Mulesoft.MCD-Level-2.by.Herry.40q

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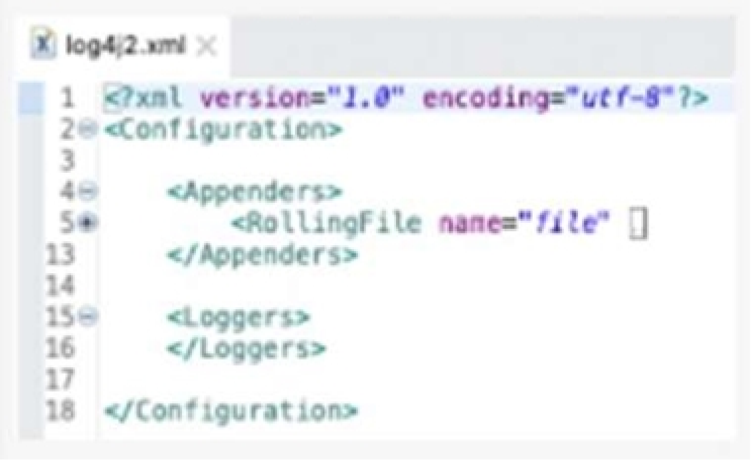
Exam Code: MCD-Level-2

Exam Name: MuleSoft Certified Developer - Level 2 (Mule 4)

Exam A

QUESTION 1
Refer to the exhibit.
What action must be performed to log all the errors raised by the VM Connector?



```
<?xml version="1.0" encoding="utf-8"?>
<Configuration>

    <Appenders>
        <RollingFile name="file" []
    </Appenders>

    <Loggers>
    </Loggers>

</Configuration>
```

A. Add <AsyncLOgger name='orgroute.extensions vm' level=ERROR'I> inside the Logger tag
B. Add <AsyncLOgger name='orgroute.extensions vm' level=ERROR'/> inside the Appenders tag
C. Configure <Logger level-'ERROR'/> inside the VM Connector configuration
D. Nothing, as error-level events are automatically logged

Correct Answer: B
Section:
Explanation:
To log all the errors raised by the VM Connector, the developer needs to add an async logger with the name 'org.mule.extension.vm' and the level 'ERROR' inside the appenders tag of the log4j2.xml file. This will enable logging all error-level events generated by the VM Connector to the console appender.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/logging-in-mule#configuring-custom-logging-settings

QUESTION 2
A developer deploys an API to CloudHub and applies an OAuth policy on API Manager. During testing, the API response is slow, so the developer reconfigures the API so that the out-of-the-box HTTP Caching policy is applied first, and the OAuth API policy is applied second.
What will happen when an HTTP request is received?

A. In case of a cache hit, both the OAuth and HTTP Caching policies are evaluated; then the cached response is returned to the caller
B. In case of a cache it, only the HTTP Caching policy is evaluating; then the cached response is returned to the caller
C. In case of a cache miss, only the HTTP Caching policy is evaluated; then the API retrieves the data from the API implementation, and the policy stores the data to be cached in Object Store
D. In case of a cache miss, both the OAuth and HTTP Caching policies are evaluated; then the API retrieves the data from the API implementation, and the policy does not store the data in Object Store

Correct Answer: B
Section:
Explanation:
When an HTTP request is received and the HTTP Caching policy is applied first, it checks if there is a cached response for that request in Object Store. If there is a cache hit, meaning that a valid cached response exists, then only the HTTP Caching policy is evaluated and the cached response is returned to the caller without invoking the OAuth policy or the API implementation. If there is a cache miss, meaning that no valid cached response exists, then both the HTTP Caching policy and the OAuth policy are evaluated before invoking the API implementation.

Reference: https://docs.mulesoft.com/api-manager/2.x/http-caching-policy#policy-ordering

QUESTION 3
A system API that communicates to an underlying MySQL database is deploying to CloudHub. The DevOps team requires a readiness endpoint to monitor all system APIs.
Which strategy should be used to implement this endpoint?

A. Create a dedicated endpoint that responds with the API status and reachability of the underlying systems
B. Create a dedicated endpoint that responds with the API status and health of the server
C. Use an existing resource endpoint of the API
D. Create a dedicated endpoint that responds with the API status only

Correct Answer: A
Section:
Explanation:
To implement a readiness endpoint to monitor all system APIs, the developer should create a dedicated endpoint that responds with the API status and reachability of the underlying systems. This way, the DevOps team can check if the system API is ready to receive requests and if it can communicate with its backend systems without errors.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/deployment-strategies#readiness-probes

QUESTION 4
A developer is working on a project that requires encrypting all data before sending it to a backend application. To accomplish this, the developer will use PGP encryption in the Mule 4 Cryptography module.
What is required to encrypt the data before sending it to the backend application?

A. The application needs to configure HTTPS TLS context information to encrypt the data
B. The application needs to both the private and public keys to encrypt the data
C. The application needs the public key from the backend service to encrypt the data
D. The application needs the private key from the backend service to encrypt the data

Correct Answer: C
Section:
Explanation:
To encrypt the data before sending it to the backend application using PGP encryption, the application needs the public key from the backend service. PGP encryption uses a public-key cryptography system, which means that each party has a pair of keys: a public key and a private key. The public key is used to encrypt data, and the private key is used to decrypt data. Therefore, to encrypt data for a specific recipient (the backend service), the application needs to use the recipient's public key. The recipient can then use its own private key to decrypt the data.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/cryptography-pgp

QUESTION 5
A heathcare customer wants to use hospital system data, which includes code that was developed using legacy tools and methods. The customer has created reusable Java libraries in order to read the data from the system.
What is the most effective way to develop an API retrieve the data from the hospital system?

A. Refer to JAR files in the code
B. Include the libraries writes deploying the code into the runtime
C. Create the Java code in your project and invoice the data from the code
D. Install libraries in a local repository and refer to it in the pm.xml file

Correct Answer: D
Section:
Explanation:
To develop an API that retrieves data from a hospital system using reusable Java libraries, the developer should install libraries in a local repository and refer to it in the pom.xml file. This way, the developer can use Maven to

manage dependencies and invoke Java code from Mule applications using Java Module operations.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/java-module-reference#add-the-java-module-to-your-project https://docs.mulesoft.com/mule-runtime/4.3/java-module-reference#invoke-java-code

QUESTION 6
An order processing system is composed of multiple Mule application responsible for warehouse, sales and shipping. Each application communication using Anypoint MQ. Each message must be correlated against the original order ID for observability and tracing.
How should a developer propagate the order ID as the correlation ID across each message?

A. Use the underlying HTTP request of Anypoint MQ to set the 'X-CORRELATION_ID' header to the order ID
B. Set a custom Anypoint MQ user property to propagate the order ID and set the correlation ID in the receiving applications.
C. Use the default correlation ID, Anypoint MQ will sutomatically propagate it.
D. Wrap all Anypoint MQ Publish operations within a With CorrelationID scope from the Tracing module, setting the correlation ID to the order ID

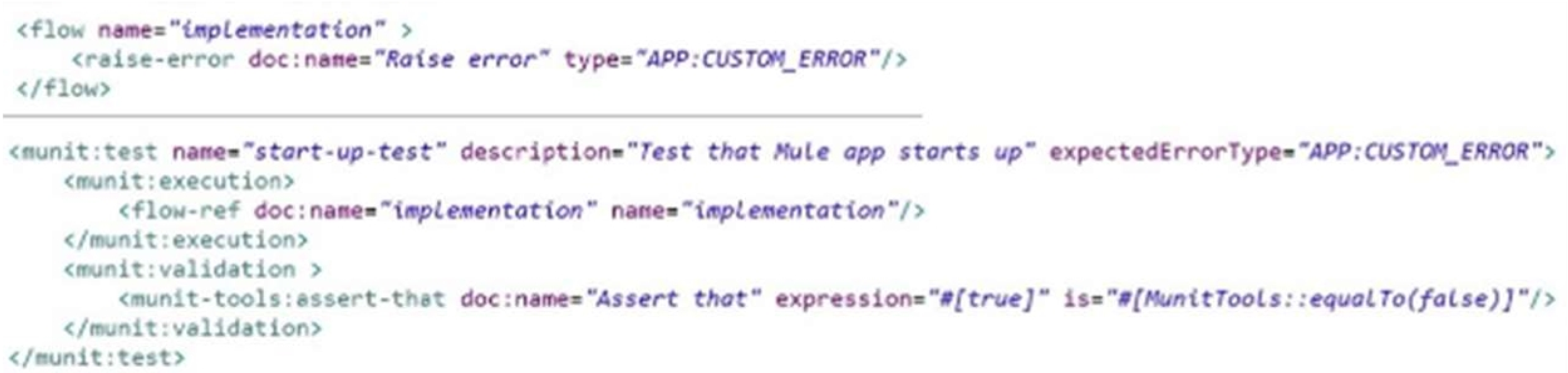
Correct Answer: D
Section:
Explanation:
To propagate the order ID as the correlation ID across each message using Anypoint MQ, the developer should wrap all Anypoint MQ Publish operations within a With CorrelationID scope from the Tracing module, setting the correlation ID to the order ID. The With CorrelationID scope allows setting a custom correlation ID for any event that occurs within it. The Tracing module also enables distributed tracing across different Mule applications and services using Anypoint Monitoring.
Reference: https://docs.mulesoft.com/tracing-module/1.0/tracing-module-reference#with-correlation-id-scope https://docs.mulesoft.com/tracing-module/1.0/tracing-module-concepts

QUESTION 7
The Center for Enablement team published a common application as a reusable module to the central Nexus repository.
How can the common application be included in all API implementations?

A. Download the common application from Naxus and copy it to the src/main/resources folder in the API
B. Copy the common application's source XML file and out it in a new flow file in the src/main/mule folder
C. Add a Maven dependency in the PCM file with multiple-plugin as <classifier>
D. Add a Maven dependency in the POM file with jar as <classifier>

Correct Answer: D
Section:
Explanation:
To include a common application as a reusable module in all API implementations, the developer should add a Maven dependency in the POM file with jar as <classifier>. This way, the developer can reuse Mule code from another application by packaging it as a JAR file and adding it as a dependency in the POM file of the API implementation. The classifier element specifies that it is a JAR file.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/mmp-concept#add-a-maven-dependency-to-the-pom-file

QUESTION 8
Refer to the exhibit.



```
<flow name="implementation" >
    <raise-error doc:name="Raise error" type="APP:CUSTOM_ERROR"/>
</flow>
```

```
<munit:test name="start-up-test" description="Test that Mule app starts up" expectedErrorType="APP:CUSTOM_ERROR">
    <munit:execution>
        <flow-ref doc:name="implementation" name="implementation"/>
    </munit:execution>
    <munit:validation >
        <munit-tools:assert-that doc:name="Assert that" expression="#[true]" is="#[MunitTools::equalTo(false)]"/>
    </munit:validation>
</munit:test>
```

The flow name is ''implementation'' with code for the MUnit test case.
When the MUnit test case is executed, what is the expected result?

A. The test case fails with an assertion error
B. The test throws an error and does not start
C. The test case fails with an unexpected error type
D. The test case passes

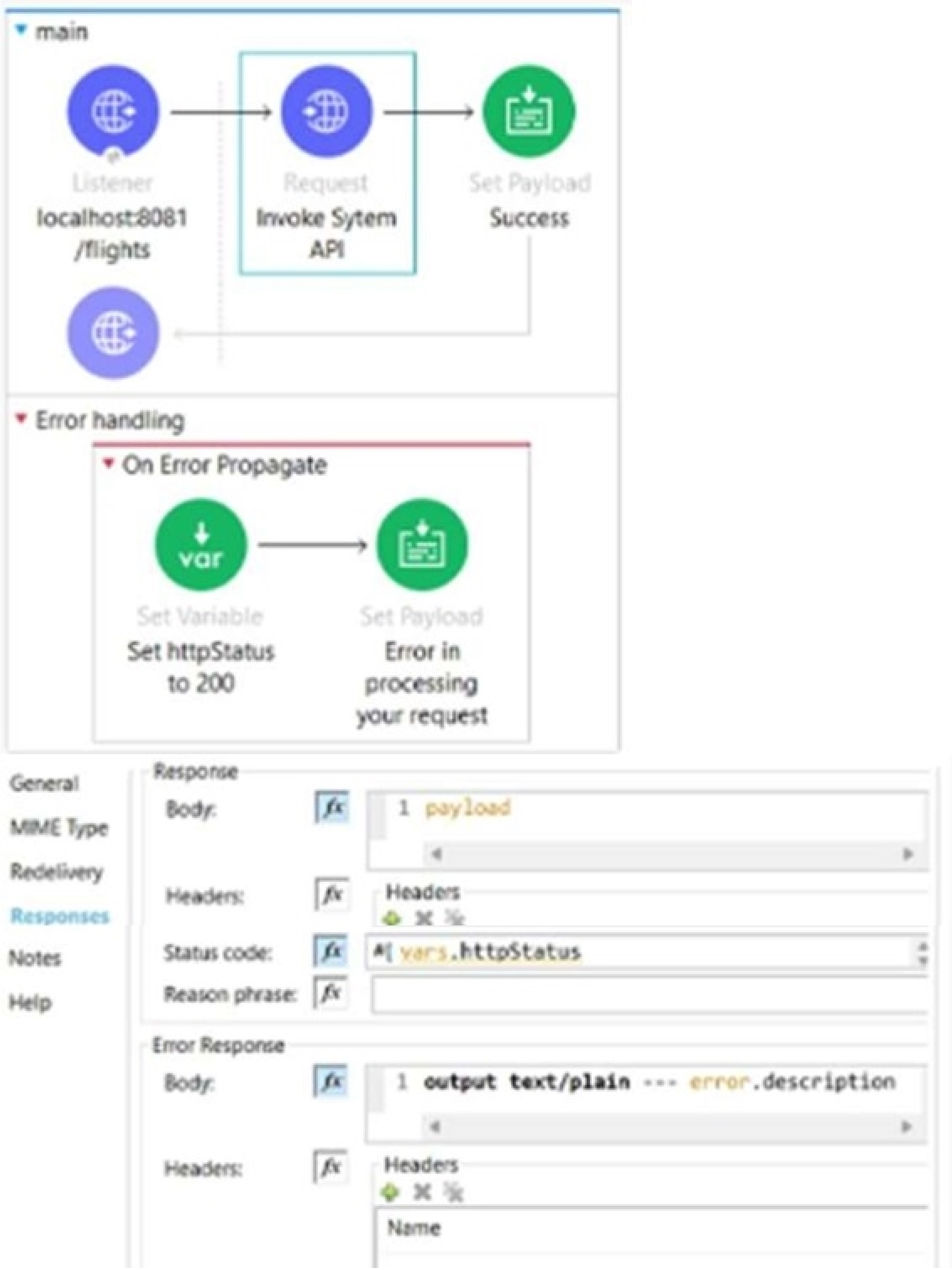
Correct Answer: A
Section:
Explanation:
Based on the code snippet and MUnit test case below, when the MUnit test case is executed, the expected result is that the test case fails with an assertion error. This is because the assert-equals processor compares two values for equality, and fails if they are not equal. In this case, the expected value is 'Hello World', but the actual value returned by the implementation flow is 'Hello Mule'. Therefore, the assertion fails and an error is thrown.
Reference: https://docs.mulesoft.com/munit/2.3/assert-equals-processor

QUESTION 9
Which pattern can a web API use to notify its client of state changes as soon as they occur?

A. HTTP Webhock
B. Shared database trigger
C. Schedule Event Publisher
D. ETL data load

Correct Answer: A
Section:
Explanation:
A web API can use HTTP Webhook to notify its client of state changes as soon as they occur. A webhook is an HTTP callback that allows an API to send real-time notifications to another system or application when an event happens. The client registers a URL with the API where it wants to receive notifications, and then the API sends an HTTP request to that URL with information about the event.
Reference: https://docs.mulesoft.com/connectors/webhook/webhook-connector

QUESTION 10
The HTTP Request operation raises an HTTP CONNECTIVITY error.
Which HTTP status code and body are returned to the web client?



Response

Body: `payload`

Headers:

Status code: `#[ vars.httpStatus`

Reason phrase:

Error Response

Body: `output text/plain --- error.description`

Headers:

Name

A. HTTP Status Code:200. Body 'Error in processing your request

B. HTTP Status Code:500. Body 'The HTTP CONNECTIVITY Error description

C. HTTP Status Code:500. Body 'Error in processing your request

D. HTTP Status Code:500. Body 'Error in processing your request

Correct Answer: C
Section:
Explanation:
When the HTTP Request operation raises an HTTP CONNECTIVITY error, it triggers an on-error-continue handler that sets a payload with 'Error in processing your request'. Since no status code is explicitly set in this handler, it defaults to 500 (INTERNAL SERVER ERROR). Therefore, the web client receives an HTTP response with status code 500 and body 'Error in processing your request'.

Reference: https://docs.mulesoft.com/mule-runtime/4.3/error-handling#on-error-continue

QUESTION 11

A Mule application defines as SSL/TLS keystore properly 'tis,keystore.keyPassword'' as secure.
How can this property be referenced to access its value within the application?

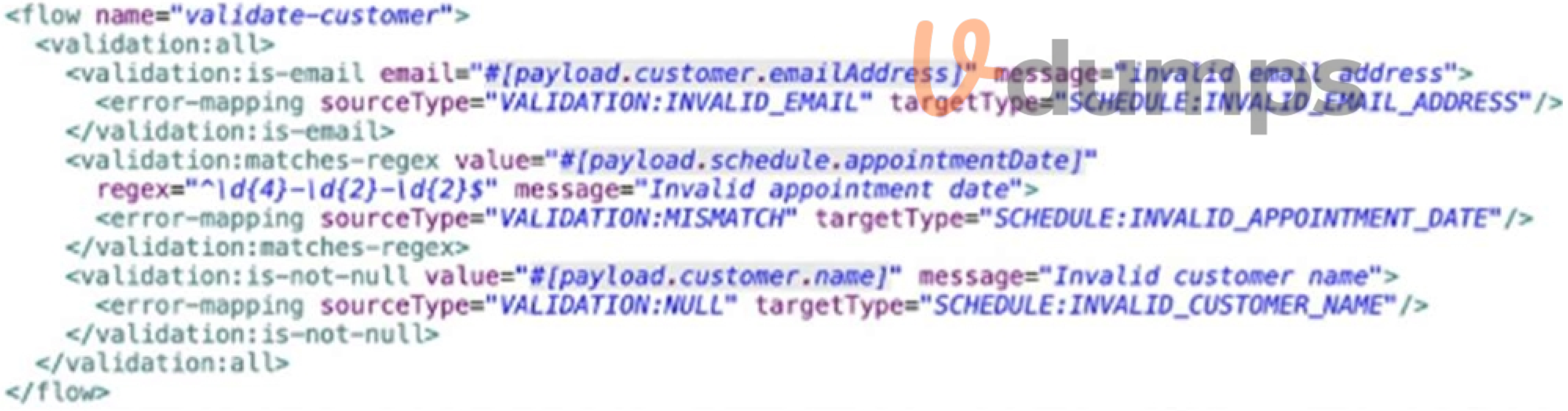
A. #{secure::tiskeystore,keyPassowrd}
B. ${secure::tiskeystore,keyPassowrd}
C. ${secure::tiskeystore,keyPassowrd}
D. p{secure::tiskeystore,keyPassowrd}

Correct Answer: B
Section:
Explanation:

secure::tiskeystore,keyPassowrdShortExplanationofCorrectAnswerOnly:Toreferenceasecurepropertyvaluewithintheapplication,thedeveloperneedstousethesyntax{secure::}. In this case, the property name is tiskeystore,keyPassword, so the correct syntax is ${secure::tiskeystore,keyPassowrd}.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/secure-configuration-properties#referencing-secure-properties

QUESTION 12

An API has been built to enable scheduling email provider. The front-end system does very little data entry validation, and problems have started to appear in the email that go to patients. A validate-customer'' flow is added validate the data.
What is he expected behavior of the 'validate-customer'' flow?



```
<flow name="validate-customer">
  <validation:all>
    <validation:is-email email="#[payload.customer.emailAddress]" message="invalid email address">
      <error-mapping sourceType="VALIDATION:INVALID_EMAIL" targetType="SCHEDULE:INVALID_EMAIL_ADDRESS"/>
    </validation:is-email>
    <validation:matches-regex value="#[payload.schedule.appointmentDate]"
      regex="^\d{4}-\d{2}-\d{2}$" message="Invalid appointment date">
      <error-mapping sourceType="VALIDATION:MISMATCH" targetType="SCHEDULE:INVALID_APPOINTMENT_DATE"/>
    </validation:matches-regex>
    <validation:is-not-null value="#[payload.customer.name]" message="Invalid customer name">
      <error-mapping sourceType="VALIDATION:NULL" targetType="SCHEDULE:INVALID_CUSTOMER_NAME"/>
    </validation:is-not-null>
  </validation:all>
</flow>
```

A. If only the email address Is invalid a VALIDATION.INVALID_EMAIL error is raised
B. If the email address is invalid, processing continues to see if the appointment data and customer name are also invalid
C. If the appointment date and customer name are invalid, a SCHEDULE:INVALID_APPOINTMENT_DATE error is raised
D. If all of the values are invalid the last validation error is raised:SCHEDULE:INVALID_CUSTOMER_NAME

Correct Answer: A
Section:
Explanation:

The validate-customer flow uses an until-successful scope to validate each field of the customer data. The until-successful scope executes its processors until they succeed or exhausts the maximum number of retries. If any processor fails, it raises an error and stops executing the remaining processors. Therefore, if only the email address is invalid, a VALIDATION.INVALID_EMAIL error is raised and the validation of appointment date and customer name is skipped.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/until-successful-scope

QUESTION 13

Multiple individual Mute application need to use the Mule Maven plugin to deploy to CloudHub.
The plugin configuration should .. reused where necessary and anything project, specific should be property-based.
Where should the Mule Maven details be configured?

A. A parent pom.xml
B. Settings, xml
C. Pom, xml
D. A Bill of Materials (BOM) parent pm

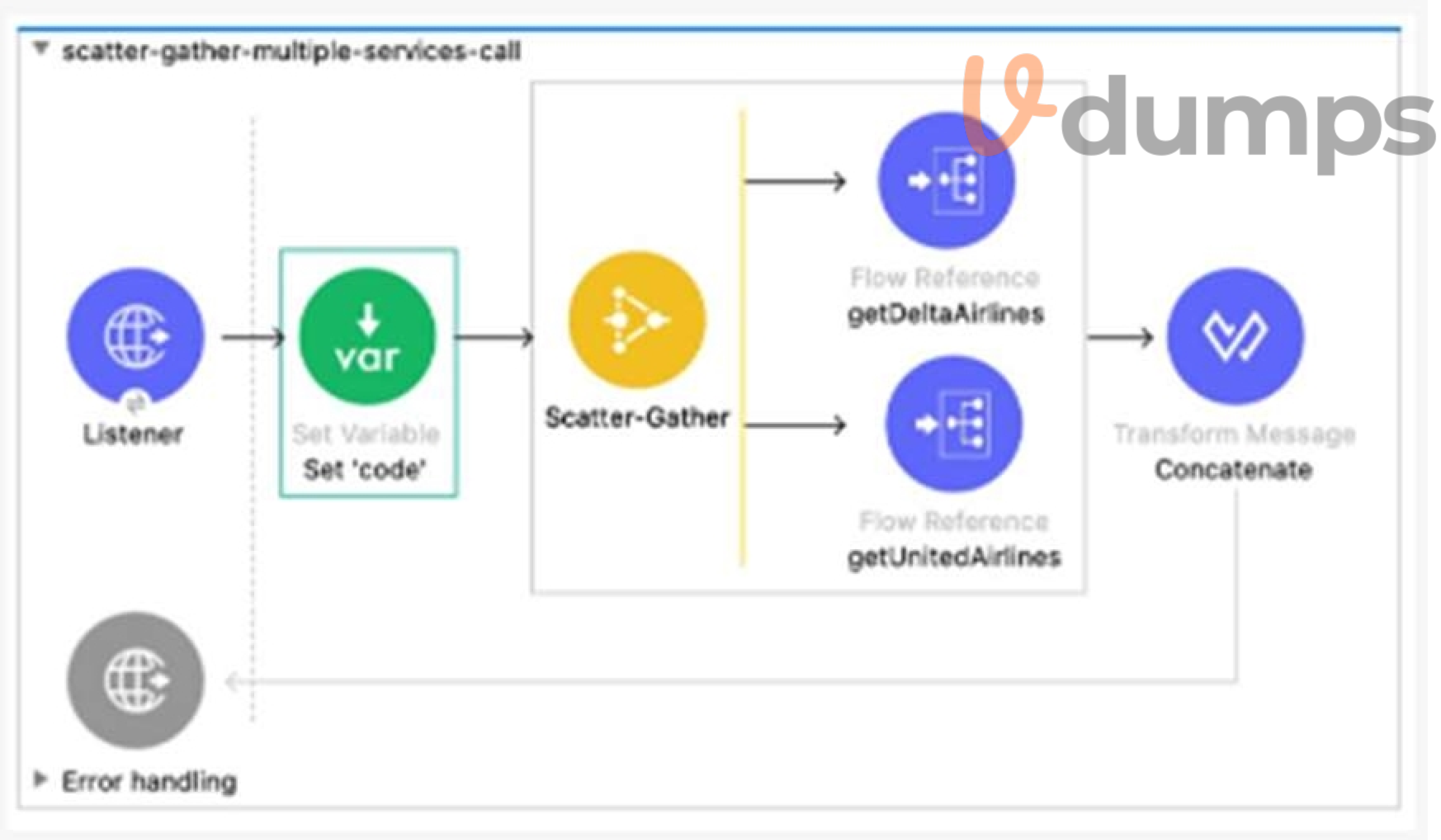
Correct Answer: A
Section:
Explanation:

To reuse Mule Maven plugin configuration across multiple individual Mule applications, the developer should use a parent pom.xml file. A parent pom.xml file defines common configuration for one or more child projects that inherit from it. The developer can specify common properties and dependencies for all child projects in the parent pom.xml file, such as Mule Maven plugin configuration, and then reference them in each child project's pom.xml file using placeholders.

Reference: https://docs.mulesoft.com/mule-runtime/4.3/mmp-concept#parent-pom https://maven.apache.org/guides/introduction/introduction-to-the-pom.html#Project_Inheritance

QUESTION 14

Refer to the exhibit.
What required changes can be made to give a partial successful response in case the United Airlines API returns with a timeout?



A. Add a Scatter-gather component inside a Try scope. Set the payload to a default value 'Error' inside the error handler using the On Error Propagate scope.

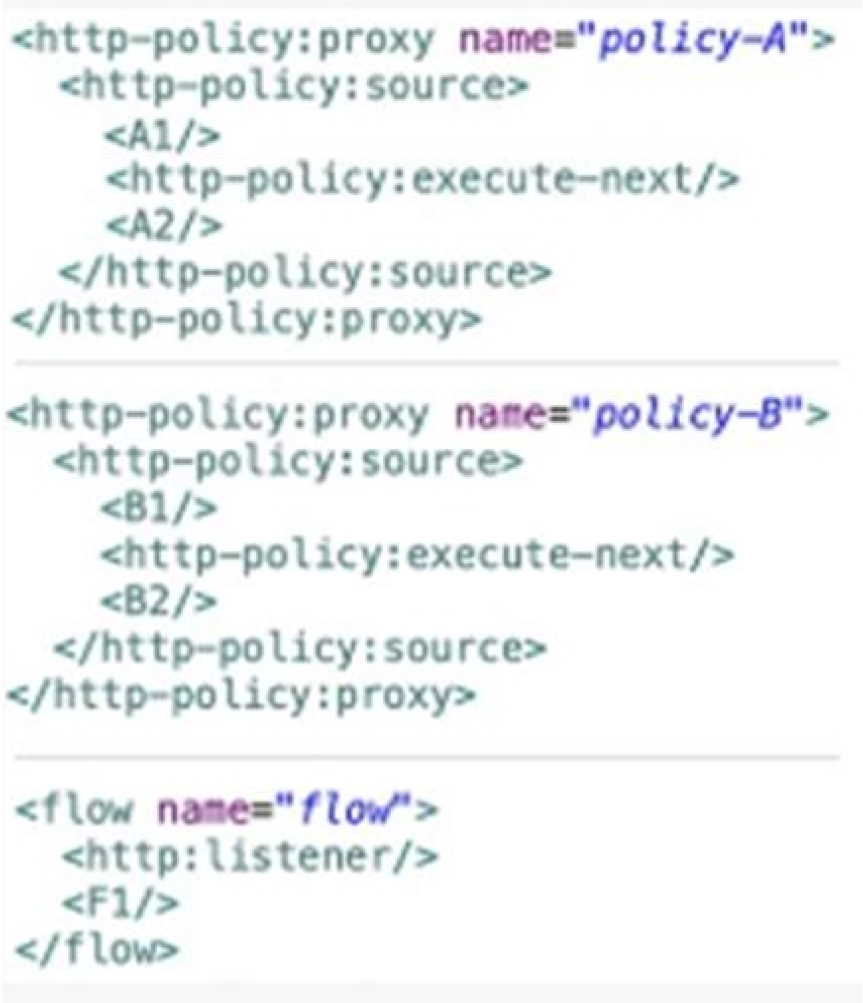
B. Add Flow Reference components inside a Try scope. Set the payload to a default value'' insider the error handler using the ON Error Continue scope

C. Add Flow Reference components inside a Try scope Set the payload to a default value '' inside the error handler using the On Error Propagate scope

D. Add a Scatter-Gather component inside a Try scope. Set the payload to a default value 'Error'' inside the error handler using the On Error Continue scope.

Correct Answer: D
Section:
Explanation:
To give a partial successful response in case the United Airlines API returns with a timeout, the developer should add a Scatter-Gather component inside a Try scope, and set the payload to a default value 'Error' inside the error handler using the On Error Continue scope. A Scatter-Gather component allows sending multiple requests concurrently and aggregating the responses into an array. A Try scope allows handling errors that occur within it using an error handler. An On Error Continue scope allows continuing the flow execution after handling an error. Therefore, by using these components, the developer can send requests to both APIs in parallel, handle any timeout errors from United Airlines API, and return a partial response with a default value for that API.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/scatter-gather-concept https://docs.mulesoft.com/mule-runtime/4.3/try-scope-concept https://docs.mulesoft.com/mule-runtime/4.3/on-error-continue-concept

QUESTION 15
A Mule application contain two policies Policy A and Policy A has order1, and Policy B has order 2. Policy A Policy B, and a flow are defined by he configuration below.



```
<http-policy:proxy name="policy-A">
  <http-policy:source>
    <A1/>
    <http-policy:execute-next/>
    <A2/>
  </http-policy:source>
</http-policy:proxy>
```

```
<http-policy:proxy name="policy-B">
  <http-policy:source>
    <B1/>
    <http-policy:execute-next/>
    <B2/>
  </http-policy:source>
</http-policy:proxy>
```

```
<flow name="flow">
  <http:listener/>
  <F1/>
</flow>
```

When a HTTP request arrives at the Mule application's endpoint, what will be the execution order?

A. A1, B1, F1, B2, A2

B. B1, A1, F1, A2, B2

C. F1, A1, B1, B2, A2

D. F1, B1, A1, A2, B2

Correct Answer: A

Section:
Explanation:
Based on the configuration below, when a HTTP request arrives at the Mule application's endpoint, the execution order will be A1, B1, F1, B2, A2. This is because policies are executed before and after the API implementation flow according to their order attribute. Policy A has order 1, which means it is executed first before Policy B, which has order 2. The flow is executed after both policies are executed before the flow. Then, Policy B is executed after the flow before Policy A is executed after the flow.
Reference: https://docs.mulesoft.com/api-manager/2.x/policies-policy-order

QUESTION 16
A Mule application for processing orders must log the order ID for every log message output.
What is a best practice to enrich every log message with the order ID?

A. Use flow variables within every logger processor to log the order ID

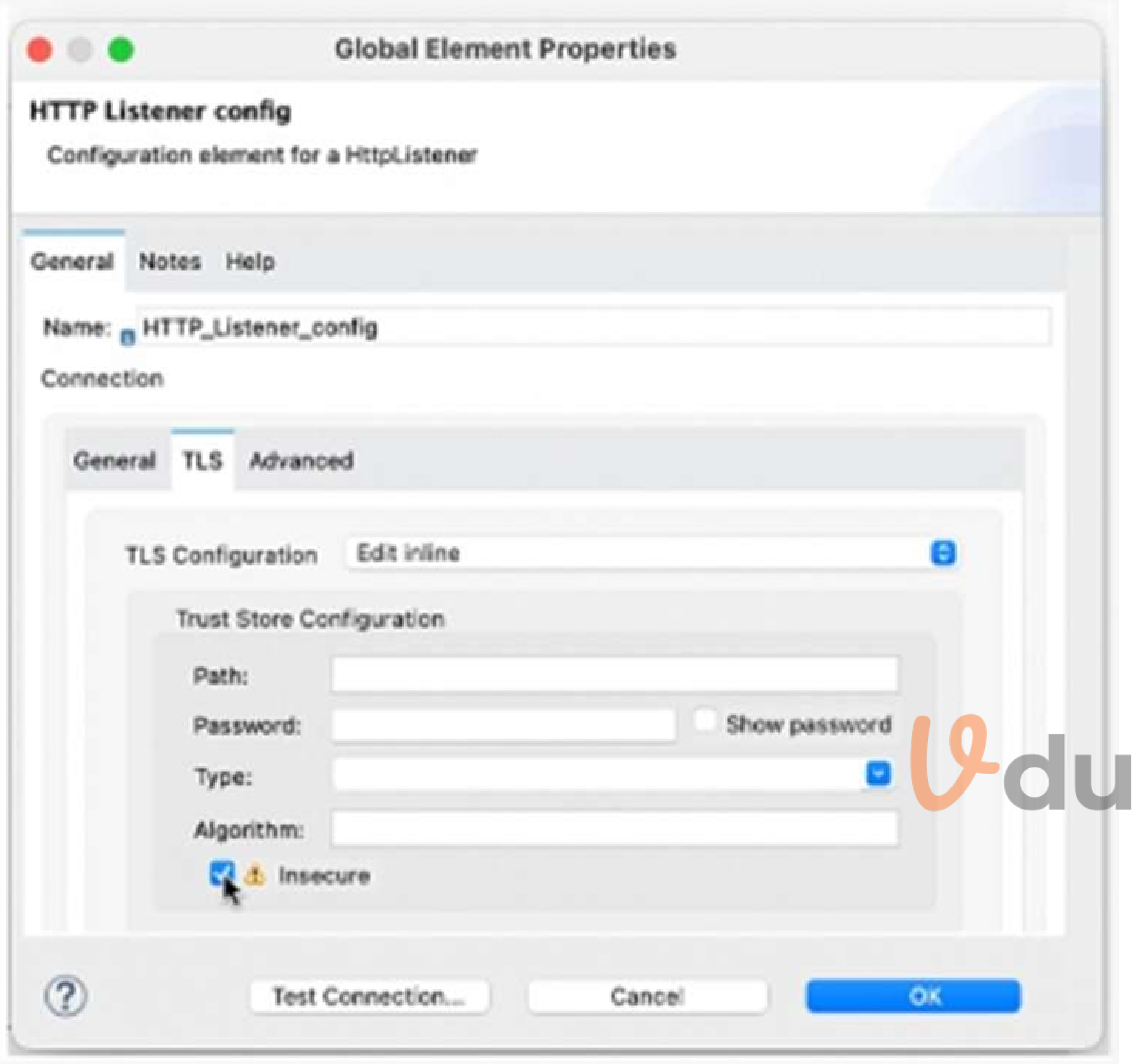
B. Set a flow variable and edit the log4/2.xml file to output the variable as part of the message pattern

C. Create a custom XML SDK component to wrap the logger processor and automatically add the order ID within the connector

D. Use the Tracing module to set logging variables with a Mapped Diagnostic Context

Correct Answer: D
Section:
Explanation:
To enrich every log message with the order ID, the developer should use the Tracing module to set logging variables with a Mapped Diagnostic Context (MDC). The Tracing module allows adding custom key-value pairs to log messages using MDC variables. The developer can use Set Logging Variables operation to set the order ID as an MDC variable and then use it in any logger processor within the same thread or event.
Reference: https://docs.mulesoft.com/tracing-module/1.0/tracing-module-reference#set-logging-variables

QUESTION 17
Refer to the exhibit.
What is the result if ''Insecure'' selected as part of the HTTP Listener configuration?



HTTP Listener config

Configuration element for a HttpListener

Name: HTTP_Listener_config

Connection

TLS Configuration: Edit inline

Trust Store Configuration

Path:

Password: □ Show password

Type:

Algorithm:

☑ Insecure

A. The HTTP Listener will trust any certificate presented by the HTTP client

B. The HTTP Lister will accept any unauthenticated request

C. The HTTP listener will only accept HTTP requests

D. Mutual TLS authentication will be enabled between this HTTP Listener and an HTTP client

Correct Answer: C
Section:
Explanation:
Based on the exhibit below, if 'Insecure' is selected as part of the HTTP Listener configuration, the HTTP listener will only accept HTTP requests. This means that no TLS context will be configured for this listener and no encryption or authentication will be applied to incoming requests. The protocol attribute of this listener will be set to HTTP instead of HTTPS.
Reference: https://docs.mulesoft.com/http-connector/1.6/http-listener-ref#insecure

QUESTION 18

An API has been developed and deployed to CloudHub Among the policies applied to this API is an allowlist of IP addresses. A developer wants to run a test in Anypoint Studio and does not want any policies applied because their workstation is not included in the allowlist.
What must the developer do in order to run this test locally without the policies applied?

A. Create a properties file specifically for local development and set the API instance ID to a value that is not used in API Manager
B. Pass in the runtime parameter ''-Danpow.platform.gatekeeper=disabled''
C. Deactivate the API in API Manager so the Autodiscovery element will not find the application when it runs in Studio
D. Run the test as-s, with no changes because the Studio runtime will not attempt to connect to API Manager

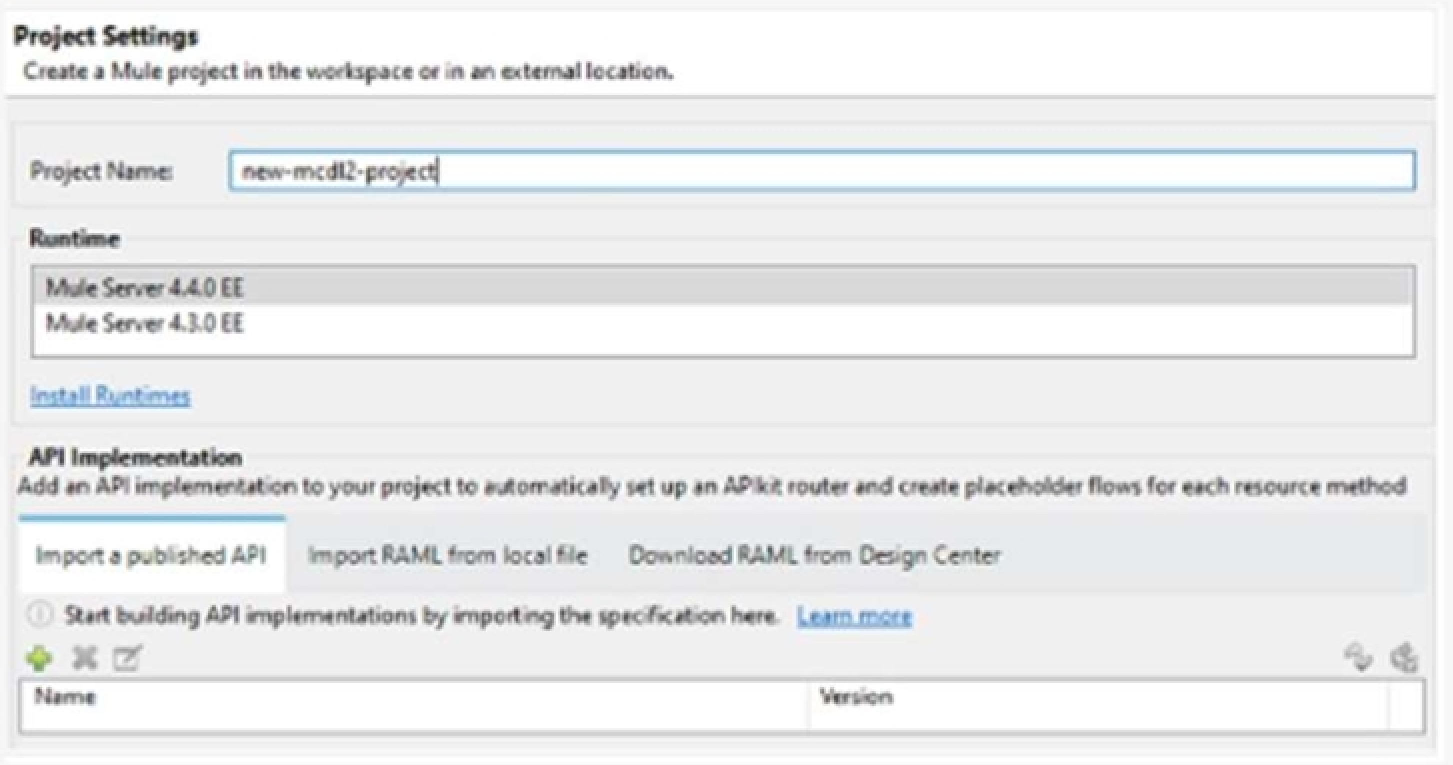
Correct Answer: A
Section:
Explanation:
To run a test locally without the policies applied, the developer should create a properties file specifically for local development and set the API instance ID to a value that is not used in API Manager. This way, the developer can use different configuration properties for different environments and avoid triggering API autodiscovery when running tests locally. API autodiscovery is a mechanism that associates an API implementation with its corresponding API specification and policies in API Manager based on its API instance ID. By setting this ID to a value that does not exist in API Manager, the developer can prevent API autodiscovery from finding and applying any policies to the local test.
Reference: https://docs.mulesoft.com/api-manager/2.x/api-auto-discovery-new-concept#configuring-api-autodiscovery https://docs.mulesoft.com/mule-runtime/4.3/configuring-properties

QUESTION 19
A developer has created the first version of an API designed for business partners to work commodity prices.
What should developer do to allow more than one major version of the same API to be exposed by the implementation?

A. In Design Center, open the RAML and modify each operation to include the major version number
B. In Anypoint Studio, generate scaffolding from the RAML, and the modify the <http:listerner> in the generated flows to include a parameter to replace the version number
C. In Design Center, open the RAML and modify baseUn to include a variable that indicates the version number
D. In Anypoint Studio, generate scaffolding from the RAML, and then modify the flow names generated by APIKit to include a variable with the major version number

Correct Answer: C
Section:
Explanation:
To allow more than one major version of the same API to be exposed by the implementation, the developer should modify the baseUri property in the RAML file to include a variable that indicates the version number. The baseUri property defines the base URL of the API and can include variables that are replaced with actual values when mocking or deploying the API. By using a variable for the version number, the developer can expose different versions of the API using different base URLs and avoid conflicts or confusion.
Reference: https://docs.mulesoft.com/api-designer/design-modify-raml-specs#baseuri https://docs.mulesoft.com/api-manager/2.x/api-versioning

QUESTION 20
Refer to the exhibit.



Project Settings

Create a Mule project in the workspace or in an external location.

Project Name: new-mcdl2-project

Runtime

Mule Server 4.4.0 EE
Mule Server 4.3.0 EE

Install Runtimes

API Implementation

Add an API implementation to your project to automatically set up an APIkit router and create placeholder flows for each resource method

Import a published API | Import RAML from local file | Download RAML from Design Center

Start building API implementations by importing the specification here. Learn more

Name	Version

When creating a new project, which API implementation allows for selecting the correct API version and scaffolding the flows from the API specification?

A. Import a published API
B. Generate a local RAML from anypoint Studio
C. Download RAML from Design Center'
D. Import RAML from local file

Correct Answer: A
Section:
Explanation:
To create a new project that selects the correct API version and scaffolds the flows from the API specification, the developer should import a published API. This option allows importing an API specification that has been published to Anypoint Exchange or Design Center, and selecting a specific version of that API specification. The developer can also choose to scaffold flows based on that API specification.
Reference: https://docs.mulesoft.com/apikit/4.x/apikit-4-new-project-task

QUESTION 21
When implementing a synchronous API where the event source is an HTTP Listener, a developer needs to return the same correlation ID back to the caller in the HTTP response header.
How can this be achieved?

A. Enable the auto-generate CorrelationID option when scaffolding the flow
B. Enable the CorrelationID checkbox in the HTTP Listener configuration
C. Configure a custom correlation policy
D. NO action is needed as the correlation ID is returned to the caller in the response header by default

Correct Answer: D
Section:
Explanation:
When implementing a synchronous API where the event source is an HTTP Listener, Mule automatically propagates some message attributes between flows via outbound and inbound properties. One of these attributes is correlation ID, which is returned to the caller in the response header by default as MULE_CORRELATION_ID.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/about-mule-message#message-attributes

QUESTION 22
Which statement is true about using mutual TLS to secure an application?

A. Mutual TLS requires a hardware security module to be used
B. Mutual TLS authenticates the identity of the server before the identity of the client
C. Mutual TLS ensures only authorized end users are allowed to access an endpoint
D. Mutual TLS increases the encryption strength versus server-side TLS alone

Correct Answer: B
Section:
Explanation:
Mutual TLS (mTLS) is an extension of TLS that requires both parties (client and server) to present their certificates to each other during the handshake process. This way, both parties can verify each other's identity and establish a secure connection. The authentication of the server happens before the authentication of the client, as the server sends its certificate first and then requests the client's certificate.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/tls-configuration#mutual-authentication

QUESTION 23
Which statement is true when using XML SDK for creating custom message processors?

A. Properties are fields defined by an end user of the XML SDK component and serve as a global configuration for the entire Mule project in which they are used
B. An XML SDK provides both inbound and outbound operations
C. Operations can be reused in recursive calls
D. All operations are public

Correct Answer: D
Section:
Explanation:
When using XML SDK for creating custom message processors, all operations are public by default and can be used by any Mule application that imports them. There is no way to make an operation private or protected in XML SDK.
Reference: https://docs.mulesoft.com/mule-sdk/1.1/xml-sdk#operations

QUESTION 24
Which type of cache invalidation does the Cache scope support without having to write any additional code?

A. Write-through invalidation
B. White-behind invalidation
C. Time to live
D. Notification-based invalidation

Correct Answer: C
Section:
Explanation:
The Cache scope supports time to live (TTL) as a cache invalidation strategy without having to write any additional code. TTL specifies how long the cached response is valid before it expires and needs to be refreshed. The Cache scope also supports custom invalidation strategies using MEL or DataWeave expressions.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/cache-scope#cache_invalidation

QUESTION 25
What is the MuleSoft recommended method to encrypt sensitive property data?

A. The encryption key and sensitive data should be different for each environment
B. The encryption key should be identical for all environments
C. The encryption key should be identical for all environments and the sensitive data should be different for each environment
D. The encryption key should be different for each environment and the sensitive data should be the same for all environments

Correct Answer: A
Section:
Explanation:
The MuleSoft recommended method to encrypt sensitive property data is to use the Secure Properties Tool that comes with Anypoint Studio. This tool allows encrypting properties files with a secret key and then decrypting them at runtime using the same key. The encryption key and sensitive data should be different for each environment to ensure security and avoid accidental exposure of sensitive data.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/secure-configuration-properties

QUESTION 26
A healthcare portal needs to validate the token that it sends to a Mule API. The developer plans to implement a custom policy using the HTTP Policy Transform Extension to match the token received in the header from the heathcare portal.
Which files does the developer need to create in order to package the custom policy?

A. Deployable ZIP file, YAML configuration file
B. JSON properties file, YAML configuration file
C. JSON properties file, XML template file
D. XML template file, YAML configuration file

Correct Answer: D
Section:
Explanation:
To package a custom policy using the HTTP Policy Transform Extension, the developer needs to create an XML template file and a YAML configuration file. The XML template file defines the policy logic using Mule components and placeholders for user-defined properties. The YAML configuration file defines the metadata of the policy, such as its name, description, category, parameters, and dependencies.
Reference: https://docs.mulesoft.com/api-manager/2.x/http-policy-transform#packaging-the-policy

QUESTION 27
In a Mule project, Flow-1 contains a flow-ref to Flow-2 depends on data from Flow-1 to execute successfully.
Which action ensures the test suites and test cases written for Flow-1 and Flow-2 will execute successfully?

A. Chain together the test suites and test cases for Flow-1 and Flow-2
B. Use ''Set Event to pass the input that is needed, and keep the test cases for Flow-1 and Flow-2 independent
C. Use ''Before Test Case'' To collect data from Flow-1 test cases before running Flow-2 test cases
D. Use 'After Test Case' to produce the data needed from Flow-1 test cases to pass to Flow-2 test cases

Correct Answer: B
Section:
Explanation:
To ensure the test suites and test cases written for Flow-1 and Flow-2 will execute successfully, the developer should use a Set Event processor to pass the input that is needed by Flow-2, and keep the test cases for Flow-1 and Flow-2 independent. This way, the developer can isolate the testing of each flow and avoid coupling them together.
Reference: https://docs.mulesoft.com/munit/2.3/munit-test-flow

QUESTION 28
A Mule application need to invoice an API hosted by an external system to initiate a process. The external API takes anywhere between one minute and 24 hours to compute its process.
Which implementation should be used to get response data from the external API after it completes processing?

A. Use an HTTP Connector to invoke the API and wait for a response

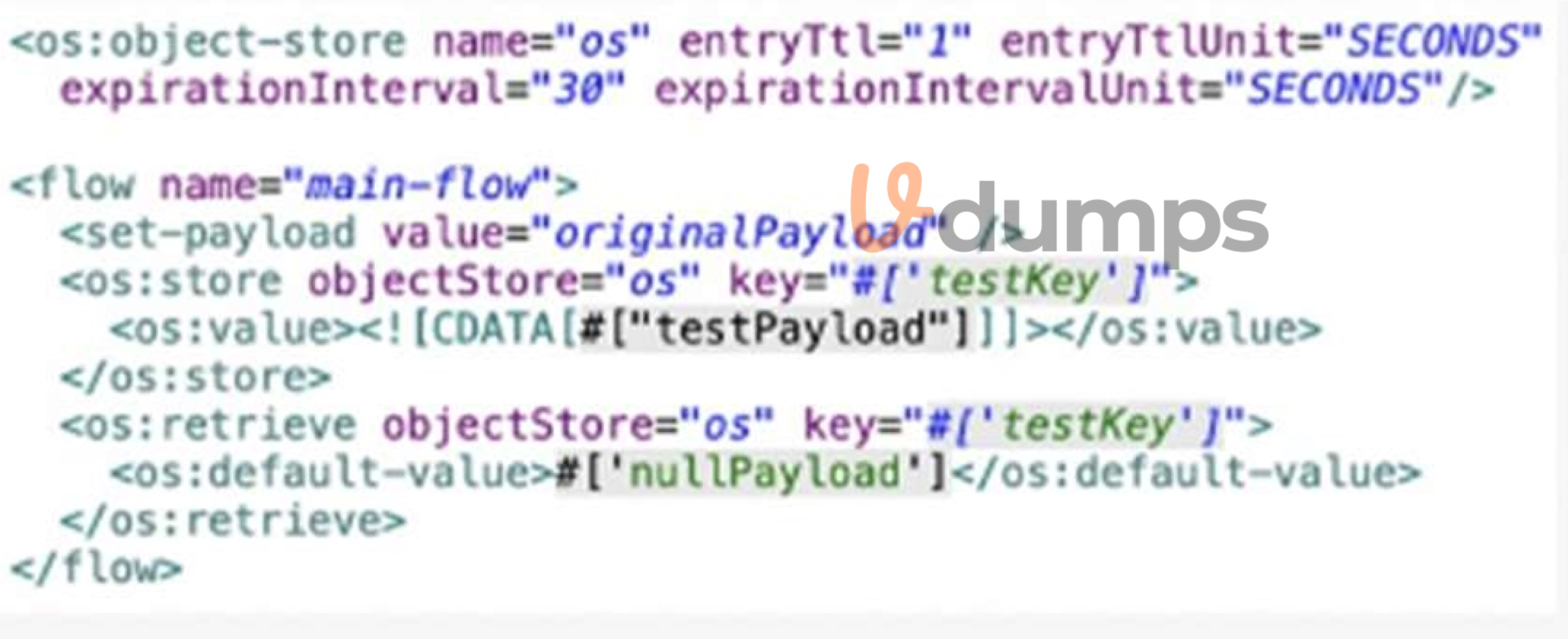
B. Use a Scheduler to check for a response every minute

C. Use an HTTP Connector inside Async scope to invoice the API and wait for a response

D. Expose an HTTP callback API in Mule and register it with the external system

Correct Answer: D
Section:
Explanation:
To get response data from the external API after it completes processing, the developer should expose an HTTP callback API in Mule and register it with the external system. This way, the external API can invoke the callback API with the response data when it is ready, instead of making the Mule application wait for a long time or poll for a response repeatedly.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/http-listener-ref#callback

QUESTION 29
Refer to the exhibit.
A Mute Object Store is configured with an entry TTL of one second and an expiration interval of 30 seconds.
What is the result of the flow if processing between os'store and os:retrieve takes 10 seconds?



```
<os:object-store name="os" entryTtl="1" entryTtlUnit="SECONDS"
  expirationInterval="30" expirationIntervalUnit="SECONDS"/>

<flow name="main-flow">
  <set-payload value="originalPayload" />
  <os:store objectStore="os" key="#['testKey']">
    <os:value><![CDATA[#["testPayload"]]]></os:value>
  </os:store>
  <os:retrieve objectStore="os" key="#['testKey']">
    <os:default-value>#['nullPayload']</os:default-value>
  </os:retrieve>
</flow>
```

A. nullPayload

B. originalPayload

C. OS:KEY_NOT_FOUND

D. testPayload

Correct Answer: A
Section:
Explanation:

The result of the flow is nullPayload if processing between os:store and os:retrieve takes 10 seconds. This is because the entry TTL of the object store is one second, which means that any stored value expires after one second and is removed from the object store. The expiration interval of 30 seconds only determines how often the object store checks for expired values, but it does not affect the TTL. Therefore, when os:retrieve tries to get the value after 10 seconds, it returns nullPayload because the value has already expired and been removed.
Reference: https://docs.mulesoft.com/object-store/osv2-faq#how-does-the-time-to-live-work

QUESTION 30
Which plugin or dependency is required to unit test modules created with XML SDK?

A. XMLUnit
B. Junit
C. MUnit Extensions Maven plugin
D. MUnit Maven plugin

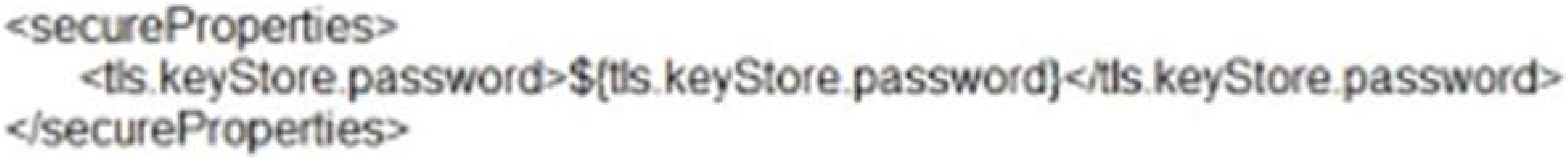
Correct Answer: C
Section:
Explanation:
To unit test modules created with XML SDK, the developer needs to use the MUnit Extensions Maven plugin. This plugin allows testing XML SDK modules using MUnit by adding a dependency to the module under test and using a custom processor tag to invoke it.
Reference: https://docs.mulesoft.com/mule-sdk/1.1/xml-sdk#testing

QUESTION 31
Which statement is true when working with correlation IDS?

A. The HTTP Listener regenerates correlation IDs regardless of the HTTP request
B. The Anypoint MQ Connector automatically propagates correlation IDS
C. The HTTP Listener generates correlation IDS unless a correlation ID is received in the HTTP request
D. The VM Connector does not automatically propagate correction IDs

Correct Answer: C
Section:
Explanation:
When working with correlation IDs, the HTTP Listener generates correlation IDs unless a correlation ID is received in the HTTP request. In that case, it propagates the received correlation ID throughout the flow execution. Correlation IDs are used to track events across different flows or applications.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/about-mule-message#message-attributes

QUESTION 32
Refer to the exhibit.
What is the result of the Mule Maven Plugin configuration of the value of property its,keystorePassoword in CloudHub 2.0?



```
<secureProperties>
    <tls.keyStore.password>${tls.keyStore.password}</tls.keyStore.password>
</secureProperties>
```

A. CloudHub encrypts the value
B. The Mule server encrypts the value
C. Anypoint Studio secures the value

D. Runtime Manager masks the value

Correct Answer: D
Section:
Explanation:
The result of the Mule Maven Plugin configuration of the value of property its,keystorePassword in CloudHub 2.0 is that Runtime Manager masks the value. This means that Runtime Manager hides or obscures the value from anyone who views it in Runtime Manager or Anypoint Platform.
Reference: https://docs.mulesoft.com/runtime-manager/runtime-manager-agent-for-mule4#properties-tab

QUESTION 33
An organization uses CloudHub to deploy all of its applications.
How can a common-global-handler flow be configured so that it can be reused across all of the organization's deployed applications?

A. Create a Mule plugin project
Create a common-global-error-handler flow inside the plugin project.
Use this plugin as a dependency in all Mute applications.
Import that configuration file in Mute applications.

B. Create a common-global-error-handler flow in all Mule Applications Refer to it flow-ref wherever needed.

C. Create a Mule Plugin project Create a common-global-error-handler flow inside the plugin project. Use this plugin as a dependency in all Mule applications

D. Create a Mule daman project. Create a common-global-error-handler flow inside the domain project. Use this domain project as a dependency.

Correct Answer: C
Section:
Explanation:
To configure a common-global-handler flow that can be reused across all of the organization's deployed applications, the developer should create a Mule Plugin project, create a common-global-error-handler flow inside the plugin project, and use this plugin as a dependency in all Mule applications. This way, the developer can import the common-global-error-handler flow in any application that needs it and avoid duplicating the error handling logic.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/error-handling#global-error-handler

QUESTION 34
A Mule API receives a JSON payload and updates the target system with the payload. The developer uses JSON schemas to ensure the data is valid.
How can the data be validation before posting to the target system?

A. Use a DataWeave 2.09 transform operation, and at the log of the DataWeave script, add: %dw 2.0 Import.json-moduls

B. Using the DataWeave if Else condition test the values of the payload against the examples included in the schema

C. Apply the JSON Schema policy in API Manager and reference the correct schema in the policy configuration

D. Add the JSON module dependency and add the validate-schema operation in the flow, configured to reference the schema

Correct Answer: D
Section:
Explanation:
To validate the data before posting to the target system, the developer should add the JSON module dependency and add the validate-schema operation in the flow, configured to reference the schema. The JSON module provides a validate-schema operation that validates a JSON payload against a JSON schema and throws an error if the payload is invalid.
Reference: https://docs.mulesoft.com/json-module/1.1/json-validate-schema

QUESTION 35
Which pattern should be used to invoke multiple HTTP APIs in parallel and roll back failed requests in sequence?

A. A database as a transactional outbox and an Until Successful router to retry any requests

B. A Parallel for Each scope with each HTTP request wrapped in a Try scope

C. Scatter-Gather as central Saga orchestrator for all API request with compensating actions for failing routes

D. VM queues as a reliability pattern with error handlers to roll back any requests

Correct Answer: C
Section:
Explanation:
To invoke multiple HTTP APIs in parallel and roll back failed requests in sequence, the developer should use a Scatter-Gather router as a central Saga orchestrator for all API requests with compensating actions for failing routes. A Scatter-Gather router executes multiple routes concurrently and aggregates the results. A Saga orchestrator coordinates a series of actions across different services and handles failures by executing compensating actions. Therefore, using a Scatter-Gather router as a Saga orchestrator allows invoking multiple HTTP APIs in parallel and rolling back any failed requests in sequence.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/scatter-gather-concept https://docs.mulesoft.com/mule-runtime/4.3/saga

QUESTION 36
Which properties are mandatory on the HTTP Connector configuration in order to use the OAuth 2.0 Authorization Code grant type for authentication?

A. External callback URL, access token URL, client ID response access token

B. Token URL, authorization URL, client ID, client secret local callback URL

C. External callback URL, access token URL, client ID, response refresh token

D. External callback URL, access token URL, local authorization URL, authorization URL, client ID, client secret

Correct Answer: B
Section:
Explanation:
To use the OAuth 2.0 Authorization Code grant type for authentication, the HTTP Connector configuration requires the following properties: token URL, authorization URL, client ID, client secret, and local callback URL. The token URL is the endpoint of the authorization server that provides access tokens. The authorization URL is the endpoint of the authorization server that initiates the user consent flow. The client ID and client secret are the credentials of the Mule application registered with the authorization server. The local callback URL is the endpoint of the Mule application that receives the authorization code from the authorization server.
Reference: https://docs.mulesoft.com/http-connector/1.6/http-authentication#oauth-2-0

QUESTION 37
A Mule application deployed to a standardalone Mule runtime uses VM queues to publish messages to be consumed asynchronously by another flow.
In the case of a system failure, what will happen to in-flight messages in the VM queues that have been consumed?

A. For nay type of queue, the message will be processed after the system comes online

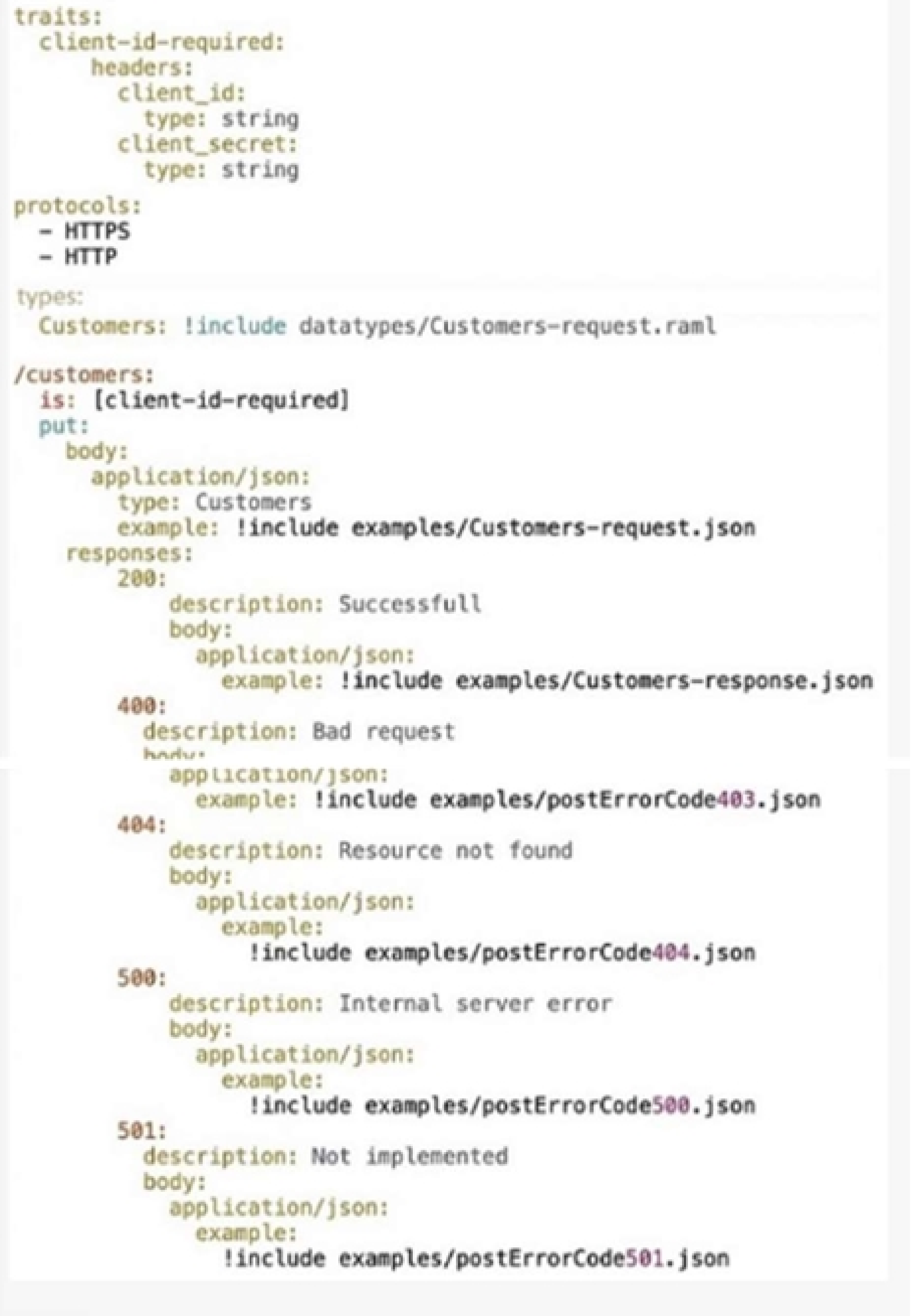
B. For persistent queues, the message will be processed after the system comes online

C. For transient queues, the message will be processed after the system comes online

D. For any type of queue, the message will be lost

Correct Answer: B
Section:
Explanation:
In case of a system failure, in-flight messages in persistent VM queues that have been consumed will be processed after the system comes online. This is because persistent VM queues store messages on disk and guarantee delivery even if there is a system crash or restart. Therefore, any in-flight messages that have been consumed but not processed will be recovered from disk and processed when the system is back online.
Reference: https://docs.mulesoft.com/mule-runtime/4.3/vm-connector#persistent-queues

QUESTION 38
Refer to the exhibit.



```
traits:
  client-id-required:
      headers:
        client_id:
          type: string
        client_secret:
          type: string
protocols:
  - HTTPS
  - HTTP
types:
  Customers: !include datatypes/Customers-request.raml

/customers:
  is: [client-id-required]
  put:
    body:
      application/json:
        type: Customers
        example: !include examples/Customers-request.json
    responses:
        200:
            description: Successfull
            body:
              application/json:
                example: !include examples/Customers-response.json
        400:
          description: Bad request
          body:
            application/json:
              example: !include examples/postErrorCode403.json
        404:
            description: Resource not found
            body:
              application/json:
                example:
                  !include examples/postErrorCode404.json
        500:
            description: Internal server error
            body:
              application/json:
                example:
                  !include examples/postErrorCode500.json
        501:
          description: Not implemented
          body:
            application/json:
              example:
                !include examples/postErrorCode501.json
```

A developer generates the base scaffolding for an API in Anypoint Studio.
Which HTTP status code is returned while testing using the API Kit console if no values are entered in client-secret?

A. HTTP status code:200

B. HTTP status code:403

C. HTTP status code:400

D. HTTP status code:500

Correct Answer: B
Section:
Explanation:
Based on the code snippet and schema.json file below, when testing using the API Kit console if no values are entered in client-secret, HTTP status code 403 (FORBIDDEN) is returned. This is because client-secret is defined as a required header parameter in schema.json file, which means that it must be present in every request. If no values are entered in client-secret, then it is equivalent to omitting this header parameter, which violates the schema and causes APIKit Router to return HTTP status code 403.
Reference: https://docs.mulesoft.com/apikit/4.x/apikit-4-headers

QUESTION 39

A company has been using CI/CD. Its developers use Maven to handle build and deployment activities.
What is the correct sequence of activities that takes place during the Maven build and deployment?

A. Initialize, validate, compute, test, package, verify, install, deploy

B. Validate, initialize, compile, package, test, install, verify, verify, deploy

C. Validate, initialize, compile, test package, verify, install, deploy

D. Validation, initialize, compile, test, package, install verify, deploy

Correct Answer: C
Section:
Explanation:
The correct sequence of activities that takes place during the Maven build and deployment is validate, initialize, compile, test package, verify, install, deploy. These are Maven lifecycle phases that define a sequence of goals to execute during a build process. Each phase represents a stage in the build lifecycle and can have zero or more goals bound to it.
Reference: https://maven.apache.org/guides/introduction/introduction-to-the-lifecycle.html

QUESTION 40

A Mule application deployed to multiple Cloudhub 2.0 replicas needs to temporarily persist large files over 10MB between flow executions, and routinely needs to query whether the file data exists on separate executions.
How can this be achieved?

A. Store the contents of the file on separate storage, and store the key and location of the file Object using Object Store v2

B. Use an in-memory Object Store

C. Store the key and full contents of the file in an Object Store

D. Store the key and full contents of the file, caching the filename and location between requests

Correct Answer: A
Section:
Explanation:
To temporarily persist large files over 10MB between flow executions, and routinely query whether the file data exists on separate executions, the developer should store the contents of the file on separate storage, and store the key and location of the file object using Object Store v2. This way, the developer can avoid storing large files in memory or exceeding the size limit of Object Store v2 (10MB per object). The developer can also use Object Store v2 operations to query, retrieve, or delete the file object by its key.
Reference: https://docs.mulesoft.com/object-store/osv2-faq#can-i-store-files-in-object-store-v2