

Recommendations for HansaWorld Enterprise Server hardware, software and network infrastructure

HansaWorld Enterprise Server Hardware

For better illustration on what is recommended, we give below three example server configurations depending on the level of usage. These configurations have provided in the past acceptable performance with normal usage of HansaWorld Enterprise. If your usage of the system is expected to be very heavy or very light (depending on the data load), please make adjustments where appropriate. If you have other functions running on the same server, such as integrated HansaWorld Enterprise Web shop, then please calculate extra capacity for this. If you have other software running on the same machine, you would need to take this into consideration as well when configuring your server hardware for HansaWorld Enterprise.

We consider that the users in the examples below are average users in a company using the full core of HansaWorld Enterprise, with Sales, Purchase, Logistics, Accounting and CRM. If you are deploying a system with significantly different usage patterns, your needs for server hardware could be greater or less. For example, HansaWorld Business-Phone users are lighter users than normal users, while users in a point of sales environment (high volume) creating stock-updating invoices (please note that there are also non stock-updating POS invoices) would be heavier than normal users.

Small Server - suitable for 1 - 5 users

- CPU 1.8GHz, one core
- RAM 1GB
- Disk 2x7200 RPM mirrored disks
- Network 100Mb/s

Medium Server - suitable for 3 - 30 users

- CPU 2.0 GHz, two cores
- RAM 2GB
- Disk 4x10k RPM in RAID 5 or 1+0
- Hardware RAID controller with 128MB write cache backed by battery configured for write-back operation
- Network 100Mb/s

Large Server - suitable for 20 - 60+ users

- CPU 2.5GHz, four cores
- RAM 4GB
- Disk 6x15k RPM in RAID 5 or 1+0
- Hardware RAID controller with 256MB write cache backed by battery configured for write-back operation
- Network 1Gb/s (for backups over the network)

The CPUs recommended are current generation (2009) Intel and AMD x86 CPUs. Old Intel Pentium4 (NetBurst based) need higher GHz rating. For IBM POWER4 and later based systems, similar GHz numbers apply.

For larger server configurations please contact your local HansaWorld office for help with configuring the appropriate hardware for your company.

HansaWorld Enterprise Server Software

The HansaWorld Enterprise server runs on the following operating systems

- Mac OS X and Mac OS X Server 10.3.9 and later (Universal 32 and 64bit)
- Windows 2000 and later (x86 and x64)
- RedHat Enterprise Linux version 3 and later (x86, x86-64, ppc and ppc64)
- SuSE Enterprise (x86, x86-64, ppc and ppc64)
- IBM AIX
- IBM i5/OS (in PASE mode)
- Sun Solaris (SPARC and SPARCv9)

You should consider the following when choosing the software environment to run HansaWorld Enterprise in.

- When running on Windows Vista, additional memory must be calculated
- When running on Microsoft Windows, antivirus software is strongly recommended
- On all platforms, backup software is strongly recommended
- When installing in a virtual environment (VMware, Xen etc.) special care must be taken to ensure disk writing consistency. HansaWorld Enterprise normally ensures the consistency of its database by forcing data to the physical disk device, or battery backed cache when available. In some configurations with virtualisation software these safety features can fail to be enabled. Care must be taken that this disk synchronisation is enabled inside the virtual environment.
- With large installations we recommend the purchase of HansaWorld Bitmap Freehandling. It gives a significant performance improvement when HansaWorld Enterprise writes into the database.

Business Intelligence

If you plan to use HansaWorld SmartView or any other BI package, you should consider the following

- You may need a separate physical server for the BI Server for performance reasons. This server should be designed differently from the main HansaWorld Enterprise server for good performance. BI tools need more RAM than the HansaWorld Enterprise Server.

Relational Database Connection

If you plan to use HansaWorld's Relational Database Shadowing capability you should consider the following

- You may need a separate physical server for Oracle or Microsoft SQL database for performance reasons.
- Shadowed mode will have a small performance impact on the HansaWorld database.

Backups and Reliability

It is vital for your business survival that you take proper responsibility for the safety, reliability and disaster-recoverability of your installation. A modern company that faces a computer disaster without proper backups will often face serious difficulties even to survive. Thus you need to take responsibility for your own system and its data.

The below is a minimum recommendation. You must not use this as a final checklist for all your needs to be "safe".

- It's vital that your disks have protection (RAID 1, 5, 1+0 etc.) Unprotected disks, such as single disks and disks in RAID 0 configuration, will put your vital data at considerably higher risk.
- Off-site backup is an important part of any backup and recovery strategy, this can be solved with network transfers of the backups or regularly sending physical tapes or other media to a different location.
- Reserve systems and infrastructure where the backups can be restored in case of a disaster is a must. A full backup and a broken machine still means your business will be stopped until you can find a machine. And then you need to order the tape-drive that might have a week's delivery time...
- You must test your recovery process. If you have not successfully tested your backup procedure you should assume that it does not work.
- If you are running a Windows server, you must install an appropriate Anti Virus solution.

HansaWorld Enterprise Network Infrastructure

HansaWorld Enterprise communicates using TCP/IP networking, and has relatively low bandwidth requirements. However, for a good user experience we do recommend a low latency.

A network connection of 30 kb/s for the first user, and an additional 10 kb/s per user tends to give an acceptable working environment. The recommended bandwidth is 50 kb/s for the first user and an additional 15 kb/s per user. This is the necessary bandwidth dedicated to HansaWorld Enterprise. If the users are also running other network traffic, such as web-browsing, this must be taken into account.

If users are routinely taking large reports (many pages of output, not heavy to calculate) the bandwidth usage increases. If the users are idle, the bandwidth usage decreases.

If you are using pictures on items and especially if you are using the CoverFlow paste special on Mac OS X the network requirements increase significantly.

Network latency should preferably be at or below 0.1 seconds. Latencies up to 0.5 seconds can generally be worked with; however, the user experience will start to suffer at this level or above.

As an example, a 128 kb/s line with a 0.1s latency can be expected to be useable for 10 – 11 users, and gives good performance for about 6 users.

For internal use HansaWorld routinely tests a GPRS connection (0.5s latency, 20 – 50 kb/s bandwidth) for 2 - 4 people using the CRM and e-mail functionality, and while this "feels a bit sluggish" it is a fully workable system.