Cisco Certified DevNet Associate Certification (DEVASC 200 – 901)
Introduction

A LOOK AT OUR HISTORY…

Meet Carl the Network Engineer

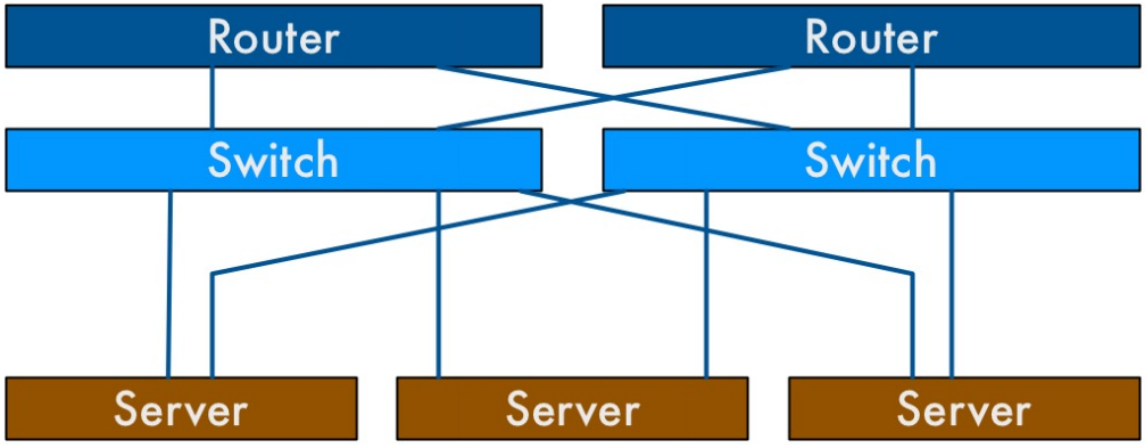
Programming Skills

- TCL
- EEM
- Expect Scripts

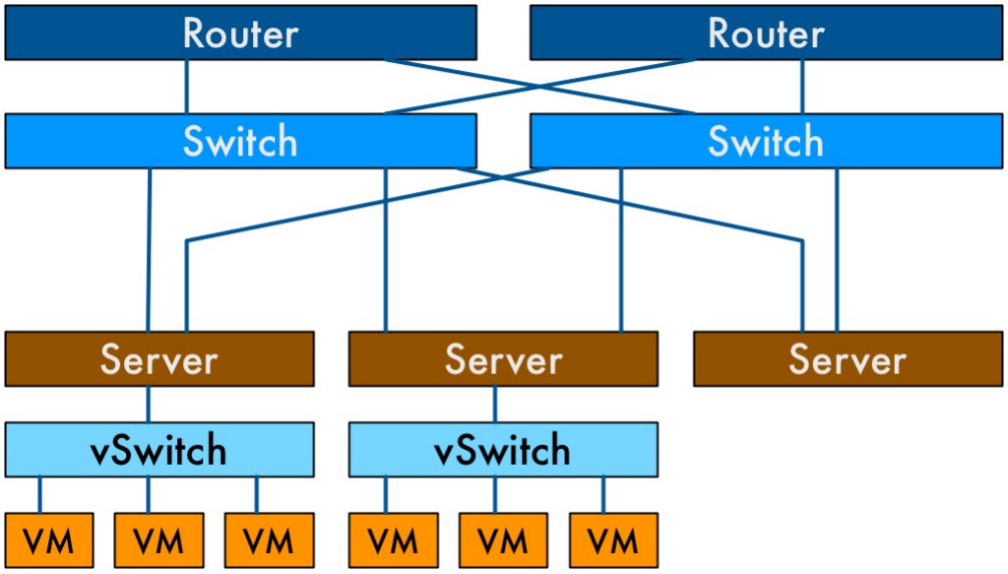
Networking Skills

- Spanning-Tree
- Routing Protocols
- QoS
- VPN Design
- Spanning-Tree
- VOIP
- Fibre Channel
- Security Policy
- MPLS
- Spanning-Tree
- Did I mention Spanning-Tree?

The Network…



The Network…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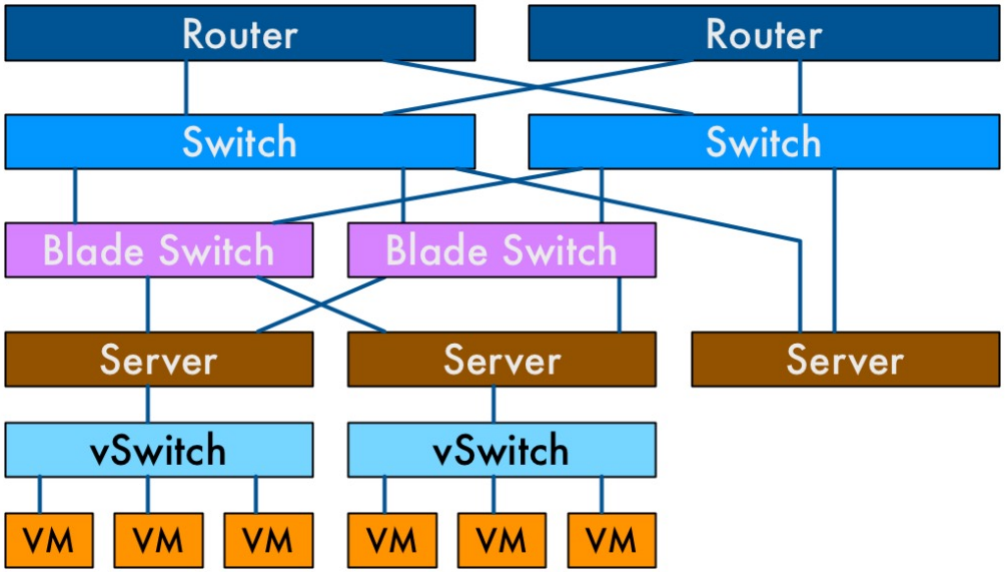
The Network…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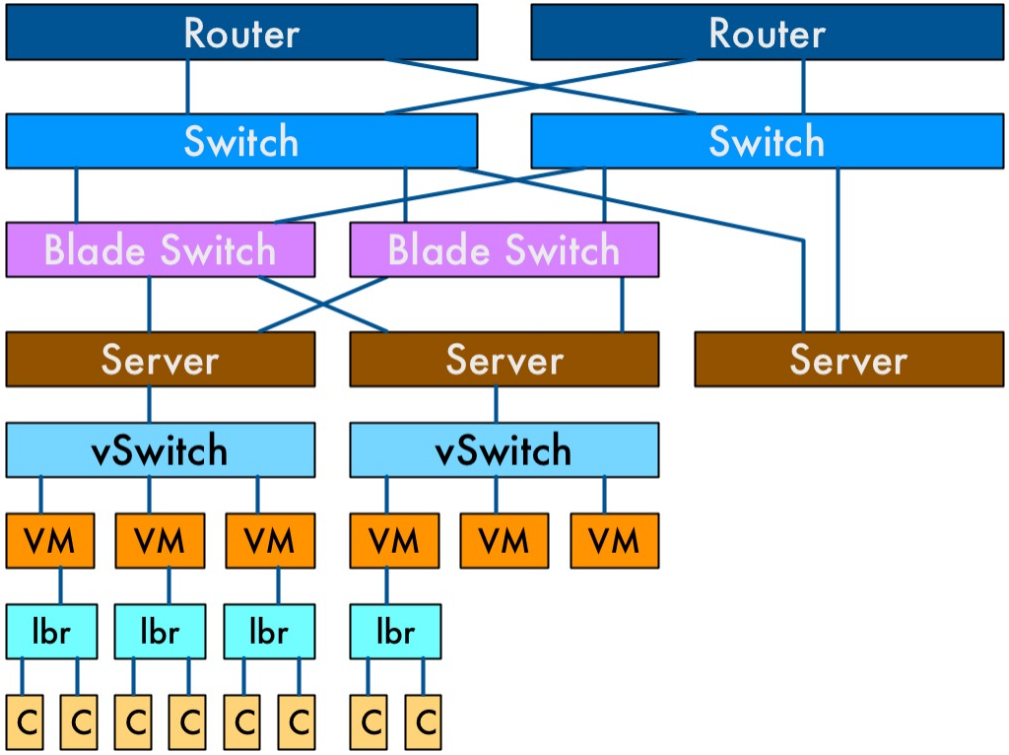
The Network…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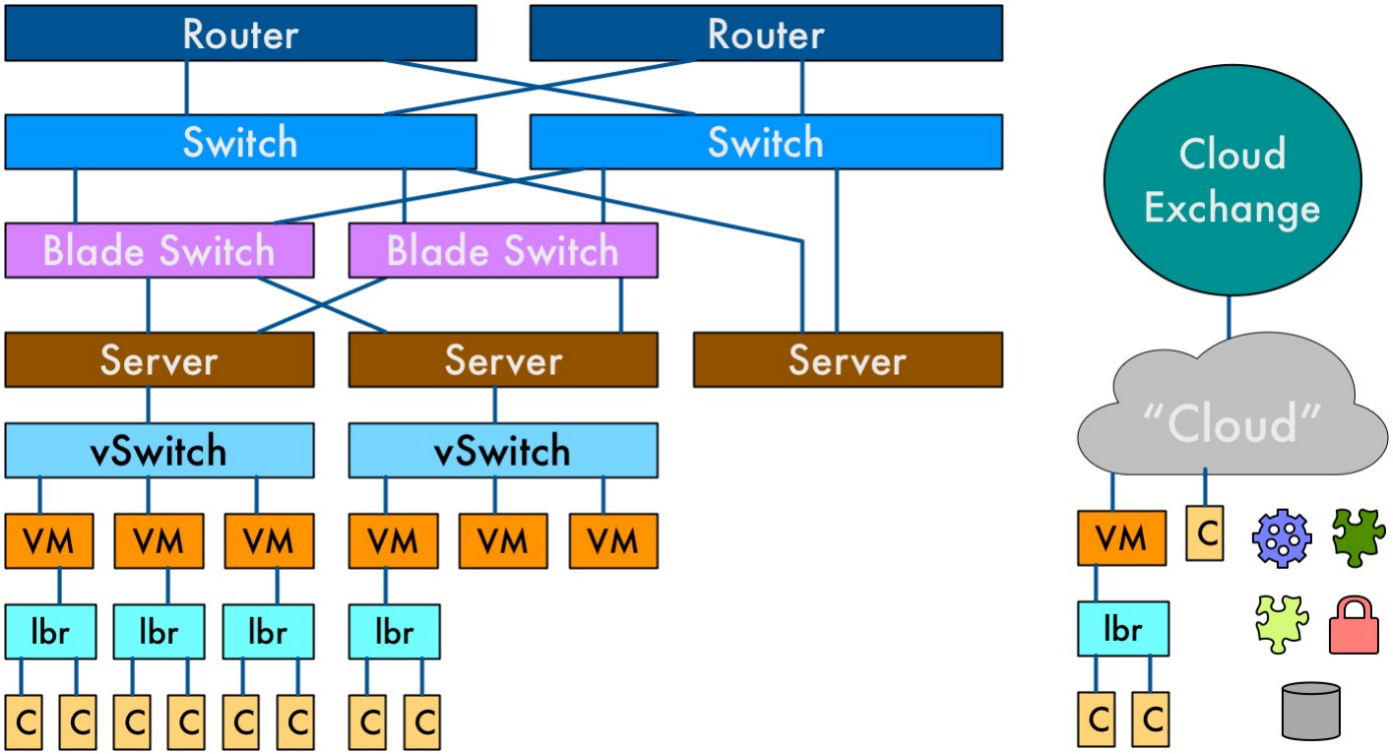
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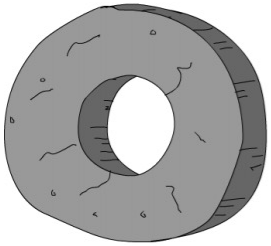
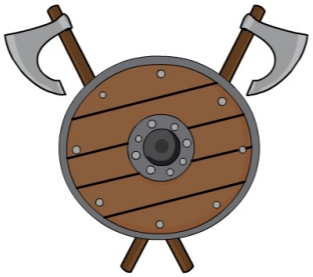
NETWORKING THROUGH THE AGES…



Stone Age

Spanning Tree

VLANs



Bronze Age

Routing Protocols

WAN Design

IP-magedon

The Renaissance

SDN

OpenFlow

Controllers

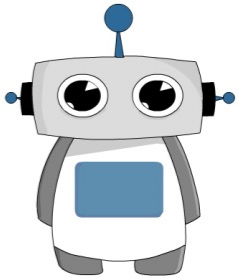
Overlays

MP-BGP

VXLAN

Micro-Segmentation

White Box



Programmable Age

Cloud

Python

REST / APIs

NETCONF / YANG

“Fabrics”

Network Function Virtualization (NFV)

DevOps

Containers

The Four Ages of Networking…..

Carl's 3 Step Approach to Network Programmability

Phase 1

- Python
- REST APIs
- JSON/XML
- git/GitHub

Phase 2

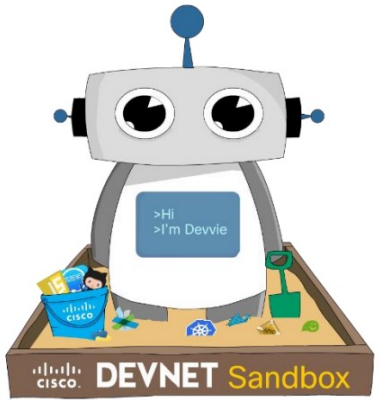
- Linux Skills
- Ansible
- Docker
- NETCONF/YANG

As Needed

- Network Controllers
- IOT Networking
- Cloud Networking
- NFV
- "DevOps"

Phase 3

- Linux Networking
- Container Networking
- NFV



Carl is now Captain Cloud!

Core Programming

- Python
- REST APIs
- JSON/XML
- Linux Skills
- Ansible (Puppet/Chef/etc)
- git/GitHub
- Docker
- ”DevOps”

“New” Networking Stuff

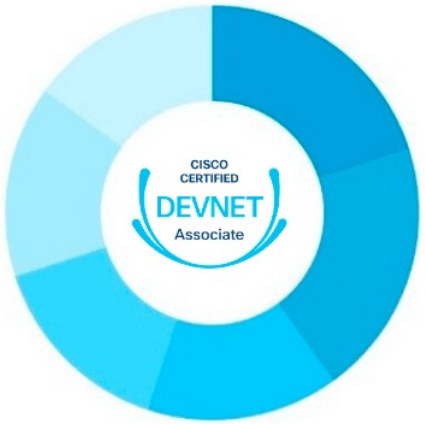
- Network Controllers
- NETCONF/YANG
- Container Networking
- Cloud Networking
- Linux Networking
- IOT Networking
- NFV

CISCO DEVNET OVERVIEW

Cisco Career Certification Overview

Cisco DevNet Associate Knowledge Domains

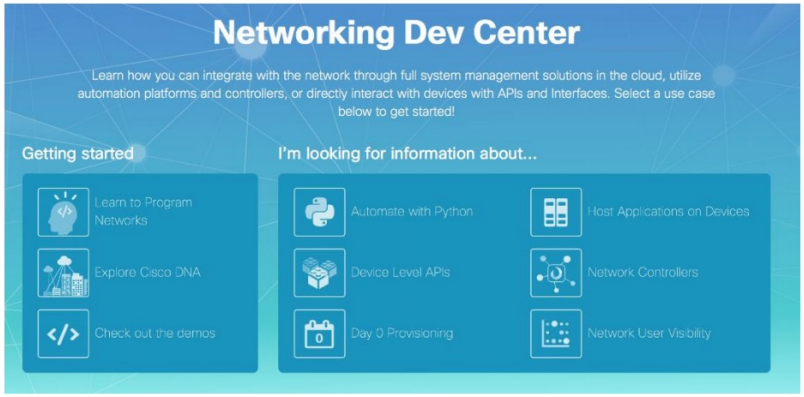
KNOWLEDGE DOMAINS

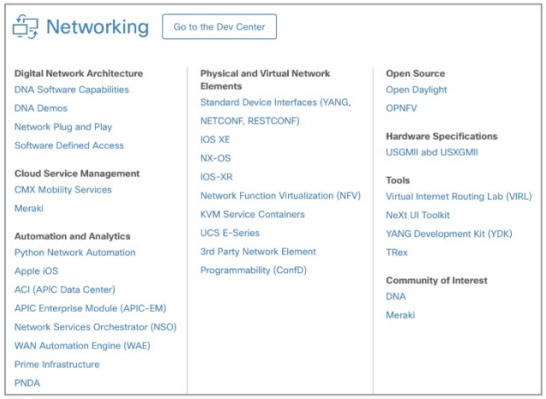


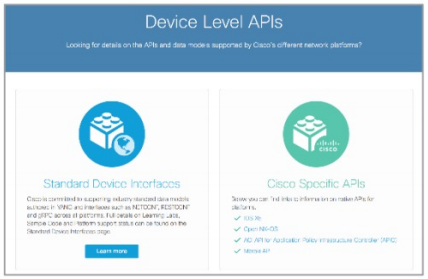
- 20% Understanding and Using APIs
- 20% Infrastructure and Automation
- 15% Application Deployment and Security
- 15% Cisco Platforms and Development
- 15% Network Fundamentals
- 15% Software Development and Design

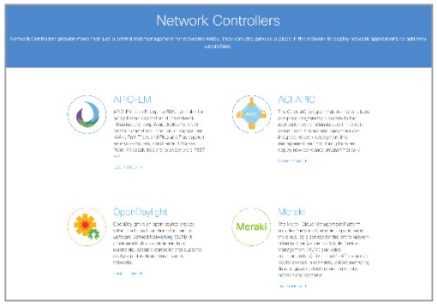
Networking on DevNet

https://developer.cisco.com/site/networking/





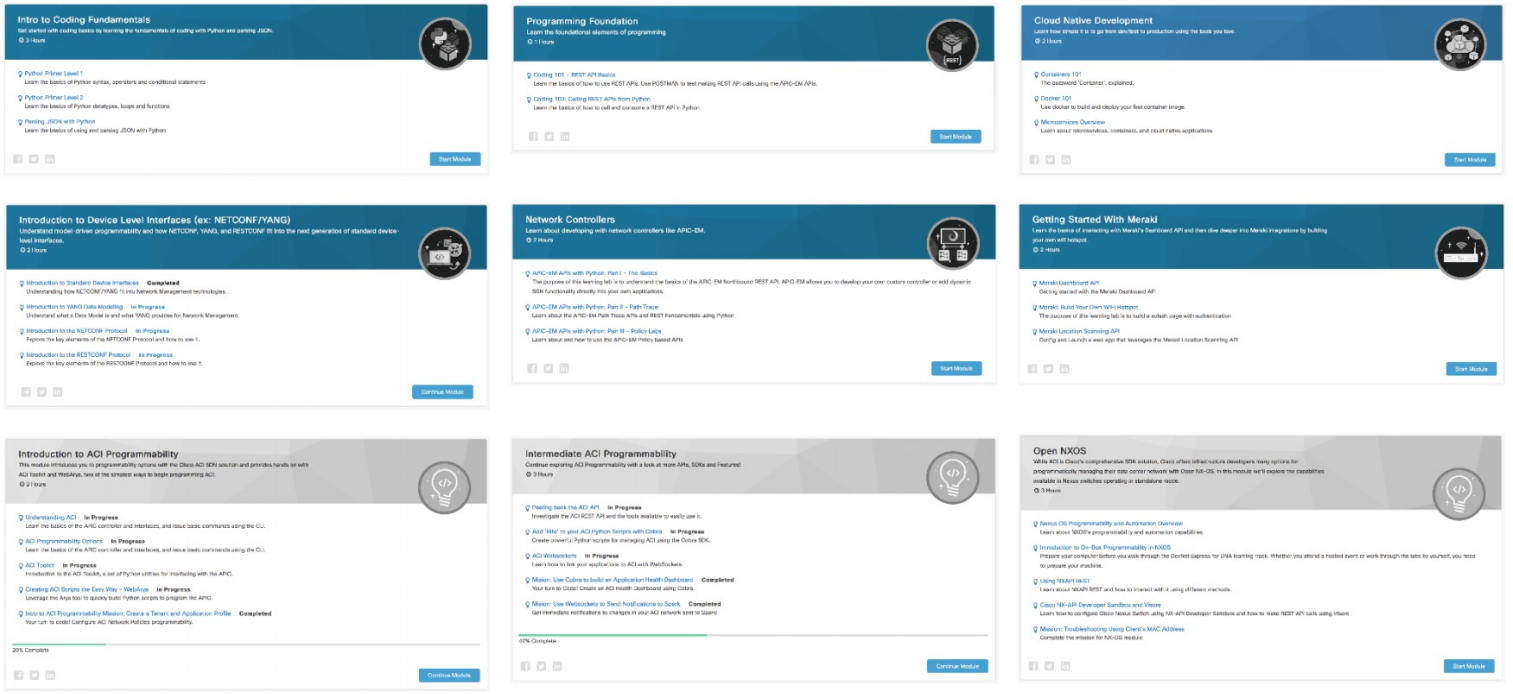




DevNet is "the" resource for engineers looking to get started with network programmability

DevNet Learning Labs Anytime, Anywhere!

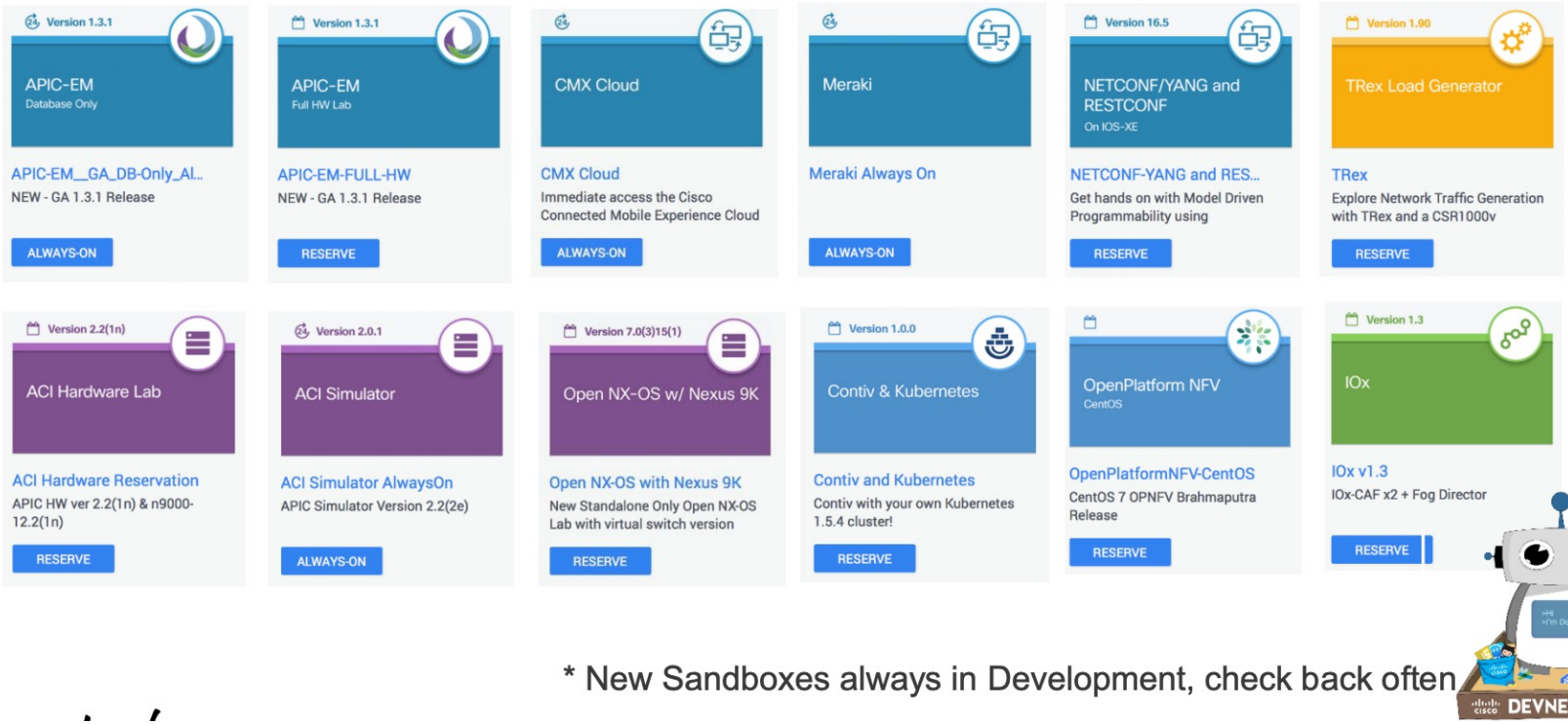
https://developer.cisco.com/learning/



* New Labs and Modules Always in Development, check back often

DevNet Sandbox

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



* New Sandboxes always in Development, check back often

Devnet course overview (1)

MODULE 1: SOFTWARE DEVELOPMENT AND DESIGN

- Describing Software Development Process
- Linux BASH
- Software Version Control

MODULE 2: PYTHON FUNDAMENTALS FOR DEVASC (1)

- Getting Started with Python
- Understanding Python Syntax
- Data Types and Variables
- Flow Control with Conditionals and Loops
- Python Functions
- Working with Python Modules
- File Input and Output

MODULE 3: UNDERSTANDING AND USING APIs

- Application Programming Interfaces (APIs)
- REST Tools
- Introducing Cisco Platforms and APIs

MODULE 4: APPLICATION DEPLOYMENT

- Application Deployment Models
- DevOps
- Docker

MODULE 5: INFRASTRUCTURE AND AUTOMATION

- Infrastructure Automation
- Model-Driven Programmability