DOCSVAULT ™

DMS for everyone

Technical Data

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Technical Data

Docsvault Concept & Architecture

Docsvault is a Server – Client based software with the server part of the software installed on a central server computer and the Desktop client part of the software installed on various workstations. All data storage is done on the server computer onsite (or hosted by you somewhere in datacenter).

The Enterprise & Ultimate editions of Docsvault also offers access to the central repository using Web browsers & Docsvault Mobile app.
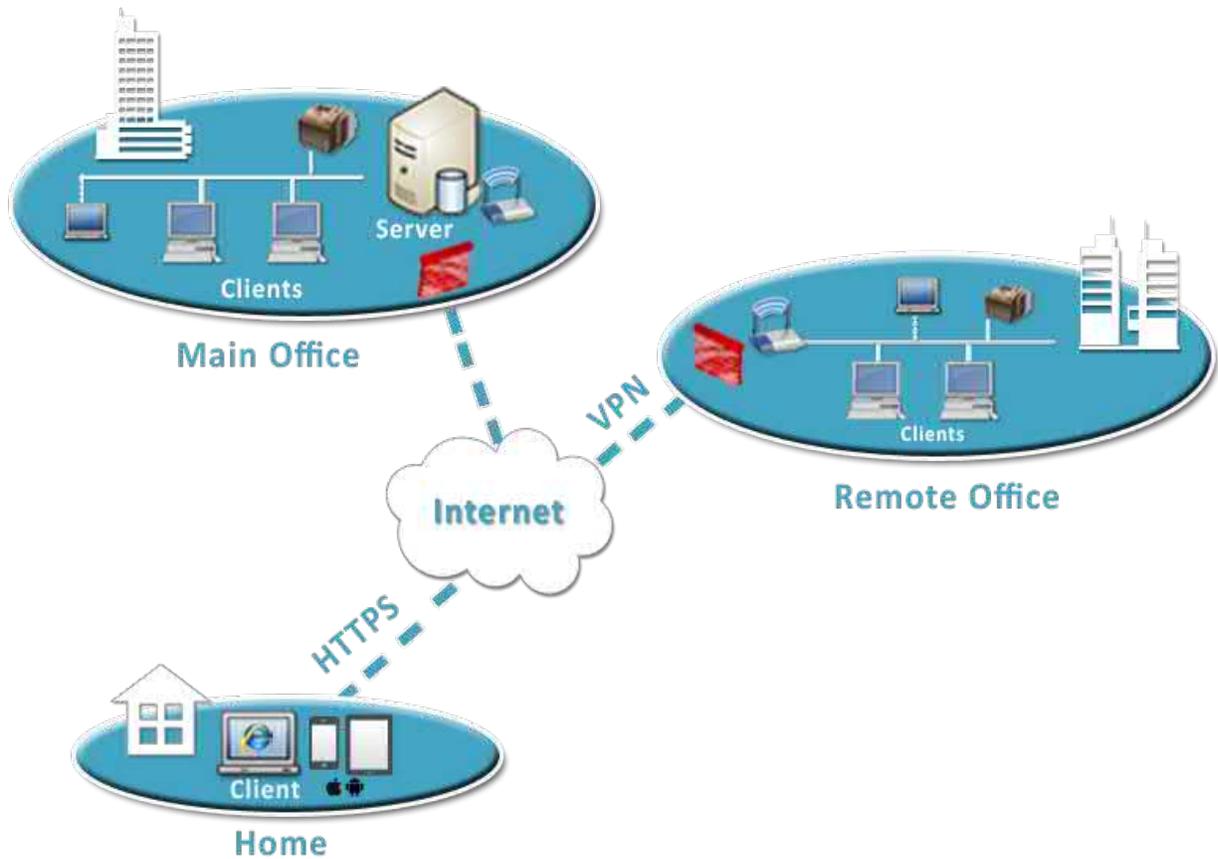
Important Server Side Components:

Docsvault Server Manager
This is the dialog to manage the server side of Docsvault software. The Server Manager dialog can be invoked from a Desktop Icon or from the Windows Start Menu.

Docsvault Services
The following tasks run as Windows services on the Docsvault server. Note that some services may be disabled if proper add-on license has not been activated on the server.

Docsvault Server Service: Provides connection services to client installations in network
Docsvault Alerts Service: Manages various system and user specified alerts
Docsvault Background Jobs Service: Performs various background jobs for Docsvault server
Docsvault OCR Service: OCRs scanned and image based PDFs imported into Docsvault
Docsvault Email Capture Service: Captures emails and attachments from various email accounts

Essential Database Services (if SQL database server is installed by Docsvault)

SQL Server (DOCSVAULT): SQL server service for Docsvault instance
SQL Full-text Filter Daemon Launcher (DOCSVAULT): Indexes contents of documents imported into Docsvault and makes them searchable
SQL Browser: Provides SQL server connection information to Docsvault clients

All files and meta data storage is handled by the SQL server. It is recommended that you use a separate hard drive (or a separate drive letter if you cannot spare a dedicated disk) to store your data.

If you let Docsvault install the SQL server express instance:
The data is stored under a folder named "DVSB Data" at a location that you specify during the initial configuration. The "DVSB Data" folder consists of the following:

- "DB" folder containing the SQL database files
- "DVFStream" folder containing the actual files imported into the system.

If you use your own SQL server for data storage:
The imported files will be stored in a folder named "DVFStream" on the same location as the database file for Docsvault.

Docsvault allows the following methods to remotely access Docsvault when outside of the local network.

Mobile App

The Enterprise & Ultimate editions of Docsvault includes Docsvault Mobile app for iOS and Android devices that enable you to securely access documents stored on your repository from anywhere.

Web Clients

The Enterprise & Ultimate editions of Docsvault includes web application to access your repository using simple web browsers. The application is designed to run with Internet Explorer 9+ but should work with many other browsers like Chrome and Firefox.

Desktop Clients

Docsvault allows the following methods to remotely connect desktop clients from outside your local network

Windows Terminal Services

All features of Docsvault are tested to work under Terminal Services with the exception of scanning using local scanners on the client side, which is not possible in terminal sessions due to TS limitations.

VPN

Docsvault clients are fully functional using this method of remote connection.

Docsvault uses following ports for communication between the server and the clients:

- **TCP Port 3831:** To allow connection to the Docsvault Server Service (dvServer.exe)

- **UDP Port 1434:** This SQL Server Browser service listens for incoming connections to a named instance of SQL server hosting Docsvault db and provides the client the TCP port number that corresponds to that named instance.

- **TCP Port for SQL server instance hosting Docsvault database:** The Docsvault's instance of SQL server listens on a dynamic port (between 49152 & 65535) selected randomly by the SQL server. The SQL clients first connect to the browser service (port#1434) to know the exact port number a named instance of SQL server is listening to for the requested database.

For more information on defining a static port for your SQL server or port forwarding from your router to the Docsvault Server, click [Client Connection Info](#)

If your firewall is application based (ex: Windows Firewall, Norton, McAfee, etc.)
The following Docsvault executables i.e Docsvault server and client along with the necessary MS SQL Server executables should be added to the exemptions/allowed list of the firewall. Docsvault installer automatically adds the necessary executables to the firewall exception list for the built-in Windows firewall.

Docsvault Client side:

- dvClient.exe (by default located at C:\Program Files\Docsvault <edition>\Client\)

Docsvault Server side:

- dvServer.exe (by default located at C:\Program Files\Docsvault <edition>\Server\)

- sqlservr.exe (by default located at C:\Program Files\Microsoft SQL Server\MSSQL10_50.DOCSVAULT\MSSQL\Binn\

   (Note: Replace MSSQL10_50.DOCSVAULT by your actual SQL instance folder if you used your own

    SQL server to host Docsvault db)

- sqlbrowser.exe (by default located at "C:\Program Files\Microsoft SQL Server\<90 or 100>\Shared\")

- **SQL Full-Text Indexing service** named 'SQL Full-text Filter Daemon Launcher' should be installed and running on the server hosting the SQL database for Docsvault. By default, Docsvault installs the SQL server database on the same machine as the Docsvault server. So if you did not specify your own SQL server during installation, SQL server machine is the same as the Docsvault server machine.

- **iFilter:** To have full text searching capability for specific extension you need to have its corresponding iFilter installed on the machine where the SQL server database for Docsvault is running. The search service already includes iFilters for many file types listed in the 'Full-Text Search' node of the Docsvault Server Manager dialog.

  By default, the operating system might not have the iFilters necessary to index popular file types such as .PDF, .docx, .xlsx, etc. For further information on adding new file types for content search, see '[Adding More File Types](#)' topic.

Docsvault supports two authentication methods that can be used in combination with each other.

- **Docsvault authentication:** Usernames and passwords are managed in Docsvault database

- **Windows authentication:** You can import usernames from active directory (LDAP). However the user & password authentication is done by your domain server. Using this method, users can also login to Docsvault without being prompted for username and password if they are already logged into their Windows accounts.

All the documents and associated meta-data are handled by the SQL server. So backing up the SQL server database for Docsvault will serve as a complete backup.

If the SQL server was installed by Docsvault installer, you can setup scheduled full and differential backups in the Docsvault Server Manager with advanced options like verification and maximum number of backup sets to keep. The backup storage medium can be a logical drive such as your hard drive, a separate storage device such as an external removable hard disk or a network storage device or share.

Default Backup Schedule

During the initial repository configuration, Docsvault will automatically schedule following backups at a location specified by you. You may change this later on from the Server Manager dialog.

Full: At 10.00 PM every Sunday of every week

Differential: At 10.00 PM every Mon, Tue, Wed, Thu, Fri, Sat of every week

Total # of full backup sets to keep: 3

When using your own SQL server to host Docsvault database, you will need to setup the backups for that database. Any backup system that is compatible with Microsoft SQL Server with support for FileStream backup can be used.

System Requirements

For a successful installation and use of Docsvault, make sure that your server and client workstations meet the minimum recommended hardware and software requirements

Docsvault Server

Requisite	Recommended Minimum
Processor	Intel/AMD dual core or higher (Server grade for 10+ users or high activity loads)
Memory	4 GB RAM or higher
Display Resolution	1024*768 or above @ 96 dpi
Operating system	Windows 7, 8 & 10 or Windows Server 2008, 2012, 2016 & 2019
Database Engine:	Microsoft SQL Server 2008 or above with full text indexing and FILESTREAM support. (The free SQL 2014 Express edition can be installed by default during setup)
Disk Space required	300 MB for Docsvault Server application data, 500+ MB - SQL server plus space for data storage
.NET Framework	Version v4.5.2 or above, VC++ 2010 Runtime Library 32 bit
Installer	Windows Installer v4.5 or above

Docsvault Desktop Client

Requisite	Recommended Minimum
Processor	Intel/AMD dual core or higher
Memory	2 GB RAM or higher
Display Resolution	1024*768 or higher @ 96 dpi
Operating system	Windows 7, 8 & 10 (32 or 64 bits)
Disk Space required	400 MB
.NET Framework	Version 4.5.2 or above
MS Office Integration	Microsoft Office 2007 / 2010 / 2013 / 2016 / 2019 / Office 365 (desktop edition)
For Scanning	Any TWAIN complaint scanner for direct scanning. All other scanners for scanning through alternate import methods.

Docsvault Web Server [Enterprise & Ultimate Edition]

Requisite	Recommended Minimum
Processor	Intel/AMD dual core or higher (Server grade for 10+ users or high activity loads)
Memory	4 GB RAM or higher
Operating System	Windows 10 or Windows Server 2012, 2016 & 2019
IIS Server	IIS 8 or higher with asp.net support
Disk Space	400 MB
.Net Framework	Version 4.5.2 or above, VC++ 2010 Runtime Library 32 bit
Installer	Windows Installer v4.5 or above

Docsvault Web Client [Enterprise & Ultimate Edition]

Requisite	Recommended Minimum
Processor	Intel/AMD dual core or higher
Memory	2 GB RAM or higher
Browser	All modern standards compliant browsers

Docsvault Mobile Apps [Enterprise & Ultimate Edition]

Requisite	Recommended Minimum
iPhone or iPad	iOS 9+
Android phones & tablets	Android 5.0+

Note:
- In order to use mobile apps, Docsvault Web Access must be configured using a SSL Certificate for secure web connection
  (ex: https://my-Docsvault-URL.com)

Server Recommendations

Up to 5 Users
Docsvault does not need any special server grade computer if you are a small group of around 5 users. You can designate any dedicated PC with a good processor, ample Memory (4 GB+) and enough available hard drive space for storing files imported in Docsvault. It is recommended that the Docsvault server be installed on a dedicated machine where no user works normally. This will avoid interference from other user interactive applications and prevent any possible performance deterioration.

Up to 25 Users
We recommend an entry level server with Xeon (or equivalent) processor, 4GB RAM and a Server 2003 or above OS.

Up to 100 Users
Depending on the document storage load and number of active connections a good entry to mid-level server with dual/Quad processors, 8GB RAM, SQL Server Standard or Enterprise Edition and a server 2003 or above OS.

Space Requirements

For data storage

The space requirements are primarily dependent on the format of the files being saved. The following estimates are for scanned files using Docsvault scanning interface. Typically, formats with text type data occupy significantly less space than say scanned files or image/media files.

Since document scanning is usually done in B&W, we will use this mode of scanning for our explanation. A usual black & white 1-page scan with 200 dpi resolution will take about 70-100 KB (Kilo Bytes) of space. If you plan on using OCR feature, the suggested scan at 300 dpi for 1-page will take around 150 to 200 KB (This includes the scan + the embedded OCR'ed text). Note that the size requirement will be more or less than these average values depending on the page density (the amount of text in the page).

Let's consider higher values for our calculation i.e. 100 KB/page for normal scan and 200 KB/page for OCR'ed scans. Since Hard drives today are measured in terms of GB (1 Gigabytes = 1,048,576 Kilobytes), we can scan 1048576/100 = 10,485 pages/GB and 1048576/200 = 5,243 pages (OCR'ed)/GB.

Note that these are theoretical calculations and are meant for planning. The actual storage size will depend on many factors like file formats, # of versions of any file, scan clarity & color, etc.

Database Engine

SQL Server:

Docsvault uses the SQL server database for data storage. The Docsvault Configuration Wizard will automatically download and install the free MS SQL Server 2014 Express Edition if you do not have an existing SQL server. The use of free SQL server express edition is quite adequate for use up to 20-25 users under normal load. For heavy usage load and for 25+ users, use of SQL server workgroup or above is recommended.

Docsvault does not embed the actual document files inside the database file but stores only the meta data associated with documents and other information in the db file. The actual data files are stored on the server hard disk using the SQL 'FileStream' feature.

Web Server:

IIS 7 and above are supported for hosing the Docsvault web application.

Note: All three, the Docsvault server, the SQL server and the Web server can be installed on the same machine if separate deployment is not possible or desired.

Server Best Practices

Use Internal Hard Drives:
Although you can create the repository folder on an external USB drive that is directly attached to the server machine, internal drives are recommended as they are more reliable. Note that due to the FileStream feature limitation of the SQL server, repository folders cannot be placed on shared network folders.

Using NAS device:
You can create the repository folder on a NAS device that supports the iSCSI interface To achieve this, follow the general steps below. For exact steps, please consult your NAS device support documentation.

- Configure an iSCSI target on your NAS device from your NAS's interface
- On the machine running the Docsvault/SQL server start up the iSCSI initiator wizard from Windows control panel and fill up the NAS device information
- On the Docsvault server machine go to 'Disk Management' in Windows control panel and create a new drive from the free space made available by the iSCSI initiation

Use Redundant Storage Systems:
Storing repository folder on RAID-1 or RAID-5 disks is recommended. However, you need to ensure that you have a good RAID system in place to avoid any data corruption issues normally associated with sub par RAID systems. If you do not have RAID system on your server, ensure that you take regular backups of your data.

Backup Your Data:
The most important & critical part of any Document Management Software is your data. In case of a disaster, everything else can be replicated other than your data. Please take regular backups of your repository using Docsvault's inbuilt backup feature or using any external backup software that you might already use. Here are some points to keep in mind:

- Avoid taking backups on the same physical hard drive as your data (even if it's a different drive letter). This is because if your hard drive fails due to any reason you will lose both the data and its backup.
- On a regular basis test your backups by doing mock restores on test systems
- You can use external hard drives, network shares/drives or NAS devices for backups
- Move backups offsite on regular basis to insure against calamities in your office. As an alternate solution, online backup services are very affordable these days.

See "Data Backup" topic in this guide for more information on backups in Docsvault.

Scanning Recommendations

Docsvault can use any TWAIN based scanner for scanning directly from its built-in scanning interface. Although Docsvault should work with any TWAIN scanner, we recommend dedicated desktop scanner machines for use with Docsvault.

If your office uses departmental MFP scanners, you can setup dedicated routes from those scanners into Docsvault per user or per department, etc. using the watch folder feature in Docsvault.

Trial & Licensing

The 30 days trial downloaded from the Docsvault website is the full-fledged software with all features in working condition with the following limitations:

- o Only 10 user logins can be created in the system
- o The software will stop working after 30 days if not activated
- o The OCR add-on will process only 100 PDF files during the trial

There is no need to reinstall the software if you purchase a license. Activating the software simply removes the time limitationss and activates the total number of licensed users in the system.

Docsvault follows the named user licensing model. So for example a 20 user license will allow creation of 20 usernames in the system. The licensing of the software is controlled from the server side. So you are free to install the client software on as many workstations as required. Note that the main user 'admin' is a fully functional user that can be used to login from client side as well and is part of the total number of licensed users. You may change the username or its authentication type for this main user as well.

Apart from normal users Docsvault also offers **Read-only, External** and **Concurrent** users licensing.

Read-only users, as the name suggests, will only be able to read and download files from the repository where they are given access to. They are however part of the Docsvault user system and can view all internal document profiling, document notes and can participate in workflow. Read Only users can login to the system using both the Desktop Clients and the Web Clients.

External users licensing is useful in situations when data needs to be shared outside of your organization with customers, vendors and other business associates. You can share up to 5 different folders (includes all subfolders for each shared folder) with each external user and can assign read-only, create files and/or create folders rights to each shared folder. External users can login to the system using the same Web login URL as normal users but will see only their shared folders (and their subfolders) without any internal document notes, profiles etc.

Concurrent users licensing model allows multiple users to share a common pool of licenses. This type of licensing is useful when you have occasional users who can share a connection license and do not need a dedicated license.

Technical Support

For any product related or general customer service questions that may arise, please use our online Technical Support or contact us by email at: Support@DocsVault.com

Easy Data Access

Web Site: https://www.DocsVault.com
E-mail: Support@DocsVault.com