Vendor: Cisco

Exam Code: 350-901

Exam Name: Developing Applications Using Cisco Core Platforms and APIs (DEVCOR)

Version: DEMO

QUESTION 1
Refer to the exhibit. 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?

```
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
```

A.
```
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:
```

B.
```
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:
```

C.
```
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:
```

D.
```
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:
```

Answer: C
Explanation:
429 produces "retry-after" which is used in the code.
408 does not produce "retry-after" so you need to define a backoff-time yourself.

QUESTION 2
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:
The most significant standard about PII processing regulations is the EU's General Data Protection Regulation (GDPR) because it applies to Europe and to any other country that wants to provide services to individuals within the EU, and as such it extends many of its data privacy safeguards globally.

QUESTION 3
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:
Once developers have built the docker application, running the standard "docker save" command can be used to export the application as ".tar" compressed file. The application can then be deployed on the Catalyst 9000 series switches. Cisco's ioxclient tool is no longer required to package the application. Ioxclient is an optional tool for developers who want to define additional parameters for the application.

QUESTION 4
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:
The merge --squash feature takes all the commits from the bugfix branch, squash them into 1 commit, and merge it with your master branch.

QUESTION 5
Drag and Drop Question

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:

```
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")
```

[Request] [Error]

Explanation:
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 6
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 queuing infrastructure

Answer: A
Explanation:
What is Fluentd used for?
Fluentd is an open source data collector for building the unified logging layer. Once installed on a server, it runs in the background to collect, parse, transform, analyze and store various types of data.

QUESTION 7
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:
Once set up, the webhook will send an HTTP POST to a unique URL, but only when a certain condition or criteria has been met to trigger an alert. So, for example, if you're only interested in being notified when a device goes offline, Webhook Alerting will be more efficient since it will only transmit information when the status of the device goes from online to offline.
https://meraki.cisco.com/blog/2018/10/real-time-alerting-with-webhooks/

QUESTION 8
What is the result of a successful OAuth2 authorization grant flow?

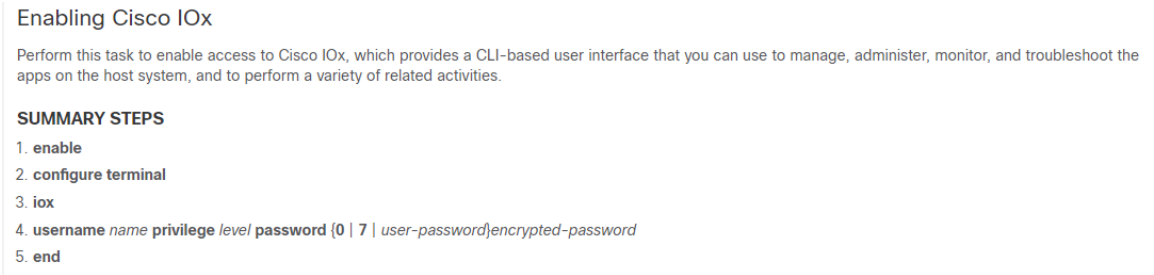
A. The user has the application rights that correspond to the user's role within the application's database
B. The application is provided with a token that allows actions on services on the user's behalf
C. The user has administrative rights to the application's backend services
D. The third-party service 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 9
Which command is used 10 enable application hosting on a Cisco IOS XE device?

A. iox
B. iox-service
C. application -honing
D. app- hosting

Answer: A
Explanation:



Enabling Cisco IOx

Perform this task to enable access to Cisco IOx, which provides a CLI-based user interface that you can use to manage, administer, monitor, and troubleshoot the apps on the host system, and to perform a variety of related activities.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **iox**
4. **username** *name* **privilege** *level* **password** {**0** | **7** | *user-password*}*encrypted-password*
5. **end**

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/171/b_171_programmability_cg/application_hosting.html#id_96210

QUESTION 10
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: AE
Explanation:
Choosing an architecture
Regardless of the architecture that you choose, it's important to understand the ramifications of high availability, scalability, and serviceability of the component services. Be sure to consider the effect on the applications being hosted by the Kubernetes or OpenShift cluster. The architecture of the storage infrastructure supporting the Kubernetes/OpenShift cluster and the hosted applications can also be affected by the chosen cluster architecture, such as where etcd is hosted.
https://netapp-trident.readthedocs.io/en/stable-v19.01/dag/kubernetes/kubernetes_cluster_architecture_considerations.html#cluster-

QUESTION 12
A developer is deploying an application to automate the configuration and management of Cisco network files and routers. The application must use REST API interface lo 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: A
Explanation:

Proactively prevent resource overload with rate-limiting mechanisms, which put a cap on how often someone can repeat an action within a certain timeframe. This can be applied to many processes:
Network traffic: Protect servers and network devices from overload during a distributed denial-of-service (DDoS) attack.

QUESTION 13
Refer to the exhibit. 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. A new service named cisco.devnet is being deployed.

```
$ docker node ls
ID                           HOSTNAME                  STATUS
AVAILABILITY        MANAGER STATUS
cfeae09c992f *               docker-west-01      Ready
Active                       Reachable
8c15d37ddalf                 docker-west-02      Ready
Active
0683c478497b                 docker-central-01   Ready
Active                       Leader
9a30a613f083                 docker-central-02   Ready
Active
0ac8a7b59d9a                 docker-east-01      Ready
Active                       Reachable
dcd6ecda93d3                 docker-east-02      Ready
Active
```

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: C
Explanation:
Placement preferences let you apply an arbitrary label with a range of values to each node, and spread your service's tasks across those nodes using an algorithm. Currently, the only supported algorithm is spread, which tries to place them evenly. For instance, if you label each node with a label rack which has a value from 1-10, then specify a placement preference keyed on rack, then service tasks are placed as evenly as possible across all nodes with the label rack, after taking other placement constraints, placement preferences, and other node-specific limitations into account.

https://docs.docker.com/engine/swarm/services/#control-service-placement

QUESTION 14
Refer to the exhibit. An attempt to execute a CI/CD pipeline results m the error shown. What is the cause of the error?

```
using GIT_ASKPASS to set credentials
     > git fetch ==tags --force --progress -- http://73aee195f715/root/ms=master.git
+refs/heads/* :refs/remotes/origin/* # timeout=10
ERROR: Error fetching remote repo 'origin'
hudson.plugins.git.GitException: Failed to fetch from http://73aee195f715/root/ms-master.git
     at hudson.plugins.git.GitSCM.fetchFrom(GitSCM.java:908)
     at hudson.plugins.git.GitSCM.retrieveChanges(GitSCM.java:1123)
     at hudson.plugins.git.GitSCM.checkout(GitSCM.java:1159)
     at hudson.scm.SCM.checkout(SCM.java:505)
     at hudson.model.AbstractProject.checkout (AbstractProject.java:1205)
     at
hudson.model.AbstractBuild$AbstractBuildExecution.defaultCheckout (AbstractBuild.java
:574)
     at jenkins.scm.SCMCheckoutStrategy.checkout(SCMCheckoutStrategy.java:86)
     at
hudson.model.AbstractBuild$AbstractBuildExecution.run(AbstractBuild.java:499)
     at hudson.model.Run.execute .Run.execute (Run.java:1853)
     at hudson.model.FreeStyleBuild.run (FreeStyleBuild.java:43)
     at hudson.model.ResourceController.execite(ResourceController.java:97)
     at hudson.model.Executor.run (Executor.java:427)
Caused by: hudson.plugins.git.GitException: Command "git fetch --tags --force --
progress --http://73aee195f715/root/ms-master.git
+refs/heads/*:refs/remotes/origin/*" returned status code 128:
stdout:
stderr: remote: GitLab is not responding
fatal: unable to access 'http://73aee195f715/root/ms-master.git/': The requested URL
returned error: 502
```

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: A
Explanation:
The standard error (stderr) is showing 502 (unable to access <>.git) repository = VCS.
HTTP 502 = This error response means that the server, while working as a gateway to get a response needed to handle the request, got an invalid response.

QUESTION 15
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:
To protect north-south API traffic, the following options are available:
- Traditional TLS or Mutual TLS (MTLS) authentication and encryption
- TLS or IPSec from the client to an API gateway or NGFW
- Cloud-based VPN service

- Dedicated cloud connections

QUESTION 16
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 then profile and complete their order. For this reason the application must store user passwords.
Which approach ensures that an attacker wifi 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:
What is Salting?
Salting is a concept that typically pertains to password hashing. Essentially, it's a unique value that can be added to the end of the password to create a different hash value. This adds a layer of security to the hashing process, specifically against brute force attacks. A brute force attack is where a computer or botnet attempt every possible combination of letters and numbers until the password is found.
Anyway, when salting, the additional value is referred to as a "salt."
The idea is that by adding a salt to the end of a password and then hashing it, you've essentially complicated the password cracking process.
https://www.thesslstore.com/blog/difference-encryption-hashing-salting/

QUESTION 17
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:
The Refresh Token grant type is used by clients to exchange a refresh token for an access token when the access token has expired.
This allows clients to continue to have a valid access token without further interaction with the user.
https://oauth.net/2/grant-types/refresh-token/

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