



eFileTexas.gov Infrastructure Guidelines



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Overview

eFileTexas.gov is powered by a comprehensive COTS software package from Tyler Technologies with functionality that provides for flexibility in setup and usage to meet the specific requirements of courts and the e-filing community they serve.

This software package, known as Odyssey File & Serve (OFS), implements a high availability hardware architecture by providing redundancy across its environments, including web servers, application servers, network, Internet contact and power source. In so doing, we eliminate any single point of failure. Additionally, we use multiple, geographically diverse data centers in Texas and New England in the event that the primary application is unavailable.

OFS architecture uses advanced market firewalls and application layering to provide a strong security implementation. OFS uses secure socket layer (SSL) to transmit documents between EFSPs and the courts. All documents submitted are checked for viruses, and any document that is infected is rejected. No documents infected with viruses will be transmitted to the court. To ensure integrity, the system returns a hash for each filed document and maintains a history of all hashes associated with a document. The system also provides an audit log of all transactions based on user ID.

The presentation tier of the eFileTexas.gov system is a Microsoft Silverlight application hosted within a browser. The Silverlight plugin is freely available from Microsoft and enables a rich user experience across a broad set of browsers (including Internet Explorer, Firefox, Safari, and Chrome) that run on desktop operating systems.

While the core OFS system operates in a hosted environment, there are several areas courts must consider when planning and budgeting for integration with eFileTexas.gov. This document is intended to outline those areas of consideration, as well as provide recommendations from eFileTexas.gov for a variety of infrastructure needs.



Internet Bandwidth Guidelines

The following Internet bandwidth guidelines are intended to facilitate optimal performance with eFileTexas.gov during normal and peak usage. Due to the high level of variability in network environments, performance cannot be guaranteed based on bandwidth alone. Network design, PC specifications, and the stability of a court’s Internet service all affect online software performance.

	Moderate File Transfer Volume	Heavy File Transfer Volume
Dedicated Internet	Mbps:	Mbps:
≤ 2 Users	1.0 down / 1.0 up	3.0 down / 3.0 up
Each Additional User	0.100 down / 0.100 up	0.100 down / 0.100 up

	Moderate File Transfer Volume	Heavy File Transfer Volume
Shared Internet	Mbps:	Mbps:
≤ 5 Users	3.0 down / 1.5-3.0 up	4.5 down / 4.5 up
Each Additional User	0.128 down / 0.128 up	0.128 down / 0.128 up

Local Area Network	1000 Mbps	1000 Mbps
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Definitions:

Dedicated Internet – Users connect to eFileTexas.gov via a dedicated Internet connection exclusively reserved for that purpose.

Shared Internet – Everyday Internet usage, email and third-party network applications compete with eFileTexas.gov for limited Internet bandwidth.

Examples:

Moderate File Transfer Volume example – A clerk who downloads/processes 20-30 documents per day.

Heavy File Transfer Volume example – A clerk who downloads/processes 100 or more documents per day.

Redundancy:

Processing electronic filings is heavily reliant on Internet connectivity. As such, redundant and/or backup Internet connections are recommended.



PC Hardware and Web Browser Guidelines

eFileTexas.gov leverages Web-based applications that require no unique software, middleware, or hardware to function. As described above, the presentation tier is a Microsoft Silverlight application that is hosted in a browser. The Silverlight plugin is freely available from Microsoft and enables a rich user experience across a broad set of browsers (including Internet Explorer, Firefox, Safari, and Chrome) that run on desktop operating systems.

Our kiosk solution provides the ability for a filer to submit an anonymous or registered file without incurring a filing fee. The filer can utilize a thumb drive, access an e-mail account and save the file to a court provided workstation, or optionally utilize a court provided scanner to facilitate the upload of an electronic file with the filing.

PC Hardware Recommendations

Component	Minimum	Optimum
Processor	2.8GHz Pentium 4	2.0GHz Core Duo or better
Memory (RAM)	2 GB	4 GB or better
Disk Space	80 MB free disk space	120 MB free disk space or better
Monitor & Resolution	17" display, 1024 x 768 res.	19" display, 1280 x 1024 or better
Ethernet Adapter	100 Mbps	1000 Mbps
Windows Operating System	Vista, (32/64-bit)	7 Pro (32/64-bit)

Web Browser Support

	No Support	Limited Support*	Full Support
Internet Explorer 10		X	
Internet Explorer 9			X
Internet Explorer 8			X
Internet Explorer 7	X		
Internet Explorer 6	X		
Google Chrome (latest released version)	X		
Mozilla Firefox (latest released version)			X
Apple Safari (latest released version)	X		

*Limited Support: Browser will be supported in a future release

Scanner Setting Recommendations:

Offices participating in e-filing may choose to place a PC with an attached scanner in their front lobby to assist walk-up filers. The following settings are recommended for such scanners based on an office's use of OCR technology.



OCR Capability	Setting Recommendation
No OCR Capability	200 DPI Bitonal (Black and White)
OCR Capability In-Use or Planned For	300 DPI Bitonal (Black and White)

Storage Guidelines

The following guidelines can be used to predict the amount of storage capacity needed to support e-filing data and documents transmitted to a jurisdiction on an annual basis based on population. These general rules may be used to produce both a high and low estimate for filings in a mandatory environment:

Population	High GB	Low GB
4,000,000	626	188
3,000,000	469	141
2,000,000	313	94
1,000,000	156	47
750,000	117	35
500,000	78	23
400,000	63	19
250,000	39	12
150,000	23	7
75,000	12	4
50,000	8	2
25,000	4	1

Predicting Annual Filing Volume:

High Annual Filing Volume Estimate: [Population] / [3]

Low Annual Filing Volume Estimate: [Population] / [10]

Predicting Annual Storage Needs:

High Annual Storage Estimate: [High Annual Filing Volume] / [1.23] * [610KB]

Low Annual Storage Estimate: [Low Annual Filing Volume] / [1.23] * [610KB]

Example:

2010 Census Population Count: 800,000



High Annual Filing Volume Estimate: $[800,000] / [3] = 266,667$ Filings

Low Annual Filing Volume Estimate: $[800,000] / [10] = 80,000$ Filings

High Annual Storage Estimate: $[266,667] / [1.23] * [610KB] = 126$ GB

Low Annual Storage Estimate: $[80,000] / [1.23] * [610KB] = 38$ GB

Storage Constants Used for Estimates:

Assumed Average number of Filings per Envelope: 1.23

Assumed Average Envelope size: 610KB

Highest Population/Filing Ratio: 3:1

Lowest Population/Filing Ratio: 10:1

Additional Storage Statistics:

Assumed Average case file record size: 40KB

Assumed Average PDF page size: 120KB

Minimum Observed Envelope Size: 643 bytes

Maximum Observed Envelope Size: 2.2 GB



Odyssey Integration Server Requirements

eFileTexas.gov's integration with Odyssey supports interoperability among systems using the Information Hub in a service-oriented architecture through the Odyssey Integration Toolkit. Communication between the Information Hub and Odyssey's core integration services utilizes the Odyssey Translation Bus (OTB) service operating on dedicated integration hardware compatible with virtualization.

Integration Server Count Recommendations Based on Filing Volume:

Minimum:

Two integration servers with load balancing dedicated solely to eFileTexas.gov integration

Optimum:

Two integration servers with load balancing dedicated solely to eFileTexas.gov integration

Plus

One additional Integration Server for every 500,000 annual filings above 1,000,000

Example 1:

Annual Filing Volume: 50,000

Integration Server Count: **2**

Example 2:

Annual Filing Volume: 2,500,000

Integration Server Count: **5** [2 (minimum) + 3 (1.5M / .5M)]

Server Hardware Recommendations:

Minimum: Two cores, 4GB RAM, 2x 300GB 15K 3.5" SAS disks, RAID1

Recommended: Four cores or more, 16GB RAM, 2x 300GB 15K 3.5" SAS disks, RAID1



Server Operating System Compatibility:

Odyssey Core Functionality		R2011	R2012	Future ⁽¹⁾ R2013	Future ⁽¹⁾ R2014
Server Operating System	Odyssey Web Application Servers, Job Servers, Public Access Servers, Integration Servers				
	Windows 2003 Std. / Ent. Edition, 32-bit	yes	no	no	no
	Windows 2003 Std. / Ent. Edition, 64-bit	no	no	no	no
	Windows 2008 Std. / Ent. Edition, 32-bit	yes	yes	yes	yes
	Windows 2008 Std. / Ent. Edition, 64-bit	no	no	no	no
	Windows Server 2008 R2 Std./Ent., 64-bit	yes	yes	yes	yes
	Windows Server 2012 Std./Ent., 64-bit	no	no	yes ⁽²⁾	yes

(1) 'Future' columns indicate changes anticipated for future Odyssey release(s). Blank cells indicate no change compared to the most recently published release. Information in 'Future' columns may be subject to change.

(2) Anticipated announcement date for support is July 1, 2013. Windows Server 2012 will be supported only with Odyssey 2013 and later.