



# System Requirements

## For eDiscovery Tools Products

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## Introduction

Our three established eDiscovery Tools products (Processor, QuickPeek, and Reviewer) are now more tightly integrated and are bundled together in the “eDiscovery Toolbox” subscription.

This delivers to our clients an end-to-end integrated solution for litigation, dispute resolution and regulatory compliance. While they are now tightly integrated, each product can also operate independently of the others. This enables each product to be used separately or may be integrated with your established third party review platforms or processing products.

This document summarises system requirements for:

- eDiscovery Toolbox (including Reviewer & QuickPeek products and supporting components)
- eDiscovery Processor (while this established, flagship product is now bundled into each eDiscoveryToolbox subscription it still runs on a different technical platform, has different requirements and should run on a separate, dedicated computer as outlined below)

Our products are based on Microsoft Windows and Microsoft .NET technologies. They should be run on dedicated computers, not on hardware shared with large enterprise applications or shared production systems.

Specifying computer hardware is challenging. Every client is different. The requirements for a single workstation site are very different to those of a service provider setting up hosting infrastructure to accommodate many clients and large datasets.

The eDiscovery Toolbox is particularly difficult to prescriptively specify because it consist of products, and components which can optionally be spread across multiple computers and can be accessed by multiple users simultaneously.

The configuration of your environment will depend upon the products you decide to deploy, the extent to which you want to make them available within and external to your organisation and the document volumes to be processed and hosted. As a general rule of thumb, it is always best to obtain the highest possible specification (RAM, disk space, CPU etc) your budget will accommodate.

Other environmental factors such as network utilization and Internet connection speeds will also impact performance and should also be configured to allow the highest possible data throughput and concurrent user access. Your network administrator will be the best source of guidance on these environmental network issues.

The information contained in this document should therefore be read as a guideline only and as a starting point for consideration by your network administrators and technology advisors. Please feel free to contact [support@ediscoverytools.com](mailto:support@ediscoverytools.com) with any queries or to arrange for one of our technical team to contact you to discuss your specific requirements and options.

## Requirements for Toolbox 3.1

Toolbox uses Microsoft SQL Server 2008 as a central store with each “case” having its own SQL Server database. This shared data store is used by both QuickPeek and Reviewer web applications. Toolbox does not store copies of all documents inside its databases so disk storage for original source data is also necessary. See the *Data Location Requirements* section below for more information.

### Toolbox Applications

The applications included in Toolbox are summarised below.

Application	Description	Target Users	App type
QuickPeek	An early case assessment tool that provides you with quick access to data profile graphs, cost and time estimates, and tools to investigate and implement various data culling options.	Analysts etc.	Web
Reviewer	An on-line web based review platform integrated with QuickPeek that can also initiate productions for exchange purposes.	Legal Reviewers	Web
Loader	Extracts metadata and text from source data in its native form and adds it to case databases. Loader is a Windows application.	Administrators	Windows
Importer	Imports structured load files into the database. Imported documents appear in Reviewer – they do not appear in QuickPeek.	Administrators	Windows
Agent	Performs most of the ongoing processing of documents after the initial load, such as creating PDFs, TIFFs and disclosure packages. A set-and-forget application that should be running at all times in case there is any work queued up for it to do. Note: Agent requires an active desktop and should not be run on a machine that is locked, logged out, or has a screensaver configured.	(None)	Windows
Toolbox Server	Performs tasks that require elevated access such as creating new Case databases.	(None)	Windows Service*
Web Manager	Monitors and cleans up temporary/cached files on the IIS (Web) server.	(None)	Windows Service*

\* Windows Services are applications that (typically) start when the operating system is booted and run in the background as long as Windows is running. They are designed to run without direct user interaction. They can be managed using “Services” from the Windows Control Panel.

### Installing on Multiple Computers

While all Toolbox applications can be run on a single computer, in production environments and especially in internet-facing situations the applications are typically installed on multiple machines. For example, for internet-facing situations the Web Application (IIS) server and the SQL Database Server are often installed on different machines so that that firewalls and other security solutions can be established. Toolbox has a flexible architecture which enables the applications to be installed in different configurations, subject to the restrictions itemised below.

Configuration Restrictions:

- The Agent must be run on a computer with an active desktop due to its application dependencies (Adobe Acrobat, Microsoft Office etc).
- The Loader and Agent must run on the same machine.
- Only one copy of the Agent should be installed and running.
- We highly recommend that the machine running the Loader and the Agent be a dedicated machine and not used as someone's day-to-day workstation.
- The Toolbox Server must be installed on the computer running SQL Server.
- The Web Manager must be installed on the IIS (web) server.

The Importer can run on any machine or on multiple machines simultaneously. However, if your site does a lot of Loading or Importing you might consider installing the Importer on a machine separate from the Loader/Agent in order to be able to simultaneously Load/Process and Import without being constrained by the available resources of a single computer.

## Concurrent/Distributed Loading, Importing, Processing

A Toolbox installation currently supports:

- One Loader.
- One Agent. Notes: The Agent runs continuously waiting for work to do. Do not install more than one copy of the Agent. Support for multiple Agents concurrently working on a case is planned for a future release of the Toolbox.
- Multiple Importers. Multiple Importers may be installed on separate computers to import Load Files into Toolbox. Multiple Importers can import into the same case simultaneously.

The Loader, Agent and multiple Importers can all be running at the same time. However, these can put significant load on SQL Server which can affect the performance of the Web applications (QuickPeek and Reviewer). If you find this to be the case, we recommend you Load/Import during times when the web applications are not be heavily utilised.

## Software

### Client Computers

End user computers accessing the QuickPeek or Reviewer web applications require the following software.

Software	QuickPeek	Reviewer
Microsoft Windows XP or later	■	■
Microsoft Internet Explorer 7+ with JavaScript enabled.	■	■
Adobe Acrobat Reader 8+		■
Avantstar Quick View Plus 11 (Professional)		■

### Server and Administrator Computers

The table below lists the required software for the server and administrator applications. An example configuration is shown in the first row of the table below (represented in italic blue font).

Software	Web Application (IIS) Server (Toolbox Web Manager, QuickPeek & Reviewer Web Apps )	SQL Database Server (Toolbox Server)	Loader	Agent	Importer
<i>Possible Configuration</i>	<i>Server 1</i>	<i>Server 2</i>	<i>Server/Computer 3</i>		
Operating System: Windows Server 2008 SP2+ (64 and 32 bit)	■	■	■	■	■
IIS 7+ (Internet Information Services)	■				
Microsoft SQL Server 2008 SP1+ Standard Edition or above <sup>1</sup>		■			
Microsoft Outlook 2007			■	■	
Microsoft Office 2007 Professional (2010 is not supported)				■	
Adobe® Acrobat 8 or 9 Professional (X is not supported)				■	
IBM® Lotus Notes® Client 6.5 (Standalone) or 8.0 (Standalone, Messaging)			■ <sup>2</sup>	■	
Avantstar Quick View Plus 11 (Professional)				■	
AutoClick Utility: ClickYes Pro (or Express ClickYes)				□ <sup>3</sup>	
Microsoft Data Access Components 2.8 SP1					■
Microsoft .NET Framework 3.5 SP1	■	■	■	■	■

Key: ■ Required/Supported. □ Optional.

## Hardware

### Client Computers

No specific hardware required apart from that necessary to run the software listed above.

### Servers

Hardware	Web (Application) Server	Database Server
Processor (CPU)	1 x Quad Core server-grade CPU.	1 x Quad Core server-grade CPU. Ideally have a spare CPU slot to add an additional CPU if required.
Memory (RAM)	8 GB	16 GB+ Ideally leave slots free so that more memory

<sup>1</sup> Compact Edition and Express Edition are not supported.

<sup>2</sup> The Lotus Notes client is required to load .NSF files. Lotus Notes requirement added in version 3.1.

<sup>3</sup> Use either an AutoClick utility or configure Outlook security settings to allow programmatic access.

Hardware	Web (Application) Server	Database Server
		can be added if required.
Hard Drive	2 x 15k RPM SAS Drives. RAID 1.	6 x 300GB+ 15K RPM SAS drives. RAID 5. This will depend on number and size of cases so the ability to scale the number and size of the drives is recommended
Network Configuration	Gigabit Ethernet (GbE)	Gigabit Ethernet (GbE)
Attached Storage	-	3TB attached storage for database backups and temporary location of source data for loading.

General hardware recommendations for the database server include:

- Obtain the fastest CPUs available within your budget.
- Use fast drives such as 15K RPM SAS drives to maximum disk IO throughput and increase performance.
- Install lots of memory (RAM). This allows SQL Server to cache more of the databases in memory, thereby increasing performance.
- Follow other SQL Server best practices. For example, distribute database-related files/logs/etc across multiple LUNs/spindles/RAID arrays.

## Agent, Loader and Importer

See the notes about these components, and especially the Agent, in the *Toolbox Applications* and *Installing on Multiple Computers* sections above.

Hardware Requirements	Minimum Recommended
Processor (CPU)	Intel® Dual-Core (e.g. Intel® Core 2 Duo)
Memory (RAM)	8GB+
Hard drive Capacity	750GB+ Depends on the size of the source data and how data is loaded into Toolbox. See Source Data Storage below for more information.
Hard drive Speed	7,200 RPM+ Processing performance is largely dependent upon the speed of the drive(s). We therefore recommend using the fastest drives you have available. For example, 10K or 15K RPM SATA or SAS drives, RAID striping etc.
Network Configuration	Gigabit Ethernet (GbE)

## Data Location Requirements

### Source Data Location Constraints

When the Loader is used to load source data into Toolbox it initially loads only the document metadata and (optionally) the text of the documents. At this point the database does not contain native files or images. As documents are moved into Reviewer and Disclosure Packages are created and so on, native files and images are retrieved or generated and stored in the database on an as-needed basis.

Ongoing access to the source data in its original location (the location it was in at the point of loading) is required by Toolbox applications (the Agent and the Toolbox Server) in order to carry out further on-demand processing, production and file extraction.

### Importer

If the Importer is used to import a load file, all of the relevant content in the Load file is copied into the case database. Therefore the Load file does not need to remain on the system.

### Processor and Filter Files

Processor requires access to the source data in its initial location if using Filter Files produced from QuickPeek.

## Requirements for Processor

While it is now bundled alongside our other eDiscovery Toolbox products as a single subscription offering, Processor runs on a different technology platform. It has its own specific requirements and due to its resource intensive requirements, it should run on a dedicated computer to ensure that it does not negatively impact Toolbox server performance, or vice versa.

### Hardware

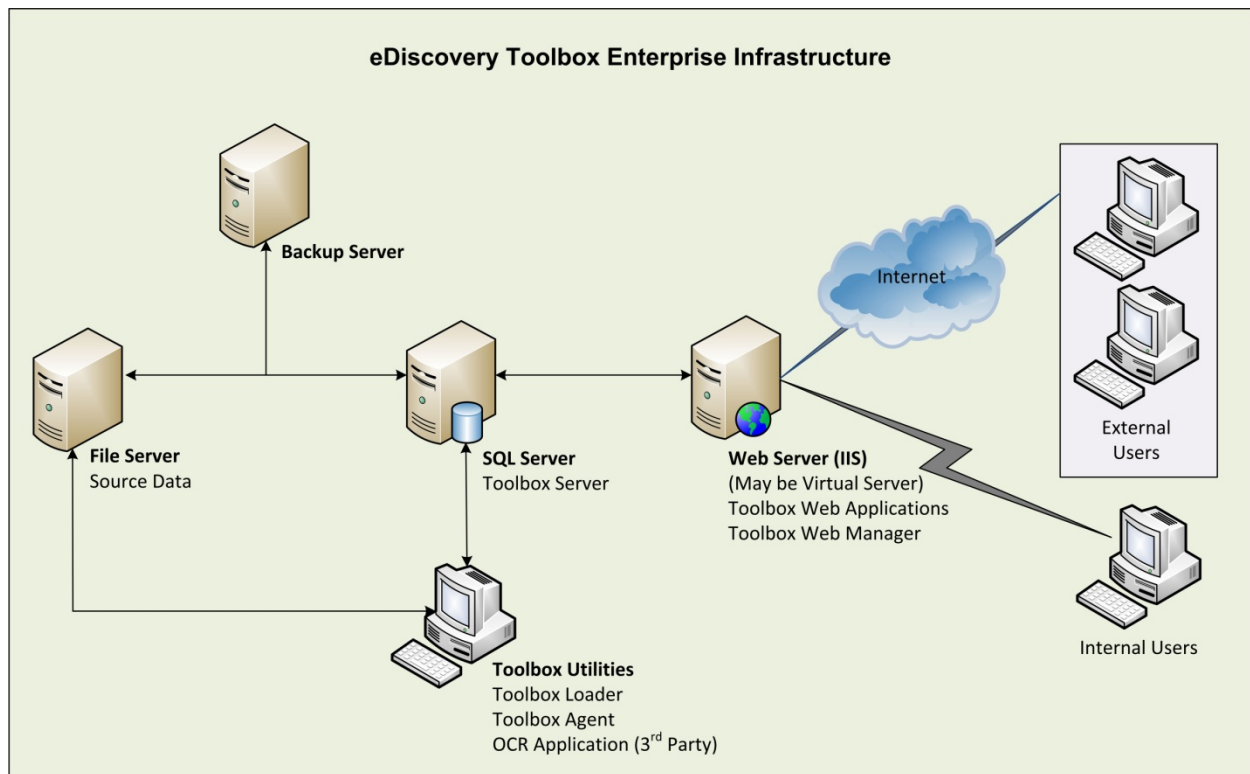
Hardware Requirements	Minimum Recommended
Processor (CPU)	Intel® Dual-Core (e.g. Intel® Core 2 Duo)
Memory (RAM)	8GB+
Hard drive Capacity	750GB+ The amount of disk storage required is dependent upon the size of the original source data to be processed and the processing options selected. As a general guideline, allow 10 times the original data size.
Hard drive Speed	7,200 RPM+ Processing performance is largely dependent upon the speed of the drive(s). We therefore recommend using the fastest drives you have available. For example, 10K or 15K RPM SATA or SAS drives, RAID striping etc.
Network Configuration	Gigabit Ethernet (GbE)
Data Archival	Somewhere to archive processed jobs. For example, an external hard drive or Network Attached Storage (NAS). Consult your network administrators for options.
Data Backup and Recovery	For example, Tape Backup. Consult your network administrators for options.

### Software

Software Requirements	Required
Microsoft Windows Operating System	XP Professional SP3, Windows Server 2003 R2 with SP2, Windows Server 2008 SP2+, or Windows 7 64-bit (x64) recommended.
Microsoft Office	Microsoft Office 2007 Professional
Microsoft .NET Framework	3.5 SP1
Microsoft Data Access Components	2.8 SP1
Microsoft Internet Explorer	7 or 8
IBM® Lotus Notes® Client	6.5 (Standalone) or 8.0 (Standalone, Messaging)
Adobe® Acrobat	8 or 9 Professional
File Archival Utility	7-Zip
File Viewing Utility	Avantstar Quick View Plus 11 (Professional)
Auto-Click Utility	Express ClickYes or ClickYes Pro

## Enterprise Subscription Infrastructure

The diagram below summarises the recommended network infrastructure for the eDiscovery Toolbox Enterprise Subscription Licence.



## OCR Software

While eDiscovery Tools does not incorporate OCR functionality it does support an OCR workflow through interaction with third party products. Our recommendation is for ABBYY FineReader 10 Professional Edition (running on a dedicated workstation on the same network as the eDiscovery Tools software).

## Virus Protection

It is also recommended that all software to be loaded into eDiscovery Toolbox is checked first for viruses and other malware. This is often done on a dedicated workstation prior to the loading of data.