

Company info – Loco News

Practical work #3, 1DV700, HT21

Loco News is a local newspaper company in a Swedish city. (Same company as presented in Assignment 2)

Interview with one of the company's employees

The server environment

Goran: Well, first of all, we have Mozart (DELL PowerEdge T130) which is our original server. It is running Ubuntu server (the same applies to all servers), and then we run an Apache 2.4, PHP and Ruby.

```
; <> DiG 9.7.0-P1 <> www.locopost.se
;; QUESTION SECTION:
; www.locopost.se. IN A
;; ANSWER SECTION:
www.locopost.se. 3600 IN CNAME mozart.locopost.se.
mozart.locopost.se. 3600 IN A 198.51.100.143
;; AUTHORITY SECTION:
locopost.se. 600 IN SOA mozart.locopost.se.
;; Query time: 24 msec
;; SERVER: 198.51.100.143 # 53 (198.51.100.143)
```

Consultant: Do you operate all your server components on the same machine?

Goran: No, no. Our database server runs on BRAHMS (DELL PowerEdge T130), and web application and mail server runs on Schubert (DELL PowerEdge T130), nothing else. Well, an SSH server of course, so that we can access the servers and make some changes.

Consultant: And how do you copy the files to the servers? And how you administer databases?

Goran: We run all file operations on the servers via Server Message Block (SMB). Regarding the database so is everyone's data in the SQL database on BRAHMS, and there is no need for direct access to the database server, so we do not need such access to the machines. For the administration of news page customer database, we use phpMyAdmin.

Consultant: Have customers themselves access to the database?

Goran: Not directly, only indirectly when they access our public web server that fetches articles and other information from the database.

Consultant: Okay. Do you run your DNS server?

Goran: Yes, that's right. We manage the DNS so we can easily modify our infrastructure and for instance, add some test servers.

Consultant: Test Environments?

Goran: Yes. Brahms and Schubert, we run Apache with PHP or Ruby, but we have set up a rather flexible test environment that allows us to develop, for example, Tomcat Java or Django. And then some IT interested colleagues run their Apache server on their workstation to test things locally. It's a little up to each to decide how you want to do.

Consultant: I understand. How do share files within the company?

Göran: First, we have a SAMBA service (re-implementation of the SMB networking protocol) at Beethoven where everyone can upload files. Later we also bought a business service from Dropbox

where we can share files with each other within the company, no matter where we are. It's not possible to access the Beethoven unless one is inside the corporate network.

The network environment

Consultant: How is it with access from the internet (100 Mbit/s from the ISP IP-Only), which machines can you access from the outside?

Goran: In the current situation, one can access Mozart, Brahms and Schubert from the outside. All other equipment is protected behind a NAT in our Cisco 1921 Integrated Services Router.

```
access-list 1 permit 192.168.0.0 0.0.0.255
ip nat pool KLIENTER 198.51.100.142 198.51.100.142
ip nat inside source list 1 pool KLIENTER overload
ip nat inside source static 192.168.0.10 198.51.100.143
ip nat inside source static 192.168.0.20 198.51.100.144
ip nat inside source static 192.168.0.21 198.51.100.145
```

Consultant: And how do you handle the addresses internally?

Goran: The servers have static addresses, and the clients get their addresses via a DHCP server on Beethoven.

Consultant: How is the network otherwise structured?

Goran: In the server room, all the servers and our router are connected to an HP ProCurve (a network switch) and from that, an Ethernet cable up to the office where we have another a couple of similar switches where all our desktop computers are connected.

Consultant: How many desktops do you have?

Goran: Well ... we are 22 employees, and most have laptops. So, we have about 18 laptops, and 10 desktop computers. But then, we have also a wireless network (Cisco Aironet 1121G W-LAN AP 11G) that is for our phones or the laptops that we take with us on travels.

Consultant: So, all employees have laptops too?

Goran: No, most of them use laptops as their main computer, and then we have we have 5 laptops that we share.

Consultant: How are you doing with the account management when computers leave the network? You did not mention any central user database.

Goran: That's right. Since the company was so small, each one has taken in charge of their computer; in other words, we cannot log on to each other's computers. The shared computers are automatically logged in, so there is no problem, and on the personal computers each has its user to be able to have their settings.

Consultant: And on the servers?

Goran: It depends. On Brahms and Schubert, not all employees' have accounts. Only trusted employees can work directly with the servers. On Mozart and Beethoven, however, all have their accounts, and the accounts are local.

The client computers

Consultant: How are the workstations, they have a standard installation or ...

Goran: We have a mixed environment with Windows and MacOS, each person is using the type of machine and operating system that is most optimal for his or her work. Otherwise, I'm not so sure... they run on their machines themselves. Regarding the shared laptops, they are quite clean and standardized.

Server room

Consultant: Look, it's a little bit crowded down here in the server room ...

Goran: Yes, we are forced to share the basement space with Chambers on the first floor and it involves the addition that it is hard to bring down the wireless signal here, but we get pretty good natural cooling which is good. It's a bit awkward that they have their archives and their old furniture down here but so far it works well, and we have still quite a lot of space in our racks, so we do not see it as a major problem.

Pictures



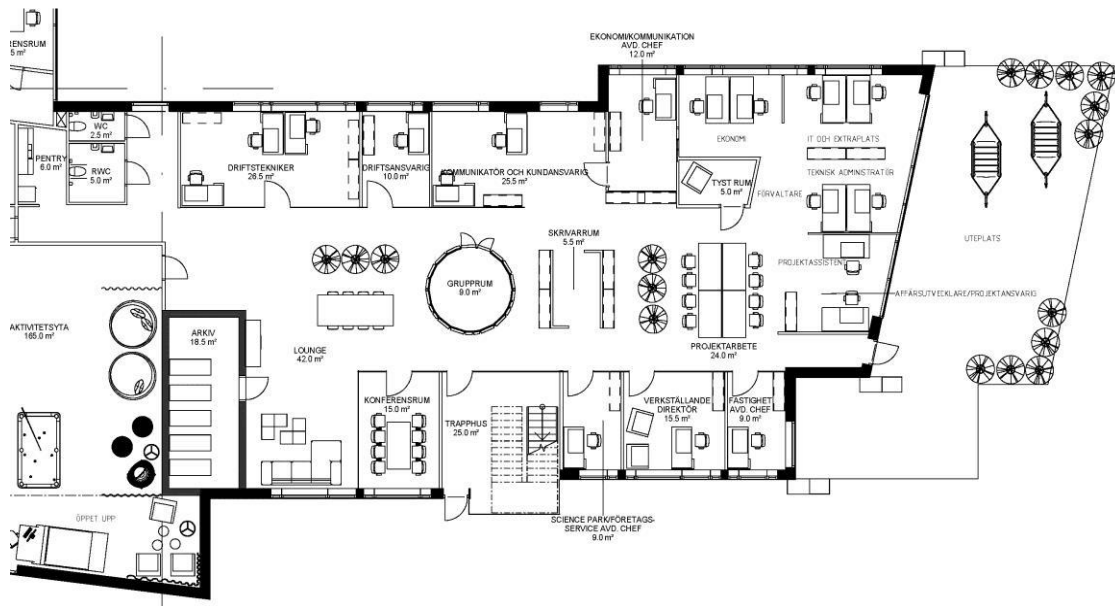
Situation plan



Airplane photography



Exterior view



Floor plan



3D Floor plan