FileFlex Enterprise Hardware Requirements

Server Hardware Requirements

The following table describes typical deployment configurations and capacities. Server hardware refers to VM-assigned resources.

	Minimum	Mid-Range	High-End
CPU	Intel Core i3 2-Core @ 2ghz Supports VT-x and AES-NI	Intel Core i7 4-Core or 6-Core @ 3ghz Supports VT-x and AES-NI	Intel Xeon 8-Core or 10-Core @ 3ghz Supports VT-x and AES-NI
RAM (assigned to VM)	4gb	8gb	16gb
Network	Single 1GbE LAN Port	Dual 1GbE LAN Ports w/ Aggregated Links	Dual 10GbE LAN Ports
OS	Linux based, with integrated virtualization support	Linux based, with integrated virtualization support	Linux based, with integrated virtualization support
Maximum Concurrent View-Only Conversions	1	3-4	6-8
Max Activations and/or Users	1000	2500	5000
Max Users in App (ram and cpu dependency)	150	500	1000
Max Typical Active Browsing Users	20	80	160
Max Typical Concurrent Transfers	10	30	60

Connector Agent Hardware Requirements

	Minimum	Mid-Range	High-End
CPU	ARM A8 Single Core @ 1ghz	ARM A9 Dual Core @ 1ghz	Intel Atom Quad Core @ 2ghz
RAM	256mb	512mb	512mb
Network	Single 1GbE LAN Port	Single 1GbE LAN Port	Dual 1GbE LAN Ports w/ Aggregated Links
OS	Linux based	Linux based	Linux based
Storage	7200rpm SATA Drives, < 10ms seek	7200rpm SATA drive(s), <10ms seek	10000rpm SATA drive(s), <7ms seek and/or SSD caching
Max Activations and/or Users	100	250	500
Max Logged in Users (ram and cpu dependency)	30	125	350
Max Typical Active Browsing Users	10	35	100
Max Typical Concurrent Transfers	5	15	30 (may be IO limited)
Expected CPU% Use at Max Typical	50%	50%	50%

View-Only Conversions

The advanced panel of the server administration contains a configurable property “Maximum concurrent view-only conversions”. This defines the maximum number of view-only conversions that may execute at the same time. When a user chooses to view an office document within the application, a conversion is necessary. The number of conversions that can happen at the same time is directly connected to the amount of CPU and RAM allocated to the server. Each “concurrent view-only conversion” requires 1 dedicated CPU core, and 1gb of RAM.

We recommend adding 1 CPU core and 1gb of RAM for each additional 1,000 users added to the system, depending on the frequency with which they are viewing documents within the application, and the size of the documents they are viewing.

Effect of RAM

The most important fundamental resource is RAM because several running processes are launched for data accumulation, proxying, data encryption, etc. A minimum of 2gb is required to run all needed services adequately. The maximum activations introduce a persistent RAM requirement, so a higher RAM total allows for more total activations/ users. Simultaneous transfers also require more RAM. A larger cache allows for a larger number of “active users”.

Effect of Disk IO

The server is not critically bound to drive IO, so most typical well-functioning NAS drive deployments will be adequate. The connector however which is responsible for fetching files from the local device is tied to the IO performance of the device - especially the seek time. SSD caching schemes will greatly improve it’s ability to deliver high numbers of files concurrently without overly slowing down the NAS’s performance.

Effect of CPU

The CPU is highly utilized for encoding/decoding of requests, so is directly related to the number of active users. It is also directly related to the number of high-speed transfers due to the active encryption. The CPU becomes especially important when dealing with 10GbE connections with clients located on the same high-performance network.

Effect of Network

The network is very important when dealing with a large number of concurrent transfers if one wants to maintain consistent local-network level performance. For the reasons described above, it's important to correlate the CPU with the network speed.

Clustering

When capacity becomes saturated, it is possible to deploy FileFlex in a clustered configuration. Supporting a clustered configuration requires dual networks, so it's important that such deployments have at least two network adapters. In a highly de-centralized deployment, the CPU and RAM become less important as the load is spread across several machines.

Virtualization

Supported Virtualization Platforms:

- VMware Workstation 11
- VMware Workstation 12
- VMware Workstation 12.5
- VMware ESXi 5.5 (vSphere)
- VMware ESXi 6.0 (vSphere)
- VMware ESXi 6.5 (vSphere)
- Oracle VirtualBox 5.1

Supported Platforms

The following is a list of verified supported platforms.

Product	OS	OS Type	OS Version
FileFlex Connector	Windows		Windows 7 32/64 bit
FileFlex Connector	Windows		Windows 8 32/64 bit
FileFlex Connector	Windows		Windows 8.1 32/64 bit
FileFlex Connector	Windows		Windows 10 32/64 bit
FileFlex Connector	Windows		Windows Server 2012 64bit
FileFlex Connector	OSX		OS X 10.13 High Sierra
FileFlex Connector	OSX		OS X 10.14 Mojave
FileFlex Connector	OSX		OS X 10.15 Catalina
FileFlex Connector	Red Hat Enterprise	Linux Enterprise: RPM Based on Fedora	RHE v6 64 bit RHE v7 64 bit
FileFlex Connector	CentOS	Linux Enterprise: RPM Based on Fedora Clone of Red Hat Enterprise	CentOS v6 64 bit CentOS v7 64 bit
FileFlex Connector	Ubuntu LTS Server	Linux Enterprise: DEB	Ubuntu LTS 14.04 64 bit Ubuntu LTS 16.04 64 bit
FileFlex Connector	Debian	Linux Enterprise: DEB	Debian v7 64 bit Debian v8 64 bit
FileFlex Connector	SUSE Enterprise	Linux Enterprise: RPM Based on OpenSUSE	SUSE Enterprise v11 64 bit SUSE Enterprise v12 64 bit
FileFlex Connector	Ubuntu Desktop	Linux Desktop: DEB	Ubuntu LTS 16.04 64 bit Ubuntu 16.10 64 bit Ubuntu 17.10 64 bit Ubuntu 18.04 64bit
FileFlex Connector	Fedora	Linux Desktop: RPM	Fedora v27 64 bit Fedora v28 64 bit

Product	OS	OS Type	OS Version
FileFlex Connector	Mint	Linux Desktop: DEB based on Ubuntu	Mint v17 64 bit Mint v17.1 64 bit Mint v17.2 64 bit Mint v17.3 64 bit Mint v18 64 bit Mint v18.1 64 bit
FileFlex Connector	OpenSUSE	Linux Desktop	OpenSUSE 42.1 64 bit OpenSUSE 42.2 64 bit

FileFlex Client App

Product	OS	OS Version
FileFlex Client App	Android	Android 6.0 Marshmallow (API 23)
FileFlex Client App	Android	Android 7.0 Nougat (API 24)
FileFlex Client App	Android	Android 7.1 Nougat (API 25)
FileFlex Client App	Android	Android 8.0 Oreo (API 26)
FileFlex Client App	Android	Android 9 Pie (API 28)
FileFlex Client App	iOS	iOS 12
FileFlex Client App	iOS	iOS 13
FileFlex Client App	Windows	Windows 7 32/64 bit
FileFlex Client App	Windows	Windows 8 32/64 bit
FileFlex Client App	Windows	Windows 8.1 32/64 bit
FileFlex Client App	Windows	Windows 10 32/64 bit
FileFlex Client App	OSX	OS X 10.13 High Sierra
FileFlex Client App	OSX	OS X 10.14 Mojave
FileFlex Client App	OSX	OS X 10.15 Catalina

FileFlex Web Client

Product	Platform Type	Platform	Browser Version
FileFlex Web Client	PC	Windows	Internet Explorer 11 and up
FileFlex Web Client	PC	Windows	70.0.1 (64-bit) and up
FileFlex Web Client	PC	OSX	Firefox 70.0.1 and up
FileFlex Web Client	PC	Linux	Firefox 70.0.1 and up
FileFlex Web Client	PC	Windows	Chrome 78.0.3904.108 and up
FileFlex Web Client	PC	OSX	Chrome 78.0.3904.108 and up
FileFlex Web Client	PC	Linux	Chrome 78.0.3904.108 and up
FileFlex Web Client	PC	OSX	Safari 13.0.3 and up
FileFlex Web Client	Mobile	Android	Android Mobile Browser 18.0.1025 and up
FileFlex Web Client	Mobile	Android	Puffin Mobile Browser 3.0 and up
FileFlex Web Client	Mobile	iOS	Puffin Mobile Browser 3.0 and up
FileFlex Web Client	Mobile	BlackBerry	BlackBerry Browser 10.2.0.1767 and up
FileFlex Web Client	Mobile	iOS	Safari Mobile Browser 3.5 and up
FileFlex Web Client	Mobile	Android	Chrome Mobile 18.0.1025 and up
FileFlex Web Client	Mobile	iOS	Chrome Mobile 19.0.1084 and up
FileFlex Web Client	Mobile	Android	Firefox Mobile 8.0 and up
FileFlex Web Client	Mobile	iOS	Firefox Mobile 8.0 and up
FileFlex Web Client	Mobile	Windows Phone	Internet Explorer Mobile 9.0 and up

