

NOKIA



Nokia NSP IP Network Automation Professional Composite Exam



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Nokia

Exam 4A0-AI1

Nokia NSP IP Network Automation Professional Composite Exam

Version: 3.0

[Total Questions: 80]

Question No : 1

Which of the following is NOT an Intent Type life-cycle state?

- A. Draft
- B. Released
- C. Phased-Out
- D. Created

Answer: D

Explanation: Intent Types have four life-cycle states: Draft, Released, Phased-Out, and Deleted. The Created state is not a life-cycle state for Intent Types; instead, it is an intermediate state used to create an Intent before it is moved to a life-cycle state.

Question No : 2

Which of the following statements about NSP APIs is FALSE?

- A. They allow for supervision of network elements.
They support REST/RESTCONF, SOAP/XML and GraphQL1
- B. They help with the definition and activation of network services.
- C. They allow for an OSS and NSP server to talk to each other.

Answer: B

Explanation: NSP APIs allow for supervision of network elements, help with the definition and activation of network services, and allow for an OSS and NSP server to talk to each other. However, they do not support GraphQL, which is a query language for APIs. According to Nokia NSP IP Network Automation Professional guide, NSP APIs support REST/RESTCONF, SOAP/XML and GraphQL, and help with the definition and activation of network services, and they also allow for supervision of network elements and an OSS and NSP server to talk to each other. Therefore, statement B is false as it states that NSP APIs support Kafka which is not mentioned in the guide as a supported API.

Question No : 3

Which of the following data encoding/decoding formats is NOT supported by the Workflow Manager?

- A. JSON

- B. CSV
- C. BER
- D. YAML

Answer: C

Explanation: Workflow Manager is a tool that allows users to design and execute workflows for network automation using NSP actions and expression functions. The Workflow Manager supports data encoding/decoding formats such as JSON, CSV, XML and Base64. However, it does not support BER (Basic Encoding Rules), which is a format used for encoding data structures for transmission or storage.

Question No : 4

Which of the following statements about the NSP Kafka service is FALSE?

- A. It allows an API client to receive event or alarm notifications.
- B. It allows an API client to subscribe to different event types.
- C. It is a distributed messaging system.
- D. It uses NETCONF based operations and YANG models.

Answer: D

Explanation: The NSP Kafka service is a distributed messaging system that allows different applications to publish and subscribe to different event types. It provides an API client to receive event or alarm notifications and subscribe to different event types. However, it does not use NETCONF based operations and YANG models. Instead, it uses the Kafka protocol to send and receive messages between producers and consumers.

Question No : 5

Which of the following statements about an intent is FALSE?

- A. It is stored in the database as the source of truth.
- B. It is an instance of an intent type.
- C. It can be created and deleted through RESTCONF API.
- D. It only involves services.

Answer: D

Explanation: According to the Nokia NSP Intent Manager Application Help², an intent has

the following characteristics:

- ✍ It is stored in the database as the source of truth.
- ✍ It is an instance of an intent type, which defines the structure and logic of an intent.
- ✍ It can be created and deleted through RESTCONF API or through the Intent Manager GUI.
- ✍ It can involve services, nodes, links, paths, or any other network elements.

Question No : 6

Which of the following configures the network based on input provided by the user?

- A. Intent
- B. Intent Type
- C. YANG module
- D. Framework files

Answer: A

Explanation: Intent is a high-level description of the desired outcome or state of the network. It allows users to specify what they want to achieve rather than how to achieve it. The intent is then translated into network configurations and policies that are used to configure the network infrastructure. Intent-based networking provides a higher level of abstraction than traditional network configuration methods, making it easier for users to specify their requirements and automate the configuration process.

Question No : 7

Which of the following NSP CLI actions uses the network element's NE ID to establish communication?

- A. nsp.cli
- B. nsp.sr_cli
- C. nsp.mdm_di
- D. nsp.netconf

Answer: B

Explanation: nsp.sr_cli is a nodal communication action that uses the network element's NE ID to establish communication. It is one of the NSP actions and expression functions that can be used to design workflows for network automation

Question No : 8

Which of the following sequences best describes the process of moving to SDN based self-regulated networking?

- A. action-based networking -> static networking -> adaptive networking -> autonomous networking
- B. static networking -> action-based networking -> autonomous networking -> adaptive networking
- C. static networking -> action-based networking -> adaptive networking -> autonomous networking
- D. action-based networking -> static networking -> autonomous networking -> adaptive networking

Answer: C

Explanation: Nokia NSP is a platform that enables management, control and automation of IP/Optical networks. It supports various levels of network automation, from static networking to autonomous networking.

The process of moving to SDN based self-regulated networking involves four stages:

- ✍ Static networking: The network is manually configured and operated by human operators. There is no automation or intelligence involved.
- ✍ Action-based networking: The network is partially automated by using predefined actions or scripts that are triggered by events or commands. There is still human intervention required for complex tasks or exceptions.
- ✍ Adaptive networking: The network is dynamically automated by using policies, analytics and machine learning that can adjust the network behavior based on changing conditions and objectives. There is minimal human intervention required for oversight and validation.
- ✍ Autonomous networking: The network is fully automated by using artificial intelligence and closed-loop feedback that can optimize the network performance and reliability without any human involvement. The network can self-heal, self-optimize and self-protect.

Question No : 9

Which of the following is the proper FULL syntax to describe a workflow task using the std.http action to access a url using the GET method?

A)

```
my_task:
  action: std.http
  input:
    url: http://test.org
    method: GET
```

B)

```
my_task:
  action: std.http
  input:
    html: http://test.org
    method: GET
```

C)

```
my_task:
  action: std.http url= "http://test.org" method:="GET"
```

D)

```
my_task:
  action: std.http html= "http://test.org" method:="GET"
```

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

Answer: A

Question No : 10

What are the possible data types capable of being assigned to the value type attributes of the target-component?

- A. String
- B. Boolean

- C. Boolean and String
- D. Number and String

Answer: C

Explanation: The value type attributes of the target-component can be assigned either a boolean or a string data type. The boolean data type can be used to indicate whether a certain attribute is enabled or not, while the string data type can be used to store textual information. Numbers and other data types are not supported.

Question No : 11

Which of the following is NOT a characteristic of Infrastructure Lure Intents?

- A. Policy management
- B. System security
- C. Initial hardware configuration
- D. L2/L3 VPN configuration of multiple services

Answer: D

Explanation: Infrastructure Lure Intents are a type of Network Intent that describe how network resources should be allocated and configured for a specific service or application. L2/L3 VPN configuration of multiple services is NOT a characteristic of Infrastructure Lure Intents, because it is more related to service provisioning than resource allocation.

Question No : 12

Which of the following is NOT a benefit of Service Fulfilment API?

- A. Increases service agility
- B. Reduces human errors
- C. Allows multi-vendor service provisioning
- D. Provides alarm monitoring

Answer: D

Explanation: Service Fulfilment API does not provide alarm monitoring; rather, it allows customers to quickly and easily order and provision services from a single interface, allowing for increased service agility and reduced human error.

According to the Nokia NSP Service Fulfilment API User Guide, Service Fulfilment API offers the following benefits:

- A. Increases service agility by providing a programmable interface for automated service provisioning and management, allowing network operators to quickly respond to customer demands and network changes.
- B. Reduces human errors by automating the service provisioning process, which minimizes the risk of manual configuration errors and improves service quality.
- C. Allows multi-vendor service provisioning by providing a vendor-agnostic interface that supports different types of network equipment and technologies, reducing vendor lock-in and enabling greater network flexibility.

Question No : 13

What are the two main functionalities of the NSP REST API gateway services?

- 1. Versioning model
- 2. Create subscriptions
- 3. Location services
- 4. Authentication and termination services

- A. 1 and 2
- B. 2 and 3
- C. 1 and 4
- D. 3 and 4

Answer: C

Explanation: the NSP REST Gateway API provides the entry point for API clients to locate and authenticate REST client requests to gain access to the various NSP modules that have registered API services.

Question No : 14

Which of the following statements about REST and RESTCONF is FALSE?

- A. REST API uses KAFKA notification service.
- B. REST/RESTCONF API performs CRUD operations on data.
- C. REST uses HTTP protocol for data communication.
- D. RESTCONF does NOT use schema mounts.

Answer: D

Explanation: REST and RESTCONF APIs provide a single entry point into the consolidated suite of NSP applications. Another source² mentions that NSP REST gateway provides access to NSD and NRC functionalities through REST API services. A third source³ explains that RESTCONF is an HTTP-based protocol that performs CRUD operations on data using YANG models.

Question No : 15

Which of the following statements about the YANG data modeling language is FALSE?

- A. Data is in the form of a tree-like structure.
- B. It is used to model configuration and state data.
- C. Data model is not human readable.
- D. Defines actions and operations.

Answer: C

Explanation: YANG is a data modeling language used to model configuration and state data for network devices. It defines a tree-like structure for data and is used to store, configure, and retrieve information from network devices. It is human readable and can be used to define actions and operations.

Question No : 16

Which of the following timing attributes will halt the entire workflow and require user intervention to proceed?

- A. wait-before
- B. wait-after
- C. timeout
- D. pause-before

Answer: D

Explanation: This attribute specifies a manual approval step before executing a task¹. The other attributes will either delay or abort the execution of a task, but not halt the entire workflow.