DevNet Expert :

Build your own Lab (and beyond)

01 Where do I start? :
DevNet Expert Exam Topics &
Software and Equipment List

02 The Candidate Workstation

03 Network topology

04 Service utilities (e.g. GitLab,Vault,…)

05 Which resources does Cisco have?
(CML/Sandbox/Learning Labs)

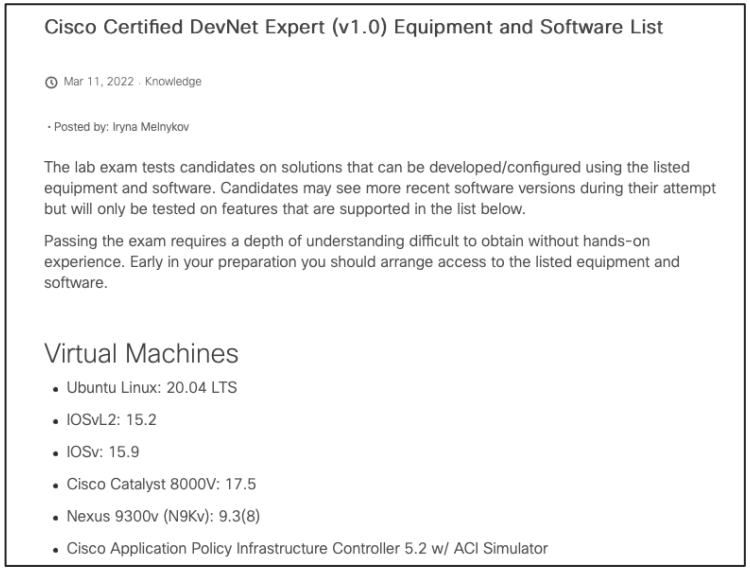
Where do I start?

Exam Topics

1.0 Software Design, Development, and Deployment	20%
2.0 Infrastructure as Code	30%
3.0 Network Programmability and Automation	25%
4.0 Containers	10%
5.0 Security	15%

Align the exam topics to the software list to identify the practical skills needed and what to lab

Equipment and Software List



Cisco Certified DevNet Expert (v1.0) Equipment and Software List

Mar 11, 2022 . Knowledge

· Posted by: Iryna Melnykov

The lab exam tests candidates on solutions that can be developed/configured using the listed equipment and software. Candidates may see more recent software versions during their attempt but will only be tested on features that are supported in the list below.

Passing the exam requires a depth of understanding difficult to obtain without hands-on experience. Early in your preparation you should arrange access to the listed equipment and software.

Virtual Machines

- Ubuntu Linux: 20.04 LTS
- IOSvL2: 15.2
- IOSv: 15.9
- Cisco Catalyst 8000V: 17.5
- Nexus 9300v (N9Kv): 9.3(8)
- Cisco Application Policy Infrastructure Controller 5.2 w/ ACI Simulator

https://learningnetwork.cisco.com/s/devnet-expert-exam-topics-lab
https://learningnetwork.cisco.com/s/article/devnet-expert-equipment-and-software-list

Where do I start?

Exam Exam Topics

1.4 Use Git in a CI/CD development workflow

1.5 Troubleshoot issues with a CI/CD pipeline (e.g., code-based failures, pipeline issues, and tool incompatibility)

3.5 Design a model-driven telemetry solution based on given business and technical requirements by using gNMI dial-in, gRPC dial-out, and NETCONF dial-in

3.6 Create YANG model-driven telemetry subscriptions
- 3.6.a Identify model elements and cadence
- 3.6.b On-change or event drive
- 3.6.c Optimize frequency
- 3.6.d Dial-out subscription
- 3.6.e Secure telemetry streams
- 3.6.f Confirm data transmission
- 3.6.g Identify network issues and make changes

Equipment and Software List

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Other Third Party Software

- GitLab 14
- GitLab Runner 14
- HashiCorp Vault 1.8
- Telegraf 1.19
- InfluxDB 1.8
- Grafana 8.1
- Kubernetes 1.23

Where do I Start?

Candidate Workstation

Note: A virtual machine image (OVA) of the Candidate Workstation can be downloaded here (8.2 GB). The instructions to install it on vCenter are available for download at the bottom of the page. These assets are provided to assist candidates in preparing for the DevNet Expert Lab exam. They are provided without support or warranty from Cisco.

This is based on Ubuntu 20.04 LTS. Manual pages for all software packages will be supplied where available.

https://cs.co/DevExCWS

Candidate Workstation : A close up view

- Linux based : Ubuntu 20.04
- The workstation you will be using during your exam
- All software and tools pre-installed that you have access to on the exam
  - NSO is not installed on downloadable CWS, but can be installed from DevNet
- Get familiar with the candidate workstation during your preparation for the DevNet Expert exam
- While studying, use it in your testing environment.

Network Topology

- It’s not an expert exam in network technologies!
- Focus of the exam is network automation.
- The CML ‘Personal’ edition is sufficient to build network topologies for all automation skills for exam.

https://learningnetworkstore.cisco.com/cisco-modeling-labs-personal/cisco-modeling-labs-personal/CML-PERSONAL.html

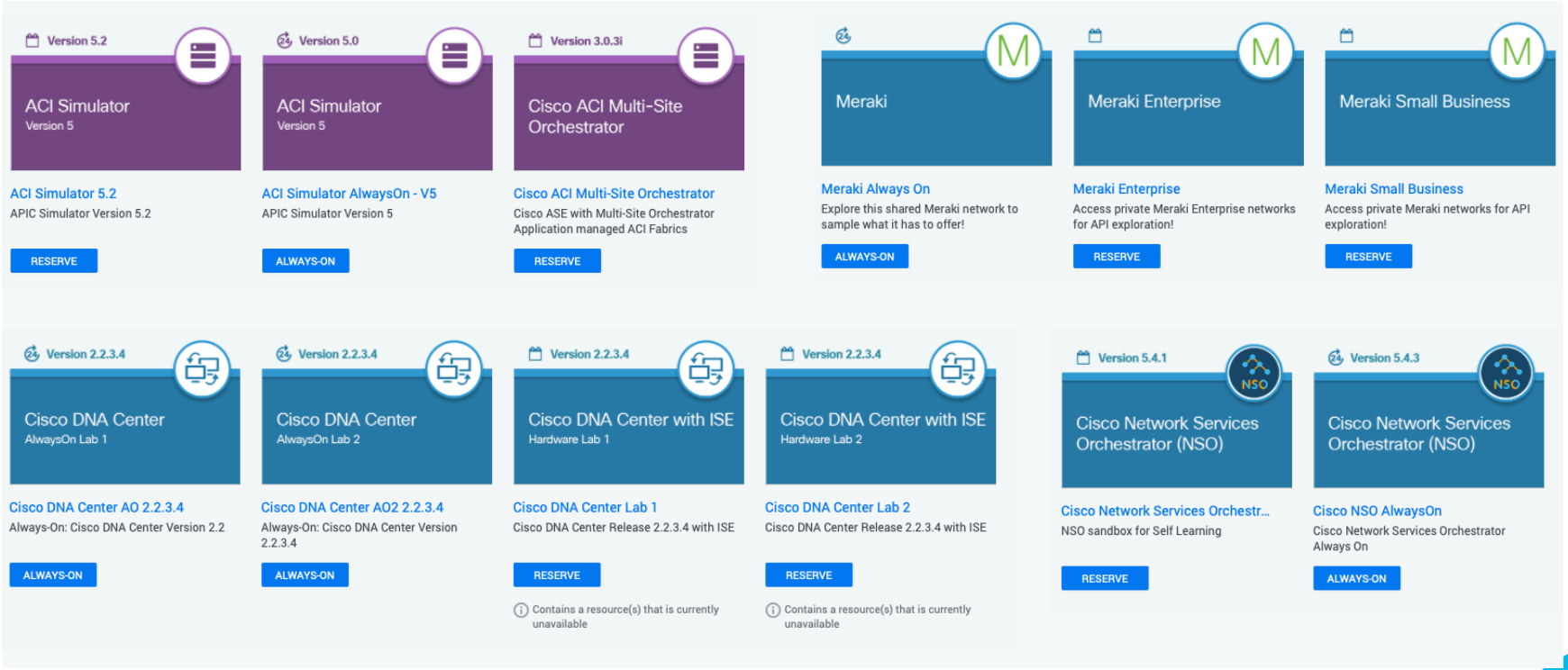
Service Utilities (Vault, GitLab, TIG...)

- Details on versions can be found in the software and equipment list
- All these utilities will be installed and ready for use on the exam. Focus will be on the use and application these service utilities in the questions.
  - *These applications are NOT running on the CWS or included in the Published OVA.*
- All code will need to be committed to the GitLab environment in the lab. Spend time on getting proficient with GitLab

What about access to Cisco software and platforms??

- Cisco NSO, Cisco DNAC, Meraki, Cisco ACI, …
- Checkout the DevNet Sandboxes!
- Checkout DevNet Learning Labs

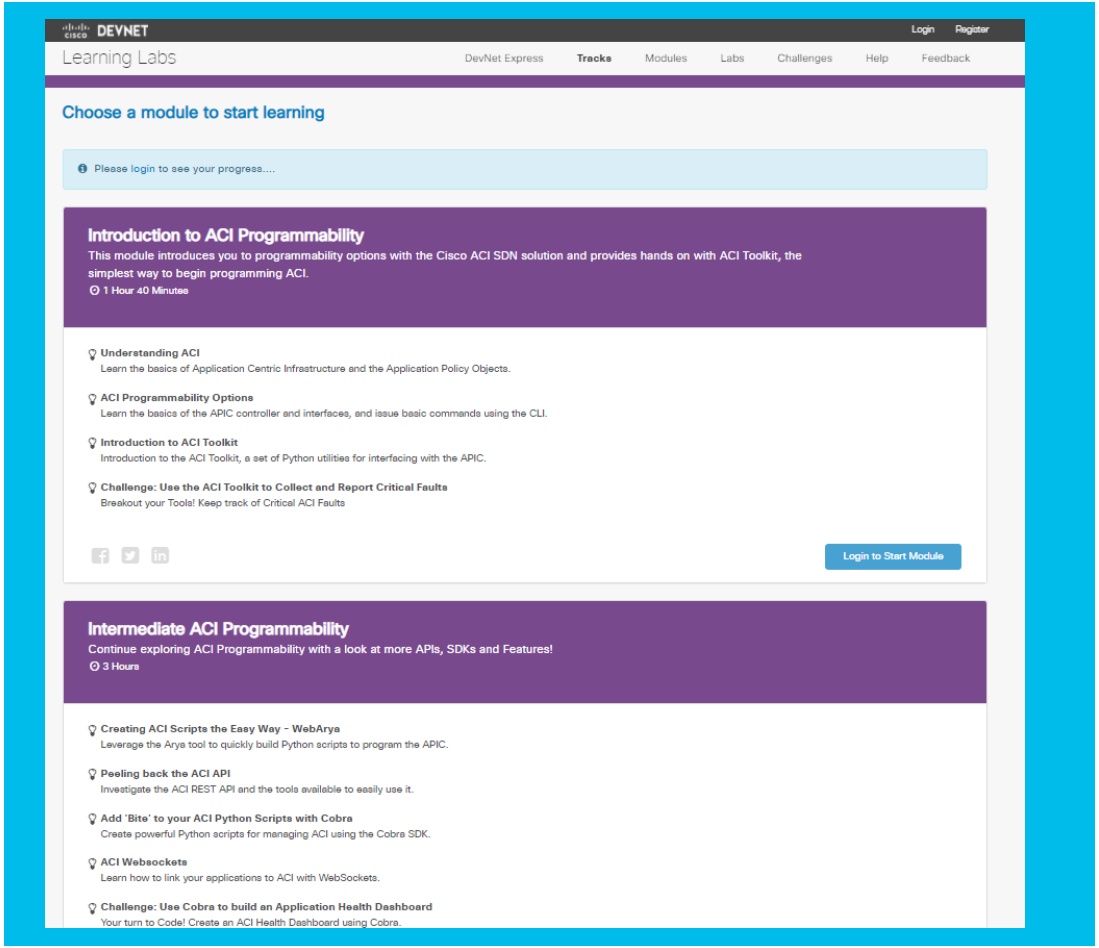
DevNet Sandboxes



https://developer.cisco.com/docs/sandbox/

DevNet Learning Labs

https://developer.cisco.com/learning/tracks



Get ready!!

Lab exam registration is open!

First day to sit the lab is May 2, 2022.

The bridge to possible