Automating Cisco Enterprise Solutions v2.0 (300-435)

Exam Description: Automating Cisco Enterprise Solutions v2.0 (ENAUTO 300-435) is a 90-minute exam associated with the CCNP Enterprise Certification and CCNP Automation Certification. This exam certifies a candidate's knowledge of implementing Enterprise automated solutions, including device level and controller-based network automation, operations, and AI in Automation. Technologies included are Cisco IOS XE, Cisco Meraki, Cisco Catalyst Center, Cisco SD-WAN, Cisco Identity Services Engine and Cisco ThousandEyes. The course, Automating Cisco Enterprise Solutions, helps candidates prepare for this exam.

The following topics are general guidelines for the content likely to be included on the exam. However, other related topics may also appear on any specific delivery of the exam. To better reflect the contents of the exam and for clarity purposes, the guidelines below may change at any time without notice.

10%	**1.0**	**Network Automation Foundation**
	1.1	Describe OpenConfig, IETF, and native YANG models
	1.2	Describe NETCONF and RESTCONF
	1.3	Construct a JSON payload based on a YANG model using tools such as YANG Suite and pyang
	1.4	Construct the XML payload based on a YANG model using tools such as YANG Suite and pyang
	1.5	Interpret a YANG module tree generated per RFC8340
25%	**2.0**	**Device-Level Network Automation**
	2.1	Construct a network automation solution with Python using Netmiko to manage and monitor configurations
	2.2	Construct a network automation solution with Python using ncclient to manage and monitor configurations
	2.3	Construct a network automation solution with Python using RESTCONF to manage and monitor configurations
	2.4	Construct a network automation solution with Ansible to manage configurations
	2.5	Construct a device-level network automation solution for Day 0 provisioning
	2.6	Troubleshoot network automation solutions based on RESTCONF, NETCONF and YANG models
	2.7	Construct on-box automations using EEM, guest shell, and on-box Python
30%	**3.0**	**Controller-Based Network Automation**
	3.1	Construct a controller-based network automation solution for Day-0 provisioning
	3.2	Construct a controller-based network automation solution with Python to manage and monitor configurations
	3.3	Construct advanced network configuration templates using Jinja2 constructs such as loops, conditionals, output modifiers, and filters

3.4 Construct a controller-based network automation solution with Ansible to manage configurations
3.5 Construct security automation solutions such as policy enforcement, compliance monitoring, and network segmentation
3.6 Troubleshoot network automation solutions based on REST APIs

20% 4.0 Operations

4.1 Describe the use of Cisco platform APIs for the testing and validation phase of a network automation solution
4.2 Describe the use of network topology simulations related to enterprise operations
4.3 Construct a controller-based network automation solution to manage device software versions
4.4 Construct a controller-based network automation solution to monitor network health
4.5 Configure a subscription for model driven telemetry on a Cisco IOS XE device (CLI, NETCONF, and RESTCONF)
4.6 Implement webhook-based monitoring using controllers

15% 5.0 AI in Automation

5.1 Describe AI in controller-based platforms
5.2 Describe AI-assisted code development for network automation
5.3 Describe the security risks in a given AI-based network automation solution
5.4 Construct an MCP server to provide network information to an AI agent using Python FastMCP