Lab Assignment 5 – Simple Guide
DAT300 - Communication Technology II

Introduction

Lab assignment 5 will test your understanding of real-world network design principles, challenging you to apply concepts such as WLAN, static routing, OSPF, and ACLs to create a functional and secure communication network in Cisco Packet Tracer.

Communication Network Design

As a communication network designer, you must ask yourself key questions to guide your network planning. This informal guide will help you start developing your network design capabilities.

A communication network designer thinking.

1. What is the motivation for your network?
    a. Are you designing for a hospital, city library, or university campus?
2. What are the network requirements?
    a. Does the network support:
        i. Sending and receiving emails?
        ii. Internet access?
        iii. Wireless devices?
        iv. Video communication?
    b. Is network security required?
    c. Is support for remote workers necessary?
    d. What network topology best suits the design? (Consider simplicity, manageability, troubleshooting, and adaptability.)
    e. Does the network support user mobility?
    f. Is the network future-proofed for technological integration?
    g. What is the estimated cost (e.g., routers, switches, servers) in USD?
3. What features and services are provided by the network?
    a. The network can provide various services, i.e., connecting the user to the Internet, data sharing among users, accessing different web services for other functionalities.
4. What devices to use in the network?

Devices	Device name	Quantity
Router		
Switches		
Servers (DNS, HTTP, email)		
Wireless Access Points		
PCs		
Laptops		
Smartphones		

5. Addressing table?
    a. What address was configured on each device?