

## Technical layer overview, additional information

To support the applications and business processes, we need an infrastructure which is described in the Architectfile. To clarify some details we couldn't fit into the layer, we this document.

### Locations

All the data is stored in a data warehouse. To access the data we have we have a so called 'Datacentre'. The datacenter supports the complete infrastructure on which the applications run and the data is being stored.

To produce our goods we have 2 factories, named factory 1 and factory 2. Both the factories are able to make a connection through VPN to the internet, the intranet and the datacenter, so they can make use of a SCM application. However, to connect with the supplier it needs to go through the office, prohibiting it from making direct contact with the supplier.

Our administrative centre is the office. The office handles all the communication with clients, suppliers, etc. It's also responsible for the administration, accounting and the human resource management. The office has full access to the datacenter and complete control. The office has a lot of workstations for the employees.

The above structure can happen on a global, regional and even local scale. By using networking it doesn't matter if and how far the locations are apart.

### Services

To allow the company to run smoothly, we need some services to make the communication go more supple:

- Intranet
  - Runs on apache 2
  - Uses Debian Linux
  - Is only accessible through internal IP's, which are assigned to people in the building and people using VPN through the company
  - This runs inter alia
    - The SCM system
    - The CRM - for which we chose Vtiger
- Datawarehouse
  - Runs on Oracle software

- Only accessible through internal IP's and company VPN
- All web applications are able to access the datawarehouse
- Accounting stores their data here too
- External webservers
  - Runs on Apache 2
  - This entails de website which the clients will use to place orders and to (initially) contact us
  - This server is accessible through external locations
- VPN
  - On a basis of OpenVPN
  - Uses the IPsec protocol
  - And gives IP's to workstations in the internal range as well as people who work at home.
- Firewall - the firewall is on a basis of IPTables. That means nothing can get in through external applications and it keeps people away that want to access, but have no VPN connection.

## Hardware

To get our services up and running, we need the hardware to support it. The hardware we use, is the following:

- Servers
  - All applications run on a standard type hardware
    - The hardware used is the HP-DL380 G5
- Routers
  - All routers are routers of the Cisco brand
    - In the datacenter this is a Cisco 6500 series with routing module
    - The rest of the locations uses the Cisco 3900 series
- All switches are from the Cisco Catalyst 2900 series

To make the ordering easier, we make a VPN connection to our supplier's internal network. Whereupon we can use the applications there available.

People working at home are able to make a VPN connection with the intranet so they can access their files and applications. They will log on with the very same user id and a password as they would normally when in the office.