DevNet

DEVNET

Learn more about DevNet certification

Devnet

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Module1: Linux

Introduction to Linux and lab setup.
File System management.
Users and Group management.
Crontab and Networking.
SSH configuration.
Basic Bash Scripting.

Module 2: Python

Introduction to Python and installation.
Objects and datastructure.
Comparison Operators.

Module 3: Networking Fundamental

OSI and TCP/IP Model.
IP Addressing, Protocol and Ports.
MAC Address and VLAN's.
Routers, Switches, Firewalls and LoadBalancers.
DNS, DHCP, NTP, SNMP, NAT.
Routing Protocols and Static Routing.
Spanning Tree Protocol.
VLAN and Inter VLAN Routing.
Telnet, SSH, HTTP, HTTPS and NETCONF.

Module 4: Automation in Networking

Python for Network Automation.
Ansible and Networking.
Python vs Ansible vs Chef vs Puppet vs Cisco NSO
Introduction to CI/CD Pipeline.
Infrastructure as a Code.

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Module 5: Application Deployment and Security

Edge Computing and benefits.
Private Cloud vs Public Cloud vs Hybrid Cloud vs Edge Computing.
Bare Metal, Virtualization and Containers.
Docker setup and basics.
Docker File and Docker Images.
Application Security, Encryption & Data Handling.
OWASP threats.

Module 6: Software Development and Design

XML, JSON and YAML.
Parsing data formats (XML, JSON and YAML) to Python Data Structure.
Software Development Methods (Agile, Lean and Waterfall).
Organising code into Methods, Functions, Classes and Modules.
Design Patterns (MVC and Observer).
Version Control with Git:
Clone, Add/Remove, Commit, Pull/Push, Branch, Merge and diff.

Module 7: Understanding and Using APIs

REST API.
Webhooks.
HTTP response codes.
Parts of HTTP response.
API Authentication: basic, token and API Keys.
API styles (REST, RPC, Synchronous and Asynchronous).
Python Script and API.

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Module 8: Cisco Platforms and Development

Cisco network management platforms and APIs (Meraki, Cisco DNA Center, ACI, Cisco SD-WAN, and NSO).

Cisco compute management platforms and APIs (UCS Manager, UCS Director, and Intersight).

Cisco collaboration platforms and APIs (Webex Teams, Webex devices, Cisco Unified Communication Manager including AXL and UDS interfaces, and Finesse).

Cisco security platforms and APIs (Firepower, Umbrella, AMP, ISE, & ThreatGrid).

Device level APIs and dynamic interfaces for IOS XE and NX-OS.

DevNet resource for a given scenario (Sandbox, Code Exchange, support, forums, Learning Labs, and API documentation).

Model driven programmability (YANG, RESTCONF, and NETCONF).

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