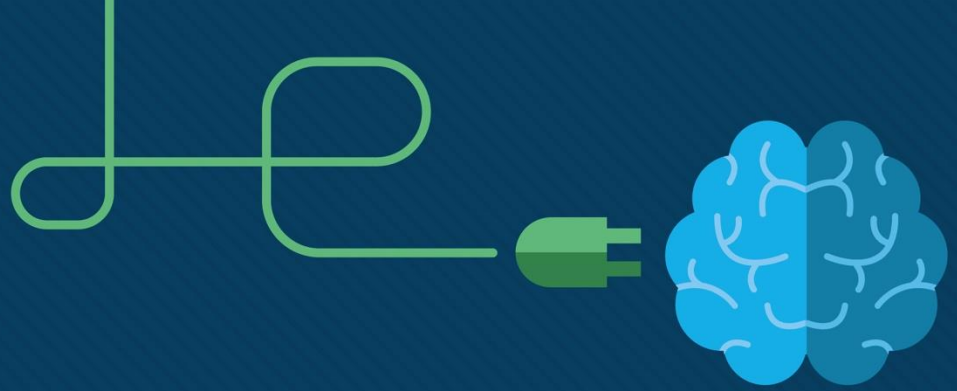

Module 1: Course Introduction

DevNet Associates v1.0

Course Overview

The DevNet Associate course will cover the basics of software development, networking fundamentals and automation. It will comprise of the following modules:

- **Understanding and Using APIs Module**: In this module, you will learn about APIs, their benefits, and how to troubleshoot them.
- **Software Development and Design Module**: In this module, you will learn the main concepts of software development and be equipped with the necessary tools to write quality code.
- **Network Fundamentals Module**: In this module, you will learn about the basics of network, network devices, network protocols, and troubleshooting connectivity issues.
- **Infrastructure and Automation module**: In this module, you learn to manage the infrastructure with automation, instead of manually setting up the infrastructure.
- **Cisco Platforms and Development:** In this module, you will learn about data centers and networking including data models and security.

Module Objectives

Module Title: Course Introduction

Module Objective: Use basic Python programming and Linux skills.

Topic Title	Topic Objective
Your Lab Environment	Install a virtual lab environment.
Linux	Manage the Linux file system and permissions.
Python	Use basic Python programming

1.1 Your Lab Environment

Set Up Your Lab Environment

- With virtualization, virtual computers can operate and run within physical computers. These computers are called Virtual Machines (VMs).
- VMs are often called guests, and physical computers are often called hosts.
- Anyone with a modern computer and operating system can run virtual machines.

Lab – Install the Virtual Lab Environment

In this lab, you will complete the following objectives:

- **Part 1**: Prepare a Computer for Virtualization
- **Part 2**: Explore the DEVASC VM GUI
- **Part 3**: Create Lab Environment Accounts
- **Part 4**: Install Webex Teams on your Device

1.2 Linux

Linux for DevNet

- Linux has gained widespread use in servers, Internet of Things (IoT) devices, networking equipment, smartphones, and many other devices that may not seem as even being computers.
- All coding labs in this course are performed on a Linux-based VM.

Lab – Linux Review

In this lab, you will complete the following objectives:

- **Part 1**: Launch the DEVASC VM
- **Part 2**: Review Command Syntax Navigation
- **Part 3**: Review File Management
- **Part 4**: Review Regular Expressions
- **Part 5**: Review System Administration

How did you do on the Linux Review Lab?

- If there was any issue with the Linux Review lab, then take the Linux Unhatched course.
- The Linux Unhatched course is a free, online, and self-paced course.

1.3 Python

The Power of Code

In this video, you will view experts talking about their experiences and passion towards coding.

Python Programming

- Python is an easy to learn programming language.
- Few factors that make Python a great tool for learning basic coding are:
  - **It is easy to learn** - the time needed to learn Python is shorter than for many other languages.
  - **It is easy to use for writing new software** – it is possible to write code faster when using Python.
  - **It is easy to obtain, install and deploy** - Python is free, open and multiplatform.
- Python provides a solid foundation and allows to learn other programming languages (for example, C++, Java, or C) much easier and faster.

Lab - Python Programming Review

In this lab, you will complete the following objectives:

- **Part 1**: Launch the DEVASC VM
- **Part 2**: Start Python and VS Code
- **Part 3**: Review Data Types and Variables
- **Part 4**: Review Lists and Dictionaries
- **Part 5**: Review the Input Function
- **Part 6**: Review If, For, and While Functions
- **Part 7**: Review Methods for File Access

How did you do on the Python Programming Review Lab?

- If there was any issue with the Python Programming lab, take the Python Essentials course listed in the Student Resources page.
- The Python Essentials course is a free, online, and self-paced course.

1.4 Course Introduction Summary

What did I learn in this module?

- This Course Introduction module was designed to help you prepare to take the DevNet Associate (DEVASC) course.
- The Install the Virtual Lab Environment gets you and your PC ready for the coding labs you will find in this course.
- The Linux Review and Python Programming Review labs help you to determine whether you are ready with the prerequisite knowledge and skills required to successfully take the DEVASC course.


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