



Server and Infrastructure Planning Guide

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Purpose

This guide should be used to aid in planning for your installation of Square 9[®] products. This guide outlines recommendations for the average deployment scenario. Your needs may vary depending on number of users, capture volume, workflows and capture requirements.

SmartSearch

Overview

SmartSearch[®] is a next-generation document management software that runs on the Microsoft .NET platform. It is fully supported in both virtual or physical environments and runs on Windows Professional and Server Operating systems. SmartSearch uses Microsoft SQL for its database backend and IIS (Internet Information Services) to communicate to its clients.

Server Operating System Requirements

Operating System	Service Pack
Windows Server 2008	2
Windows Server 2008 R2	1
Windows Server 2012	1
Windows Server 2012 R2	N/A
Windows 7 Professional	2
Windows 8/8.1 Professional	1
Windows 10 Professional	N/A
Windows Small Business Server 2008	1
Windows Small Business Server 2011 Essentials	1

- *Desktop based Operating Systems, such as Windows 7, 8/8.1 or 10 only support up to 3 concurrent users.*
- *Only 64 bit versions are supported for server operations.*

Demo Machine Operating System Requirements

Operating System	Service Pack
Windows 7 Professional (32 bit/64 bit)	2
Windows 8/8.1 Professional (32 bit/64 bit)	1
Windows 10 Professional (32 bit/64 bit)	N/A

Microsoft SQL Server

Version	Edition
Microsoft SQL Server 2008	Express, Standard and Enterprise editions are fully supported.
Microsoft SQL Server 2008 R2	
Microsoft SQL Server 2012	
Microsoft SQL Server 2014	

Other Notes:

- By default SmartSearch ships with Microsoft SQL Server 2012 Express.
- SmartSearch requires creation of 4 databases during the installation process.
- SmartSearch supports connections to SQL using named pipes using Windows Authentication or SQL authentication.
- At the time of installation, the user running installation must have “sysadmin” privileges to create its related databases, otherwise a SQL user with the necessary permissions should be specified at installation time.
- Hosted instances of SQL such as Amazon’s RDS service or Microsoft’s Azure are supported, but may affect the performance of SmartSearch depending on the latency between the SmartSearch server and SQL instance.
- Clustered SQL Instances are supported.

Hardware Requirements

The below hardware requirements for SmartSearch, these requirements outline resources that need to be available for SmartSearch. SmartSearch’s hardware requirements can vary based on number of concurrent users in the system at a given time, capture volume, number of workflows and more. For more specific recommendations, please contact your Regional Sales Manager or Square 9 Authorized Reseller.

CPU/Processor	Available Memory	Hard Drive Speed	Free Space for Application Services
1 – 3 User			
Dual Core or Equivalent	4GB	7.2k RPM or SSD	100GB
4-20 Users			
Quad Core or Equivalent	8GB	10k RPM or SSD	100GB
21 – 40 Users			
Eight Core	16GB	15k RPM or SSD	100GB
41 – 100 Users (Dual Servers)			
Application Server			
Quad Core	8GB	15K RPM or SSD	100GB
Database Server			
Quad Core	8GB	15k RPM or SSD	50GB

Virtualization Support

SmartSearch is fully supported in Virtual environments such as VMware ESXi, Citrix XenServer and Microsoft Hyper-V.

Image Storage Requirements

Storage requirements for images can vary greatly depending on the types of documents to be stored and volume. It’s important that storage requirements be considered when planning for SmartSearch as well as future growth, the table below outlines average file sizes. For a good mix of quality for both viewing and recognition, Square 9 recommends 300 DPI.

File Type	Format	Resolution	File Size
TIFF/PDF	Black and White	300	100KB
TIFF/PDF	Grayscale/Color	300	1000KB

To calculate storage requirements, use the below formula.

$$(\text{Documents Received Weekly} * \text{Average Number of Pages} * \text{Average Page Size}) / 1000 / 1000$$

- 📌 *Image Storage can exist on the server as local storage, or as any network addressable network storage, including DFS configured storage or storage on a SAN or NAS.*

Client Requirements

Square 9's SmartSearch has two clients, a Web Based client and a Windows based client. Depending on your choice, requirements may vary.

Windows Client

Operating System	Edition
Windows Vista	Business/Ultimate (32bit or 64bit)
Windows 7	Professional/Ultimate (32bit or 64bit)
Windows 8/8.1	Professional/Ultimate (32bit or 64bit)
Windows 10	Professional/Ultimate (32bit or 64bit)

Web Client

Browser	Version
Internet Explorer	IE11 with Compatibility Mode Disabled
Microsoft Edge	Latest stable version supported
Mozilla Firefox	Latest stable version supported
Google Chrome	Latest stable version supported
Safari (Mac)	Latest stable version supported

Terminal Server and Citrix Support

The SmartSearch Windows client is supported in Citrix XenApp, Microsoft RemoteApp and Terminal Services environments.

GlobalForms

Overview

GlobalForms® is Square 9's powerful web forms product. GlobalForms can live separate of SmartSearch and runs on a separate Web Engine. The below requirements outline Square 9's minimum requirements for GlobalForms. When planning for a server, it's important to note that the below hardware requirements are in addition to any requirements set forth by other products.

Server Operating System Requirements

Operating System	Service Pack
Windows Server 2008	2
Windows Server 2008 R2	12
Windows Server 2012	1
Windows Server 2012 R2	N/A
Windows 7 Professional	2
Windows 8/8.1 Professional	1
Windows 10 Professional	N/A
Windows Small Business Server 2008	1
Windows Small Business Server 2011 Essentials	1

Microsoft SQL Server

Version	Edition
Microsoft SQL Server 2008	Express, Standard and Enterprise editions are fully supported.
Microsoft SQL Server 2008 R2	
Microsoft SQL Server 2012	
Microsoft SQL Server 2014	

Other Notes:

- GlobalForms does not need to live on the same Server as SmartSearch.
- GlobalForms requires creation of 1 database during the installation process.
- GlobalForms supports connections to SQL using SQL User Authentication.
- Hosted instances of SmartSearch such as Amazon's RDS service or Microsoft's Azure hosted are supported, but may affect the performance of SmartSearch depending on the latency between the SmartSearch server and SQL instance.
- Clustered SQL Instances are supported.

Hardware Requirements

The below requirements outline resources that need to be available for GlobalForms. GlobalForms's hardware requirements can vary based on number of concurrent users in the system at a given time, capture volume, number of workflows and more. For more specific recommendations, please contact your Regional Sales Manager or Square 9 Authorized Reseller.

CPU/Processor	Available Memory	Hard Drive Speed	Free Space for Application Services
10 User			
Dual Core or Equivalent	4GB	7.2k RPM or SSD	50GB
10-50 Users			
Quad Core or Equivalent	8GB	10k RPM or SSD	50GB
50-100 Users			
Eight Core	16GB	15k RPM or SSD	50GB
100+ Users			
Please contact your Regional Sales Manager for assistance.			

Supported Browsers

Browser	Version
Internet Explorer	IE11 with Compatibility Mode Disabled
Microsoft Edge	Latest stable version supported
Mozilla Firefox	Latest stable version supported
Google Chrome	Latest stable version supported
Safari (Mac)	Latest stable version supported

Virtualization Support

GlobalForms is fully supported in Virtual environments such as VMware ESXi, Citrix XenServer and Microsoft Hyper-V.

Public Access

GlobalForms is commonly made available for public access to facilitate users both public and internal access to forms outside the network. To make GlobalForms publically available, the following must be configured:

1. Port Forwarding – Your firewall must allow traffic from the outside network to the destination server and port GlobalForms is installed on. By default, GlobalForms uses port 8082 for non-SSL encrypted traffic and 8443 for SSL encrypted traffic.

 *Port mapping can be altered easily, for more information contact Square 9's support team or your authorized reseller.*

2. A fully qualified domain name must be configured to point to your external IP GlobalForms is available at. For example, globalforms.square-9.com.
3. SSL Certificate (Optional, but highly recommended) – To secure traffic between clients and the GlobalForms server, a SSL certificate from a trusted Certificate Authority (such as Network Solutions, Comodo) must be provided and issued for the Tomcat Web Engine.

For more information or additional materials to assist in configuring GlobalForms to be available publically, contact Square 9's Software Support team or your authorized Square 9 Reseller.

Overview

PlanetPress is Square 9’s choice of variable printing software. Using PlanetPress you can process data into documents quickly for release to SmartSearch.

Server Operating System Requirements

Operating System	Service Pack
Windows Server 2008	2
Windows Server 2008 R2	12
Windows Server 2012	1
Windows Server 2012 R2	N/A
Windows 7 Professional	2
Windows 8/8.1 Professional	1
Windows 10 Professional	N/A
Windows Small Business Server 2008	1
Windows Small Business Server 2011 Essentials	1

Hardware Requirements

CPU/Processor	Available Memory	Hard Drive Speed	Free Space for Application Services
Dual Core or Equivalent	8GB	10k RPM or SSD	20GB

Virtualization Support

PlanetPress is fully supported in Virtual environments, such as VMware ESXi, Citrix XenServer and Microsoft Hyper-V.

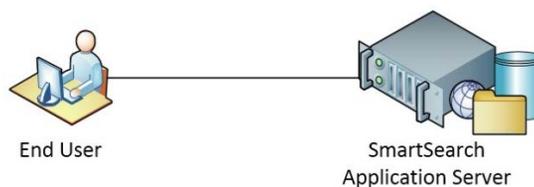
Server Configurations

Overview

Square 9’s product offers are modular, meaning you can have the products installed on completely separate servers, the same server (hardware resources permitting) or the same product installed across multiple servers (for example having two SmartSearch servers to handle user load). Below are some examples of common server configurations.

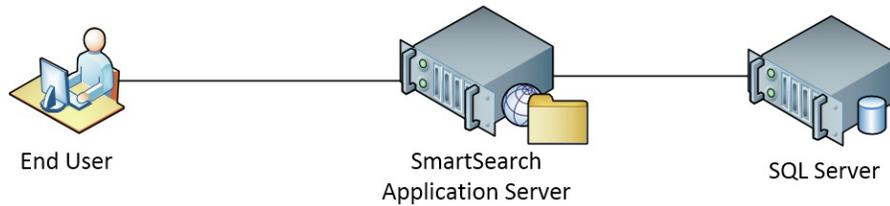
SmartSearch with all Services and Database on a Single Server

SmartSearch can entirely live on a single server, storing images, and hosting its database on the same machine. This is suitable in small – medium environments.



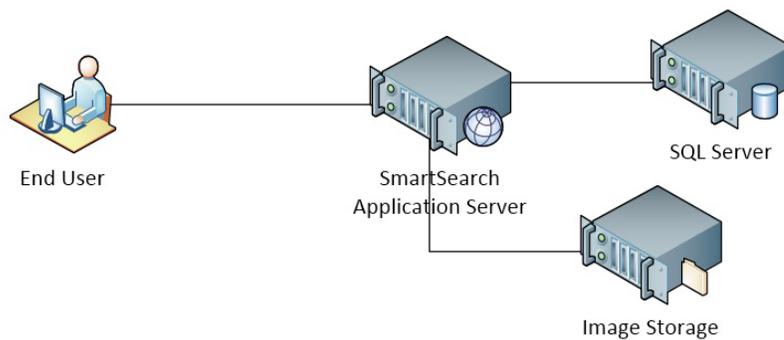
SmartSearch with Separate SQL Server

In environments where a SQL Server is available or demand requires it SmartSearch’s database can be installed on a separate Microsoft SQL Server.



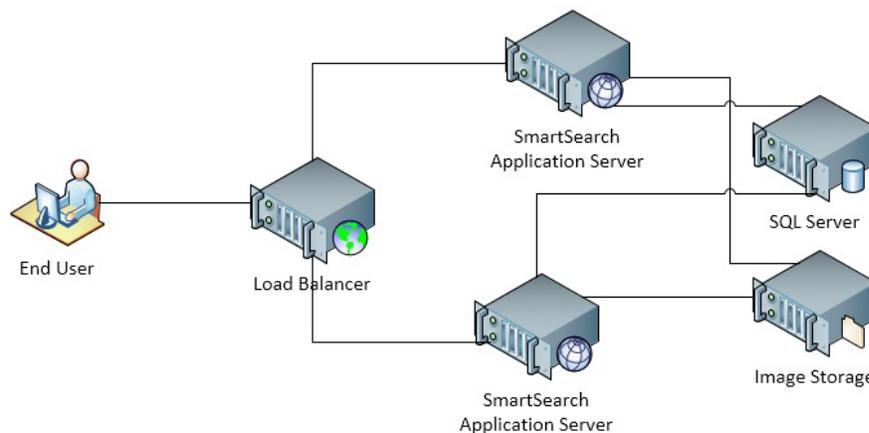
SmartSearch with Network File Storage and Separate Database Server

In more enterprise level environments, SQL, file storage and application operations may be separated entirely. In the diagram below images are stored on a separate file server, such as a NAS, SAN or any other addressable storage and database operations are performed on a dedicated or shared SQL server.



SmartSearch with Multiple Application Servers

In high volume environments, it may be necessary to spread SmartSearch across multiple application servers. As such, use of a Load Balancer can handle traffic distribution, utilizing separate servers for image storage and database operations. You can create a more highly available environment when databases are stored on clustered SQL instances or images across redundant file storage.



SmartSearch with GlobalForms Server

GlobalForms runs on a separate web service, as such it can be installed in a completely standalone environment if desired. In the diagram below, GlobalForms can be installed on a separate server and share the same database backend. The GlobalForms server could exist in a DMZ if desired.

