



# System Requirements

## For eDiscovery Tools Products

### Contents

<b>Introduction.....</b>	<b>2</b>
Software Requirements Summary.....	2
<b>Requirements for Processor &amp; Analyst .....</b>	<b>3</b>
Hardware .....	3
Software.....	3
<b>Requirements for QuickPeek.....</b>	<b>4</b>
Server Software .....	4
Server Hardware .....	5
Server Storage.....	5
Client.....	5
<b>Requirements for Reviewer.....</b>	<b>6</b>
Client .....	6
Server Software .....	6
Server Hardware .....	6
Case Studies .....	7
Example 1.....	7
Example 2.....	8

## Introduction

*eDiscovery Tools* products are easy to use software applications that can be used separately or integrated with each other or with third party products to deliver an end-to-end eDiscovery solution.

This document summarises system requirements for the following products:

- eDiscovery Processor & eDiscovery Analyst
- eDiscovery Reviewer
- eDiscovery QuickPeek

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 other 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.

eDiscovery Reviewer and eDiscovery QuickPeek products are particularly difficult to prescriptively specify because they consist of components which can optionally be spread across multiple computers and can be accessed by multiple users simultaneously. 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 particular requirements and options.

## Software Requirements Summary

The following table contains the core and common software requirements for the eDiscovery Tools product range. For more detailed requirements for each product, see the appropriate section in this document.

Software	Processor & Analyst	Reviewer	QuickPeek
Operating System options: <sup>1</sup>			
▪ Windows XP Professional SP3	■		■
▪ Windows Server 2003 R2 SP2	■		■
▪ Windows Server 2008 SP2+	■	■	■
Microsoft SQL Server <sup>2</sup>			
▪ 2005 SP3+		■	■
▪ 2008 SP1+		■ <sup>3</sup>	
.Net Framework 3.5 SP1+	■	■	■
Office 2007 Professional	■		Outlook 2007

Key: ■ Supported

<sup>1</sup> 64-bit Operating Systems are recommended.

<sup>2</sup> Compact Edition is not supported.

<sup>3</sup> Reviewer requires Standard Edition at minimum.

## Requirements for Processor & Analyst

### 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	XP Professional SP3, Windows Server 2003 R2 with SP2, or Windows Server 2008 SP2+. 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 10
Auto-Click Utility	Express ClickYes or ClickYes Pro

## Requirements for QuickPeek

QuickPeek is a new product from eDiscovery Tools.

QuickPeek consists of 2 tools:

- QuickPeek. This is the component that most users will work with, using a web browser. QuickPeek is a web application.
- Loader. Loader is used by administrators to load datasets into QuickPeek. Loader is a Windows application.

The tools in QuickPeek use Microsoft SQL Server 2005 or 2008 as a central store. QuickPeek does not currently store copies of the documents in its databases so disk storage for original datasets is also necessary.

QuickPeek components can be installed on a single computer or spread across multiple computers. For example, it is possible to have the following components on separate computers:

- Web browser (client) for accessing the QuickPeek
- QuickPeek Web Server
- Loader
- Microsoft SQL Server 2005/2008
- File Servers for original datasets

### Server Software

Note: all 3 components below may be installed on a single machine. Multiple columns are shown to differentiate the software requirements of each component.

Software	Web (Application) Server	Database Server	Loader
Operating System options:			
▪ Windows XP <sup>4</sup>	■	■	■
▪ Windows Server 2003 R2 SP2	■	■	■
▪ Microsoft Windows 2008 SP2+	■	■	■
IIS 6+ (Internet Information Services)	■		
Microsoft SQL Server <sup>5 6</sup>			
▪ 2005 SP3+		■	
▪ 2008 SP1+ (Preferred)		■	
Microsoft .NET Framework 3.5 SP1+	■	■	■
Microsoft Outlook 2007			■

Key: ■ Supported.

32 bit and 64 bit versions of the specified operating system and SQL Server are supported.

<sup>4</sup> Supported in v2.0

<sup>5</sup> Compact Edition not supported.

<sup>6</sup> The Express Edition is supported, but note that it can only utilize 1 physical processor, up to 1 GB memory, and up to 4 GB per database. <http://www.microsoft.com/sqlserver/2008/en/us/express.aspx>

## Server Hardware

The following are minimum recommendations for eDiscovery QuickPeek 1.0 running on an internal LAN. Later versions will likely require increased specifications as more functionality is introduced.

Note: all components may be installed on a single machine. Larger installations may choose to install on multiple servers in order to scale. If you elect to install all components on a single machine, refer to the requirements specified in the Database Server column below.

Hardware	Web (Application) Server	Database Server
Processor (CPU)	1 x Dual Core server-grade CPU.	1 x Quad Core server-grade CPU.
Memory (RAM)	4 GB	8 GB+
Hard Drive	250GB. 7,200 RPM	500GB+ drive. 7,200 RPM+. See <i>Server Storage</i> below for more information.
Network Configuration	Gigabit Ethernet (GbE)	Gigabit Ethernet (GbE)

## Server Storage

Information about each case is stored in its own SQL Server database. A case database only contains document metadata; it does not contain files or images.

The following provides a rough guide to the amount of disk space needed by a case, based on our initial observations.

1. Original dataset size, plus
2. Database file size of approximately 1 to 2 MB for every thousand documents in the original dataset, plus
3. Additional space for the database log file.

Future versions of QuickPeek will require:

- Ongoing access to the datasets in their original locations in order to carry out further processing.
- Additional disk space. It is estimated that the *additional* space required will not exceed the size of the original dataset, and should be significantly less.

Processor 3.10 requires access to the datasets in their initial locations if using filter files produced by eDiscovery QuickPeek.

## Client

Users who will be accessing QuickPeek require the following.

Software	
Operating System	Microsoft Windows XP or later
Web Browser	Microsoft Internet Explorer 7+. JavaScript enabled.

## Requirements for Reviewer

Reviewer should be installed on a multi-server environment. The server roles and configuration requirements are described below.

It is important to note however, that the configuration of the Reviewer servers will depend upon the document volumes to be hosted. As a general rule of thumb, it is always best to obtain the highest possible specification (RAM, disk space, CPU) 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.

Typically Reviewer is installed on 2 separate servers, a Web (Application) Server and a Database server.

### Client

Software	
Operating System	Microsoft Windows XP or later
Web Browser	Microsoft Internet Explorer 7+
PDF Viewer	Adobe Acrobat Reader 8+
Native File Viewer (Optional)	Avantstar Quick View Plus 10

### Server Software

Software	Web (Application) Server	Database Server
Windows Server 2008 SP2+ (64-bit or 32-bit)	■	■
IIS 7.0 (Internet Information Services)	■	
Microsoft SQL Server 2008 SP1+, Standard Edition or above.		■
Microsoft .NET Framework 3.5 SP1+	■	■

### Server Hardware

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 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:

- Get the fastest CPU(s) available within your budget.
- Use 15K RPM SAS drives to maximum Disk IO throughput – random IO and MB/sec transfers.
- Install the maximum amount of RAM affordable to enable more of the database and full text data to be in cache.

## Case Studies

The following examples provide information from 2 service providers hosting Reviewer environments. This information may be useful when planning new Reviewer installations.

### Example 1

Reviewer version: 1.7<sup>7</sup>

Hosted customers: 4

Number of users: 26

Hardware details are not included in this case study as, at the time of writing, this service provider is upgrading their single server solution in order to provide better performance, scalability and room for future growth.

Case	Number of Documents*	Database file size	Disk space used per Document*
1	580,832	188,582 MB	332 KB
2	23,121	1,379 MB	61 KB
3	331,647	70,144 MB	217 KB
4	2,324	299 MB	132 KB

\* A Document comprises: a PDF, a native file (in most cases), and metadata. Disk space usage includes database overhead such as indexes, full-text catalogs and so on.

<sup>7</sup> Reviewer 1.7 has been superseded by version 2.0 and is no longer available.

## Example 2

Reviewer version:	2.0
Hosted customers:	4
Number of users:	154

Hardware	Web (Application) Server	Database Server
Operating System	Windows Server 2003 R2 Enterprise Edition 32 bit	Windows Server 2003 R2 Enterprise Edition 32 bit
Processor	2 x Quad Xeon 2.4 GHz	2 x Quad Xeon 2.4 GHz
Memory	8 GB	8 GB
Hard Drive	OS: 2 x 146 GB 10K RPM SAS RAID 1 Web sites: 6 x 146 GB 10K RPM SAS RAID 5	OS: 2 x 146 GB 10K RPM SAS RAID 1 Data: 14 x 146 GB 10K RPM SAS RAID 5
Attached Storage		4 TB (USB 2)

### Example cases:

Case	Number of Documents*	Database file size	Disk space used per Document*
1	95141	50,700 MB	546 KB
2	6204	18,253 MB	3,013 KB**
3	15604	3,072 MB	202 KB
4	1851	776 MB	429 KB

\* A Document comprises: a PDF, a native file (in most cases), and metadata. Disk space usage includes database overhead such as indexes, full-text catalogs and so on.

\*\* Case 2 contained some large PDFs (600MB+) which increased the overall document average.