

# HARDWARE AND SOFTWARE REQUIREMENTS

## PENTAGON 2000SQL FOR WINDOWS

### Sample General Guideline Specification for about 400-500 Users

#### SQL Database Server

- 64 Bit Processors, 2 - 4 CPU, 8 or more Core per CPU  
3.6 GHZ or better recommended  
\*\*\* Increase CPU based on concurrent users as needed \*\*\*
- Min of 256 GB of RAM or better.  
\*\*\* Increase RAM based on concurrent users as needed \*\*\*
- Raid 10 configuration, Fast SCSI / SAS hard disk drives 15,000 RPM,  
Fast SSD Drives Recommended with large capacity drive.
- Windows Server 2019/2022 or Higher, Standard/Enterprise Edition or Higher
- Microsoft SQL Server 2019/2022 or Higher, Standard/Enterprise Edition or Higher

#### Application Servers / Print Servers / Scheduling Servers (10-20 Servers)

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.

- 64 Bit Processors, 2 - 4 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 \*\*\*
- Raid 10 configuration, Fast SCSI / SAS hard disk drives 15,000 RPM,  
Fast SSD Drives Recommended with large capacity drive.
- Windows Server 2019/2022 or Higher, Standard/Enterprise Edition or Higher

## 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 minimum specs (The more memory and CPU the better):

- 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.

## 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

## 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.

## 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.