M-FILES 2015.1



VERSION 1.0

Supported Operating Systems

M-Files supports the operating systems listed in the table below.

M-FILES DESKTOP	M-FILES SERVER
Windows 10	Windows Server 2012 R2 (recommended)
Windows 8 and 8.1	Windows Server 2012 (recommended)
Windows 7	Windows Server 2008 R2 (recommended)
Windows Vista	Windows Server 2008
Windows Server 2012 R2	Windows 10
Windows Server 2012	Windows 8 and 8.1
Windows Server 2008 R2	Windows 7
Windows Server 2008	Windows Vista

M-Files Desktop for M-Files 2015.1 and later is not compatible with Windows XP. Windows XP users can use M-Files Server for M-Files 2015.1 and later with the client version 9.0. M-Files Desktop for M-Files 2015.1 and later also requires Internet Explorer 9 or newer.

For data security reasons, we do not recommended installing M-Files Server on a computer that is also used as a Microsoft domain controller. However, M-Files Server can technically run on a Microsoft domain controller server.

32/64-bit Support

M-Files is available in both 32-bit and 64-bit versions. Both M-Files Server and M-Files Desktop can be installed and used with either 32- or 64-bit editions of Windows.

M-Files Server Hardware Requirements

The minimum requirements and recommended hardware setups for M-Files Server are listed in the tables below.

MINIMUM REQUIREMENTS	
Processor	1 processor with 2 cores (Intel Xeon or similar)
RAM	1 GB

RECOMMENDATIONS FOR UP TO 50,000 OBJECTS	
Processor	1 or 2 processors with 4 or more cores in each (Intel Xeon or similar)
RAM	4 GB
Storage	RAID 1 or RAID 5 disks

RECOMMENDATIONS FOR UP TO 1,000,000 OBJECTS	
Processor	2 or 4 processors with 4 or more cores in each (Intel Xeon or similar)
RAM	16 GB
Storage	RAID 1 or RAID 5 disks
os	64-bit operating system
DBMS	MS SQL Server 2012 or 2014 Standard or Enterprise Edition

RECOMMENDATIONS FOR MORE THAN 1,000,000 OBJECTS	
Processor	4 processors with 4 or more cores in each (Intel Xeon or compatible)
RAM	32 GB
Storage	RAID 1 or RAID 5 disks
os	64-bit operating system
DBMS	MS SQL Server 2012 or 2014 Standard or Enterprise Edition

M-Files Server can be installed either on a physical or a virtualized server, for instance using Hyper-V or VMWare ESXi.

Consult M-Files Corporation for requirements and best practices in environments with more than 1,000,000 objects.

Supported Operating Systems for M-Files Mobile Apps

The M-Files mobile apps support the following mobile operating systems:

WINDOWS PHONE	IOS	ANDROID
Windows Phone 8.0/8.1 or later	iOS 7.0 or later	Android 2.3.3 or later

Recommended Browsers for M-Files Web

For optimal M-Files Web user experience, consider using the web browsers listed in the following table:

WEB BROWSER	SUPPORTED VERSIONS	OPERATING SYSTEM
Internet Explorer	IE9, IE10, and IE11	Microsoft Windows
Mozilla Firefox	Version 41 and later	MICROSOIT WINDOWS
Safari	Safari 7 and later	OS X

Note: Microsoft Edge and Google Chrome (versions 45 and later) do not support Java. M-Files Web can be used with these browsers, but certain file operations are unavailable. For instance, modifying files with these browsers might not be as effortless as with browsers that support Java.

M-Files Server Disk Space Requirements

Metadata database

- Local hard disk drive
- 2–5 GB of disk space for 100,000 objects
- 20–50 GB of disk space for 1,000,000 objects

Consult M-Files Corporation for requirements and best practices in environments with more than 1,000,000 objects. Please also note that the hard disk space requirements for the metadata database highly depend on the complexity of the metadata structure as well as on the number of object versions in the database. The estimates above apply to typical document management use cases.

File data

- Local hard disk drive OR a network file server
- Sufficient disk space for storing the document files, thumbnails, viewer files, and full-text search index files

M-Files uses a binary delta algorithm to process old versions of document files. This reduces the disk space consumption of old file versions considerably.

Administrators can free disk space by archiving or destroying old versions.

Database Engine and Data Storage

M-Files Server includes Firebird Embedded, a powerful SQL database engine. Firebird is the default database engine of M-Files. Purchasing additional database software is thus not required. When using Firebird as the database engine of M-Files, the metadata of documents and other objects will be stored in a SQL database. The data files of objects are stored in the file system.

Optionally, Microsoft SQL Server 2008, 2008 R2, 2012 or 2014 can be used as the database engine of M-Files for better performance and support for larger repositories. M-Files supports all the editions, for example, Express Edition, Standard Edition, and Enterprise Edition. When using Microsoft SQL Server as the database engine of M-Files, the metadata of documents and other objects will be stored in a SQL database. The data files of objects can be stored either in the MS SQL database or in the file system. MS SQL Server can be installed on the M-Files Server computer, or alternatively, the M-Files Server computer can connect to an existing SQL Server farm. In the latter case, the processor and RAM requirements of the M-Files Server may be smaller than indicated above.

M-Files uses Unicode and thus supports storing and finding data in East Asian languages as well.

The data saved in the file system can be encrypted with the AES-256 algorithm. For more information, refer to <u>Protecting</u> <u>File Data at Rest with Encryption in M-Files</u>.

Network Communication

M-Files Desktop communicates with M-Files Server via TCP/IP or HTTPS protocol. M-Files Web and the M-Files Mobile apps communicate with M-Files Server via HTTP or HTTPS protocol.

It is recommended to use encrypted connections in all client-to-server communication. For more information, see <u>Protecting Data in Transit with Encryption in M-Files</u>.

Special Environments

M-Files is compatible with the following special environments:

- Remote Desktop Services (Terminal Services)
- Citrix XenApp *
- Linux file servers
- Novell networks

*) M-Files is Citrix Ready for Citrix XenApp 7.6. See M-Files and Citrix XenApp for the configuration details.

User Authentication

M-Files supports multiple authentication methods (can be mixed):

Windows authentication	Users are authenticated using their Windows account names and passwords. Login accounts can be imported from Active Directory (LDAP).
Federated authentication	Users are authenticated against an external Identity Provider (IdP), such as Azure Active Directory. See <u>Using Federated Authentication with M-Files</u> for more information.
M-Files authentication	Users are authenticated with usernames and passwords specified within M-Files.

M-Files supports using pre-shared keys for an additional level of security. For more information, see <u>Securing Access to M-Files Vaults with a Pre-Shared Key</u>.

Database Connections

M-Files Server can be integrated with existing databases, such as CRM and ERP databases. All databases with an OLE DB or ODBC driver are supported (includes SQL Server, Access, Oracle, and MySQL).

Integrations with 3rd Party Applications

M-Files can also integrate with numerous 3rd party applications. See www.m-files.com/integrations and https://catalog.m-files.com for examples.

Application Programming Interface (API)

M-Files includes an ActiveX/COM API. Supported languages include VB.NET, C#, Visual Basic, VBScript, and C++. Additionally, M-Files includes the M-Files Web Service API that allows programmatic access to M-Files through a REST-like interface.

M-Files API and its documentation are included within the installation of the M-Files software. The M-Files Web Service API is documented at: http://www.m-files.com/mfws.

The M-Files UI Extensibility Framework allows external add-ins (M-Files Applications) to be used for personalizing the behavior of M-Files Desktop. With these applications, the M-Files experience can be modified to better match specific business areas and needs. For more information, please refer to the <u>UI Extensibility Framework documentation</u>.

Backups and Maintenance

M-Files automatically optimizes the vault database once a week. No other regular database maintenance is needed.

M-Files supports scheduled full and differential backups.

When using Firebird as the database engine, document vaults are backed up using the M-Files Admin tool. When using Microsoft SQL Server as the database engine, document vaults are backed up using the management tools of Microsoft SQL Server and file system level backup tools. Any backup system compatible with Microsoft SQL Server can be used.

Technical Assistance Please send your technical inquiries to support@m-files.com.