

QSuite 26x Minimum Hardware & Software Requirements

Contents

Disclaimer.....	2
Production Requirements	2
Network, Infrastructure, Backup, and Disaster Recovery Requirements	2
SQL Server	2
Base requirements:	2
Extended Requirements:.....	3
Disk Space Requirements:.....	4
Peripheral Support:.....	5
Base requirements:	5
Thick Client Requirements	6
Base Requirements:	6
Peripheral Support:.....	6
Virtualization Technologies.....	6
Configuration Diagram Samples	6
Basic Thick Client Deployment – 1 location	6

Disclaimer

The information provided in this guide pertains only to the documented software and hardware configurations as of its last update. Any software or hardware configurations not explicitly mentioned or covered in this guide are beyond its scope and should be approached with caution. We cannot guarantee the accuracy, reliability, or suitability of any undocumented configurations, and their use may result in unintended consequences, including system instability, data loss, or security vulnerabilities. It is essential to exercise prudence and seek advice from TRIARQ Health when dealing with any unmentioned software or hardware configurations. Additionally, we disclaim any liability for damages or issues arising from the use of such undocumented configurations. Remember that modifying software or hardware configurations beyond the official technical guidelines listed in this document may prevent warranties or support agreements with TRIARQ Health and/or with relevant vendors or manufacturers. Therefore, proceed at your own risk and take appropriate measures to safeguard your systems and data.

If there are any questions, please contact the TRIARQ Health's Support team at incident@triarqhealth.com.

Production Requirements

Network, Infrastructure, Backup, and Disaster Recovery Requirements

TRIARQ Health is not responsible for the practice's Network & Infrastructure and will not be supported by TRIARQ Health. There are minimum requirements which must be met prior to implementation:

- Network equipment (switches, routers, modems, NAS devices, etc.), practice servers and SQL Server must reside in a secure (only accessible by authorized personnel), dedicated area where everyday practice functions will not interfere with their uptime. It is also assumed that temperature and humidity levels will be in line with manufacturer specifications. Uninterruptible Power Supply Units (UPS) with adequate power capacity must be used with said network equipment.
- All workstations and servers used with QSuite must be joined to a domain
- Malware and Anti-virus software must be used to protect server and workstation equipment. SQL database LDF and MDF files must be excluded from Malware / Anti-Virus software scans.
- Port 21 must be accessible for FTP access at practice (used for updates)
- Port 6077 and 6078 firewall exceptions created if Remote Scan will be used
- Port 47289 and 47290 firewall exceptions created if SigSock will be used remotely (signature pads)
- Exception for port 1433 for firewall settings must be made on SQL Server and client machines (internal network)
- Gigabit LAN is required throughout the practice
- The practice and/or Managed Services Provider (MSP) will be responsible for backups and a disaster recovery plan. Scheduled SQL Maintenance plan for database backups is required as well as server-based imaging. The following items must be fully documented by practice and/or the MSP as mandated by CMS:
 - Data Backup Plan
 - Disaster Recovery Plan
 - Emergency Mode Operation Plan

SQL Server

Every practice, with an on-premises installation, will require a dedicated SQL Server. The SQL Server is the central repository where all data will be stored and accessed. Required Windows services for full use of QSuite software will also run on the SQL Server.

Base requirements:

- Windows Server 2019 (must have QSuite version 26.x and above)

- Standard or Enterprise SQL Server 2019 / SQL Server 2022
 - SQL must be installed with mixed mode authentication (SQL + Windows)
 - Default SQL instance name (MSSQLSERVER) must be used
 - Database Engine Services
 - Full-Text and Semantic Extractions for Search
 - Reporting Services – Native, SSRS
 - Management Tools – Complete
 - File Stream must be Enabled
- SSD (NVMe preferred) or 10K RPM SAS drives for SQL arrays
- Gigabit Network
- Server must be dedicated strictly to hosting TRIARQ server software and components; additional roles or applications must be hosted on a separate server.
- UAC must be completely disabled

NOTE: BUSINESS SERVER IS NOT SUPPORTED

Extended Requirements:

1 – 10 Users

2 DEDICATED CPU CORES (XEON 2GHZ. OR GREATER) 16GB RAM
RAID 1 OS ARRAY (2 drives), RAID 1 DEDICATED SQL ARRAY (2 drives)

11 – 20 Users

2 DEDICATED CPU CORES (XEON 2GHZ. OR GREATER) 16GB RAM
RAID 1 OS ARRAY (2 drives), RAID 5 DEDICATED SQL ARRAY (3 drives)

21 – 30 Users

4 DEDICATED CPU CORES (XEON 2GHZ. OR GREATER) 24GB RAM
RAID 1 OS ARRAY (2 drives), RAID 10 SQL ARRAY (4 drives)

31 – 50 Users

4 DEDICATED CPU CORES (XEON 2GHZ. OR GREATER) 32GB RAM
RAID 1 OS ARRAY (2 drives), RAID 10 SQL ARRAY (4 drives)

51 – 80 Users

4 DEDICATED CPU CORES (XEON 2GHZ. OR GREATER) 32GB RAM
RAID 1 OS ARRAY (2 drives), RAID 1 SQL TRANSACT LOG ARRAY, RAID 10 SQL DATA ARRAY (6 drives)

If more than 80 concurrent users will be accessing the database, please contact the TRIARQ Support team to determine recommended infrastructure.

Disk Space Requirements:

An SQL Server which meets TRIARQ's minimum hardware and software requirements will have a dedicated disk array for the operating system volume (C:\). A minimum of 80GB must be allocated to the system / operating system volume to ensure adequate headroom for system growth.

The amount of space required for SQL data will vary greatly depending upon the following variables:

- Number of patient charts
- Average page count / chart which will be scanned
- Scanning resolution
- Number of encounters

TRIARQ recommends that all scanning occur at 200 DPI, and that black and white be used, when possible, to help keep database size down.

Peripheral Support:

The number of certified peripherals for use with QSuite continues to grow. Here are the current statuses of peripheral support:

Scanners: Kodak i2000, Kodak i2800, Fujitsu 6130, Fujitsu 6140, Fujitsu 7160, Brother ADS-3000N	Notes: Remote Scan must be purchased for each scanner used at the practice. Recommended 200 DPI scanning w/ lossy compression setting set to 50% in Remote Scan. Port 6077 and 6078 firewall exceptions created if Remote Scan will be used. The Fujitsu 6130 and 6140 models are no longer manufactured but will still work with QSuite
Card Scanners: Scan Shell 3100D / DN	Notes: Base image scans, no OCR or duplex capabilities to extract discrete data from patient cards
Signature Pads: Topaz USB T-LBK462-HSB-R / BSB-R	Notes: Must Sigsock Client (free software) installed on machine using signature pad. Port 47289 and 47290 firewall exceptions created.
Web Cameras	Notes: Requires gloCam software (free software) to be installed on machine using web camera.
Microphones: Nuance Dictaphone PowerMic 2, Nuance Dictaphone PowerMic 3	Notes: Dragon Client for Remote Desktop must be installed on machine for button mappings with Nuance Dictaphone PowerMic II. Press-to-talk capabilities not supported; simple toggle on / toggle off of microphone only supported. Dragon Medical 10.1 must be installed on server which is included in the QSuite installer. NOTE: You MUST use the version of Dragon from TRIARQ's prerequisites folder; retail boxed copies are NOT supported.

Base requirements:

- Windows Server 2019 – Standard or Enterprise
- SSD (NVMe preferred) or 10K RPM SAS drives
- 80GB free hard disk space
- Microsoft 32-bit Word 2010 Volume licensing
- Microsoft 32-bit Excel 2010 Volume licensing recommended for viewing exported reports
- .NET Framework 4.6.2 or above Installed
- UAC must be completely disabled

NOTE: 64-BIT VERSIONS OF MS OFFICE ARE NOT SUPPORTED. TRIAL VERSIONS OR CLOUD BASED (Office 365) VERSIONS WILL NOT WORK. SMALL BUSINESS SERVER IS NOT SUPPORTED.

Thick Client Requirements

Thick Client (desktop) computers may be used when a physical gigabit connection is available where the SQL Server is on the same physical LAN.

Base Requirements:

- Intel Core i5 (8th Gen or newer) / Intel Core i7 (10th Gen or newer), **Quad Core 2.4 GHz or higher**, with SSE4.2 support
- 16 GB (recommended for smooth performance)
- Minimum **256 GB SSD** (with at least 64 GB available for OS)
- Gigabit Ethernet / Wi-Fi 5 or higher
- Minimum 1920 × 1080 (Full HD) resolution
- Windows 11
- Microsoft 32bit Word 2010 (See Note below). Excel 2010, 2013, 2016 is recommended for viewing exported reports.
- UAC must be completely disabled

NOTE: 64-BIT VERSIONS OF MS OFFICE ARE NOT SUPPORTED. TRIAL VERSIONS OR CLOUD BASED (Office 365) VERSIONS WILL NOT WORK.

Peripheral Support:

- **Card Scanner:** Scanshell 3100D / DN (NOTE: 3100DN model does not support OCR; if OCR is required, only the 3100D is supported).
- **Document Scanners:** Kodak i2000, Kodak i2800, Fujitsu 6130, 6140, 7160, Brother ADS-3000N (Minimum of TWO scanners is recommended for failover)
- **Microphone:** Nuance PowerMic II or PowerMic III for voice dictation
- **Signature Pad:** Topaz USB T-LBK462-HSB-R / BSB-R (This is required if the practice wants to get patient signatures.)
- **Web Camera:** Windows supported USB web camera for taking patient photographs

Virtualization Technologies

Virtualization technologies such as VMWare ESXi/ESX, Microsoft Hyper-V, or Citrix XenServer may be used assuming resource allocations meet or exceed TRIARQ’s hardware requirements.

Configuration Diagram Samples

Basic Thick Client Deployment – 1 location

The following diagram illustrates a basic practice with one physical location using thick clients and a locally deployed SQL Server:

