheetseries.owasp.org/cheatsheets/Cross_Site_Scripting_Prevention_Cheat_Sheet.html)

**Question: 68**

Refer to the exhibit.



A company has extended networking from the data center to the cloud through Transit VPC.

Which two statements describe the benefits of this approach? (Choose two.)

- A. Dynamic routing combined with multi-AZ- deployment creates a robust network infrastructure.
- B. VPC virtual gateways provide highly available connections to virtual networks.
- C. Dedicated VPC simplifies load balancing by combining internal and external web services.
- D. VPC virtual gateways provide more secure connections to virtual networks.
- E. Dedicated VPC simplifies routing by not combining this service with other shared services.

**Answer: BD**

Explanation:

**Question: 69**

A developer has just completed the configuration of an API that connects sensitive internal systems. Based on company policies, the security of the data is a high priority.

Which approach must be taken to secure API keys and passwords?

- A. Embed them directly in the code.
- B. Store them in a hidden file.
- C. Store them inside the source tree of the application.
- D. Change them periodically.

**Answer: D**

Explanation:

**Question: 70**

Which two principles are included in the codebase tenet of the 12-factor app methodology? (Choose two.)

- A. An application is always tracked in a version control system.
- B. There are multiple codebases per application.
- C. The codebase is the same across all deploys.
- D. There can be a many-to-one correlation between codebase and application.
- E. It is only possible to have one application deployment per codebase.

**Answer: AC**

Explanation:

Explanation

**Question: 71**

What is submitted when an SSL certificate is requested?

- A. PEM
- B. CRT
- C. DER
- D. CSR

**Answer: D**

Explanation:

Explanation

**Question: 72**

Which two actions must be taken when an observable microservice application is developed? (Choose two.)

- A. Know the state of a single instance of a single service.
- B. Place "try/except" statement in code.
- C. Place log statements in the code.
- D. Use distributed tracing techniques.
- E. Deploy microservice to multiple datacenters.

**Answer: CD**

Explanation:

Explanation

**Question: 73**

Which two countermeasures help reduce the risk of playback attacks? (Choose two.)

- A. Store data in a NoSQL database.
- B. Implement message authentication (HMAC).
- C. Enable end-to-end encryption.

D. Remove stack traces from errors.

E. Use short-lived access tokens.

**Answer: BE**

Explanation:

Explanation

**Question: 74**

Which type of file is created from issued intermediate, root, and primary certificates for SSL installation on a server?

A. DER

B. CSR

C. PEM

D. CRT

**Answer: C**

Explanation:

Explanation

SSL .pem files (concatenated certificate container files), are frequently required for certificate installations when multiple certificates are being imported as one file.

**Question: 75**

DRAG DROP

Refer to the exhibit.

**Description**

The addURLObject operation handles configuration related to \_ L < t model.

This API call is not allowed on the standby unit in an HA pair.

HTTP request

URL

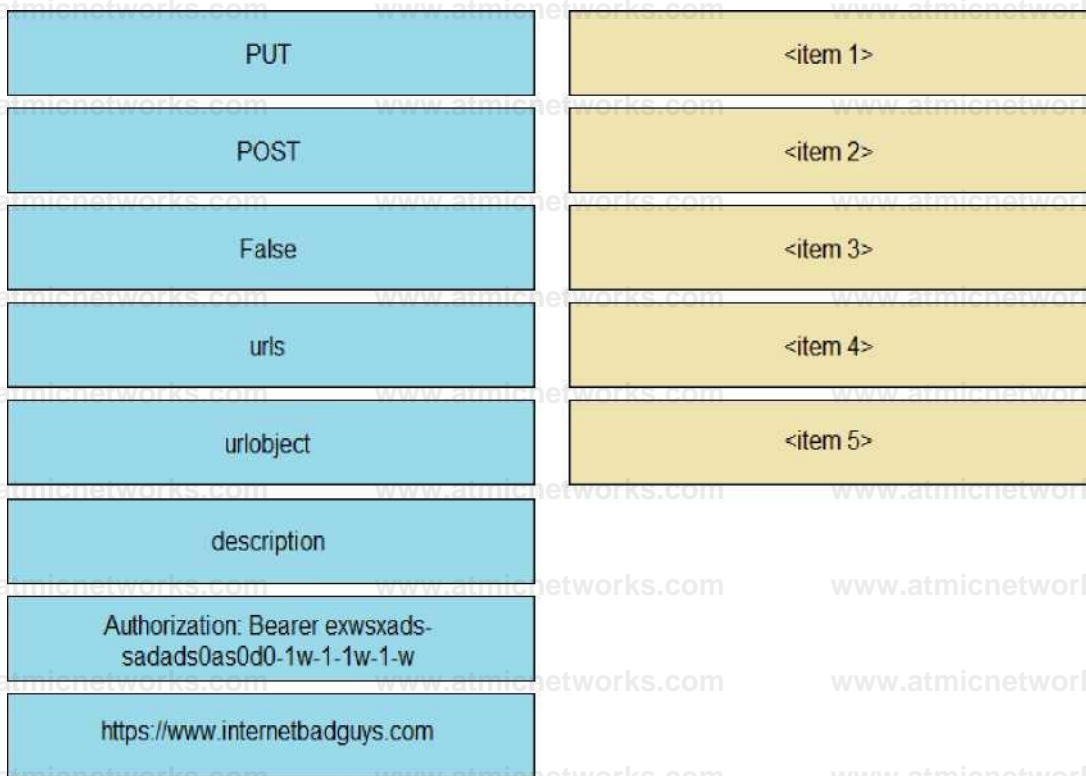
## POST /api/fdm/v4/object/urls

### Data Parameters

Parameter	Required	Type	Description
name	True	string	An string represents the name of URL object
description	False	string	An string containing the description information of URL object Field level constraints: length must be between 0 and 200 (inclusive). (Note: Additional constraints might exist)
url	True	string	An string value containing the URL address. Field level constraints: cannot be blank or empty, length must be between 0 and 400 (inclusive). (Note: Additional constraints might exist)
type	True	string	A UTF8 string, all letters lower-case, that represents the class-type. This corresponds to the class name.

```
curl -x <item 1> --header 'Content-Type: application/json' --header 'Accept: application/json'-H "O-tem 2" -d '{ \n  "name": "Blocked URL", \n  "url": "<item 3>", \n  "type": "<item 4>" \n}' https://ast0072-pod.xyz.com:33333/api/fdm/v4/object/<item 5>
```

Refer to the exhibit. Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the curl exhibit to complete the cURL request to FirePower Device Manager API to create objects. Not all code snippets are used.



**Answer:**

Explanation:



**Question: 76**

Which two statements describe advantages of static code analysis over unit tests? (Choose two.)

- A. It checks for potential tainted data where input is not checked.

- B. It enforces proper coding standards and style.
- C. It performs a quick analysis of whether tests will pass or fail when run.
- D. It checks for race conditions in threaded applications.
- E. It estimates the performance of the code when run.

**Answer: AB**

Explanation:

Explanation

### **Question: 77**

Refer to the exhibit.

**FROM alpine:3.7**

**RUN apk add --no-cache bash**

Which additional line results in the output of Test 1 upon execution of the docker run --rm devnet 1 command in a Dockerfile with this content?

- A. CMD ["/bin/echo", "Test"]
- B. RUN ["/bin/echo", "Test"]

C. ENTRYPOINT ["/bin/echo", "Test"]

D. CMD ["/bin/echo Test"]

**Answer: A**

Explanation:

Explanation

**Question: 78**

Which two techniques protect against injection attacks? (Choose two.)

A. input validation

B. trim whitespace

C. limit text areas to 255 characters

D. string escaping of user free text and data entry

E. only use dropdown, checkbox, and radio button fields

**Answer: AD**

Explanation:

Explanation

**Question: 79**

Refer to the exhibit.

```
apiVersion: v1
clusters:
- cluster:
  certificate-authority: fake-ca-file
  server: https://1.2.3.4
  name: development
- cluster:
  insecure-skip-tls-verify: true
  server: https://5.6.7.8
  name: scratch
contexts:
- context:
  cluster: development
  namespace: frontend
  user: developer
  name: dev-frontend
- context:
  cluster: development
  namespace: storage
  user: developer
  name: dev-storage
- context:
  cluster: scratch
  namespace: default
  user: experimenter
  name: exp-scratch
current context: ""
kind: Config
preferences: {}
users:
- name: developer
  user:
    client-certificate: fake-cert-file
    client-key: fake-key-file
- name: experimenter
  user:
    password: some-password
    username: exp
```

A kubeconfig file to manage access to clusters is provided. How many clusters are defined and which of them are accessed using username/password authentication versus certificate?

A. two clusters; scratch

- B. three clusters; scratch
- C. three clusters; development
- D. two clusters; development

**Answer: A**

Explanation:

Explanation

### Question: 80

Which two strategies are used to protect personally identifiable information? (Choose two.)

- A. Encrypt data in transit.
- B. Encrypt hash values of data.
- C. Encrypt data at rest.
- D. Only hash usernames and passwords for efficient lookup.
- E. Only encrypt usernames and passwords for efficient lookup.

**Answer: AC**

Explanation:

Explanation

### Question: 81

The response from a server includes the header ETag: W/"7eb8b94419e371767916ef13e0d6e63d".

Which statement is true?

- A. The ETag has a Strong validator directive.
- B. The ETag has a Weak validator directive, which is an optional directive.
- C. The ETag has a Weak validator directive, which is a mandatory directive.

D. The ETag has a Strong validator directive, which it is incorrectly formatted.

**Answer: B**

Explanation:

Explanation

<https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/ETag>

The ETag HTTP response header is an identifier for a specific version of a resource. It lets caches be more efficient and save bandwidth, as a web server does not need to resend a full response if the content has not changed. Additionally, etags help prevent simultaneous updates of a resource from overwriting each other

Syntax:

ETag: W/"<etag\_value>"

Directives:

W/ ( Optional)

'W/' (case-sensitive) indicates that a weak validator is used. Weak etags are easy to generate, but are far less useful for comparisons.

"<etag\_value>"

Entity tag uniquely representing the requested resource. They are a string of ASCII characters placed between double quotes, like "675af34563dc-tr34"

**Question: 82**

Refer to the exhibit.

```
open_file = open("text_file.txt", "r")
read_file = open_file.read()
print(read_file)
```

A developer created the code, but it fails to execute. Which code snippet helps to identify the issue?

```
A try:
    open file = open("text file.txt", "r")
    read file = open file.read()
    print(read_file)
except:
    print("File not there")
```

```
B try:
    print("File not there")
except:
    open file = open("text file.txt", "r")
    read_file = open_file.read()
    print(read file)
```

```
C- try:
    open_file = open("text_file.txt", "r")
    read file = open file.read()
    print(read file)
except:
    print("File not there")
catch:
    error(read_file)
```

```
0- open file = open("text file.txt", "r")
read file = open file.read()
print(read file)
except:
    print("File not there")
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: A**

Explanation:

```
>>> read_file = open("me.txt", "r")
```

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

FileNotFoundError: [Errno 2] No such file or directory: 'me.txt'

```
>>>
```

### Question: 83

Which HTTP status code indicates that a client application is experiencing intentional rate limiting by the server?

- A. 202
- B. 401
- C. 429
- D. 503

**Answer: C**

Explanation:

Explanation

<https://httpstatuses.com/429>

### Question: 84

Which database type should be used to store data received from model-driven telemetry?

- A. BigQuery database
- B. Time series database

C. NoSQL database

D. PostgreSQL database

**Answer: B**

Explanation:

**Question: 85**

DRAG DROP

Refer to the exhibit.

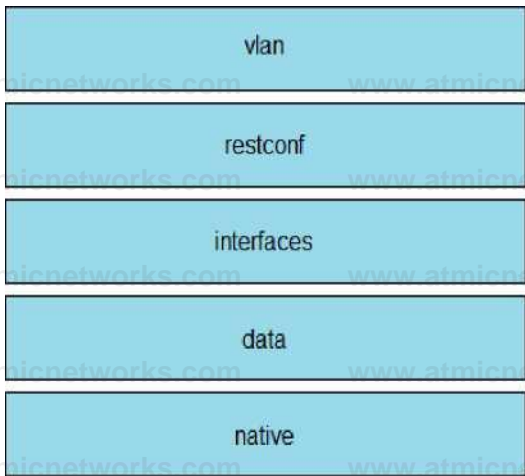
```

module: Cisco-IOS-XE-vlan
augment /ios:native/ios:vlan:
  +-rw access-map* [name]
  I +-rw name          string
  I +-rw value?        uint16
  I +-rw action?       enumeration
  | +-rw match
  |   +-rw ipv6
  I   | +-rw address* string
  I   +-rw ip
  I     +-rw address*  string
  +-rw configuration* [vlan-id]
  | +-rw vlan-id      union
  I +-rw ip
  I | +-rw flow
  | | +-rw monitor* [flow-monitor]
  I |   +-rw flow-monitor string
  I |   +-rw input?       empty
  I |   +-rw output?      empty
  I +-rw ipv6
  I | +-rw nd
  l | | +-rw suppress!
  I | |   +-rw attach-policy? string
  I | +-rw dhcp
  I |   +-rw guard)
  I |     +-rw attach-policy? string
  | +-rw member
  I   +-rw evpn-instance
  |   | +-rw evpn-instance? uint16
  I   | +-rw vni?            uint32
  I   +-rw vni?            uint32
  +-rw filter* [word]

```

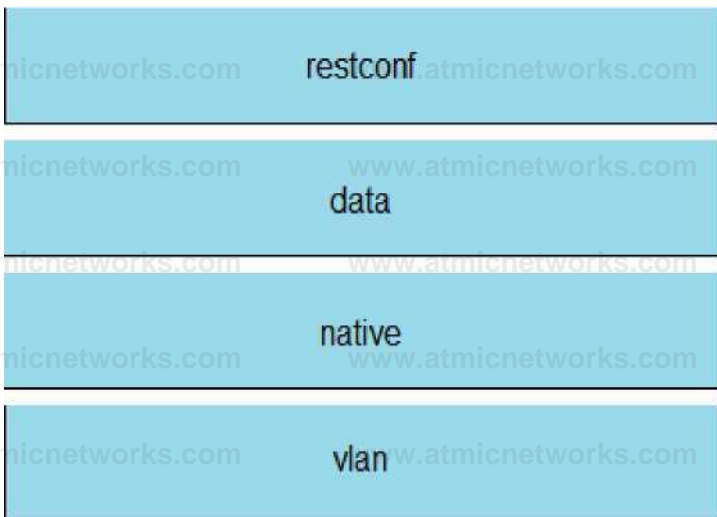
<https://ios-xe-mgmt.cisco.com:9443/<item 1>/<item 2>/<item 3>/<item 4>/>

Refer to the exhibit. Drag and drop parts of the URL from the left onto the item numbers on the right that match the missing sections in the exhibit to create the appropriate RESTCONF URL to query the VLAN configuration given this YANG model. Not all URL parts are used.



**Answer:**

**Explanation:**



**Question: 86**

A heterogeneous network of vendors and device types needs automating for better efficiency and to enable future automated testing. The network consists of switches, routers, firewalls and load balancers from different vendors, however they all support the NETCONF/RESTCONF configuration standards and the YAML models with every feature the business requires. The business is looking for a buy versus build solution because they

cannot dedicate engineering resources, and they need configuration diff and rollback functionality from day 1.

Which configuration management for automation tooling is needed for this solution?

- A. Ansible
- B. Ansible and Terraform
- C. NSO
- D. Terraform
- E. Ansible and NSO

**Answer: C**

Explanation:

<https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2020/pdf/DEVLIT-4019.pdf>

**Question: 87**

An automated solution is needed to configure VMs in numerous cloud provider environments to connect the environments to an SDWAN. The SDWAN edge VM is provided as an image in each of the relevant clouds and can be given an identity and all required configuration via cloud-init without needing to log into the VM once online.

Which configuration management and/or automation tooling is needed for this solution?

- A. Ansible
- B. Ansible and Terraform
- C. NSO
- D. Terraform
- E. Ansible and NSO

**Answer: D**

Explanation:

## Question: 88

Refer to the exhibit.

```
name: Configure Interfaces
with items: "{interfaces}!"
netconf_config:
  «: *host_info
  xml: |
    <config>
      <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces">
        <interface>
          <name>{{(item.interface_typeIH (item.interface_id})}</name>
          <description>{{(item.description)}}</description>
          <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:ethernetCsmacd</type>
          <enabled>true</enabled>
          <ipv4 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
            <address>
              <ip>{{(item.ip address)}}</ip>
              <netmask>{{(item.subnet mask)}}</netmask>
            </address>
          </ipv4>
        </interface>
      </interfaces>
    </config>
```

The Ansible playbook is using the netconf\_ module to configure an interface using a YANG model. As part of this workflow, which YANG models augment the interface?

- A. ietf-interfaces and ietf-ip
- B. iana-if-type and ietf-interfaces
- C. ietf-ip and openconfig-interface
- D. ietf-ip and iana-if-type

**Answer: B**

Explanation:

### Question: 89

Refer to the exhibit.

```
---
- name: IOS XE Configuration
  hosts: ios_xe
  connection: local
  gather_facts: false

  tasks:
  - name: IOS NTP
    ios_ntp:
      provider: "{{ creds }}"
      server: 10.0.255.10
      source_int: GigabitEthernet2
      logging: false
```

Which key value pair from the `ios_ntp` Ansible module creates an NTP server peer?

- A. `state: present`
- B. `state: True`
- C. `config: present`
- D. `config: True`

**Answer: A**

Explanation:

`ios_ntp` : Manages core NTP configuration

`state` : Manage the state of the resource

Choices : present | absent

Example:

```
# Set new NTP server and source interface
```

```
- ios_ntp:
```

```
server: 10.0.255.10
```

```
source_int: Loopback0
```

```
logging: false
```

```
state: present
```

[https://docs.ansible.com/ansible/latest/modules/ios\\_ntp\\_module.html](https://docs.ansible.com/ansible/latest/modules/ios_ntp_module.html)

## Question: 90

Refer to the exhibit.

```
name: VRFs
```

```
ios_vrf:
```

```
vrf: "{{local_vrfs}}" state: present
```

```
purge: yes
```

The YAML represented is using the `ios_vrf` module. As part of the Ansible playbook workflow, what is the result when this task is run?

- A. VRFs not defined in the `host_vars` file are removed from the device.
- B. VRFs not defined in the `host_vars` file are added to the device, and any other VRFs on the device remain.

C. VRFs defined in the host\_vars file are removed from the device.

D. VRFs are added to the device from the host\_vars file, and any other VRFs on the device are removed.

**Answer: D**

**Explanation:**

## Question: 91

Refer to the exhibit.

```
name: Configure Interfaces with_items: "{{interfaces}}" netconf config:
  <: *host_info
  xml: |
    <config>
      <interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces"> <interface>
        <name>{{ item, interface_type }} {{ item. interface_id }}</name>
        <description>{{ item.description }}</description>
        <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:ethernetCsmacd</type>
        <enabled>true</enabled>
        <ipv4 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip"> <address>
          <ip>{{ item.ip_address }}</ip>
          <netmask>{{ item, subnet_mask }}</netmask>
        </address>
        </ipv4>
      </interface>
    </interfaces>
  </config>
```

As part of the Ansible playbook workflow, several new interfaces are being configured using the netconf\_config module. The task references the interface variables that are unique per device.

In which directory is the YAML file with these variables found?

- A. host\_vars directory
- B. home directory
- C. group\_vars directory
- D. current working directory

**Answer: A**

Explanation:

[https://docs.ansible.com/ansible/latest/user\\_guide/intro\\_inventory.html#organizing-host-and-group-variables](https://docs.ansible.com/ansible/latest/user_guide/intro_inventory.html#organizing-host-and-group-variables)

### Question: 92

A developer needs to configure an environment to orchestrate and configure. Which two tools should be used for each task? (Choose two.)

- A. Puppet for orchestration
- B. Terraform for orchestration
- C. Terraform for configuration
- D. Ansible for orchestration
- E. Ansible for configuration

**Answer: BE**

Explanation:

### Question: 93

Application sometimes store configuration as constants in the code, which is a violation of strict separation of configuration from code. Where should application configuration be stored?

- A. environment variables
- B. YAML files
- C. Python libraries
- D. Dockerfiles
- E. INI files

**Answer: A**

Explanation:

### Question: 94

Refer to the exhibit.

```
import sys, requests
URL = 'http://ios-xe-nigrjt.cisco.com: 9 4 43'
USER = 'root'
PASS = 'Cisco0123'

url = URL + "/restconf/data/ietf-interfaces:interfaces-state"
headers = ['content-type':
'application/vnd-ang-data+json', 'accept': 'application/yang-data+json'
]

try:
    result = requests.get(url, auth=(USER,PASS), headers=headers)
    r_json = result.json()
    flagDown = 0
    for record in r_json["ietf-interfaces: interfaces"] ["interface"]:
        print("{0:<35}".format("interface: " + record["name"]), end="")
        print("{0:<S}".format("ip: "), end="")
        if {'address' in record["ietf-ip:ipv4"]}:
            print("{0:<15}".format(record["ietf-ip:ipv4"] ["address"] [0] ["ip"]), end="")
        else:
            print("{0:<15}".format(record["No IPv4"], end="")
        print (" {0 :<9}''. format ("status : ") , end="")
        print(str(record["enabled"]))
        if (record["enabled"] =False) :
            flagDown=1
    print ("")
    if(flagDown):
        print("At least one interface is down")
    else:
        print("All interfaces are up")

except:
    print("Exception: " + str(sys.exc_info()[0]) + " " + str(sys.exc_info()[1]))
    print("Error: " + str(result.status code), result.text)
```

What is the output of this IOS-XE configuration program?

- A. interface operational status in IPv6 addresses

- B. interface administrative status in IPv4 addresses
- C. interface operational status in IPv4 addresses
- D. interface administrative status in IPv6 addresses

**Answer: B**

Explanation:

### Question: 95

DRAG DROP

Refer to the exhibit.

```
*** Instantiate a UCS Service Profile from template and associate ***
from ucsm.sdk.ucshandle import UcsHandle
from ucsm.sdk.mometa.ls.LsBinding import LsBinding
from ucsm.sdk.mometa.ls.LsServer import LsServer

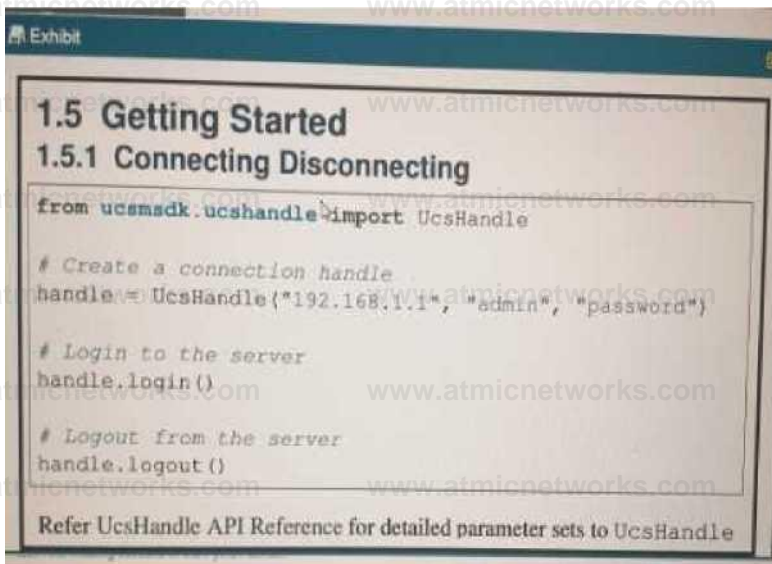
HANDLE = <item1>({
    "ucs-devcore.cisco.com",
    "admin",
    "password"
})

HANDLE.<item2>({})

SP_FROM_TEMPLATE = <item3>({
    parent_mo_or_dn='org-root/org-devnet',
    name="devcore-server-01",
    src_tmpl_name="devcore_template",
    type="instance"
})

LsBinding({
    parent_mo_or_dn=<item4>,
    pn_dn="sys/chassis-7/blade-3"
})

HANDLE.<item5>(SP_FROM_TEMPLATE, modify_present=True)
HANDLE.<item6>({})
HANDLE.<item7>({})
```

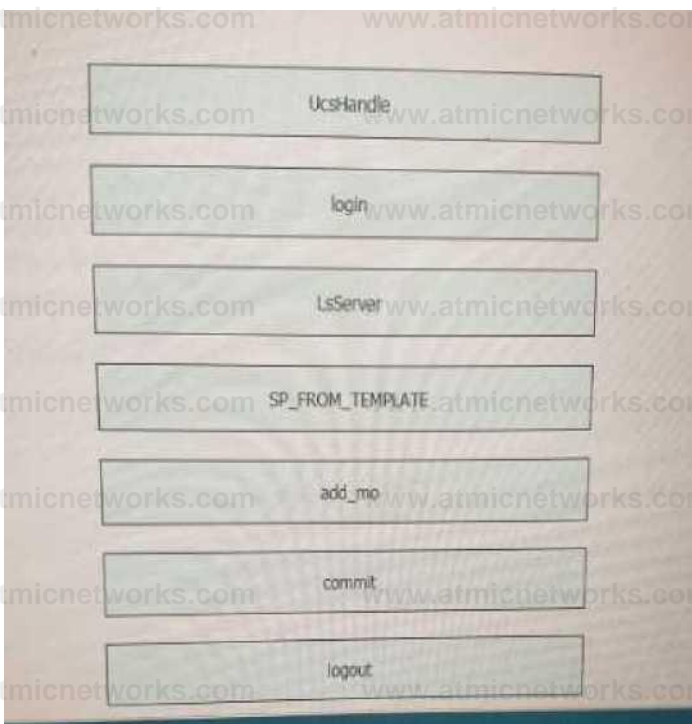


Refer to the exhibit above and click on the resource tabs in the top left corner to view resources to help with this question. Python code that uses the UCS Python SDK is instantiating a service profile named "devcore-server-01" from service profile template "device-template", then associating the service profile instance to blade 3 in chassis 7. Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the Python exhibit.



**Answer:**

**Explanation:**



**Question: 96**

DRAG DROP

# 1.5 Getting Started

## 1.5.1 Connecting Disconnecting

```
from ucsmsdk.ucshandle import UcsHandle
```

```
# Create a connection handle
```

```
handle = UcsHandle("192.168.1.1", "admin", "password")
```

```
# Login to the server handle.login()
```

```
# Logout from the server handle.logout()
```

Refer UcsHandle API Reference for detailed parameter sets to UcsHandle

This module contains the general information for ComputePooledSlot ManagedObject.

```
class ucsm.sdk.mometa.compute.ComputePooledSlot.ComputePooledSlot(parent mo or dn, chassis_  
id, slot_id, **kwargs) [source]
```

Bases: ucsm.sdk.ucsmo.ManagedObject

This is ComputePooledSlot class.

```
consts = < ucsm.sdk.mometa.compute.ComputePooledSlot.ComputePooledSlot- Consts  
instance >
```

```
mo_meta = <ucsm.sdk.ucscoremeta.MoMeta object > naming_props = set(['u'chassisld',  
u'slotld']) prop_map = {'dn': 'dn', 'status': 'status', 'sad': 'sad', 'slotld': 'slot_id', 'assigned':  
'assigned', 'owner': 'owner', 'prevAssignedToDn': 'prev_assigned_to_dn', 'childAction':  
'child_action' | 'poolableDn': 'poolable_dn', 'chassisld': 'chassis_id', 'm': 'rn',  
'assignedToDn': 'assigned_to_dn'}
```

```
prop_meta = {'dn': <ucsm.sdk.ucscoremeta.MoPropertyMeta object at  
oxi233ad250>, 'status': <ucsm.sdk.ucscoremeta.MoPropertyMeta object at oxi233adsdo>,  
'sad': <ucsm.sdk.ucscoremeta.MoPropertyMeta object at oxt233ad4do>, 'assigned_to_dn':  
<ucsm.sdk.ucscoremeta.MoPropertyMeta object at ox123392b!o>, 'assigned':  
<ucsm.sdk.ucscoremeta.MoPropertyMeta object at oxi23392bdo>, 'owner':  
<ucsm.sdk.ucscoremeta.MoPropertyMeta object at oxi233ad2do>, 'child_action':  
<ucsm.sdk.ucscoremeta.MoPropertyMeta object at oxi233adido>, 'poolable_dn':  
<ucsm.sdk.ucscoremeta.MoPropertyMeta object at oxi233ad350>, 'chassis_id':  
<ucsm.sdk.ucscoremeta.MoPropertyMeta object at oxi23392ado>, 'slot_id':  
<ucsm.sdk.ucscoremeta.MoPropertyMeta object at oxi233ad550>, 'prev_assigned_to_dn':  
<ucsm.sdk.ucscoremeta.MoPropertyMeta object at oxi233ad3do>, 'rn':  
<.ucsm.sdk.ucscoremeta.MoPropertyMeta object at oxi233ad45<>}
```

```
class ucsm.sdk.mometa.compute.ComputePool.ComputePool(porent_mo_or_dn, name,  
**kwargs) [source]
```

Bases: `ucsmsdk.ucsmo.ManagedObject`

This is `ComputePool` class.

```
consts = <ucsmsdk.mometa.compute.ComputePool.ComputePoolConsts instance>
mo_meta = <ucsmsdk.ucscoremeta~MoMeta object> naming_props = set([u'name'])
prop_map = {'dn': 'dn', 'status': 'status', 'policyLevel': 'policy_level', 'assignmentOrder':
'assignment_order', 'sad': 'sad', 'policyowner': 'policyowner', 'assigned': 'assigned', 'intld':
'int_id', 'childAction': 'child_action', 'name': 'name', 'descr': 'descr', 'rn': 'rn', 'size': 'size'}
prop_meta = {'dn': <ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230f8f90>,
'status': <ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230ed3d0>, 'sad':
<ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230ed2d0>, 'assigned':
<ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230f8d90>, 'int_id':
<ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230ed050>, 'assignmentorder':
<ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230f8e10>, 'childodion':
<ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230f8e90>, 'name':
<ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230ed0d0>, 'descr':
<ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230f8f10>, 'policyowner':
<ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230ed1d0>, 'policy_level':
<ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230edi50>, 'rn':
<ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230ed250>, 'size':
ucsmsdk.ucscoremeta.MoPropertyMeta object at 0xi230ed350>}
```

### 1.5.2 Base APIs

The SDK provides APIs to enable CRUD operations.

- Create an object - `add_mo`
- Retrieve an object - `query_dn, query_classid, query_dns, query_classids`
- Update an object - `set_mo`
- Delete an object - `delete_mo`

The above APIs can be bunched together in a transaction (All or None). `commit_mo` commits the changes made using the above APIs.

All these methods are invoked on a `UcsHandle` instance. We refer it by `handle` in all the examples here-after. Refer to the *Connecting Disconnecting* to create a new `handle`.

### 1.5.3 Creating Objects

Creating managed objects is done via `add_mo` API.

Example:

The below example creates a new Service Profile (`LsServer`) Object under the parent `org-root`

```
from ucsmsdk.mometa.Ls.LsServer import LsServer

sp = LsServer(parent_mo_or_dn="org-root", name="sp_demo")
handle.add_mo(sp)
```

note: the changes will only be sent to server when `handle.commit()` is called.

Add Mo API reference

*class ucsm sdk.mometa. Is.LsRequirement. LsRequirement(parent mo\_or dn, "kwards)*  
[source)

Bases: ucsm sdk.ucsmo.NanagedObject

This is LsRequirement class.

```
const = <ucsm sdk.mometa.ls.LsRequirement.LsRequirementConsts instance> mo_meta
= <ucsm sdk.ucscoremeta.MoMeta object> narning_props = set([])
prop_map = {'dn': 'dn', 'status': 'status', 'operState': 'oper_state', 'qualifier': 'qualifier',
'sad': 'sad', 'pnDn': 'pn_dn', 'restrictMigration': 'restrict_migration', 'issues': 'issues',
'operName': 'oper_name', 'pnPoolDn': 'pn_pool_dn', 'name': 'name', 'computeEpDn':
'compute_ep_dn', 'rn': 'rn', 'childAction': 'child_action', 'as- assignedToDn':
'assigned_to_dn'}
prop_meta = {'dn': <ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi22cf- bfio>,
'status': <ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi2e892790>, 'qualifier':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxt2e892350>, 'sad':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi2e8g26go>, pn_pool_dn':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi2e8g2gdo>, 'assigned_to_dn':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi22cjb- dgo>, 'oper_state':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi2e8g2ago>, 'issues':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi2e8g2450>, 'child_action':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi22cfbggo>, 'name':
cucsm sdk.ucscoremeta.MoPropertyMeta object at Oxt2e8g2ido>, 'oper_name':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi2e892aio>, 'm':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi2e8g2090>, 'restrict_migration':
cucsm sdk.ucscoremeta.MoPropertyMeta object at oxi2e892iio>, 'pndn':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi2e8g26do>, 'compute_ep_dn':
<ucsm sdk.ucscoremeta.MoPropertyMeta object at oxi22cfi)350>}
```

```

""" Create UCS Server Pool and associate to template """
from ucsm.sdk.ucshandle import UcsHandle
from ucsm.sdk.mometa.compute.ComputePool import ComputePool
from ucsm.sdk.mometa.compute.ComputePooledSlot import ComputePooledSlot
from ucsm.sdk.mometa.ls.LsRequirement import LsRequirement

HANDLE = <item 1>{
    "sandbox-ucsml.cisco.com",
    "admin",
    "password"
}
HANDLE.login()

SERVER_POOL = <item 2>{
    parent_mo_or_dn="org-root/org-devnet",
    name="devcore_pool"
}
HANDLE.<item 3>(SERVER_POOL, modify_present=True)
for blade in HANDLE.query_classid(
    "computeBlade",
    filter_str="(chassis_id, '7')"):
    SERVER = <item 4>{
        parent_mo_or_dn=SERVER_POOL,
        chassis_id=blade.chassis_id,
        slot_id=blade.slot_id
    }
    HANDLE.add_mo(SERVER, modify_present=True)
HANDLE.commit()

SP_TEMPLATE = <item 5>{
    parent_mo_or_dn="org-root/org-devnet/ls-devcore_template",
    name="devcore_pool"
}
HANDLE.add_mo(SP_TEMPLATE, modify_present=True)
HANDLE.<item 6>()

HANDLE.<item 7>()

```

Refer to the exhibit above and click on the resource tabs in the top left corner to view resources to help with this question. Python code using the UCS Python SDK is creating a server pool named "devcore\_pool" and populating the pool with all servers from chassis 7 and then the server pool is associated to existing service profile template "devcore\_template". Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the python exhibit.

Refer to the above and click on the resource labs in the top left corner to view resources to help with this question.

Python code using the UCS Python SDK is creating a server pool named "devcore\_pool" and populating the pool with all servers from chassis 7, and then the server pool is associated to existing

Service Profile template "devcore\_template" Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the Python exhibit.

add_mo	<item 1>
commit	<item 2>
logout	<item 3>
UcsHandle	<item 4>
ComputePooledSlot	<item 5>
ComputePool	<item 6>
LsRequirement	<item 7>

**Answer:**

**Explanation:**

UcsHandle

ComputePool

ComputePooledSlot

add\_mo

LSRequirement

commit

logout

**Question: 97**

DRAG DROP

Refer to the exhibit.

# Sselect Qi response

# HTTP

The Sselect query option allows clients to request a specific set of properties for each entity or complex type. The value of the Sselect option is a comma-separated list of property names.

The Sselect option is not intended to be a query filter. For query filters, see the Sthter operator.

The ability to select which properties are returned in the HTTP response can help to minimize network traffic between the client and the intersight Web service and improve the performance of the client. This can be especially useful for mobile applications.

**Example:** Query compute.RackInit managed objects, where each response managed object is represented with three properties: Vendor, Model, and Serial (instead of having the full JSON output for compute.RackUnifi). Note the 'Mod' s always included in the response regardless of what is specified in the Sselect query parameter.

```
CK? Zap". /V t/cotspu to/nacktlhlt? Ssoi oct-Vnndor, Hoda 1,Serial
```

HTTP Response

```
'Result*': [
```

```
  { "Mod": "HX2WC-HWX", "Hold": "9S69b<lb9a9<c0<0001J7f6<l*", "Serial": "HWlliaOSW", "Vendor": "Cisco System Inc"
```

```
    { "Mod": "VCSC-CMtMtMW", "Hold": "3>6Hf3be>4cO<OOl>>#<H*", "Serial": "P?117O4KH", "Vendor": "Cisco System Inc" b
```

```
    { "Mod": "KXIWC-KSSX",
```

```
      "Serial": "5J6S6faba94c040001J7fcIJ *",
```

```
GET /api/v1/compute/RackUnits?$select=Vendor,Model,Serial
```

HTTP Response:

```
{
  "Results": [
    {
      "Model": "HX220C-M5SX",
      "Moid": "59696db9a94c04000137f683",
      "Serial": "W2P21120SP9",
      "Vendor": "Cisco Systems Inc"
    },
    {
      "Model": "UCSC-C240-M5SN",
      "Moid": "59696f3ba94c04000137f8d4",
      "Serial": "W2P211704KM",
      "Vendor": "Cisco Systems Inc"
    },
    {
      "Model": "HX220C-M5SX",
      "Moid": "59696faba94c04000137fc13",
      "Serial": "W2P21120SP1",
      "Vendor": "Cisco Systems Inc"
    }
  ]
}
```

## Logical Operator

### "Equal" Operator

The **eq** operator returns true if the left operand is equal to the right operand, otherwise it returns false. The **eq** operator accepts numeric, dates and string values.

**Example:** Query RackUnit resources where Serial equals to "WZP211704KM"

```
GET /api/v1/compute/RackUnits?$filter=Name eq 'WZP211704KM'
```

**Example:** Query RackUnit resources where the value of the 'Model' property is equal to 'UCSC-C240-M5SN'

```
GET /api/v1/compute/RackUnits?$filter=Model eq 'UCSC-C240-M5SN'
```

**Example:** Query RackUnit resources where the number of CPU cores is 24. Numeric values are specified without quotes.

```
GET /api/v1/compute/RackUnits?$filter=NumCpuCores eq 24
```

**Example:** Query Audit log records where 'CreationTime' is '2018-06-20T05:31:38.862Z'.

```
GET /api/v1/aaa/AuditRecords?$filter=CreateTime eq 2018-06-20T05:31:38.862Z
```

### "Not Equal" Operator

The **ne** operator returns true if the left operand is not equal to the right operand, otherwise it returns false. The **ne** operator accepts numeric, dates and string values.

**Example:** Query RackUnit resources where Serial is not equal to "WZP211704KM"

```
GET /api/v1/compute/RackUnits?$filter=Name ne 'WZP211704KM'
```

**Example:** Query RackUnit resources where the value of the 'Model' property is not equal to 'UCSC-C240-M5SN'

```
GET /api/v1/compute/RackUnits?$filter=Model ne 'UCSC-C240-M5SN'
```

```
* Iwerijht REST API Operations rackunit iron body • (
```

```
  'request method' i 'rites i>*', 'resource path': (
```

```
    'https://www.interalight.com/api/v1/compute/rackOr.it<<?<<eloet << item 2>>'
```

```
  firmware json body • (
```

```
    'request method' i 'm t r air, J>',
```

```
    'resource path' i 'https://www.interalight.com/api/v1/Unaware/*;fr !*', 'request body': (
```

```
      'DirectDownload' i {,
```

```
        'NetworkShare' i {
```

```
          'MapType' i 'ww',
```

```
          'Server' i 'nv_upgrade_full',
```

```
          'BtpServer' i (
```

```
            'Locationlink' i 'http://10.10.10.10/uc8-c?4!lm4 huu
```

```
4.0.2h.json'
```

```
h
```

```
  'UpgradeType' i 't' <itas S>, 'Server': ''
```

```
RESPONSE * requests.request(
```

```
  method='rackunit json body!' request method'].
```

```
  url=BURL>rackunit_json_body!'resource_path'1, auth=AVTH
```

```
firmware json_body['request body'1'Server') * (
```

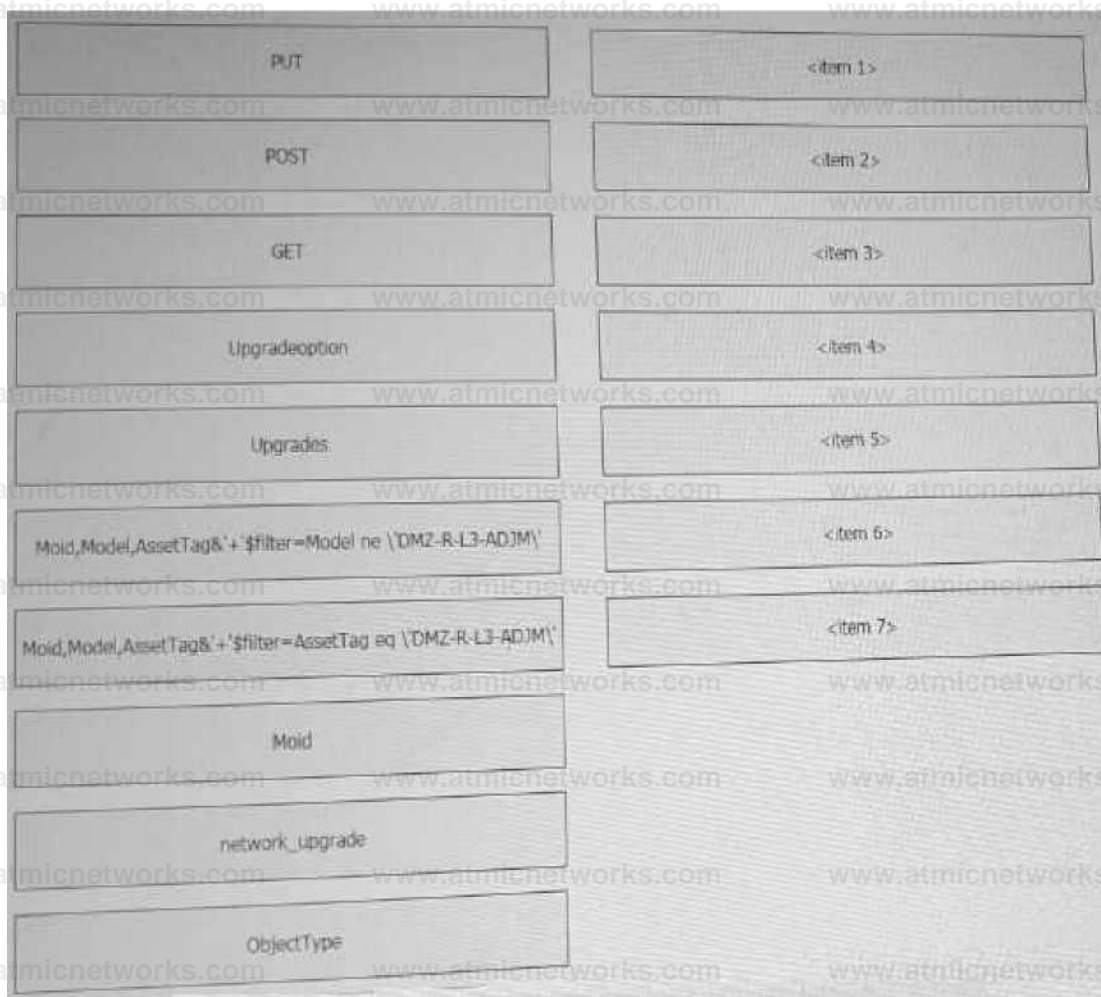
```
  json.loads(RESPONSE.text)! 'Remits' [(0) | it<n ^ ' |
```

```
RESPONSE * requests.request!
```

```
  method=firmware_json_body['request method'] |, url=BURL>firmware.Json body!'resource path'], data-
```

```
  json.loads(RESPONSE.text)! 'Remits' [(0) | it<n ^ ' |
```

Refer to the exhibit above and click on the resource tabs in the top left corner to view resources to help with this question. The script uses the Cisco Intersight REST API. Drag and drop the code snippets from the left onto the item numbers on the right to match the missing sections in the Python script to update the firmware on specific Cisco Intersight USC rack server.DMZ\_R-L3-ADJM. Not all code snippets are used.



### Answer:

Explanation:

1. GET
2. eq \'DMZ ...
3. POST
4. Upgrades
5. Upgradeoption
6. network\_upgrade
7. Moid

[https://github.com/CiscoDevNet/intersight-rest-api/blob/main/intersight\\_firmware.py](https://github.com/CiscoDevNet/intersight-rest-api/blob/main/intersight_firmware.py)

## Question: 98

```
module: ietf-routing
  +--ro routing-state
    +--ro routing-instance* [name]
      +--ro name string
      +--ro type? identityref
      +--ro router-id? yang:dotted-quad
      +--ro interfaces
        +--ro interface* if:interface-state-ref
      +--ro routing-protocols
        +--ro routing-protocol* [type name]
          +--ro type identityref
          +--ro name string
      +--ro ribs
        +--ro rib* [name]
          +--ro name string
          +--ro address-family identityref
          +--ro default-rib? boolean (multiple-ribs)?
          +--ro routes
            +--ro route* [destination-prefix]
              +--ro route-preference? route-preference
              +--ro destination-prefix string
              +--ro metric? uint32
              +--ro next-hop
                +--ro (next-hop-options)
                  +--:(simple-next-hop)
                    +--ro outgoing-interface? string
                    +--ro next-hop-address? string
                  +--:(special-next-hop)
                    +--ro special-next-hop? enumeration
              +--ro source-protocol identityref
              +--ro active? empty
              +--ro last-updated? yang:date-and-time
              +--ro update-source? string
  +--rw routing
    +--rw routing-instance* [name]
      +--rw name string
      +--rw type? identityref
      +--rw enabled? boolean
      +--rw router-id? yang:dotted-quad (router-id)?
      +--rw description? string
      +--rw interfaces
        +--rw interface* if:interface-ref
      +--rw routing-protocols
        +--rw routing-protocol* [type name]
          +--rw type identityref
          +--rw name string
          +--rw description? string
          +--rw static-routes
        +--rw ribs
          +--rw rib* [name]
            +--rw name string
            +--rw address-family? identityref
            +--rw description? string
```

```
{
  "errors": {
    "error": [
      {
        "error-message": "object is not writable: /rt:routing-
state/rt:routing-instance",
        "error-path": "/ietf-routing:routing-state/routing-instance=default",
        "error-tag": "malformed-message",
        "error-type": "application"
      }
    ]
  }
}

https://ion-xe-mgmt-latest.cisco.com:9443/restconf/data/ietf-routing:routing-
state/routing-instance=default
```

Refer to the exhibit above and click on the IETF Routing tab in the top left corner to help with this question. A developer is trying to update the routing instance by adding a new route to the routes list using the URL in the exhibit. What action must be taken to fix the error being received?

- A. Fix the body being sent to update the routes list.
- B. Update the authorization credentials.
- C. Change the url to "/ietf-routing:routing/routing-instance=default".
- D. Change the URL to "/ietf-routing:routing-instance/default".
- E. Change the HTTP Method being used to make the change

**Answer: C**

Explanation:

**Question: 99**

DRAG DROP

Refer to the exhibit.

```

module: ietf-ip
augment /if:interfaces/if:interface:
  +--rw ipv4!
    +--rw enabled?          boolean
    +--rw forwarding?      boolean
    +--rw mtu?              uint16
    +--rw address* [ip]
      +--rw ip              inet:ipv4-address-no-zone
      +--rw (subnet)
        +--:(prefix-length)
          +--rw prefix-length?  uint8
        +--:(netmask)
          +--rw netmask?       yang:dotted-quad {ipv4-non-
contiguous-netmasks}?
      +--rw neighbor* [ip]
        +--rw ip              inet:ipv4-address-no-zone
        +--rw link-layer-address  yang:phys-address
  +--rw ipv6!
    +--rw enabled?          boolean
    +--rw forwarding?      boolean
    +--rw mtu?              uint32
    +--rw address* [ip]
      +--rw ip              inet:ipv6-address-no-zone
      +--rw prefix-length  uint8
      +--rw neighbor* [ip]
        +--rw ip              inet:ipv6-address-no-zone
        +--rw link-layer-address  yang:phys-address
    +--rw dup-addr-detect-transmits?  uint32
    +--rw autoconf
      +--rw create-global-addresses?  boolean
      +--rw create-temporary-addresses?  boolean {ipv6-
privacy-autoconf}?
    +--rw temporary-valid-lifetime?  uint32 {ipv6-privacy-
autoconf}?

```

```

module: ietf-interfaces
  +--rw interfaces
    |   +--rw interface* [name]
    |   |   +--rw name                string
    |   |   +--rw description?        string
    |   |   +--rw type                identityref
    |   |   +--rw enabled?            boolean
    |   |   +--rw link-up-down-trap-enable? enumeration {if-mib}?
    |   +--ro interfaces-state
    |   |   +--ro interface* [name]
    |   |   |   +--ro name            string
    |   |   |   +--ro type            identityref
    |   |   |   +--ro admin-status    enumeration {if-mib}?
    |   |   |   +--ro oper-status     enumeration
    |   |   |   +--ro last-change?    yang:date-and-time
    |   |   |   +--ro if-index        int32 {if-mib}?
    |   |   |   +--ro phys-address?   yang:phys-address
    |   |   |   +--ro higher-layer-if* interface-state-ref
    |   |   |   +--ro lower-layer-if* interface-state-ref
    |   |   |   +--ro speed?          yang:gauge64
    |   |   |   +--ro statistics
    |   |   |   |   +--ro discontinuity-time yang:date-and-time
    |   |   |   |   +--ro in-octets?        yang:counter64
    |   |   |   |   +--ro in-unicast-pkts?  yang:counter64
    |   |   |   |   +--ro in-broadcast-pkts? yang:counter64
    |   |   |   |   +--ro in-multicast-pkts? yang:counter64
    |   |   |   |   +--ro in-discards?      yang:counter32
    |   |   |   |   +--ro in-errors?        yang:counter32
    |   |   |   |   +--ro in-unknown-protos? yang:counter32
    |   |   |   |   +--ro out-octets?       yang:counter64
    |   |   |   |   +--ro out-unicast-pkts? yang:counter64
    |   |   |   |   +--ro out-broadcast-pkts? yang:counter64
    |   |   |   |   +--ro out-multicast-pkts? yang:counter64
    |   |   |   |   +--ro out-discards?     yang:counter32
    |   |   |   |   +--ro out-errors?      yang:counter32

```

```

curl --location --request PUT 'https://ios-xe-
mgmt.cisco.com:9443/restconf/data/<item 1>/<item 2>=GigabitEthernet2'\
--header 'Authorization: <item 3>' \
--header 'Accept: <item 4>' \
--header 'Content-Type: application/yang-data+json' \
--data-raw '{
  "ietf-interfaces:interface": {
    "<item 5>": "GigabitEthernet2",
    "description": "Configured by RESTCONF",
    "<item 6>": "iana-if-type:ethernetCsmacd",
    "enabled": true,
    "<item 7>": {
      "address": [
        {
          "<item 8>": "10.255.255.1",
          "<item 9>": "255.255.255.0"
        }
      ]
    }
  }
}'

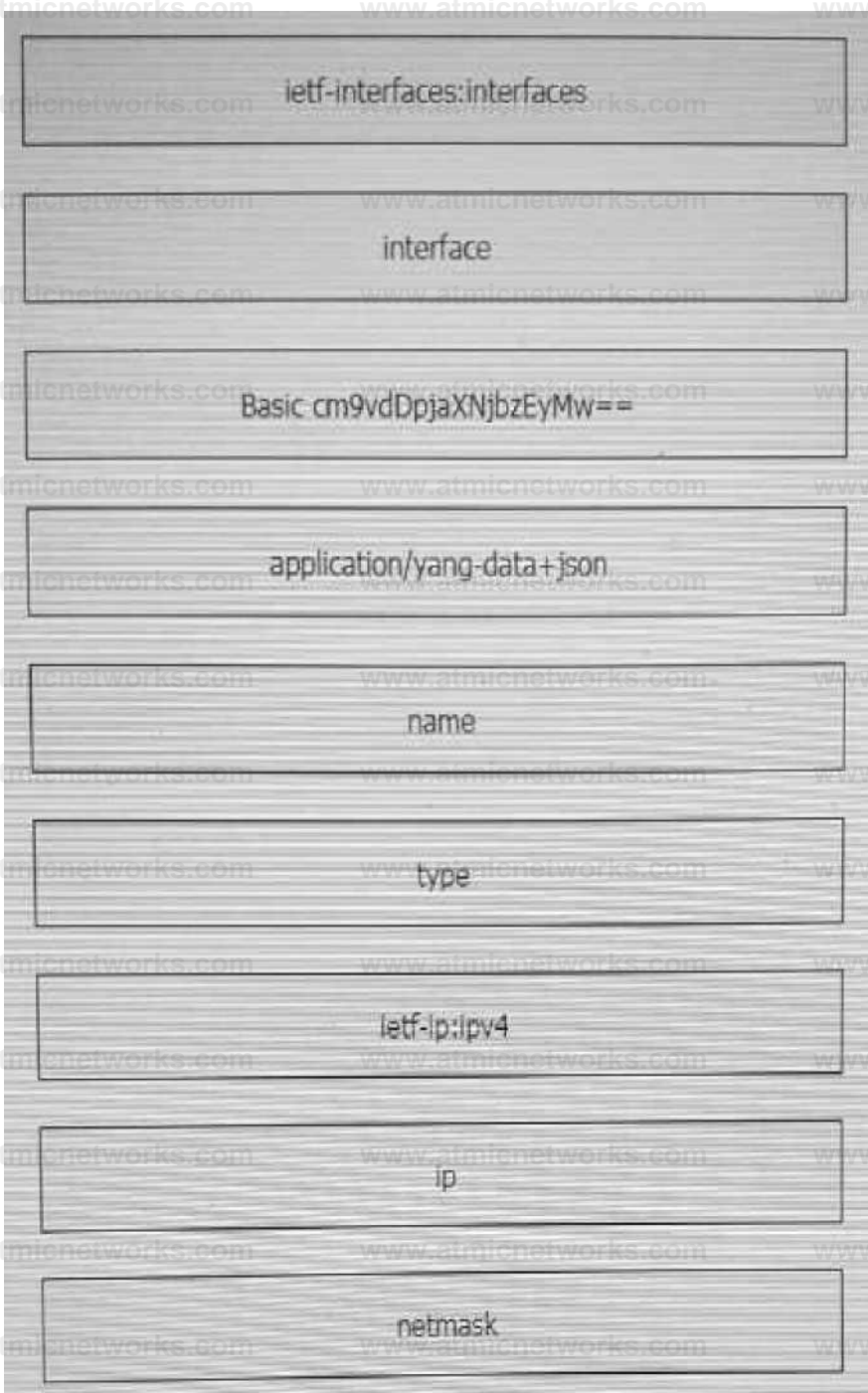
```

Refer to the exhibit above and click on the resource tabs in the top left corner to view resources to help with this question. Drag and drop the correct code snippets from the left onto the item numbers on the right that match the missing sections in the exhibit to complete the cURL script that will use RESTCONF to update an interface on a CISCO IOS XE device.

ietf-ip:ipv4	<item 1>
ietf-interfaces:interfaces	<item 2>
interface	<item 3>
name	<item 4>
type	<item 5>
ip	<item 6>
Basic authentication	<item 7>
netmask	<item 8>
application/yang-data+json	<item 9>

**Answer:**

**Explanation:**



**Question: 100**

DRAG DROP

Refer to the exhibit.

```
HOST* 'xehostl.exam.local*
PORT << '443*
USER ■ * admin*
PASS - 'samplepassword*
INTERFACE - 'GigabitEthernet1

urlbase * "https://{h}:{p}/restconf".format(h=HOST,p=PORT)
url ■ urlbase + "/data/ietf-
interfaces:interfaces/interface-{i}".format(i=INTERFACE)
with open('./interface.json') as f:
    data ■ json.load(f)

response ■ requests.put(url,
                        auth*(USER, PASS) headers=headers, verify=False, json=data)

print(response.text)
```

## 2. IP Data Model

This document defines the YANG module "ietf-ip", which augments the "interface" lists defined in the "ietf-interfaces" module [RFC8343] with IP-specific data nodes.

The data model has the following structure for IP data nodes per interface, excluding the deprecated data nodes:

```

module: ietf-ip
  augment /if:interfaces/if:interface:
    +--rw ipv4!
      +--rw enabled?          boolean
      +--rw forwarding?      boolean
      +--rw mtu?              uint16
      +--rw address* [ip]
        +--rw ip              inet:ipv4-address-no-zone
        +--rw (subnet)
          +--:(prefix-length)
          |   +--rw prefix-length?  uint8
          +--:(netmask)
          |   +--rw netmask?        yang:dotted-quad
          |   {ipv4-non-contiguous-netmasks}?
          +--ro origin?         ip-address-origin
        +--rw neighbor* [ip]
          +--rw ip              inet:ipv4-address-no-zone
          +--rw link-layer-address yang:phys-address
          +--ro origin?         neighbor-origin
    +--rw ipv6!
      +--rw enabled?          boolean
      +--rw forwarding?      boolean
      +--rw mtu?              uint32
      +--rw address* [ip]
        +--rw ip              inet:ipv6-address-no-zone
        +--rw prefix-length   uint8
        +--ro origin?         ip-address-origin
        +--ro status?         enumeration
      +--rw neighbor* [ip]
        +--rw ip              inet:ipv6-address-no-zone
        +--rw link-layer-address yang:phys-address
        +--ro origin?         neighbor-origin
        +--ro is-router?      empty
        +--ro state?          enumeration
      +--rw dup-addr-detect-transmits?  uint32
  
```

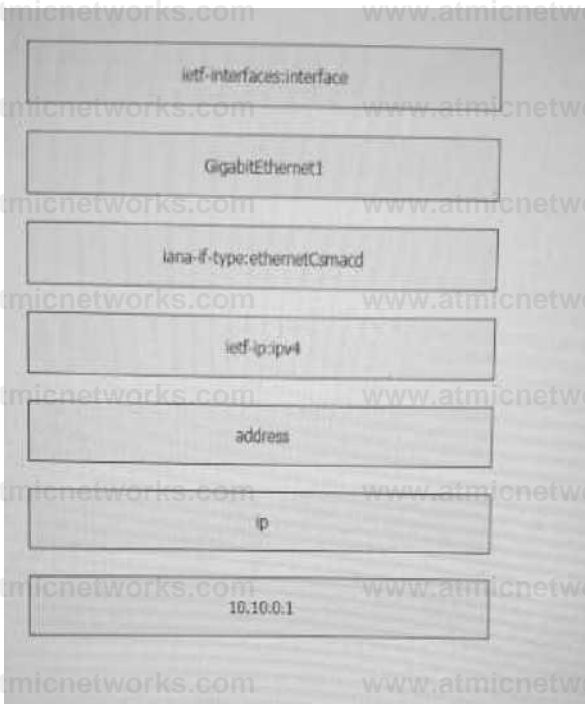
```
{
  "<item 1>": {
    "name": "<item 2>",
    "type": "<item 3>",
    "<item 4>": {
      "<item 5>": {
        "<item 6>": "<item 7>",
        "netmask": "255.255.255.0"
      }
    }
  }
}
```

Refer to the exhibit above and click on the resource tabs in the top left corner to view an IETANG MODEL and a Python file that changes the configuration via RESTCONF. Drag and drop the code snippets from the left onto the item numbers on the right that match the missing sections in the exhibit to complete the JSON file that changes configuration of interface GigabitEthernet1 to have an IPv4 configuration of 10.10.0.1/24. Not all options are used.

iana-if-type:ethernetCsmacd	<item 1>
ietf-interfaces:interface	<item 2>
ietf-interfaces	<item 3>
ietf-ip:ipv4	<item 4>
interfaces	<item 5>
GigabitEthernet1	<item 6>
ip	<item 7>
address	
ip-address	
10.10.0.1	

**Answer:**

Explanation:



**Question: 101**

Refer to the exhibit.

### "Greater Than" Operator

The **gt** operator returns true if the left operand is greater than the right operand, otherwise it returns false. The **gt** operator accepts numeric, dates and string values

**Example:** Query RackUnit resources where AvailableMemory is greater than 98304MB:

```
GET /api/v1/compute/RackUnits?filter=AvailableMemory gt 98304
```

**Example:** Query Audit log records where 'CreationTime' is greater than '2018-06-20T05:31:38.862Z'. The date must be specified in UTC time without quotes

```
GET /api/v1/aaa/AuditRecords?filter=CreationTime gt 2018-06-20T05:31:38.862Z
```

### "Less Than" Operator

The **lt** operator returns true if the left operand is less than the right operand, otherwise it returns false. The **lt** operator accepts numeric, dates and string values

**Example:** Query RackUnit resources where AvailableMemory is less than 98304MB:

```
GET /api/v1/compute/RackUnits?filter=AvailableMemory lt 98304
```

### "Greater Than Or Equal" Operator

The **ge** operator returns true if the left operand is greater than or equal to the right operand, otherwise it returns false. The **ge** operator accepts numeric, dates and string values

**Example:** Query RackUnit resources where AvailableMemory is greater than or equal to 98304MB:

```
GET /api/v1/compute/RackUnits?filter=AvailableMemory ge 98304
```

### "Less Than Or Equal" Operator

The **le** operator returns true if the left operand is less than or equal to the right operand, otherwise it returns false. The **le** operator accepts numeric, dates and string values

**Example:** Query RackUnit resources where AvailableMemory is less than or equal to 98304MB:

```
GET /api/v1/compute/RackUnits?filter=AvailableMemory le 98304
```

### "Greater Than" Operator

The `>` operator returns true if the left operand is greater than the right operand. Example: Query RackUnit resources where Available Memory is greater than 90304MB.

```
GET /api/v1/compute/RackUnits?$filter=AvailableMemory gt 90304
```

Example Query Audit log records where 'CreationTime' is greater than '2018-06-20^5:31:38.852Z'. The date must be specified in UTC format, without quotes.

```
GET /api/v1/auditlogrecords?$filter=CreationTime gt 2018-06-20^5:31:38.852Z
```

### "Less Than" Operator

The `<` operator returns true if the left operand is less than the right operand, otherwise it returns false. The `<` operator accepts numeric, dates and string values. Example: Query RackUnit resources where AvailableMemory is less than 98304MB:

### "Greater Than Or Equal" Operator

The `>=` operator returns true if the left operand is greater than or equal to the right operand, otherwise it returns false. The `>=` operator accepts numeric, dates and string values.

Example. Query RackUnit resources where AvailableMemory is greater than or equal to 98304MB:

```
GET /api/v1/compute/RackUnits?$filter=AvailableMemory ge 98304
```

### "Less Than Or Equal" Operator

The `<=` operator returns true if the left operand is less than or equal to the right operand, otherwise it returns false. The `<=` operator accepts numeric, dates and string values.

Example Query RackUnit resources where AvailableMemory is less than or equal to 98304MB:

```
GET /api/v1/compute/RackUnits?$filter=AvailableMemory le 98304
```

Click on the GET Resource button above to view resources that will help with this question. An engineer is managing a DC with 6000 Cisco UCS servers installed and running. The engineer has been asked to identify all resources where the model is in the UCSB family and the available memory is less than or equal to 5 GB. Which REST API call accomplishes this task?

- A. GET/api/v1/compute/RackUnits?\$select=Vendor,Model,Serial&\$filter=not(Model eq 'UCSC') and AvailableMemory le 5000
- B. GET/api/v1/compute/RackUnits?\$select=Vendor,Model,Serial&\$filter=Model eq 'UCSB' and AvailableMemory lt 5000
- C. GET/api/v1/compute/RackUnits?\$select=Vendor,Model,Serial&\$filter=contains(Model, 'UCSB') and AvailableMemory lt 5000
- D. GET/api/v1/compute/RackUnits?\$select=Vendor,Model,Serial&\$filter=contains(Model,

UCSB') and AvailableMemory le 5000

Answer: D

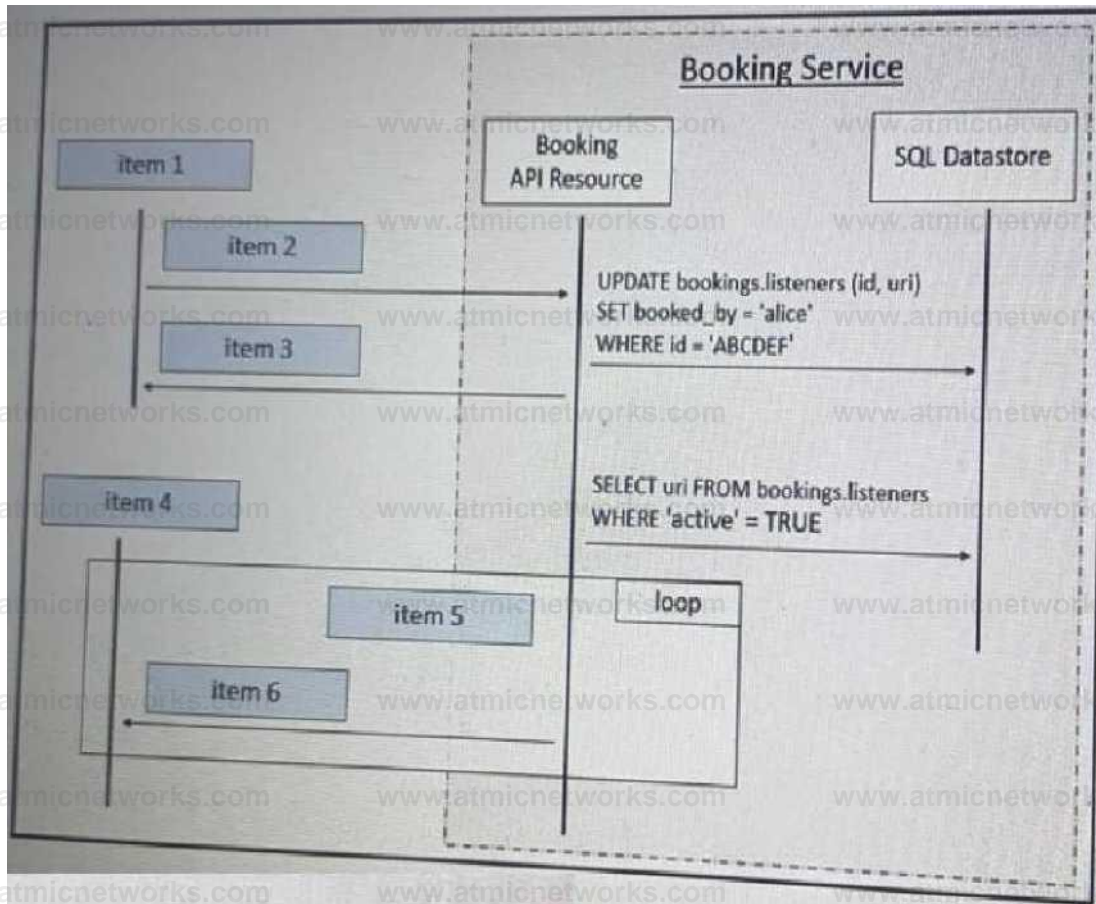
Explanation:

<https://intersight.com/apidocs/introduction/query/#filter-query-option-filtering-the-resources>

### Question: 102

DRAG DROP

Refer to the exhibit.

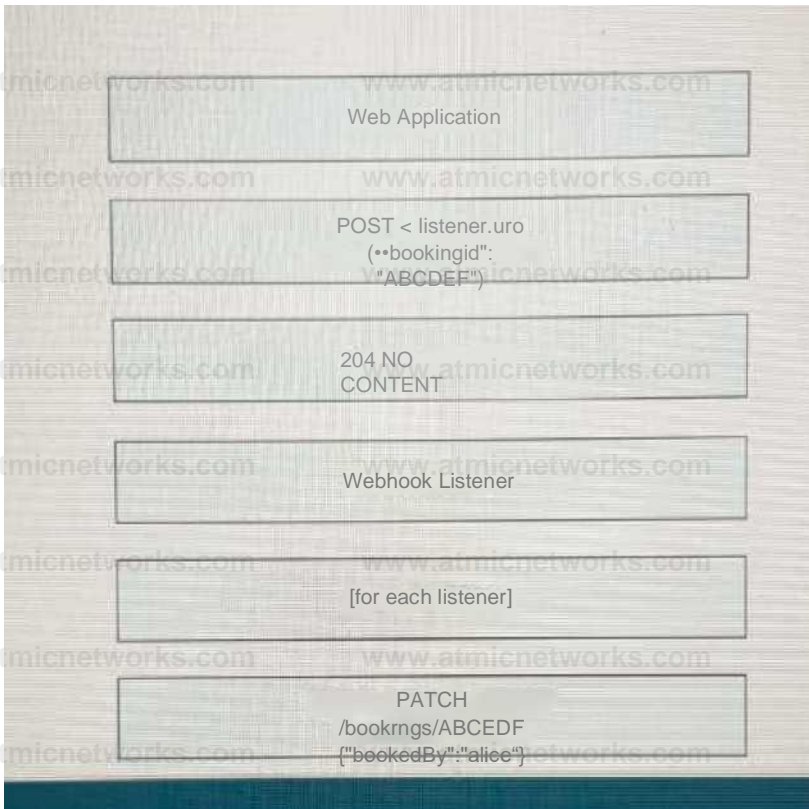


Refer to the exhibit above and click on the tab in the top left corner to view a diagram that describes the typical flow of requests involved when a webhook is created for a booking service. Drag and drop the requests from the left onto the item numbers on the right that match the missing sections in the sequence diagram to design the complete flow of requests involved as a booking is updated from a web application.



**Answer:**

**Explanation:**



## Question: 103

DRAG DROP

Refer to the exhibit.



TTP REQUEST

```
PUT /networks/{networkid}/ssids/{number}
```

### PARAMETERS

**name**

The name of the SSID

**enabled**

Whether or not the SSID is enabled

**authMode**

The association control method for the SSID ('open', 'psk', 'open-with-radius', '8021 x-merak '8021 x-radius')

**enterpriseAdminAccess**

Whether or not an SSID is accessible by 'enterprise\*' administrators ('access disabled' or 'acc enabled')

**encryptionMode**

The psk encryption mode for the SSID ( wep\* or wpa). This param is only valid if the authMo psk

**psk**

The passkey for the SSID. This param is only valid if the authMode is 'psk'

**wpaEncryptionMode**

The types of WPA encryption. ('WPA1 and WPA2' or 'WPA2 only')

## splashPage

The type of splash page for the SSID ('None', 'Click-through splash page', 'Billing', 'Password-protected with Meraki RADIUS', 'Password-protected with custom RADIUS', 'Password-protected with Active Directory', 'Password-protected with LDAP', 'SMS authentication', 'Systems Manager Sentry', 'Facebook Wi-Fi', 'Google OAuth' or 'Sponsored guest'). This attribute is not supported for template children.

## walledGardenEnabled

Allow access to a configurable list of IP ranges, which users may access prior to sign-on.

## walledGardenRanges

Specify your walled garden by entering space-separated addresses, ranges using CIDR notation, domain names, and domain wildcards (e.g. 192.168.1.1/24 192.168.37.10/32 www.yahoo.com \*.google.com). Meraki's splash page is automatically included in your walled garden.

## radiusOverride

If true, the RADIUS response can override VLAN tag. This is not valid when ipAssignmentMode is 'NAT mode'.

## minBitrate

The minimum bitrate in Mbps. ('1', '2', '5.5', '6', '9', '11', '12', '18', '24', '36', '48' or '54')

## bandSelection

The client-serving radio frequencies: ('Dual band operation', '5 GHz band only' or 'Dual band operation with Band Steering')

```
def set_ssid_settings(network_id, wireless_name, wireless_password):
    """Configure an SSID to use the External Captive Portal."""
    response = requests.put(
        base_url + "/<item 1>/<item 2> + "/<item 3>/0",
        headers={
            "X-Cisco-Meraki-API-Key": MERAKI_API_KEY,
            "Content-Type": "application/json"
        },
        json={
            "number": 0,
            "name": wireless_name,
            "enabled": True,
            "splashPage": "<item 4>",
            "ssidAdminAccessible": False,
            "authMode": "<item 5>",
            "pwk": wireless_password,
            "encryptionMode": "wpa",
            "wpaEncryptionMode": "WPA2 only",
            "ipAssignmentMode": "Bridge mode",
            "useVlanTagging": False,
            "walledGardenEnabled": True,
            "walledGardenRanges": "<item 6>",
            "minBitrate": 11,
            "bandSelection": "<item 7>",
            "perClientBandwidthLimitUp": 0,
            "perClientBandwidthLimitDown": 0
        }
    )
    response.raise_for_status()
```

Click on the Meraki Resources tab in the left corner to view Meraki documentation to help with this question. Drag and drop the parts of the python code from the left onto the item numbers on the right that match the missing sections in the exhibit to enable an SSID. Not all code parts are used.

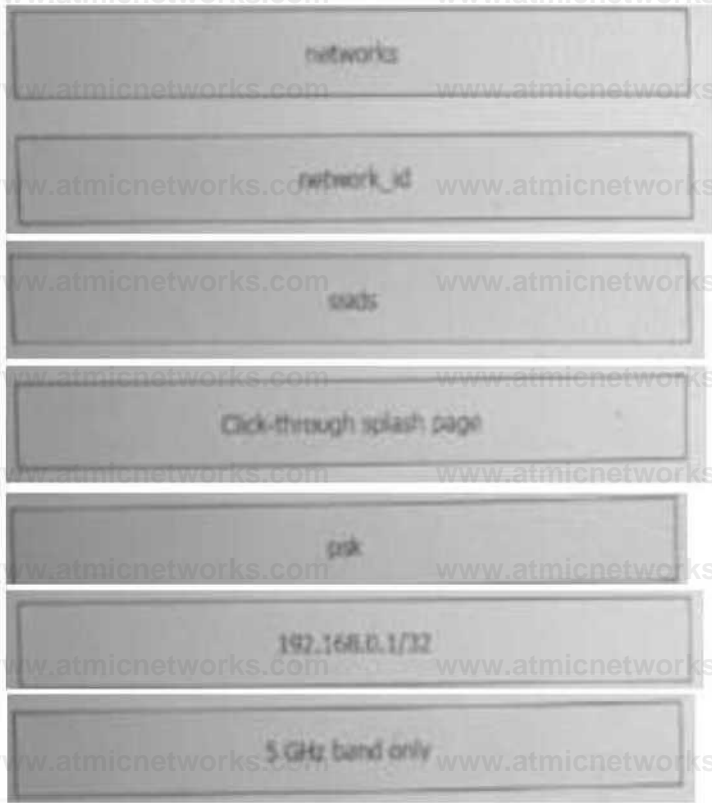
Refer to the exhibit above and click on the Meraki Resources tab in the top left corner to view Meraki documentation to help with this question. Drag and drop the parts of the Python code from the left onto the item numbers on the right that match the missing sections in the exhibit to enable an SSID. Not all code parts are used.

ssid	<item 1>
org_id	<item 2>
networks	<item 3>
network_id	<item 4>
192.168.0.1/32	<item 5>
Click-through splash page	<item 6>
5 GHz band only	<item 7>
psk	
organizations	

Next →

**Answer:**

**Explanation:**



**Question: 104**

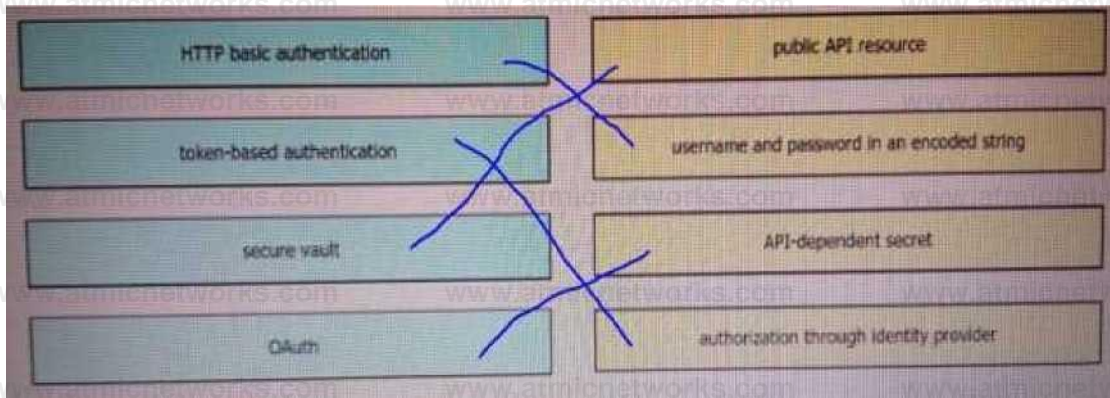
DRAG DROP

Drag and drop the REST API authentication method from the left to the description on the right

HTTP basic authentication	public API resource
token-based authentication	username and password in an encoded string
secure vault	API-dependent secret
OAuth	authorization through identity provider

**Answer:**

Explanation:



**Question: 105**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing the snippet to complete this Ansible Playbook. Not all options are used.

```

---
- hosts: ios
  gather_facts: no
  vars:
    dns_servers:
      - ip name-server [ ]
      - ip name-server 208.67.222.222

  tasks:
    - name: set name-server commands
      with_items: "[ ]"
      ios_config:
        lines: "[ ]"
        register: set_dns
  
```

**Answer:**

Explanation:

208.67.222.222

dns\_servers

## Question: 106

Refer to the exhibit.

```
import json, requests
USER = 'admin'
PASS = 'cisco'

url = "https://ios-xe-mgmt.cisco.com:9443/restconf/data/Cisco-IOS-XE-native:native \
      "/interface/GigabitEthernet=2/ip/address/primary"

payload = {"primary": [{"address": "10.10.10.1", "mask": "255.255.255.0"}]}
data = json.dumps(payload)
headers = {
    'Accept': "application/yang-data+json",
    'Content-Type': "application/yang-data+json",
}

response = requests.request("PATCH", url, auth=(USER, PASS), data=data, headers=headers,
                             verify=False)

print(response.text)
```

Which RESTCONF verb changes the GigabitEthernet2 interface from 192.168.100.1/24 to 10.10.10.1/24

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

**Answer: A**

Explanation:

## Question: 107

The Meraki API URL <https://api.meraki.com/api/v0/networks/123456789/ssids/2> has been stored in the environment variable `meraki_url` and the API key has been stored in `meraki_api_key`. Which snippet presents the API call to configure, secure and enable an SSID using the Meraki API?

A)

```
curl -X PUT --url $meraki_url \  
-H 'X-Cisco-Meraki-API-Key: '$meraki_api_key \  
-H 'Accept: application/json' \  
-H 'Content-type: application/json' \  
--data-raw '{  
  "name": "My SSID",  
  "enabled": true,  
}'
```

B)

```
curl -X PUT --url $meraki_url \  
-H 'X-Cisco-Meraki-API-Key: '$meraki_api_key \  
-H 'Accept: application/json' \  
-H 'Content-type: application/json' \  
--data-raw '{  
  "enabled": true,  
  "useVlanTagging": true  
}'
```

C)

```
curl -X PUT --url $meraki_url \
-H 'X-Cisco-Meraki-API-Key: '$meraki_api_key' \
-H 'Accept: application/json' \
-H 'Content-type: application/json' \
--data-raw '{
  "name": "My SSID", "enabled": true,
  "authMode": "psk", "encryptionMode": "wpa",
  "psk": "meraki123",
  "wpaEncryptionMode": "WPA1 and WPA2"
}'
```

D)

```
curl -X PUT --url $meraki_url \
-H 'X-Cisco-Meraki-API-Key: '$meraki_api_key' \
-H 'Accept: application/json' \
-H 'Content-type: application/json' \
--data-raw '{
  "name": "My SSID", "enabled": false,
  "authMode": "psk", "encryptionMode": "wpa",
  "psk": "meraki123",
  "wpaEncryptionMode": "WPA1 and WPA2"
}'
```

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

**Answer: C**

Explanation:

**Question: 108**

A developer plans to create a new bugfix branch to fix a bug that was found on the release branch. Which command completes the task?

- A. git checkout -b RELEASE BUGFIX
- B. git checkout -t BUGFIX RELEASE
- C. git checkout -b BUG FIX RELEASE
- D. git checkout -t RELEASE BUGFIX

**Answer: C**

Explanation:

**Question: 109**

What is a benefit of continuous testing?

- A. decreases the frequency of code check-ins
- B. removes the requirement for test environments
- C. enables parallel testing
- D. increases the number of bugs found in production

**Answer: C**

Explanation:

**Question: 110**

In the three-legged OAuth2 authorization workflow, which entity grants access to a protected resource?

- A. resource server
- B. resource owner
- C. client
- D. authorization server

**Answer: A**

Explanation:

**Question: 111**

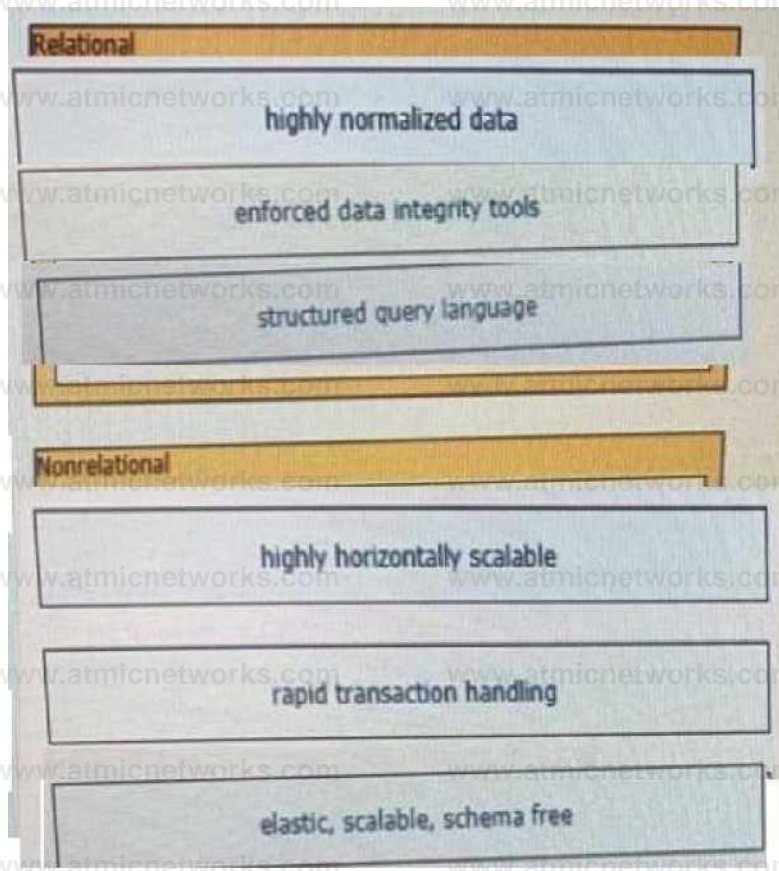
DRAG DROP

Drag and Drop the application requirement on the left onto the database type that should be selected for the requirement on the right.

highly normalized data	Relational
highly horizontally scalable	
rapid transaction handling	
enforced data integrity tools	Nonrelational
elastic, scalable, schema free	
structured query language	

**Answer:**

Explanation:



**Question: 112**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing on the Ansible task to enable a VLAN on a Meraki MX Device, Not all options are used.

```
- name: Create combined network
meraki_network:
  auth_key: "{{ meraki_api_key }}"
  net_name: "{{ item }}"
  org_id: "{{ meraki_org_id }}"
  type:
    - switch
    - wireless
    - appliance
  timezone: Europe/London
  tags: staging, uk
  loop: "{{ network_ids }}"
  delegate_to: localhost
  register: result
- name: Enable VLAN support on MX
  uri:
    url: "https://api.meraki.com/api/v2/networks/{{ item.data.id }}/vlansEnabledState"
    return_content: yes
    headers:
      X-Cisco-Meraki-API-Key: "{{ meraki_api_key }}"
    body:
      enabled: true
      follow_redirects: all
      status_code: 200
      body_format: json
  delegate_to: localhost
```

**Answer:**

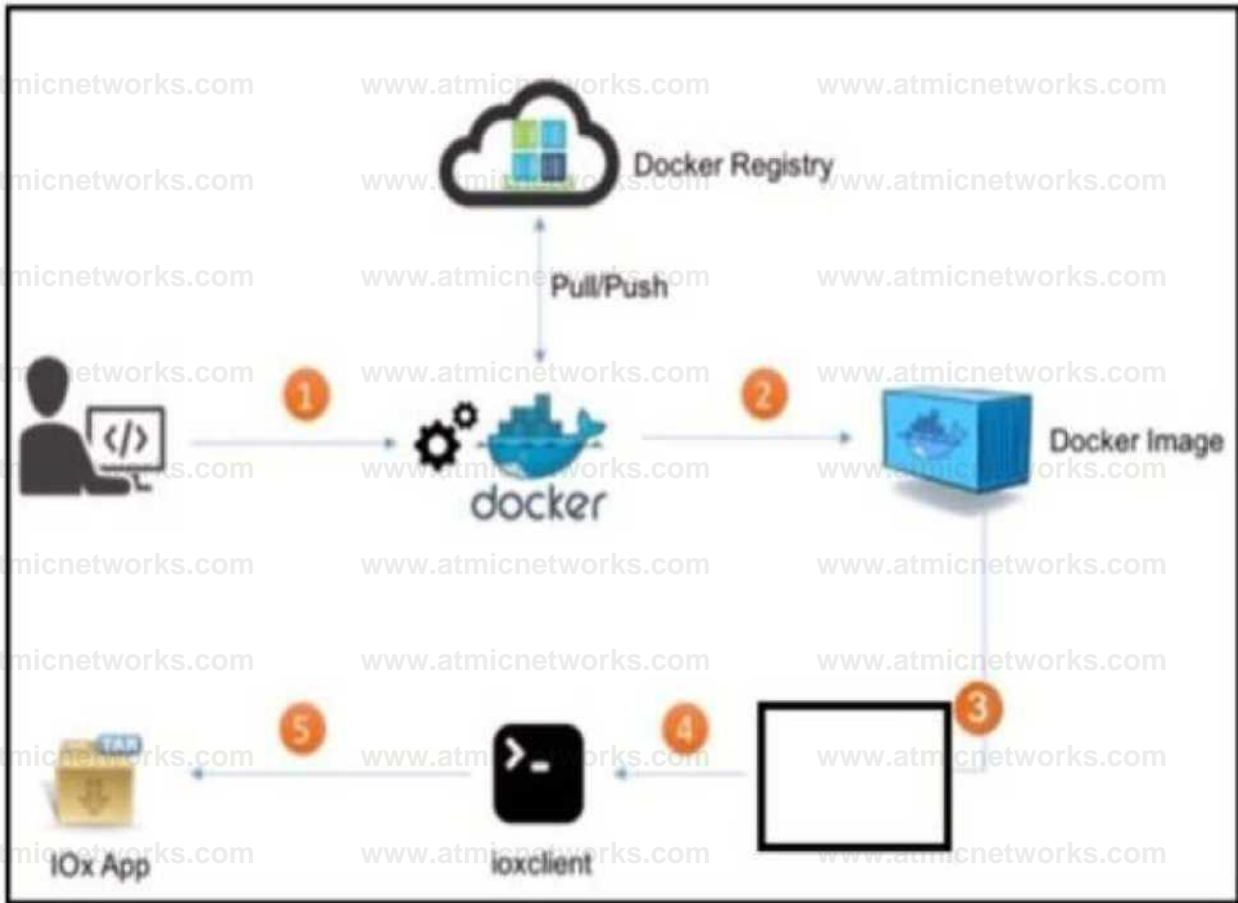
**Explanation:**

method : put

loop : {{result.results}}

**Question: 113**

Refer to the exhibit.



What is the missing step in deploying a Docker container to IOx?

- A. Pull/push the image to the Docker registry,
- B. Build the package.yaml file.
- C. Build the package.cert file to sign the app ,
- D. Log in to Device Manager.

**Answer: B**

Explanation:

Reference : <https://www.cisco.com/c/en/us/support/docs/routers/1101-industrial-integrated-services-router/214383-build-and-deploy-a-docker-iox-package-fo.html>  
<https://www.ciscolive.com/c/dam/r/ciscolive/apjc/docs/2017/pdf/DEVNET-2039.pdf>  
<https://www.cisco.com/c/en/us/support/docs/cloud-systems-management/iox/211534-Configure-a->

www.atmicnetworks.com

[Small-Alpine-Linux-Docker-Im.html](#)

**Question: 114**

Refer to the exhibit.

```
apiVersion: v1 clusters: - cluster:
  certificate-authority: fake-ca-file server:
  https://1.2.3.4
  name: development - cluster:
  insecure-skip-tls-verify: true server: https://5.6.7.8
  name: scratch contexts: - context:
  cluster: development namespace: frontend user: developer
  name: dev-frontend - context:
  cluster: development namespace: storage user: developer
  name: dev-storage - context: cluster: scratch namespace:
  default user: experimenter
  name: exp-scratch current-context: "" kind: Config
preferences: () users: - name: developer user:
  client-certificate: fake-cert-file client-key: fake-key-
  file
- name: experimenter user:
  password: some-password username: exp
```

A kubeconfig file to manage access to Kubernetes clusters is shown. How many Kubernetes clusters are defined in the file, and which cluster FS accessed using username/password authentication rather than using a certificate?

- A. three dusters; scratch
- B. three clusters: development
- C. two dusters; development
- D. two clusters: scratch

**Answer: D**

Explanation:

### Question: 115

Which tool is used to deploy an IOx application to a group of IOx devices at one time?

A. ioxclient

B. IOx local manager

C. Fog Network Director

D. Kubernetes

**Answer: C**

Explanation:

### Question: 116

Which two design considerations should be considered when building a Cisco Meraki dashboard out of available APIs? (Choose two,)

A. API call volume is rate-limited to five calls per second per organization.

B. The API version does not need to be specified in the URL.

C. Access to the API must first be enabled by using the settings for an organization.

D. The API requests require the key and the user credentials.

E. If the API key is shared, it cannot be regenerated

**Answer: CD**

Explanation:

[https://documentation.meraki.com/General Administration/Other Topics/Cisco Meraki Dashboard](https://documentation.meraki.com/General_Administration/Other_Topics/Cisco_Meraki_Dashboard/API#Enable_API_Access)

[API#Enable API Access](https://documentation.meraki.com/General_Administration/Other_Topics/Cisco_Meraki_Dashboard/API#Enable_API_Access)

### Question: 117

DRAG DROP

Drag and drop the steps from the left into the order on the right to configure and install a container on a Cisco Catalyst 9000 Series Switch.

cat9k# app-hosting start appid MYAPP	step 1
cat9k# app-hosting install appid MYAPP package flash:myapp.tar	step 2
cat9k# app-hosting activate appid MYAPP	step 3
cat9k(config)# iox	step 4

**Answer:**

Explanation:

D, B,C,A

**Question: 118**

Refer to the exhibit , The command `docker build -tag=friendlyhello .` is run to build a docker image from the given Dockerfile,

requirements.txt, and app.py. Then the command `docker run -p 4000:80 friendlyhello` is executed to run the application. Which URL is entered in the web browser to see the content served by the application?

- A. `http://localhost:4000`
- B. `http://localhost:80`
- C. `http://127.0.0.1:80`
- D. `http://4000:80`

**Answer: D**

Explanation:

## Question: 119

Refer to the exhibit.

```
while attempts < max_attempts:
    response = requests.get(request_url,
                             headers = ( "Authorization": "Bearer " + api_token))
```

• If not rate-limited, exit loop and continue with rest of the code

```
    break
```

```
    time.sleep((2 ** attempts) + random.random())
    attempts += 1
```

Which code snippet completes this code to handle API rate-limit?

- A. response.status\_code != 408
- B. response.status != 408
- C. response.status\_code != 429
- D. response.status\_code == 429

**Answer: C**

Explanation:

## Question: 120

Users report that they are no longer able to process transactions with the online ordering application, and the logging dashboard is

displaying these messages:

```
Fri Jan 10 19:37:31.123 EST 2020 [FRONTEND] [INFO: Incoming request to add item to cart from user
45834534858
```

```
Fri Jan 10 19:37:31.247 EST 2020 [BACKEND] INFO: Attempting to add item to cart
```

```
Fri Jan 10 19:37:31.250 EST 2020 [BACKEND] ERROR: Failed to add item: MYSQLDB ERROR: Connection
refused
```

What is causing the problem seen in these log messages?

- A. The database server container has crashed.
- B. The backend process is overwhelmed with too many transactions.
- C. The backend is not authorized to commit to the database.
- D. The user is not authorized to add the item to their cart.

**Answer: A**

Explanation:

**Question: 121**

What are two advantages of using model-driven telemetry, such as gRPC, instead of traditional telemetry gathering methods? (Choose two.)

- A. all data is ad-hoc
- B. efficient use of bandwidth
- C. no overhead
- D. decentralized storage of telemetry
- E. continuous information with incremental updates

**Answer: B, E**

Explanation:

**Question: 122**

DRAG DROP

Drag and drop the steps on the left into the order on the right for an end-user to access an OAuth2 protected resource using the Authorization Code Grant1 flow.

OAuth client receives an authorization code

step 1

OAuth client requests access token from authorization server

step 2

end-user initiates authentication using OAuth client

step 3

OAuth client requests a resource on the resource server

step 4

OAuth client communicates with authorization server to display login UI

step 5

end-user authenticates with the authorization server

step 6

**Answer:**

**Explanation:**

end-user initiates authentication using OAuth client

OAuth client communicates with authorization server to display login UI

end-user authenticates with the authorization server

OAuth client receives an authorization code

OAuth client requests access token from authorization server

OAuth client requests a resource on the resource server

**Question: 123**

Refer to the exhibit. Which snippet creates a Webex Teams space and adds the users in the variable user list to that space?

A)

```
space = create_space("Chatops Incident Space**") for user in
user_list:
    add__user_to_space (user, space)
```

B)

```
space = create_space("Chatops Incident Space")
for user in user_list:
    add_user_to_space(space)
```

C)

```
space = create_space("Chatops Incident Space") user =
", ".join(user_list) add_user_to_space(space)
```

D)

```
space = create_space("Chatops Incident Space")
user = ", ".join(user_list)
add_user_to_space(users, space)
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: A**

Explanation:

**Question: 124**

What is a consideration for using gRPC as the model-driven telemetry protocol on a Cisco IOS XE device?

A. XML-based transmission format

- B. works in dial-out mode
- C. human-readable transmission format
- D. works in call-out mode

**Answer: B**

Explanation:

**Question: 125**

Refer to the exhibit.

# API CONSOLE

**/api/fmc\_config/v1/domain/e276abec-e0f2-11e3-8169-6d9ed49b625f/object/fqdns**

005056BB-0B24-0ed3-0000-858993545263

Identifier for FQDN object.

+ query parameter

Content-Type Header

Accept Header

GET

Success!

Response Text

Response Info

Request Info

```
"value": "10.156.100.26",
"overridable": false,
"description": "testServer",
"id": "005056BB-0B24-0ed3-0000-858993545263",
"name": "testServer01.foobar.com",
"metadata": {
  "timestamp": 1551986986196,
  "lastUser": {
    "name": "jboga"
  },
  "domain": {
```

Which API call does an engineer use to delete the FQDN object?

A. DELETE /api/fmc\_config/v1/domain/e276abec-e0f2-11e3-8169-6d9ed49b625f

B. DELETE /api/fmc\_config/v1/domain/e276abec-e0f2-11e3-8169-6d9ed49b625f/object/fqdns/005056BB-0B24-0ed3-0000-858993545263

C. DELETE /api/fmc\_config/v1/domain?id=e276abec-e0f2-11e3-8169-6d9ed49b625f

D. DELETE /api/fmc\_config/v1/domain/e276abec-e0f2-11e3-8169-6d9ed49b625f/object/fqdns?id=005056BB-0B24-0ed3-0000-858993545263

**Answer: B**

Explanation:

[https://www.cisco.com/c/en/us/td/docs/security/firepower/640/api/REST/Firepower\\_Management\\_Center\\_REST\\_API\\_Quick\\_Start\\_Guide\\_640/Objects\\_In\\_The\\_REST\\_API.html#fqdns\\_DELETE](https://www.cisco.com/c/en/us/td/docs/security/firepower/640/api/REST/Firepower_Management_Center_REST_API_Quick_Start_Guide_640/Objects_In_The_REST_API.html#fqdns_DELETE)

## Question: 126

Refer to the exhibit.

```
import json, requests
USER = 'admin'
PASS = 'cisco'

url = "https://ios-xe-mgmt.cisco.com:9443/rejtconf/dat4/Cisco-I05-XE-Mtive:native" \
      "/interface/GigabitEthernet=2/ip/address/primary"
payload = {"primary": {"address": "10.10.10.1", "mask": "255.255.255.0"}}
data = json.dumps(payload)
headers = (
    'Accept': "application/yang-data+json",
    'Content-Type': "application/yang-data+json";
)

response = requests.request("POST", url, auth=(USER,PASS), data=data, headers=headers, verify=False)
print(response.text)
```

An engineer needs to change the IP address via RESTCONF on interface GigabitEthernet2. An error message is received when the script is run. Which amendment to the code will result in a successful RESTCONF action?

- A. Change POST to PATCH.
- B. Issue a DELETE before POST.
- C. Issue a DELETE before PATCH
- D. Change POST to GET

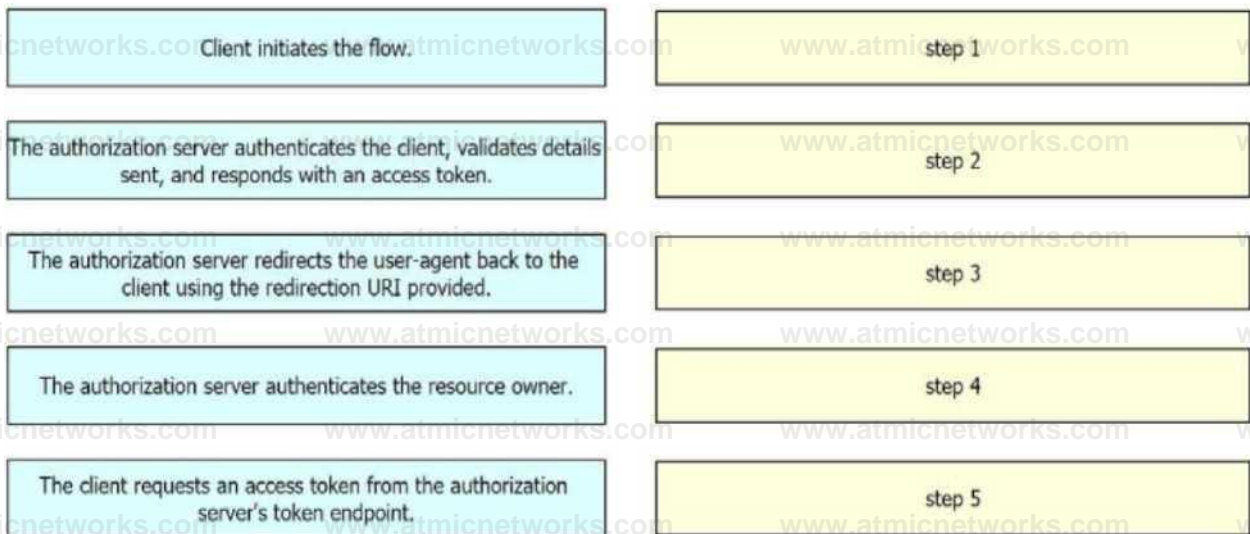
**Answer: A**

Explanation:

**Question: 127**

DRAG DROP

Refer to the exhibit.



Drag and drop the steps from the left into the order of operation on the right for a successful OAuth2 three-legged authorization code grant flow,

**Answer:**

Explanation:

Client initiates the flow.

The authorization server redirects the user agent back to the client using the redirections URI provided.

The authorization server authenticates the client, validates details sent, and responds with an access token.

The client requests an access token from the authorization server's token endpoint,

The authorization server authenticates the resource owner

### Question: 128

Why is end-to-end encryption deployed when exposing sensitive data through APIs?

- A. Traffic is encrypted and decrypted at every hop in the network path.
- B. Data transfers are untraceable from source to destination.
- C. Data cannot be read or modified other than by the true source and destination.
- D. Server-side encryption enables the destination to control data protection.

**Answer: C**

Explanation:

### Question: 129

Refer to the exhibits which show the documentation associated with the create port object API call in Cisco Firepower Threat Defense, and a cURL command. Which data payload completes the cURL command to run the API call?

A)

```
''description": "string",  
"icmpv4Code": "ANY_IPV4",  
"icmpv4Type": "ANY", "id":  
"string", "isSystemDefined":  
"string", name: string,  
"type": "icmpv4portobject",  
version : string
```

B)

```
"description": "This is an ICMP Echo",  
"icmpv4Code": "8", "icmpv4Type": "Echo",  
"isSystemDefined": true, "name": "ICMP  
Echo", "version": "2.2"
```

C)

```
"icmpv4Type": "ANY", "name": "string",  
"type": "icmpv4portobject"
```

D)

```
"description": "string",  
"icmpv4Code": "ANY_IPV4",  
"icmpv4Type": null,  
"isSystemDefined": true,  
"name": "string",  
"type": "icmpv4portobject"
```

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

**Answer: C**

Explanation:

Reference : <https://developer.cisco.com/site/ftd-api-reference/#!/editicmpv4portobject/path->

[parameters](#)

### Question: 130

What is a characteristic of a monolithic architecture?

- A. It is an application with multiple independent parts.
- B. New capabilities are deployed by restarting a component of the application.
- C. A service failure can bring down the whole application.
- D. The components are platform-agnostic.

**Answer: C**

Explanation:

A monolithic app can be platform-agnostic but it's not mandatory. But if the app is monolithic, a service failure (such as storage or network) will bring down the whole app/service. This is unlike the distributed application architecture where failure of one microcomponent can be detected and fixed dynamically.

### Question: 131

A local Docker image has an image ID of 386231131. Fill in the blanks to complete the command in order to tag the image into the "cisco" repository with "version1.0".

\$ docker tag

**Answer: 386231131 ,  
cisco/386231131:version1.0**

Explanation:

\$ docker tag

386231131

cisco/386231131:version1.0

<https://docs.docker.com/engine/reference/commandline/tag/>

**Question: 132**

A bot has been created, called "386231131", to respond to alarm messages. A developer is now creating a Webhook to allow the bot to respond to messages. Which format allows the Webhook to respond to messages for the bot within Webex Teams?

A)

```
GET /messages?botId=me&roomId=NETWORK_3STATUS
Authorization: Bearer THE_30T3_ACCESS_TOKEN
```

B)

```
GET /me_3sages?mentionedBot=me&roomId=NETWORK_3STATU3
Authorization: Bearer THE_B0T3_ACCESS_TOKEN
```

C)

```
GET /messages?mentioned?eople=me&roomId=NETWORK_STATUS
Authorization: Bearer THE_B0T3_ACCESS_TOKEN
```

D)

```
GET /messages?personId=me&roomId=NETWORK_STATUS
Authorization: Bearer THE_B0T3_ACCE3S_TOKEN
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: C**

Explanation:

<https://developer.webex.com/docs/api/guides/webhooks>

**Question: 133**

Refer to the exhibit.

```
curl "http://localhost/api/ [redacted]"
```

An application's REST API GET call is tested to the inventory database. Which missing code must be included to limit

the number of values that are returned from the query to 20?

- A. Inventory=20
- B. limit=?20
- C. inventory=limit?20
- D. inventory? limit20

**Answer: D**

Explanation:

**Question: 134**

Given an application that implements a basic search function as well as a video upload function which two load-balancing approaches

optimize the application's user experience? (Choose two.)

- A. Video upload requests should be routed to the endpoint using an intermediate hop.
- B. Video upload requests should be routed to the endpoint with highest data throughput.
- C. Video upload requests should be routed to the endpoint with lowest round-trip latency.
- D. Search requests should be routed to the endpoint with lowest round-trip latency.
- E. Search requests should be routed to the endpoint with highest data throughput.

**Answer: BD**

Explanation:

**Question: 135**

What are two methods for sending bearer access tokens in resource requests to servers?  
(Choose two,)

- A. in plaintext for user access
- B. in the HTTP API schema
- C. in the HTTP request entity-body
- D. in the "Authorization" request header field
- E. in the HTTP request URI

**Answer: CD**

Explanation:

**Question: 136**

Which Git command enables the developer to revert back to f414f31 commit to discard changes in the current working tree?

- A. `git reset-hard f414f31`

B. git reset checkout-hard f414f31

C. git reset-soft f414f31

D. git checkout f414f31

**Answer: A**

Explanation:

Reference: <https://www.freecodecamp.org/news/the-ultimate-guide-to-git-reset-and-git-revert/>

### Question: 137

An engineer must enable an SSID in a Meraki network. Which request accomplishes this task?

A. PUT /networks/{networkId}/ssids/{number} {"enable": true}

B. POST /networks/{networkId}/ssids/{number} {"enable": true}

C. PUT /networks/{networkId}/ssids/{number}?enabled=true

D. POST /networks/{networkId}/ssids/{number}?enabled=true

**Answer: A**

Explanation:

### Question: 138

A team of developers created their own CA and started signing certificates for all of their IoT devices, Which action will make the browser

accept these certificates?

A. Set the private keys 1024-bit RSA.

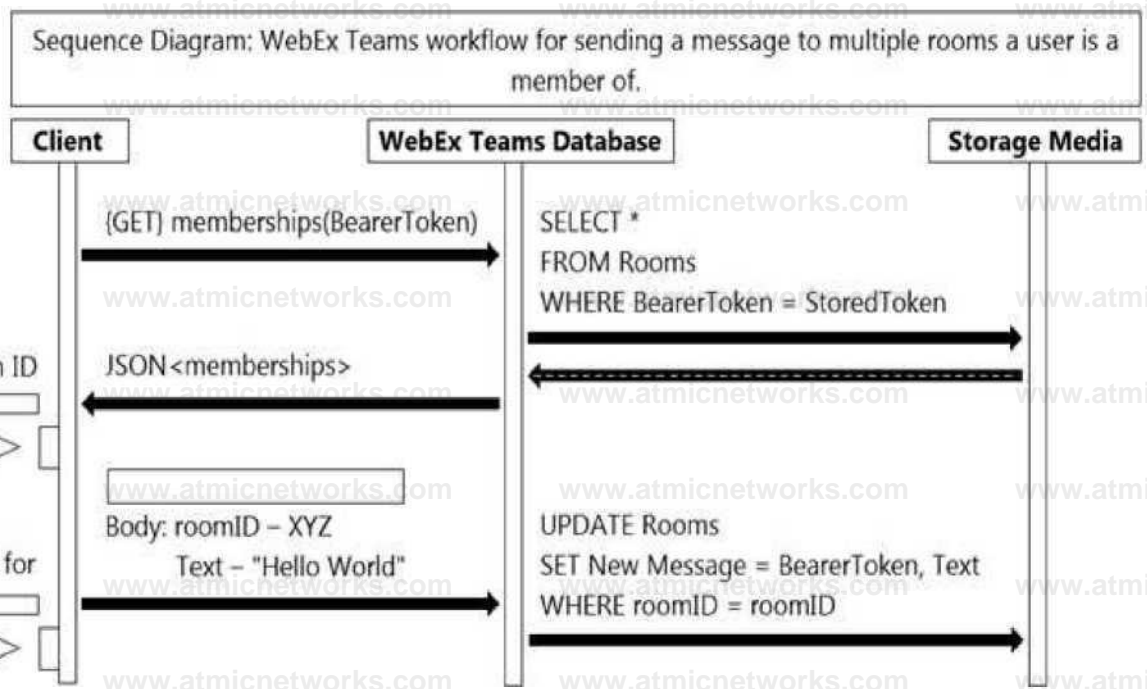
- B. Preload the developer CA on the trusted CA list of the browser.
- C. Enable HTTPS or port 443 on the browser.
- D. install a TLS instead of SSL certificate on the IoT devices.

**Answer: B**

Explanation:

**Question: 139**

Refer to the exhibit.



Which action will complete the workflow that represents how an API call sends multiple messages?

- A. {PUT} messages(roomID)
- B. {PUT} messages(BearerToken)
- C. {POST} messages(roomID)
- D. {POST} messages(BearerToken)

**Answer: D**

Explanation:

<https://developer.webex.com/docs/api/v1/messages/create-a-message>

### Question: 140

Which two types of organization are subject to GDPR? (Choose two.)

- A. only organizations that operate outside the EU
- B. any organization that offers goods or services to customers in the EU
- C. only organizations that have offices in countries that are part of the EU
- D. any organization that operates within the EU
- E. only organizations that physically reside in the EU

**Answer: BD**

Explanation:

Reference: <https://www.cisco.com/c/en/us/products/security/comply-with-GDPR.html>

### Question: 141

A developer deploys a SQLite database in a Docker container. Single-use secret keys are generated each time

a user accesses the database. The keys expire after 24 hours. Where should the keys be stored?

- A. Outside of the Docker container in the source code of applications that connect to the SQLite database.
- B. In a separate file inside the Docker container that runs the SQLite database.
- C. In an encrypted database table within the SQLite database.
- D. In a separate storage volume within the Docker container.

**Answer: D**

Explanation:

**Question: 142**

While working with the Webex Teams API, on an application that uses end-to-end encryption, a webhook has been received. What must be considered to read the message?

- A. Webhook information cannot be used to read the message because of end-to-end encryption. The API key is needed to decrypt the message.
- B. Webhook returns the full unencrypted message. Only the body is needed to query the API.
- C. Webhook returns a hashed version of the message that must be unhashed with the API key.
- D. Webhook returns message identification. To query, the API is needed for that message to get the decrypted information.

**Answer: D**

Explanation:

Room messages are considered sensitive information and since Webex initiated the request to your backend, it did not have your Access Token with which to decrypt the message. In order to get the sensitive information, your app needs to use the resource id to fetch the full resource. Using the above messages example, your app could fetch the complete message object along with the text by doing an authenticated (via your Bearer Token) GET request to `/messages/{id}`

<https://developer.webex.com/docs/api/guides/webhooks>

**Question: 143**

Which Puppet manifest needs to be used to configure an interface GigabitEthernet 0/1 on a Cisco IOS

switch?

A.

```
ios interface {  
    name                               - 'GigabitEthernet0/1',  
    link status                         - false,  
    logging_event                       = [  
        'spanning-tree' ,  
        'subif-link-status'  
    ]  
    b  
    logging_event_link_status          = false,  
    ip_dhcp_snooping_trust             - true,  
    ip_dhcp_snooping_limit            - 1500,  
}
```

B.

```
ios interface {  
    'GigabitEthernet0/1'              => {  
    link status                        => false,  
    logging_event 'spanning-          => [  
        tree' , 'subif-link-  
        status'  
    ]  
    b  
    logging_event_link_status          => false,  
    ip_dhcp_snooping_trust            => true.  
    ip_dhcp_snooping_limit            => 1500,  
}
```

```
ios interface {
  id => 'GigabitEthernet0/1',
  link status => false.
  logging_event => [
    'spanning-tree',
    'subif-link-status'
  ]
  logging-event_link_status => false.
  ip_dhcp_snooping_trust => true,
  ip_dhcp_snooping_limit => 1500,
}
```

```
ios_interface { 'GigabitEthernet0/1' :
  link status => false,
  logging_event => [
    'spanning-tree' ,
    'subif-link-status'
  ]
  logging event link status => false,
  ip_dhcp_snooping_trust => true,
  ip_dhcp_snooping_limit => 1500,
}
```

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

**Answer: D**

Explanation:

[https://github.com/puppetlabs/cisco\\_ios/blob/main/examples/network\\_interface.pp](https://github.com/puppetlabs/cisco_ios/blob/main/examples/network_interface.pp)

### Question: 144

What are two steps in the OAuth2 protocol flow? (Choose two.)

- A. The user is authenticated by the authorization server and granted an access token.
- B. The user's original credentials are validated by the resource server and authorization is granted.
- C. The user indirectly requests authorization through the authorization server.
- D. The user requests an access token by authentication and authorization grant presentation.
- E. The user requests the protected resource from the resource server using the original credentials.

**Answer: AE**

Explanation:

Reference: <https://www.digitalocean.com/community/tutorials/an-introduction-to-oauth-2>

### Question: 145

DRAG DROP

```
class ucsmSdkMOMeta.ls.LsServer.LsServerConsts
```

```
ASSIGN_STATE_ASSIGNED= 'assigned*
```

```
ASSIGN_STATE_FAILED= 'failed
```

```
ASSIGN_STATE_UNASSIGNED= 'unassigned
```

```
ASSOC_STATE_ASSOCIATED= associated1
```

```
ASSOC_STATE_ASSOCIATING = 'associating'
```

```
ASSOC_STATE_DISASSOCIATING = 'disassociating'
```

```
ASSOC_STATE_FAILED= 'failed
```

```
ASSOC_STATE_UNASSOCIATED= 'unassociated
```

```
CONFIG_STATE_APPLIED= 'applied
```

```
CONFIG_STATE APPLYING= 'applying' CONFIG_STATE_FAILED_TO APPLY= 'failed-to-apply'
```

```
CONFIG_STATE_NOT_APPLIED= 'not-applied
```

Refer to the exhibit. Drag and drop the code snippets from the bottom onto the blanks in the code to provision a new UCS server. Not all options are used.

```
from ucsm.sdk.ucseventhhandler import UcsEventHandle
from ucsm.sdk.mometa.Is.LsServer import

end_script = False

def _sp_associate_callback(mce):
    global end_script
    if mce.mo.assoc_state == LsServerConsts.ASSOC_STATE_ASSOCIATED: log.debug("SP:"
    + mce.mo.dn + " Assoc Successful. assoc_state: " + mce.mo.assoc_state
    elif mce.mo.assoc_state == LsServerConsts.ASSIGN_STATE_FAILED: log.error("SP:" +
    mce.mo.dn + "Assoc Failed. assoc_state: " + mce.mo.assoc_state)
    end_script = True

def _sp_associate_monitor(event_handle, mo):
    .add(managed_object=mo, prop="assoc_state",
    success_value=[LsServerConsts.ASSOC_STATE_ASSOCIATED],
    failure_value=[LsServerConsts.ASSOC_ | _____]
    timeout_sec=600, call_back=_sp_associate_callback)

    [STATE_ERROR] | [STATE_FAILED]

LsServerConsts I event handle
```

**Answer:**

**Explanation:**

```

from ucsmsdk.ucseventhhandler import UcsEventHandle from ucsmsdk.mometa.Is.LsServer
import LsServerConsts

end_script = False

def _sp_associate_callback(mce):
    global end_script
    if mce.mo.assoc_state == LsServerConsts.ASSOC_STATE_ASSOCIATED:
        log.debug("SP:" + mce.mo.dn + " Assoc Successful. assoc_state: "+
            mce.mo.assoc_state)
    elif mce.mo.assoc_state == LsServerConsts.ASSIGN_STATE_FAILED:
        log.error("SP:" + mce.mo.dn + "Assoc Failed. assoc_state: "+
            mce.mo.assoc_state)
    end_script = True
def
_sp_associate_monitor(event_handle, mo):
    event_handle .add(managed Object=mo, prop= "assoc_state",
        success_value=[LsServerConsts.ASSOC_STATE_ASSOCIATED],
        failure_value=[LsServerConsts.ASSOC_ STATE FAILED]
        timeout_sec=600, call_back=_sp_associate_callback)

```

### Question: 146

DRAG DROP

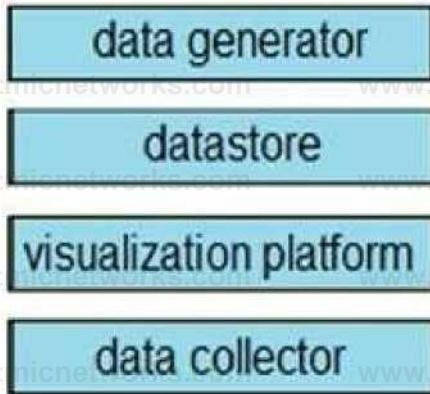
A Python application is being written to run inside a Cisco IOS XE device to assist with gathering telemetry data

a. Drag and drop the elements of the stack from the left onto the functions on the right to collect and display the telemetry streaming data.

visualization platform	Cisco IOS XE device
data collector	Elasticsearch
data generator	Kibana
datastore	Python application

**Answer:**

Explanation:



**Question: 147**

Refer to the exhibit.

POST

/object/networks

### Implementation Notes

This API call is not allowed on the standby unit in an HA pair.

### Response Class (Status 200)

Model

Example Value

```
{  
  "version": "string",  
  "name": "string",  
  "description": "string",  
  "subType": "HOST",  
  "value": "string"  
  "links": {  
    "self": "string"  
  }  
}
```

Refer to the exhibit. A developer must create a new network object named testnetwork by using the Cisco Firepower Device Management API. The script must also handle any exceptions that occur during the request and print out any resulting errors. Which script must be used?

```
import requests, json
headers = { 'Content-type': 'application/json'} data = {"name":
"testnetwork", "description": "Test Network", "subType": "HOST",
"value": "192.168.1.1", "type" : "networkobject"} try:
    response = requests.post(
        'https://firepower-server/object/networks', data=data)
except:
    print(error)
```

```
import requests, json
headers = { 'Content-type': 'application/json'} data = {"name":
"testnetwork", "description": "Test Network", "subType": "HOST",
"value": "192.168.1.1", "type" : "networkobject"} try:
    response = requests.post(
        'https://firepower-server/object/networks', data=data,
        headers=headers)
    response.raise_for_status() except:
    print(error)
```

```
import requests, json.
headers = { 'Content-type': 'application/json'} data = {"name":
"testnetwork", "description": "Test Network", "subType" : "HOST",
"value": "192.168.1.1", "type" : "networkobject"} try:
response = requests.post(
'http://firepower-server/object/networks',
data=json.dumps(headers), headers=data)
response.raise_for_status() except:
print(error)
```

```
import requests, json
headers = { 'Content-type': 'application/json'} data = {"name":
"testnetwork", "description": "Test Network", "subType" : "HOST",
"value": "192.168.1.1", "type" : "networkobject"} try:
response = requests.post(
'https://firepower-server/object/networks',
data=json.dumps(data), headers=headers)
response.raise_for_status() except:
print(error)
```

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

**Answer: A**

Explanation:

### Question: 148

What is the gRPC Network Management Interface protocol?

- A. a unified management protocol for streaming telemetry and database logging
- B. a configuration management protocol for monitoring

- C. a protocol for configuration management and streaming telemetry
- D. a logging protocol used across database servers

**Answer: C**

Explanation:

Reference: <https://infohub.delltechnologies.com/l/enterprise-sonic-distribution-by-dell-technologies-lifecyclemanagement/grpc-network-management-interface>

### Question: 149

An application has been developed for monitoring rooms in Cisco Webex. An engineer uses the application to retrieve all the messages from a Cisco Webex room, but the results are slowly presented. Which action optimizes calls to retrieve the messages from the /v1/messages endpoint?

- A. Define the ma property by using the pagination functionality.
- B. Set the beforeMessage property to retrieve the messages sent before a specific message ID.
- C. Avoid unnecessary calls by using a prior request to /v1/rooms to retrieve the last activity property.
- D. Filter the response results by specifying the created property in the request.

**Answer: A**

Explanation:

Reference: <https://apphub.webex.com/messaging/applications/paginate-cisco-systems-82277>

**Question: 150**

What are two principles according to the build, release, run principle of the twelve-factor app methodology?

(Choose two.)

- A. Code changes are able to be made at runtime.
- B. Separation between the build, release, and run phases.
- C. Releases should have a unique identifier.
- D. Existing releases are able to be mutated after creation.
- E. Release stage is responsible for compilation of assets and binaries.

**Answer: BC**

Explanation:

Reference: <https://www.bmc.com/blogs/twelve-factor-app/>

**Question: 151**

A developer is building an application to access a website. When running the application, an HTTP 403 error code has been received. How should the application be modified to handle this code?

- A. Create a loop on cancel the operation and run a new one after the code is received.
- B. Use exponential backoff when retrying distributed services and other remote endpoints.
- C. Build a try/except around the urlopen to find errors occurring in the request.

D. Redirect the request to an internal web server and make a new request from the internal resource.

**Answer: B**

Explanation:

**Question: 152**

When end-to-end encryption is implemented, which area is most vulnerable to exploitation?

- A. cryptographic key exchange
- B. endpoint security
- C. cryptographic key generation
- D. security of data in transit

**Answer: B**

Explanation:

**Question: 153**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing in the Python script to execute a REST API call to query all the NTP policy names and print the name of each policy. Not all options are used.

```

import requests, json
from intersight_auth import IntersightAuth

AUTH = IntersightAuth(
    secret_key_filename= '/tmp/secretfile.txt',
    api_key_id= 'api-key-id')
URL= 'https://www.intersight.com/api/v1/'

operations = [ {"resource_path": "
                "request_method": "GET" } ]

:
response = None
if operation['resource_path'] == "ntp/Policies":
    response = requests.get(
    )

    = response.json()

for key, value in jsonResponse.items():
    if key = "Name":
        print(value)

```

```
for operation in operations
```

```
URL+operation
['resource_path'],auth=AUTH
```

```
jsonResponse
```

```
URL+operation[resource_path],
auth=api_key_id
```

```
ntp/Policies
```

```
response.json
```

```
for each operations
```

## Answer:

Explanation:

```
import requests, json
from intersight_auth import IntersightAuth

AUTH = IntersightAuth(
    secret_key_filename= '/tmp/secretfile.txt',
    api_key_id= 'api-key-id')
URL= 'https://www.intersight.com/api/v1/'

operations = [ {"resource_path": "ntp/Policies",
               "request_method": "GET" }]

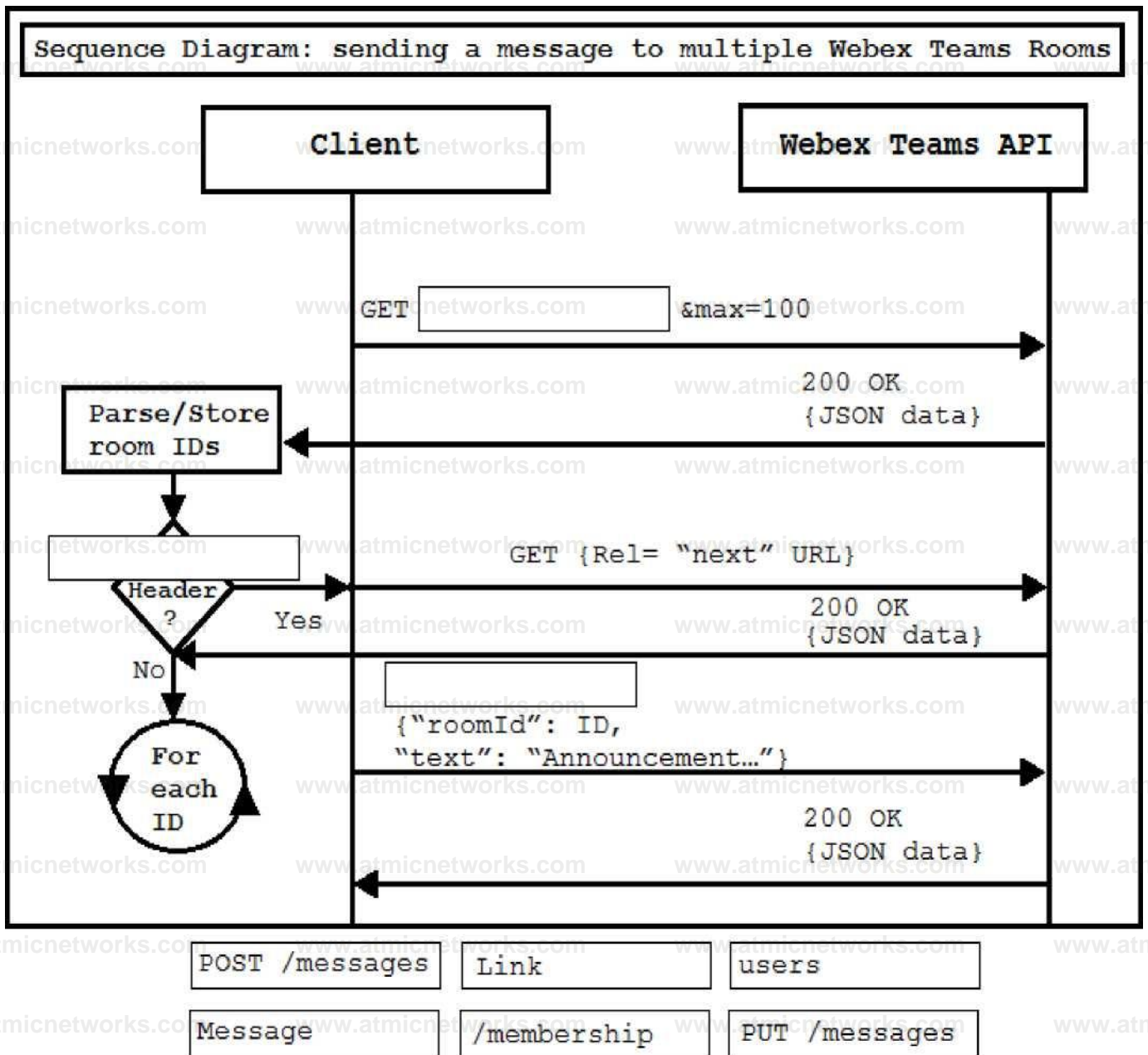
for operation in operations :
    response = None
    if operation['resource_path'] == "ntp/Policies":
        response = requests.get( URL+operation
                                ['resource_path'],auth=AUTH
                                )
        jsonResponse = response.json()
    for key, value in jsonResponse.items():
        if key = "Name":
            print(value)
```

## Question: 154

DRAG DROP

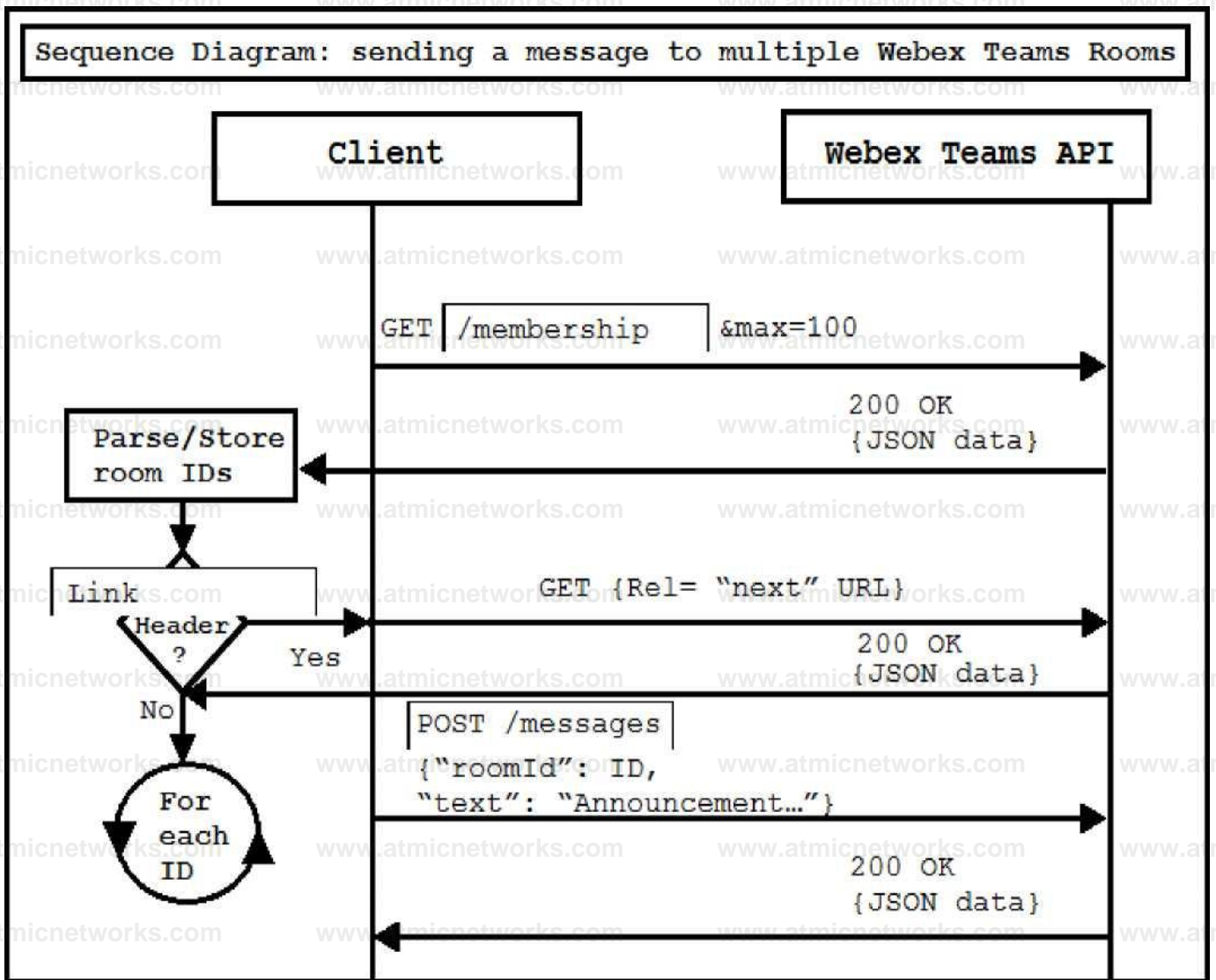
Drag and drop the code from the bottom onto the box where the code is missing in the diagram to show how data is processed in Webex Teams. Not all options are used.

Sequence Diagram: sending a message to multiple Webex Teams Rooms



**Answer:**

Explanation:



**Question: 155**

Refer to the exhibit.

```
#k8s-nginx. yml
apiVersion: apps/v1
kind: Deployment metadata:
  name: nginx-deployment
  labels: app: nginx
spec:
  replicas: 1 selector:
    matchLabels: app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
        - name: nginx
          image: nginx ports:
            - name: nginx-port
              containerPort: 80

apiVersion: v1 kind: Service
metadata:
  name: load-balancer
spec:
  selector: app: nginx ports:
    - port: 80
      targetPort: nginx-port
  type: LoadBalancer
```

Refer to the exhibit. The presented application consists of a Nginx container and a load balancer service. Which GitLab CI/CD configuration implements the Kubernetes deployment?

A.

```
Deploy:
  stage: Deployment
  script:
    - kubectl exec -k k8s-nginx.yml
```

B.

```
Deploy:
  stage: Deployment
  script:
    - kubectl apply -f k8s-nginx.yml
```

C.

```
Deploy:
  stage: Deployment
  script:
    - kubectl apply -k k8s-nginx.yml /patch/to/cluster
```

D.

```
Deploy:
  stage: Deployment
  script:
    - kubectl exec -f k8s-nginx.yml /patch/to/cluster
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: B**

Explanation:

<https://kubernetes.io/docs/reference/kubectl/kubectl/>

## Question: 156

What are two benefits of using distributed log collectors? (Choose two.)

- A. supports multiple transport protocols such as TCP/UDP
- B. improves performance and reduces resource consumption
- C. provides flexibility due to a wide range of plugins and accepted log formats
- D. enables extension of logs with fields and export to backend systems
- E. buffers and resends data when the network is unavailable

**Answer: BE**

Explanation:

**Question: 157**

What are two features of On-Box Python for hosting an application on a network device?  
(Choose two.)

- A. It has direct access to Cisco IOS XE CLI commands.
- B. It is a Python interpreter installed inside the guest shell.
- C. It enables execution of XML scripts on a Cisco IOS XE router or switch.
- D. It supports Qt for graphical interfaces and dashboards.
- E. It has access to Cisco IOS XE web UI through a controller.

**Answer: AB**

Explanation:

Reference: [https://blog.wimwauters.com/networkprogrammability/2020-06-08\\_guestshell\\_onbox/](https://blog.wimwauters.com/networkprogrammability/2020-06-08_guestshell_onbox/)

**Question: 158**

Refer to the exhibit.

```
[all :vars] ansible_connection= ansible user=admin
ansible network os=ios
```

An engineer is configuring Ansible to run playbooks against Cisco IOS XE Software. What should be configured in ansible.cfg as the connection type?

- A. network\_cli
- B. ssh
- C. shell
- D. command

**Answer: B**

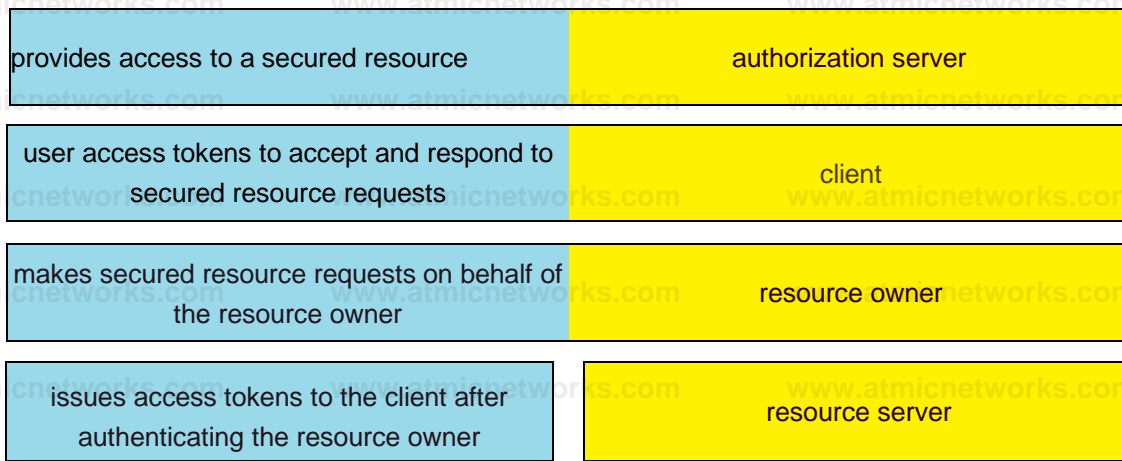
Explanation:

Reference: [https://docs.ansible.com/ansible/latest/user\\_guide/intro\\_inventory.html](https://docs.ansible.com/ansible/latest/user_guide/intro_inventory.html)

**Question: 159**

DRAG DROP

Drag and drop the descriptions from the left onto the related OAuth-defined roles on the right.



**Answer:**

**Explanation:**

issues access tokens to the client after authenticating the resource owner

makes secured resource requests on behalf of the resource owner

user access tokens to accept and respond to secured resource requests

provides access to a secured resource

**Question: 160**

A local Docker container with a Container ID of 391441516e7a is running a Python application. Which command is used to connect to a bash shell in the running container?

A. `docker attach <Container ID>`

B. `docker exec -it <Container ID> /bin/bash`

C. `docker run -a stdin -a stdout <Container ID> /bin/bash`

D. `docker container attach <Container ID>`

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: A**

Explanation:

**Question: 161**

Refer to the exhibit.

```
"version": "3.0",
"secret": "supersecret",
"type": "WiFi",
"data": {
  "networkId": "L 000000000000391274",
  "observations": [
    <
    "locations": [],
    "ipv4": null,
    "ssid": null, "os": null,
    "I": "cc:cc:66:88:85:23"
    "latestRecord": {
      "time": "2020-10-19T10:23:21z",
      "nearestApMac": "aa:aa:22:56:2e:42"
      "nearestApRssi": "-62"
    }
  ]
}
```

Refer to the exhibit. The JSON response is received from the Meraki location API. Which parameter is missing?

- A. apMac
- B. clientMac
- C. clientId
- D. accesspoint

**Answer: B**

Explanation:

Reference: <https://community.meraki.com/t5/Developers-APIs/Location-lat-lng-and-x-y-are-showing-similar-for-all-devices/td-p/65707>

### Question: 162

Which two gRPC modes of model-driven telemetry are supported on Cisco IOS XE Software? (Choose two.)

A. dial-in

B. dial-out

C. call-in

D. call-out

E. passive

**Answer: AB**

Explanation:

Reference: <https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1612/>

[b\\_1612\\_programmability\\_cg/model\\_driven\\_telemetry.html#id\\_86392](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/1612/b_1612_programmability_cg/model_driven_telemetry.html#id_86392)

### Question: 163

Refer to the exhibit.

```
2 {
3   "version": ,
4   "secret": "supersecret", "type": "DevicesSeen", "data": {
5     "apMac": "00:18:0a:13:dd:b0
6     "apFloors": [], "apTags": ["dev",
7     "home", "test"
```

12 Which parameter is missing from the JSON response to confirm the API version that is used?

- A. version 4
- B. v 10
- C. 2
- D. version 2

**Answer: C**

Explanation:

### Question: 164

What is a capability of the End User Monitoring feature of the AppDynamics platform?

- A. discovers traffic flows, nodes, and transport connections where network or application/network issues are developing
- B. monitoring local processes, services, and resource use, to explain problematic server performance
- C. identifies the slowest mobile and IoT network requests, to locate the cause of problems
- D. provides metrics on the performance of the database to troubleshoot performance-related issues

Answer: C

Explanation:

Reference: <https://docs.appdynamics.com/display/PRO21/Overview+of+End+User+Monitoring>

### Question: 165

Refer to the exhibit.

```
$ git checkout release-2.1 Switched to branch 'release-2.1'
Your branch is up to date with 'origin/release-2.1'.

$ git add -A
& git commit -m "Demo" [release-2.1 6226cf6] Demo
 1 file changed, 3 insertions(+)
$ git merge dev
Auto-merging python/mac.py
CONFLICT (content): Merge conflict in python/mac.py
Automatic merge failed; fix conflicts and then commit the result
```

Refer to the exhibit. Which command resolves the merge conflict by removing the previous commit from the commit history?

- A. `git checkout mac.py`
- B. `git reset --hard HEAD~1`
- C. `git rebase --abort`
- D. `git revert -m 1 HEAD`

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: B**

Explanation:

**Question: 166**

DRAG DROP

An engineer must access multiple bots that are running in an internal infrastructure. A different HTTPS URL is required for each bot. The infrastructure has just one public IP address and a Linux server with Apache installed. Drag and drop the actions from the left into the order of steps on the right to enable access to the bots inside. Not all options are used.

Configure "Let's Encrypt" on the bot servers	step 1
Enable a forward proxy in Apache	step 2
Configure Apache virtual hosts	step 3

Enable a reverse proxy in Apache

Configure an Apache htaccess file

Configure "Let's Encrypt" on the Apache server

**Answer:**

Explanation:

Configure Apache virtual hosts.

Configure "Let's Encrypt" on the Apache server.

Enable a reverse proxy in Apache.

**Question: 167**

What is the function of dependency management?

- A. separating code into modules that execute independently
- B. utilizing a single programming language/framework for each code project
- C. automating the identification and resolution of code dependencies
- D. managing and enforcing unique software version names or numbers

**Answer: A**

Explanation:

<https://devopedia.org/dependency-manager>

**Question: 168**

DRAG DROP

A network engineer needs to retrieve interface data using the Cisco IOS XE YANG Model. Drag and drop the

components from the bottom onto the box where the code is missing to complete the RESTCONF

URI. Not all

options are used.

https:// {host}}:{{port}}/restconf/data/

:  /

Cisco-native-IOS-XE

interface

native

Cisco-IOS-XE

Cisco-IOS-XE-native

IOS-XE-native

**Answer:**

Explanation:

```
https:// {host} : {port} /restconf/data/
```

```
Cisco-IOS-XE-native : native /
```

```
interface
```

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

**Question: 169**

Refer to the exhibit.

```

www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com www.atmicnetworks.com
module: ietf-interfaces
+--rw interfaces
| +--rw interface* [name]
I +--rw name string
| +--rw description? string
I +--rw type identityref
I +--rw enabled? boolean
I +--rw link-up-down-trap- -enable? enumeration {if-mib}?
+--ro interfaces-state
+--ro interface* [name]
+--ro name string
+--ro type identityref
+--ro admin-status enumeration {if-mib}?
+--ro oper-status enumeration
+--ro last-change? yang:date-and-time
+--ro if-index int32 {if-mib}?
+--ro phys-address? yang:phys-address
+--ro higher-layer-if* interface-state-ref
+--ro lower-layer-if* interface-state-ref
+--ro +-speed? yang:gauge64
rostatistics
+--ro discontinuity-time yang:date-and-time
+--ro in-octets? yang:counter64
+--ro in-unicast-pkts? yang:counter64
+--ro in-broadcast-pkts? yang:counter64
+--ro in-multicast-pkts? yang:counter64
+--ro in-discards? yang:counter64
+--ro in-errors? yang:counter32
+--ro in-unknown-protos? yang:counter32
+--ro out-octets? yang:counter64
+--ro out-unicast-pkts? yang:counter64
+--ro out-broadcast-pkts? yang:counter64
+--ro out-multicast-pkts? yang:counter64
+--ro out-discards? yang:counter64
+--ro out-errors? yang:counter32
import requests
url = ("https://ios-xe-
mgmt.cisco.com:9443/restconf/data/ietf-interfaces:" +
"interfaces/interface=GigabitEthernet2")
headers = {
'Accept': "application/yang-data+json",
'Authorization': "Basic cm9vdDpEXlZheSFfMTAm",
'Content-Type': "application" }
response = requests.request(rest_operation, url, data=payload, headers

```

```
headers, verify=False)
print (response.text)
```

Refer to the exhibits. An interface named "GigabitEthernet2" has been configured on a Cisco IOS XE device. Using RESTCONF APIs as defined by the ietf-interfaces@2014-05-08.yang model, which two combinations of "rest\_operation" and "payload" must be added to the Python script to set the "description" to "Configured by RESTCONF"? (Choose two.)

A.

```
rest_operation = "PATCH"
payload = " {\n      \"ietf-interfaces:interface\": {\n        \"name\": \"GigabitEthernet2\", \n        \"description\": \"Configured by RESTCONF\" \n      }\n}"
```

B.

```
rest_operation = "PUT"
payload = " {\n      \"ietf-interfaces:interface\": {\n        \"name\": \"GigabitEthernet2\", \n        \"description\": \"Configured by RESTCONF\" \n      }\n}"
```

C.

```
rest_operation = "PUT"
payload = "{\n  \"ietf-interfaces:interface\": {\n    \"name\": \"GigabitEthernet2\", \n    \"description\": \"Configured by RESTCONF\", \n    \"type\": \"iana-if-type:ethernetCsmacd\", \n    \"enabled\" true, \n    \"ietf-ip:ipv4\": {\n      \"address\": [\n        {\n          \"ip\": \"10.255.255.1\", \n          \"netmask\": \"255.255.255.0\" \n        }\n      ]\n    }\n  }\n}"
```

D.

```
rest_operation = "POST"
payload = " {\n      \"ietf-interfaces:interface\": {\n        \"name\": \"GigabitEthernet2\", \n        \"description\": \"Configured by RESTCONF\" \n      }\n}"
```

E.

```
rest_operation = "POST"
payload = "{\n  \"ietf-interfaces:interface\": {\n    \"name\": \"GigabitEthernet2\", \n    \"description\": \"Configured by RESTCONF\", \n    \"type\": \"iana-if-type:ethernetCsmacd\", \n    \"enabled\" true, \n    \"ietf-ip:ipv4\": {\n      \"address\": [\n        {\n          \"ip\": \"10.255.255.1\", \n          \"netmask\": \"255.255.255.0\" \n        }\n      ]\n    }\n  }\n}"
```

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

**Answer: AB**

Explanation:

**Question: 170**

What is a well-defined concept for GDPR compliance?

A. Records that are relevant to an existing contract agreement can be retained as long as the contract is in effect.

B. Data controllers must confirm to data subjects as to whether where, and why personal data is being processed.

C. Personal data that was collected before the compliance standards were set do not need to be protected.

D. Compliance standards apply to organizations that have a physical presence in Europe.

**Answer: B**

Explanation:

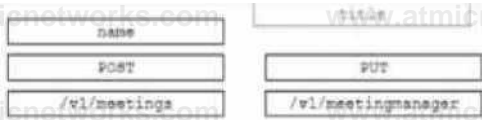
<https://gdpr.eu/article-13-personal-data-collected/>

**Question: 171**

## DRAG DROP

Drag and drop the code snippets from the bottom onto the boxes where the code is missing to create a Cisco Webex meeting by using the Webex API. Not all options are used.

```
import requests, json
token = 'eyJhbGciOiJIbGciLCJ0eSI6InR5cGU6ImF1dG8iLCJ1IjoiYXV0b3R5IiwiaWF0Ijoi2020-11-10T15:00:00Z', "end": "2020-11-10T17:00:00Z", "enabledAutoRecording": False, "allowAnyDialIn": True
headers = {'Authorization': f'Bearer {token}', 'Content-Type': 'application/json'}
payload = {
    "title": "DevMet Webex Discussion",
    "foreword": "AORTUM",
    "start": "2020-11-10T15:00:00Z", "end": "2020-11-10T17:00:00Z", "enabledAutoRecording": False, "allowAnyDialIn": True
}
response = requests.request("PUT", "https://api.cisco.com/webex/meetings", headers=headers, data=json.dumps(payload))
print(response.text.encode('utf8'))
```



**Answer:**

## Explanation:

```
import requests, json
token = 'eyJhbGciOiJIbGciLCJ0eSI6InR5cGU6ImF1dG8iLCJ1IjoiYXV0b3R5IiwiaWF0Ijoi2020-11-10T15:00:00Z', "end": "2020-11-10T17:00:00Z", "enabledAutoRecording": False, "allowAnyDialIn": True
headers = {'Authorization': f'Bearer {token}', 'Content-Type': 'application/json'}
payload = {
    "title": "DevMet Webex Discussion",
    "foreword": "AORTUM",
    "start": "2020-11-10T15:00:00Z", "end": "2020-11-10T17:00:00Z", "enabledAutoRecording": False, "allowAnyDialIn": True
}
response = requests.request("PUT", "https://api.cisco.com/webex/meetings", headers=headers, data=json.dumps(payload))
print(response.text.encode('utf8'))
```



## Question: 172

Refer to the exhibit.

```

module Cisco-IOS-XE-native
  *rw c>dvt
  *rw int<r<<<
  *rw GigabitEthernet<r.m;
  | *rw name Bering
  | *rw iwdla-type? enumeration
  | *rw port-type? enumeration
  | *rw description? string
  *rw switchport-conf
  | *rw switchport? boolean
  | *rw switchport Plos-featuresJawicchjng-platforml i | *rw attackwise-victual
  | *rw link? uint1
  | *rw dual-active-detection? empty
  | *rw mac-address? string
  *rw shutdown? empty
  *rw arp i I *rw timeout? uintH

```

Interface Loopback 1 must be created with IP address 10.30.0.1/24 in a Cisco IOS XE device using RESTCONF. The schema that is defined by the exhibit must be used. Which body and URI should be used for this operation?

A)

```

FVT lestoni data-Cisco-I03-XE-native:interfaces | "Loopback"j [{"name": "1%"description*i "Loopback 1 • description", •Vt I "address"i |
"primary: I "address": 10.>0.0.1", "mask"! **255.255.255.0" I

```

B)

```

restconf/data/Cisco-IOS-XE-native:interfaces
  "LoopbackX": | {"name": "1", "description"j "Loopback 1 - description", #If: I
  "address"i |
  "primary! | "address"! 10.30.0.1",
  "mask"! *24")

```

C)

```

POST
/restconf/data/Cisco-IOS-XE-native:interface
{
  "Loopback": {
    "name": "1",
    "description": "Loopback 1 - description",
    "ip": {
      "address": {
        "primary": { "address": 10.30.0.1,
                    "mask": "255.255.255.0" }
      }
    }
  }
}

```

D)

```
#!/usr/bin/python
import json
import urllib2

url = "http://localhost:8080/restconf/data/Cisco-IOS-XE-native:interface"

data = {
    "Loopback": [
        {
            "name": "1",
            "description": "Loopback 1 - description",
            "ip": {
                "address": {
                    "primary": { "address": "10.10.0.1",
                                "mask": "24"
                            }
                }
            }
        }
    ]
}

req = urllib2.Request(url, json.dumps(data))
response = urllib2.urlopen(req)
```

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

**Answer: A**

Explanation:

**Question: 173**

Refer to the exhibit.

```
<0 is:
- runcli Base config teapL ioa config:

    lowing battered 10240
    * service tieeataapa debug date tie* Mee Joceltiee shoe* tine tone
    * service tieestaape log dateline m>eqL ocalltee shoe-tinetone
```

Which word is missing from this Ansible playbook shown, to allow the Cisco IOS XE commands for router configuration to be pushed after the playbook is executed?

- A. Commands
- B. Input
- C. Lines
- D. config

**Answer: C**

Explanation:

### Question: 174

DRAG DROP

Drag and drop the code from the bottom onto the where the code is missing to create a host object by using the Cisco Firepower Device Manager API. Not all options are used.

```
import requests
import json

BASE_URL = 'https://ftd.example.com/api/fdm/latest'
url = 
token = 'eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXbzI9In'

payload = {
    "name": "developer.cisco.com", "description": "DevNet host",
    "subType": "HOST", "value": "209.165.200.230",
    "type": 
}

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

response = requests.request(, url, headers=headers,
data=json.dumps(payload))
print(response.text.encode('utf8'))
```

- 
- 
- 
- 
- 
- 
- 

**Answer:**

Explanation:

```
import requests
import json

BASE_URL = 'https://ftd.example.com/api/fdm/latest'
url = f'{BASE_URL}/object/networks'
token = 'eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXbzN8'

payload = {
    "name": "developer.cisco.com", "description": "DevNet host",
    "subType": "HOST", "value": "209.165.200.230",
    "type": "networkobject"
}

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

response = requests.request("POST", url, headers=headers,
data=json.dumps(payload))
print(response.text.encode('utf8'))
```

f'Bearer {token}',  
f'{BASE\_URL}/object/hosts/{ID}'

"GET"

### Question: 175

DRAG DROP

Refer to the exhibit.

**Operation Id:** getSiteHealth

**Description:** Returns Overall Health information for all sites

`GET /dna/intent/api/v1/site-health`

### Responses

**Status:** 200

The request was successful. The result is contained in the response body.

Schema Definition	Example Body
<b>GetSiteHealthResponse</b> response: array[] accessGoodCount: string accessTotalCount: string clientHealthWired: string clientHealthWireless: object clientIssueCount: object clientNumberOffIssues: object latitude: object longitude: object networkHealthAverage: object networkHealthOthers: object networkHealthWireless: object networkNumberOffIssues: object numberOfWirelessClients: object wirelessGoodClients: object	

A developer is creating a Python script by using Cisco DNA Center APIs Drag and drop the code from the bottom onto the box where the code is missing in the Python script to retrieve and display wireless health information for each site Not all options are used.

```
import requests
URL = 'https://cisco.dnatest.com:443/dna/intent/api/v1/site-health'
ACCESS_TOKEN = 'ABCD1234'

headers = {
    'X-Auth-Token': [REDACTED],
    'Content-type': 'application/json;charset=utf-8'
}

response = requests.get(URL, params=params_data, headers=headers)
[REDACTED]

sites_response = response.json['response']
for site in sites_response:
    [REDACTED]
else:
    print([REDACTED],
response.text)
```

```
if response.status_code == 200:
    while response.code == 200:
        ACCESS_TOKEN
        response.status_code
        print(site['siteName'][0]['networkHealthWireless'])
        response.error
        print('{}{}'.format(site['siteName'], site['networkHealthWireless']))
```

## Answer:

Explanation:

```
import requests
URL = 'https://cisco.dnatest.com:443/dna/intent/api/v1/site-health'
ACCESS_TOKEN = 'ABCD1234'

headers = {'X-Auth-Token': ACCESS_TOKEN, 'Content-type': 'application/json;charset=utf-8'}
response = requests.get(URL, params=params_data, headers=headers)
if response.status_code == 200:
    sites_response = response.json['response']
    for site in sites_response:
        print(site['siteName'][0]['networkHealthWireless'])
else:
    print(response.status_code, response.text)

while response.code == 200:
    response.error
    print('{}{}'.format(site['siteName'], site['networkHealthWireless']))
```

## Question: 176

Refer to the exhibit.

TO STATE	SAME DESIRED STATE	SERVICE NODE	UR 31	
d(H14dld0ca	ciaca_damet. 1	ciaeo_davnat	demet/Mat: 1.0	Running 23
Binutaa	Running	del. dace, can		
a847\$60<fa<	claca_aemet. 2	eiaco_damet	de met/Mat: 1.0	Running 23
minutea	Running	del. sites, earn		
Ca^atod?3c4^	cnco_aevnet. 3	c::5C3_3evr.eT	cevr.es/Mat : 1.0	Running 23
minutes	Stunning	dci.cieco.com		
eft-aadcJsc	ciaca_semet.4	eiace_demet	semes teat; 1.0	Running 23
minutaa	Running	dc3.ciaeo.com		
BdddOX2d<3f4	citGO—devnet.5	cieco^devnet	minutea demet/teat: 1.0	Running 25
Running		dc4.ciaec.com		

The cisco\_devnet Docker swarm service runs across five replicas The development team tags and imports a new image named devnet'test 1 1 and requests that the image be upgraded on each container There must be no service outages during the upgrade process Which two design approaches must be used? (Choose two.)

- A. Implement rolling upgrades by using the docker service update command.
- B. Enable parallel upgrades by using the docker service update command.

- C. Ensure that the service is hosted behind a VIP with no session persistence.
- D. Update the restart policy of the containers to restart upon failure.
- E. Ensure that the service replicas are set to a minimum of 5

**Answer: A, C**

Explanation:

**Question: 177**

How is AppDynamics used to instrument an application?

- A. Provides visibility into the transaction logs that can be correlated to specific business transaction requests
- B. Enables instrumenting a backend web server (or packet installation by using an AppDynamics agent
- C. Retrieves a significant amount of information from the perspective of the database server by using application monitoring
- D. Monitors traffic flows by using an AppDynamics agent installed on a network infrastructure device

**Answer: A**

Explanation:

**Question: 178**

An engineer is developing a Docker container for an application in Python. For security reasons, the application needs to be accessible on port 5001 only. Which line should be added to the Dockerfile in order to accomplish this?

- A. ENTRYPOINT 5001
- B. PORT SRC 5001
- C. ADO PORT 5001
- D. EXPOSE 5001

**Answer: D**

Explanation:

### Question: 179

DRAG DROP

Drag and drop the code snippets from the bottom onto the boxes where the code is missing to deploy three Cisco UCS servers each from a different template. Not all options are used.

```

import 
url = "https://rrZ09;iS5.ZD0.731"

dn="org-root/vnware-service-tempi-001" cookie="real cookie*" inTargetOrg="org-root" mKunrchiesls'no'l
<inXsMSet>
  <dn v*lue"*serTlce-proffle-A*/>
  <dn value@"service-proffle-B"/>
  <dn value="service-proffle-C"/>
</:nNaae5et>

...
headers = {'Accept': 'application/xal'}

response = requests.request(* 
url, headers=headers, data=payload)
print(response.text.encode('utf8'))

```

GET

/!eInstantiateNNamedTemplate

ComponentNameTemplate

POST

/ComponentNameTemplate

!eInstantiateNNamedTemplate

**Answer:**

Explanation:

```

import  rtywfti
url = "http://209.145.200.231"

payload = <|>
<|>IMt>nn>t<liHma:wipl>t<<|> dn="org-root/enware-sereice-tempi-001" cookie="real cookie*" in"argetOrg="org-root"
:nHxerarchleal="no*"
<inXaaaSet>
<dn velue"*serTlce"profile-A"/>
<dn valuea'svlce-proffle-B"/>
<dn Tlul'"Mrnc<-p:offlt-C'/> </inXaaieSet>
<|/alnatanantiateXNaaedTemclste |>

```

```
headers = {'Accept': 'application/xal'}
```

```
response = requests.request('GET', url, headers=headers, data=payload)
print(response.text.encode('utf8'))
```

31

oap onentaSanaTarp1ato

cc^onentaNaaeres^late

### Question: 180

Which OAuth mechanism enables clients to continue to have an active access token without further interaction from the user?

- A. JWT
- B. password grant
- C. refresh grant
- D. preshared key

**Answer: C**

Explanation:

### Question: 181

Refer to the exhibit.

```
1 server {
2     [redacted]
3     server_name      www.webapp.com;
4     ssl_certificate  www.webapp.com.crt;
5     ssl_certificate_key www.webapp.com.key;
6     ssl_protocols    TLSv1.2;
7     ssl_ciphers      HIGH:!aNULL:!MD5;
8 }
9 }
```

A developer must configure an SSL certificate for an nginx web server. Which code must be added on the script to accomplish this configuration?

A)

```
listen 443 ssl;
```

B)

```
listen 443/ssl;
```

C)

```
listen 80 ssl;
```

D)

```
listen 443;
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: A**

Explanation:

### Question: 182

A web application is being developed to provide online sales to a retailer. The customers will need to use their username and passwords to login into their profile and complete their order. For this reason,

the application must store user passwords. Which approach ensures that an attacker will

need to crack the passwords one at a time?

- A. Apply the peppering technique
- B. Store the passwords by using asymmetric encryption
- C. Apply the salting technique
- D. Store the passwords by using symmetric encryption

**Answer: C**

Explanation:

**Question: 183**

Which scenario is an example of the pseudonymization of sensitive data that meets GDPR requirements?

- A. encrypting sensitive data at rest by using native cloud services and data in transit by using SSL/TLS transport
- B. implementing X-Forwarded-For at the frontend of a web app to enable the source IP addresses of headers to change
- C. leveraging an application load balancer at the frontend of a web app for SSL/TLS decryption to inspect data in transit
- D. separating the sensitive data into its own dedicated secured data store and using tokens in its place

**Answer: A**

Explanation:

## Question: 184

Refer to the exhibit.

```
using GF? A3KPA33 to Mt credentials
> git fetch --tags --force --progress -- http://73ae195f715/root/ms-master.git • re!>/hw<it/':r>f>/r<wtsi/9rigin/' t timeout>10
ERROR: Error fetching remote repo 'origin'
Hudson.plugins.git.GitException: failed to fetch fracs http://73ae195f715/root/ns-suster.git
    at Hudson.plugins.git.Gitax.fetchFrom(Git3CM.java:908)
    at Hudson.plugins.git.Oit>CX.retrievechanges<0It3>.java: 1123)
    at Hudson.plugins.git.GIUCM.checkout(GitSCM.java: 1159)
    at Hudson.scm.3CH.checkout(8CH.java:505)
    at Hudson.model.Abstractproject.checkout(AbstractPzobject.java:1205) at
Hudson.model.AbstractBuildSAabstractBuildExecution.defaultchockout(AbstractBuild.java 1574)
    at jenkins.sen.SCMCheckoutBtrategy.checkout(SCNCheckoutStrategy.java:St I at
Hudson.nodal.AbstractBuildSAabstractBuildExecution.run(AbstractBuild.java:499)
    at Hudson.model.Run.execute(Run.java:1853)
    at Hudson.nodal.FreeStyleBuild.run(FreeStyleBuild.java:43)
    at Hudson.nodal.ResrurceCor.troiler.execute(ResourceController.java:97)
    at huds on.nodal.Exe cut or.run(Executox.java:42 7)
Caused by: Hudson, plugins .git .Git Except ion: Command "git fetch --tags --force --
progress -- http://73aool55f715/root/M-naater.git
♦refs/heads/':refs/remotes/origin/"" returned status code 128: stdout:
stderr: reacts: GitLab is not responding fatal: unable to access 'http://73aeol93f715/root/nw-naater .git/'I The requested URL
returned error: 502
```

An attempt to execute a CI/CD pipeline results m the error shown What is the cause of the error?

- A. The VCS repository is unavailable
- B. The unit tests failed to complete
- C. The built artifacts failed to publish to the target server
- D. The remote library repository is unavailable

**Answer: D**

Explanation:

## Question: 185

DRAG DROP

An engineer is developing a web-based application that will be used as a central repository for the HR department The application needs to authenticate user access and encrypt communication. Drag and drop the steps from the left into the order on the right to install an application-specific SSL certificate.



**Answer:**

**Explanation:**



**Question: 186**

Which security approach should be used for developing a REST API?

- A. Use custom security relevant HTTP response codes
- B. Utilise TLS for end to end encryption
- C. Add an API key to each URL string
- D. Utilize CORS headers

**Answer: B**

**Explanation:**

**Question: 187**

## DRAG DROP

Refer to the exhibit.

### Query Parameters

- `email` List people with this email address For non-admin requests, either this or `displayHam*` are required `displayName`
  - `*`` List people whose name starts with this string For non-admin requests.
- `id` List people by ID Accepts up to 85 person IDs separated by commas If this parameter is provided then presence information (such as the last Activity or status properties) will not be included in the response `orgId`
  - `^o`` List people in this organization Only admin users of another organization (such as partners) may use this parameter calling `Data`
  - `^a`` Include BroadCloud user details in the response
    - Default false

### locationId

- `*#`` List people present in this location
  - `max`` Limit the maximum number of people in the response
    - Default 100

Drag and drop the code snippets from the bottom onto the boxes where the code is missing to retrieve a list of all the members of a specific Cisco Webex organization Not at options are used.

```
headers = {
    [redacted]
}
params = {
    [redacted]
}

url = "http://apl.eiacoapark.eoa/vl/paspla"
response = req.request("GET", uri=url, params=params, headers=headers)
raaponaaHeader = raaponaa.header
if "Link" in raaponaaHeader:
    print(raaponaaHeader["link"])
else:
    [redacted]
```

```
print("Results:", json.dumps(response.json(), indent=4))

"Authorization": "Basic Dlk2dcYQcOTcxyOjMscxNDM1ZTR-4851-9309"
print("Paginated results detected!")

print("No pagination!")

"orgId": "Y2l2adcfavL3VzLRPQU0vZDk3OYaeidiOxMNU5LTcGRkOHN",

"Authorization": "Bearer Dlk2dcYQcOTcxyOjMscxNDM1ZTR-4851-
```

**Answer:**

**Explanation:**

```

import requests as req
import json

headers = {
    "Authorization": "Bearer Dlk2dcYQtOTcxy0iMzcxNDM1STR-4851-"
}

params = {
    "orgId": "Y2lzsdcfzvL3VzLRFQU0v2Dk3OYasdi0xM9U5LTsGRkOhm",
    "max": "10"
}

url="https://api.ciscospark.com/v1/people"
response=req.request("GET", url, params=params, headers=headers)

responseHeaders=response.headers
if "Link" in responseHeaders:
    print(responseHeaders["link"])
else:
    print("No pagination!")
    print("Results:", json.dumps(response.json(),indent=4))

```

```

"Authorization": "Basic Dlk2dcYQtOTcxy0iMzcxNDM1STR-4851-9309"
print("Paginated results detected!")

```

### Question: 188

What is a benefit of using model-driven telemetry?

- A. enables operational data to be collected at higher rates and a higher scale
- B. enables the application to pull data faster than pushing the data
- C. reduces the load on the server by enabling the client to pull data
- D. simplifies the development of clients by using a single encoding standard for the data

**Answer: D**

Explanation:

### Question: 189

A developer has issued `git add file1` and `file2 test.py` command to add the three files for the next commit, but then decides to executed `test.py` from this command. Which command needs to be used to exclude `test.py` from this commit but keep the rest of the files?

- A. git clean — test.py
- B. git reset - test.py
- C. git checkout - file1 file2
- D. git stash -- file1 file 2

**Answer: B**

Explanation:

### Question: 190

Refer to the exhibit.

```

afar: :<^iti:i, :tquff:>_ctch<
from flask mpert Flask, racier template, request, ^semfy

app ■ fliitl naae I
request »_cache. mate ll_cache l'app;eche'■ backend*' rein'. expire_ofter*J

9app.route)' ', aethoda*"SE?\'KS?')
□e: teener<)>i.
if request.method ** *POS?*:
    Iccatlen * rc^uaat. fem.9*11'location'I
    url ■ "httpa: / iavriat .com api ***reh/(0 r". femat I location)
    raaponaa_dict ■ raquaata.get(url)*J.accl) raturu jaoaxfyira»ponaa_aict)
    return renaer_ftEplateI'index.hrel*I

if __name__ == '__main__':
    app.run()

```

An application has been developed to serve the users in an enterprise After HTTP cache controls are implemented in the application users report that they receive state data when they refresh the page Without removing HTTP cache controls, which change ensures that the users get current data when refreshing the page'

- A. Reduce the expire\_after value to 60.
- B. Add a Cache-Control header that has a value of no-cache, no-store must-revalidate.
- C. Add an H-None-Match header that has a value of an Entity Tag.
- D. Add an Expires header that has a value of 0.

**Answer: B**

Explanation:

## Question: 191

A developer must create VLANs 2-5 on a remote Cisco NX-OS switch by using an Ansible playbook The playbook must meet these requirements

- Configure the VLANs and a name for each VLAN
- Only run against the switches inventory group
- Execute from the local Ansible controller
- Prevent the collection of system information prior to execution

Which playbook must be used?

A)

```
- targets: switches
connection: local
collect_info: false
tasks:
  block:
    - name: Create VLANs
      name_vlan: vlan_id="2-5" state=present
      hosts: [ inventory_hostname ]
```

B)

```
- hosts: switches
connection: local
gather_facts: no
tasks:
  - name: Create VLANs
    name_vlan: vlan_id="{{ item.vid }}" state=present
    hosts: [ inventory_hostname ]

  - name: Configure VLAN Name
    name_vlan: vlan_id="{{ item.vid }}" name="{{ item.name }}"
    hosts: [ inventory_hostname ]
    state=present
    with_items:
      - { vid: 2, name: web }
      - { vid: 3, name: db }
      - { vid: 4, name: app }
      - { vid: 5, name: mgmt }
```

C)

```

- groups: switches
  connection: localhost
  collect_info: no
  tasks:
    - name: Create VLANs
      name_vlan: vlan_id="1-4" state=present
      host: {{ inventory_hostname }}
    - name: Configure VLAN Name
      name_vlan: vlan_id={{ item.vid }} name={{
        item.name }} host={{ inventory_hostname }}
      state=present
      loop:
        - { vid: 2, name: web }
        - { vid: 3, name: db }
        - { vid: 4, name: app }
        - { vid: 5, name: mgmt }

```

D)

```

- hosts: switches
  connection: 127.0.0.1
  gather_facts: false
  tasks:
    - name: Create VLANs
      name_vlan: vlan_id="1-4"
      state: present
      host: {{ inventory_hostname }}
    - name: Configure VLAN Name
      name_vlan: vlan_id={{ item.vid }} name={{
        item.name }} host={{ inventory_hostname }}
      state=present
      loop: "[ { vid: 2, name: web }, { vid: 3, name:
        db }, { vid: 4, name: app }, { vid: 5, name:
        mgmt } ]"

```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: A**

Explanation:

**Question: 192**

DRAG DROP

Drag and drop the steps from the left into the sequence on the right to implement an OAuth2 threelegged authorization code flow grant type in an application Not all options are used.

Using the user credentials, the application requests an authorization token.

The user is directed to a login page where they supply credentials and authorize consent.

Using the authorization token, protected API calls can then be made.

Using the code generated during login, protected API calls can then be made.

Using the code generated during login, the application requests an authorization.

step 1

step 2

step 3

**Answer:**

**Explanation:**

The user is directed to a login page where they supply credentials and authorize consent.

Using the user credentials, the application requests an authorization token.

Using the authorization token, protected API calls can then be made.

Using the code generated during login, protected API calls can then be made.

Using the code generated during login, the application requests an authorization.

**Question: 193**

Refer to the exhibit.

```

1 i{srft jiat 2 insert requests $rta requests.exception* taptxt HTTPError
2
3 url'"httpsi^/deenet.ap.net/accesspints(244*
4 | tryi response * requests.get(url)
5 . reap sr.se. raise_fer_status (I
6 9 except HTTPError as http_err: print ('HTTP error occurred:' .format (http_err))
7 11 else:
8     print('Success I')
9 13 *pe ■ jeon.leads(response.text)
10 14 print jssn[0]['apld*']
11
12 $ python get-ap.py
13 Success: 'u'isacti}e': raise, u'apld': 24€, u'apNaae': 'reception*} Traceback (asst recent call last):
14 File "get-ap.py", line 14, in <asdule> print ape[0]('ap'd'I
15 KeyError: 0

```

A Python developer is creating a wireless network device inventory application for local deployment of Cisco access points The developer is retrieving an access point ID by using a REST API The output indicates that there was a KeyError when parsing the JSON response. What returns the expected output of 266 at line 14?

A)

```
print aps['apId']
```

B)

```
print aps[1]['apId']
```

C)

```
print aps[0]['apId']
```

D)

```
print aps.['apId']
```

A. Option

B. Option

C. Option

D. Option

**Answer: A**

Explanation:

**Question: 194**

DRAG DROP

A developer is creating a Python script to analyze errors during REST API call operations. The script will be used with Cisco solution and devices. Drag and drop the code from the bottom to the box where the code is missing to implement control flow for handling unrecoverable REST API calls. Not all options are used.

```

import requests, json, sys

BASE_URL = "https://10.10.20.90:8443"
AUTH_URL = f"{BASE_URL}/j_security_check"
headers = {'Content-Type': 'application/x-www-form-urlencoded'}
payload = {'j_username': "admin", 'j_password': "password"}

session = requests.Session()
response = session.post(AUTH_URL, headers=headers, data=payload, verify=False)

if response.status_code == 403:
    DEVICE_URL = f"{BASE_URL}/dataservice/device/interface/synced?deviceId=10.10.1.11"
    response = session.get(DEVICE_URL, verify=False)
    print(response.text.encode('utf8'))
    sys.exit(0)

elif response.status_code == 403:
    print("Authentication error")

else:
    print("Unknown Error!")
    sys.exit(1)

```



**Answer**

**Explanation:**

```

import requests, json, sys
BASE_URL = "https://10.10.20.90:8443"
AUTH_URL = f"{BASE_URL}/j_security_check"
headers = {'Content-Type': 'application/x-www-form-urlencoded'}
payload = {'j_username': "admin", 'j_password': "password"}

session = requests.Session()
response = session.post(AUTH_URL, headers=headers, data=payload, verify=False)

```

```

if response.status_code == 403:
    DEVICE_URL = f"{BASE_URL}/dataservice/device/interface/synced?deviceId=10.10.1.11"
    response = session.get(DEVICE_URL, verify=False)
    print(response.text.encode('utf8'))
    sys.exit(0)

```

```

elif response.status_code == 403:
    print("Authentication error")

```

```

else:
    print("Unknown Error!")
    sys.exit(1)

```

```

response.status == 403

```

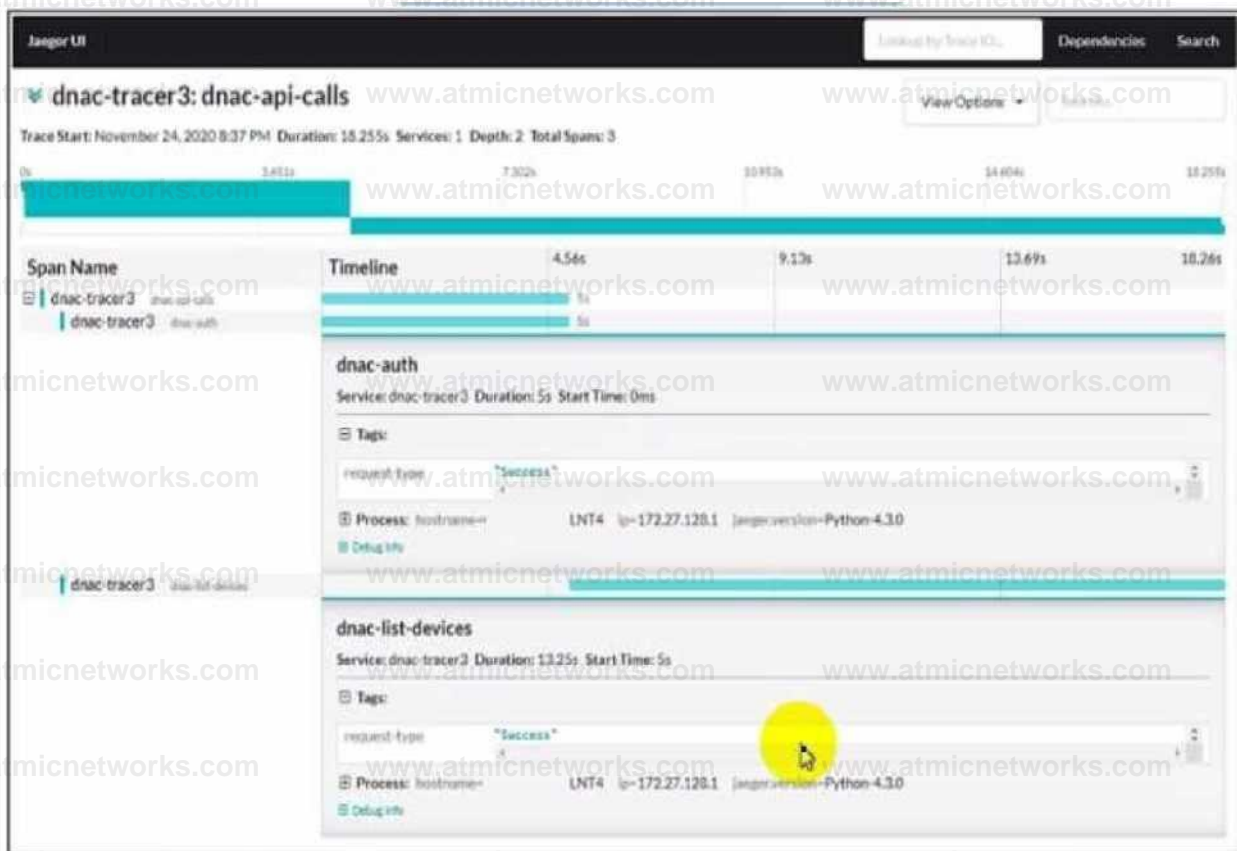
```

response.status == 200

```

## Question: 195

Refer to the exhibit



```
1 def init_tracer(service):
2     logging.getLogger('').handlers = []
3     logging.basicConfig(format='%(message)s', level=logging.DEBUG)
4     config = Config(
5         config={'sample': {'type': 'const', 'param': 1, 'logging': True,}},
6         service_name=service,)
7     return config.initialize_tracer()
8 tracer = init_tracer('dnac-tracer')
9 base_url = 'https://sandboxdnac.cisco.com/'
10
11 with tracer.start_span('dnac-api-calls') as span:
12     with tracer.start_span('dnac-auth', child_of=span) as site_span:
13         try:
14             dnac = DNACenterAPI(username='devnetuser', password='Cisco123!',
15                                 base_url=base_url, version='1.3.3',
16                                 verify=False)
17             print('auth passed')
18             site_span.set_tag('request-type', 'Success')
19         except Exception as e:
20             print('failed')
21             site_span.set_tag('request-type', e)
22
23 with tracer.start_span('dnac-list-devices', child_of=span) as site_span:
24     try:
25         devices = [dnac.devices.get_device_list() for device in devices]
26         print(devices)
27         site_span.set_tag('request-type', 'Success')
28     except Exception as e:
29         print('Failed to list devices!')
30         site_span.set_tag('request-type', e)
```

An application is developed to perform multiple API calls. The calls will be performed on the infrastructure devices. Delays in the information transfer occur when the application is executed.

What are two reasons for the issue? (Choose two )

- A. The list devices API call is failing and does not return a result
- B. Listing devices takes longer than usual due to high network latency
- C. One of the API calls takes roughly three times as long to complete
- D. The list devices API call is inefficient and should be refactored
- E. The requests are being rate limited to prevent multiple calls causing the excessive load

**Answer: B, C**

Explanation:

### Question: 196

Refer to the exhibit.

```
import MySQLdb db = MySQLdb.connect(host="localhost",
                                     user="root",
                                     passwd="root",
                                     db="test")

cur = db.cursor()
platform = raw_input('Enter language: ')
cur.execute("SELECT * FROM platforms \
WHERE Language = '%s'" % platform)
for row in cur.fetchall(): print(row)

db.close (>
```

Which action should be performed to avoid an SQL injection attack?

- A. Encrypt the password that is used to connect to the database
- B. Develop a denial of service response plan
- C. Vacate the input on the platform variable
- D. Compile the Python file instead of allowing live interpretation

**Answer: C**

Explanation:

**Question: 197**

A developer is working on a new feature in a branch named 'newfeay000222118' and the current working primary branch is named 'pnm409024967'. The developer requires a merge commit during a fast forward merge for record-keeping purposes. Which Git command must be used?

A)

```
git reset --commit-ff newfeat000222118
```

B)

```
git add --commit-ff newfeat000222118
```

C)

```
git merge --no-ff newfeat000222118
```

D)

```
git commit --no-ff newfeat000222118
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: C**

Explanation:

**Question: 198**

A developer is deploying an application to automate the configuration and management of network files and routers. The application must use REST API interface to achieve programmability. The security team mandates that the network must be protected against DDoS attacks. What mitigates the attacks without impacting genuine requests?

- A. API rate limiting at the application layer
- B. IP address filtering at the application layer
- C. traffic routing on the network perimeter
- D. firewall on the network perimeter

**Answer: D**

Explanation:

### Question: 199

A development team is working on a bug fix in a remote branch named "UXbug000222134" and the current working primary branch is named ,prod409024967'. A developer who just joined the team needs to checkout the remote branch. Which Git commands must be used?

A)

```
git add UXbug000222134
git push origin om
```

B)

```
git add UXbugO 134
git checkout •
```

C)

```
git fetch --multiple
git branch UXbug000222134
```

D)

```
git fetch --all
git checkout 'JXbugj - 0212134
```

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

**Answer: C**

Explanation:

### Question: 200

Refer to the exhibit.

```

try:
    response = requests.post(url)
    if |_____| (== 101):
        print(f"--- returned (response.status code) from (url).*) print('--- Check Authentication*)
    else:
        print(f"--- returned (response.status code) from (url)*)

```

A network engineer writes a script to test authentication workflow using Python and REST API. The engineer wants to ensure that the script handles expected errors by matching output to HTTP status codes. The script uses the Python requests module. Which line of code must be added on the snippet where the code is missing?

- A. requests.error\_code
- B. response.sutus\_code
- C. response
- D. requests.post

**Answer: B**

Explanation:

### Question: 201

Refer to the exhibit. Pipenv is used to manage dependencies. The test runs successfully on a local environment. What is the reason for the error when running the test on a CI/CD pipeline?

- A. The pipeline in the local environment was not pushed to the remote repository
- B. All the unit tests in testsum.py failed
- C. Pytest did not detect any functions that start with test\_.
- D. Nose2 was not used as the test runner

**Answer: A**

Explanation:

### Question: 202

Refer to the exhibit.

```
"ietf-interfaces:interface":({
  "name": "GigabitEthernet2", "description": "Configured by RESTCONF", "type": "iana-if-type: ethernet",
  "enabled": true, "ietf-ip:ipv4": {
    "address": [
      {
        "ip": "10.255.255.1",
        "netmask": "255.255.255.0"
      }
    ]
  }, "ietf-ip:ipv6": {}
})
```

An engineer is managing a network that consists of Cisco IOSXE devices. There is a need to retrieve the details of the interface GigabitEthernet2 using RESTCONF. Which URI will accomplish this by providing the same response as shown in the JSON body?

A)

<https://10.255.255.1:443/ios-xe-configuration/rearconf/data/interfaces/naae/GigabitEthernet2>

B)

[https://10.255.255.1:443/ios-xe-configuration/restconf/data/ietf-interfaces/\\*:interface/GigabitEthernet2](https://10.255.255.1:443/ios-xe-configuration/restconf/data/ietf-interfaces/*:interface/GigabitEthernet2)

C)

https://los-xo-xgirt.cisco.com.xostconf data ietf'intax facas/GigabitEth\*xnat2

D)

http\*://io\*-xa-mgnt.cites.con? rattconf data latt-intaxfacaaaintaxiaca/GigabitEthainafZ

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: D**

Explanation:

**Question: 203**

Refer to the exhibit.

◆--rw interfaces	
I ◆--rw interface* [name]	
*--xo name	string
◆--rw description?	string
◆--tw t woe	identityref
◆--xo enabled?	boolean
I ◆--rw link-up-down-trap*	'enable?' enumeration
◆--TO int:1 faces-state	
◆--xo interface* name)	
◆--xo nano	string
◆--xo -yp@	identityref
◆--xo adaiin-ataua	enumeration
◆--to op<x-ataua>	enumeration
◆--xo laa-change?	yang:date-and-time
◆--xo if-index	int:32
◆--xo phys-addressJ?	yang:phys-address
◆--TO highex-layax-if*	interface-state-ref
◆--xo lower*1 aver*if *	interface-state-ref
◆--xo *peed?	yang:gauge64
◆--xo atatiaties	
◆--to discontinuity-time	yang:date-and-time
*--xo in-octets?	yang:counter64
◆--xo in-unicast-pkts?	yang{counter64
◆--xo in-broadcast-pkts?	yang:counter 64
◆--xo in-multicast-pkts?	yang{counter64
◆--io in-discards7	yang:counter 32
◆--xo in-erxors?	yang(counter32
◆--xo in-unknown-prot#2	yang(counter32

Which URL retrieves the errors in the GigabitEthernet 1 interface?

A)

```
/restconf/data/ietf-interfaces:interfaces/interface/\
GigabitEthernet1
```

B)

```
/restconf/data/ietf-interfaces:interfaces-state/\
GigabitEthernet1
```

C)

```
/restconf/data/ietf-interfaces:interfaces/\
GigabitEthernet1
```

D)

```
/restconf/data/ietf-interfaces:interfaces-state/\
interface=GigabitEthernet1
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: D**

Explanation:

### Question: 204

A local data center deployment using Cisco NX-OS switches is scaling and requires automatic configuration at scale. Configuration management must be set up for a Cisco NX-OS switch by using Ansible. The Ansible control server is currently located on a different subnet than the switch. The solution has these requirements:

- The transport protocol used must be encrypted
- The connections must originate from a server in the same local network
- Enable mode must be supported

Which connectivity method must be used?

- A. SSH through a bastion host and `ansible_become` method for privilege escalation.
- B. HTTPS through a repository and `ansible_become` method for privilege escalation
- C. XML-RPC through a web proxy.
- D. HTTP through a web proxy.

**Answer: A**

Explanation:

### Question: 205

Which Puppet manifest changes the NTP server and generates the traffic from VLAN 15?

A)

```
ntp_server | '172.30.200.11':
  ensure      => 'present',
  key         => 94,
  prefer      => true,
  minpoll    => 4,
  maxpoll    => 14,
  vian       => '15',
}
```

B)

```
ntp_server (
  *172.30.200.11*.
  ensure      █> 'present*',
  key         █> #4.
  prefer      █> true*
  minpoll    █> 4.
  maxpoll    █> 14,
  source!interface █> *15*.
)
```

C)

```
ntp_server (*172.30.200.11*: ensure      •> 'present*'
  key       █> #4.
  prefer    > true.
  minpoll   •> 4,
  maxpoll   █> 14.
  source interface █> 'Vian 15'
```

D)

```
ntp_server (
  server      <> '172.30.200.11'
  ensure      <> 'present *',
  key         <> 34,
  prefer      <> true.
  minpoll    a>
  maxpoll    <> 14,
  source interface 1 M> █> 'Vian 15',
)
```

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

**Answer: C**

Explanation:

### Question: 206

An enterprise refactors its monolithic application into a modern cloud-native application that is based on microservices. A key requirement of the application design is to ensure that the IT team is aware of performance issues or bottlenecks in the new application. Which two approaches must be part of the design considerations? (Choose two.)

- A. Periodically scale up the resources of the host machines when the application starts to experience high loads
- B. Instrument the application code to gather telemetry data from logs, metrics or tracing
- C. Adopt a service-oriented architecture to handle communication between the services that make up the application
- D. Deploy infrastructure monitoring agents into the operating system of the host machines
- E. Implement infrastructure monitoring to ensure that pipeline components interoperate smoothly and reliably

**Answer: B, E**

Explanation:

### Question: 207

Refer to the exhibit.

```
for k, v in d.iteritems():
    if k == 'data':
        for i in v:
            for k2, v2 in i.iteritems():
```

An application is created to serve an enterprise. Based on use and department requirements, changes are requested quarterly. Which application design change improves code maintainability?

- A. Use global variables
- B. Use double quotes instead of single quotes to enclose variables
- C. Use different indent levels for variables

D. Use more verbose names for variables

**Answer: D**

Explanation:

### Question: 208

An architect must optimize traffic that targets a popular API endpoint. Currently, the application downloads a large file hourly, but often the file is unchanged and the download causes unnecessary load and delays. Which cURL command must be used to determine the last modified date of the file and to optimize the API usage?

- A. curl GET request
- B. curl HEAD request
- C. curl --silent request
- D. curl -H 'Cache-Control: no-cache' request

**Answer: B**

Explanation:

### Question: 209

Refer to the exhibit.

```
i^oxt http.client lapart cisetypea
XfER_1K_FXY ■ 'USadsdOaLSPJefSBalOibdfsOSSfadSIHC
conn ■ http.client.HTTPFJConnection("http://api.nexaki,C<n/api/vO*) papl»d • G
header# * <
'Content-Type': ' application 3 sen',
'AKJCW': MERMCJCW

Maa.xaqaut('SK", " ir.taxXaxaa", payload, haadtx*
```

A developer created a Python script to retrieve information about Meraki devices in a local network deployment. After requesting a security review of the code, the security analyst has observed poor secret storage practices. What is the appropriate secret storage approach?

- A. Set the Base64 encoded version of the API key as MER\_API\_KEY in the code and Base64 decode before using in the header
- B. Leverage an external secret vault to retrieve MER\_API\_KEY and embed the vault key as a new variable before running the code
- C. Leverage an external secret vault to retrieve MER\_API\_KEY and set the vault key as an OS environment variable before running the code
- D. Set an OS environment variable for MER\_API\_KEY to the API key before running the code and no longer set MER\_API\_KEY within the code

**Answer: C**

Explanation:

**Question: 210**

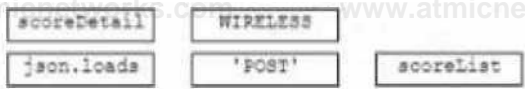
DRAG DROP

A Python script must query the Cisco DNA center API for the number of unique wireless clients that are exhibiting poor health behavior. Drag and drop the code from the bottom onto the box where the code is missing to complete the script. Not all options are used.

```

1 import requests as re
2 flow baseM import b(4encode
3 import json 1
S host ■ 'https://oandboxdnac.cisco.com/'
6 auth ext " 'dna/aystam api-vl aut. -t; ;'^
7 health ext * 'dna intent ■ api'vl "health*
1 user ■ *devnatueer*
J paaw ■ 'Cisco123!'
10
11 encoded_auth a bC4encode(otr.encode(user**:'epaswH.decodefascil*)
12 head " ('Authorisation*: 'Basic I').format(encoded_auth)I
13 body ■ None
14 auth_head = ('X-Auth-Token': json.loads)
15 ro.request('BOST'. host»auth_ext, headers*head< data*body( verify'False 1$ ).text)['Token'))
17 wirelo*s_he«lth_stats " |
IS score['clientUncjueCount*] for score in
19 [itea[ * |
20 re. requosTT'CTT', host • health_ext,
21 headersea^tjwied^databody. verify"FalseI .text
22 H' response' HO) I' || '1 if
23 item{'acoreCategory' ] | 'value* ; - = ' | 'HO)
24 if score['acoreCategory'] ['value*] " 'POOR*
IS HO)

```



### Answer:

#### Explanation:

```

1 import requests as ro
2 from baseCS import b(4encode
3 import json 4
S host ■ 'https://sar.dboxdr.ac.cisco.com/'
4 auth ext = ' dnasystem/api/vl/auth token*
7 health ext ■ 'dna/intent api/vl/ client [-health'
8 user s 'devnatueer'
9 paaw a 'Cisco123!'
10
11 encoded_auth ■ b44encoda(etc.encode(ueer-'*«pasw)).decode)"aecii")
12 head ■ ('Authorisation*: 'Basic (I*.format(encoded_auth))
13 body ■ None
14 auth_head = ('X-Auth-Token': json.loads)
15 ro.request)' POST*, host*auth_oxt. header»head, databody, verif^False
16 ).text)['Token'))
17 wirelooo_health_eteto ■ [
IS score [ * client'JniquCount *! for score in
19 [item[' Isoorelist ]?] for item in Json.loads)
20 re. reqileTrT'TTT*, hoot • hoalth_ext,
21 header s"AMfiA_StAA*_pataeb 3 dy, verify"raloe I .text
22 H' response' HO) I'1 etsroTetail 1 • i
23 item [ 'acoreCategory ' ] | 'value' ] " | 'SIUItii' ] [Q]
24 if score['scorecategory'] ['value'J •• 'POOR'
J# HO)

```



#### Question: 211

When an application is designed that requires high availability, what is a reason to use a cross-region cloud?

- A. Provide disaster recovery protection
- B. Protect from a single component failure
- C. Minimize COSTS
- D. Account for failure in another zone

**Answer: A**

Explanation:

**Question: 212**

Refer to the exhibit.

AVAILABILITY	HOSTNAME	MANAGER STATUS	
cfoae09c992f * Active	docker-weet-0X	Reachable	Ready
8cl5d3'dda:J Active	dooker-weat-02		Ready
0813047843^ Active	deckcr-central-01	Leedec	Ready
9a30ael3f083 Active	docher-central-02		Ready
0aclc7bS\$dSa Active	docker****t*01	Reachatle	Re a dy
dcd<ecda93d3 Active	docker-eaat-02		Ready

A Docker swarm cluster is configured to load balance services across data centers in three different geographical regions west central and east. The cluster has three manager nodes and three worker nodes Anew service named cisco.devnet is being deployed. The service has these design requirements

- All containers must be hosted only on nodes in the central region
- The service must run only on nodes that are ineligible for the manager role

Which approach fulfills the requirements?

- A. Create a second swarm cluster that is hosted only in the central region.
- B. Create the service manually in the central region and set replicas to 0.
- C. Use placement constraints to control nodes to which the service can be assigned.
- D. Enable the control flag in the containers of the west and east regions to prevent the service from starting

**Answer: D**

Explanation:

## Question: 213

Refer to the exhibit.

```
$ Icekcr tvica It
IS          KAME      SCALE IMAGE      CCMMAXC
fc3dlc42$813 d<vr.<t  1/1      devnecil.O */app.>h"
```

Refer to the exhibit A Docker swarm service is currently running in a local data center The service is hosting an HTML website if the container fails then the service becomes unavailable The design must meet these requirements

- The service must be highly available and resilient against a data center outage.
- The service must be accessible from a single URL
- The HTTP session must remain on the server from which the original request was sent

\* Failure of the server must force the client to reconnect

Which two design approaches must be used to meet the requirements? (Choose two.)

- A. Create another swarm cluster within a data center and deploy a secondary instance of the service.
- B. Create another node in the swarm cluster to scale the service across the nodes over two replicas.
- C. Configure an external load balancer to route requests to the swarm service by using session persistence
- D. Scale the Docker swarm service to 2 and set endpoint-mode to DNSRR instead of the default value of VIP
- E. Configure a routing mesh to route requests to the swarm service by using NAT on the network side



```

import coquette

url = "http://api.meraki.com/api/v0/networks/{}".format(networkId)

payload = {}
headers = {'Accept': '*/*'}

response = requests.request("GET", url, headers=headers, data=payload)
print(response.text.encode('utf8'))

```

GET floorPlanId  
 networkId floorPlan  
 network payload

**Answer**

**Explanation:**

```

import requests

url = "https://api.meraki.com/api/v0/networks/{}".format(networkId)

payload = {}
headers = {'Accept': '*/*'}

response = requests.request("GET", url, headers=headers, data=payload)
print(response.text.encode('utf8'))

```

GET floorPlanId  
 network

**Question: 215**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to retrieve and display wireless network health information. The wireless network devices are being managed by Cisco DNA Center and are compatible with REST API. Not all options are used.

```

import requests
import json

BASE_URL = "http://localhost:8080/api/v1/wireless-network-health"

token = 'eyJhbGciOiJIc2EiLCJ0eSI6InR5cGU6ImFjdGlzeSIsImF1dG8iOiJ1b250b29udCJ9'

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

response = requests.request('GET', url, headers=headers)

networkhealth = json.loads(response.text)

for healthDist in networkhealth["healthDistribution"]:
    print(healthDist["category"])

```

## Answer:

### Explanation:

```
import requests
import json

BASE_URL = "http://sandbexdnaci_£*sco_Licoi£2^^^^_^^^__url • f*IBA3EJURL)/dr.a intent fdpvTi-wireleTrTealth*"

token = "eyJhbGe ... yJbXS' head*ra » I
        'x-euth-toker.': token, I
        ^aMiM-Typ*' T ■ TARSriet ion / j son', 'Accept': 'application/jeon'

response = requests.request('GET', url, headers=headers)

networkhealth = json.loads(response.text)

for healthDist in networkhealth['distribution']:
    if healthDist['category'] == 'Warning':
        print "Warning: %s" % healthDist['description']

api = requests.get('http://localhost:8080/api/v1/network-health')
```

"Distribution"

### Question: 216

A developer must deploy a containerized application for network device inventory management. The developer sets up a Kubernetes cluster on two separate hypervisors. The SLA is not currently meeting a specified maximum value for network latency/jitter. CPU/memory and disk I/O are functioning properly. Which two design approaches resolve the issue? (Choose two.)

A. Colocate services in the same pod

- B. Replace the HDD drives with SSD drives
- C. Enable IPv6 within the duster
- D. Deploy the duster to a bare metal server
- E. Upgrade the server NIC card

**Answer: A, E**

Explanation:

### Question: 217

Refer to the exhibit.

```

1 import requests
2 url = "https://api.meraki.com/api/v0/networks/2/clients"
3 payload = None
4 headers = {
5     "Content-Type": "application/json",
6     "Accept": "application/json",
7     "X-Cisco-Meraki-API-Key": "1b87b584fb5411eaadc10242ac120002"
8 }
9
10 response = requests.request('GET', url, headers=headers, data = payload)
11 print(response.text.encode('utf8'))

```

A Python script must list network clients in the Cisco Meraki API that have used a network with an ID of 2 The number of client entries per returned page is restricted to 1.000 according to the API specification Network 2 has 2.500 clients What must be added where the code is missing to print the content of each response?

A)

```

if response.links.get('next'):
    url = response.links['next']['url']
    response = requests.get(url)
    print(response.text)

```

B)

```

url = "https://api.meraki.com/api/v0/networks/2/clients?startingAfter=1000"
response = requests.get(url)
print(response.text)

```

C)

```

url = "https://api.meraki.com/api/v0/networks/2/clients?perPage=1000"
response = requests.get(url)
print(response.text)

```

D)

```
if response.links.get('next'):  
    url = links['url']  
    response = requests.get(url)  
    print(response.text)
```

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

**Answer: A**

Explanation:

### Question: 218

A developer deploys a web application in a local data center that is now experiencing high traffic load from users accessing data through REST API calls. Which approach enhances the responsiveness and performance of the API?

- A. Use HTTP POST or other non-read methods for read requests when possible
- B. Ensure that all read requests are clearly identified by the PUT method
- C. Configure API payload to return errors in HTTP 200 responses
- D. Use HTTP standard authorization header to submit authentication credentials

**Answer: D**

Explanation:

### Question: 219

A custom dashboard of the network health must be created by using Cisco DNA Center APIs. An existing dashboard is a RESTful API that receives data from Cisco DNA Center as a new metric every time the network health information is sent from the script to the dashboard. Which set of requests creates the

custom dashboard?

- A. PUT request to Cisco DNA Center to obtain the network health information and then a POST request to the dashboard to publish the new metric
- B. POST request to Cisco DNA Center to obtain the network health information and then a GET request to the dashboard to publish the new metric
- C. GET request to Cisco DNA Center to obtain the network health information and then a PUT request to the dashboard to publish the new metric
- D. GET request to Cisco DNA Center to obtain the network health information and then a POST request to the dashboard to publish the new metric

**Answer: D**

Explanation:

**Question: 220**

A developer wants to automate virtual infrastructure to provision and manage it. The system will be implemented in large-scale deployment while offering redundancy and scalability with ease of management. The solution must meet these requirements:

- Support the provisioning of up to 500 new virtual machines into private datacenters or the public cloud
- Support the modeling of a complex environment that consists of multiple virtual machines while supporting disaster recovery
- Maintain steady-state environments

Which configuration management solution must the developer use?

A. Puppet

B. Terraform

C. Docker

D. Arable

**Answer: B**

Explanation:

### Question: 221

Refer to the exhibit.

```
<interface xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces"
xmlns:if="urn:ietf:params:xml:ns:yang:ietf-interfaces">
  <name>GigabitEthernet2</name>
  <description>Sample Description</description>
  <type xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">ianaift:ethernetCsmacd</type>
  <enabled>true</enabled>
  <ipv4 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
    <address>
      <ip>10.255.255.1</ip>
      <netmask>255.255.255.0</netmask>
    </address>
  </ipv4>
  <ipv6 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
  </ipv6>
</interface>
```

A)

```
curl -X PUT
https://<HOST>:<PORT>/restconf/data/\
ietf-interfaces:interfaces/\
interface=GigabitEthernet2
```

B)

```
curl -X GET \
https://<HOST>:<PORT>/restconf/data/\
ietf-interfaces:interfaces
```

C)

```
curl -X PUT \
https://<HOST>:<PORT>/restconf/data/\
ietf-interfaces:interfaces \
-H 'Authorization: Basic <TOKEN>'
```

D)

```
curl -X GE?
httpiti ^MOIT>PKJi:>.'r<itconf. d>u letC-lAMifAMiilatetface
irxerface'Gigebidlthern«c2
M|JUUnuixofti Bolt -TOKUT**
```

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

**Answer: A**

Explanation:

### Question: 222

What are two building blocks of the 12-factor app? (Choose two.)

- A. Stateful Processes
- B. Easy access to underlying systems
- C. Dev and Prod must be different
- D. One codebase
- E. Isolated Dependencies

**Answer: D, E**

Explanation:

### Question: 223

DRAG DROP

Drag and drop the code snippets from the bottom onto the boxes where the code is missing to complete the API call to implement error handling. Not all options are used.

```

base url = 'https://webexapis.com/v1'
headers = {'content-type': 'application/json', 'Authorization': 'Bearer secret123'}

def list_messages():
    response = requests.get(base url + '/messages', headers=headers,
                             data={'roomId': '1234'})

    if response.status_code == 429:
        retry_time = int(response.headers.get('Retry-After')) or 3
        print('Too many requests, trying again in ' + str(retry_time) + ' secs.')
        time.sleep(retry_time)
        get_token()
    else:
        return response

list_messages()

```

**Answer:**

**Explanation:**

```

base url = 'https://webexapis.com/v1'
headers = {'content-type': 'application/json', 'Authorization': 'secret123'}

def list_messages():
    response = requests.get(base url + '/messages', headers=headers,
                             data={'roomId': '1234'})

    if response.status_code == 429:
        retry_time = 3
        retry_time = int(response.headers.get('Retry-After')) or retry_time
        print('Too many requests, trying again in ' + str(retry_time) + ' secs.')
        time.sleep(retry_time)
        get_token()
    else:
        return response

list_messages()

```

**Question: 224**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to create a Webex space. Not all options are used.



A Python script has these requirements

- Retrieve a list of Bluetooth clients seen by the access points on a network.
- Print the content of the response
- Retrieve the next page only if it is available in the response headers

What must be added where the code is missing to get the remaining pages by using the next link from the link response header of the last request?

A)

```
if links[0]['rel'] == 'next':  
    url = links[0]['url']  
    response = requests.get(url)  
    print(response.text)
```

B)

```
if links[0]['rel'] == 'next':  
    url = response.links['next']['url']  
    response = requests.get(url)  
    print(response.text)
```

C)

```
if response.links.get('next'):  
    url = links['url']  
    response = requests.get(url)  
    print(response.text)
```

D)

```
if response.links.get('next'):  
    url = response.links['next']['url']  
    response = requests.get(url)  
    print(response.text)
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: A**

Explanation:

**Question: 226**

Refer to the exhibit.

```
list protocol {
  key "identifier name";
  description
    "A process (instance) of a routing protocol. See vyion. May not support ar
    more than one instance of a particular routing protocol";
  leaf identifier {
    type leafref {
      path "../config/identifier";
    }
    description
      "The protocol name for the routing or forwarding protocol to be
      instantiated";
  }
  leaf name {
    type leafref {
      path "../config/name";
    }
    description
      "An operator-assigned identifier for the routing or forwarding protocol.
      For some processes this leaf may be system defined."
  }
}
```

&

A)

```
/restconf/data/
  openconfig-network-instance:network-instances/
    network-instance=/CUSTOMER/protocols/protocol/STATIC
```

B)

```
/restconf/data/
  openconfig-network-instance:network-instances/
    network-instance=/CUSTOMER/protocols/protocol=STATIC
```

C)

```
/restconf/data/
  openconfig-network-instance:network-instances/
    network-instance/CUSTOMER/protocols/protocol/
      STATIC,DEFAULT
```

D)

```
/restconf/data/ietf-interfaces:interfaces/
  interface/GigabitEthernet1
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: A**

Explanation:

**Question: 227**

Which command is used to enable application hosting on a Cisco IOS XE device?

- A. iox
- B. iox-service
- C. application -honing
- D. app- hosting

**Answer: A**

Explanation:

**Question: 228**

DRAG DROP

Refer to the exhibit.

Click on the resource labs in the top left corner to view resources to help with this question. The script uses the Cisco Intersight REST API. Drag and drop the code from the bottom of the code snippet to the blanks in the code to construct a Python script to update the firmware on a specific Cisco Interact managed UCS rack server, DMZ-RL3ADJM.



```
rackunit json body ■ {
  "resource path": "https://www.intersight.coa/api/vi/*",
  "request method": "POST",
  "body": {
    "directDownload": (),
    "Networkshare*": (
      "Hapsyp@",
      "Vpgradeoption": "nw upgrade full",
      "HttpServer's": {
        "LocationLsnk": "http://10.10.10.10/ucs-c240s4-huu-4.0.2h.iso",
        "UpgradeType": "network upgrade",
        "Server's": ""
      }
    )
  }
}
```

```
RESPONSE - request*request! method
url="BURL"rackunit Jeon body('resource path'), auth^AUTH)
firmware json body|request body|J('Server'J |
Jeon.loads(RESPONSE.text!['Results'J(0)('Mold')])
RESPONSE * requests.request(
method@? i mware json body('request method'), url-BURL*firmware json
body('resource path'), data=json.dumps (tirsiwaxe_json_body
('request_body')),auth=AUTH)
```

**Question: 229**

A developer releases a new application for network automation of Cisco devices deployed in a local data center. The application utilizes complex design patterns such as microservices that host multiple third-party libraries and programming languages. The development must be simplified by implementing an observability-driven development lifecycle. Which two considerations must be taken to meet the requirements? (Choose two.)

- A. description of low-level errors
- B. which KPIs to monitor
- C. relevant metrics to expose
- D. which monitoring tools to use
- E. identifying customer priorities

**Answer: B, C**

**Explanation:**

### Question: 230

A developer must recommend an appropriate tool to deploy a configuration to hundreds of servers. The configuration management solution must meet these requirements.

- The servers must initiate the connection to obtain updates
- The configuration must be defined in a declarative style

Which tool should be used?

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

**Answer: A**

Explanation:

### Question: 231

DRAG DROP

Click on the resource lab in the top left corner to view resources to help with this question. An engineer is managing a data center with 6000 Cisco UCS servers installed and running. The engineer is asked to identify all resources where the model is in the UCSB family and the available memory is less than or equal to 5 GB. Drag and drop the code from the bottom onto the blanks in the code snippet to construct a REST API call to accomplish this task. Not all options are used.

```
[/api/v1/ /RackUnits?select=Vendor, Model, and AvailableMemory le 5000]
```

Available code snippets:

- compute
- network
- GET
- FULL
- Model
- Serial

## Answer:

### Explanation:

Model: | Serial ~|uhltewiiUia>| | Hade- ~|, 'UCSB'I •nd Asa:|»bleMe»ory le 5000



### Question: 232

Refer to the exhibit.

#### Exceptions

amprim requests. ftoq«ostticoptia\*(fjrpB, \*Ui«<uv\*)  
Their was an arnbqcuua rscriptmti that ocromsl while handling >wr request

mpcum requests. CMMCIUM rear (\*0/91. "tusmpa)  
A Conner non error ocroned

cnvpfMui request\*.ItTHrrorl'urj/i \*\*liiuryi)  
An UTT? error ocrwmrd

<.u>prM\*H request s.URUtoq«Lrod( \trya. "Utamp)  
A iMM VW. »\* required lo mate a request

rjirpficui requests. Joeftonyilolirectti 'iirpr \*kuarq>  
Ton mans redirect\*

rupfian requests. Caoa«ctTiaoout(irv\* \*\*iuarrfa)  
The reqevt tuned out while trying so rennets to the remote Mewr.  
Request\* that produced thin error are Mfr to retry

exception requests.RoodTLaoout('unrK "tuun^)  
The MtWf did not send am data in the allotted amount at time

nmrptuwi requests. Tteooutperrt. "heurpr)  
The rrrqiwvl timed out

Gilching Ibu error will catch both ConnectTineoot and hoodnaooot errors

```
import requests
url = "https://ios-xe-mgmt.cisco.com:9443/restconf/data/Cisco-IOS-XE-native:native"
headers = {'Authorization': 'Basic 2GV2ZWxvcGVyOkMxc2NvMTIzNDU='}
try:
    response = requests.get(url, headers=headers, verify=False)
except:
    response = requests.get(url, headers=headers, verify=False, timeout=60)
print(response.text)
```

An engineer writes a script to retrieve data from a REST API and must build support for cases where the response that contains data from the server may take a longer time than normal Which code must be added to the snippet where the code is missing to catch such a timeout?

- A. request.exception.ConnectTimeout
- B. request.executions.DataTimeout
- C. request.exeception.HTTPError

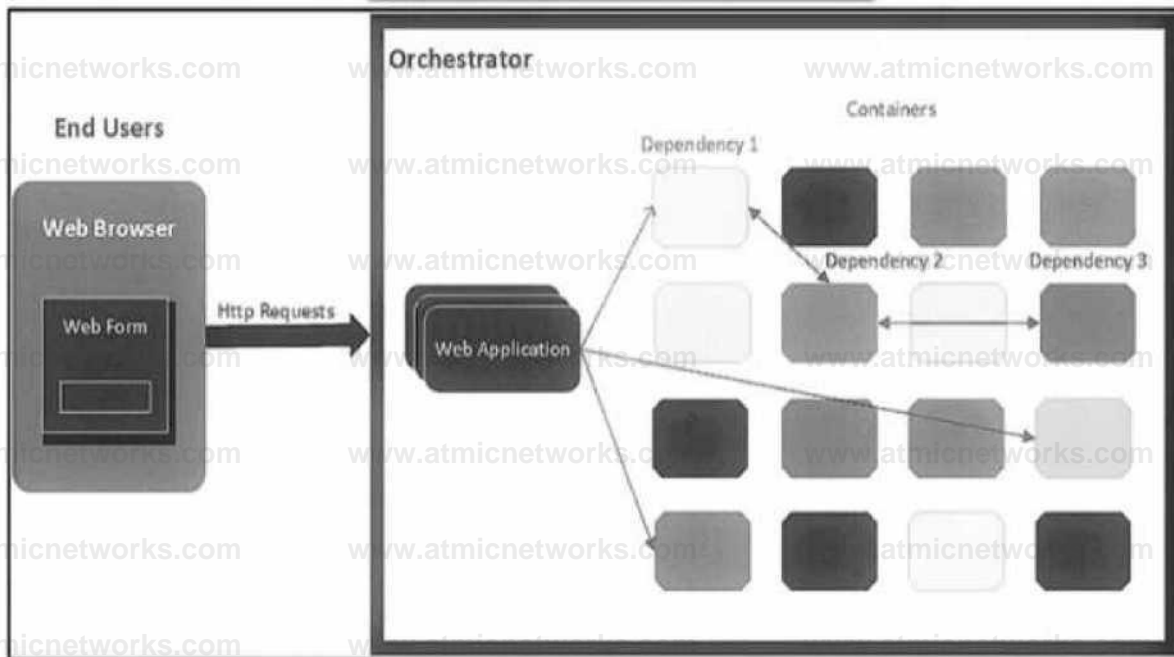
D. request.exception.ReadTimeout

**Answer: A**

Explanation:

**Question: 233**

Refer to the exhibit.



The application follows a containerized microservices architecture that has one container per microservice. The microservices communicate with each other by using REST APIs. The double-headed arrows in the diagram display chains of synchronous HTTP calls needed for a single use/request. Which action ensures the resilience of the application in the scope of a single user request?

- A. Redesign the application to be separated into these three layers: Presentation, API, and Data
- B. Implement retries with exponential backoff during HTTP API calls
- C. Set up multiple instances of each microservice in active/active mode by using the Orchestrator
- D. Create two virtual machines that each host an instance of the application and set up a cluster

**Answer: A**

Explanation:

**Question: 234**

What is the result of a successful OAuth2 authorization grant flow?

- A. The user has the application rights that correspond to the user's role within the application's database
- B. The application is provided with a token that allows actions on services on the user's behalf
- C. The user has administrative rights to the application's backend services
- D. The third-party service is provided with a token that allows actions to be performed

**Answer: B**

Explanation:

"The OAuth 2.0 authorization framework enables a third-party application to obtain limited access to an HTTP service, either on behalf of a resource owner by orchestrating an approval interaction between the resource owner and the HTTP service, or by allowing the third-party application to obtain access on its own behalf."

**Question: 235**

A timeframe custom dashboard must be developed to present data collected from Cisco Meraki. The dashboard must include a wireless health alert count. What needs to be built as a prerequisite?

- A. A publicly available HTTP server to receive Meraki Webhooks from the Meraki Dashboard API
- B. A publicly available HTTP server to receive Meraki Webhooks from the Meraki Scanning API
- C. A daemon to consume the Wireless Health endpoint of the Meraki Scanning API
- D. A daemon to consume the Wireless Health endpoint of the Meraki Dashboard API

**Answer: A**

Explanation:

**Question: 236**

An application has these characteristics

- provide one service or function
- distributed database
- API gateway
- central repository for code
- configuration database
- uses session management

Which two design approaches contribute to the scalability of the application? (Choose two.)

- A. built to scale based on a star topology
- B. modular design iteration
- C. session management in a stateless architecture
- D. planned before the first device is deployed
- E. distributed computing with tightly coupled components

**Answer: C, E**

Explanation:

**Question: 237**

What is an effective logging strategy according to the 12-factor app tenets?

- A. Capture logs by the execution environment and route to a centralized destination

- B. Tag and save logs in a local document database that has querying capabilities.
- C. Back up log files in a high-availability remote cluster on the public cloud
- D. Timestamp and save logs in a local time-series database that has querying capabilities

**Answer: A**

Explanation:

### Question: 238

Which two encryption principles should be applied to secure APIs? (Choose two.)

- A. Use temporary files as part of the encryption and decryption process
- B. Transmit authorization information by using digitally signed payloads
- C. Use encrypted connections to protect data in transit
- D. Reuse source code that contain existing UUIDs
- E. Embed keys in code to simplify the decryption process

**Answer: B, C**

Explanation:

### Question: 239

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to create a new Cisco Webex space and attach a previously configured bot named 'sampleBot'. Not all options are used.

```
import requests as re
import json

token = '<< personal token >>'
auth = 'Bearer {}'.format(token)
header = {'Authorization': auth}
room_name = "Yet_another_room"
body = {'title': room_name}
create_room_url = "https://webexapis.com/v1/rooms"
add_membership_url = "https://webexapis.com/v1/rooms/{room_id}/memberships"
request = re.request(method='POST', url=create_room_url, headers=header, data=body)
resp = json.loads(request.text)
body = {'roomId': resp, 'personEmail': 'sampleBot@webex.bot'}
request = re.request(method='POST', url=add_membership_url, headers=header, data=body)
```

rooms

member

memberships

userId

id

roomId

**Answer:**

Explanation:

```

import requests as re
import json

token = '<< personal token >>'
auth = 'Bearer {}'.format(token)
header = {'Authorization': auth}
room_name = "Yet_another_room"
body = {'title': room_name}
create_room_url = 'https://webexapis.com/v1/rooms'
add_membership_url = 'https://webexapis.com/v1/memberships'
request = re.request(method='POST', url=create_room_url, headers=header, data=body)
resp = json.loads(request.text)['id']
body = {'roomId': resp, 'personEmail': 'sampleBot@webex.bot'}
request = re.request(method='POST', url=add_membership_url, headers=header, data=body)

```

member
userId

**Question: 240**

Refer to the exhibit.

```

1 import MySQLdb
2
3 db = MySQLdb.connect(host="localhost",
4 user="cisco",
5 passwd="cisco",
6 db="apdb")
7
8 cur = db.cursor()
9
10 ap_name = raw_input('Enter AP Name: ')
11
12
13 for row in cur.fetchall():
14     print (row)
15
16 db.close()

```

Refer to the exhibit A script returns the location of a specific access point when given the access point name If a user enters a search value such as DROP TABLE access points then the entire table is removed. What must be added to the box where the code is missing to prevent a SQL injection attack?

- A)
 

```
cur.execute('SELECT location FROM ecesspoints WHERE nine = 'la;" 1 »p_Mae)
```
- B)
 

```
cur.execute("SELECT location FROM acceapoints WHERE name ~ '♦»•• 4 ap_na»e)
```

C)

cur.execute('SELECT location FROM accesspointe WHERE one = la;\*, (ap\_nab>,l)

D)

cur.execute('SELECT location FROM accaaapointa WHERE

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: D**

Explanation:

**Question: 241**

Refer to the exhibit.

isage: dceker:l#03.1 services:

- uati deckusU.N.I'diJd

stages:

- build container

- get\_ceafig

variables:

DOCK\* CRIVER: overlay;

XCKER~TL3 CER7"R: ""

W9:€€€397 JETwCSKrcS5: "False"

Build container and install dependencies:

stage: build\_container

before script:

\* docker info

\* decker login registry.gitlab.cos -u "BDOCnR OSERXAKE" -c "IXCKERJASJWOR:"

script:

\* decker build -t registry.gitlab.ccn.'SCOCK€R\_'JSLR.'<A<E/SDO;K€R\_R€FO3170R!(

\* decker run -t -d —ra —nane aettest registry.gitlab.com/

mcmjmMNB/IDoan.KNBnott

\* decker coastt aettest registry.gitlab.ces/SD0CEER\_REJ0SI70RY after script:

Connect to Cisco Sandbox and backup config:

luge: registry, git lao.ccs JOOCKERJ'SERSMC. RdOCEERJEFOSTTCW

stage: get\_cnflg

script:

- ansible-playbcek gather\_andjrcccess\_ccafigs.yml -1 inventory

A)

docker info registry.gitlab.com/DOCKER REPOSITORY

B)

```
docker info registry.gitlab.com/DOCKER REPOSITORY
```

C)

docker info registry.gitlab.com/DOCKER REPOSITORY

D)

```
docker push registry.gitlab.com/  
DOCKER USERNAME/DOCKER REPOSITORY
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: D**

Explanation:

**Question: 242**

A Cisco Catalyst 9000 switch has guest shell enabled. Which Linux command installs a third-party application?

A. yum install <package-name>

B. apt-get install <package-name>

C. zypper install <package-name>

D. dnf install <package-name>

**Answer: A**

Explanation:

**Question: 243**

Which function does Fluentd fulfill for application logging in Kubernetes?

- A. logging agent for distribution
- B. backend time series database storage
- C. monitoring and log visualization
- D. messaging queue infrastructure

**Answer: A**

Explanation:

**Question: 244**

Refer to the exhibit.

```
import requests import sys
requests.get(URL)
```

```
sys.exit('You do not have permission')
```

A network engineer needs to handle API errors in their requests when users do not have permission to access the resource, even if they are authenticated and authorized. Which line of code needs to be placed on the snippet where the code is missing to handle these API errors?

- A. `if r.status_code == 403`
- B. `if r.raise_for_status() == 403`
- C. `if r.raise_for_status() = 401`
- D. `if r.status_code = 401`

**Answer: B**

Explanation:

**Question: 245**

How is client code that consumes gRPC telemetry implemented, assuming that the preferred language is able to be chosen?

- A. Parse the OpenAPI spec model
- B. Compile the protocol buffers IDL
- C. Leverage a Thrift code generator to parse a Thrift IDL
- D. Review the Swagger API documentation to build client code

**Answer: B**

**Explanation:**

**Question: 246**

Refer to the exhibit.

```
1  {
2    "show_title": "A show",
3    "seasons": [
4      {
5        "season_number": 1,
6        "episodes": [
7          {
8            "id": 3,
9            "title": "A title",
10           "reviews": [{}],
11           "cast_members": [{}]}
12         ]
13       }
14     ]
15   },
16   {
17     "show_title": "Another show",
18     "seasons": [
19       {
20         "season_number": 1,
21         "episodes": [
22           {
23             "id": 1,
24             "title": "Another title",
25             "reviews": [{}],
26             "cast_members": [{}]}
27         ]
28       }
29     ]
30   }
31 ]
32 }
```

An application is being developed as an information repository. The application will be used to store details about television shows, including the scenario, year, and category. Which database type must used for high performance for the data structure?

- A. time series
- B. Eidocument-based
- C. graph
- D. columnar

**Answer: B**

Explanation:

**Question: 247**

Refer to the exhibit.

\*interface xmlns="urn:ietf:params:xml:ns:yang:ietf-int<rfaces"  
xml ns: if="urn:ietf: params :xml: ns: yang: ietf-inter f aces"?

```
*name?GigabitEthernet2</name?
<description?3anple Description*/description?
<type xmlns:ranaift="urn:ietf:params:xml:ns:yang:rana-if-type" ranaift:ethemetCsnacd*/type ■
enabled*true*/enabled?
<ipv4 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
  *address?
    <ip>10.255.255.K/ip
    <netmask>255.255.255.0</netmask?
  /address?
</ipv4>
<ipv6 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
</ipv6?
</interface?
```

Which cURL request is included in the presented XML as the body of the response?

A)

```
curl -X GET \
https://<HOST>:<PORT>/restconf/data/\
ietf-interfaces:interfaces
```

B)

```
curl -X PUT \
https://<HOST>:<PORT>/restconf/data/\
ietf-interfaces:interfaces/\
interface=GigabitEthernet2
```

C)

```
curl -X GET \
  https://<H03T>:<PORT>/restconf/data/\ ietf-
  interfaces:inter faces/\
  interface=GigabitEthernet2 \
  -H 'Authorization: Sasic <TOKEN>'
```

D)

```
curl -X PUT \
  https://<HOST>:<PORT>/restconf/data/\
  ietf-interfaces:interfaces \
  -H 'Authorization: Basic <TOKEN>'
```

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

**Answer: D**

Explanation:

**Question: 248**

A developer releases a new application for network automation of Cisco devices deployed in a local data center. The application utilizes complex design patterns such as microservices that host multiple third-party libraries and programming languages. The development must be simplified by implementing an observability-driven development lifecycle. Which two considerations must be taken to meet the requirements? (Choose two.)

- A. which KPIs to monitor
- B. description of low-level errors
- C. relevant metrics to expose
- D. which monitoring tools to use
- E. identifying customer priorities

**Answer: AC**

Explanation:

**Question: 249**

Which command is used to enable application hosting on a Cisco IOS XE device?

- A. app-hosting
- B. application-hosting
- C. iox
- D. iox-service

**Answer: C**

Explanation:

**Question: 250**

Refer to the exhibit.



- B. git checkout
- C. git clean
- D. git reset

**Answer: C**

Explanation:

### Question: 252

Which load balancing algorithm balances load based on the active sessions of a node?

- A. weighted round-robin
- B. IP source affinity
- C. least connections
- D. sticky session

**Answer: A**

Explanation:

### Question: 253

What is a characteristic of event-driven architecture?

- A. separates the models for the reading and writing of data
- B. allows for loose coupling between software components
- C. breaks a solution into parts according to business capability
- D. provides a single point of reference for mastering data

**Answer: B**

Explanation:

**Question: 254**

Refer to the exhibit.

```
f self.response.status_code = 429 and tries < self.request.retries:
try:
    retry_after =
except Exception: retry_after = 1
print(f'Waiting for {retry_after} second(s) ...')
sleep (retry_after) continue
```

Which line of code needs to be placed on the snippet where the code is missing to provide API rate-limiting to the requests?

- A. `int(self.response.headers.post('Retry-After'))`
- B. `int(response.headers.get('Retry-After'))`
- C. `int(self.response.headers.get('Retry-After'))`
- D. `int(response.headers.post('Retry-After'))`

**Answer: C**

Explanation:

**Question: 255**

What is a benefit of implementing a CI pipeline?

- A. enforces version control
- B. enables a faster feedback loop
- C. ensures that tests are written before code is written
- D. decreases external dependencies

**Answer: B**

Explanation:

### Question: 256

Refer to the exhibit.

```

$ docker service ps cisco_devnet

```

ID	NAME	SERVICE	IMAGE	LAST
STATE	DESIRED STATE	NODE		
d61834d1d0ce	cisco_devnet.1	cisco_devnet	devnet/test:1.0	Running 25
minutes	Running	dc1.cisco.com		
a8479669efee	cisco_devnet.2	cisco_devnet	devnet/test:1.0	Running 25
minutes	Running	dc1.cisco.com		
0a9abcd93c47	cisco_devnet.3	cisco_devnet	devnet/test:1.0	Running 25
minutes	Running	dc2.cisco.com		
ef60dad56bc	cisco_devnet.4	cisco_devnet	devnet/test:1.0	Running 25
minutes	Running	dc3.cisco.com		
88dd012de364	cisco_devnet.5	cisco_devnet	devnet/test:1.0	Running 25
minutes	Running	dc4.cisco.com		

The cisco\_devnet Docker swarm service runs across five replicas. The development team tags and imports a new image named devnet/ test:1.1 and requests that the image be upgraded on each container. There must be no service outages during the upgrade process. Which two design approaches must be used? (Choose two.)

- A. Enable parallel upgrades by using the docker service update command
- B. Ensure that the service replicas are set to a minimum of 5
- C. Implement rolling upgrades by using the docker service update command
- D. Ensure that the service is hosted behind a VIP with no session persistence
- E. Update the restart policy of the containers to restart upon failure

**Answer: CD**

Explanation:

**Question: 257**

A developer is working on a bug fix. The existing branch named 'bugfix05328' needs to be merged with the current working primary branch named 'prim404880077'. All changes must be integrated into a single commit instead of preserving them as individual commits. Which git command must be used?

- A. git checkout --squash bugfix05328
- B. git merge --squash bugfix05328
- C. git rebase --merge bugfix05328
- D. git push --rebase bugfix05328

**Answer: B**

Explanation:

**Question: 258**

A developer is working in a branch to develop a new feature named 'newfeat404880077'. A file named 'devcoreg13642911.jpg' has accidentally been staged. This needs to be removed so that the commit is performed and branches merged. Which git command must be used to unstage the file?

- A. git delete HEAD devcoreg13642911.jpg
- B. git remove HEAD devcoreg13642911.jpg

C. git reset HEAD devcoreg13642911.jpg

D. git revert HEAD devcoreg13642911.jpg

**Answer: C**

Explanation:

### Question: 259

In the three-legged OAuth2 process, after the authorization server presents a form to the resource owner to grant access, what is the next step?

A. The resource owner authenticates and optionally authorizes with the authorization server.

B. The user who owns the resource initiates a request to the OAuth client.

C. If the resource owner allows access, the authorization server sends the OAuth client a redirection.

D. A form to allow or restrict access is submitted by the owner of the resource.

**Answer: C**

Explanation:

"If the resource owner grants access, the authorization server redirects the user's browser back to the client using the redirection URI provided earlier (in the request or during client (registration). The redirection URI includes an authorization code and any local state provided by the client earlier"

"Assuming the resource owner grants access, the authorization server redirects the user-agent back to the client using the redirection URI provided earlier (in the request or during client (registration). The redirection URI includes an authorization code and any local state provided by the client earlier."

### Question: 260

DRAG DROP

A developer is creating a Python script to catch errors using REST API calls and to aid in debugging. Drag and drop the code from the bottom onto the box where the code is missing to implement control flow for REST API errors. Not all options are used.

```
try:
    res = requests.get (address,timeout=30)
except requests. [ ] as e:
    print ("Make sure you are connected to Internet.")
    print (str (e))
    continue
except requests. [ ] as e:
    print ("Timeout Error")
    print (str (e))
    continue
except requests. [ ] as e:
    print ("General Error")
    print (str (e))
    continue
except [ ]:
    print ("Program closed")
```

ConnectionError

RequestException

Timeout

KeyboardInterrupt

Request

Error

**Answer:**

Explanation:

```

try:
    res = requests.get (address,timeout=30)
except requests. ConnectionError as e:
    print ("Make sure you are connected to Internet.")
    print (str (e))
    continue
except requests. Timeout as e:
    print ("Timeout Error")
    print (str (e))
    continue
except requests. RequestException as e:
    print ("General Error")
    print (str (e))
    continue
except KeyboardInterrupt :
    print ("Program closed")

```

In the event of a network problem (e.g. DNS failure, refused connection, etc), Requests will raise a ConnectionError exception.

In the event of the rare invalid HTTP response, Requests will raise an HTTPError exception.

If a request times out, a Timeout exception is raised.

If a request exceeds the configured number of maximum redirections, a TooManyRedirects exception is raised.

All exceptions that Requests explicitly raises inherit from requests.exceptions.RequestException.

<https://docs.python-requests.org/en/latest/user/quickstart/#errors-and-exceptions>

## Question: 261

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to provision a new Cisco Unified Computing System server by using the UCS XML API. Options may be used more than once. Not all options are used.

```
import requests

url = "https://209.165.200.231"

payload = '''
< [ ]
  dn= "org-root/vcs-service-templ-001"
  cookie= "<real_cookie>"
  inTargetOrg= "org-root"
  [ ] = "vcs001"
  inHierarchical= "no">
</ [ ] >
'''

headers = {
    'Accept': 'application/xml',
}

response = requests.request ([ ] , url, headers=headers,
data=payload)

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

lsDeployTemplate

inDeployServerName

lsInstantiateTemplate

"POST"

inServerName

"PUT"

**Answer:**

Explanation:

```

import requests

url = "https://209.165.200.231"

payload = '''
< lsInstantiateTemplate
  dn= "org-root/vcs-service-templ-001"
  cookie= "<real_cookie>"
  inTargetOrg= "org-root"
  inServerName = "vcs001"
  inHierarchical= "no">
</ lsInstantiateTemplate >
'''

headers = {
    'Accept': 'application/xml',
}

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

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

```

### Question: 262

```
{'lat': 37.4180951010362, 'lng': -122.098531723022, 'address': '', 'serial': 'Q2HP-F5K5-F98Q',
```

```
'mac': '88:15:44:ea:f5:bf', 'lanIp': '10.10.10.15',
```

```
'url': 'https://n149.meraki.com/DevNet-Sandbox/n/EFZDavc/manage/nodes/new_list/78214561218351',
```

```
'model': 'MS220-8P', 'switchProfileId': None, 'firmware': 'switch-11-31', 'floorPlanId': None}
```

Refer to the exhibit. A developer needs to find the geographical coordinates of a device on the network L\_397561557481105433 using a Python script to query the Meraki API. After running `response = requests.get()` against the Meraki API, the value of `response.text` is shown in the exhibit.

What Python code is needed to retrieve the longitude and latitude coordinates of the device?

- A. latitude = response.text['lat'] longitude = response.text['lng']
- B. latitude = response.json()['lat'] longitude = response.json()['lng']
- C. latitude = response.json()[0] longitude = response.json()[1]
- D. latitude = response.text[0] longitude = response.text[1]

**Answer: A**

Explanation:

### Question: 263

An application is developed in order to communicate with Cisco Webex. For reporting, the application must retrieve all the messages sent to a Cisco Webex room on a monthly basis.

Which action calls /v1/messages directly?

- A. Set up a webhook that has messages as the resource type and store the results locally.
- B. Utilize the pagination functionality by defining the max property.
- C. Recursively call the /v1/messages endpoint by using the beforeMessage property.
- D. Filter the response results by specifying the created property in the request.

**Answer: D**

Explanation:

## Question: 264

Refer to the exhibit.

```
response = requests.get(url, auth= (username, password))  
  
print("Invalid credentials. Please login again")  
username, password = get_credentials()  
response = requests.get(url, auth= (username, password))
```

Which code snippet must be added to the blank in the code to automate the evaluation and handling of errors due to wrong credentials when Basic Authorization is used?

A)

```
while response.get.status_code == 404 :
```

B)

```
while response.status_code == 403 :
```

C)

```
while response.status_code == 401 :
```

D)

```
while response.get.status_code == 400 :
```

A. Option

B. Option

C. Option

D. Option

**Answer: C**

Explanation:

**Question: 265**

A developer needs to build a new Docker image and has created a tag by using the command:

```
$ docker tag 32df423320458 local/app:1.2
```

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

A)

```
$ docker run -p local/app:1.2
```

B)

```
$ docker run -t local/app:1.2
```

C)

```
$ docker build -t local/app:1.2
```

D)

```
$ docker build -p local/app:1.2
```

A. Option

B. Option

C. Option

D. Option

**Answer: C**

Explanation:

**Question: 266**

**DRAG DROP**

Drag and drop the code from the bottom onto the box where the code is missing in the Python code to complete the greeter function while also mitigating against XSS threats. Not all options are used.

```
from datetime import datetime
from flask import Flask, request, make_response, escape
from flask_wtf.csrf import CSRFProtect

[ ]

csrf = CSRFProtect(app)

[ ]

def time():
    now = datetime.now()
    current_time = now.strftime("%H:%M:%S")
    return make_response("Current Time: " + current_time)

[ ]

def greeter():
    first_name = request.args.get("name", '')
    return make_response("Your name: " + [ ] )
```

first_name	app = Flask(_name_)	@app.route('/time')
@app.route('/greeter')	escape(first_name)	last_name

**Answer:**

Explanation:

```

from flask import Flask, request, make_response, escape
from flask_wtf.csrf import CSRFProtect

app = Flask(name)
csrf = CSRFProtect(app)

@app.route('/time')
def time():
    now = datetime.now()
    current_time = now.strftime("%H:%M:%S")
    return make_response("Current Time: " + current_time)

@app.route('/greeter')
def greeter():
    first_name = request.args.get("name", " ")
    last_name = request.args.get("last_name", " ")
    return make_response("Your name: " + first_name + " " + last_name)

```

### Question: 267

Refer to the exhibit.

```

1 import http.client
2 import mimetypes
3
4 MER_API_KEY = '345ed8d63e19179cf88a100bc2f8056fad512345'
5
6 conn = http.client.HTTPSConnection("https://api.meraki.com/api/v0")
7 payload = {}
8
9 headers = {
10     'Content-Type': 'application/json',
11     'API_KEY': MER_API_KEY
12 }
13
14 conn.request("GET", "/interfaces", payload, headers)

```

A developer created a Python script to retrieve interface information for the devices in a MeraKi network environment. A security analyst has reviewed the code and observed poor secret storage practices. What is the appropriate password storage approach?

- A. Set the Base64 encoded version of the API key as MER\_API\_KEY in the code and Base64 decode before using in the header.
- B. Set an OS environment variable for MER\_API\_KEY to the API key during running the code and longer set MER\_API\_KEY within the code.
- C. Create a secret for the API key, set MER\_API\_KEY using the value from the secret in the Pod. and no longer set MER\_API\_KEY within the code.

D. Leverage an external secret vault to retrieve MER\_API\_KEY and embed the vault key as a new variable before running the code.

**Answer: D**

Explanation:

**Question: 270**

Refer to the exhibit.

```
import requests import getpass
device_list = ('192.168.243.1', '192.168.243.2']
port = "8080"
username = input("Enter Username ->") password = getpass.getpass(prompt="Enter
Password: ->")
for device in device_list:
```

```
headers = {'Content-Type': 'application/vnd.yang.data*Json*', \ 'Accept':
'application/vnd.yang.data*json'}
response = requests.get( url, auth=(username, password), \ headers=headers,
verify=False)
print(f"Interfaces present on {device}:")
for interfaces in response.Json():
print(f"(interfaces)")
```

A)

```
url="http://" + device + ":" + port + "/api/running/
interfaces/interface/name"
```

B)

```
url="http://" + device + ":" + port + "/api/running/
interfaces/interface"
```

C)

```
url="http://" + device + ":" + port + "/api/running/
interfaces"
```

D)

```
url=http://f"{device_list}+{port}/api/running/  
interfaces"
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: B**

Explanation:

### Question: 271

DRAG DROP

A developer is creating a Python script to use the Webex REST API to list joined spaces and handle and print the errors it receives. Drag and drop the code from the bottom of the code snippet onto the blanks in the code to complete the script. Not all options are used.

```
import requests
url = 'https://api.ciscospark.com/v1/rooms'
[ ] = "BEARER_TOKEN_HERE"
headers = {"content-type": "application/json",
           "[ ]": "Bearer " + bearer}
try:
    [ ] = requests.get(url, headers=headers, verify=False)
    response.raise_for_status()
except requests.exceptions.HTTPError as err:
    if response.status_code == 401 :
        print("Check Bearer Token")
    elif response.status_code == 404 :
        print("Check API Endpoint/uri")
    elif response.status_code == 500:
        print("[ ], Try again Later")
    else:
        print(("HTTP Error") + str(err))
```

Authorization    Too many requests    Server Error

Authentication    bearer    response

**Answer:**

Explanation:

```

import requests
url = 'https://api.ciscospark.com/v1/rooms'
bearer = "BEARER_TOKEN_HERE"
headers = {"content-type": "application/json",
           "Authorization": "Bearer " + bearer}
try:
    response = requests.get(url, headers=headers, verify=False)
    response.raise_for_status()
except requests.exceptions.HTTPError as err:
    if response.status_code == 401 :
        print("Check Bearer Token")
    elif response.status_code == 404 :
        print("Check API Endpoint/uri")
    elif response.status_code == 500:
        print("Server Error, Try again Later")
    else:
        print(("HTTP Error") + str(err))

```

Too many requests

Authentication

### Question: 272

A new record-keeping application for employees to track customer orders must be deployed to a company's existing infrastructure. The host servers reside in a data center in a different country to where the majority of users work. The new network configuration for the database server is: •IP: 10.8.32.10

- Subnet Mask: 255.255.255.0
- Hostname: CustOrd423320458-Prod-010
- MAC: 18-46-AC-6F-F4-52.

The performance of the client-side application is a priority due to the high demand placed on it by employees. Which area should the team consider in terms of impact to application performance due to the planned deployment?

- jitter
- decreased bandwidth
- latency
- connectivity loss

**Answer: C**

Explanation:

### Question: 273

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing on the Dockerfile to containerize an application that listens on the specified TCP network port at runtime. Not all options are used.

```
FROM alpine:3.4
RUN apk update
COPY myapp.py /myapp.py
[ "/myapp.py" ]
EXPOSE 8484
```

Available options for the Dockerfile:

- CMD
- EXPOSE
- FROM
- PORT
- RUN
- BASE

**Answer:**

Explanation:

```
FROM alpine:3.4
RUN apk update
COPY myapp.py /myapp.py
CMD [ "/myapp.py" ]
EXPOSE 8484
```

Available options for the Dockerfile:

- PORT
- RUN
- BASE

### Question: 274

DRAG DROP

A developer must package an application for Kubernetes to integrate into a prebuilt CD environment.

The application utilizes a Docker image from Cisco DevNet public repository and is accessible from a specific port of the container. Drag and drop the code from the bottom onto the box where the code is missing in the Kubernetes YAML configuration file. Not all options are used.

```

apiVersion: apps/v1
[ ]:StatefulSet
metadata:
  name: devnet-mgr
  namespace: devnet
[ ]:
  selector:
    matchLabels:
      app: devnet-mgr
    serviceName: "devnet-mgr"
  replicas: 1
  template:
    metadata:
      labels:
        app: devnet-mgr
    spec:
      containers:
        - name: mgr
          [ ]: repo.cisco.com/devnet/mgr:0.2
          ports:
            [ ]:
              name: mgr

```

type	containerPort: 8888	exposedport: 8888
spec	kind	image

**Answer:**

Explanation:

```

apiVersion: apps/v1
[ ] kind: StatefulSet
metadata:
  name: devnet-mgr
  namespace: devnet
[ ] spec:
  selector:
    matchLabels:
      app: devnet-mgr
    serviceName: "devnet-mgr"
  replicas: 1
  template:
    metadata:
      labels:
        app: devnet-mgr
    spec:
      containers:
        - name: mgr
          [ ] image: repo.cisco.com/devnet/mgr:0.2
          ports:
            - containerPort: 8888
              name: mgr

```

type	exposedport: 8888
------	-------------------

**Question: 275**

DRAG DROP

Drag and drop the steps from the left into the order on the right to build and run a customized Python Docker image. Not all options are used

Create a Dockerfile that contains the text: FROM python:3.7.2 COPY ./my_app.py /app	step 1
Create a Dockerfile that contains the text: IMPORT python:3.7.2 COPY ./my_app.py /app	step 2
\$ docker run -dit --name my-running-app -p 8080:80 my-app	step 3
\$ docker compile -t my-app .	
\$ doc* r" tuid 4 my-app	

### Answer

Explanation:

Create a Dockerfile that contains the text: FROM python:3.7.2 COPY ./my_app.py /app
\$ docker compile -t my-app .
\$ docker run -dit --name my-running-app -p 8080:80 my-app

### Question: 276

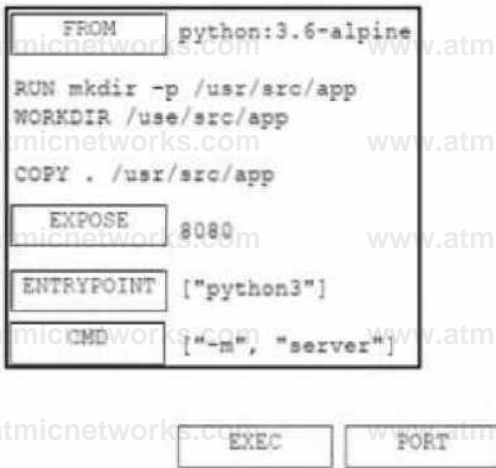
DRAG DROP

A developer must containerize a Python application to integrate into a prebuilt CD environment by creating a Docker image. It will be hosted as a web application to enable end users from accessing it remotely. Drag and drop the code from the bottom onto the box where the code is missing in the Docker file Not all options are used.



**Answer:**

Explanation:



**Question: 277**

An application requires SSL certificates signed by an intermediate CA certificate. The crt files must be available to the application:

- The root CA certificate is root\_certificate.crt.
- The intermediate CA certificate is intermediate\_certificate.crt
- The application-specific SSL certificate is crt\_certificate.crt.

Which Bash command outputs the certificate bundle as a .pem file?

A)

```
I cat soot certificate.crt intermediate certificate.crt > I certificate bundle.pem
```

B)

```
cat root certih.Mte.crt intenadute certificate.crt crl certificate.crt > certificate bundle.pea
```

C)

```
cat crl certificate.crt intermediate certificate.crt root certificate.crt > certificate bundle.pea
```

D)

```
cat intermediate., certificate.crt root_certificate.crt > cert1flestebundle.pea
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: D**

Explanation:

**Question: 278**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing in the Python code to query for user permissions while mitigating against SQL Injection Not all options are used.

```

import psycopg2

connection = psycopg2.connect(
    host="localhost",
    database="credentials"
    user="pguser"
)

def check_admin(username):
    with connection.cursor() as cursor:
        query = 
        cursor.execute( )
        result = cursor.fetchone()
    return result

```

- 'SELECT admin\_role FROM users WHERE username = {0}'
- query.format(username)
- query, (username,)
- 'SELECT admin\_role FROM users WHERE username = %s'
- execute
- connection.set\_session()

**Answer**

**Explanation:**

```

import psycopg2

connection = psycopg2.connect(
    host="localhost",
    database="credentials"
    user="pguser"
)

connection.set_session()

def check_admin(username):
    with connection.cursor() as cursor:
        query = 'SELECT admin_role FROM users WHERE username = {0}'
        cursor.execute( execute )
        result = cursor.fetchone()
    return result

```

- query.format(username)
- query, (username,)
- 'SELECT admin\_role FROM users WHERE username = %s'

**Question: 279**

Refer to the exhibit.

```

1  from http.server import HTTPServer, BaseHTTPRequestHandler
2  import json
3
4  class MainHandler(BaseHTTPRequestHandler):
5      def do_GET(self):
6          users = get_users()
7          self.send_response(200)
8          self.wfile.write(json.dumps(users).encode("utf-8"))
9          self.end_headers()
10
11 if __name__ == "__main__":
12
13     def run(server_class=HTTPServer, handler_class=BaseHTTPRequestHandler):
14         server_address = ('0.0.0.0', 8000)
15         httpd = server_class(server_address, MainHandler)
16         httpd.serve_forever()
17     run()

```

Refer to the exhibit An application hosting server with the local data center is experiencing large amounts of traffic from enclusers. A developer must optimize this API server to reduce the toad on its host. What are two ways to optimize this code through HTTP cache controls? (Choose two.)

Include the "ETag" header in the API response.

- A. Include the "Last-Modified" header in the API response.
- B. Include the "Content-Type" header in the API response.
- C. Leverage middleware caching and respond with HTTP code 104 m the API response
- D. Leverage middleware caching and respond with HTTP code 204 m the API response.

**Answer: A, B**

Explanation:

**Question: 280**

Refer to the exhibit.

```

1 import requests
2 import json
3
4 BASE_URL = 'https://api.meraki.com/api/v0'
5 API_KEY = '6bec40cf957de430a6ff1f2baa056b99e4fac8fa0'
6
7 headers = {
8     'Content-Type': 'application/json',
9     'X-Cisco-Meraki-API-Key': API_KEY
10 }
11
12 url = f'{BASE_URL}/organizations/2930418/networks'
13 network_response = requests.get(url, headers=headers)
14
15 if network_response.status_code == 200:
16     for network in network_response.json():
17
18         url = f'{BASE_URL}/networks/{network["id"]}/clients'
19         clients_response = requests.get(url, headers=headers)
20
21         if clients_response.status_code == 200:
22             print(Clients_response.decode("utf-8"))

```

One part of an application routinely uses the Cisco Meraki API to collate data about all clients. Other parts of the application also use the Meraki API, but a single API key is used within the application. The organization has approximately 4,000 clients across 30 networks. Some of the application users report poor performance and missing data.

a. Which two changes improve the performance of the application? (Choose two.)

- A. Check for HTTP code 429 and wait until Retry-After time before further calls are made.
- B. Configure multiple API keys in the application and rotate usage of each one.
- C. Use random values in the User-Agent header when HTTP calls are made.
- D. Use fewer API calls to create a more efficient endpoint.
- E. Check API response payloads for later reuse in real time during code execution.

**Answer: A, B**

Explanation:

**Question: 281**

DRAG DROP

Refer to the exhibit.

## Request Parameters

**Query** timestamp | String

Epoch time(in milliseconds) when the Site Hierarchy data is required

## Responses

Status: 200

The request was successful. The result is contained in the response body.

### Schema Definition

```

GetSiteHealthResponse
├── response: array[]
│   ├── parentSiteId: string
│   ├── parentSiteName: string
│   ├── siteId: string
│   ├── siteName: string
│   ├── siteType: string
│   ├── networkHealthOthers: object
│   ├── networkHealthRouter: object
│   ├── networkHealthWireless: object
│   └── overallGoodDevices: object
│       ├── routerGoodCount: object
│       ├── routerTotalCount: object
│       ├── totalNumberOfActiveWirelessClients: object
│       ├── totalNumberOfConnectedWiredClients: object
│       ├── wiredGoodClients: object
│       ├── wirelessDeviceGoodCount: object
│       ├── wirelessDeviceTotalCount: object
│       └── wirelessGoodClients: object

```

Drag and drop the code from the bottom onto the box where the code is missing to construct a Python script that prints a message if the Cisco DNA Center wireless network health for a site is NOT greater than 90%. The information is collected from the wireless network devices using GET method of REST API. Not all options are used.

```
def Mini():
```

```
    token = get_token()
    headers = {'X-Auth-Token': token, 'Content-Type': 'application/json'}
    response = request.get(base_url + '/dna/intent/api/el/' + site_id, headers=headers)
```

```
    for site in sites:
```

```
        if site['overallGoodDevices']['wirelessGoodClients'] > 90:
```

```
            print(f"Site {site['siteName']} wireless network health is good")
```

```
        else:
            print(f"Site {site['siteName']} wireless network health is NOT good. Need attention")
```

```
if __name__ == "__main__":
    Mini()
```

site-health	siteName	post
response	networkHealthWireless	wirelessNetworks



```

import requests

BASE_URL = 'https://ftd.example.com/api/edm/latest'
ID = '900fac69-7d19-11e7-bf7b-d9417b20e59e'
url = f'{BASE_URL}/object/hosts/{ID}'
token = 'eyJhbGciOiJIUzI1NiIsInR5cCI6IkpzZW50In'

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

response = requests.request("DELETE", url, headers=headers)
print(response.text.encode('utf8'))

f'Basic {token}',
f'{BASE_URL}/object/networks/{ID}'
"PUT"

```

### Question: 283

How should logs for an application be created?

- A. Use a standard and easily configurable logging framework.
- B. Use fault-tolerant protocols.
- C. Monitor for backlogs and outages.
- D. Filter sensitive data before transmitting logs.

**Answer: A**

Explanation:

### Question: 284

Which approach is used to protect East-West API traffic?

- A. Use encryption between services
- B. Install a perimeter firewall
- C. Use a dedicated cloud connection service.
- D. Implement an API gateway

**Answer: A**

Explanation:

**Question: 285**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to enable an SSID by using the Cisco Meraki Dashboard API. Not all options are used.

```
import requests
import json

DASHBOARD_HOST = 'https://api.meraki.com'
API_KEY = '345ed8d63e19179cf88a190bc2f8056fad512345'

url = '{}/api/v0/{} /L_646829496481105433/
payload = {
headers = {
    'Content-Type': 'application/json',
}
response = requests.{}(url, headers=headers,
    data=json.dumps(payload))
print(response.status_code)
```

post	put
ssids	networks
'enabled': True	'X-Cisco-Meraki-API-Key': API_KEY

**Answer:**

Explanation:

```
import requests
import json
DASHBOARD_HOST = 'https://api.meraki.com
API_KEY = '345ed8d63e19179cf88a100bc2f8056fad512345'
url = '{{/api/v0/ networks /l_646829496481105433/
ssids /1'.format (DASHBOARD_HOST)
payload = {
'enabled': True
}
headers = {
'Content-Type': 'application/json',
'X-Cisco-Meraki-API-Key': API_KEY
}
response = requests. post (url, headers=headers,
data=json.dumps(payload))
print(response.status_code)
```

put

**Question: 286**

A developer creates an application for a Cisco Catalyst 9000 switch in a Docker container. Which action must be taken to host the application on the switch?

- A. Copy the application code to a NETCONF file and upload the file to the switch
- B. Connect the switch to Cisco DNA Center and push the application through the platform.
- C. Use the Cisco IOxClient tool to export the application to a ZIP file and push the file to the switch
- D. Export the application as a TAR file and import the file to the switch

**Answer: D**

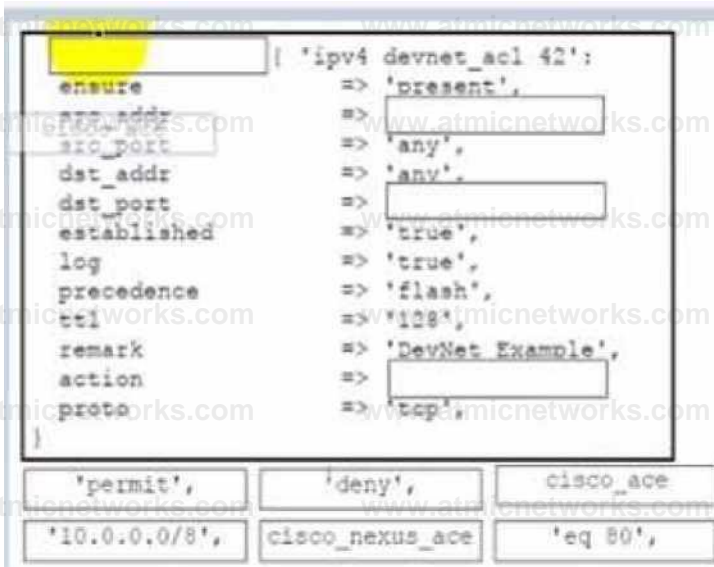
Explanation:

**Question: 287**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to permit network traffic between 10.0.0.0/8 and all other networks on port 80 for a Cisco Nexus 9000 switch by using

the Puppet module. Not all options are used.



**Answer:**

**Explanation:**

```
! ipv4 devnet_acl 42:
=> 'present',
  addr => '10.0.0.0/8',
  port => 'any',
  ds: add; dst port => 'eq 80',
  established => 'true',
  log => 'true',
  precedence => 'flash',
  ttl => '128',
  remark => 'DevNet Example',
  action => 'permit',
  proto => 'tcp',
'deny',
```

cisco\_ne:<us\_Ace

**Question: 288**

Refer to the exhibit.

```
import requests
import time
import json
```

```
class Connection:
    def __init__(self, config):
        self.config = config
        self.session = None
        self.retries = 0
        self.MAX_RETRIES = 12
```

```
    def setupSession(self):
        self.retries = 0
        if self.session is None:
            self.session = requests.Session()
        return self

    def get(self, url, params=None):
        self.setupSession()
        resp = self.session.get(self.config.host + url,
                                verify=False,
                                params=params)
        if resp.status_code == 200:
            return json.loads(resp.content.decode('utf-8'))
```

```
        self.retries += 1
        exp_backoff = (2**(self.retries!))/1000
        time.sleep(exp_backoff)
        self.get(url=url,
                params=params)
        return resp
```

A network engineer must integrate error handling for time-outs on network devices using the REST interface. Which line of code needs to be placed on the snippet where the code is missing to accomplish this task?

- A. `elif resp.status_code == 429 or self._retries < self._MAX_RETRIES:`
- B. `elif resp.status_code == 404 or self._retries < self._MAX_RETRIES:`
- C. `elif resp.status_code == 429 and self._retries < self._MAX_RETRIES:`
- D. `elif resp.status_code == 404 and self._retries < self._MAX_RETRIES:`

**Answer: C**

Explanation:

**Question: 289**

DRAG DROP

Drag and drop the steps from the left into the order on the right to ensure that an application

requiring communication to the external network is hosted on a Cisco Catalyst 9000 switch.



**Answer:**

**Question: 290**

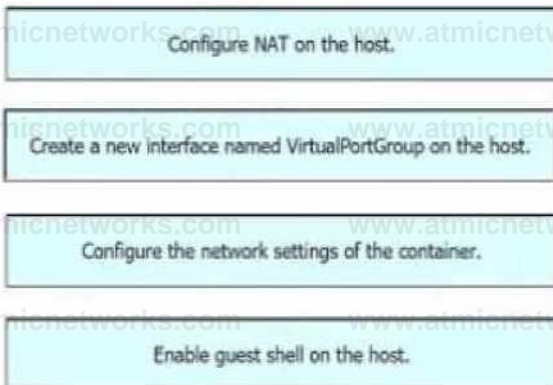
Create a new interface named VirtualPortGroup on the host



DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to retrieve a

Explanation:



summary of physical compute resources. The collected information about the compute resources will be presented in a dashboard to be developed for device monitoring purposes. Not all snippets are used.

```

import requests
import json
BASE_URL = "https://intersight.com/api/v1"
url = 
payload = {}
headers = {
    'Accept': 'application/json',
    'Authorization': ,
    'Digest': '{{computed-digest}}',
    'Date': '{{current-date}}',
}
response = requests.request(, url,
headers=headers, data=json.dumps(payload))
print(response.text.encode('utf8'))

```

"POST"	"GET"
f'{BASE_URL}/compute/ListPhysical'	f'Signature {httpsig}',
f'{BASE_URL}/compute/PhysicalSummaries'	f'Bearer {token}',

**Answer:**

**Explanation:**

```

import requests
import json
BASE_URL = "https://intersight.com/api/v1"
url = f'{BASE_URL}/compute/PhysicalSummaries'
payload = {}
headers = {
    'Accept': 'application/json',
    'Authorization': f'Signature {httpsig}',
    'Digest': '{{computed-digest}}',
    'Date': '{{current-date}}',
}
response = requests.request("GET", url,
headers=headers, data=json.dumps(payload))
print(response.text.encode('utf8'))

```

"POST"	"GET"
f'{BASE_URL}/compute/ListPhysical'	f'Bearer {token}',

**Question: 291**

Two Elasticsearch database servers use bidirectional asynchronous data replication Both servers accept writes from clients The design must meet these requirements:

- The cluster must survive if a fault occurs that causes the network connection to go down between

nodes

- The data must remain consistent if communication between nodes fails.
- The data must be spread evenly across all nodes in the cluster.

Which design approach must be used to meet the requirements?

- Set the initial voting configuration to force a specific node as the master.
- Scale the master nodes down to a single node.
- Set the `minimum_master_nodes` to 2 in the configuration.
- Add a third cluster node to provide majority votes.

**Answer: C**

Explanation:

**Question: 292**

Refer to the exhibit.

```
Running on runner-kzy3auq6-project-z-concurrent*0 via d277177ad901...
Getting source from Git repository Fetching changes with git depth set to 50...
Reinitialized existing Git repository in /builds/podOl/nxos.cicd/.git/
Checking out 140cb64b as aaster...
Skipping Git submodules setup
Executing "step_script" stage of the gob script $ ansible-playbook --syntax-check -1 hosts site.yal ERROR! We were unable to read
either as JSON nor YAML, these are the errors we got from each:
JSON: Expecting value: Line X column 1 (char 0) Syntax Error while loading YAML.
did not find expected '-' indicator The error appears to be in '/builds/podOl/nxos.cicd/roles/spine/tasks/main.yml': line 5, column
3, but may be elsewhere in the file depending on the exact syntax problem.
The offending line appears to be:
- name: ENABLE FEACCRES
  cisco.axos.nxos_feature;
```

B. The Ansible playbook task has a formatting issue.

C. The Ansible playbook has an undefined variable.

D. The runner is running the wrong Docker version.

**Answer: B**

Explanation:

**Question: 293**

DRAG DROP

Refer to the exhibit.

**Handling Requests from Webex**  
When one of your webhooks is triggered by an event, Webex will send an HTTP POST to the backend targetURL that you've specified. The body of the POST will look something like this:

```
{
  "id": "YZ1zY29zcGfyzovL3VzL1dFQkhPT8vszjR1NjA1NjA1NjYwMjB0ZnZwREyMREtOTQ5O",
  "name": "New message in 'Project Unicorn' room",
  "resource": "messages",
  "event": "created",
  "filter": "roomId=YZ1zY29zcGfyzovL3VzL1JPT0NvTmJjZWIxYmQtdmNMS0ZyYjU4LTkxNDctZjE",
  "orgId": "OTZlY29zcGfyzovL3VzL1dFQkhPT8vszjR1NjA1NjA1NjYwMjB0ZnZwREyMREtOTQ5O",
  "createdBy": "YZ1zY29zcGfyzovL3VzL1BFT1BMS9MmIzNjE4Ny1jOGRkLTQ3MjctOGIyZl",
  "appId": "YZ1zY29zcGfyzovL3VzL1BFT1BMS9MmIzNjE4Ny1jOGRkLTQ3MjctOGIyZl",
  "ownedBy": "creator",
  "status": "active",
  "actorId": "YZ1zY29zcGfyzovL3VzL1BFT1BMS9MmIzNjE4Ny1jOGRkLTQ3MjctOGIyZl",
  "data": {
    "id": "YZ1zY29zcGfyzovL3VzL1BFT1BMS9MmIzNjE4Ny1jOGRkLTQ3MjctOGIyZl",
    "roomId": "YZ1zY29zcGfyzovL3VzL1JPT0NvTmJjZWIxYmQtdmNMS0ZyYjU4LTkxNDctZjE",
    "personId": "YZ1zY29zcGfyzovL3VzL1BFT1BMS9MmIzNjE4Ny1jOGRkLTQ3MjctOGIyZl",
    "personEmail": "example.com",
    "created": "2015-10-18T14:26:16.000Z"
  }
}
```

The first few properties shown above are called the "envelope." They identify all webhooks that are sent. This envelope contains the following information:

Parameter	Explanation
id	The webhook ID. This is the same ID returned when you created the webhook and is what you would use
id	The webhook ID. This is the same ID returned when you created the webhook and is what you would use to view the webhook configuration or delete the webhook.

**Get Message Details**  
Shows details for a message, by message ID. Specify the message ID in the `messageId` parameter in the URI.

**GET** `/v1/messages/{messageId}`

**URI Parameters**

**messageId**  
string **Required**  
The unique identifier for the message.

**Response Properties**

**id**  
string  
The unique identifier for the message.

**parentId**  
string  
The unique identifier for the parent message.

**roomId**  
string  
The room ID of the message.

Drag and drop the code from the bottom onto the box where the code is missing to complete the API

request. An engineer is using this API request to implement Chat-Ops to generate notifications in a Webex space by using webhooks. Not all options are used.

```
def process_incoming_message (
    # Get the webhook data
    webhook_data = inbound_webhook_request.json

    # Determine the Teams Room to send reply to
    room_id = [redacted]
    # Get the details about the message that was sent.
    message_id = [redacted]
    message = teams.messages.get(message_id)

    # Verify message isn't from bot
    if [redacted] in teams.people.me().id:
        return ""
```



**Answer:**

Explanation:

```
def process_incoming_message( inbound_webhook_request ):

    # Get the webhook data
    webhook_data = inbound_webhook_request.json

    # Determine the Teams Room to send reply to
    room_id = webhook_data["data"]
                ["roomId"]

    # Get the details about the message that was sent.
    message_id = webhook_data["data"]["id"]
    message = teams.messages.get(message_id)

    # Verify message isn't from bot
    if message.personId in teams.people.me().id:
        return ""
```

webhook\_data["roomId"]

message.toPersonId

### Question: 294

Refer to the exhibit.

```

container protocols |
description
  "The routing protocols that are enabled for this network-instance.";
list protocol {
  key "identifier name";

  description
    "A process (instance) of a routing protocol. Sase systems may not support more than ate
    instance of a particular routing protocol";

  leaf identifier (
    type leafref (
      path "../config/identifier";

    description
      "The protocol name for the routing or forwarding protocol to be instantiated*";

  leaf name (
    type leafref (
      path "../config/name";

    description
      "An operator-assigned identifier for the routing or forwarding protocol.
      For some processes this leaf may be system defined.";

```

uses network-instance-top;

Refer to the exhibit. Which URI string retrieves configured static routes in a VRF named CUSTOMER from a RESTCONF-enabled device?

A)

```

estconf data
openconfig-network-instance:network-instances
network-instance ^CUSTOMER protocols/protocol^STATIC

```

B)

```

/restconf/data/ietf-interfaces:interfaces/\
interface/GigabitEthernet1

```

C)

```

estconf/data
openconfig-network-instance:network-instances network-
instance/'CUSTOMER protocols/protocol/
STATIC,DEFAULT

```

D)

```
eatconf/data/  
openccnfig-r.etwork-in9tance:aezwork-ir.9tance9/  
r>etwork-ir.9"ance="CUSTOMER protocols pictscol STATI
```

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

**Answer: D**

Explanation:

### Question: 295

DRAG DROP

A developer is creating a Python function that adds network engineers to a Webex room to troubleshoot after a monitoring alert Drag and drop the code from the bottom onto the box where the code is missing in the Python function to add the engineers to the room. Not all options are used.

```
def gather_all(token, room_id, teamMembers):  
    for member in teamMembers:  
        header = {"": "Bearer %s" % token,  
                 "Content-Type": "application/json"}  
  
        payload = {  
            "roomId": room_id,  
            "personEmail": member  
        }  
  
        response = requests.post("https://api.webexapi.com/v1/memberships",  
                                headers=header, , verify=True)  
        if response. != :  
            print("error inviting:" + member)
```

500	code	200
status code	json=payload	Authorization

**Answer**

Explanation:

```
def gather_all(token, room_id, teamMembers):
    for member in teamMembers:
        header = {"Authorization": "Bearer %s" % token,
                  "Content-Type": "application/json"}

        payload = {
            "roomId": room_id,
            "personEmail": member
        }

        response = requests.post("https://api.webexapi.com/v1/memberships",
                                 headers=header, json=payload, verify=True)

        if response.status_code != 200:
            print("error inviting:" + member)
```

500

code

**Question: 296**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to construct a UCS XML API request to generate two service profiles from the template org-root/is-service-template. Not all options are used

```
<isInstantiateNamedTemplate
  da="org-root/is-service-template" cookie="<cookie>"
  inTargetOrg="oxg*zoot"
  latHierarchical^ I < />
  <inNameSet>
    < | _____ J ^service-profile-a"/>
    <dn value| _____ | />
```

```
* I _____ I
</XSIInstantiateNamedTemplate>
"service-profile-b" "yes"
dn value /outNameSet
/inNameSet add profile
"no"
```

**Answer:**

Explanation:

```
<lsInstantiateNamedTemplate
  dn="org-root/ls-service-template"
  cookie="<cookie>"
  inTargetOrg="org-root"
  inHierarchical= [ ] "no" >
  <inNameSet>
    < [ ] dn value ["service-profile-a"/>
    <dn value= [ ] "service-profile-b" />
    < [ ] /inNameSet >
  </lsInstantiateNamedTemplate>
```

- "yes"
- /outNameSet
- add profile

**Question: 297**

Refer to the exhibit.

```
Running with gitl*h-runn<r 12.5.0*xcl (>350f628)
on docker-auto-scale fa6cab46
Preparing the "docker+machine" executor 00:14
Using Docker executor with image alpine:3.10 ...
Pulling docker image alpine:3.10 ...
Using docker image
Sha256:5e35e350aded98340bc8fcb0ba392d809c807bc3eb5c618d4a0674d98d88bccd for alpine:3.10...
5 eval 'SCI_PRE_CLO!E_SCRIPT'
  • [new ref] refs/pipelines/125695607 -> refs/pipelinesZ125695607
```

- B. Use the python:3.9.0a4-alpine3.10 Docker image
- C. Install the missing python libraries via pip3.
- D. Add the absolute path to the python3 executable

**Answer: B**

Explanation:

**Question: 298**

Refer to the exhibit.

```
import requests
```

```
url = "https://ios-xe-mgmt.cisco.com:9443/restconf/data/Cisco-IOS-XE-native"
```

```
headers = {'Authorization': 'Basic ZGV2ZWxvcGVyOkMxc2XvXTIzNO='}
```

```
response = requests.get(url, headers=headers, verify=False)
```

```
if response.status_code in [500, 501, 502, 503, 504]:
```

```
    print ()
```

An engineer is implementing the response for unrecoverable REST API errors. Which message needs to be placed on the snippet where the code is missing to complete the print statement?

- A. "Error; The server is unable to handle your request." "Error:
- B. The data requested has not been found."
- C. "Error: The rate limit has been exceeded for sending API requests at this time"
- D. "Enor: The server requires authentication to complete this request."

**Answer: A**

Explanation:

**Question: 299**

## DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to stop the REST API requests if a 'Too Many Requests' response is received. Not all options are used.

```
sa#_attempts = 10
```

```
while attempts < max.attempts: response = requests.get(request_url, headers = {"Authorization": "Bearer " + api_token})
```

```
if .status_code != :  
    break
```

```
time.sleep((2 ** attempts) * )  
attempts = attempts + 1
```

<code>int(response.status_code)</code>	<code>10</code>
<code>440</code>	<code>response</code>
<code>random.random()</code>	<code>429</code>

## Answer:

Explanation:

```
max_attempts = 10  
while attempts < max_attempts:  
    response = requests.get(request_url, headers =  
    {"Authorization": "Bearer " + api_token})  
  
    if .status_code != :  
        break  
  
    time.sleep((2 ** attempts) + )  
    attempts = attempts + 1
```

<code>10</code>	
<code>440</code>	<code>response</code>

## Question: 300

Refer to the exhibit.

```
Started POST "/users/auth/ldapmain/callback*" for 172.17.4.98 at 2021-02-11 21:06:47 *0000 2021-02-11.21:06:49.80956 127.0.0.1 - -  
(ll/Feb/2021:21:06:49 UTC) "GET /sidekiq HTTP/1.1" 200 57318 2021-02-11.21:06:49.80959 - -> /sidekiq  
{"severity":"ERROR","timestamp":"*2021-02-11T21:06:52.813Z","pid":20966,"progname":"*omniauth",\  
"message":"(Idapaaia) Authentication failure! Idap.error: Net::LDAP::Error, Connection timed out - user specified timeout*}  
Processing by CamiauthCallbacksController#failure as HTML  
Parameters: {"utf8"=>"*/*", "authenticity_token"=>"*[FILTERED]*", "username"=>"*user!", "password"=>"*[FILTERED]*"}  
Redirected to http://192.168.24.55/users/sign Ln  
Completed 302 Found in 119ns (ActiveRecord: 32.9ns I Elasticsearch: 0.0ms I Allocations: 40775)  
{"method":"POST","path":"/users/auth/ldapmain/callback*","format":"html","controller":"OmniauthCallbacksController",  
"action":"failure*","status":302,\  
"location":"http://192.168.24.55/users/sign Ln" "tun":"2021-02-11T21:06:52.934Z*.  
"params": [{"key":"utf8", "value":"*/*"}],
```

```
[{"key": "authenticity.token", "value": "[FILTERED]"}, {"key": "username", "value": "user1"}, {"key": "password", "value": "[FILTERED]"}, {"key": "remote_ip", "value": "172.17.4.98"}, {"key": "user.id", "value": null}, {"key": "username", "value": null}, {"key": "ua", "value": "Mor11la/5.0 ....k. '...I ... - .. V SA *C. _O. A. A.-V- /AA,AA.A. <*.&.-/O, A" { "redis.shared.state.read.bytes": 109, "redis.shared.state.write.bytes": 85, "db.count": 5, "db.write.count": 1, "db.queued.count": 0, "queue.duration.s": 0.008279, "cpu.s": 0.11, "db.duration.s": 0.03294, "view.duration_s": 0.0, "duration.s": 0.11892 }
```

Recently, users have reported problems logging into an application with their usernames and passwords. The logs have captured an authentication attempt. Based on the messages and errors contained, what is the cause of the problem?

- A. The sign-in redirection is sending clients to the wrong server for SSO.
- B. There is a time synchronization issue between the application and LDAP.
- C. Users are providing incorrect credentials when logging in.
- D. The LDAP server used for authentication fails to respond to connection requests

**Answer: A**

Explanation:

**Question: 301**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to create a new IKEv2 policy Not all options are used

```

import requests, json

BASE_URL = 'https://ftd.example.com/api/fdm/latest'
url = 
token = 'eyJhbGc ... yJbN8'
payload = {
    'name': 'DEVNET_IKEV2',
    'enabled': True,
    'priority': 0,
    'type': 
    'encryptionTypes': ['AES_GCM256', 'AES256']
}

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

response = requests.request(, url,
headers=headers, data=json.dumps(payload))
print(response.text.encode('utf8'))

```

f'Bearer {token}'	'ikevtwopolicy'
'ikevtwopolicies'	f'{BASE_URL}/object/ikev2policy'
f'{BASE_URL}/object/ikev2policies'	"POST"
f'Basic {token}'	

**Answer:**

**Explanation:**

lapart requests, json

```
BASE_URL = 'https://ftd.example.cca/api/fdB/latest' url = f'{BASE_URL}/object/ikev2policies' token = 'eyJhbGc...yJbN8'
```

```
payload = {'name': 'DEVNET.IKEV2', 'enabled': True, 'priority': 0, 'type': 'IKEV2', 'encryptionTypes': ['AES_GCM256', 'AES256']}
```

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

```
response = requests.request("POST", url, headers=headers, data=json.dumps(payload))  
print(response.text.encode('utf 8'))
```



### Question: 302

DRAG DROP

Drag and drop the components from the left into the order on the right to create the flow of the three-legged OAuth2.



**Answer:**

Explanation:



### Question: 303

DRAG DROP

Refer to the exhibit.

A paginated endpoint to the API accepts 3 specific query parameters

- `perPage` The number of entries to be returned per page (required request)
- `startAfter` A token used by our server to indicate the starting 'cursor' of the page (i.e. the data we want in this request will start immediately after the entry with this 'cursor')
- `endingBefore` A token used by our server to indicate the ending 'cursor' of the page (i.e. the data we want in the request will end immediately before the entry with this 'cursor')

The actual types of the starting and ending cursor identifiers will vary depending on the API endpoint. However, they typically fall into 3 categories:

- **Timestamps** The values of `startAfter` and `endingBefore` are timestamps if we are paginating based on time. In other words, each entry returned in the response has some timestamp value associated with it and each request returns a limited number of these entries based on the value of the `perPage` parameter. We use timestamps as the 'boundaries' between pages.
  - For example, the current page might contain entries with timestamps ranging from exactly 7 days ago to exactly 7 days ago. The previous page might be referred to by (`endingBefore: <2 days ago>`), and the next page might be referred to by (`startAfter: <1 day ago>`).
  - For example, the current page might contain 5 entries with ages ranging from 1 to 5 minutes. The previous page might be referred to by (`endingBefore: 1 min`) and the next page might be referred to by (`startAfter: 5 min`).

Refer to the exhibit. Drag and drop the code from the bottom onto the box where the code is missing to query the last 10 Bluetooth clients seen by APs in their network using the Meraki Dashboard API. Not all options are used.

```

import requests
URL = 'https://api.meraki.com/api/v0/networks/NETWORK/'
r = requests.get(URL + '?',
                 perPage=10,
                 endingBefore=' ')
print(r.json())

```

get

endingBefore

clients.mac

bluetoothClients

r.text

bluetooth



Explanation:

```
import requests
URL = 'https://api.meraki.com/api/v0/networks/NETWORK/'
r = requests.get(URL + 'bluetoothClients?perPage=10&endingBefore=0')
print(r.text)
```

clients.msc  
bluetooth

### Question: 304

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to construct a contact tracking application that dynamically returns all the Bluetooth clients on a given Meraki network. Not all options are used.

```
import
```

headers = {'Content-Type': 'application/json', 'Accept': 'application/json', 'X-Cisco-Keraki-API-Key': '95fta40M7kN\*'}

networkID = 'K.73S40S83M1'

```
def getClients(networkID):
    url = 'https://api.aeraki.coa/api/v1/networks/'
    results = []
    response = requests.get(url + networkID + 'bluetoothClients', headers=headers)
    for client in response.json():
        results.append(client)
    url = response.links['next']('url')
    response = requests.get("GET", url, headers=headers)
    results.append(client)
    return results
```

requests	bluetoothClients	clientID
networkID	Sva	endpoints

**Answer:**

Explanation:

```

import requests

headers = {
    'Content-Type': 'application/json',
    'Accept': 'application/json',
    'X-Cisco-Meraki-API-Key': '95f9e40b874M'
}

networkID = "K_73540883661"
def getClients(networkID):
    url = "https://api.meraki.com/api/v1/networks/*"
    url = url + networkID + "/bluetoothClients"
    results = []
    response = requests.request("GET", url, headers=headers)
    for client in response.json():
        results.append(client)
    while 'next' in response.links:
        url = response.links['next']['url']
        response = requests.request("GET", url, headers=headers)
        for client in response.json():
            results.append(client)
    return results

```



**Question: 305**

What are two benefits of using a centralized logging service? (Choose two.)

- A. reduces the time required to query log data across multiple hosts
- B. reduces the loss of logs after a single disk failure
- C. improves application performance by reducing CPU usage
- D. improves application performance by reducing memory usage
- E. provides compression and layout of log data

**Answer: A, E**

Explanation:

**Question: 306**

Refer to the exhibit. A developer wants to automatically deploy infrastructure for a containerized application. A .gitlab-ci.yml file must describe a pipeline that builds a container based on a supplied Dockerfile and executes an Ansible playbook on the configured container. What must be added where the code S missing to complete the script?

```

y>j<: dK<:! 19.03.1 service*:
- aaaa: decker:19.03.1-dlnd

```

```
■e>9«at
* build contain*!
• get_rcnfig
variable*:
DOCKERDRIVER: overlay!
DOCKER T1S CESmiR: ""
Ah"5^U_MCS:_KEX_CHECK:X3i "raise"
```

Build container and install Dependencies: stage: build^centatner beforaysexist: - docker info

```
* decker login registry.gitlab ■ c™—j "111 IKER CSERXAME" *c " «:C+:KIR_ FRS5W2W script:
- decter m.c . t registry.gitlab.ccr, SDCCXEF USEMOME F"*rER_FE?C - docker run -t -d —ra —nose settee:
registry.gitlab.cam SDOCKXER^DSERMRXE SIOIKER RER IS IHRV
* docker errant settee: registry.git lab.err J ICC KER REPOSITORY aftet^e-._____Z
```

annect to Cisco Sandbox and backup config:

```
image: registry.gitlab.ccaiDOCKXER VSERSM1E JDOIKER REFISITCRY
stage: getjrenfig
script:
- ansible-playceck gathes aBd process coBflgs.yBl -1 inventory
```

A)

```
docker assign nettest
registry.gitlab.com/DOCKE: USERNAME/$DOCKE REPOSITORY
```

B)

```
docker info registry.gitlab.com/$DOCKE REPOSITORY
```

C)

```
docker logout registry.gitlab.com
```

D)

```
docker push registry.gitlab.com/
$DOCKE USERNAME/$DOCKE REPOSITORY
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: D**

Explanation:

**Question: 307**

A developer must deploy a containerized application for network device inventory management. The developer sets up a Kubernetes cluster on two separate hypervisors. The SLA is not currently meeting a specified maximum value for network latency/jitter. CPU/memory and disk I/O are functioning properly.

Which two design approaches resolve the issue? (Choose two.)

- A. Upgrade the server NIC card.
- B. Colocate services in the same pod.
- C. Enable IPv6 within the cluster.
- D. Replace the HDD drives with SSD drives.
- E. Deploy the cluster to a bare metal server.

**Answer: A, B**

Explanation:

**Question: 308**

A developer is deploying an application to automate the configuration and management of Cisco network switches and routers. The application must use REST API interface to achieve programmability. The security team mandates that the network must be protected against DDoS attacks. What mitigates the attacks without impacting genuine requests?

- A. traffic routing on the network perimeter
- B. firewall on the network perimeter
- C. API rate limiting at the application layer
- D. IP address filtering at the application layer

**Answer: B**

Explanation:

**Question: 309**

Which kind of API that is used with Cisco DNA Center provisions SSIDs, QoS policies, and update software versions on switches?

- A. Event
- B. Multivendor
- C. Integration
- D. Intent

**Answer: A**

Explanation:

**Question: 310**

Cisco sensorBase gathers threat information from a variety of cisco products and services and performs analytics on threats. Which term describes this process?

- A. consumption

B. deployment

C. sharing

D. authoring

**Answer: C**

Explanation:

**Question: 311**

Refer to the exhibits. Which data payload completes the CURL command to run the create port object API call In Cisco Firepower Threat Defense?

```
curl -X POST \
--header "Accept: application/json" \
--header "Authorization: Bearer ${ACCESS_TOKEN}" \
--header "Content-Type: application/json" \
-d '{
} \
https://$[HOST]:$[PORT]/api/fdm/v3/object/icmpv4ports
```

Refer to the exhibits. Which data payload completes the CURL command to run the create port object API call In Cisco Firepower Threat Defense?

A)

```
"icmpv4Type": "ANY",
"name": "string",
"type": "icmpv4portobject"
```

B)

```
"description": "This is an ICMP Echo",  
"icmpv4Code": "8",  
"icmpv4Type": "Echo",  
"isSystemDefined": true,  
"name": "ICMP Echo",  
"version": "2.2"
```

C)

```
"description": "string",  
"icmpv4Code": "ANY_IPV4",  
"icmpv4Type": "ANY",  
"id": "string",  
"isSystemDefined": "string",  
"name": "string",  
"type": "icmpv4portobject",  
"version": "string"
```

D)

```
"description": "string",  
"icmpv4Code": "ANY_IPV4",  
"icmpv4Type": null,  
"isSystemDefined": true,  
"name": "string",  
"type": "icmpv4portobject"
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: A**

Explanation:

**Question: 312**

Which transport layer protocol does gRPC use to retrieve telemetry information?

- A. SSH
- B. SNMP
- C. TCP
- D. HTTP/2

**Answer: D**

Explanation:

**Question: 313**

A developer corrects an application bug with ID bugIDa98416945110x and then installs it on a Cisco Catalyst 9300 series switch. Which command will enable the application called myapp?

- A. app-hosting install appid myapp package usbflash1:myapp.tar
- B. app-hosting run re-start appid my app bugfix
- C. app-hosting activate appid myapp
- D. app-hosting start appid myapp

**Answer: D**

Explanation:

## Question: 314

Refer to the exhibit.

```
import requests
import getpass
device_list = ['192.168.243.1', '192.168.243.2']
port = "8080"
username = input("Enter Username -->")
password = getpass.getpass(prompt="Enter Password: ->")
for device in device_list:
    [REDACTED]
headers = {'Content-Type': 'application/vnd.yang.data+json',\
           'Accept': 'application/vnd.yang.data+json'}
response = requests.get(url, auth=(username, password),\
                        headers=headers, verify=False)
print(f"Interfaces present on {device}:")
for interfaces in response.json():
    print(f"{interfaces}")
```

Cisco IOS XE switches are used across the entire network and the description that is filed for all interfaces must be configured. Which code snippet must be placed in the blank in the script to leverage RESTCONF to query all the devices in the device list for the interfaces that are present?

A)

```
url="http://"♦device*":"♦port*"/api/running/ interfaces"
```

B)

```
url="http://"♦device*":"♦port*"/api/running/ interfaces/interface"
```

C)

```
url="http://"♦device*":"♦port*"/api/running/ interfaces/interface/name"
```

D)

```
url=http://f"{device_list}+(port)/api/running/
interfaces"
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: A**

Explanation:

**Question: 315**

Refer to the exhibit.

```
1 def init_tracer(service):
2     logging.getLogger('').handlers = []
3     logging.basicConfig(format='%(message)s', level=logging.DEBUG)
4     config = Config(
5         config={'sampler': {'type': 'const', 'param': 1,}, 'logging': True,},
6         service_name=service,)
7     return config.initialize_tracer()
8
9     base_url = 'https://sandboxdnac.cisco.com/'
10
11     try:
12         dnac = DNACenterAPI(username='devnetuser', password='Cisco123!',
13                             base_url=base_url, version='1.3.3',
14                             verify=False)
15         print('auth passed')
16     except Exception as e:
17         print('Failed')
18
19     try:
20         devices = dnac.devices.get_device_list()
21         devices = devices['response']
22
23         devices = [device['hostname'] for device in devices]
24         print(devices)
25     except Exception as e:
26         print('Failed to fetch devices')
```

An application is created to serve the needs of an enterprise. Slow performance now impacts certain API calls, and the application design lacks observability. Which two commands improve observability

and provide an output that is similar to the sample output? (Choose two.)

A)

```
dnac-tracer3 = init_tracer ('dnac-tracer3')
```

B)

```
with dnac-tracer3.start_span('dnac-api-calls') as span:
```

C)

```
with tracer.start_span('dnac-api-calls') as span:
```

D)

```
dnac-tracer3.start_span('dnac-api-calls') as span:
```

E)

```
tracer = init_tracer('dnac-tracer3')
```

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

**Answer: C, E**

Explanation:

**Question: 316**

Refer to the exhibit.

```
response = requests.post(url)
```

```
backoff = 5  
time.sleep(int(backoff))  
response = requests.post(url)  
while response.status_code != 200 and backoff < 80:  
    backoff *= 2  
    time.sleep(int(backoff))  
    response = requests.post(url)  
else:  
    continue
```

An engineer needs to implement REST API error handling when a timeout or rate limit scenario is present. Which code snippet must be placed into the blank in the code to complete the API request?

A)

```
if response.status_code == 429:  
    wait = response.headers.get('Retry-After', 99)  
    print(f'-> got {response.status_code} from {url}. retrying after {wait}s')  
    time.sleep(int(wait))  
    response = requests.post(url)  
elif response.status_code == 408:
```

B)

```
if response.status_code == 401:  
    wait = response.headers.get('Retry-After', 99)  
    print(f'-> got {response.status_code} from {url}. retrying after {wait}s')  
    time.sleep(int(wait))  
    response = requests.post(url)  
elif response.status_code == 408:
```

C)

```
if response.status_code == 408:  
    wait = response.headers.get('Retry-After', 99)  
    print(f'-> got {response.status_code} from {url}. retrying after {wait}s')  
    time.sleep(int(wait))  
    response = requests.post(url)  
elif response.status_code == 429:
```

D)

```
if response.status_code == 429:
    wait = response.headers.get('Retry-After', 99)
    print(f'-> got {response.status_code} from {url}. retrying after {wait}s')
    time.sleep(int(wait)) response =
    requests.post(url)
elif response.status_code == 401:
```

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

**Answer: A**

Explanation:

### Question: 317

A developer has built a Docker image named 'devcor73f3e94529V' using the Dockerfile named 'devcor42f5e464771' and now needs to containerize it. Which command must the developer use?

- A. docker run -name devcor73f3e945291 -i -t devcorapp
- B. docker run -name devcorapp i -t devcor73f3e945291
- C. docker build --name devcorapp -i devcor73f3e945291
- D. docker build -name devcor73f3e945291 -i devcorapp

**Answer: B**

Explanation:

### Question: 318

Refer to the exhibit.

```

import requests
from requests.auth import HTTPBasicAuth

# latest 2son
url = 'https://na.cloudcenter.rise.com:443/!uizenrer-rm-career! apt v1 apps'
response = requests.request("GET", url, auth=HTTPBasicAuth('327<S', '2b...'),
    verify=False)
result = json.loads(response.text)

def page = 0
totalPages = 1
while page < totalPages;
    url = 'https://na.cloudcenter.cisco.coaL/cleudcenter-ccn-backend/apx/v1
    virtualMachines?page= page}'
    response = requests.request("GET", url, auth=HTTPBasicAuth('327<S', '2b...'),
    verify=False)
    result = json.loads(response.text)
    page = page + 1
totalPages = result["details"]['totalPages']
return result

```

An application has been created to serve a whole enterprise. Based on use and department requirements, changes are requested on a quarterly basis. When evaluating the application design, which two actions improve code maintainability?

- A. Replace the requests library with the http client library in the code.
- B. Place all import statements on a single line at the top of the code.
- C. Cache responses to API calls for later reuse on other code.
- D. Parameterize similar code blocks inside functions and reuse within the code.
- E. Add comments in appropriate locations to aid in understanding the code.

**Answer: D, E**

Explanation:

**Question: 319**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to configure a router that runs Cisco IOS XE by using RESTCONF. The API call is made to the management URL of the IOS XE device and on a registered port number. Errors that are caught during HTTP operation are

registered. Not all options are used.

```
import requests

HOST = '192.168.1.1'
PORT = 80
USER = 'admin'
PASS = 'GigabitEthernet3'
BASE_URL = "https://{h}:{p}/api/running/native/ip/route".format(h=HOST, p=PORT)
headers = {'content-type': 'application/vnd.yang.data+json', 'accept': 'application/vnd.yang.data-json'}

r = requests.post(BASE_URL, auth=(USER, PASS), data=data, headers=headers, verify=False)

if r.status_code == 401:
    print(r.status_code, r.text)
elif r.status_code == 201:
    print(r.status_code, r.text)
else:
    print(r.status_code, r.text)
```

**Answer:**

**Explanation:**

ios-xe-mgmt, 9443, requests.post, 201

**Question: 320**

What is a benefit of running multiple instances of a back-end service and using load balancing to distribute the communication between the front-end and back-end services?

- A. The consistency of data for stateful services increases.
- B. High availability is provided for the back-end services.
- C. Scaling horizontally is automated out of the box.
- D. The total load on the database servers decreases.

**Answer: B**

Explanation:

### Question: 321

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing in the Python script to display the error message to the user. The script uses Python to connect to Cisco DNA Center and provides details if the connection fails. Not all options are used.

```
import requests
from requests.exceptions import Timeout

dnac_url = "https://192.168.243.1:8443"
sess = requests.session()
try:
    rc = sess.request('GET', dnac_url, timeout=1)
except Timeout:
    print('TIMEOUT ERROR: Unable to access DNA Center!')
    exit(-1)
if rc.status_code ==  :
    print('The request was successful')
else:
    print(f'Error Code: {  }:{  }')
```

<code>rc.reason</code>	<code>status_code</code>	<code>requests.code.ok</code>
<code>rc.status_code</code>	<code>rc.error</code>	<code>rc.dnac_error</code>

**Answer:**

Explanation:

`requests.code.ok, rc.status_code, rc.reason`

### Question: 322

Refer to the exhibit. The code fetches the latest order from the purchases table for a specific user. An engineer needs to pass query parameters to the execute function to prevent an SQL injection attack. Which code snippet must be placed in the blank in the code to meet this requirement?

A)

```
cursor.execute("SELECT orders FROM purchases WHERE  
username = '%s' % username".replace("'", "''))
```

B)

```
cursor.execute(f"SELECT orders FROM purchases WHERE username  
= '{username}'")
```

C)

```
cursor.execute("SELECT orders FROM purchases WHERE username =  
'({}*'.format(username))
```

D)

```
cursor.execute("SELECT orders FROM purchases WHERE  
username = %(username)s", {'username': username})
```

A. Option A

B. Option B

C. Option C

D. Option D

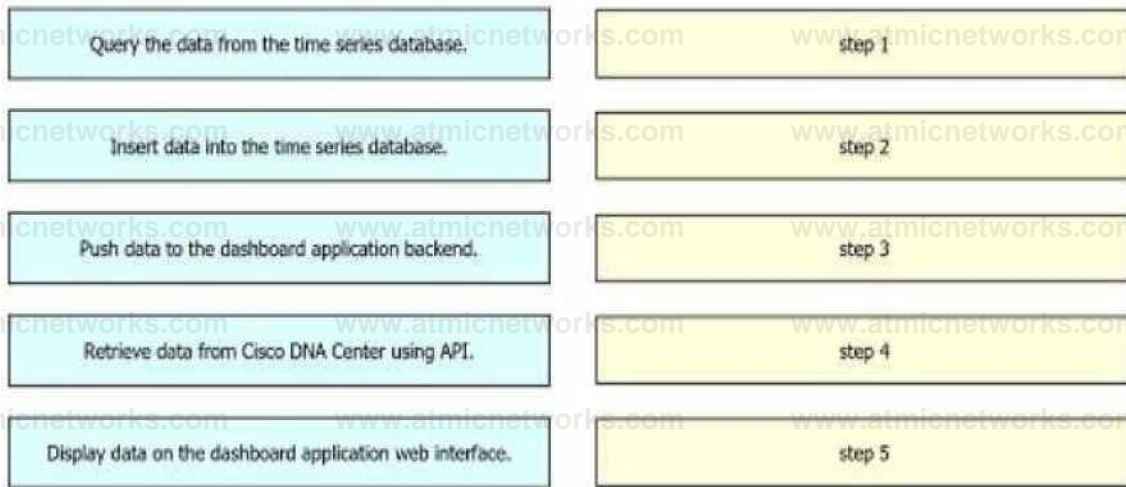
**Answer: D**

Explanation:

**Question: 323**

DRAG DROP

Drag and drop the operations from the left into the order on the right to create a web dashboard that displays Cisco DNA Center data for an organization.



### Answer:

Explanation:

Retrieve data from Cisco DNA Center using API.

Insert data into the time series database.

Query the data from the time series database.

Push data to the dashboard application backend.

Display data on the dashboard application interface.

### Question: 324

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing in the Ansible script to get the existing firewall rules from Cisco Meraki and store the results to a new variable. Not all options are used.

```
- name: Get firewall rules
meraki_mx_l3_firewall:
  auth_key: KEY123
  org_name: example_org
  net_name: example_net
  state: query
  : localhost
  :
set_fact:
  original_ruleset: '{{ [ ] }}
```

- rules
- register
- policy
- rules.data
- delegate\_to
- task
- access\_rule

**Answer:**

**Explanation:**

delegate\_to, register, rules, rules.data

**Question: 325**

What securely stores and encrypts the API keys and tokens that are used for an application deployment?

- A. ITSM
- B. Artifactory
- C. GitHub
- D. Vault

**Answer: D**

**Explanation:**

## Question: 326

Refer to the exhibit.

```
1 import json
2 import requests
3 from requests.exceptions import HTTPError
4
5 url='https://devnet.ap.net/accesspoints/266'
6 try:
7     response = requests.get(url)
8     response.raise_for_status()
9 except HTTPError as http_err:
10    print('HTTP error occurred: {}'.format(http_err))
11 except Exception as err:
12    print('Other error occurred {}'.format(err))
13 else:
14    json = json.loads(response.text)
15    _____
```

```
$ python get-userid.py
{'u'userId': 1, u'firstName': 'James', u'secondName': u'Bond', u'email':
u'james.bond@cisco.com'}
```

A developer has created a Python script that retrieves information about the deployment of Cisco wireless access points using REST API. Which two code snippets must be added to the blank in the code to print the value of the userid key instead of printing the full JSON response? (Choose two.)

A)

```
print json[0][userId]
```

B)

```
print json['userId']
```

C)

```
print json[1]['userId']
```

D)

```
for key, value in json.items():  
    if key == 'userId':  
        print('{}'.format(value))
```

E)

```
for key, value in json.dumps(response.text):  
    if key in 'userId':  
        print value
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: B, D**

Explanation:

**Question: 327**

Refer to the exhibit.

```

$ docker service scale cisco_devnet=5
cisco_devr.ee scaled to 5 $
docker service ps cisco_devnet
ID                MAME                SEP-VICE                IMAGE                Uv2T
STATE            DESIRED STATE        NODE
de1334dld0ce cisco_devr.ee. 1    ciacc_devnet         devnet/test         Running2:
minutes Running          dcl.c  tsc.com
a34"?9$€9efee ciscoo_devr.ee. 2    ccscoc_devr.ee       devnet/test         Running25
minutes Running          dcl.c  isco.com
"aiacod53c41 cisco_devnet.3    cisco_devr.ee        devr.ee/test        Running25
minutes Running          dcl.c  isco.com
efS0dadBSSbc cisco_devnet.4    ciscc_devr.ex         dev.net/test        Running0
minutes Running          de3.  cisco.COB
38dd012de364 ciscoo_devr.ee. 5    cisco_devnet         devnet/test         Running5
minutes Running          dc4.  cisco.com

```

A developer runs the docker service scale command to increase the number of replicas for the cisco\_devnet service. The swarm cluster is using a private IP address subnet. The service has these design requirements:

It must be hosted behind a virtual IP address that is reachable from the Internet.

For security reasons, the Docker swarm cluster subnet must not be reachable from the Internet.

Which design approach is used to fulfill the requirements?

- A. Create an overlay network by using a globally routable subnet and enable a routing mesh within the swarm cluster.
- B. Create a bridge network by using a globally routable subnet and enable a routing mesh within the SWARM cluster.
- C. Configure an external load balancer to route requests to the swarm service by using VPN.
- D. Configure an external load balancer to route requests to the swarm service by using NAT.

**Answer: A**

Explanation:

**Question: 328**

A development team is looking for a tool to automate configurations across the infrastructure. The tool must have these characteristics:

- written in Python
- define playbooks (or intent)

- stateless
- imperative

Which tool meets these requirements?

- A. Puppet
- B. Netmiko
- C. Ansible
- D. NCM

Explanation:

### Question: 329

Refer to the exhibit.

**Answer: C**

```

import paramiko
from os import environ

host = ["JJ3172-TOR-01.widgets.com", "N3172-TOR-O2.widgets.com", "N9336C-LEAF-01.widgets.com", "N31108-3ORDER-LEAF-01.widgets.com"]
backup_server = "central-server-01.widget.com"

class ConnectionManager:

    def nc (u, p) :
        client = SSHClientO
        return client.connect(host, username=u, password=p)

    def nctkey:
        Client = SSHClientO
        return client.connect(host, pkey=key)

if __name__ == "__main__":
    cm = ConnectionManagerO
    for i in host:
        try:
            if i.index("TOR") != -1:
                conn = cm.nc(environ("PRIVATE_KEY"))
            else:
                conn = cm.nc(environ("USER"), environ("PASSWD"))
                conn.exec_command(f"copy running-config scp://{(backup_server)} backups (i)")
        except Exception *3 e:
            print(f"The host {i} failed to backup properly, {(str(e))}")
        else:
            conn.close()

```

A developer must review an intern's code for a script they wrote to automate backups to the storage server.

The script must connect to the network device and copy the running-config to the server.

When considering maintainability, which two changes must be made to the code? (Choose two.)

- A. Rename the class to "ArchiveManager".
- B. The code is incorrect because the class does not have an init () method.
- C. The command sent to the network device is incorrect.
- D. Refactor the code placing the "for" loop steps inside a single nc method.
- E. The intern must use IP addresses because DNS is unreliable.

**Answer: C, D**

Explanation:

### Question: 330

Which data encoding format uses gRPC by default for serializing structured sets of information?

A. JSON

B. YAML

C. Protobuf

D. XML

**Answer: C**

Explanation:

The data encoding format used by gRPC by default is Protobuf.

### Question: 331

Refer to the exhibit.

```
hosts: nxos gather.facts: no connection: httpapi tasks:
  - name: run multiple commands on remote nodes
    cisco.nxos.nxos_command: commands:
      - show version
      - show Interfaces
```

A network administrator copies SSL certificates to a Cisco NX-OS switch. An Ansible playbook is created to enable NX-API, which will use the new certificate. In the group\_vars/vars.yml file, which code snippet must be used to define the properly formatted variables?

A)

```
ansible_network_os: "netconf"  
ansible_httpapi_use_ssl: true  
ansible_httpapi_validate_certs: false  
ansible_httpapi_port: 80  
ansible_user: "USER"  
ansible_password: "PASSWORD"
```

B)

```
---  
ansible_network_os: "restconf"  
ansible_httpapi_use_ssl: true  
ansible_httpapi_validate_certs: true  
ansible_httpapi_port: 443  
ansible_user: "USER"  
ansible_password: "PASSWORD"
```

C)

```
---  
ansible_network_os: "nxos"  
ansible_httpapi_use_ssl: false  
ansible_httpapi_validate_certs: false  
ansible_httpapi_port: 80  
ansible_user: "USER"  
ansible_password: "PASSWORD"
```

D)

```
---  
ansible_network_os: "cli"  
ansible_httpapi_use_ssl: false  
ansible_httpapi_validate_certs: true  
ansible_httpapi_port: 443  
ansible_user: "USER"  
ansible_password: "PASSWORD"
```

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

**Answer: B**

Explanation:

**Question: 332**

DRAG DROP

A developer is designing an application that uses confidential information for a company and its clients. The developer must implement different secret storage techniques for each handled secret to enforce security policy compliance within a project. Drag and drop the security policy requirements from the left onto the storage solutions on the right

SecretA must be accessible only to the application.	environmental variable file
SecretB, which has access control, must be implemented in a secure, per-user fashion.	source code file in plain text
The development team must have unlimited access to SecretC.	external password manager
SecretD must be accessible to anyone who has host access.	source code file encrypted

**Answer:**

Explanation:

accessible only app -> encrypted

per user fashion -> external password manager

unlimited access -> file plain text

host access -> enviromental variable file

**Question: 333**

A developer in a learn of distributed authors is working on code in an isolated Git branch

named 'update4a2f5464771 The developer attempts to merge the new code with a branch named 'dvcapp2a3f1564733' however the merge operation encounters a conflict error during the process. Which Git command must the developer use to exit from the merge process and return the branch to the previous state?

- A. git merge -exit
- B. git merge -abort
- C. git abort —merge
- D. git abort -status

**Answer: B**

Explanation:

### Question: 334

How does the use of release packaging allow dependencies to be effectively managed during deployments?

- A. dependencies are staggered between multiple releases
- B. designed to prevent any dependencies between release units
- C. dependencies are tested after the release is deployed
- D. removal of release units if they have issues in testing

**Answer: B**

Explanation:

**Question: 335**

Where must the data be encrypted to ensure end-to-end encryption when using an API?

- A. on the device that consumes the API
- B. on the source device before transmission
- C. on the end device after a request is received
- D. on the server that stores the data

**Answer: A**

Explanation:

**Question: 336**

Refer to the exhibit.

```
<input type="hidden" name=" " >
```

A network engineer created a simple Python Flask application but must incorporate a CSRF token. Which code snippet must be added in the blank in the script to manually incorporate the token?

- A. `_access_tokenM value=M{{ csrf_token}}`
- B. `_csrMoken" value="{{ csrf_grant()}}`
- C. `_csrMoken" value="{{ csrf_token()}}`
- D. `_xssjoken" value="{{ csrMoken}}`

**Answer: C**

Explanation:

**Question: 337**

DRAG DROP

Drag and drop the steps from the left into the order on the right to host a Docker-contained application on a Cisco Catalyst 9000 Series Switch.

Activate and start the hosted application.	step 1
Upload the containerized application to a repository, save the container as a .tar file, and prepare and format the USB drive.	step 2
Configure the application that hosts vNIC on the switch.	step 3
Download the application to usbflash1 and configure the relevant VLAN interface on the switch.	step 4
Design, develop, and dockerize the application.	step 5
Install the application on the switch.	step 6

**Answer:**

Explanation:

Design, develop, and dockerize the application.

Upload the containerized application to a repository, save the container as a .tar file, and prepare and format the USB drive.

Download the application to usbflash1 and configure the relevant VLAN interface on the switch.

install the application on the switch.

Configure the application that hosts vNIC on the switch.

Activate and start the hosted application.

**Question: 338**

Refer to the exhibit.

**"errors": (**  
**"API rate limit exceeded for organization"**

An architect wrote an application to collect device information from the Cisco Meraki Dashboard API. Every time a network change occurs the application collects information and records new endpoint MAC addresses. The application stopped working after the locations and network equipment of a competitor were acquired. Which application approach must be applied to reduce latency and rate limiting?

- A. MOS scoring system before collecting information
- B. leaky faucet algorithm for fault categorizing
- C. error handling to check for reachability first
- D. webhooks to trigger updates

**Answer: C**

Explanation:

**Question: 339**

An application must be able to print the values of the variables in specific modules. Different message levels will be used for production and for development. Proof of access and activity must be documented. What must be included in the implementation to support these observability requirements?

- A. print
- B. metrics
- C. logging
- D. streaming

**Answer: C**

Explanation:

## Question: 340

Refer to the exhibit.

```
fatal: [localhost]: FAILED! => ("changed": true, "sig*: "non-zero return code", "rc": 1,
"atderr": "Traceback (most recent call last)i\n File \"/home/user/ .ansible tmpansible-trp-
1622890235.6864936-1'9-246910255466835/ load_and_parae.py\"", line 3, in <aodule>\n with
open<*bioe.jeon',*x*> a* bioe:XnFileNotFoundError: [Errno 2] No such file or directory:
'bio*.jeon*Xn". "etderr_lmes": ["Traceback (most recent call last):", " File \"/home/user/
ansible tntp'ansible-trp-1622690235.6864936-1'9-246920255488835/ load_and_paxse.pyX", line 3, in
'module*", " with cpent'bioa.jeon', 'r') a* bios:", "FileNotFoundError: (Errno 2] No such file or
directory: 'bios.jeon'"], "stdout": "", "stdout_lines": (])
```

An engineer creates an application that leverages the Ansible framework to provision CPE endpoints that have configuration changes. The application contains an Ansible playbook named provision\_cpes.yml that uses the ansible.builtin.script Ansible module to execute these two Python scripts:

- gather and\_create.py. which creates a JSON file named bios.json that contains the CPE models and their respective IOS file information
- load and parse.py. which loads the file data and parses it for later consumption

After several successful runs, the application fails. During a review of the Ansible execution logs, the engineer discovers an error output that indicates that one of the stages failed. What is the cause of this issue?

- A. ansible builtm script Ansible module
- B. gather and create.py Python script
- C. load\_and\_parse.py Python script
- D. provision cpes.yml Ansibte playbook

**Answer: B**

Explanation:

## Question: 341

DRAG DROP

Refer to the exhibit.

**POST** /api/fmc\_config/v1/domain/{domainUUID}/object/hosts

Retrieves, deletes, creates, or modifies the host object associated with the specified ID. If no ID is specified for a GET, retrieves list of all host object. Check the response section for applicable examples (if any).

Name	Description
<b>body</b> * required (body)	Input representation of host object. Example Value: Model

```
{
  "metadata": {
    "lastUser": {
      "name": "string",
      "links": {
        "parent": "string",
        "self": "string"
      }
    },
    "id": "string",
    "type": "string"
  },
  "domain": {
    "name": "string",
    "links": {
      "parent": "string",
      "self": "string"
    },
    "id": "string",
    "type": "string"
  },
  "readOnly": {
    "reason": "ERAC",
    "state": true
  },
  "timestamp": 0
},
"bulk":
string
(query)
domainUUID * required
string
(path)
```

**Responses** Response content type: application/json

Code	Description
201	Created

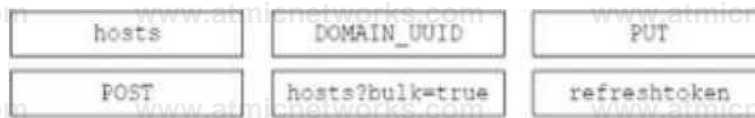
Drag and drop the code from the bottom onto the box where the code is missing in the script to read from a .csv file and import the host entries. The script uses the Cisco Firepower API to create the appropriate entries. The script will be used as part of the security analysis dashboard application to visualize data about network security and host information. Not all options are used.

```
import requests, csv, json
from requests.auth import HTTPBasicAuth
address = fscrestaplab.sandbox.cisco.cos
username = "networkuser"
password = "clsc0l23"
api.uri = "/api/fmc_config/v1/domain/{domainUUID}/object/hosts"
url = "https://{}{}".format(address, api.uri)
response = requests.request("POST", url, verify=False, auth=HTTPBasicAuth(username, password))
access_token = response.headers["X-auth-access-token"]
refresh_token = response.headers["X-auth-refresh-token"]
DOMAIN_UUID = response.headers["DOMAIN.UUID"]
csv_file_path = input("Please enter the CSV Filepath:")
host = []
csv_reader = csv.DictReader(open(csv_file_path))
for rows in csv_reader:
    if rows['type'] == "Host":
        host.append(rows)
host_payload = json.dumps(host)
```

```
/api/fmc_config/v1/domain/" + 
/object/ 
```

```
host_url = "http://{}{}".format(address, host.api.uri)
headers = {'Content-Type': 'application/json', 'X-auth-access-token': access_token}
response = requests.request("POST", host_url, headers=headers, data=host_payload, verify=False)
```

```
If response.status.code == 201 or response.status.code == 202:  
    print("Host Objects successfully pushed")
```



**Answer:**

Explanation:

Domain UUID

hosts

POST

**Question: 342**

How is an OAuth2 three-legged authentication flow initiated?

- A. The user makes a request to the OAuth client
- B. Exchange the key for an access token
- C. Construct an API call to retrieve the credentials.
- D. Get the authorization code.

**Answer: A**

Explanation:

**Question: 343**

What is the unique identifier in the OAuth2 three-legged authorization code flow?

- A. client ID
- B. resource server
- C. resource owner
- D. authorization server

**Answer: A**

Explanation:

**Question: 344**

A developer is designing a modern, distributed microservice enterprise application. The application will be integrating with other systems and focus on a large deployment, so control of API calls is necessary. What is the best practice to reduce application response latency and protect the application from excessive use?

- A. Implement rate limiting on the client side.
- B. Implement rate limiting on the client and server sides.
- C. Do not enforce any rate limiting
- D. Implement rate limiting on the server side.

**Answer: B**

Explanation:

**Question: 345**

An application is made up of multiple microservices, each communicating via APIs. One service is beginning to be a bottleneck for the application because it can take a lot of time to complete requests. An engineer tried adding additional instances of this service behind the load balancer, but it did not have any effect. Which application design change must be implemented in this scenario?

- A. Move from synchronous to asynchronous interactions with the service and implement a message queue.
- B. Deploy an API gateway to centralize all inbound communication requests and offload authentication
- C. Vendor all dependencies into the service that is causing delays to remove external dependency checks.
- D. Leverage serverless architecture instead of containers to gain the advantage of event driven APIs.

**Answer: A**

Explanation:

**Question: 346**

What is a risk to data privacy during the storage and transmission of data?

- A. The risk of exposure is increased when data is shared between applications.
- B. The transfer of unencrypted data between storage devices increases the risk of exposure.
- C. Data breaches cause ongoing exposure of personal information.
- D. The transfer of unencrypted personally identifiable financial information from a storage device increases the risk of a data breach.

**Answer: B**

Explanation:

**Question: 347**

A web application has those requirements for HTTP cache control:

The client browser must be prevented from storing responses that contain sensitive information.

Assets must be downloaded from the remote server every time.

Which header must the engineer use?

- A. must-revalidate
- B. no-store
- C. public
- D. private

**Answer: B**

Explanation:

**Question: 348**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to create a Puppet manifest that implements an NTP configuration when applied to a device in the master inventory. Not all options are used.

```
ntp_server { '10.1.1.20':  
   =>  
  key => 54,  
  prefer => true,  
   =>  
   =>  
   =>  
}
```

- 
- 
- 
- 

**Answer:**

Explanation:

Ensure

minpoll

maxpoll

source\_interface

### Question: 349

A team is developing a cloud-native application for network monitoring and management of various devices. An increased growth rate of users is expected. The solution must be easily managed and meet these requirements:

- able to use dependencies
- easy disposability
- flexible configuration

Which application design approach must be used?

- A. waterfall model
- B. 12-factor app framework
- C. object-oriented programming
- D. agile software development

**Answer: B**

Explanation:

This framework is designed to provide a consistent set of practices and principles to ensure applications can be easily deployed and managed in the cloud. It utilizes a microservices architecture which allows applications to be broken up into smaller, more manageable components. In addition, the 12-factor App Framework makes use of dependencies, flexible configuration and disposable services, making it an ideal choice for this type of application.

### Question: 350

Which configuration step must be performed on a Cisco IOS XE device to present collected data in Cisco DNA Center?

- A. Create an SNMPv3 user account.
- B. Apply a telemetry profile.
- C. Synchronize the device and the data collector.
- D. Enable Cisco NetFlow collection.

**Answer: B**

Explanation:

**Question: 351**

DRAG DROP

Drag and drop the steps from the left into the order on the right to create the workflow to retrieve the gateway information from a set of Cisco IOS devices. Not all options are used.

Apply the cisco_ios class on each primary node.	step 1
Run the puppet agent -t command on each agent.	step 2
Apply the cisco_ios class on each Puppet agent.	step 3
Run the puppet agent -t command on each primary.	step 4
Run the puppet device --target cisco.example.com --resource gateway command.	step 5

Apply the cisco ios class on each proxy Ppboet agent

**Answer:**

Explanation:

1. Apply the cisco\_ios class on each primary node
2. Apply the cisco\_ios class on each proxy Puppet agent
3. Run the puppet agent -t command on each primary
4. Run the puppet agent -t command on each agent

5. Run the puppet device –target cisco.example.com –resource gateway command"

**Question: 352**

## DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to retrieve a list of rack units that have more than 16 CPU cores. The filtered list will be used to create a summary on the monitoring dashboard.

Not all options are used.

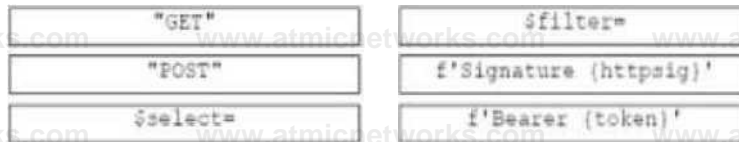
```
import requests
import json
```

```
base_url = "https://mtersight.com/api/v1"
url = f'{base_url}/compute/RackUnits?filter=NumCpuCores>16'
```

```
def payload():
    headers = {
        'Accept': 'application/json',
        'Authorization': 'Bearer token',
        'Digest': '(computed-digest)', 'Date': '(current-date)'
```

```
response = requests.request('GET', url, headers=headers, data=json.dumps(payload))
print(response.text.encode('utf8'))
```

NumCpuCores



**Answer:**

Explanation:

\$filter

f'Bearer (Token)

GET

## Question: 353

An engineer needs to configure an interface named GigabitEthernet3 with an IP address on several RESTCONF-enabled Cisco IOS XE devices. Which code snippet must be placed in the blank in the code to meet this requirement?

A. (item["name"])

B. (item["name"])/ip/address3

C. item["name"]:/ip/address/primary'

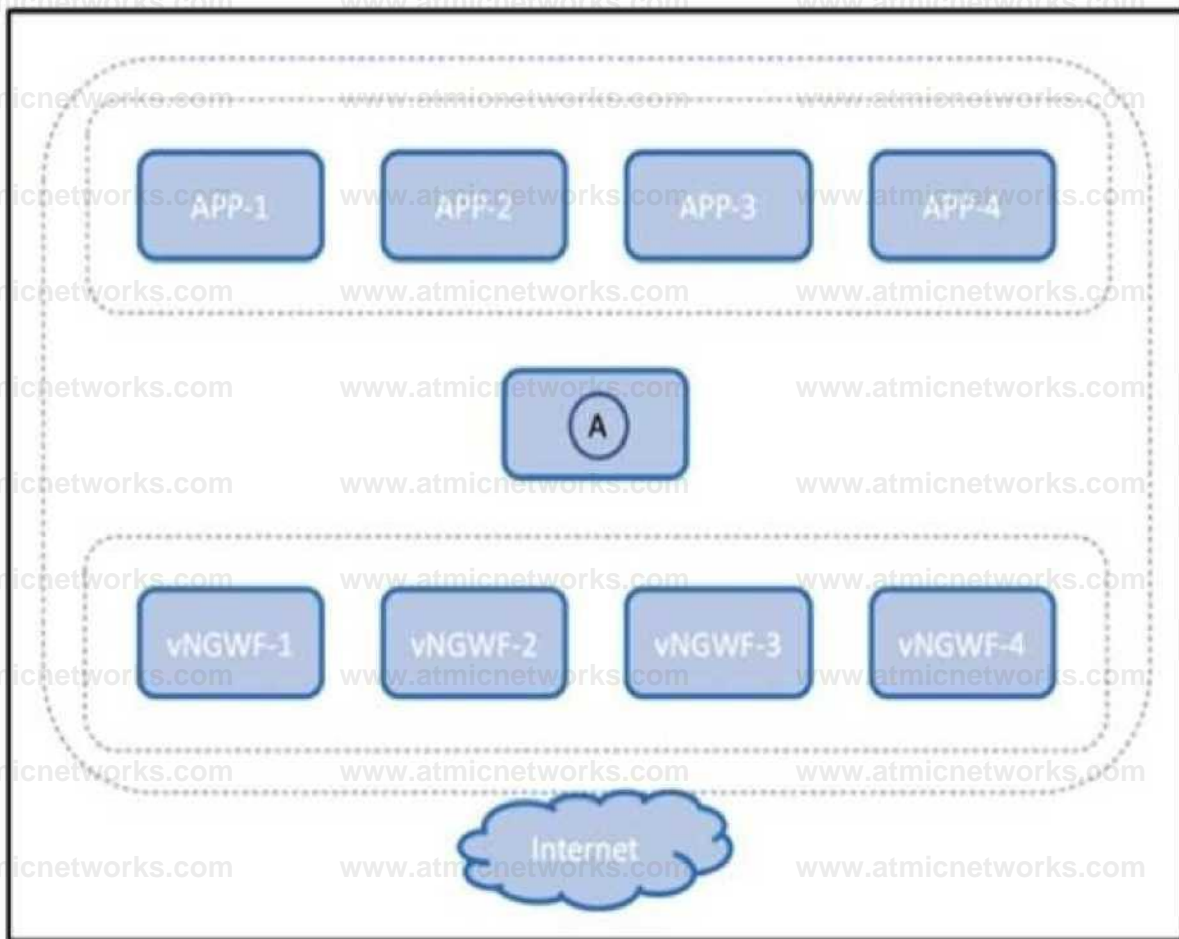
D. (Item"name"})/ip

**Answer: B**

Explanation:

### Question: 354

Refer to the exhibit.



The virtual next-generation firewalls running in the public cloud must be scaled out to meet the throughput requirements of the application layer. Which component is deployed to location A in the diagram?

A. frontend caching server

B. forward proxy

C. backend database

D. internal load balancer

**Answer: D**

Explanation:

### Question: 355

Refer to the exhibit.

```
1 import requests, json
2 from flask import Flask, request
3
4 app = Flask(__name__)
5
6 db_connection = psycopg2.connect()
7 @app.route('/message', methods=["GET"])
8 def message():
9
10     messages = []
11     with connection.cursor() as cursor:
12         query = 'SELECT * FROM messages WHERE status = UNREAD'
13         cursor.execute(query)
14         messages = cursor.fetchall()
15     return json.dumps(messages)
16
17 if __name__ == '__main__':
18     app.run(debug=True)
```

Refer to the exhibit. A Python API server has been deployed. Based on metrics and logs, increased load has been noticed. Which two approaches must be taken to optimize API usage on the server? (Choose two.)

A. Include the ETag header in the API response

B. Include the Last-Modified header in the API response.

C. Change the query to be more efficient.

D. Include the Content-Type header in the API response.

E. Leverage middleware caching and respond with HTTP code 204 in the API response.

Answer: A, E

Explanation:

**Question: 356**

A developer has created a local Docker alpine image that has the image ID 'dockapp432195596ffr' and tagged as 'new'. Which command creates a running container based on the tagged image, with the container port 80 bound to port 8080 on the host?

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

Answer: D

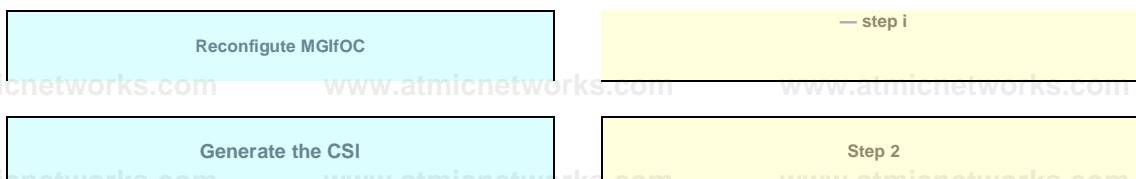
Explanation:

This command will create a running container based on the specified image and will bind the container port 80 to port 8080 on the host.

**Question: 357**

DRAG DROP

An engineer has created an NGINX web server. The server will be accessible from outside the organization. A public-key certificate must be installed before external access is allowed. Drag and drop the steps from the left into the order on the right to configure the certificate. Not all options are used.



Restrict ones to th\* MTW certifi\*nl\*

Step 3

Generate the prMte key

step 4

Enron the ortflcate through th\* CA.

Stop 5

Resort acres to the prtvsste ley.

**Answer:**

Explanation:

1. Generate private key
2. Restrict access to the private key
3. Generate the csr
4. Enroll the certificate through the CA
5. Reconfigure NGINX

**Question: 358**

DRAG DROP

Drag and drop the code from the bottom onto the box where the code is missing to list objects that use the paginated Cisco FDM API. Some options may be used more than once. Not all options are used.

```

import requests
import json

BASE_URL = 'https://ftd.example.com/api/fdm/latest'
nextURL = f'{BASE_URL}/object/networks'

while [ ]:

    response = requests.request("GET", nextURL)
    result = json.loads(response.text)

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

    if len(result [ ]) > 0:

        nextURL = result [ ] [0]

    else:
        nextURL = [ ]

```

BASE_URL	nextURL
None	["paging"]["next"]
["paging"]["page"]	["paging"][next]

**Answer:**

Explanation:

1. nextURL
2. ["paging"]["next"]
3. ["paging"]["next"]

**Question: 359**

What is a well-defined concept of GDPR compliance?

- A. Data subjects can require that the data controller erase their personal data.
- B. Records that are relevant to an existing contract agreement can be retained as long as the contract is in effect.

C. Personal data that was collected before the compliance standards were set do not need to be protected

D. Compliance standards apply to organizations that have a physical presence in Europe

**Answer: A**

Explanation:

### Question: 360

An engineer needs to automate the configuration on a Cisco NX-OS switch. The solution must meet these requirements:

- Ansible is used
- The transport protocol is encrypted
- Support for Asynchronous requests.

Which two access mechanisms must be used? (Choose two.)

A. SNMP Version 2c

B. NETCONF

C. NX-API

D. HTTPS

E. JSON-RPC

**Answer: B, D**

Explanation:

### Question: 361

A developer is working on an enhancement for an application feature and has made changes to a

branch called 'devcor-432436127a-enhance4'. 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 -abort
- C. git merge -revert
- D. git merge --comrmt

**Answer: B**

Explanation:

This command will recreate the pre-merge state, reverting any changes made to the branch before the merge.

### Question: 362

Refer to the exhibit.

```
1 from base64 import b64encode
2
3 import requests
4
5 userAndPass = b64encode(b"developer:Cisco12345").decode("ascii")
6 headers = {'Authorization': 'Basic %s' % userAndPass,
7            "Accept": "application/yang-data+json",
8            "Content-Type": "application/yang-data+json"}
9
10 payload = {
11     "hostname": "Router1"
12 }
13
14
15
16
17 print("response:" + str(response.status_code), response.text)
```

Refer to the exhibit. The Python code manages a Cisco CSR 1000V router. Which code snippet must be placed in the blank in the code to update the current configuration of the targeted resource?

- A)

```
uri = "/restconf/data/Cisco-IOS-XE-native:native"
response = requests.patch("https://10.10.20.48:443" +
uri, headers=headers, json=payload
```

B)

```
uri = "/restconf/data/Cisco-IOS-XE-
native:native/hostname"
response = requests.patch("https://10.10.20.48:443" +
uri, headers=headers, json=payload
```

C)

```
uri = "/restconf/data/Cisco-IOS-XE-native:native"
response = requests.post("https://10.10.20.48:443" +
+ uri, headers=headers, json=payload
```

D)

```
uri = "/restconf/data/Cisco-IOS-XE-
native:native/hostname"
response = requests.post("https://10.10.20.48:443" +
uri, headers=headers, json=payload
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: B**

Explanation:

**Question: 363**

Refer to the exhibit.

```
[[source]]com
url = "https://pypi.python.org/simple"
verify_ssl = true
[dev-packages]
requests = "*"
dnscentersdk = "*"

[packages]
pyyaml = "5.3.1"
```

Which type of python dependency file is shown?

- A. setup.py
- B. TOML
- C. packages
- D. requirements.txt

**Answer: B**

Explanation:

**Question: 364**

DRAG DROP

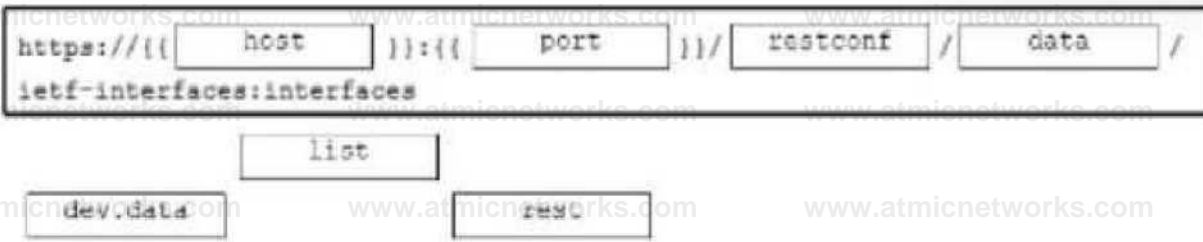
Drag and drop the code snippets from the bottom onto the Blanks in the code on the RESTCONF request to retrieve a list of configured interlaces on a Cisco IOS XE device. Not all options are used.

https://({ host }) : ({ port }) / restconf / data /  
ietf-interfaces:interfaces

restconf	list	host	data
dev.daLa	putt		

**Answer:**

Explanation:



### Question: 365

Refer to the exhibit.

```
cap = 2000
base = 10

response = requests.get(BURL + resource_path, auth=AUTH)

attempt = 0
if response.status_code == 200:
    print(response.text)
while response.status_code == 403:
    attempt += 1
    [ ]
    time.sleep(sleep)
    response = requests.get(BURL + resource_path, auth=AUTH)
```

Refer to the exhibit. The Python code is used to retrieve data from a web API. Which code snippet must be placed onto the blank in the code to add exponential backoff with Jitter?

A.

`sleep - ln(cap, base * 2 ** attempt)`

B.

```
sleep = random.randrange(0, min(cap, base * 2 ** attempt))
```

C.

```
sleep = random.randint(base, cap)
```

D.

```
sleep = random.randrange(0, attempt(cap, base * 2))
```

**Answer: B**

Explanation:

**Question: 366**

On which system must the messaging standards be defined to allow communication between all the components for a custom dashboard?)

- A. front end
- B. back end
- C. web application
- D. management server

**Answer: B**

Explanation:

**Question: 367**

Refer to the exhibit.

```

import requests
import time
url = "https://dnac.example.com/dna/intent/api/v1/network-device"
headers = {"X-Auth-Token": "your_token", "Content-Type": "application/json"}
def fetch_devices():
    try:
        response = requests.get(url, headers=headers)
        if response.status_code == 429:
            retry_after = int(response.headers.get("Retry-After", 10))
            time.sleep(retry_after)
            return fetch_devices()
        response.raise_for_status()
    except requests.exceptions.HTTPError as err:

```

Refer to the exhibit. An engineer must improve error handling for a script: `caning /dna/intent/v1.'network-device`. It should exit on 403 and retry after a delay on 429. Which code snippet must be placed on the box in the code to complete the script?

A.

```

if response.status_code == 403: print("Access denied. Exiting.") sys.exit(1)

```

B.

```

if response.status_code == 403:
    time.sleep(60)
    return fetch_devices()

```

C.

```

if response.status_code == 403: print("Permission denied.") return None

```

D.

```

if response.status_code == 403:
    print("Rate limited. Waiting default time.") return fetch_devices()

```

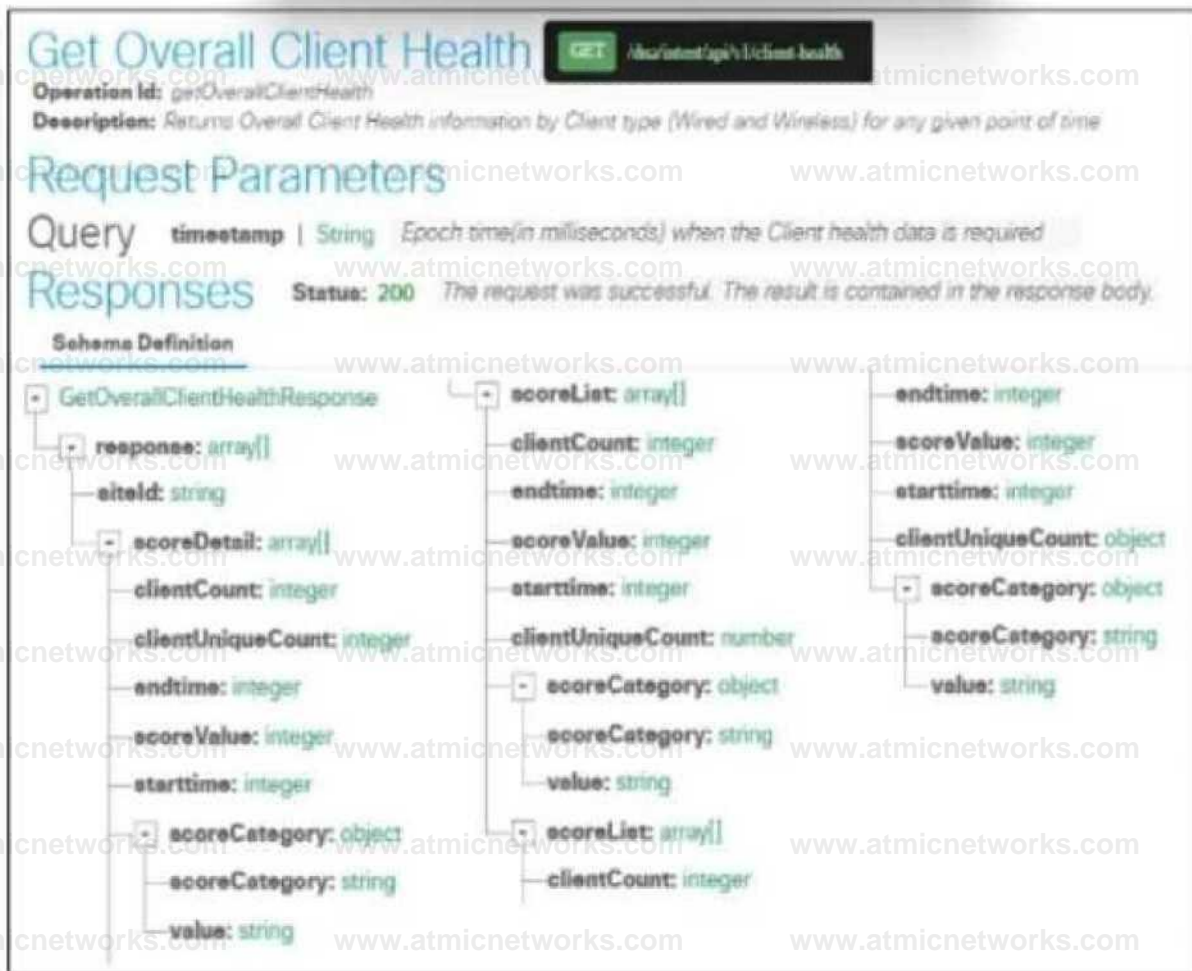
Answer: A

Explanation:

Question: 368

DRAG DROP

Refer to the exhibit.



Refer to the exhibit. Drag and drop the code snippets from the bottom onto the blanks in the Python scrip; to retrieve wireless client health data by using the Cisco Catalyst Center (formerly DNA Center) API. Not all options are used.

```
wsport requests iron requests. auth import &TTPBasicAuth
host =
auth_url = f'h:tF>;//hoit!/dM/iyit<?ipi/Tl/fjtli/to<n" user * * "
pas*
headers = [ "Contest-Type": "appliestita/jsea", "Accept": "spplcation/jsen"
```

```

auth - requests.request(*POST*, auth url, auth="Basic: " + user + ":" + pass, headers=headers)
headers["X-Auth-Token"] = auth.json()["Token"]
health_url = "https://(host)/(dia)/ntent/api/v1/client-health"
requests.request("GET", health_url, headers=headers, verify=False)
clients = health.json()["response"]

for score in clients["health"][0]:
    if score["scoreCategory"] == "value":
        *WTSH?o5*: print(f'type: {score["type"]} | value: {score["value"]} | clientCount: {score["clientCount"]}, Score: {score["scoreValue"]}')
    else:
        category = score["scoreCategory"]
        print(f'type: {category} | value: {score["value"]} | clientCount: {score["clientCount"]}')

```

scoreCategory	scoreList	clientCount
value	scoreValue	scoreDetail

**Answer:**

**Explanation:**

```

    .sport requests
    from recipie st a. auth j.E$>crT MTTfTtSas icJLurh

```

```

host -
auth_url = f"https://(host)/dna/systemu'api/sl/auth/toaen" user *
paSU =

```

```

headers = (
    "Content-type": "application/json", "Accent": "application/JSON"
)

```

```

auth = requests.a.request('POST', auth_url, auth=TTfBasicJluth(user, pasu), headers=headers)

```

```

headers['X-Auth-ToKta'] = auth.json()['Token']

```

```

healthurl = f"https://(host)/dna/intent/epi/el/eliene-health"
response = requests.request('GET', healthurl, headers=headers, verify=False)
;sunO ['response']

```

```

fox score = clients_health[0]['scoreDetail']:
    if <
        ["scoreCategory"]["value"] == 'WIRELESS':
            PTI st(f'Type: {score["scoreCategory"]},
                Count: {score["clientCount"]}, Score: {score["scoreValue"]}')
            category in score['scoreList']:
                print(f'Type: {category["scoreCategory"]},
                    Count: {category["clientCount"]}')

```



### Question: 369

What is a characteristic of release packaging?

- A. It describes packages that are depended on but not the specific version.
- B. It describes the process of packaging an application including all the binaries and scripts.
- C. It simplifies application deployment and clearly describes dependencies.
- D. It slows down the deployment process but speeds up the development process.

**Answer: C**

Explanation:

### Question: 370

DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the script to implement flow contra. Not all options are used.

```

import requests, json, sys, token
token = "A3CDEFGHTJK"
def get_dnac_devices():
    [ ] :
    url = "https://sandbexdnac.cisco.com/dna/intent/apl/vl/network-device"
    payload = {}
    headers = { "Content-Type": "application/json",
                "Accept": "application/json", "x-oauth-token": token }
    response = requests.request("GET", url, headers=headers, data=payload)
    response.raise_for_status()
    return response.text except Exception as e:
    > [ ] in str(e):
    if str(request.status_codes.codes.L) in str(e):
    create_dnac_token()
    def create_dnac_token():
    try:
    url = "https://sandbexdnac.cisco.com/dna/intent/auth/token"
    headers = {
                "Authorization": "Basic ZGVZbDVO-dXNlcjpwZXNjbrEyMyE-",
                "Content-Type": "application/json"
            }
    response = requests.request("POST", url, headers=headers, data=payload)
    response.raise_for_status()
    return response.json()['Token']
    [ ] :
    if str(request.status_codes.codes.L) in str(e):
    sys.exit("MAC Service is not reachable")
    if __name__ == '__main__':
    token = create_dnac_token()
    print(get_dnac_devices())
    
```

AUTHOR;Z;	try	SKKVH-
UNAUTHORIZED	except	axcapt Exception as *

**Answer:**

**Explanation:**

```
impart requests, Ison, sys token =
"ABCMLFGHIJE" def
get.dnac.devices():
```

```
try:
```

```
url = "https://sandboxdnac.cisco.com/dna/intent/api/v1/network-device"
payload = {}
headers = {"Content-Type": "application/json"}
```

```
Accept: application/json
x-auth-token: token
```

```
response = requests.request("GET", url, headers=headers, data=payload)
response.raise_for_status()
return response.text
```

```
except Exception as e:
    if str(request.status_code) == "401":
```

```
AUTHORIZED
```

```
        create.dnac.token()
def create.dnac.token():
```

```
url = "https://sandboxdnac.cisco.com/dna/intent/api/v1/auth/token"
```

```
headers = {"Authorization": "Basic ZGV2kBsVOdXhlcjpw3aXH7biEyMyE="}
headers["Content-Type"] = "application/json"
```

```
response = requests.request("POST", url, headers=headers, data=payload)
response.raise_for_status()
except Exception as e:
```

```
if str(request.status_code) == "500":
    sys.exit("DNAC Service is not reachable")
    token()
```

```
SERVER_ERROR
```

```
UNAUTHORIZED
```

```
elif:
```

### Question: 371

What describes microservices?

- A. self-contained artifact that includes the interfaces of all application layers
- B. loosely coupled services that are independently deployable and maintainable
- C. tightly coupled services that are built as a single unit that is deployable to the infrastructure
- D. set of services that are provided through a communication call over the internet

**Answer: B**

Explanation:

**Question: 372**

Refer to the exhibit.

```
$ docker image push cisco-dev/test-image:latest
The push refers to repository [docker.io/cisco-dev/test-image]
tag does not exist: dhirotsu/test-image:latest

$ docker images
REPOSITORY          TAG          IMAGE ID          CREATED          SIZE
cisco-dev/test-image 1.0         cdec93a89ebb     2 hours ago     189MB
```

Refer to the exhibit. Which command publishes the Docker image to the private repository named cisco-dev with the latest tag?

A.

```
docker tag cisco-dev/test-image:latest
```

B.

```
docker image push --disable-content-trust \
cisco-dev/test-image:latest
```

C.

```
docker tag cisco-dev/test-image:1.0 \
cisco-dev/test-image:latest
```

D.

```
docker image push test-image:latest
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: C**

Explanation:

**Question: 373**

Refer to the exhibit.

```
openssl req -new -x509 -days 365 -key /etc/ssl/private/localhost.key -out /etc/ssl/certs/localhost.crt
```

Refer to the exhibit. An engineer needs to encrypt communication between two servers using self-signed certificates. Which code snippet must be placed in the blank in the code to complete the generation of the .crt certificate file?

A.

```
openssl req -x509 -days 90 -in /etc/cert/host.csr -signkey /etc/cert/host.key -out /etc/cert/hoat.crt
```

B.

```
openssl req -x509 -key /etc/cert/host.csr -days 90 -out /etc/cert/host.ert -signkey /etc/cert/host.key
```

C.

```
openssl req -x509 -days 90 -out /etc/cert/host.csr -keypair /etc/cert/host.key -in /etc/cert/host.ert
```

D.

```
openssl req -x509 -key /etc/cert/hcst.csr -days 90 -in /etc/cert/host.csr -keypair /etc/cert/host.key -out /etc/cert/hoat.crt
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: A**

Explanation:

**Question: 374**

A developer is asked to implement an infrastructure pipeline within the organization. To implement the infrastructure pipeline, the developer must identify the methods that are required for storing and working with credentials, such as API key, usernames, and passwords. Which two methods must be used? (Choose two.)

A. Inject the secrets into the pipeline at runtime.

B. Store the secrets in a text file on your local machine.

C. Implement a secret store, such as Vault.

D. Store the secrets in a vars file, and encrypt and store in a version control system.

E. Use SHA-1 hashing and store in a version control system.

**Answer: A, C**

Explanation:

**Question: 375**

Refer to the exhibit.

```
import requests
headers = {'Host': 'www.atmicnetworks.com', 'Authorization': 'Basic YWRVuzjkhgl2DVpri46c3BAeY2U=:'}
payload = {}
response = requests.request("POST", "https://192.168.3.4/api/login/login", headers=headers,
data=payload, verify=False)
if response.status_code == 500:
    print("Error Server")
elif response.status_code == 404:
    print("Resource not found")
elif response.status_code == 401:
    print("You're not authorized")
```

Refer to the exhibit. A user makes a request to authenticate and retrieve a token to consume resources. The user encodes the username and password in base64 format and makes a POST request to the server. The server responds with a 401 Unauthorized status and provides the information to allow authorization by using a WWW-Authenticate response header. Which code snippet must be placed in the blank in the code to complete the Python script that retrieves the resource?

A.

MAC TOKEN

B.

X-TOKEN-ACCESS

C.

Authorization

D.

Bearer

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: C**

Explanation:

**Question: 376**

DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the code to deploy a Node.js application as a service on a CentOS server. Not all options are used.

- naae: Deploy the nodejs application hosts: deploy\_nodeapp vars:

tasks: - [ \_\_\_\_\_ ] : /usr/lib/nodeapp

- naae: Create project dlr file: path: • • state: directory

- name: Copy systemd service file to server copy: arc: node\_appd.service dest: /etc/1 I/systema

owner: root group: root - naae: Start\_node\_appd systemd: nene: node,appd state: daeaon\_reload: yes enabled: yes

restarted	systemd
opened	APP_ROUTE_DIR
{{ APP_ROUTE_DIR }}	loaded
routed	

**Answer:**

Explanation:

name: Deploy the node's application hosts: deploy\_nodeapp

APF RCCT FTP

: /usr/lib/nodeapp

tasks;

- naae: Create project d.

```
path: " (( APP_ROOT_DIR )) "  
state: directory  
name: Copy systemd service file to server  
copy:  
src: node_appd.service  
dest: /etc/systemd/system  
owner: root  
group: root
```

- naae: Start\_node\_appd systemd:

name: node.appd

restarted

dnemonreload: yes

enabled: yes

opened

loaded

routed

state:

### Question: 377

Which type of agent is responsible for monitoring server usage and forwarding this data to the Cisco AppDynamics controller?

- A. machine
- B. application server
- C. monitoring
- D. end user

**Answer: B**

Explanation:

**Question: 378**

DRAG DROP

Refer to the exhibit.

Data Parameters			HTTP request URL
Parameter	Required	Type	Description
name	True	string	A string that is the name of the network object.
description	False	string	A string containing the description information Field level constraints: length must be between 0 and 200 (inclusive). (Note: Additional constraints might exist)
subType	True	string	An enum value that specifies the network object type HOST - A host type. NETWORK - A network type. FQDN - A FQDN type. RANGE - A range type. Field level constraints: cannot be null. (Note: Additional constraints might exist)
value	True	string	A string that defines the address content for the object. For HOST objects, this is a single IPv4 or IPv6 address without netmask or prefix. For NETWORK objects, this is an IPv4 or IPv6 network address with netmask (in CIDR notation) or prefix. For FQDN objects, this is a Fully qualified domain name. For RANGE objects, this is IPv4 or IPv6 addresses separated by '-' Field level constraints: cannot be null, must match pattern *((?:;))*S. (Note: Additional constraints might exist)
isSystemDefined	False	boolean	A Boolean value, TRUE or FALSE(the default). The TRUE value indicates that this Network object is a system defined object.
dnsResolution	False	string	DNS Resolution type can be IPV4_ONLY, IPV6_ONLY or IPV4_AND_IPV6
type	True	string	A UTF8 string, all letters lower-case, that represents the class-type. This corresponds to the class name.

Refer to the exhibit. Drag and drop the code snippets from the bottom onto the blanks in the code to construct a Python script that creates a new network object in FDM. Not all options are used.

```
def IMin ():
    args = sys.argv[1:]
    token = get_token()
    url = "https://10.10.10.10:8080"
    networks_url = "/api/fda/v</object/"

    headers = {}
    headers["Authorization"] = "bearer {}".format(token)
    headers["Content-Type"] = "application/json"

    payload = {"description": "Network Object", "name": "NetObj",
```

```
'subType': 'tM*', t',
'value': '192.168.0.10/32'
response █ requests.! | (base_url * networks_uzl, data-payload,
headers-headers)
if name █ sain " main!)
```

networks	naT.wnrkobjeot	get
HOST	peat	token

**Answer:**

Explanation:

```
def main(): argil = sys.argv[1:j token = <jet tok*n() bate url -
*http://10.10.0.10:9080*
```

```
networks_url = '/dpi/fda/vt/object/ network*
```

```
headers = ( 'Authorization': 'Bearer {}'.format(token), 'Content-Type':!
'application/json'
```

```
payload = (
```

```
'description': 'Network object', 'name': 'NetObj',
```

```
'subType': 'HOST',
```

```
'type': 'networkobject',
```

```
'value': '192.168.0.10/32'
```

```
) response = requests.post(base_url + networks_url, data=payload,
headers=headers)
```

```
if name == '* main *': main()
```

```
gat
```

```
token
```

### Question: 379

A company uses an API to share sensitive customer data with third-party partners. To ensure the security of this data, how should end-to-end encryption be applied?

A. Mask or obfuscate sensitive data, such as passwords and API keys, to protect it from unauthorized access.

B. Impose API rate limits to prevent abuse and protect against denial-of-service attacks.

C. Encrypt API data from the client to the server and back, which ensures confidentiality at all stages of transmission.

D. Employ robust authentication to verify the identity of users and grants access based on predefined roles and permissions.

**Answer: C**

Explanation:

**Question: 380**

Refer to the exhibit.

```
MAXIMUM_BACKOFF_TIME = 3000
MINIMUM_BACKOFF_TIME = 10

def backoff_time():
    # If backoff time is too large, give up.
    if MINIMUM_BACKOFF_TIME > MAXIMUM_BACKOFF_TIME:
        print("Exceeded maximum back-off time. Giving up.")
        break

    delay = MINIMUM_BACKOFF_TIME + random.randint(0, 1000) / 1000.0
    time.sleep(delay)

    [ ]

    client.connect(mqtt_bridge_hostname, mqtt_bridge_port)
```

Refer to the exhibit. The Python code is used to retrieve data from a web API. Which code snippet must be placed in the blank in the code to add exponential backoff with an upper limit?

A.

```
MINIMUM_BACKOFF_TIME += 2
```

B.

MAXIMUM\_BACKOFF.TIME

C.

```
MAXIMUM_BACKOFF_TIME -= 100
```

D.

```
delay*=2
```

A. Option A

B. Option B

C. Option C

D. Option D

Answer: A

Explanation:

**Question: 381**

DRAG DROP

Refer to the exhibit.

The screenshot shows a REST API endpoint documentation. At the top, the title is "Get Device Interface Count By Device Id". Below the title, the "Operation Id" is `getDeviceInterfaceCountByDeviceId` and the "Description" is "Returns the interface count for the given device". A green "GET" button is shown next to the endpoint URL: `/dna/intent/api/v1/interface/network-device/{deviceId}/count`. Below this, there are two tabs: "Schema Definition" (which is selected) and "Example Body". Under the "Schema Definition" tab, a tree view shows a root node "CountResult" with two children: "response: integer" and "version: string".

Refer to the exhibit. The `get_interfaces` function is implemented already, and the interfaces must be retrieved in a controlled manner. Drag and drop the code snippets from the bottom onto the blanks in the Python function to split the job into batches of a maximum of 50 records. Not all options are used.

I g>t\_Interf««3 function definition:

```
def get_interfaces(start_index, records_count):  
    """Retrieves record* from start_index to start_index + records_count - 1  
    * global and start free: 1. * start_index: index of the 1st record  
    * records_count: number of record* to retrieve
```

url - "http://sandsprite.cisco.caiax.intent/api/v1.0/interface/network-device/6aad3e/

payload = {"limit": 2000, "headers": {

"X-Auth-Token": token,

"Content-Type": "application/json",

"Accept": "application/json"

response = requests.get(url, headers=headers, data=payload)  
return json.loads(response.text)["response"]

max\_recs = 50

```
if interfaces_count > max_recs:  
    get_interfaces(1, max_recs)
```

```
for i in range(1, interfaces_count + 1):
```

```
    get_interfaces(i * max_recs + 1, max_recs)
```

```
else:
```

```
    get_interfaces(1, max_recs)
```

pages nawai	BUU.XSCS	count
1	//	interface_count

**Answer:**

Explanation:



**name:** Perform basic hardening tasks on a CentOS server hosts: hardening tasks:

- **name:** Disable X11 forwarding lineinfile:  
**path:** "/etc/ssh/sshd\_config"

**name:** Make sure X11 forwarding is absent lineinfile:  
**path:** "/etc/ssh/sshd\_config"

**name:** Restart sshd, Issue daemon-reload to pick-up config changes systemd:

**state:** restarted daemon-reload: yes **name:** sshd

state: present

line: "X11Forwarding no"

state: enabled

line: "X11Forwarding run"

state: disabled

state: absent

line: "X11Forwarding yes"

**Answer:**

**Explanation:**

**name:** Perform basic hardening tasks on a Centos server

**hosts:** hardening

**tasks:**

- **name:** Disable X11 forwarding lineinfile:  
**path:** "/etc/ssh/sshd\_config"

**state:** present

**line:** "X11Forwarding no"

- **name:** Make sure X11 forwarding is absent lineinfile:  
**path:** "/etc/ssh/sshd\_config"

**state:** absent

**line:** "X11Forwarding no"

**name:** Restart sshd, issue daemon-reload to pick-up config changes systemd:

**state:** restarted

**daemon-reload:** yes **name:** sshd

state: disabled

line: "X11Forwarding run"

state: disabled

**Question: 383**

An engineer developed an application to be used as a file server using Python. The application was placed in a Kubernetes pod and must be accessible from outside the network utilizing an HTTPS service. Which command must be used to enable the required access?

A.

```
kubectl expose pod frontend --port=32000 --name=nginx
```

B.

```
kubectl config set-cluster nodeport --port=32000 --  
name=nginx
```

C.

```
kubectl attach pod frontend --port=32000 --name=nginx
```

D.

```
kubectl port-forward frontend --port=32000
```

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

**Answer: A**

Explanation:

### Question: 384

A team of engineers must manage and configure an infrastructure programmatically. The team must be able to bootstrap and configure new servers and switches remotely without using an agent.

Which configuration management tool meets the requirements?

- A. Terraform
- B. Puppet
- C. Jenkins
- D. Chef

**Answer: A**

Explanation:

### Question: 385

An engineer is developing a client/server application for use by a very large number of clients. The engineer must optimize the application response time and lower the required network bandwidth

when clients access the server. The engineer wants the server responses to be based on the resource **VERSION** fetched by the clients. Which HTTP technique must be used?

- A. middleware caching
- B. API pagination
- C. data compression
- D. conditional requests

**Answer: D**

Explanation:

**Question: 386**

DRAG DROP

Refer to the exhibit.

## Create a Message

Post a plain text or **rich text** message, and optionally, a **file attachment** attachment, to a room.

The `files` parameter is an array, which accepts multiple values to allow for future expansion, but currently only one file may be included with the message. File previews are only rendered for attachments of 1MB or less.

**POST** /v1/messages

### Body Parameters

`roomId` The room ID of the message.

string  
`parentId` The parent message to reply to.

string  
`toPersonId` The person ID of the recipient when sending a private 1:1 message.

string  
`toPersonEmail` The email address of the recipient when sending a private 1:1 message.

string  
`text` The message, in plain text. If `markdown` is specified this parameter may be optionally used to provide alternate text for UI clients that do not support rich text. The maximum message length is 7439 bytes.

string  
`markdown` The message, in Markdown format. The maximum message length is 7439 bytes.

Refer to the exhibit. An engineer needs to implement a Cisco Webex ChatOps application to display requested metrics about the Cisco Webex space of the operations team. The application must meet the requirements:

- \* Listen for messages that are targeted to the bot's user.
- \* Parse the message body to form the command that is directed to the bot.
- \* Retrieve and display the requested data.
- \* Ensure that the command follows this form: `display stats stat1 stat2 from host1 host2`.

```

(token)
}

from flask import Flask, request
import requests as req
import json
token = 'Bearer ' + token
Headers = {'Content-Type': 'application/json',
           'authorisation': f'Bearer {token}'}

message = request.get_json()
message_id = message.get('id')
room_id = message.get('room_id')

def get_message(message_id):
    url = f'https://webexapis.com/v1/messages/{message_id}'
    req.get(url, headers=Headers)

def post_message(text, room_id):
    url = f'https://webexapis.com/v1/messages'
    req.post(url, headers=Headers, json={'room_id': room_id, 'text': text})

app = Flask(__name__)
@app.route('/webhooks', methods=['POST'])
def webhooks():
    req.get_json()
    message_id = message.get('id')
    room_id = message.get('room_id')
    text = message.get('text')

    if message_id:
        get_message(message_id)
    else:
        post_message(text, room_id)

app.run()

```

**Answer:**

**Explanation:**

```

from flask import Flask, request
import requests as req
import json
token = 'Bearer ' + token
Headers = {'Content-Type': 'application/json',
           'authorisation': f'Bearer {token}'}
app = Flask(__name__)

```



Bearer

data

```

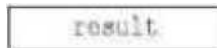
gather.data()
return json.dumps(gather.data(), room_id)

def post_message(text, room_id):
    url = f'https://webexapis.com/v1/messages'
    req.post(url, headers=Headers, json={'room_id': room_id, 'text': text})

def get_message(message_id):
    url = f'https://webexapis.com/v1/messages/{message_id}'
    req.get(url, headers=Headers)

app.run()

```



url

**Question: 387**

How are end-to-end encryption principles applied to API usage?

- A. Service owners are prevented from accessing data that is being transferred.
- B. Sensitive information is protected against backdoor attacks.
- C. Both endpoints using the API resources are hardened against hacking.
- D. API data is protected against man-in-the-middle attacks.



**Question: 388**

Refer to the exhibit.

```
import requests
import time

token = 'XXXXXX'
headers = {
    "Authorization": f"Bearer {token}"
}
url = "https://webexapis.com/v1/rooms"

def try_request(url,headers):
    request = requests.request('GET', url = url,headers = headers)
    if request.status_code == 200:
        successful_response = request.json()
        return successful_response
    elif request.status_code in [ ]:
        time.sleep(60)
        try_request(url,headers)
    else:
        raise Exception('Failed Request')
```

Refer to the exhibit. An engineer creates a function that gathers information from the Cisco Webex RESTful API. To enable increased durability, the engineer needs to implement a retry mechanism that pauses the script and retries the request if specific response codes are received. Which code snippet must be placed in the blank in the code to meet this requirement?

- A. `400, 403, 409, 504`

- B. `400, 404, 502, 503`

- C. `403, 404, 409, 4?`

- D. `400, 404, 502, 503`

429, 502, 503, 504

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

**Answer: D**

Explanation:

### Question: 389

DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the Python script to retrieve and display wireless health information from the Cisco Catalyst Center (formerly DNA Center) API. Not all options are used.

```
from dnacentersdk import api

base_url = "https://dnacenter.cisco.com"
dnac = api.DNACenterAPI(username='USER', password='PASSWORD',
                        base_url=base_url)

site_health = 

for item in :
    print(f"Wifi Health 
          () %s")
```

<code>{item['siteName']}</code>	<code>{site['siteName']}</code>
<code>dnac.sites.get_site()</code>	<code>site_health.response</code>
<code>item['clientHealthWireless']</code>	<code>dnac.sites.get_site_health()</code>
<code>['clientHealthWireless']</code>	

**Answer:**

Explanation:

```
from dnacentersdk import api

base_url = "https://dnacenter.cisco.com"
dnac = api.DNACenterAPI(username='USER', password='PASSWORD',
                        base_url=base_url)

site_health = {site['siteName']}

for item in {item['siteName']} :
    print(f"Wifi Health {item['clientHealthWireless']} :
          {item['clientHealthWireless']}")
```

dnac.sites.get\_site()

site\_health.response

dnac.sites.get\_site\_health()

### Question: 390

DRAG DROP

Refer to the exhibit.

```
{
  "items": [
    {
      "id": "YQ5",
      "name": "mybot.messages.created",
      "targetUrl": "https://myapi.com",
      "resource": "messages",
      "event": "created",
      "orgId": "Y2lzY29zcGFyazovL3VzL093RQ4NmEtYmYwNS0wNjdlZjczYzY4MzY",
      "createdBy": "Y2lzY29zcGFyazovL3VzL093RQ4NmEtYmYwNS0wNjdlZjczYzY4MzY",
      "appId": "Y2lzY29zcGFyazovL3VzL093RQ4NmEtYmYwNS0wNjdlZjczYzY4MzY",
      "ownedBy": "creator",
      "status": "active",
      "created": "2020-11-02T16:08:13.166Z"
    }
  ]
}
```

Refer to the exhibit. Drag and drop the code snippets from the bottom onto the blanks in the Python script to create messages in a Cisco Webex room using the Webex API. Not all options are used.

from flask import Flask, request, json, abort import requests

```

from webxteamssdk import WebexTeamsAPI
token - "mEMTVk~f ih6794 . Cf43eel234-426a-bf 05-0ef * 3c66 36* apt ~
WebexTeamsAPI(access.token-token) spp " Flask(..name..)

```

```

def webhook():

```

```

    if request.method == 'POST':
        if 'application/json' in request.headers.get('Content-Type'):
            data = request.get_json()
            message_id = data.get('data').get('id')
            message = api.messages.get(message_id)
            api.messages.create(markdown="A " + (data['type'] + "
            event occurred"),
                               data={'category': 'event'})
        return 'OK'
    else:
        abort(400) if __name__ == '__main__':
            app.run(host='127.0.0.1', port=23123)

```

roomid="YQ5"	@route('/text')	POST
@app.route('/')	GET	200

## Answer:

### Explanation:

```

from flask import flask, request, json, abort
from webxteamssdk import WebexTeamsAPI
token - "SaiEM7V7k7fdh8794.Cf<f36<1234-486a-bf05-067ef73cC836" apt ~
WebexTeamsAPI(access.token-token) app = Flask(__name__)
@app.route('/') def webhook():
    if request.method == 'POST':
        if 'application/json' in request.headers.get('Content-Type'):
            data = request.get_json()
            message_id = data.get('data').get('id')
            message = api.messages.get(message_id)
            api.messages.create(markdown="A " + (data['type'] + "
            event occurred"),
                               data={'category': 'event'})
        return 'OK'
    else:
        abort(400)
if __name__ == '__main__':
    app.run(host='127.0.0.1', port=23123)

```

(b r.oC/t^xt')

SET

**Question: 391**

Which type of statistics is model-driven telemetry able to stream?

- A. operational
- B. resource
- C. access
- D. downtime

**Answer: A**

Explanation:

**Question: 392**

Which approach is part of the twelve-factor app methodology?

- A. Explicitly declare and isolate dependencies.
- B. Store the configuration in a database.
- C. Leverage available resources to scale the application.
- D. Maintain states in the app.

**Answer: A**

Explanation:

**Question: 393**

DRAG DROP

Drag and drop the code snippets from the bottom onto the boxes in the Terraform cod© to create a NEW application profile and EPG. Not all code snippets are used.

**"acl tenant" "acitenant var.aci  
name tenant**

**resource "aci application profile" "myWebsite" (  
tenant dn • J name • "my website"**

```
resource "aci_application_profile" "web" {  
  application_profile_dn = aci_application_profile.myWebsite.id  
  name = "web"
```

**name\_alias = "web"  
description • "this is the web epg created by terraform"**

**flood on encap • local.flood onencap fwd Ctrl -  
local.fwd Ctrl  
shutdown \* local.shutdown**

provider	resource	•cUerantid
at mpitnlrji' ndir	KI apphtautn epg	ac je w oo tenantid

**Answer:**

Explanation:

```

resource "aci_tenant" "aci_tenant" {
  name = var.aci_tenant
}

resource "aci_application_profile" "myWebsite" {
  tenant_dn = aci_tenant.aci_tenant.id
  name      = "my_website"
}

resource "aci_application_epg" "web" {
  application_profile_dn = aci_application_profile.myWebsite.id
  name                  = "web"
  description           = "this is the web epg created by tenant"
  flood_on_encap       = true
  fwd_ctrl              = "shutdown"
}

```

an oppHarm pdf

### Question: 394

DRAG DROP

#### 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

Known Limitations The underlying database does not support natural sorting by lastactivity and will only sort on limited set of results, which are pulled from the database in order of roomId For users or bots in more than 3000 spaces this can result in anomalies such as spaces that have had recent activity not being returned in the results when sorting by lastactivity

GET

Query Parameters

teMId List rooms associated with a team, by ID

sortBy Sort results

*Possible values id, l&stxtjvrtj. created*

Mx Limit the maximum number of rooms in the response Value must be between 1 and

1000 inclusive

Default 100

Refer to the exhibit. Drag and drop the code snippets from the bottom onto the blanks in the Python script to list all rooms and use pagination to restrict the number of results to five by using the Cisco Webex API.

Not all options are used.

```

import requests
url = "https://api.ciscospark.com/v1/rooms? [ ]"

payload= [ ]

headers = {
    'Authorization': ' [ ] zfbhkvkffljshiqfva22878-vzojbv-eavohziguv-534c-
4556-9cf8-df9df90f516e'
}

response = requests.request("[ ]", url, headers=headers, data=payload)
print(response.text)

```

[ ]  
max=5

access-code  
limit=5

GET  
Bearer

POST

**Answer:**

Explanation:

```

import requests
url = "https://api.ciscospark.com/v1/rooms? [ max=5 ]"

payload= [ {} ]

headers = {
    'Authorization': ' [ Bearer ] zfbhkvkffljshiqfva22878-vzojbv-eavohziguv-534c-
4556-9cf8-df9df90f516e'
}

response = requests.request("[ GET ]", url, headers=headers, data=payload)
print(response.text)

```

access-code  
limit=5

POST

**Question: 395**

Refer to the exhibit.

```
192.168.162.12 — [01/Jun/2021 12:09:54] 'OPTIONS sr.^p-ir.torfacei'devils by-id'2'68 HTTP/1.1' 200
152 .168.162.12 [Cl. Jun/2021 12:2 5:54] "GET inmp-int«»£«cB»/d*vic«a by-id 2'68 HTTP 1.1" ICO -
2021-06-01 12:09:58 i; •nnp-intex£«c*a :: INFO:: number of targets: 4
2021.-06-01 12:09:56 ;; aronp-inctrfacts :: INFO :: Slwping for 60
```

Refer to the exhibit. A software engineer develops an application that has a microservices architecture. The microservices must communicate with an API. The engineer creates a Dockerfile for the application and deploys the file to a pre-production environment. After the first API request, a microservice stops and the engineer discovers an error in the log file. What is the cause of this issue?

- A. The API failed to find the resource.
- B. The API is not authorized to access the resource.
- C. The API does not understand the request.
- D. The API failed to complete the request.

**Answer: C**

Explanation:

### Question: 396

DRAG DROP

Drag and drop the coda snippets from the bottom onto the blanks in the code to implement error handling for an application that will attempt to call a REST API. In the event of an error, the script must back off for 10 seconds before trying again, adding an extra 10 seconds to the backoff period for every failure that occurs.

Not all options are used.

```

import sys
import requests

[ ]

retries = 1
success = False

while not success:
    try:
        r = requests.get('https://api.example.com')
        success = True
        print('Success')

        [ ]

        print('Error! Waiting %s secs and re-trying...' % wait)
        time.sleep(wait)

        [ ]

```

import time	wait = retries * 10	import json
except Exception as e:	retries += 1	Exception:

**Answer:**

Explanation:

```
import sys
import requests
import time
retries = 1
success = False

while not success:
    try:
        r = requests.get('https://api.example.com')
        success = True
        print('Success')
    except Exception as e:
        wait = retries * 10
        print('Error! Waiting %s secs and re-trying...' % wait)
        time.sleep(wait)
        retries += 1
```

```
import json
Exception:
```

**Question: 397**

A company must adopt a configuration management solution for its multi-cloud microservices architecture. The solution has these requirements:

- \* Hybrid cloud deployment
- \* Automated compliance and security configurations
- \* Dynamic infrastructure scaling
- \* Zero-downtime updates
- \* Immutable infrastructure principles
- \* Advanced configuration monitoring

Which configuration management solution should be implemented?

- A. Chef-based configuration management
- B. Terraform with multi-cloud state management

C. Ansible playbooks with dynamic inventory

D. custom Python infrastructure scripts

**Answer: B**

**Explanation:**

**Question: 398**

Refer to the exhibit.

```
2021-11-18 15:43:06.486466 :: INFO :: Recieved request from 10.8.4.2:46937
2021-11-18 15:43:06.613524 :: ERROR :: Error 61 connecting to localhost:6379. Connection refused.
2021-11-18 15:43:07.118302 :: INFO :: Unable to verify the users's identity, dropping request
2021-11-18 15:43:20.173824 :: INFO :: Recieved request from 10.8.4.4:49368
2021-11-18 15:43:21.613524 :: ERROR :: Error 61 connecting to localhost:6379. Connection refused.
2021-11-18 15:43:21.486466 :: INFO :: Unable to verify the users's identity, dropping request
```

A team of engineers deploys a new front-facing application that communicates with other services to handle user requests. An external authentication and authorization service on port 6379 is used. When users try the new application, errors are reported. What is the cause of the issue?

- A. The new application cannot reach the client IPs.
- B. The users are not authenticating properly.
- C. The authentication service is unreachable.
- D. The new application drops user requests.

**Answer: C**

**Explanation:**

**Question: 399**

Refer to the exhibit.

```
import requests

url = "https://dnac.example.com/dna/intent/api/v1/network-device"
headers = {"X-Auth-Token": "your_token", "Content-Type": "application/json"}

try:
    response = requests.get(url, headers=headers)
    response.raise_for_status()
except requests.exceptions.HTTPError as err:
```

Refer to the exhibit. An engineer is automating network device retrieval from Cisco Catalyst Center. The script encounters a 500 Internal Server Error and users control Mow. Which code snippet must be placed on the box in the code to exit on unrecoverable server errors?

A.

```
if response.status_code >= 500:
    print(f"Critical error: {err}.")
    return None
```

B.

```
if response.status code >- 500: print (fCritical error: Exiting.*) exit(l)
```

C.

```
if response.status_code >= 500:
    print(f"Critical error: {err}. Exiting.")
    exit(1)
```

D.

```
if response.status_code >= 500:
    print(f"Critical error: Exiting.")
    return None
```

A. Option A

B. Option B

C. Option C

D. Option D

Answer: C

Explanation:

### Question: 400

Refer to the exhibit.

```
1 <yang-patch xmlns="urn:ietf:params:xml:ns:yang:ietf-yang-patch">
2   <patch-id>add-hostname-patch</patch-id>
3   <edit>
4     [ ]
5   <target>/hostname</target>
6   <value>
7     <hostname xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-native">testname
8   </hostname>
9   </value>
10  </edit>
11 </yang-patch>
```

Refer to the exhibit. An engineer must add a new hostname configuration to a Cisco IOS device by using RESTCONF to make a YANG patch request. Which code snippet completes the configuration?

A.

```
<edit-id>edit1</edit-id>
<operation>edit</operation>
```

B.

```
<edit-id>edit1</edit-id>
<operation>create</operation>
```

C.

```
<edit-id>edit1</edit-id>
<operation>edit</operation>
```

D.

```
<create-id>create1</create-id>  
<operation>new</operation>
```

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

**Answer: C**

Explanation:

**Question: 401**

An engineer must design a high-availability solution for an application that will be used as a central repository. During the design process, the engineer discovers that some components send sensitive data over the internet, but the policy prohibits this. All sensitive data needs to remain confidential and must not be exposed. Which design decision ensures data confidentiality using microservice architecture?

- A. Application is hosted behind a DMZ firewall.
- B. Application is hosted on a virtual private cloud.
- C. Data is restricted to an on-premises solution.
- D. Data is hashed.

**Answer: B**

Explanation:

**Question: 402**

DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the code to create a configuration backup on a Cisco UCS server using the Cisco UCS Python SDK. Some options may be used more than once. Not all options are used.

```

This module provides the template to create config backup W P It tl/u»i b;n/«nv python
from ucstsdk.ucshandle import UcsSandle
-----
from ucsmtdk.momete.lsboot.LsbootPolicy import from
ucsmtdk.momete.lsboot.LabootVirtualMedia import IsbeotVixtualMedia from
ucatnadk.momata.lsboot.LsbootStorage report LabootStorage from
ucsmtdk.momete.laboot.LabootLocalStorage import LabootLocalStorage from
ucsmtdk.moceta.lsboot.LahaatJstFlaahJtorageImage import
LabootVabFlashdstorageiaage
handle = CcaHandleI in 9"*, username 9"***, cassword 9*"!
|
|
mo = | _____ [(parent mo_or dn=ob;> nare="new_boot_3pol",
reboot_on_update 9"no", poltocy_owner="local", purpose="operational", enforce vnic
name="yes", boot mode 9"legacy"
mo_l 9 LscocotVirtualMedia|parent mo_or dn 9«o,
acea> = "read-only-xemote-cimc", Lur.id 9' C", order 9"!") me_2 ■
LsboetVirtualMedia(parent mo_or dn 9mo, access 9"read*only-local", Lun_d="1",
ordet "1") mo_3 - labootstorage(parent_ao_or dn 9nid, crder="3"( nio 4 9
LabootuocalStorage(parent mo ox dn 9^? 3. I mo_5 = LebeotvabFleekStPxageTiaage
(perent^iao^or^dn^dn^". order="3")

```



**Answer:**

**Explanation:**

This nodule provides the tentplate to create config backup 11w ■'

```

#1/uer/bia/env python
from uoatnedk.usehendie import UcaHandle
from ucsmtdk.nomete.labour.Lsbeot Pol icy import ^MJ^IC/_____
from ucbsiadk.siom.eta. laboot.LabootVirtualMedia import LabootVixtualMedia
from ucasisdk.siometa. laboot.LabootStorage import Labootdtorage
from ucssisdk.mcrmata.laboot.LateootLocaldtorage import LsbootLocalStorage
from uesmaak-rtiometa.laboot. LabootnahFlashdtoxageCmage
import labootCabflaahStoxageimage
handle = UcsHandle(ip="", username="", password="")

```

**handle.login()**

```

no = shoot [ ] . fey iparent_ino_cr_dr.=ob;; nar.e="new_boct_pol",
reboot_on_irpdate="no", policy_cwr.er = " local", purpose^"operational", enforce
vnic name="ye*", boot mode^"legacy* )
mo_l = LibootVirtualMedia (parent ne OS^dnmmo, eoceea^"read-Mily-smote-cine",
lun_id='0", order@"!") mo_2 = LabootVirtualMedia (parent_«BO_ox_dn"wo,
a=ceas="iead*OBly-local", Lun id=".". order^3"!*)
ata 3 @ iBBoetStorageieparent no or dn^no, crder="3"
mo 4 = LabootLocalStorage (parent mo or dn=mo 3, I
mt 1 = tit-rtlTabFla*h3tOXage"nase parent —o : an=mc 4, order="3"i
handle.add DU (lba,ltrue)

```

iundlo.c^mLtO

hand! fi. 1 r<qrnit ()

LobvetE uidcy	T.rSt=i .“ult	handle, ctruest ()
---------------	---------------	--------------------

handle. 1 tgm ()	rar tie. a id mt (rm,TTt:e	handle • livjuui ()
------------------	----------------------------	---------------------

**Question: 403**

Refer to the exhibit.

```
ietf-interfeces:Interface": I {"name": "Loopback100", "description": "Added  
with RESTCONF", "type": "iana-lf-type:tcftwareLoopback"
```

```
"ip": "172.16.100.1", "netmask": "255.255.255.0"
```

Refer to the exhibit. An engineer must add a new loopback interface with a RESTCONF request on a

Cisco IOS XE device. Which code snippet must be placed onto the blank in the body of the code to complete the request?

A.

```
"enabled": loopback,  
  "ietf-ip:ipv4": {  
    "address": [
```

B.

```
"interface": true,  
  "ietf-ip:ipv4": {  
    "address": [
```

C.

```
"interface": true,  
  "ietf-ip:ipv4": {  
    "ipv4": [
```

D.

```
"enabled": true, "ietf-lpiipv4": ( "address": |
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: D**

Explanation:

### Question: 404

A DevOps engineer needs to design an application to send emails based on incoming webhooks. No more than 10,000 outgoing emails should be sent per hour. How will the engineer ensure that all webhook transactions are processed within the email constraints?

A. rate limit incoming webhooks and pagination

B. send emails in batches and on a cadence

C. message queues and rate limiting

D. APIs for internal and external communication

**Answer: C**

Explanation:

**Question: 405**

A team is developing a cloud-native application. The project has these architecture requirements:

- \* Leverage the use of containers for effective usage of resources.
- \* Scale up the application automatically when more resources are needed.
- \* Ensure that the application is developed as a stateless application.

Which two guidelines must be met? (Choose two.)

- A. Rely on the web server to help provide sticky sessions for web transactions.
- B. Use Python class definition to leverage object-oriented techniques for development.
- C. Ensure that all data that should persist is stored in a data store such as a database.
- D. Use memory or disk space for temporary data that should not persist between nodes.
- E. Develop the application using Python and virtual environments.

**Answer: B, C**

Explanation:

**Question: 406**

A developer is containerizing an application using Docker. A local Docker alpine image has been created, and it has the image ID 'b9c2d50f0b6y74998' with the tag 'dev'. The developer must make a running container based on the tagged image, with the container port 80 bound to port 8080 on the host. Which command must be used?

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

**Answer: A**

Explanation:

**Question: 407**

DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the Python script to provision a Cisco UCS server with a service template. The script will enable automated provisioning of Cisco UCS servers in a local data center and allow attaching custom service profiles at scale. This script is implemented in CLI and allows the user to pass arguments that are parsed to retrieve a specific output. Not all options are used.

```
class UCSt
```

```
<snip>
```

```
def create_service_profile(scff, name, template): body = (  
    f"<cnf1gConfMo dn=* cookie=" (self.cookie) "xinCcafig>" f* <lsServer dn="orq-  
    roct/ls~| name)" * f" naae="(name)""  
    f* srcTerapiKaac-* (template) "/>*" f" <? incnfigx/cnfigConfxo"
```

```
response = self.api.request(body) return response
```

```
<smp>
```

```
if name.startswith("_mam "):
```

```
    parser = argparse.ArgumentParser()
```

```
    parser.add_argument('--template', required=True)
```

```
    parser.add_argument('--prefla', required=True) parser.add_argument('--count', type=Int,  
    default=1) args = UCS - UCS (MOST. USERNAME. PASSWORD)
```

```
if args.template in ucs.get_service_profiles():
```

```
    for i in range(args.count):
```

```
        name = f"{args.prefix}{str(i+1)}
```

```
        response = ucs.create_service_profile(name, )
```

```
        if response.status_code == 200 and 'errorCode' not in str(response.json()): print(f"The service profile  
{name} created successfully.")
```

```
parser.parse_args()
```

```
Uca.login()
```

```
args.template
```

```
parser.template
```

```
ucs.logout()
```

```
ucs.session()
```

**Answer:**

**Explanation:**

```

class UCS:
    <code>def __init__(self, host, username, password):
        self.host = host
        self.username = username
        self.password = password
        self.session = None

    <code>def _login(self):
        url = f'conflgConfMo da= cookie={self.cookie}'
        headers = {'Host': self.host, 'User-Agent': self.ua}
        response = self._request('POST', url, headers=headers)
        if response.status_code == 200:
            self.session = response.json()
            return True
        return False

    <code>def _request(self, method, url, headers=None, data=None):
        url = f'{self.host}/api/{url}'
        headers = headers or {}
        headers['Host'] = self.host
        headers['User-Agent'] = self.ua
        response = requests.request(method, url, headers=headers, data=data)
        return response

    <code>def get_service_profiles(self):
        url = 'service-profile-templates'
        response = self._request('GET', url)
        if response.status_code == 200:
            return response.json()
        return []

    <code>def create_service_profile(self, name, template):
        url = 'service-profile-templates'
        data = {'name': name, 'template': template}
        response = self._request('POST', url, data=data)
        if response.status_code == 200:
            return response.json()
        return None

    <code>def delete_service_profile(self, name):
        url = f'service-profile-templates/{name}'
        response = self._request('DELETE', url)
        if response.status_code == 200:
            return True
        return False

    <code>def logout(self):
        url = 'logout'
        response = self._request('POST', url)
        if response.status_code == 200:
            return True
        return False

```

### Question: 408

Refer to the exhibit.

```
1 $ docker build --tag "SCI_REGISTRY_IMAGE:SCI_COMMIT_REF_NAME" .
2 Step 1/10 : FROM python:3.8.2-alpine3.11
3 Step 2/10 : WORKDIR /tmp
4 Step 3/10 : COPY requirements.txt requirements.txt
5 Step 4/10 : RUN apk add --update --upgrade --no-cache --virtual .build
6     && pip install --no-cache-dir -r requirements.txt      git      && apk del
7     .build      && rm -rf /tmp/*
8 fetch http://dl-cdn.alpinelinux.org/alpine/v3.11/main/x86_64/APKINDEX.tar.gz
9 fetch http://dl-cdn.alpinelinux.org/alpine/v3.11/community/x86_64/
10 * APKINDEX.tar.gz
11 Executing busybox-1.31.1-r3.trigger
12 OK: 221 MiB in 51 packages
13 fetch http://dl-cdn.alpinelinux.org/alpine/v3.11/main/x86_64/APKINDEX.tar.gz
14 fetch http://dl-cdn.alpinelinux.org/alpine/v3.11/community/x86_64/
15 * APKINDEX.tar.gz
16 OK: 221 MiB in 51 packages
17 ERROR: Could not find a version that satisfies the requirement git (from
18     versions: none)
19 ERROR: No matching distribution found for git
20 WARNING: You are using pip version 20.0.2; however, version 20.1 is available.
21 You should consider upgrading via the '/usr/local/bin/python -m pip install --
22     upgrade pip' command.
23 The command '/bin/sh -c apk add --update --upgrade --no-cache --virtual
24     .build      gcc      musl-dev      python3-dev
25     libevent-dev      && apk add --update --upgrade --no-cache      && pip
26     install --no-cache-dir -r requirements.txt
27     git      && apk del .build      && rm -rf /tmp/*' returned a non-
28     zero code: 1
29 Running after script
30 Uploading artifacts for failed job
31 ERROR: Job failed: exit status 1
```

Refer to the exhibit. The script, which uses Docker to run a Python application against production network switches, worked properly yesterday but is not working today. The engineer suspects that another engineer changed the script, which caused the CI/CD pipeline to fail. What is the reason for this failure?

- A. The PyPI package index is unreachable.
- B. The Git version is invalid.
- C. Git is an invalid PyPI package.
- D. Pip must be updated to a newer version.

**Answer: C**

Explanation:

**Question: 409**

Refer to the exhibit.

```
1 root@ci-job-1:/job-6768# pytest --verbose src/
2 bash: pytest: command not found
```

Refer to the exhibit. An engineer is setting up a CI/CD pipeline for a new application that depends on other services. The services must be prepared beforehand. Build dependencies must be installed by the pipeline. One of the pipeline stages fails. What is the cause of the issue?

- A. The CI syntax is invalid.
- B. A package is missing.
- C. The dependent services are not ready.
- D. The unit test failed.

**Answer: B**

Explanation:

**Question: 410**

Which risk is there to data privacy during the storage and transmission of data?

- A. Unencrypted information from a storage device increases the risk of a data breach.
- B. Exposure is increased when data is shared between applications.
- C. Data breaches cause the ongoing exposure of personal information.
- D. Transfer of unencrypted data between storage devices increases exposure.

**Answer: D**

Explanation:

**Question: 411**

Refer to the exhibit.

```

import requests

response = requests.get('https://api.cisco.com/IsAlive')
failure_codes = [400, 401, 402, 403, 404]
try_later_codes = [500, 501, 502, 503]

[REDACTED]

    if response.status_code in failure_codes:

        raise Exception(f"Error {response.status_code}")

        if response.status_code in try_later_codes:
            payload = generate_payload(response)
            add_to_retry_queue(payload)

    else:

        process_response(response)

```

Refer to the exhibit. An engineer is developing a Python script to check if an API is live. If the API is not live, the script must evaluate the response code and either raise an exception or add the request to a queue for retry. Which code snippet must be placed in the plank in the code to complete the script?

A.

```

if response.status_code not in failure_codes:

```

B.

```

if response.status_code == 200:

```

C.

```

if response.status_code in try_later_codes:

```

D.

```
if response.status_code != 200:
```

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

**Answer: D**

Explanation:

### Question: 412

Refer to the exhibit.

```
FROM openjdk:latest
ARG VERSION
ADD application-$VERSION.jar /usr/local/application/application.jar
ENTRYPOINT ["/bin/sh"]
CMD ["-c", "java -jar /usr/local/application/application.jar"]
```

Refer to the exhibit. The Dockerfile is placed in the current working directory. Which command builds an image named application:1.0.0 that contains application-1.0.0.jar and also includes any updates to the parent image?

- A. docker build --put=VERSION="1.0.0" --tag application:1.0.0
- B. docker build --build-arg VERSION="1.0.0" --tag application:1.0.0
- C. docker build --pull --build-arg VERSION="1.0.0" --tag application:1.0.0
- D. docker build --file=application-1.0.0.jar --tag application:1.0.0

**Answer: D**

Explanation:

### Question: 413

What is a benefit of continuous testing?

- A. It enables silos to be effective.
- B. It reduces business risks.
- C. It enables an increase in human intervention.
- D. It removes the need for performance testing.

**Answer: B**

Explanation:

**Question: 414**

A company is starting a machine-learning project to analyze employee information and enforce social distancing guidelines. The data that the company wants to leverage includes these data points:

- access badge logs
- security camera metadata
- WebEx Teams messages
- email attachments
- phone GPS coordinates

Which type of database must be used for this application?

- A. RDBMS
- B. object-oriented
- C. NoSQL
- D. flat file

**Answer: C**

Explanation:

**Question: 415**

DRAG DROP

Refer to the exhibit.

Data Parameters		HTTP request URL	
Parameter	Required	Type	Description
name	True	string	A string that is the name of the network object.
description	False	string	A string containing the description information Field level constraints: length must be between 0 and 200 (inclusive). (Note: Additional constraints might exist)
subType	True	string	An enum value that specifies the network object type HOST - A host type. NETWORK - A network type. FQDN - A FQDN type. RANGE - A range type. Field level constraints: cannot be null. (Note: Additional constraints might exist)
value	True	string	A string that defines the address content for the object. For HOST objects, this is a single IPv4 or IPv6 address without netmask or prefix. For NETWORK objects, this is an IPv4 or IPv6 network address with netmask (in CIDR notation) or prefix. For FQDN objects, this is a Fully qualified domain name. For RANGE objects, this is IPv4 or IPv6 addresses separated by '-'. Field level constraints: cannot be null, must match pattern '^((?!.)*)\$'. (Note: Additional constraints might exist)
isSystemDefined	False	boolean	A Boolean value, TRUE or FALSE (the default). The TRUE value indicates that this Network object is a system defined object
dnsResolution	False	string	DNS Resolution type can be IPV4_ONLY, IPV6_ONLY or IPV4_AND_IPV6
type	True	string	A UTF8 string, all letters lower-case, that represents the class-type. This corresponds to the class name.

Refer to the exhibit. Drag and drop the code snippets from the bottom onto the blanks in the code to create a function to add new network objects to their Firepower Device Management instance. Not all options are used.

```
import requests
def new_network_object(TOKEN):
    url = f'https://{HOST}/api/fdm/latest/object/'
    headers = {
        'Content-Type': 'application/json',
        'Accept': 'application/json',
        'Authorization': f'Bearer {TOKEN}'
    }
    body = {
        'subtype': ' ',
        'value': '10.10.10.0/24',
        'type': ' '
    }
    response = requests.post(url, verify=False, headers=headers, json=body)
```

networks	networkobject	network_type
NETWORK	networktype	device

**Answer:**

Explanation:

```
import requests
def new_network_object(TOKEN):
    url = f'https://{HOST}/api/fdm/latest/object/ networks
    headers = {
        'Content-Type': 'application/json',
        'Accept': 'application/json',
        'Authorization': f'Bearer {TOKEN}'
    }
    body = {
        'subtype': ' NETWORK ',
        'value': '10.10.10.0/24',
        'type': ' networkobject '
    }
    response = requests.post(url, verify=False, headers=headers, json=body)
```



**Question: 416**

Refer to the exhibit.

```
Marker.java:
01 // Marker.java - InfoWindow display status
02     public void run() {
03         if (reshowFlag){
04             marker.showInfoWindow();
05 <<<<<<< HEAD
06         } else{
07             marker.hideInfoWindow();
08             reshowFlag = true;
09             handler.postDelayed(this, 500);
10         }
11         =====
12     } else {
13         marker.hideInfoWindow();
14     }
15 >>>>>>> NORESHOW
16 }
```

Refer to the exhibit. Which set of actions resolves the conflict in the MarkerJava file to accept the incoming changes?

A.

- 1) Run the following cowr-ar-dt:

```
git rm Marker.java
git commit
git checkout master
git merge NORE3HOW
```

B.

- I) Manually delete lines 5 through 11
- 21 Manually delete line 15
- J) Run the following commands:

```
git add Marker.java
git commit
git checkout NORE3HOW
git merge master
```

C.

- 1) Run the following commands:

```
git checkout master
git rm Marker.java
git commit
git checkout NORE3HOW
git merge master
```

D.

```
1) Manually delete lines 5 through 11
2) Manually delete line 15
3) Run the following commands:

git add Marker.java
git commit
git merge master
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: D**

Explanation:

### Question: 417

Refer to the exhibit.

```
1 from flask import request
2 import xml.etree.ElementTree as ET
3
4 tree = ET.parse('routers.xml')
5 root = tree.getroot()
6
7 @app.route('/sites')
8 def user_location():
9     username = request.args['username']
10    query = "./routers/[@name='"+router+"']"
11    elmts = root.findall(query)
12    return 'Location %s' % list(elmts)
```

Refer to the exhibit. A developer creates a route by using the Python Flask framework to return information about a network router. Penetration testers can extract sensitive information from the route by using specialty crafted values in the URL. Which action will mitigate this vulnerability?

- A. Implement rate limiting to prevent DOS.
- B. Secure the /routers endpoint against cross-site scripting attacks.
- C. Validate injection of untrusted XPath expressions.
- D. Prevent HTTP request redirection.

**Answer: C**

Explanation:

### Question: 418

An engineer is designing an application to interact with Cisco Catalyst Center (formerly DNA Center). The application must use multiple components that serve unique functions that range from device data collection, analysis, and monitoring to a custom dashboard. It must meet these development requirements:

- Application components are easy to replace.
- Application components are easy to re-use.
- It can scale up at short notice.
- It allows work to be done on specific components independently.

Which design practice must the engineer apply?

- A. object-oriented design
- B. modular design
- C. single-responsibility principle
- D. software configuration management

**Answer: B**

Explanation:

**Question: 419**

DRAG DROP

A developer is creating a Python Flask solution to leverage the Cisco Meraki Location API. Drag and drop the code snippets from the bottom onto the blanks in the Python script to manage incoming location data.

Not all options are used.

```

from flask import Flask
from flask import request
app = Flask(__name__)

@.route('/', methods=['POST'])
def get_cmxJSONO : cmxdata = request.json if not cmxdata else 'data' in cmxdata:
    return ("invalid data", 400)

print("Received data from ", request.environ['REMOTE_ADDR'])
print(cmxdata)
return "Location Scanning Data Received"

if __name__ == '__main__':
    main(sys.argv[1:])
    app.run(host='0.0.0.0', port=5000)

```



**Answer:**

Explanation:

from flask import Flask from flask import request app = Flask( name )

```
@ app.route ( '/', methods=['POST'] )
```

def get\_cam\_JSON(): cnxdata = request.json

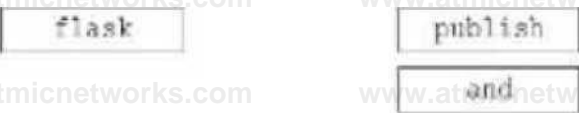
If not cnxdata or not 'data' in cnxdata: return ("Invalid data", 4001)

print("Received data from ", request.environ['REMOTE\_ADDR']) print (cnxdata)  
return "Location Scanning Data Received"

if \_\_name\_\_ == '\_\_main\_\_':

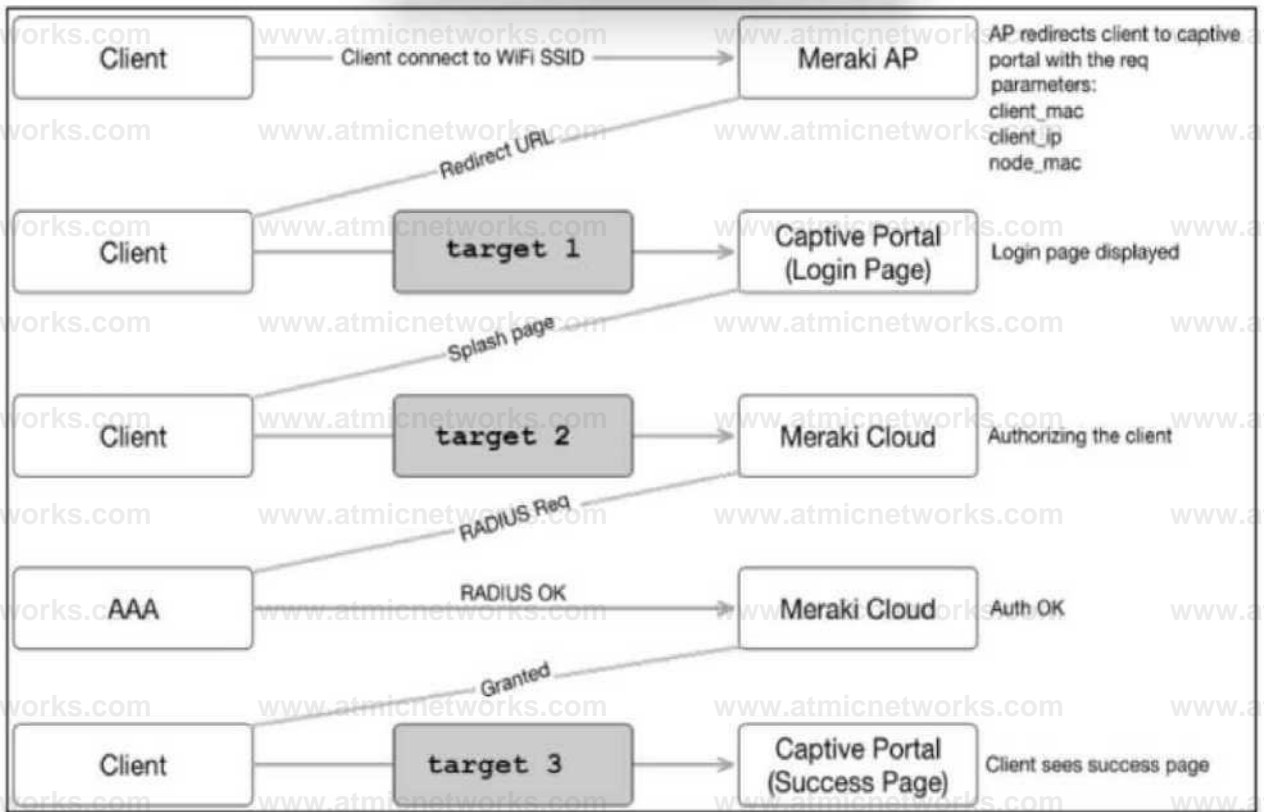
main(sys.argv[1:])

app.run (port=5000)



**Question: 420**

DRAG DROP



Refer to the exhibit. Drag and drop the code snippets from the left onto the targets on the right to complete the Cisco Meraki Captive Portal REST API call. Not all options are used.

[POST] URL: https://splashurl.com?Query:continue_url	target 1
[GET] URL: https://splashurl.com/call	target 2
[GET] URL: https://splashurl.com?Query:pass	target 3
[GET] URL: https://splashurl.com?success	
[GET] URL: https://splashurl.com/call?Query:client_mac,client_ip,node_mac	

**Answer:**

Explanation:

[GET] URL: https://splashurl.com/call	[GET] URL: https://splashurl.com/call?Query:client_mac,client_ip,node_mac
[GET] URL: https://splashurl.com?Query:pass	[POST] URL: https://splashurl.com?Query:continue_url
	[GET] URL: https://splashurl.com?success

### Question: 421

During the final step in the OAuth2 authorization process, what must the client send to the OAuth authorization server to obtain a data access token?

- A. resource owner's permission
- B. refresh access token
- C. authorization challenge request
- D. short-lived access code

**Answer: D**

Explanation:

**Question: 422**

DRAG DROP

vara: vpc.pkl.jrc: 172.16.30.102 vpc.pkl.dest: 172.16.30.10 vpc: domain: 100  
pkl.vrf: management port.channel:

- Ethernet/3
- Ethernet 1/4

Refer to the exhibit. Drag and drop the code snippets from the bottom onto the blanks in the code to complete the playbook for creation of an Ansible role that configures VPC on a Cisco Nexus switch. Not all options are used.

```
- name: Enable Features
  [ ]:
  - vpc
  - lacp
  nxos [ ]:
    feature: "{{ item }}"
    state: enabled
- name: Configure VPC
  nxos_vpc:
    domain: "{{ [ ] }}"
    pkl_src: "{{ vpc.pkl_src }}"
    pkl_dest: "{{ vpc.pkl_dest }}"
    pkl_vrf: "{{ vpc.pkl_vrf }}"
    peer_gw: true
    auto_recovery: true
```

Loop	vpc.domain	enable
feature	foreach	domain

**Answer:**

Explanation:

```

- name: Enable Features
  loop:
    - vpc
    - lacp
  nxos_feature:
    feature: "{{ item }}"
    state: enabled
dcaila:
  pkl_3rc
- name: configure VPC axes _vpc:
  vpc_domain: "{{ vpc.domain }}"
  vpc_pk1_src: "{{ vpc.pkl_src }}"
  vpc_pk1_dest: "{{ vpc.pkl_dest }}"
  vpc_pk1_vrf: "{{ vpc.pkl_vrf }}"
  peer_gw: true
  auto_recovery: true

```



### Question: 423

An engineer is managing the development of an application hosted in the Python Django framework. A remote database for state deposition and containerized microservices are used for the application logic. Which two monitoring solutions enable the application observability to assist with troubleshooting and debugging? (Choose two.)

- A. security information and event management
- B. resource utilization monitor
- C. integrated configuration environment
- D. Cisco Intersight view
- E. continuous deployment pipeline

**Answer: B, E**

Explanation:

### Question: 424

DRAG DROP

Refer to the exhibit.

WiFi Properties	
JSON	
<pre>    "version": number*     "secret": string,     "type": string,     "data":         "network!": string, "observations": 1       ( "locations" 1         "x": number, "lng":         number, "T9siRccords" (           "apMac": string,           "rssi": number</pre>	<pre>    "y": string,     "floorPlanId": string,     "time": ISO t1*e,      "ipv4": string, ssm : string,     "os": string,     "clientMac": string,     "lpv6": string,      "latestRecord": ( "tune"* strlna       "nearestApMac": string,       "nearestApRssi": string</pre>

Refer to the exhibit. Drag and drop the code snippets from the bottom onto the blanks in the Python script to retrieve location data from the Cisco Meraki Location API by using a webhook receiver. Not all options are used.

from flask import flask, request, Response

app = Flask(\_\_name\_\_)

@app.route('/webhooks', methods=['GET']) def webhook(): json\_hook = request.json

if validate\_secret(json\_hook.get('secret')): get\_location\_data(json\_hook.get('observations'))

else: return Response(status=403)

def validate\_secret(secret):

secret = 'meraki-secret'

if secret == secret: return True

else: return False

def get\_location\_data(observations):

with open('meraki\_location\_log.txt', 'a') as log: log.write('Observations: ' + observations + '\n')

if \_\_name\_\_ == '\_\_main\_\_': app.run()



**Answer:**

**Explanation:**

from flask import Flask, request, Response

app = Flask(\_\_name\_\_)

@app.route('/webhooks', methods=['GET']) def webhook():

json\_hook = request.json

if validate\_secret(json\_hook.get('secret')): get\_location\_data(json\_hook.get('observations'))

else: return Response(status=403)

def validate\_secret(secret):

secret = 'meraki-secret'

if secret == secret: return True

else: return False

def get\_location\_data(observations):

with open('meraki\_location\_log.txt', 'a') as log:

log.write('Observations: ' + observations + '\n')

if \_\_name\_\_ == '\_\_main\_\_': app.run()



**Question: 425**

Which authorization steps are required to obtain an access token according to the OAuth2 authorization code grant flow?

- A. Log in with a username and password using a form, get a token, and include the token in the body.
- B. Send the base64 encoded username, password, client ID, and client secret to the single sign-on manager.
- C. Send the client ID and client secrets by using the grant flow type, get the token, and authorize by using a callback.
- D. Authenticate, get the authorization code, and send it with the client ID and client secret.

**Answer: D**

Explanation:

**Question: 426**

DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the code to deploy the last version of a previously created Python Flask application called app-updates onto a Kubernetes cluster. Not all options are used.

```
 run  --image=gcr.io/devnet-258113/  
app-flask-updates:  --port=5000 --replicas=3
```

kubectl	latest	'app-updates'
app-updates	last	kube

**Answer:**

Explanation:

```
kubectl run app-updates --image=gcr.io/devnet-258113/  
app-flask-updates: latest --port=5000 --replicas=3  
'app-updates last | kube'
```

**Question: 427**

DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the Python script to retrieve a list of all the Cisco Webex rooms using pagination and the Webex API. Not all options are used.

```

import requests
api_key = 'NGMwYWYlYzktYzJiM6a-bf05-067ef73c6836'
headers = {'Authorization': f'Bearer {api_key}', 'Content-Type':
           'application/json'}
url = 'https://webexapi9.cacn/v1/rooms'
params = {'max': 10}

```

```

:
response = requests.get(url, headers=headers, params=params)
try:
    url = response.json()['next']['url']
except:
    break

```

print(response.json())	while True
except IndexError	response.links
except KeyError	for i in range(10):

**Answer:**

**Explanation:**

```

import requests
api_key = 'NGMwYWYlYzktYzJiM6a-bf05-067ef73c6836'
headers = {'Authorization': f'Bearer {api_key}', 'Content-Type':
           'application/json'}
url = 'https://webexapi9.cacn/v1/rooms'
params = {'max': 10}

while True:
    response = requests.get(url, headers=headers, params=params)
    for i in range(10):
        try:
            url = response.links['next']['url']
        except KeyError:
            break

    print(response.json())
except IndexError:

```

**Question: 428**

Which load-balancing algorithm balances loads based on configurations to determine the traffic handling capacity of a server?

- A. sticky session
- B. least connections
- C. weighted round robin
- D. IP source affinity

**Answer: C**

Explanation:

**Question: 429**

DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the Python script to provision a new Cisco UCS server by using a specific template. Not all options are used.

```
from ucsm.sdk.ucshandle import UcsHandle
from ucsm.sdk.mcmeta.is.LsServer import LsServer server="10.10.20.112"
handle = DcsRandle(ip=aerver, useraae="adaln", pasaword^secret", secure=True) handle.login()
```

```
sp = LsServer(parent_mo_or_dn=" [ ] , name="provjsxon_2"
src_tmpl_name=" [ ] ")
handle. [ ] (sp)
handle. [ ] ()
handle.logout()
```

query_classid	put
add_mo	server Ivapidle
commit	set_mo
org_root	

**Answer:**

Explanation:

```

from ucsmask.ucshandle import UcsHandle
from ucsmask.mometa.ls.LsServer import LsServer
server="10.10.20.112"

handle = UcsHandle(ip=server, username="admin", password="secret", secure=True)
handle.login()

sp = LsServer(parent_mo_or_dn="org-root", name="provision_2",
src_tmpl_name="server_template")

handle.add_mo(sp)

handle.commit()
handle.logout()

```

query\_classid

put

set\_mo

### Question: 430

What is the first step in the OAuth2 Authorization code grant flow?

- A. Request authorization from the resource owner.
- B. Receive an authorization code from the resource server.
- C. Mutual authentication between client and server.
- D. Authorization tokens are exchanged.

**Answer: A**

Explanation:

### Question: 432

DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the cURL script that uses RESTCONF to update an interface on a Cisco IOS XE device. Not all options are used.

```
curl --location --request PUT 'https://ios-xe-ntgr.t.cisco.com:5443/restconf/data/ietf-interfaces:interfaces
interface=GigabitEthernet2'
```

```
--header 'Authorization: Basic cm9vd0pjaXNjbrEyMw==' \
--header 'Accept: application/yang-data+json' \
--header 'Content-Type: application/yang-data+json' \
--data-raw '{
  "ietf-interfaces:interface": {
    "name": "GigabitEthernet",
    "description": "Configured by AESTCONF",
    "iana-if-type": "iana-if-type:
    "ietf-ip:ipv4": {
      "address": {
        "ip": "10.255.255.1", "netmask": "255.255.255.0"
      }
    }
  }
}
```

J

state	true	ethernetCsmacd
type*	enabled	Cosmea

**Answer:**

Explanation:

```
curl --location --request PUT 'https://ios-xe-mgmt.cisco.com:9441/ietf-
interface:interfaces/interface=GigabitEthernet2'
--header 'Authorization: Basic cm9vd0pjaXNjbrEyMw==' \
--header 'Accept: application/yang-data+json' \
--header 'Content-Type: application/yang-data+json' \
--data-raw '{
  "ietf-interfaces:interface": {
    "name": "GigabitEthernet",
    "description": "Configured by RESTCONF",
    "iana-if-type": "iana-if-type: ethernetCsmacd",
    "enabled": true,
    "ietf-ip:ipv4": {
      "address": {
        "ip": "10.255.255.1", "netmask": "255.255.255.0"
      }
    }
  }
}
```

I

state

**Question: 433**

An engineer creates an application that manages the parsing and analysis of data. The data is continuously generated in bursts and is disrupting the performance of the application by overloading the provided resources. The engineer wants to implement rate limiting on the receiving endpoint to ensure that a minimum data sample from every timeframe is parsed and that no more than a specific number of requests are processed each time. Which rate limiting algorithm must the engineer use?

- A. leaky bucket
- B. sliding window
- C. fixed window
- D. event queue

**Answer: A****Explanation:**

**Question: 434**

DRAG DROP

Refer to the exhibit.

```
{
  "Moid": "2fsgsgerge4f057feer234",
  "CreateTime": "2021-02-08T14:30:00.826-07:00",
  "ModTime": "2021-02-08T14:30:00.826-07:00",
  "Tags": [
    {
      "Key": "DataCenter",
      "Value": "City-A"
    },
    {
      "Key": "Environment",
      "Value": "Testing"
    }
  ]
}
```

Refer to the exhibit. An engineer is attempting to retrieve information about free resources in the Cily-Adata center. The engineer wants to know only about resources in the testing environment. Drag and drop the code snippets from the bottom onto the blanks in the API call to meet this requirement. Some options may be used more than once. Not all options arc used.

```
GET /api/v1/compute/ [ ] ?$filter=
any(t: [ ] eq 'DataCenter' and [ ] eq 'City-A' )
and Tags/any(t: [ ] eq 'Environment' and
'Testing' J
```

Tags	t/Key	Key	t/Value
Tag	RackUnits	Value	

**Answer:**

Explanation:

```
GET /api/v1/compute/RackUnits?filter=Tags /
any(t: t/Key eq 'DataCenter' and t/Value eq 'City-A' )
and Tags/any(t: Key eq 'Environment' and Value eq
'Testing')
```

```
Tag
```

\* here  
Cleaning up file based variables  
ERROR: Job failed: exit code 1

A network engineer developed an Ansible playbook and committed it to GitLab. A GitLab CI pipeline is started but immediately fails. What is the issue?

A. The runner task uses an incorrect parameter.

```
• [new branch] development -> origin/development
Checking out 65702a£3 as development...
Skipping Git submodules setup
Restoring cache 00:01
Downloading artifacts 00:02
Running script from Job 00:01
3 python3 —version
Zusr/bin/bash: line 94: python3: command not found
Running after script 00:02
Uploading artifacts for failed job
00:01
ERROR: Job failed: exit code 1
```

Refer to the exhibit. Which action resolves the error for the GitLab CI/CD pipeline execution?

A. Download the correct artifacts by specifying them in GitLab.