

Curso ATNE - Networking Essentials

20,00 Horas

Introdução

This Networking Essentials course provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level information and communication technology.

Público-alvo

This course is meant for those looking to get started with complexities of Networking.

This course may not be for those who are already Networking Professionals.

Quando completar o curso

This course you, along with the instructor, will take a look at the following in depth:

- Protocols and the magic of protocols, in particular, TCP/IP.
- Working with name-resolution.
- IP address allocation.
- Troubleshooting.

Pré-requisitos

Basic Skills of computer and Operating Systems

Exames

(não existem exames)

Conteúdo em detalhe

Networks

An introduction to networking, and discusses the different network topologies.

Ethernet

Ethernet wiring standards and physical layer classifications.

OSI Model

OSI model, and the associate layer-1 through layer-3

MAC Addresses

What is a MAC address and how it is derived.

Function of Address Resolution Protocol (ARP)

TCP/IP

What is TCP/IP how it works

TCP/IP Architecture

Description of IPv4 Address Structure

IPv4 Address Classes

IPv4 Reserved Addresses

Setting a Static IP Address

IPv4 Address Decimal Binary Notation

DNS, hosts files

IPv4 Addresses

Basic elements of an IPv4 address.

Subnet Mask

Concepts of subnetting and standard class addressing.

Overview of CIDR

Gateway Addresses

The role that the default gateway plays in a network.

The Concept of Subnetworks

DHCP

The dynamic host configuration protocol (DHCP) including a use case for dynamic reservation tables.

Ping Utility (pouco relevante, já usam)

The ping utility accessed through the Windows Command Prompt application.

IPConfig Utility (pouco relevante, já usam)

Ipconfig utility through the Windows Command Prompt application. Review ipconfig show all and other options.

Switches vs Routers

Network switch and router hardware equipment.

IP Scanner Utility

Different hardware and software techniques for finding IP devices on a network.

Introduction to Transport Protocols

Transmission Control Protocol (TCP)

User Datagram Protocol (UDP)

Port Numbers

The role of the port number in association with the IP address of a network destination.

Unicast

Different network communication technologies with a focus on Unicast communications.

Multicast

The benefits of Multicast communications, especially in consideration of network media streaming.

Introduction to IPv6

IPv4 vs IPv6 Address Space

Types of IPv6 Address

802.1x Security