Introduction

11.0.1

Why should I take this module?

Welcome to IPv4 Addressing!

Currently, there are still plenty of networks using IPv4 addressing, even as the organizations which use them are making the transition to IPv6. So it is still very important for network administrators to know everything they can about IPv4 addressing. This module covers the fundamental aspects of IPv4 addressing in detail. It includes how to segment a network into subnets and how to create a variable-length subnet mask (VLSM) as part of an overall IPv4 addressing scheme. Subnetting is like cutting a pie into smaller and smaller pieces. Subnetting may seem overwhelming at first, but we show you some tricks to help you along the way. This module includes several videos, activities to help you practice subnetting, Packet Tracers and a lab. Once you get the hang of it, you'll be on your way to network administration!

11.0.2

What will I learn to do in this module?

Module Title: IPv4 Addressing

Module Objective: Calculate an IPv4 subnetting scheme to efficiently segment your network.

Topic Title	Topic Objective
IPv4 Address Structure	Describe the structure of an IPv4 address including the network portion, the host portion, and the subnet mask.
IPv4 Unicast, Broadcast, and Multicast	Compare the characteristics and uses of the unicast, broadcast and multicast IPv4 addresses.
Types of IPv4 Addresses	Explain public, private, and reserved IPv4 addresses.
Network Segmentation	Explain how subnetting segments a network to enable better communication.
Subnet an IPv4 Network	Calculate IPv4 subnets for a /24 prefix.
Subnet a /16 and a /8 Prefix	Calculate IPv4 subnets for a /16 and /8 prefix.
Subnet To Meet Requirements	Given a set of requirements for subnetting, implement an IPv4 addressing scheme.
Variable Length Subnet Masking	Explain how to create a flexible addressing scheme using variable length subnet masking (VLSM).
Structured Design	Implement a VLSM addressing scheme.