



HARDWARE AND SOFTWARE REQUIREMENTS

PENTAGON 2000SQL FOR WINDOWS

Sample General Guideline Specification for about 20-30 Users

SQL Database Server / Files & Application Server

- 64 Bit Processors, 2 CPU, 8 or more Core per CPU
3.6 GHZ or better recommended
*** Increase CPU based on concurrent users as needed ***
- Min of 64 GB of RAM or better, 128 GB recommended
*** Increase RAM based on concurrent users as needed ***
- Fast SAS/SCSI/raid controller (with fast caching)
- Raid 10 configuration, Fast SCSI / SAS hard disk drives
15,000 RPM, Fast SSD Drives Recommended with large capacity drive.
- UPS battery to protect file server
- Windows Server 2019/2022 or Higher, Standard/Enterprise Edition or Higher
- Microsoft SQL Server 2019/2022 or Higher, Standard/Enterprise Edition or Higher
- Display Resolution: Minimum 1280 x 960, Maximum 2048 x 1152

Application Server (Optional)

- 64 Bit Processors, 2 CPU, 8 or more Core per CPU
3.6 GHZ or better recommended
*** Increase CPU based on concurrent users as needed ***
- Min of 64 GB of RAM or better, 128 GB recommended
*** Increase RAM based on concurrent users as needed ***
- Fast SAS/SCSI/raid controller (with fast caching)
- Raid 10 configuration, Fast SCSI / SAS hard disk drives
15,000 RPM, Fast SSD Drives Recommended with large capacity drive.
- UPS battery to protect file server
- Windows Server 2019/2022 or Higher, Standard/Enterprise Edition or Higher
- Display Resolution: Minimum 1280 x 960, Maximum 2048 x 1152



Print Server / Scheduling Server

Some of the tasks like printing service and scheduling tasks are recommended to dedicate a separate Server/s to ease the burden on the main server, additional server/s can be added as needed.

IIS Server

For Apps, websites and browsers-based modules that requires IIS server, it is recommended to have its own dedicate Server on the same network, specs are vary based on the modules functions to be used.

Optional:

- SAN fiber storage - an aggregate of XX number of SAS XXGB SSD or 15K RPM Disk.
- Replicating all databases to a third SQL server for disaster recovery, and Load balancing servers / Clustered as Active/Passive

Workstations via Local network

- i7 processor or **better**
- 16 GB RAM or **better**
- 200GB SSD hard disk drive or **better** (Fast SSD Drives Recommended)
- 27" monitor or better recommended
- Operating system: Windows 11 Professional.
- Display Resolution: Minimum 1280 x 960, Maximum 2048 x 1152

Workstations – Remote Access

Remote Desktop or Citrix Client can be used by various applications; Windows RDP, Mac., iPad etc., the requirement and performance are mostly based on the internet bandwidth, speed, and server capacity the client is connected to will require a gateway.

General Sample:

- 1 CPU 4 Cores 8 GB RAM Will hold 3-5 users
- 1 CPU 4 Cores 14 GB RAM Will hold 6-10 users
- 1 CPU 4 Cores 28 GB RAM Will hold 12-20 users

Multiple Servers need to be configured as Farm with Load Balancing based on number of remote number of users.

Cloud Specs Samples

By opting for either Amazon AWS with Workspaces or Azure Virtual Desktop, each user is provided with their own personal cloud-based PC, eliminating the need to connect to servers via RDP.

Otherwise use the RDP concept sample as shown below:

Samples of specific Servers modules using AVD (Good for 10-25 users):

- AVD Server: D8as v5 instances (8 vCPUs, 32 GB RAM)
- SQL Server: E8as VM (8 vCPUs, 64 GB RAM)



Printers – Forms & Reports

- Any LaserJet printer pcl6 compatible (HP Laser Printer pcl6 recommended)

Printers – Bar-Code Labels

- Any “Zebra Technologies” bar code printer using the ZPL/ZPLII printer language only. 203 dpi, 4 Inch Wide.

Backup

- Any backup drive with the capacity of the hard drive, or other backup method to support the SQL database Backup program

Imaging Module – Supported Scanners

- Any Twain compatible scanner with automatic feeder.
Network Scanner with static IP recommended, for remote access a ‘Remote Scan’ third party program is required.
For large capacity imaging, dedicated Drive is recommended for storage.

Fax Server Requirements

The decision regarding which type of combination to choose is based on the expected number of faxes sent daily. There are several possible combinations; please choose the combination that is most applicable to your operations and the volume of faxes sent out by your organization.

Email fax services

Email fax services are one of the latest innovations in the way we do business. You no longer need a landline phone and a fax machine to receive and send faxes. Now you can send and receive faxes by email directly from Pentagon 2000.

With this module, when submitting the document from Pentagon to the Fax, Pentagon will send the document by email to the Fax service provider which they will send the fax for you to the destination you specified.



Mandatory Backup Systems

It is imperative that you implement a backup system that will safely and efficiently backup your SQL database. Losing this data would cause significant setbacks both in your operations and finances. Using a backup utility will ensure that your business data remains intact in the face of some unforeseen event.

Whichever choice you make, be sure that it carries out the SQL Maintenance Plan.

Implementation Guidelines

1. Get a Microsoft Professional to install your network and SQL Server
2. Plan your resources months ahead
3. Assign team leaders with procedures responsibility
4. Assign Power-Users who will be your in-house experts
5. Setup your system defaults and tables according to your business practices and your company structure
6. Plan your Data Conversion
7. Get training from Pentagon 2000
8. Practice on the system using your own data by running business cases
9. Plan "Going-live" date
10. Setup daily automatic SQL database back up maintenance plan

*****And remember: You can always call Pentagon 2000 with any question you may have. *****