

## Cisco CCNA (200-301)

### Episode Title: Learning Basic Subnetting Contexts and Concepts

Learner Objective: Learn Subnetting Basics

Description: You will learn how subnetting is useful and what problem it addresses. You will also learn how to perform subnetting using basic tools like pen and paper.

#### Questions:

##### Q: What is subnetting?

- At the heart of it, it's division.

##### Q: Why do we need it?

- Remember there's a limited number of IPv4 addresses.
  - NAT
  - Private IP addresses
  - VLSM

##### Q: When do we use it?

- Context is important! ISP assigns your business a block of addresses. Usually, they've already done the work
- Internally, within your business, you can do the same for network management.

##### Q: What do we need to do subnetting?

- Have a grasp of Binary to Decimal conversion.

128		64		32		16		8		4		2		1	
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- Remember the component parts of an IP Address and subnet masks
- Binary ANDing

#### Endnote, External and etc.

- Objective: 1.6.1b
- Exam 200-301 Objectives