

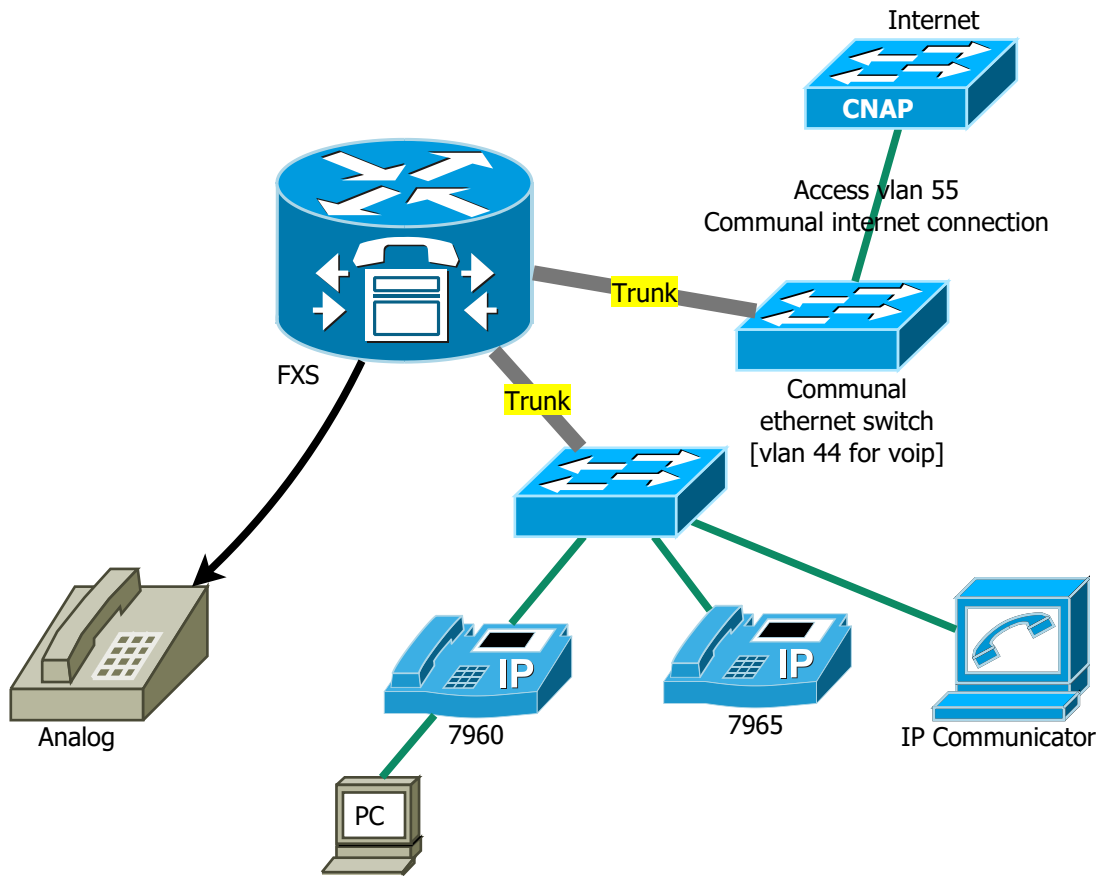
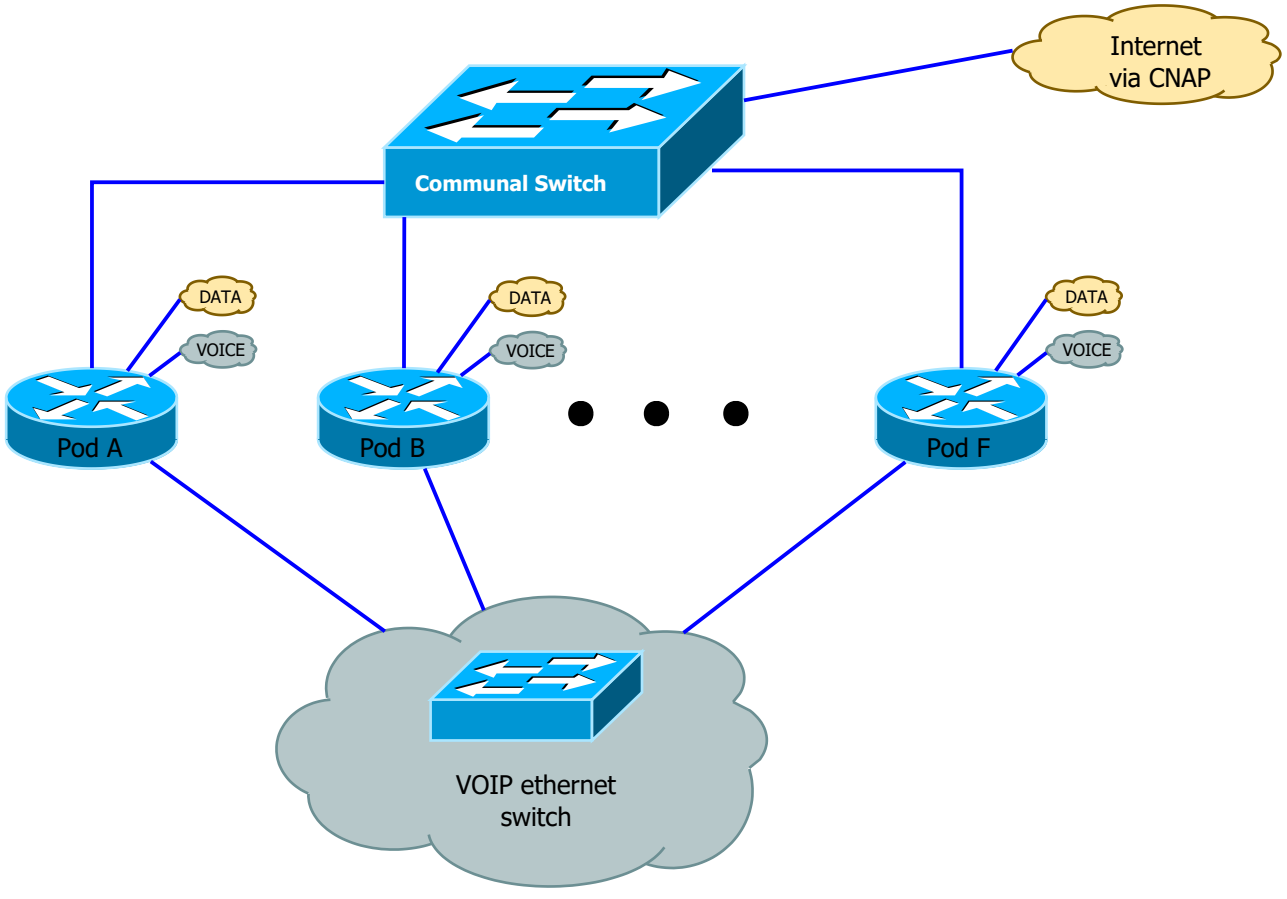


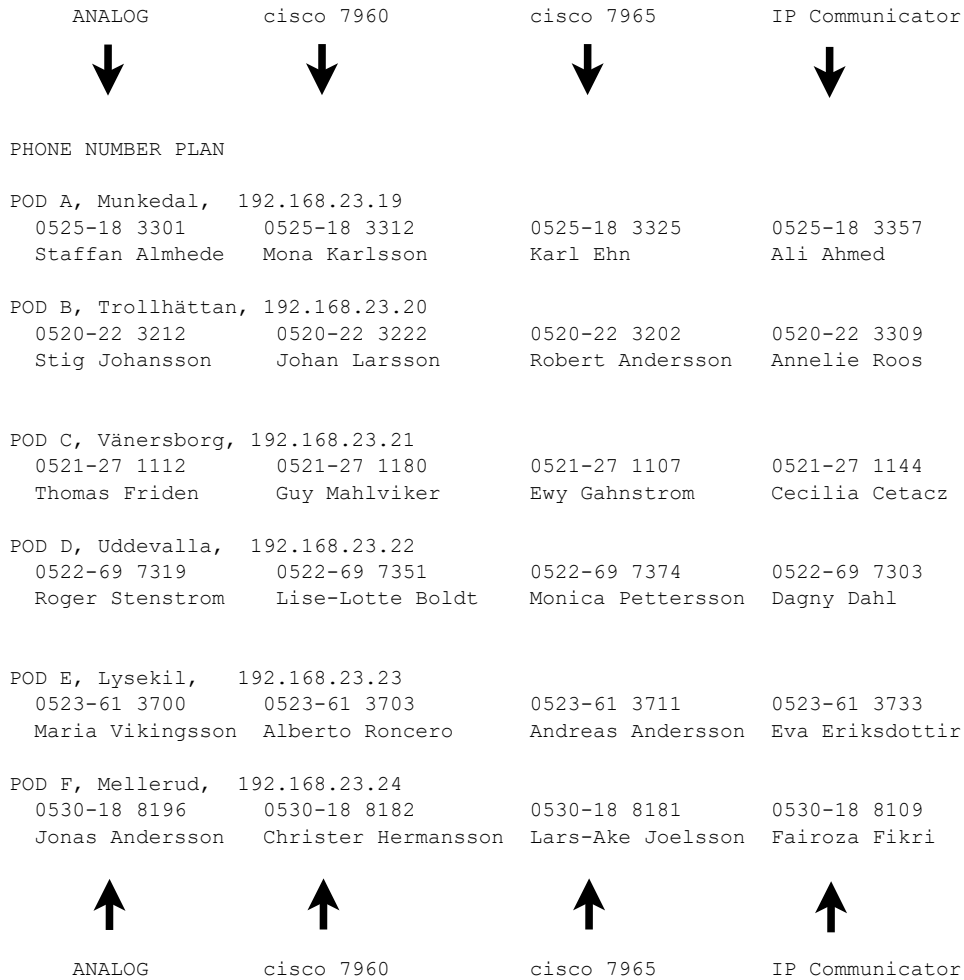
IP Telephony

# **SKILLS EXAM**

Version 6, 2015  
(c) Robert Andersson

Skrivtid: 100 Minuter





IP NUMBER PLAN

Pod	Town	External VOIP IP	Internal IP NETWORKS
====	====	=====	=====
A	Munkedal	192.168.23.19/24	10.1.x.0/24
B	Trollhättan	192.168.23.20/24	10.2.x.0/24
C	Vänersborg	192.168.23.21/24	10.3.x.0/24
D	Uddevalla	192.168.23.22/24	10.4.x.0/24
E	Lysekil	192.168.23.23/24	10.5.x.0/24
F	Mellerud	192.168.23.24/24	10.6.x.0/24

## REQUIREMENTS

- Proper phone boot process (DHCP server, TFTP etc )
- Use "ip address dhcp" (dhcp client) for router internet-connection on vlan 55
- Start the NTP-client on the router
- ⌘ Follow the numberplan (other page) and give name and number to button 1 on the phones
  - Configure description on all personal ephone-dn's (Fornamn Efternamn)
  - Configure label on all personal 'buttons' (Fornamn x1234)
  - Internally, you should use four digits for dialing extensions
- Externally you should use ten digit dialling
  - always send 10 digit called-number to the other PBX's (num-exp)
  - always send 10 digit calling-number to the other PBX's (translation-rule)
- Configuration Professional (CCP) configuration shall work OR web configuration (HTTPS) shall work
- Configure 'call forward' from 7965 to 7960
- Give all IP-phones the number 5555 "ServiceDesk" on button 2 (line 2)  
It is OK if "ServiceDesk" can only be reachable within each town/switchboard

## BONUS ASSIGNMENT

(not included in the skills-exam)

- Add NAT/PAT to the router, so that the PC's can surf the internet