

IMT2521 Network administration, Introduction

- ▶ Graduate of 2005
- ▶ Engineer, Comp. Sci.
- ▶ Systems and network admin at GUC
- ▶ Cisco Networking academy instructor

Pre-requisite, one (or both) of:

- ▶ IMT2431 Data communication and Network security
- ▶ CCNA Exploration Module 1, Network fundamentals v.4+

IMT2431 Data communication and network security:

- ▶ Basics of computer networks
- ▶ Application layer (HTTP, SMTP, DNS)
- ▶ Transport layer (TCP, UDP)
- ▶ Network layer (IP, ICMP, routing)
- ▶ IPv4 Network addressing
- ▶ Data link and physical layer (Ethernet, MAC, ARP, PPP, ATM)
- ▶ + network security.

Network Fundamentals:

- ▶ Communicating in a Network-centric world
- ▶ Communicating over the Network
- ▶ Application Layer functionality and Protocols
- ▶ OSI Transport and Network layers
- ▶ Addressing the network, IPv4
- ▶ Data link layer, OSI Physical layer ,Ethernet
- ▶ Planning, cabling, configuring and testing your network.

- ▶ Routing of network traffic, including:
 - ▶ The TCP/IP protocol family, addressing and subnet calculation
 - ▶ Routing-protocols - RIP, EIGRP and OSPF
 - ▶ Router components and router configuration
- ▶ Switching in computer networks, including
 - ▶ Switching and virtual LANs (VLAN)
 - ▶ Spanning Tree Protocol
 - ▶ Supporting systems of switched networks
 - ▶ Packet filtering and access control
- ▶ WAN-technologies
 - ▶ WAN-equipment and communication formats in WAN
 - ▶ PPP, components, session handling and authentication
 - ▶ Frame Relay technology
 - ▶ Services and supporting systems for access delivery, DHCP and NAT
- ▶ Infrastructure dependency, troubleshooting, tools

This course is built around Cisco Networking Academy, CCNA Exploration v4.0.

- ▶ Module 1: Network Fundamentals
- ▶ Module 2: Routing Protocols and Concepts
- ▶ Module 3: LAN Switching and Wireless
- ▶ Module 4: Accessing the WAN

Module 1 is a requirement, while this course covers the remaining three.

About CCNA certification

- ▶ Standard industry certification
- ▶ A standard mark of knowledge about networking.
- ▶ Price examples:
 - ▶ Sonans private: **30.000,-**
 - ▶ Noroff: **45.000,-**
 - ▶ Global Knowledge std. track: **65.000,-**
 - ▶ Global Knowledge fasttrack: **35.000,-**
- ▶ Common for the above: additional fee for the certification.
- ▶ As part of your education: 1/2 price of the cert.

Tight schedule

We have:

- ▶ 3 modules
- ▶ 26 chapters (11 + 7 + 8)
- ▶ 15 weeks