 CISCO **DevNet Associate** v1.0

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Introduction

1.0.1

First Time in This Course

Welcome to the DevNet Associate (DEVASC) course. The DEVASC course is designed for people who want to learn the knowledge and skills they need to work in network programming and automation. In addition to learning basic coding and networking concepts, learners will create code using Python.

These course materials will assist you in developing the skills necessary to do the following:

- Use basic Python programming and Linux skills.
- Implement a development environment using DevNet resources.
- Use software development and design best practices.
- Create REST API requests over HTTPS to securely integrate services.
- Explain the processes and devices that support network connectivity.
- Use current technologies to deploy and secure applications and data in a cloud environment.
- Compare software testing and deployment methods in automation and simulation environments.
- Compare Cisco platforms used for collaboration, infrastructure management, and automation.

This course contains numerous opportunities for practicing and assessing your skills through various types of assessments, labs and simulations.

1.0.2

Student Resources

There are a number of tools and resources that are available to you that will help you in your journey as you develop your DevNet skills and prepare for job opportunities.

Developer Environment

This is the environment you will create on your PC. Most of the labs in this course are performed on your own developer environment. The first lab in the next topic explains how to do this.

Packet Tracer

Packet Tracer simulates the internal workings of a network. Download and install the latest version of Packet Tracer here: Packet Tracer Resources.

If you are new to Packet Tracer, take this FREE, short, online course now: Introduction to Packet Tracer Course.

You can use your smartphone, tablet, or desktop to access your course; however, Packet Tracer activities, as well as some other activities, quizzes, and exams are best experienced using a PC.

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More Courses

Choose a course, practice what you learn, and become an IT professional. Check out our Course Catalog.

You'll get a lot more out of this DevNet course if you have a good foundation in Linux. Try NDG's Linux Unhatched course for free!

This DevNet course makes use of Python. Get the basics of Python in this fun, free course!

1.0.3

Course Overview

Welcome to the DevNet Associate course! This course will teach you the basics of software development, networking fundamentals and automation.

The industry is shifting towards automation, applications, and integrations. It is important to learn the necessary skills in order to keep up with the fast pace of technology. The modules in this course were specifically chosen to help you obtain critical job skills.

The cause of this shift in the industry is Application Programming Interfaces (APIs). We need to be more efficient in how we deploy devices, applications, networks and infrastructures. One way to do this is to eliminate repetitive manual tasks with computer automation using APIs. APIs make it possible to build automated scripts, as well as integrations that build a network between applications. This lets the applications share data, request actions to be performed, or even notify each other when a specific event happens. You will learn about APIs, their benefits, and how to troubleshoot them in the Understanding and Using APIs module.

To be able to use APIs to write scripts and build applications, you must know how to code. You need to learn the main concepts of software development and be equipped with the necessary tools to write quality code. These topics will be covered in the Software Development and Design module.

Automation and integrations through APIs cannot exist without the network. The network allows communication between applications and clients. Using APIs have helped make the network more efficient through network programmability. Network programmability is the ability to configure, monitor, and react to events in the network in real-time. It is important to learn about the basics of the network, which is discussed in detail in the Network Fundamentals module.

With the number of APIs growing in the industry and applications integrating together, it is important to understand how to secure the network and your applications to avoid incidents such as data breaches. There are different security concerns for each deployment type, so you need to know about the various modes of deployment to make the best choice for your application. More details about securing the network and your applications are discussed in the Application Deployment and Security module.

APIs have already opened the doors for automation of the network. Network automation can be taken a step further by the automated deployment of applications. You can do this with infrastructure as code. This is basically the ability to manage the infrastructure with automation, instead of manually setting up the infrastructure. You will learn more about this topic in the Infrastructure and Automation module.

The last module is Cisco Platforms and Development. This module pulls it all together in big categories, such as collaboration, compute including data centers, networking including data models, and security. Let's get started!

1.0.4

Why Should I Take this Module?

Why should you take this module? Because you are a NetAcad student and you know that the world of networking is changing all the time and you want to keep your knowledge and skills up to date! The newest change in networking is using code to automate many of the functions of the network. This module is intended to be a refresh of Linux and Python skills. It contains labs and quizzes to help you recall your skills.

The DevNet Associate course will teach you the necessary skills around software development, APIs, networks, automation, and security. These skills will help you stay up-to-date with the rapid changes in the industry. At the end of each module, you can test your newly acquired skills by taking the quiz assessments. Are you ready to begin?

1.0.5

What Will I Learn to Do in this Module?

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.