Sequence Software System Requirements

General Technical Information

Sequence is comprised of several components that operate in a Microsoft Windows-based environment.

Components of the system can be arranged to meet specific load requirements and can also be consolidated with customer-owned equipment and software to leverage existing infrastructure, where possible.

The system utilizes a combination of a web server, database server, and client software to provide complete functionality.

Network Information

Client workstations and server(s) must be on the local area network.

Users maintaining documentation will interact with Sequence via a client/server application (WinSequence/Engineering Clients).

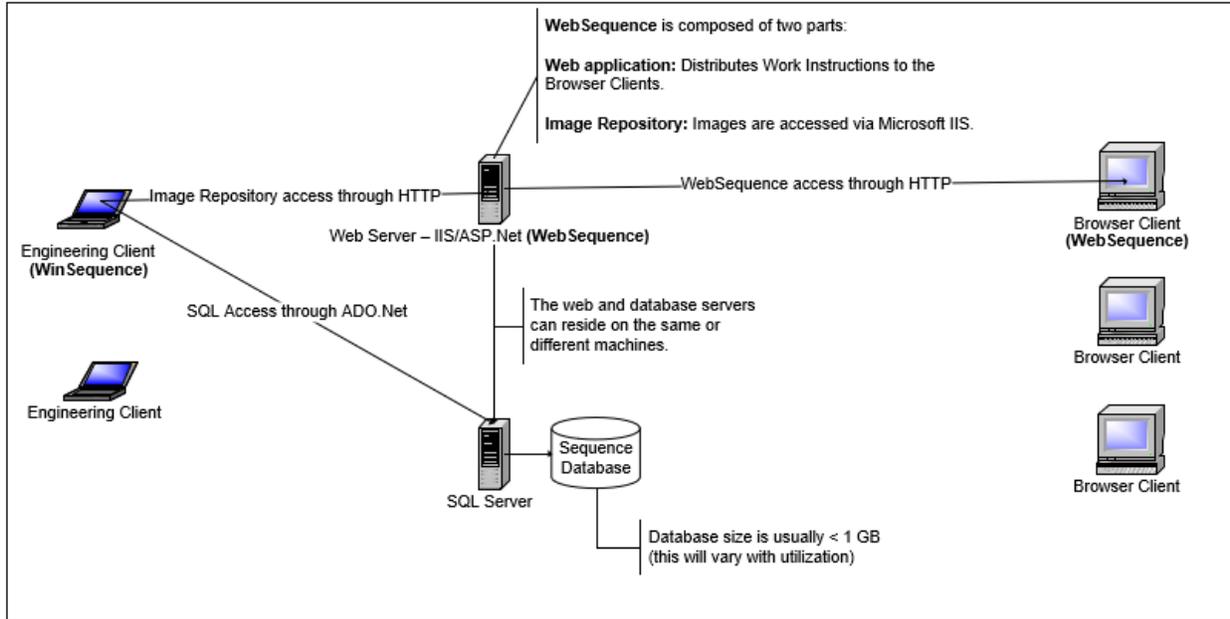WinSequence uses the .NET framework and is written in C#.

WinSequence interacts with SQL Server (a version of which can be freely installed) to acquire data and the web server (Microsoft IIS) to acquire images.

SQL Server and the Web Server can reside on the same machine.

When instructions are deployed electronically, users access read-only versions using Internet Explorer (WebSequence/Browser Clients).

Figure 1: Sequence Network Architecture

Back-up Plan

Two components need to be included in the corporate back-up plan. The SQL Server database needs to be backed up. The image repository, which resides in a physical directory on the web server, needs to be backed up as well.

Minimum and recommended System Requirements are listed in the following tables.

Database Requirements

DATABASE SERVER	Sequence Software uses SQL Server as its database backbone. The software can be installed using an existing license of SQL Server 2012, 2014, 2016, and 2017. If no license of SQL Server exists, SQL Express can be installed at no charge. SQL Express is a 'light' edition of SQL Server. It is recommended that SQL Express be used for no more than 20 total users. The Server Requirements below reflect this recommendation.
WEB SERVER	Microsoft IIS

Sequence
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Server Requirements

TARGET USER BASE	IMPORTED ROWS FROM MRP/ERP/PLM* (SEE * BELOW TABLE)	RECOMMENDED	MINIMUM
Up to 20 total users	No MRP/ERP/PLM Integration or 100,000 rows or less	Two CPU cores 4 GB RAM Windows Server 2012/2016/2019 Backup Device (Tape or removable disk) UPS Appropriate decision on hard disk for redundancy such as a RAID drive	2 GB RAM Windows 10 Pro Backup Device (Tape or removable disk) UPS
Up to 20 total users	Greater than 100,000 rows	Four CPU cores 4 GB RAM Windows Server 2012/2016/2019 Backup Device (Tape or removable disk) UPS Appropriate decision on hard disk for redundancy such as a RAID drive	2 GB RAM Windows Server 2012/2016/2019 Backup Device (Tape or removable disk) UPS
More than 20 total users	Most cases. For applications with more than 500,000 rows, consult Sequence Software.	Four CPU cores or greater 4 GB RAM or greater Windows Server 2012/2016/2019 SQL Server 2012/2014/2016 Backup Device (Tape or removable disk) UPS Appropriate decision on hard disk for redundancy such as a RAID drive	4 GB RAM Windows Server 2012/2016/2019 SQL Server 2012/2014/2016 Backup Device (Tape or removable disk) UPS

* A general understanding of how many rows will be imported from MRP/ERP can be accomplished through a brief discovery call between IT specialists in our two organizations.

Disk storage requirements will vary depending on part volume, instruction complexity, and most especially on the resolution and number of media items stored.

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Engineering Client Workstation Requirements (WinSequence)

PLATFORM	RECOMMENDED	MINIMUM
Windows 8.1 or better	Multicore desktop-class CPU 4 GB RAM Laptop (for portability when documenting processes)	2 GB RAM Desktop

Supported Web Browsers (WebSequence)

PLATFORM	RECOMMENDED
Windows	Google Chrome Microsoft Edge Mozilla Firefox (may not be supported for all configurations) Internet Explorer 11
iOS	Safari
Android	Google Chrome

Software and Peripherals

PLATFORM	RECOMMENDED	MINIMUM
Digital Camera	Nikon "D" series for Direct-to-Sequence Connectivity (real-time Work Instruction creation). The Nikon D40 with standard 18-55 mm lens is most affordable. Camera purchases will typically come with a battery. Memory cards are sold separately. Recommended size: 1 GB	Pictures taken with any digital camera other than those recommended can be added to the Work Instructions with a drag-and-drop approach. However, only the recommended cameras support the Direct-to-Sequence Connectivity.
GENERIC		
Report Generation	Data Reports can be generated from the Work Instruction database using a report writer such as Crystal Reports. This is typically done by the customer with Sequence Software support.	
Additional Supported Technology	Touch screen computers Barcode scanning Thin Client PCs	