



## Automating and Programming Cisco Service Provider Solutions (SPAUTO)



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# **Cisco**

## **Exam 300-535**

**Automating and Programming Cisco Service Provider Solutions  
(300-535 SPAUTO)**

Version: 5.0

**[ Total Questions: 60 ]**

**Topic break down**

Topic	No. of Questions
Topic 1: Network Programmability Foundation	6
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## Topic 1, Network Programmability Foundation

### Question No : 1 DRAG DROP - (Topic 1)

Drag and drop the steps from the left into the correct order on the right to deploy an already created service into NSO. Not all options are used.

Log in to NSO CLI.	
Verify that the service has been properly loaded with "show packages package oper-status" command.	
Perform a "services reload" command.	
Move the service into \$NCS_DIR/packages directory.	
Perform a "packages reload" command.	
Move the service into \$NCS_PACKAGES directory.	
Run "make clean all" inside the service "src" directory.	
Verify that the service has been properly loaded with "show services service service-version" command.	

### Answer:

Log in to NSO CLI.	Move the service into \$NCS_PACKAGES directory.
Verify that the service has been properly loaded with "show packages package oper-status" command.	Log in to NSO CLI.
Perform a "services reload" command.	Run "make clean all" inside the service "src" directory.
Move the service into \$NCS_DIR/packages directory.	Perform a "packages reload" command.
Perform a "packages reload" command.	Verify that the service has been properly loaded with "show packages package oper-status" command.
Move the service into \$NCS_PACKAGES directory.	
Run "make clean all" inside the service "src" directory.	
Verify that the service has been properly loaded with "show services service service-version" command.	

### Question No : 2 - (Topic 1)

An automation engineer is trying to configure a destination group to use dial-out telemetry with gRPC on a Cisco IOS XR platform. The template created is failing to apply. Which parameters must be configured?

- A. source IP address, source port, encoding, and sampling interval
- B. source IP address, source port, encoding, and protocol
- C. destination IP address, destination port, encoding, and sensor path
- D. destination IP address, destination port, encoding, and protocol

**Answer: D**

Reference: [https://www.cisco.com/c/en/us/td/docs/iosxr/asr9000/telemetry/b-telemetry-cg-asr9000-61x/b-telemetry-cg-asr9000-61x\\_chapter\\_010.html](https://www.cisco.com/c/en/us/td/docs/iosxr/asr9000/telemetry/b-telemetry-cg-asr9000-61x/b-telemetry-cg-asr9000-61x_chapter_010.html)

### Question No : 3 - (Topic 1)

Which two Python libraries are used to write a script to retrieve network device information using RESTCONF? (Choose two.)

- A. PySNMP
- B. requests
- C. ncclient
- D. YANG
- E. json

**Answer: B,E**

### Question No : 4 - (Topic 1)

Refer to the exhibit.

```
curl --request DELETE --url http://10.1.1.1:8080/srpolicy-install --header 'cache-control: no-cache' --header 'content-type: application/json' --data '{"source": "1.1.1.2", "end-point": "2001:4860::1:1:1", "color": 99, "route-distinguisher": 2}'
<!DOCTYPE html>
<html>
<head>
<title>404 Not Found</title>
</head>
<body>
<h1>Not Found</h1>
<hr>
<address> Server at localhost:8080 </address>
</body>
</html>
```

An engineer implements an automation with Cisco XTC. Which problem results in the 404 Not Found error code on the REST call?

- A. The resource that you are trying to delete does not exist.
- B. Port 8080 is not enabled on XTC.
- C. XTC does not offer any APIs.
- D. You must change the request method.

**Answer: B**

**Question No : 5 - (Topic 1)**

Which command configures the remote peer when the Cisco IOS XR Traffic Controller is used?

- A. peer-sync ipv4 192.168.0.3
- B. state ipv4 192.168.0.3
- C. peer ipv4 192.168.0.3
- D. state-sync ipv4 192.168.0.3

**Answer: D**

Reference: [https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r6-2/segment-routing/configuration/guide/b-segment-routing-cg-asr9000-62x/b-seg-routing-cg-asr9000-62x\\_chapter\\_01001.html](https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r6-2/segment-routing/configuration/guide/b-segment-routing-cg-asr9000-62x/b-seg-routing-cg-asr9000-62x_chapter_01001.html)

**Question No : 6 - (Topic 1)**

What tool is used to perform a “what if” failure analysis in a service provider network that is running Segment Routing?

- A. Cisco WAN Automation Engine
- B. Cisco Evolved Programmable Network Manager
- C. Cisco Network Services Orchestrator
- D. Cisco Segment Routing Path Computation Element

**Answer: A**

Reference: <https://www.cisco.com/c/en/us/products/routers/wan-automation-engine/index.html>

**Topic 2, Automation APIs and Protocols****Question No : 7 - (Topic 2)**

Refer to the exhibit.

```
def configure_ip_address(interface, ip, length):
    url = BASE_URL + "/data/ietf-interfaces:intefaces/interface={i}".format(
        i = interface
    )
    data = OrderedDict(
        [
            (
                "ietf-interfaces:interface",
                OrderedDict(
                    [
                        ("name", interface),
                        ("type", "iana-if-type:ethernetCsmacd"),
                        ("ietf-ip:ipv6",
                            OrderedDict(
                                [
                                    ("address",
                                        [OrderedDict([("ip", ip), ("prefix-length", length)])],
                                    )
                                ]
                            )
                        ),
                    ]
                )
            ),
        ]
    )

    response = requests.put(
        url, auth=(USERNAME, PASSWORD), headers=HEADERS, verify=False, json=data
    )
    print(response.status_code)

configure_ip_address("GigabitEthernet2", "2001:db8:636c:6179:2063:7572:7469:7300", "64")
```

What is the effect of the script on the device?

- A. All interfaces except GigabitEthernet2 are reset to their default configurations.
- B. It replaces the entire configuration for GigabitEthernet2 on the device using RESTCONF.
- C. It merges the new configuration with the existing configuration on the device using RESTCONF.
- D. It compares the configuration to the device. If it matches, the device sends back an HTTP 204 status code.

**Answer: C**

**Question No : 8 - (Topic 2)**

Refer to the exhibit.

```
from ydk.services import CRUDService
from ydk.providers import NetconfServiceProvider
from ydk.models.cisco_ios_xr import Cisco_IOS_XR_shellutil_oper \
    as xr_shellutil_oper
from datetime import timedelta

if __name__ == "__main__":
    """Main execution path"""
    provider = NetconfServiceProvider(address="10.0.0.1",
                                     port=830,
                                     username = "admin",
                                     password = "admin",
                                     protocol = "ssh")

    crud = CRUDService()
    system_time = xr_shellutil_oper.SystemTime()
    system_time = crud.read(provider, system_time)
    print("System uptime is" +
          str(timedelta(seconds=system_time.uptime.uptime)))
    exit()
```

Regarding the Python script using YDK, what is the result for a device that is running Cisco IOS XR Software?

- A. retrieves the system time
- B. configures the system time
- C. prints the uptime of the CRUDService
- D. prints the system uptime

**Answer: D**

**Question No : 9 - (Topic 2)**

Refer to the exhibit.



```
- name: configure global bgp as 65000
  iosxr_bgp:
    bgp_as: 65000
    router_id: 1.1.1.1
    neighbors:
      - neighbor: 182.168.10.1
        remote_as: 500
        description: PEER_1
      - neighbor: 192.168.20.1
        remote_as: 500
        update_source: GigabitEthernet 0/0/0/0
    address_family:
      - name: ipv4
        cast: unicast
        networks:
          - network: 192.168.2.0/23
          - network: 10.0.0.0/8
        redistribute:
          - protocol: ospf
            id: 400
            metric: 110
```

What is the result of the Ansible task?

- A. It configures a Cisco IOS XR router with BGP AS65000 with two neighbors and redistributes OSPF into BGP.
- B. It validates the BGP configuration on a Cisco IOS XR router, but it is a read-only module and cannot modify the configuration on the router.
- C. It validates the BGP configuration on a Cisco IOS XE router, but it is a check mode-only network module and cannot modify the configuration on the router.
- D. It configures a Cisco IOS router with BGP on AS500 and redistributes OSPF into BGP.

**Answer: A**

Reference: [https://docs.ansible.com/ansible/latest/modules/iosxr\\_bgp\\_module.html](https://docs.ansible.com/ansible/latest/modules/iosxr_bgp_module.html)

What is a key feature of YANG?

- A. use identification
- B. error prediction
- C. JAVA compatibility
- D. reusable types and groupings

**Answer: D**

Reference:

[https://www.cisco.com/c/en/us/td/docs/optical/ncs1000/60x/b\\_Datamodels\\_cg\\_ncs1000/b\\_Datamodels\\_cg\\_ncs1000\\_chapter\\_00.html](https://www.cisco.com/c/en/us/td/docs/optical/ncs1000/60x/b_Datamodels_cg_ncs1000/b_Datamodels_cg_ncs1000_chapter_00.html)

#### **Question No : 11 - (Topic 2)**

Which two commands generate a template using Cisco NSO to build a service package? (Choose two.)

- A. show running-config devices device ce-ios config ios:interface Loopback 0 | display template.xml
- B. show running-config devices device ce-ios config ios:interface Loopback 0 | display xml | save template.xml
- C. request running-config devices device ce-ios config ios:interface Loopback 0 | display xml
- D. show running-config devices device ce-ios config ios:interface Loopback 0
- E. show running-config devices device ce-ios config ios:interface Loopback 0 | display xml

**Answer: A,C**

#### **Question No : 12 - (Topic 2)**

An engineer is deploying a Python script to manage network devices through SSH. Which library based on Paramiko is used?

- A. sshmiko
- B. paramiko.agent
- C. libssh2
- D. netmiko