

## MCPA-Level-1 Dumps

### MuleSoft Certified Platform Architect - Level 1

<https://www.certleader.com/MCPA-Level-1-dumps.html>



### NEW QUESTION 1

What best describes the Fully Qualified Domain Names (FQDNs), also known as DNS entries, created when a Mule application is deployed to the CloudHub Shared Worker Cloud?

- A. A fixed number of FQDNs are created, IRRESPECTIVE of the environment and VPC design
- B. The FQDNs are determined by the application name chosen, IRRESPECTIVE of the region
- C. The FQDNs are determined by the application name, but can be modified by an administrator after deployment
- D. The FQDNs are determined by both the application name and the Anypoint Platform organization

**Answer: B**

#### Explanation:

Correct Answer

The FQDNs are determined by the application name chosen, IRRESPECTIVE of the region

\*\*\*\*\*

>> When deploying applications to Shared Worker Cloud, the FQDN are always determined by application name chosen.

>> It does NOT matter what region the app is being deployed to.

>> Although it is fact and true that the generated FQDN will have the region included in it (Ex: exp-salesorder-api.au-s1.cloudhub.io), it does NOT mean that the same name can be used when deploying to another CloudHub region.

>> Application name should be universally unique irrespective of Region and Organization and solely determines the FQDN for Shared Load Balancers.

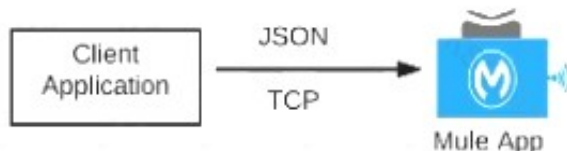
### NEW QUESTION 2

What Mule application can have API policies applied by Anypoint Platform to the endpoint exposed by that Mule application?

- A) A Mule application that accepts requests over HTTP/1.x



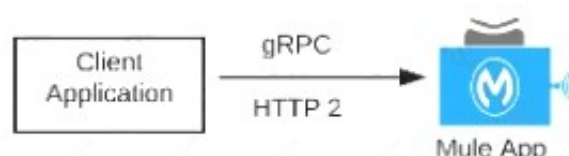
- B) A Mule application that accepts JSON requests over TCP but is NOT required to provide a response



- C) A Mute application that accepts JSON requests over WebSocket



- D) A Mule application that accepts gRPC requests over HTTP/2



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

**Answer: A**

#### Explanation:

Correct Answer

Option A

\*\*\*\*\*

>> Anypoint API Manager and API policies are applicable to all types of HTTP/1.x APIs.

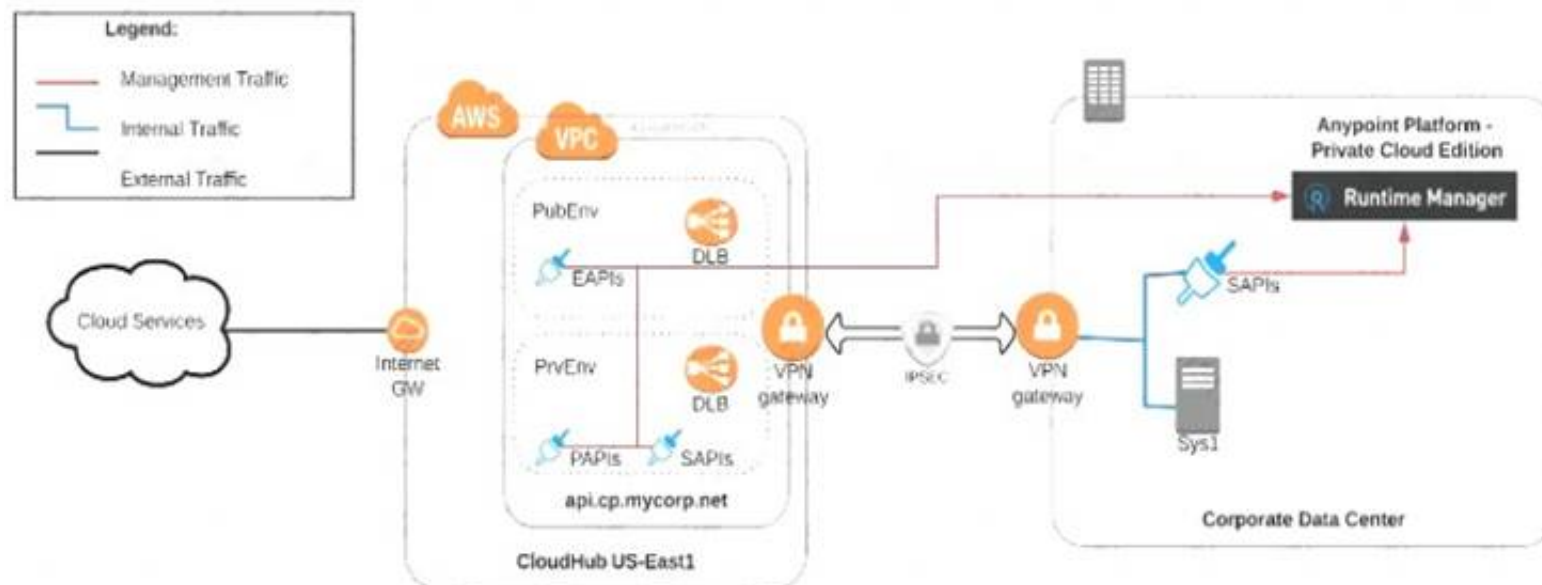
>> They are not applicable to WebSocket APIs, HTTP/2 APIs and gRPC APIs

### NEW QUESTION 3

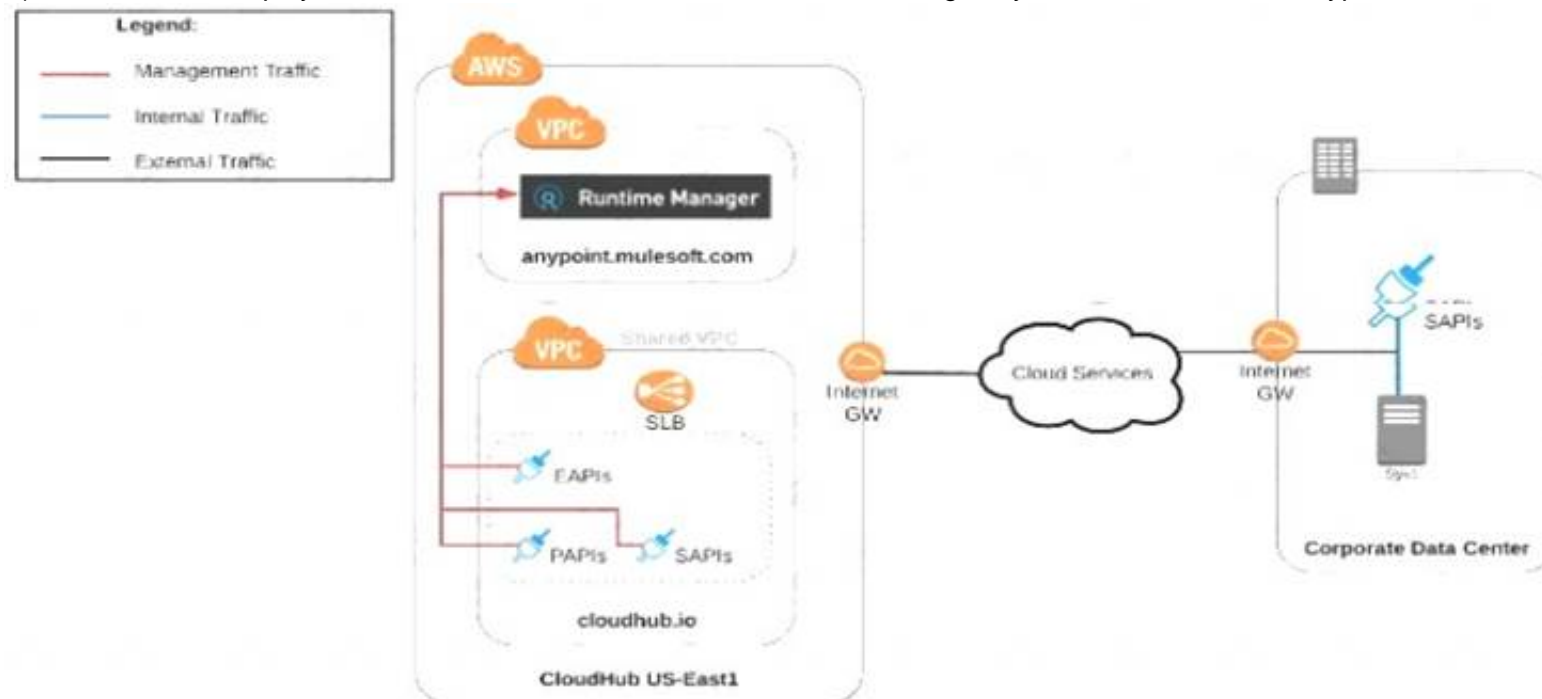
An organization uses various cloud-based SaaS systems and multiple on-premises systems. The on-premises systems are an important part of the organization's application network and can only be accessed from within the organization's intranet.

What is the best way to configure and use Anypoint Platform to support integrations with both the cloud-based SaaS systems and on-premises systems?

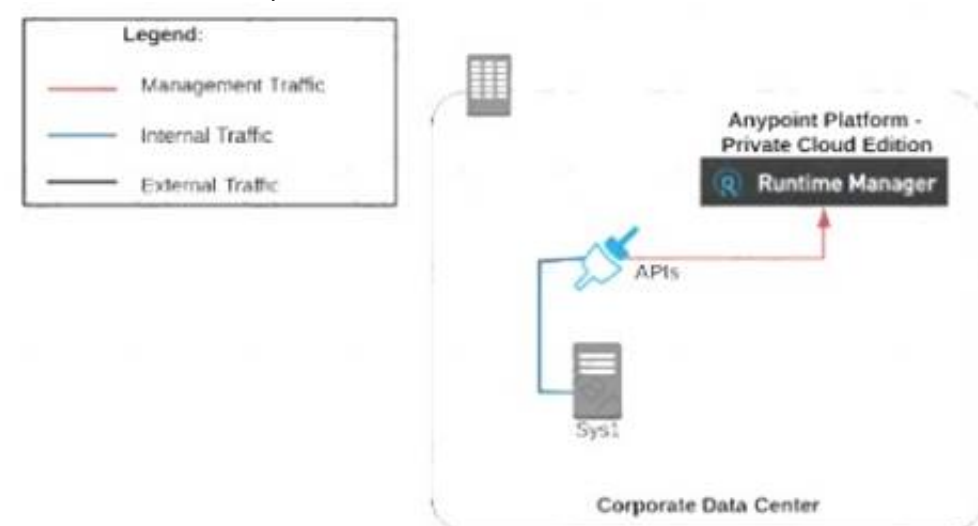
- A) Use CloudHub-deployed Mule runtimes in an Anypoint VPC managed by Anypoint Platform Private Cloud Edition control plane



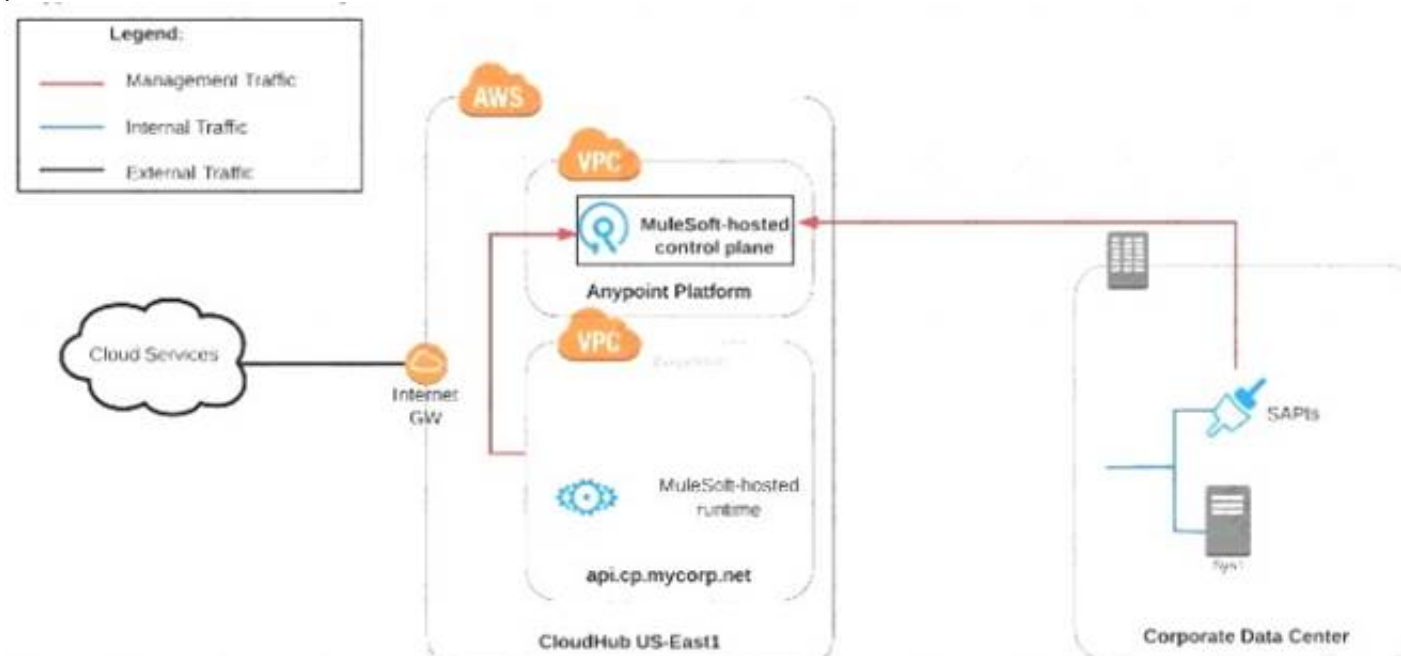
B) Use CloudHub-deployed Mule runtimes in the shared worker cloud managed by the MuleSoft-hosted Anypoint Platform control plane



C) Use an on-premises installation of Mule runtimes that are completely isolated with NO external network access, managed by the Anypoint Platform Private Cloud Edition control plane



D) Use a combination of Cloud Hub-deployed and manually provisioned on-premises Mule runtimes managed by the MuleSoft-hosted Anypoint Platform control plane



A. Option A

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

**Answer: B**

**Explanation:**

Correct Answer

Use a combination of CloudHub-deployed and manually provisioned on-premises Mule runtimes managed by the MuleSoft-hosted Platform control plane.

\*\*\*\*\* Key details to be taken from the given scenario:

>> Organization uses BOTH cloud-based and on-premises systems

>> On-premises systems can only be accessed from within the organization's intranet Let us evaluate the given choices based on above key details:

>> CloudHub-deployed Mule runtimes can ONLY be controlled using MuleSoft-hosted control plane. We CANNOT use Private Cloud Edition's control plane to control CloudHub Mule Runtimes. So, option suggesting this is INVALID

>> Using CloudHub-deployed Mule runtimes in the shared worker cloud managed by the MuleSoft-hosted Anypoint Platform is completely IRRELEVANT to given scenario and silly choice. So, option suggesting this is INVALID

>> Using an on-premises installation of Mule runtimes that are completely isolated with NO external network access, managed by the Anypoint Platform Private Cloud Edition control plane would work for On-premises integrations. However, with NO external access, integrations cannot be done to SaaS-based apps. Moreover CloudHub-hosted apps are best-fit for integrating with SaaS-based applications. So, option suggesting this is BEST WAY.

The best way to configure and use Anypoint Platform to support these mixed/hybrid integrations is to use a combination of CloudHub-deployed and manually provisioned on-premises Mule runtimes managed by the MuleSoft-hosted Platform control plane.

**NEW QUESTION 4**

What is the most performant out-of-the-box solution in Anypoint Platform to track transaction state in an asynchronously executing long-running process implemented as a Mule application deployed to multiple CloudHub workers?

- A. Redis distributed cache
- B. java.util.WeakHashMap
- C. Persistent Object Store
- D. File-based storage

**Answer: C**

**Explanation:**

Correct Answer

Persistent Object Store

\*\*\*\*\*

>> Redis distributed cache is performant but NOT out-of-the-box solution in Anypoint Platform

>> File-storage is neither performant nor out-of-the-box solution in Anypoint Platform

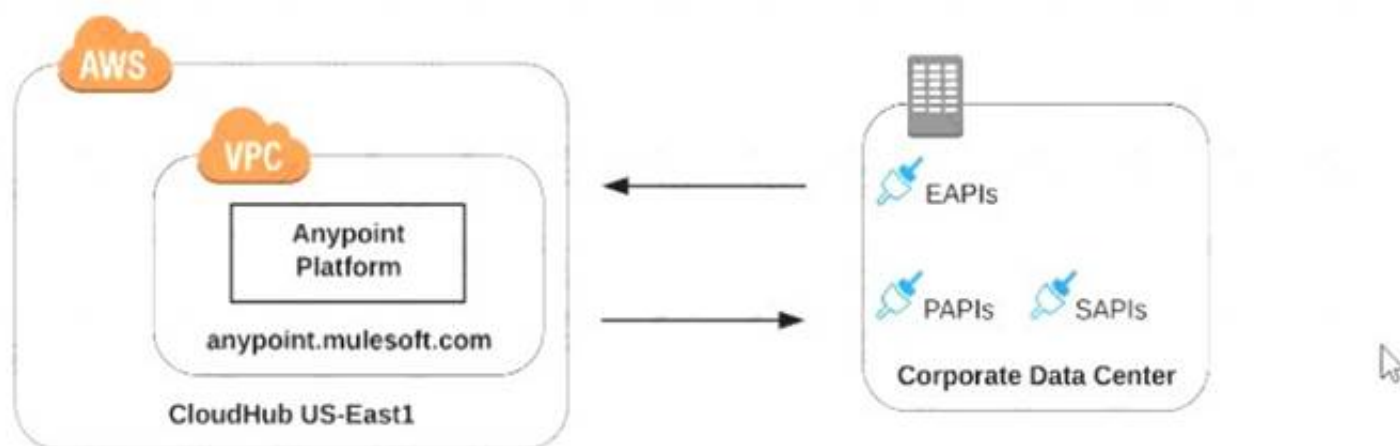
>> java.util.WeakHashMap needs a completely custom implementation of cache from scratch using Java code and is limited to the JVM where it is running. Which means the state in the cache is not worker aware when running on multiple workers. This type of cache is local to the worker. So, this is neither out-of-the-box nor worker-aware among multiple workers on cloudhub. <https://www.baeldung.com/java-weakhashmap>

>> Persistent Object Store is an out-of-the-box solution provided by Anypoint Platform which is performant as well as worker aware among multiple workers running on CloudHub. <https://docs.mulesoft.com/object-store/>

So, Persistent Object Store is the right answer.

**NEW QUESTION 5**

Refer to the exhibit.



what is true when using customer-hosted Mule runtimes with the MuleSoft-hosted Anypoint Platform control plane (hybrid deployment)?

- A. Anypoint Runtime Manager initiates a network connection to a Mule runtime in order to deploy Mule applications
- B. The MuleSoft-hosted Shared Load Balancer can be used to load balance API invocations to the Mule runtimes
- C. API implementations can run successfully in customer-hosted Mule runtimes, even when they are unable to communicate with the control plane
- D. Anypoint Runtime Manager automatically ensures HA in the control plane by creating a new Mule runtime instance in case of a node failure

**Answer: C**

**Explanation:**

Correct Answer

API implementations can run successfully in customer-hosted Mule runtimes, even when they are unable to communicate with the control plane.

\*\*\*\*\*

>> We CANNOT use Shared Load balancer to load balance APIs on customer hosted runtimes



## ◦ Load balancing

Load balancing is not provided for hybrid deployments. You can manage load balancing with the tools connected to your on-premises resources.

>> For Hybrid deployment models, the on-premises are first connected to Runtime Manager using Runtime Manager agent. So, the connection is initiated first from On-premises to Runtime Manager. Then all control can be done from Runtime Manager.

>> Anypoint Runtime Manager CANNOT ensure automatic HA. Clusters/Server Groups etc should be configured before hand.

Only TRUE statement in the given choices is, API implementations can run successfully in customer-hosted Mule runtimes, even when they are unable to communicate with the control plane. There are several references below to justify this statement.

References:

<https://docs.mulesoft.com/runtime-manager/deployment-strategies#hybrid-deployments> <https://help.mulesoft.com/s/article/On-Premise-Runtimes-Disconnected-From-US-Control-Plane-June-18th-2018>

<https://help.mulesoft.com/s/article/Runtime-Manager-cannot-manage-On-Prem-Applications-and-Servers-from-US-Control-Plane-June-25th-2019>

<https://help.mulesoft.com/s/article/On-premise-Runtimes-Appeared-Disconnected-in-Runtime-Manager-May-29th-2018>

### On-Premise Runtimes Disconnected From US Control Plane - June 18th 2018

🕒 Jun 19, 2018 - RCA

#### Content

##### Impacted Platforms    Impacted Duration

Anypoint Runtime Manager / On-Prem Runtimes	During this time frame, on-prem runtimes appeared disconnected from the US Anypoint Control Plane: June 18, 2018 10:35 AM PST to June 18, 2018 11:12 AM PST
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#### Incident Description

On-premises applications weren't able to connect to Anypoint Runtime Manager during the length of the incident, which made on-premises runtimes to throw errors in their logs because they received network disconnect messages from the control plane. Other than generating the log as mentioned above entries, on-premises runtimes and applications were not impacted.

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### Runtime Manager cannot manage On-Prem Applications and Servers from US Control Plane - June 25th 2019

🕒 Jul 3, 2019 - RCA

#### Content

##### Incident Summary

Between 2:51 p.m. PT June 25th and 12:41 a.m. PT June 26th, customers were not able to manage their On-Prem applications and servers. The availability of running applications and runtimes were not impacted.

##### Impacted Platforms    Impact Duration

US-Prod	9 hours and 50 minutes
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## On-premise Runtimes Appear Disconnected in Runtime Manager - May 29th 2018

🕒 Jun 2, 2018 - RCA

### Content

Impacted Platforms	Impacted Duration
Anypoint Runtime Manager / On-Prem Runtimes	During this time frame, on-prem runtimes appeared disconnected from the US Anypoint Control Plane: Tuesday, May 29, 2018, 3:35 AM PDT to 4:27 AM PDT

### Incident Description

During the incident time frame, managed Runtimes running on-premises disconnected from the US Anypoint Platform Control Plane and may have encountered recurrent re-connection errors. Customers were unable to manage applications running on those runtimes or register new ones during this time. Runtimes and Applications continued to operate without impact.

### NEW QUESTION 6

What is most likely NOT a characteristic of an integration test for a REST API implementation?

- A. The test needs all source and/or target systems configured and accessible
- B. The test runs immediately after the Mule application has been compiled and packaged
- C. The test is triggered by an external HTTP request
- D. The test prepares a known request payload and validates the response payload

**Answer: B**

#### Explanation:

Correct Answer

The test runs immediately after the Mule application has been compiled and packaged

\*\*\*\*\*

>> Integration tests are the last layer of tests we need to add to be fully covered.  
>> These tests actually run against Mule running with your full configuration in place and are tested from external source as they work in PROD.  
>> These tests exercise the application as a whole with actual transports enabled. So, external systems are affected when these tests run.  
So, these tests do NOT run immediately after the Mule application has been compiled and packaged.  
FYI... Unit Tests are the one that run immediately after the Mule application has been compiled and packaged.

### NEW QUESTION 7

Which of the following best fits the definition of API-led connectivity?

- A. API-led connectivity is not just an architecture or technology but also a way to organize people and processes for efficient IT delivery in the organization
- B. API-led connectivity is a 3-layered architecture covering Experience, Process and System layers
- C. API-led connectivity is a technology which enabled us to implement Experience, Process and System layer based APIs

**Answer: A**

#### Explanation:

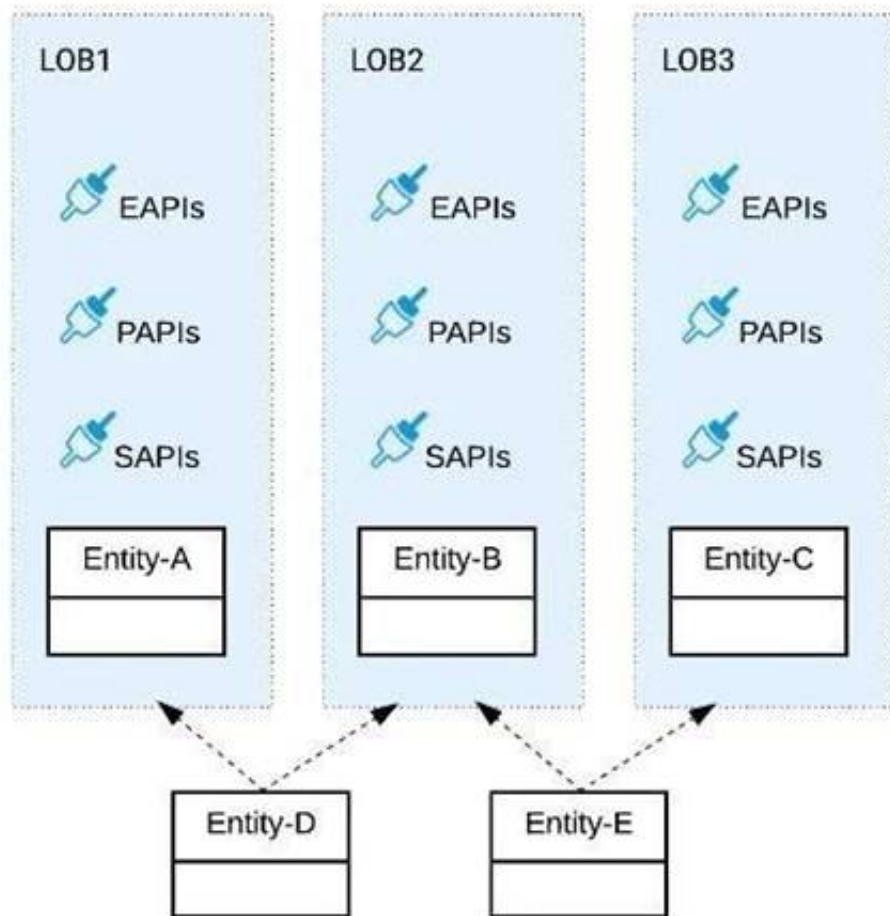
Correct Answer

API-led connectivity is not just an architecture or technology but also a way to organize people and processes for efficient IT delivery in the organization.

\*\*\*\*\*

### NEW QUESTION 8

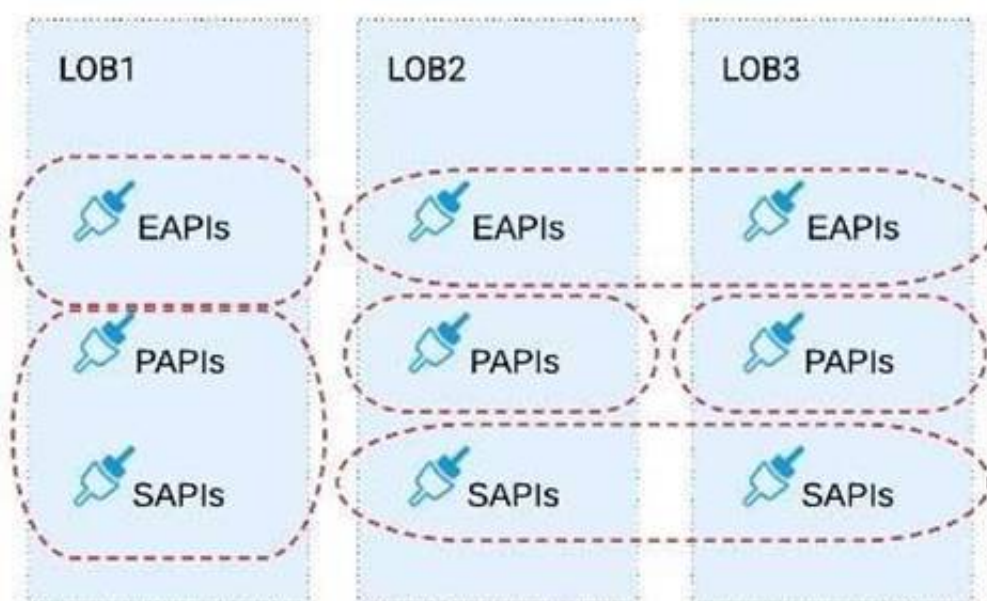
Refer to the exhibit.



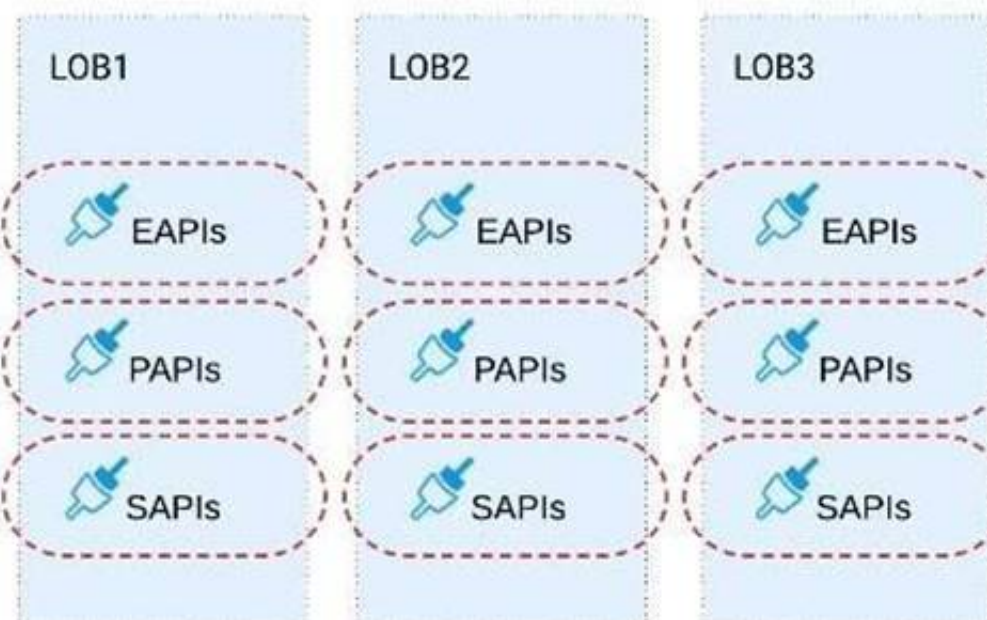
Three business processes need to be implemented, and the implementations need to communicate with several different SaaS applications. These processes are owned by separate (siloe) LOBs and are mainly independent of each other, but do share a few business entities. Each LOB has one development team and their own budget

In this organizational context, what is the most effective approach to choose the API data models for the APIs that will implement these business processes with minimal redundancy of the data models?

A) Build several Bounded Context Data Models that align with coherent parts of the business processes and the definitions of associated business entities

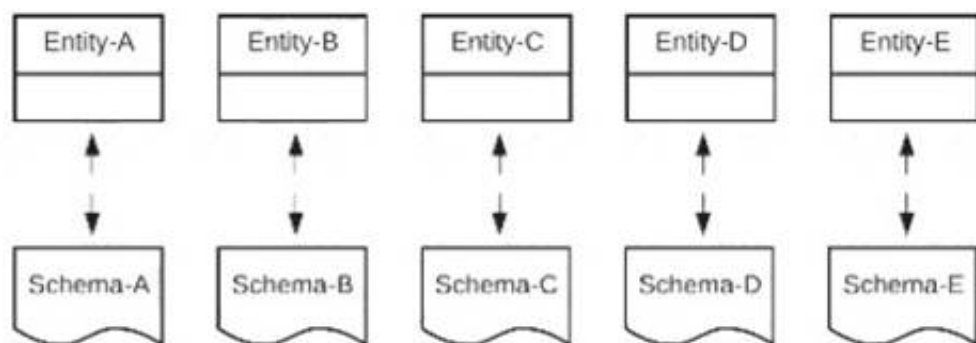


B) Build distinct data models for each API to follow established micro-services and Agile API-centric practices

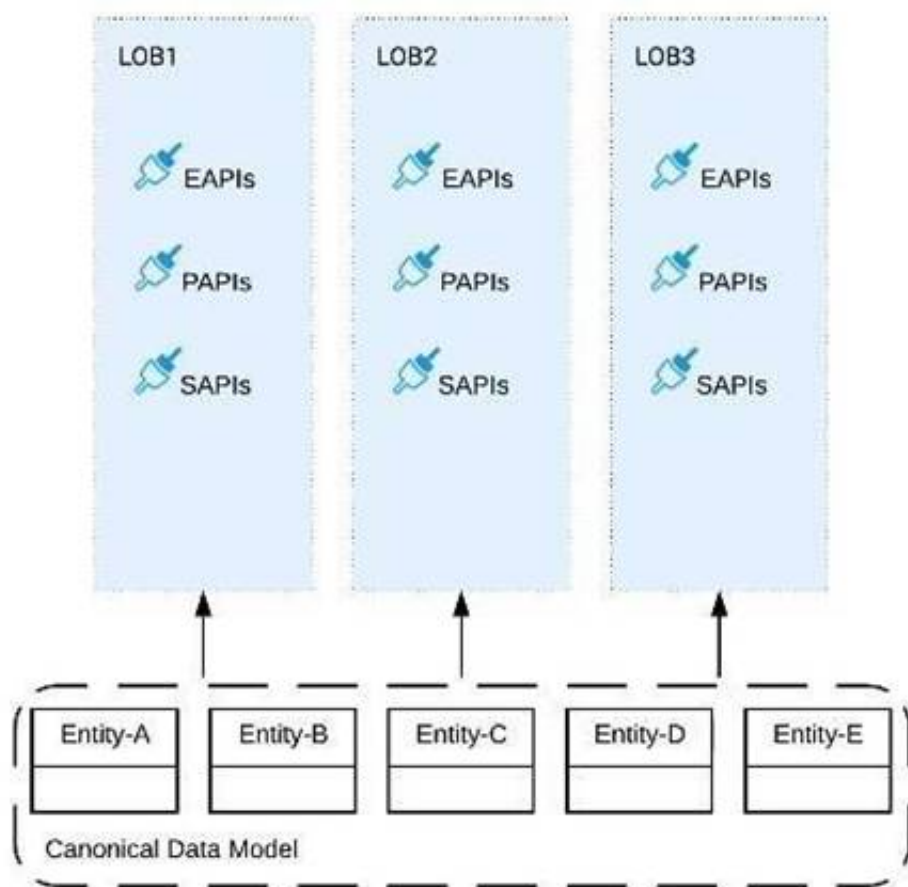


C) Build all API data models using XML schema to drive consistency and reuse across the organization





D) Build one centralized Canonical Data Model (Enterprise Data Model) that unifies all the data types from all three business processes, ensuring the data model is consistent and non-redundant



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

**Answer: A**

**Explanation:**

Correct Answer

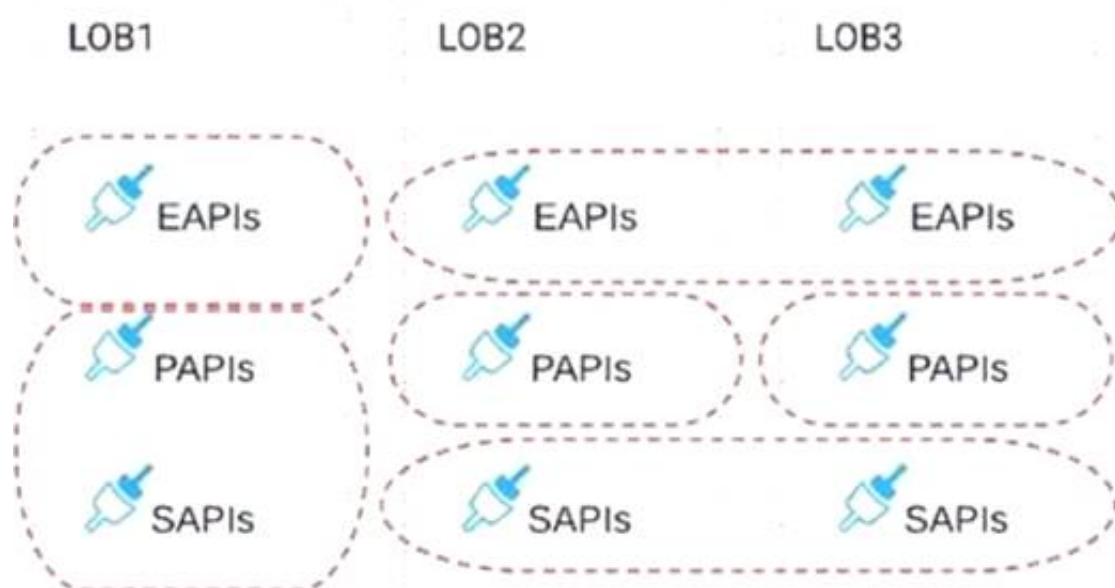
Build several Bounded Context Data Models that align with coherent parts of the business processes and the definitions of associated business entities.

\*\*\*\*\*

>> The options w.r.t building API data models using XML schema/ Agile API-centric practices are irrelevant to the scenario given in the question. So these two are INVALID.

>> Building EDM (Enterprise Data Model) is not feasible or right fit for this scenario as the teams and LOBs work in silo and they all have different initiatives, budget etc.. Building EDM needs intensive coordination among all the team which evidently seems not possible in this scenario.

So, the right fit for this scenario is to build several Bounded Context Data Models that align with coherent parts of the business processes and the definitions of associated business entities.



#### NEW QUESTION 9

A code-centric API documentation environment should allow API consumers to investigate and execute API client source code that demonstrates invoking one or more APIs as part of representative scenarios.



What is the most effective way to provide this type of code-centric API documentation environment using Anypoint Platform?

- A. Enable mocking services for each of the relevant APIs and expose them via their Anypoint Exchange entry
- B. Ensure the APIs are well documented through their Anypoint Exchange entries and API Consoles and share these pages with all API consumers
- C. Create API Notebooks and include them in the relevant Anypoint Exchange entries
- D. Make relevant APIs discoverable via an Anypoint Exchange entry

**Answer:** C

**Explanation:**

Correct Answer

Create API Notebooks and Include them in the relevant Anypoint exchange entries

\*\*\*\*\*

>> API Notebooks are the one on Anypoint Platform that enable us to provide code-centric API documentation

#### NEW QUESTION 10

A company uses a hybrid Anypoint Platform deployment model that combines the EU control plane with customer-hosted Mule runtimes. After successfully testing a Mule API implementation in the Staging environment, the Mule API implementation is set with environment-specific properties and must be promoted to the Production environment. What is a way that MuleSoft recommends to configure the Mule API implementation and automate its promotion to the Production environment?

- A. Bundle properties files for each environment into the Mule API implementation's deployable archive, then promote the Mule API implementation to the Production environment using Anypoint CLI or the Anypoint Platform REST APIsB.
- B. Modify the Mule API implementation's properties in the API Manager Properties tab, then promote the Mule API implementation to the Production environment using API Manager
- C. Modify the Mule API implementation's properties in Anypoint Exchange, then promote the Mule API implementation to the Production environment using Runtime Manager
- D. Use an API policy to change properties in the Mule API implementation deployed to the Staging environment and another API policy to deploy the Mule API implementation to the Production environment

**Answer:** A

**Explanation:**

Correct Answer

Bundle properties files for each environment into the Mule API implementation's deployable archive, then promote the Mule API implementation to the Production environment using Anypoint CLI or the Anypoint Platform REST APIs

\*\*\*\*\*

>> Anypoint Exchange is for asset discovery and documentation. It has got no provision to modify the properties of Mule API implementations at all.

>> API Manager is for managing API instances, their contracts, policies and SLAs. It has also got no provision to modify the properties of API implementations.

>> API policies are to address Non-functional requirements of APIs and has again got no provision to modify the properties of API implementations.

So, the right way and recommended way to do this as part of development practice is to bundle properties files for each environment into the Mule API implementation and just point and refer to respective file per environment.

#### NEW QUESTION 10

How can the application of a rate limiting API policy be accurately reflected in the RAML definition of an API?

- A. By refining the resource definitions by adding a description of the rate limiting policy behavior
- B. By refining the request definitions by adding a remaining Requests query parameter with description, type, and example
- C. By refining the response definitions by adding the out-of-the-box Anypoint Platform rate-limit-enforcement securityScheme with description, type, and example
- D. By refining the response definitions by adding the x-ratelimit-\* response headers with description, type, and example

**Answer:** D

**Explanation:**

Correct Answer

By refining the response definitions by adding the x-ratelimit-\* response headers with description, type, and example

\*\*\*\*\*

## Response Headers

The following access-limiting policies return headers having information about the current state of the request:

- X-Ratelimit-Remaining: The amount of available quota.
- X-Ratelimit-Limit: The maximum available requests per window.
- X-Ratelimit-Reset: The remaining time, in milliseconds, until a new window starts.

## Response Headers

Three headers are included in request responses that inform users about the SLA restrictions and inform them when nearing the threshold.

When the SLA enforces multiple policies that limit request throughput, a single set of headers pertaining to the most restrictive of the policies provides this information.

For example, a user of your API may receive a response that includes these headers:

```
X-RateLimit-Limit: 20
X-RateLimit-Remaining: 14
X-RateLimit-Reset: 19100
```

Within the next 19100 milliseconds, only 14 more requests are allowed by the SLA, which is set to allow 20 within this time-window.

References:

<https://docs.mulesoft.com/api-manager/2.x/rate-limiting-and-throttling#response-headers> <https://docs.mulesoft.com/api-manager/2.x/rate-limiting-and-throttling-sla-based-policies#response-headers>

### NEW QUESTION 15

What is a best practice when building System APIs?

- A. Document the API using an easily consumable asset like a RAML definition
- B. Model all API resources and methods to closely mimic the operations of the backend system
- C. Build an Enterprise Data Model (Canonical Data Model) for each backend system and apply it to System APIs
- D. Expose to API clients all technical details of the API implementation's interaction with the backend system

**Answer: B**

**Explanation:**

Correct Answer

Model all API resources and methods to closely mimic the operations of the backend system.

\*\*\*\*\*

>> There are NO fixed and straight best practices while opting data models for APIs. They are completely contextual and depends on number of factors. Based upon those factors, an enterprise can choose if they have to go with Enterprise Canonical Data Model or Bounded Context Model etc.

>> One should NEVER expose the technical details of API implementation to their API clients. Only the API interface/ RAML is exposed to API clients.

>> It is true that the RAML definitions of APIs should be as detailed as possible and should reflect most of the documentation. However, just that is NOT enough to call your API as best documented API. There should be even more documentation on Anypoint Exchange with API Notebooks etc. to make and create a developer friendly API and repository..

>> The best practice always when creating System APIs is to create their API interfaces by modeling their resources and methods to closely reflect the operations and functionalities of that backend system.

### NEW QUESTION 17

In an organization, the InfoSec team is investigating Anypoint Platform related data traffic.

From where does most of the data available to Anypoint Platform for monitoring and alerting originate?

- A. From the Mule runtime or the API implementation, depending on the deployment model
- B. From various components of Anypoint Platform, such as the Shared Load Balancer, VPC, and Mule runtimes
- C. From the Mule runtime or the API Manager, depending on the type of data
- D. From the Mule runtime irrespective of the deployment model

**Answer: D**

**Explanation:**

Correct Answer

From the Mule runtime irrespective of the deployment model

\*\*\*\*\*

>> Monitoring and Alerting metrics are always originated from Mule Runtimes irrespective of the deployment model.

>> It may seem that some metrics (Runtime Manager) are originated from Mule Runtime and some are (API Invocations/ API Analytics) from API Manager.

However, this is realistically NOT TRUE. The reason is, API manager is just a management tool for API instances but all policies upon applying on APIs eventually gets executed on Mule Runtimes only (Either Embedded or API Proxy).

>> Similarly all API Implementations also run on Mule Runtimes.

So, most of the day required for monitoring and alerts are originated from Mule Runtimes only irrespective of whether the deployment model is MuleSoft-hosted or Customer-hosted or Hybrid.

**NEW QUESTION 20**

An organization is implementing a Quote of the Day API that caches today's quote.

What scenario can use the GoudHub Object Store via the Object Store connector to persist the cache's state?

- A. When there are three CloudHub deployments of the API implementation to three separate CloudHub regions that must share the cache state
- B. When there are two CloudHub deployments of the API implementation by two Anypoint Platform business groups to the same CloudHub region that must share the cache state
- C. When there is one deployment of the API implementation to CloudHub and anottV deployment to a customer-hosted Mule runtime that must share the cache state
- D. When there is one CloudHub deployment of the API implementation to three CloudHub workers that must share the cache state

**Answer: D**

**Explanation:**

Correct Answer

When there is one CloudHub deployment of the API implementation to three CloudHub workers that must share the cache state.

\*\*\*\*\* Key details in the scenario:

>> Use the CloudHub Object Store via the Object Store connector Considering above details:

>> CloudHub Object Stores have one-to-one relationship with CloudHub Mule Applications.

>> We CANNOT use an application's CloudHub Object Store to be shared among multiple Mule applications running in different Regions or Business Groups or Customer-hosted Mule Runtimes by using Object Store connector.

>> If it is really necessary and very badly needed, then Anypoint Platform supports a way by allowing access to CloudHub Object Store of another application using Object Store REST API. But NOT using Object Store connector.

So, the only scenario where we can use the CloudHub Object Store via the Object Store connector to persist the cache's state is when there is one CloudHub deployment of the API implementation to multiple CloudHub workers that must share the cache state.

**NEW QUESTION 25**

A Mule application exposes an HTTPS endpoint and is deployed to three CloudHub workers that do not use static IP addresses. The Mule application expects a high volume of client requests in short time periods. What is the most cost-effective infrastructure component that should be used to serve the high volume of client requests?

- A. A customer-hosted load balancer
- B. The CloudHub shared load balancer
- C. An API proxy
- D. Runtime Manager autoscaling

**Answer: B**

**Explanation:**

Correct Answer

The CloudHub shared load balancer

\*\*\*\*\* The scenario in this question can be split as below:

>> There are 3 CloudHub workers (So, there are already good number of workers to handle high volume of requests)

>> The workers are not using static IP addresses (So, one CANNOT use customer load-balancing solutions without static IPs)

>> Looking for most cost-effective component to load balance the client requests among the workers. Based on the above details given in the scenario:

>> Runtime autoscaling is NOT at all cost-effective as it incurs extra cost. Most over, there are already 3 workers running which is a good number.

>> We cannot go for a customer-hosted load balancer as it is also NOT most cost-effective (needs custom load balancer to maintain and licensing) and same time the Mule App is not having Static IP Addresses which limits from going with custom load balancing.

>> An API Proxy is irrelevant there as it has no role to play w.r.t handling high volumes or load balancing. So, the only right option to go with and fits the purpose of scenario being most cost-effective is - using a CloudHub Shared Load Balancer.

**NEW QUESTION 27**

What are 4 important Platform Capabilities offered by Anypoint Platform?

- A. API Versioning, API Runtime Execution and Hosting, API Invocation, API Consumer Engagement
- B. API Design and Development, API Runtime Execution and Hosting, API Versioning, API Deprecation
- C. API Design and Development, API Runtime Execution and Hosting, API Operations and Management, API Consumer Engagement
- D. API Design and Development, API Deprecation, API Versioning, API Consumer Engagement

**Answer: C**

**Explanation:**

Correct Answer

API Design and Development, API Runtime Execution and Hosting, API Operations and Management, API Consumer Engagement

\*\*\*\*\*

>> API Design and Development - Anypoint Studio, Anypoint Design Center, Anypoint Connectors

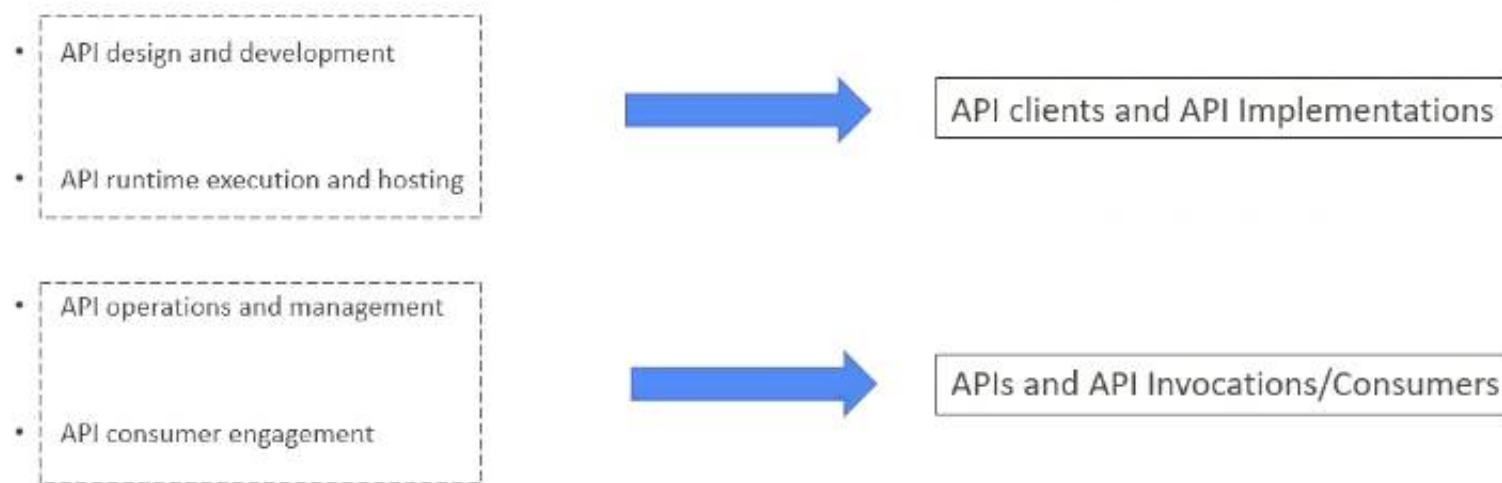
>> API Runtime Execution and Hosting - Mule Runtimes, CloudHub, Runtime Services

>> API Operations and Management - Anypoint API Manager, Anypoint Exchange

>> API Consumer Management - API Contracts, Public Portals, Anypoint Exchange, API Notebooks



# Platform Capabilities



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## NEW QUESTION 29

What is true about the technology architecture of Anypoint VPCs?

- A. The private IP address range of an Anypoint VPC is automatically chosen by CloudHub
- B. Traffic between Mule applications deployed to an Anypoint VPC and on-premises systems can stay within a private network
- C. Each CloudHub environment requires a separate Anypoint VPC
- D. VPC peering can be used to link the underlying AWS VPC to an on-premises (non AWS) private network

**Answer: B**

### Explanation:

Correct Answer

Traffic between Mule applications deployed to an Anypoint VPC and on-premises systems can stay within a private network

\*\*\*\*\*

>> The private IP address range of an Anypoint VPC is NOT automatically chosen by CloudHub. It is chosen by us at the time of creating VPC using the CIDR blocks.

CIDR Block: The size of the Anypoint VPC in Classless Inter-Domain Routing (CIDR) notation.

For example, if you set it to 10.111.0.0/24, the Anypoint VPC is granted 256 IP addresses from 10.111.0.0 to 10.111.0.255.

Ideally, the CIDR Blocks you choose for the Anypoint VPC come from a private IP space, and should not overlap with any other Anypoint VPC's CIDR Blocks, or any CIDR Blocks in use in your corporate network.

## ← Create VPC

[Learn more about VPCs](#)

### General Information

Name	vpc1	
Region	US East (N. Virginia)	▼
CIDR Block	10.0.0.0/16	
Environments	Design x	▼
	<input checked="" type="checkbox"/> Set as default VPC	
Business Groups	MyBusinessGroup (MyOrg) ▲	

that each CloudHub environment requires a separate Anypoint VPC. Once an Anypoint VPC is created, we can choose a same VPC by multiple environments. However, it is generally a best and recommended practice to always have separate Anypoint VPCs for Non-Prod and Prod environments.

>> We use Anypoint VPN to link the underlying AWS VPC to an on-premises (non AWS) private network. NOT VPC Peering.

**NEW QUESTION 34**

What Mule application deployment scenario requires using Anypoint Platform Private Cloud Edition or Anypoint Platform for Pivotal Cloud Foundry?

- A. When it is required to make ALL applications highly available across multiple data centers
- B. When it is required that ALL APIs are private and NOT exposed to the public cloud
- C. When regulatory requirements mandate on-premises processing of EVERY data item, including meta-data
- D. When ALL backend systems in the application network are deployed in the organization's intranet

**Answer: C**

**Explanation:**

Correct Answer

When regulatory requirements mandate on-premises processing of EVERY data item, including meta-data.

\*\*\*\*\*

We need NOT require to use Anypoint Platform PCE or PCF for the below. So these options are OUT.

>> We can make ALL applications highly available across multiple data centers using CloudHub too.

>> We can use Anypoint VPN and tunneling from CloudHub to connect to ALL backend systems in the application network that are deployed in the organization's intranet.

>> We can use Anypoint VPC and Firewall Rules to make ALL APIs private and NOT exposed to the public cloud.

Only valid reason in the given options that requires to use Anypoint Platform PCE/ PCF is - When regulatory requirements mandate on-premises processing of EVERY data item, including meta-data.

**NEW QUESTION 39**

A set of tests must be performed prior to deploying API implementations to a staging environment. Due to data security and access restrictions, untested APIs cannot be granted access to the backend systems, so instead mocked data must be used for these tests. The amount of available mocked data and its contents is sufficient to entirely test the API implementations with no active connections to the backend systems. What type of tests should be used to incorporate this mocked data?

- A. Integration tests
- B. Performance tests
- C. Functional tests (Blackbox)
- D. Unit tests (Whitebox)

**Answer: D**

**Explanation:**

Correct Answer

Unit tests (Whitebox)

\*\*\*\*\*

**NEW QUESTION 41**

An Order API must be designed that contains significant amounts of integration logic and involves the invocation of the Product API.

The power relationship between Order API and Product API is one of "Customer/Supplier", because the Product API is used heavily throughout the organization and is developed by a dedicated development team located in the office of the CTO.

What strategy should be used to deal with the API data model of the Product API within the Order API?

- A. Convince the development team of the Product API to adopt the API data model of the Order API such that the integration logic of the Order API can work with one consistent internal data model
- B. Work with the API data types of the Product API directly when implementing the integration logic of the Order API such that the Order API uses the same (unchanged) data types as the Product API
- C. Implement an anti-corruption layer in the Order API that transforms the Product API data model into internal data types of the Order API
- D. Start an organization-wide data modeling initiative that will result in an Enterprise Data Model that will then be used in both the Product API and the Order API

**Answer: C**

**Explanation:**

Correct Answer

Convince the development team of the product API to adopt the API data model of the Order API such that integration logic of the Order API can work with one consistent internal data model

\*\*\*\*\* Key details to note from the given scenario:

>> Power relationship between Order API and Product API is customer/supplier

So, as per below rules of "Power Relationships", the caller (in this case Order API) would request for features to the called (Product API team) and the Product API team would need to accommodate those requests.

**NEW QUESTION 43**

An API has been updated in Anypoint Exchange by its API producer from version 3.1.1 to 3.2.0 following accepted semantic versioning practices and the changes have been communicated via the API's public portal.

The API endpoint does NOT change in the new version.

How should the developer of an API client respond to this change?

- A. The update should be identified as a project risk and full regression testing of the functionality that uses this API should be run
- B. The API producer should be contacted to understand the change to existing functionality
- C. The API producer should be requested to run the old version in parallel with the new one
- D. The API client code ONLY needs to be changed if it needs to take advantage of new features

**Answer:** D

#### NEW QUESTION 48

An organization wants MuleSoft-hosted runtime plane features (such as HTTP load balancing, zero downtime, and horizontal and vertical scaling) in its Azure environment. What runtime plane minimizes the organization's effort to achieve these features?

- A. Anypoint Runtime Fabric
- B. Anypoint Platform for Pivotal Cloud Foundry
- C. CloudHub
- D. A hybrid combination of customer-hosted and MuleSoft-hosted Mule runtimes

**Answer:** A

#### Explanation:

Correct Answer

Anypoint Runtime Fabric

\*\*\*\*\*

>> When a customer is already having an Azure environment, It is not at all an ideal approach to go with hybrid model having some Mule Runtimes hosted on Azure and some on MuleSoft. This is unnecessary and useless.

>> CloudHub is a Mulesoft-hosted Runtime plane and is on AWS. We cannot customize to point CloudHub to customer's Azure environment.

>> Anypoint Platform for Pivotal Cloud Foundry is specifically for infrastructure provided by Pivotal Cloud Foundry

>> Anypoint Runtime Fabric is right answer as it is a container service that automates the deployment and orchestration of Mule applications and API gateways.

Runtime Fabric runs within a customer-managed infrastructure on AWS, Azure, virtual machines (VMs), and bare-metal servers.

-Some of the capabilities of Anypoint Runtime Fabric include:

-Isolation between applications by running a separate Mule runtime per application.

-Ability to run multiple versions of Mule runtime on the same set of resources.

-Scaling applications across multiple replicas.

-Automated application fail-over.

-Application management with Anypoint Runtime Manager.

#### NEW QUESTION 50

What CANNOT be effectively enforced using an API policy in Anypoint Platform?

- A. Guarding against Denial of Service attacks
- B. Maintaining tamper-proof credentials between APIs
- C. Logging HTTP requests and responses
- D. Backend system overloading

**Answer:** A

#### Explanation:

Correct Answer

Guarding against Denial of Service attacks

\*\*\*\*\*

>> Backend system overloading can be handled by enforcing "Spike Control Policy"

>> Logging HTTP requests and responses can be done by enforcing "Message Logging Policy"

>> Credentials can be tamper-proofed using "Security" and "Compliance" Policies

However, unfortunately, there is no proper way currently on Anypoint Platform to guard against DOS attacks.

#### NEW QUESTION 54

The responses to some HTTP requests can be cached depending on the HTTP verb used in the request. According to the HTTP specification, for what HTTP verbs is this safe to do?

- A. PUT, POST, DELETE
- B. GET, HEAD, POST
- C. GET, PUT, OPTIONS
- D. GET, OPTIONS, HEAD

**Answer:** D

#### Explanation:

Correct Answer

GET, OPTIONS, HEAD



APIs use HTTP-based protocols: cached HTTP responses from previous HTTP requests may potentially be returned if the same HTTP request is seen again.

*Safe HTTP methods* are ones that do not alter the state of the underlying resource. That is, the *HTTP responses to requests using safe HTTP methods may be cached.*

The HTTP standard requires the following HTTP methods on any resource to be safe:

- GET
- HEAD
- OPTIONS

Safety must be honored by REST APIs (but not by non-REST APIs like SOAP APIs): It is the *responsibility of every API implementation* to implement **GET, HEAD or OPTIONS** methods such that they never change the state of a resource.

<http://restcookbook.com/HTTP%20Methods/idempotency/>

#### NEW QUESTION 59

What is true about API implementations when dealing with legal regulations that require all data processing to be performed within a certain jurisdiction (such as in the USA or the EU)?

- A. They must avoid using the Object Store as it depends on services deployed ONLY to the US East region
- B. They must use a Jurisdiction-local external messaging system such as Active MQ rather than Anypoint MQ
- C. They must be deployed to Anypoint Platform runtime planes that are managed by Anypoint Platform control planes, with both planes in the same Jurisdiction
- D. They must ensure ALL data is encrypted both in transit and at rest

**Answer: C**

#### Explanation:

Correct Answer

They must be deployed to Anypoint Platform runtime planes that are managed by Anypoint Platform control planes, with both planes in the same Jurisdiction.

\*\*\*\*\*

>> As per legal regulations, all data processing to be performed within a certain jurisdiction. Meaning, the data in USA should reside within USA and should not go out. Same way, the data in EU should reside within EU and should not go out.

>> So, just encrypting the data in transit and at rest does not help to be compliant with the rules. We need to make sure that data does not go out too.

>> The data that we are talking here is not just about the messages that are published to Anypoint MQ. It includes the apps running, transaction states, application logs, events, metric info and any other metadata. So, just replacing Anypoint MQ with a locally hosted ActiveMQ does NOT help.

>> The data that we are talking here is not just about the key/value pairs that are stored in Object Store. It includes the messages published, apps running, transaction states, application logs, events, metric info and any other metadata. So, just avoiding using Object Store does NOT help.

>> The only option left and also the right option in the given choices is to deploy application on runtime and control planes that are both within the jurisdiction.

#### NEW QUESTION 61

An organization has several APIs that accept JSON data over HTTP POST. The APIs are all publicly available and are associated with several mobile applications and web applications.

The organization does NOT want to use any authentication or compliance policies for these APIs, but at the same time, is worried that some bad actor could send payloads that could somehow compromise the applications or servers running the API implementations.

What out-of-the-box Anypoint Platform policy can address exposure to this threat?

- A. Shut out bad actors by using HTTPS mutual authentication for all API invocations
- B. Apply an IP blacklist policy to all APIs; the blacklist will include all bad actors
- C. Apply a Header injection and removal policy that detects the malicious data before it is used
- D. Apply a JSON threat protection policy to all APIs to detect potential threat vectors

**Answer: D**

#### Explanation:

Correct Answer

Apply a JSON threat protection policy to all APIs to detect potential threat vectors

\*\*\*\*\*

>> Usually, if the APIs are designed and developed for specific consumers (known consumers/customers) then we would IP Whitelist the same to ensure that traffic only comes from them.

>> However, as this scenario states that the APIs are publicly available and being used by so many mobile and web applications, it is NOT possible to identify and blacklist all possible bad actors.

>> So, JSON threat protection policy is the best chance to prevent any bad JSON payloads from such bad actors.

#### NEW QUESTION 63

A company has started to create an application network and is now planning to implement a Center for Enablement (C4E) organizational model. What key factor would lead the company to decide upon a federated rather than a centralized C4E?

- A. When there are a large number of existing common assets shared by development teams
- B. When various teams responsible for creating APIs are new to integration and hence need extensive training
- C. When development is already organized into several independent initiatives or groups
- D. When the majority of the applications in the application network are cloud based

**Answer:** C

**Explanation:**

Correct Answer

When development is already organized into several independent initiatives or groups

\*\*\*\*\*

>> It would require lot of process effort in an organization to have a single C4E team coordinating with multiple already organized development teams which are into several independent initiatives. A single C4E works well with different teams having at least a common initiative. So, in this scenario, federated C4E works well instead of centralized C4E.

**NEW QUESTION 67**

An API has been updated in Anypoint exchange by its API producer from version 3.1.1 to 3.2.0 following accepted semantic versioning practices and the changes have been communicated via the APIs public portal. The API endpoint does NOT change in the new version. How should the developer of an API client respond to this change?

- A. The API producer should be requested to run the old version in parallel with the new one
- B. The API producer should be contacted to understand the change to existing functionality
- C. The API client code only needs to be changed if it needs to take advantage of the new features
- D. The API clients need to update the code on their side and need to do full regression

**Answer:** C

**NEW QUESTION 71**

The application network is recomposable: it is built for change because it "bends but does not break"

- A. TRUE
- B. FALSE

**Answer:** A

**Explanation:**

\*\*\*\*\*

>> Application Network is a disposable architecture.

>> Which means, it can be altered without disturbing entire architecture and its components.

>> It bends as per requirements or design changes but does not break

**NEW QUESTION 73**

An organization is deploying their new implementation of the OrderStatus System API to multiple workers in CloudHub. This API fronts the organization's on-premises Order Management System, which is accessed by the API implementation over an IPsec tunnel. What type of error typically does NOT result in a service outage of the OrderStatus System API?

- A. A CloudHub worker fails with an out-of-memory exception
- B. API Manager has an extended outage during the initial deployment of the API implementation
- C. The AWS region goes offline with a major network failure to the relevant AWS data centers
- D. The Order Management System is Inaccessible due to a network outage in the organization's on-premises data center

**Answer:** A

**Explanation:**

Correct Answer

A CloudHub worker fails with an out-of-memory exception.

\*\*\*\*\*

>> An AWS Region itself going down will definitely result in an outage as it does not matter how many workers are assigned to the Mule App as all of those in that region will go down. This is a complete downtime and outage.

>> Extended outage of API manager during initial deployment of API implementation will of course cause issues in proper application startup itself as the API Autodiscovery might fail or API policy templates and policies may not be downloaded to embed at the time of applicaiton startup etc... there are many reasons that could cause issues.

>> A network outage onpremises would of course cause the Order Management System not accessible and it does not matter how many workers are assigned to the app they all will fail and cause outage for sure.

The only option that does NOT result in a service outage is if a cloudhub worker fails with an out-of-memory exception. Even if a worker fails and goes down, there are still other workers to handle the requests and keep the API UP and Running. So, this is the right answer.

**NEW QUESTION 74**

What is a typical result of using a fine-grained rather than a coarse-grained API deployment model to implement a given business process?

- A. A decrease in the number of connections within the application network supporting the business process
- B. A higher number of discoverable API-related assets in the application network
- C. A better response time for the end user as a result of the APIs being smaller in scope and complexity
- D. An overall tower usage of resources because each fine-grained API consumes less resources

**Answer:** B

**Explanation:**

Correct Answer

A higher number of discoverable API-related assets in the application network.

\*\*\*\*\*

>> We do NOT get faster response times in fine-grained approach when compared to coarse-grained approach.

>> In fact, we get faster response times from a network having coarse-grained APIs compared to a network having fine-grained APIs model. The reasons are below.

Fine-grained approach:

\* 1. will have more APIs compared to coarse-grained

\* 2. So, more orchestration needs to be done to achieve a functionality in business process.

\* 3. Which means, lots of API calls to be made. So, more connections will need to be established. So, obviously more hops, more network i/o, more number of integration points compared to coarse-grained approach where fewer APIs with bulk functionality embedded in them.

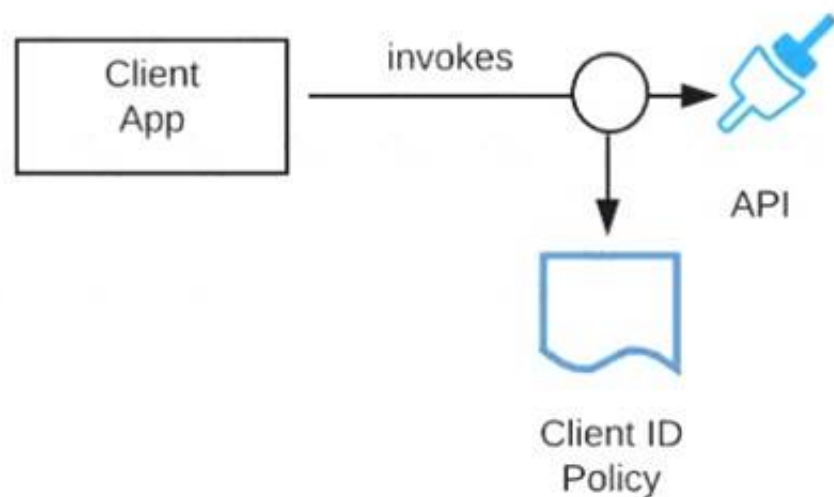
\* 4. That is why, because of all these extra hops and added latencies, fine-grained approach will have bit more response times compared to coarse-grained.

\* 5. Not only added latencies and connections, there will be more resources used up in fine-grained approach due to more number of APIs.

That's why, fine-grained APIs are good in a way to expose more number of reusable assets in your network and make them discoverable. However, needs more maintenance, taking care of integration points, connections, resources with a little compromise w.r.t network hops and response times.

#### NEW QUESTION 77

Refer to the exhibit.



A developer is building a client application to invoke an API deployed to the STAGING environment that is governed by a client ID enforcement policy. What is required to successfully invoke the API?

- A. The client ID and secret for the Anypoint Platform account owning the API in the STAGING environment
- B. The client ID and secret for the Anypoint Platform account's STAGING environment
- C. The client ID and secret obtained from Anypoint Exchange for the API instance in the STAGING environment
- D. A valid OAuth token obtained from Anypoint Platform and its associated client ID and secret

**Answer: C**

#### Explanation:

Correct Answer

The client ID and secret obtained from Anypoint Exchange for the API instance in the STAGING environment

\*\*\*\*\*

>> We CANNOT use the client ID and secret of Anypoint Platform account or any individual environments for accessing the APIs

>> As the type of policy that is enforced on the API in question is "Client ID Enforcement Policy", OAuth token based access won't work.

Right way to access the API is to use the client ID and secret obtained from Anypoint Exchange for the API instance in a particular environment we want to work on.

References:

Managing API instance Contracts on API Manager <https://docs.mulesoft.com/api-manager/1.x/request-access-to-api-task> <https://docs.mulesoft.com/exchange/to-request-access> <https://docs.mulesoft.com/api-manager/2.x/policy-mule3-client-id-based-policies>

#### NEW QUESTION 80

An organization has created an API-led architecture that uses various API layers to integrate mobile clients with a backend system. The backend system consists of a number of specialized components and can be accessed via a REST API. The process and experience APIs share the same bounded-context model that is different from the backend data model. What additional canonical models, bounded-context models, or anti-corruption layers are best added to this architecture to help process data consumed from the backend system?

- A. Create a bounded-context model for every layer and overlap them when the boundary contexts overlap, letting API developers know about the differences between upstream and downstream data models
- B. Create a canonical model that combines the backend and API-led models to simplify and unify data models, and minimize data transformations.
- C. Create a bounded-context model for the system layer to closely match the backend data model, and add an anti-corruption layer to let the different bounded contexts cooperate across the system and process layers
- D. Create an anti-corruption layer for every API to perform transformation for every data model to match each other, and let data simply travel between APIs to avoid the complexity and overhead of building canonical models

**Answer: C**

#### Explanation:

Correct Answer

Create a bounded-context model for the system layer to closely match the backend data model, and add an anti-corruption layer to let the different bounded contexts cooperate across the system and process layers

\*\*\*\*\*

>> Canonical models are not an option here as the organization has already put in efforts and created bounded-context models for Experience and Process APIs.

>> Anti-corruption layers for ALL APIs is unnecessary and invalid because it is mentioned that experience and process APIs share same bounded-context model.

It is just the System layer APIs that need to choose their approach now.



>> So, having an anti-corruption layer just between the process and system layers will work well. Also to speed up the approach, system APIs can mimic the backend system data model.

#### NEW QUESTION 81

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