Case Study

For the designed network, the following project points should be completed and documented:

1. Analysis of customer requirements.
1.1. 1.2.Technologies (wired, wireless, types of links, …)
1.3.Topologies (schematic diagram of the network (and possibly sub-networks))
1.4.An illustration of the solution (Visio / Dia or related)

2. IP addressing
Description of the concept of network / subnet allocation / IP addresses
2.2. A table of interfaces and masks for each interface of each router
2.3. Routing protocols

3. Security
3.1. Access rules - ACL checklists (if applicable!)
3.2. Virtual local networks - concept. (if used!)

4. Physical design of the solution
4.1. Devices (models of routers, switches, accessories)
4.2. Connections (cables, categories, etc.)
4.3. All network components

5. Configuration
5.1.Command or configuration - routers
5.2.Command or configuration – switches

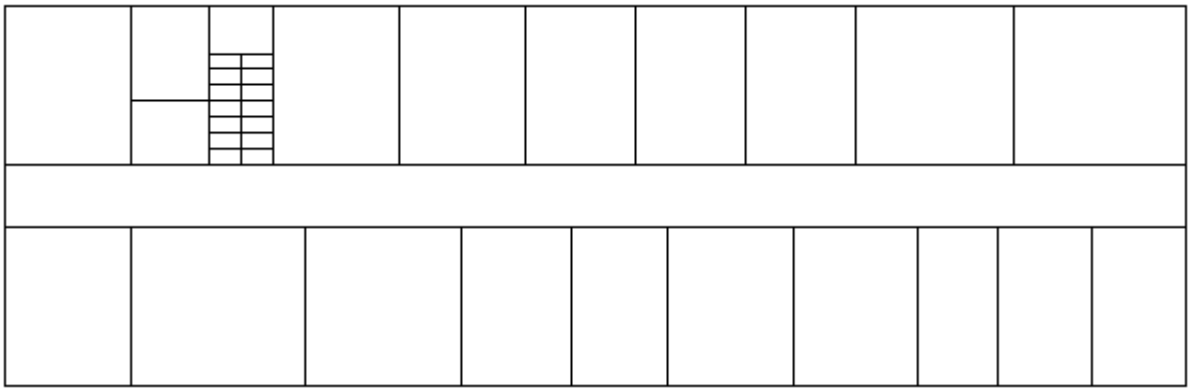
Project

General Information

Design a local network for a combined heat and power plant:
- office building,
- machine hall,
- two lodges,
- Distance between all buildings is 50 – 250 m

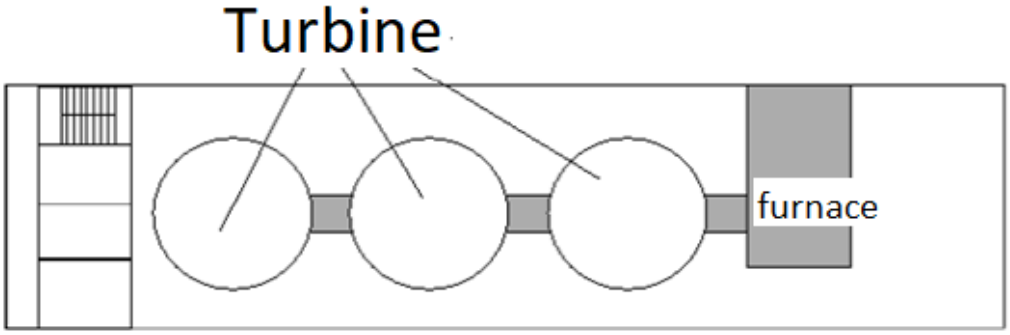
Office building

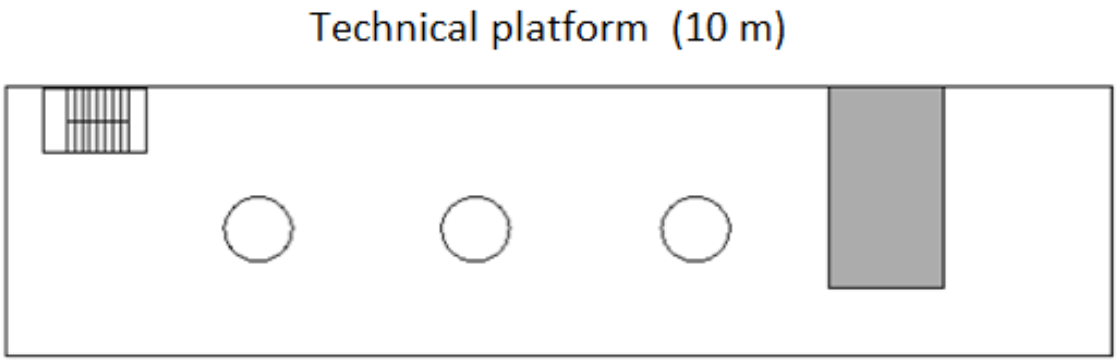
• Dimensions about 20 m x 100 m
• 3 floors, floor height 4m
• 3-5 connections in each room
• About 20 rooms per floor



Machine hall

• A building with dimensions of approximately 30 m x 150 m
• We have to connect 3 rooms and sensors (note the part at a height of about 10 m)





Security

A building with dimensions of 4 x 5 m
Requirement to connect 2-4 computers

Requirements

Draw a selected floor of the office building and two floors of the machine hall.
Draw connections between buildings
Make a preliminary schedule (how many sockets, cables, devices you need and add labor costs)