**CHAPTER 7: EXPLORE THE NETWORK**

Chapter outline – Introduction, IPv4, IPv6, Connectivity verification

7.1 IPv4 Network Addresses

Upon completition of this section, you should be able to:

* Convert between binary and decimal numbering systems
* Describe the structure of an IPv4 address including the network portion
* Compare

7.1.1: Binary and Decimal Conversion

IPv4 Addresses – групирани в 4 октета, 32 бита

* Dotted decimal
* Octets
* 32-bit address

Positional Notation

* Decimal Positional Notation
* Applying Decimal Positional Notation
* Binary Positional Notation

Decimal to Binary Conversion

7.1.2 IPv4 address

- The Subnet Mask

-ANDing – Logical AND is the comparison of two bits.

- ANDing between the IP address and the subnet mask yields the network address.

- The Prefix Length

Network, Host and Broadcast addresses

7.1.3 IPv4 Unicast, Broadcast