

# Hardware & System Requirements

The following sections explain the system terminology, describe the minimum software, hardware, and network specifications, and illustrate the implementation methods required by OfficeMate/ExamWRITER:

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## NOTES

- The requirements outlined in this document represent the minimum system specifications required to effectively use the OfficeMate/ExamWRITER software. Failure to meet these requirements will noticeably degrade the performance.
- Overall performance is predicated on four areas of hardware: memory; processor utilization; hard drive speed and space; and network speed and throughput. Monitor these system resources and upgrade them before they reach 80% of capacity.
- In addition to these requirements, review and adhere to the requirements and recommendations provided by your other software and equipment vendors. For example, ECRVault requires a dedicated server with its own specifications.
- Eyefinity highly recommends employing certified operating system and networking technicians to install and manage your computer systems. Eyefinity does *not* provide support for your computer systems.
- If you are unsure about whether your systems meet the minimum requirements, or if you're considering purchasing hardware, hardware support, or a hosting service, go to <http://www.eyefinity.com/strategic-partners/CertifiedPartners.html>.
- These system requirements are routinely reviewed and updated. Visit our website to view the latest system requirements. This document was updated on April 22, 2019.

## System Terminology

<b>client or workstation</b>	A computer that is connected to the server and relies on the server for data files and network connections.
<b>dedicated server network</b>	A network in which one computer is designated as the server and only handles network administration tasks. Other computers, or clients, are dependent on the server for network connections. A dedicated server is recommended for large networks with more than three users. Dedicated server networks are fast and can handle multiple users.
<b>network</b>	A physically interconnected group of computers running software that allows them to share files and resources.
<b>peripheral</b>	An external hardware component added to your computer to extend functionality. Peripherals can include printers, scanners, keyboards, mice, cameras, and more. Peripherals may be wired or wireless.
<b>print server</b>	A computer (either a client or a server) that has a printer physically attached to it. Other workstations may print to the printer via the network, but print jobs are controlled by the print server.
<b>server</b>	A computer running administrative software that controls access to the network and its resources. The server acts as the network's file cabinet, providing data files to other computers on the network.
<b>Terminal Server</b>	<p>Terminal Services allows a user to access OfficeMate/ExamWRITER on a remote computer over your network.</p> <p>If the workstations in your practice (single or multiple locations) access the OfficeMate/ExamWRITER applications via a network connection to a central server, you may have a Terminal Services environment.</p> <p>If the OfficeMate/ExamWRITER applications reside on individual workstations in your practice (single or multiple locations), you have a non-Terminal Services environment.</p>

## Software Requirements

Software	Requirement	Notes	
Server Operating System	<b>Operating System</b>	<b>Supported Editions</b> <b>Unsupported Editions</b>	
	Windows Server® 2016 <sup>1</sup>	Standard	Datacenter
	Windows Server 2012 R2 <sup>2</sup>	Standard	Foundation Essentials (formerly Small Business Server) Datacenter
	<p><sup>1</sup> Requires OfficeMate/ExamWRITER 14.0 or later.</p> <p><sup>2</sup> Requires OfficeMate/ExamWRITER 10.8 or later.</p> <p>Install the latest service pack and critical updates for your operating system. Ensure that your computer is certified for the operating system that you are using.</p>		

Workstation Operating System	Operating System	Supported Editions	Unsupported Editions
	Windows® 10 <sup>3, 4, 6</sup>	Pro Enterprise	Basic Education Home Mobile
	Windows 8.1 <sup>3, 5</sup>	Pro Enterprise	Basic
	Windows 7 <sup>3</sup>	Professional Ultimate	Starter Home Basic Home Premium

<sup>3</sup> OfficeMate/ExamWRITER runs in 32-bit and 64-bit environments.

<sup>4</sup> Eyefinity supports OfficeMate/ExamWRITER 12.0 on Windows 10 Pro Edition and Enterprise Edition. Earlier versions of OfficeMate/ExamWRITER are not supported on Windows 10.

<sup>5</sup> Eyefinity supports OfficeMate/ExamWRITER 10.7 and later on Windows 8.1 Pro Edition and Enterprise Edition.

<sup>6</sup> Windows 10 does not support TWAIN, which is currently required to scan documents into eDocs.

Install the latest service pack and critical updates for your operating system. Ensure that your computer is certified for the operating system that you are using.

Software	Requirement	Notes											
SQL Database Server	<p>On seeking the appropriate version of Microsoft SQL Server that best fits your needs, we recommend consulting a Microsoft Certified Technician. There are two versions of Microsoft® SQL Server:</p> <ul style="list-style-type: none"> <li>• Express, which is free</li> <li>• Standard, which supports more users and bigger databases</li> </ul> <p>The version required depends on two factors: the size of your database and the number of users—doctors and staff—in your practice.</p>												
		<table border="1"> <thead> <tr> <th>Number of Users</th> <th>Database Size</th> <th>SQL Database Server</th> </tr> </thead> <tbody> <tr> <td rowspan="2">1–25</td> <td>10 GB or less</td> <td>SQL Server 2017 Express <sup>7</sup> SQL Server 2016 Express SP2 SQL Server 2014 Express SP3 SQL Server 2012 Express SP4</td> </tr> <tr> <td>10 GB or more</td> <td>SQL Server 2017 Standard <sup>7</sup> SQL Server 2016 Standard SP2 SQL Server 2014 Standard SP3 SQL Server 2012 Standard SP4</td> </tr> <tr> <td>25 or more</td> <td>Any size</td> <td>SQL Server 2017 Standard <sup>7</sup> SQL Server 2016 Standard SP2 SQL Server 2014 Standard SP3 SQL Server 2012 Standard SP4</td> </tr> </tbody> </table>	Number of Users	Database Size	SQL Database Server	1–25	10 GB or less	SQL Server 2017 Express <sup>7</sup> SQL Server 2016 Express SP2 SQL Server 2014 Express SP3 SQL Server 2012 Express SP4	10 GB or more	SQL Server 2017 Standard <sup>7</sup> SQL Server 2016 Standard SP2 SQL Server 2014 Standard SP3 SQL Server 2012 Standard SP4	25 or more	Any size	SQL Server 2017 Standard <sup>7</sup> SQL Server 2016 Standard SP2 SQL Server 2014 Standard SP3 SQL Server 2012 Standard SP4
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		<p><sup>7</sup> Microsoft SQL Server 2017 is supported by OfficeMate/ExamWRITER 15 (February 2019 release) and later.</p> <p>OfficeMate/ExamWRITER 15 includes SQL Server 2014 Express in new installations but does not upgrade the SQL server in existing installations.</p> <p>Additionally, new or upgraded servers also require SQL Server Management Studio (SSMS). OfficeMate/ExamWRITER 15 does not include SSMS.</p> <p>For more information on downloading and installing SQL Server Express and SSMS, go to the <a href="#">knowledge base</a>.</p>											
Microsoft .NET Framework	Microsoft .NET Framework 4.7	.NET Framework 4.7 is installed as part of Windows 10. You can download .NET Framework 4.7 for free from <a href="#">Microsoft</a> .											
Word Processor	Any word processor capable of opening rich-text format (RTF) files	Microsoft Word, Microsoft WordPad, or OpenOffice Writer are all suitable word processors. Such web-based word processors as Google Docs will not work with OfficeMate and ExamWRITER.											
XPS Writer	XPS Writer	XPS is required to print certain documents like claims. XPS is installed as part of Windows and Windows Server. Ensure XPS is installed and enabled.											

## Workstation Requirements

Refer to “[Software Requirements](#)” on page 3 for a complete list of supported operating systems.

**NOTE** Eyefinity highly recommends employing certified operating system and networking technicians to install and manage your computer systems. Eyefinity does *not* provide support for your computer systems.

Hardware	Requirement	Best-Fit Workstation
Processor	Intel® Core™ 2 Duo Processor E8400 or better	Dell™ OptiPlex™ 3000 Series
Memory	3 GB or higher	Lenovo® ThinkCentre® M710 Series
Hard Drive Size	60 GB or higher with at least 8 GB free for the software	
Hard Drive Type	SATA 7200 rpm	HP EliteDesk 705 Desktop Mini
Video Adapter & Screen Resolution	1280×1024 pixels (24-bit) or higher	Think Smart Vision Series Workstations
Monitor	17-inch or larger	

## Peripheral Requirements

Peripherals are components that you attach to your computer to add functionality. Peripherals may include printers, scanners, and backup media. Although Eyefinity outlines the following requirements for peripherals, not every peripheral is required.

Peripheral	Requirement	Notes
Document Printer	Business-grade laser printer that supports PCL 5e	Multifunction printers may not operate properly and are not recommended. Eyefinity tests its products with HP LaserJet® printers. Use PCL 5e-compatible printers; some forms will not print correctly on non-PCL 5e-compatible printers.
Label Printer	Dymo LabelWriter 450	Requires the DYMO 8.6.6.11 software. Later versions are not supported. To download the driver, go to <a href="http://download.dymo.com/dymo/Software/Win/DLS8Setup.8.6.exe">http://download.dymo.com/dymo/Software/Win/DLS8Setup.8.6.exe</a> .
Barcode Printer	SATO CL408e for distribution centers (Part# WW00409021)  SATO CG408TT for individual offices (Part# WWCG18031)	Ensure that your SATO printer includes the RS-232 serial interface.
Document Scanner	TWAIN-compatible	Starting with Windows 10, Microsoft no longer includes native TWAIN drivers. Check with your scanner manufacturer for TWAIN-compatible drivers for your version of Windows.  Eyefinity does not recommend a specific scanner brand or model; you can use any scanner that can create an electronic document with the OfficeMate software eDocuments feature. Some TWAIN-compatible network scanners or scanners that are part of multifunction machines may not work under a Terminal Server environment or on a Windows Server.

Peripheral	Requirement	Notes
Barcode Scanner	Datalogic Gryphon GM4130 Wireless (Part# GM4130-BK-910K1 and Part# GM4130-WH-910K1)  Datalogic Heron HD3130 Wired (Part# HD3130-BKK1B and Part# HD3130-WHK1B)	You can use any barcode scanner with a keyboard-wedge interface that is programmed to read the Interleaved 2 of 5 format with OfficeMate.
Uninterruptible Power Supply (UPS)	UPS on file server	Electric power is not always delivered to your outlets in perfect condition. Fluctuations can impact your computer's performance. A total loss of power can damage your data if your system was running at the time of a power loss. A UPS with line conditioning capabilities can help control the level of power coming to your system. In the event of a power loss, a UPS contains a backup battery to keep your computer running long enough to safely shut it down.

## Server Requirements

### NOTES

- Eyefinity highly recommends employing certified operating system and networking technicians to install and manage your computer systems. Eyefinity does not provide support for your computer systems.
- Overall performance is predicated on four areas of hardware: memory, processor utilization, hard drive speed and space, and network speed and throughput. Monitor these system resources and upgrade them before they reach 80% of capacity.
- Microsoft SQL Server Standard Edition may be required if the SQL database is 10 GB in size or larger.

Server hardware requirements vary greatly depending on the number of users. Refer to the hardware requirements that best fit your user group:

- [1–5 Users Dedicated Database Server, 8](#)
- [6–20 Users Dedicated Database Server, 9](#)
- [1–25 Users Combined Database Server/Terminal Server, 10](#)
- [26–100 Users Dedicated Database Server and Terminal Server, 11](#)
- [101+ Users Dedicated Database Server and Terminal Server, 12](#)
- [1–25 Users Virtual Machine Host Server, 13](#)

### 1–5 Users Dedicated Database Server

Refer to “[Software Requirements](#)” on [page 3](#) for a complete list of supported server operating systems and supported SQL server versions and editions.

Dedicated Database Server		
	Minimum Requirement	Best-Fit Server
CPU	Quad- core Intel Xeon® E3-1230 v2	Dell PowerEdge T130
Memory	8 GB	
Hard Drive Data Capacity	146 GB SCSI or SAS (15 K rpm) or Enterprise-class SATA (10 K rpm)	Lenovo ThinkServer TS150
	8 GB minimum available space	HP ProLiant ML30 Series
Hard Drive Redundancy	RAID 5, three drive minimum (software RAID not supported)	Think Smart Smart Server 8



**6–20 Users Dedicated Database Server**

Refer to “Software Requirements” on page 3 for a complete list of supported server operating systems and supported SQL server versions and editions.

Dedicated Database Server		
	Minimum Requirement	Best-Fit Server
CPU	Quad- core Intel Xeon E3-1230 v2	Dell PowerEdge T330
Memory	12 GB	IBM Lenovo TS440
Hard Drive Capacity	146 GB SCSI or SAS (15 K rpm) or Enterprise-class SATA (10 K rpm)	HP ProLiant ML110 Series
	8 GB minimum available space	Think Smart Smart Server 9
Hard Drive Redundancy	RAID 5, three drive minimum (software RAID not supported)	

### 1–25 Users Combined Database Server/Terminal Server

If you have more than 20 users, we highly suggest using OfficeMate/ExamWRITER in a Terminal Server environment. Noticeable performance issues arise if you have more than 20 users in a non-Terminal Server environment. Using a Terminal Server in your practice offers many benefits:

- Easier software upgrades. Installing and upgrading software is easier on a Terminal Server because, in most cases, the software does not have to be loaded on individual workstations.
- Lower cost of ownership. The cost of a Terminal Server license is one-tenth the cost of a new workstation that meets the OfficeMate hardware and system requirements.
- Easier Access. Terminal Server allows you to remotely access applications like OfficeMate ExamWRITER from anywhere internet access is available. OfficeMate/ExamWRITER in a Terminal Server environment.

Refer to “[Software Requirements](#)” on page 3 for a complete list of supported server operating systems and supported SQL server versions and editions.

Combined Database Server/Terminal Server		
	Minimum Requirement	Best-Fit Server
CPU	Octa- core Intel Xeon E5-2609 v4	Dell PowerEdge T630
Memory	8 GB plus ½ GB per user	
Hard Drive Capacity	146 GB SCSI or SAS (15 K rpm) or Enterprise-class SATA (10 K rpm)	IBM Lenovo TD350
	8 GB minimum available space	HP ProLiant ML350 Series
Hard Drive Redundancy	RAID 5, three drive minimum (software RAID not supported)	Think Smart Smart Server 9

### 26–100 Users Dedicated Database Server and Terminal Server

Refer to “Software Requirements” on page 3 for a complete list of supported server operating systems and supported SQL server versions and editions.

Dedicated Database Server		
	Minimum Requirement	Best-Fit Server
CPU	Octa- core Intel Xeon E5-2609 v4	Dell PowerEdge T630
Memory	16 GB	
Hard Drive Capacity	146 GB SCSI or SAS (15 K rpm)	IBM Lenovo TD350
	8 GB minimum available space	HP ProLiant ML350 Series
Hard Drive Redundancy	RAID 5, three drive minimum (software RAID not supported)	Think Smart Smart Server 9

Dedicated Terminal Server		
	Minimum Requirement	Best-Fit Server
CPU	Octa- core Intel Xeon E5-2609 v4	Dell PowerEdge T630
Memory	4 GB plus ½ GB per user	
Hard Drive Capacity	146 GB SCSI or SAS (15 K rpm)	IBM Lenovo TD350
	8 GB minimum available space	HP ProLiant ML350 Series
Hard Drive Redundancy	RAID 1, two drive minimum (software RAID not supported)	Think Smart Smart Server 9

### 101+ Users Dedicated Database Server and Terminal Server

Refer to “Software Requirements” on page 3 for a complete list of supported server operating systems and supported SQL server versions and editions.

Dedicated Database Server		
	Minimum Requirement	Best-Fit Server
CPU	Octa- core Intel Xeon E5-2609 v4	Dell PowerEdge T630
Memory	32 GB	
Hard Drive Capacity	OS: 146 GB SCSI or SAS (15 K rpm) Data: 146 GB SCSI or SAS (15 K rpm)	IBM Lenovo TD350
	8 GB minimum available space	HP ProLiant ML350 Series
Hard Drive Redundancy	OS:RAID 1, two drive minimum Data: RAID 10, six drive minimum (software RAID not supported)	Think Smart Smart Server 9

Dedicated Terminal Server		
	Minimum Requirement	Best-Fit Server
Terminal Server	One dedicated Terminal Server for every 100 users	Dell PowerEdge T630
CPU	Octa- core Intel Xeon E5-2609 v4	IBM Lenovo TD350
Memory	8 GB plus ½ GB per user	
Hard Drive Capacity	146 GB SCSI or SAS (15 K rpm)	HP ProLiant ML350 Series
	8 GB minimum available space	Think Smart Smart Server 9
Hard Drive Redundancy	RAID 1, two drive minimum (software RAID not supported)	

### 1–25 Users Virtual Machine Host Server

Refer to “Software Requirements” on page 3 for a complete list of supported server operating systems and supported SQL server versions and editions.

Virtual Machine Host Server	
Minimum Requirement	
Number of VMs	Two: One SQL database server and one application Terminal Server
OS	VMWare vSphere 5 Standard or later (licensed for two physical CPUs)
CPU	Two Octa-core Intel Xeon E5-2660 or better
Memory	64 GB (32 GB assigned to each VM)
Hyperthreading	Active
Hard Drive	OS: Two 146 GB SCSI or SAS (15 K rpm), RAID 1 VM: Six 300 GB SCSI or SAS (10 K rpm), RAID 10

### Network Requirements

<b>NOTE</b>	Eyefinity highly recommends employing certified operating system and networking technicians to install and manage your computer systems. OfficeMate does <i>not</i> provide support for networks.
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Network Item	Requirement	Notes
Internet Connection	Business-grade, high-speed DSL, cable, or T1 connection	Business-grade, high-speed DSL or cable modems are recommended for internet access, software updates, and OfficeMate training and support. If your electronic claims clearinghouse requires a phone line modem, you will need a separate internet connection and 56k fax modem.
Wireless	802.11ac business-grade router and 802.11ac wireless network card  802.11n may be used in a Terminal Services environment	Enable wireless security.  Purchase your wireless access point and wireless network card from the same manufacturer.  Wireless networks offer significantly lower performance and reliability than wired networks; therefore, Eyefinity/ OfficeMate recommends hard-wired networks in environments where high performance is necessary.

Network Item	Requirement	Notes
Cables	Category 5e ethernet	Category 6 or 6a recommended.
Cards	Gigabit ethernet	
Switches	Gigabit transfer rates	Eyefinity does not support hubs.
HP Jetdirect		Use the HP Jetdirect service for Jetdirect printing. Use the TCP/IP protocol and 9100 default port.
Remote Desktop Protocol (RDP)	50 Kbps bandwidth connection or better per RDP client	Use Remote Desktop Connection to access OfficeMate/ExamWRITER running on a Terminal Server in single and multilocation practices.  Use the TCP/IP protocol and 3389 default port.
Name Service		Use the Name Service for file and printer sharing. Use the NetBIOS protocol and 137, 138, and 139 default ports.
EFSync Service		Use the EFSync service for data transfer between desktop and cloud software. Use the HTTPS protocol and 443 default port for this service.
SQL Server		Use the TCP/IP protocol and 1433 default port for this service.
SQL Browser		Use the SQL Browser to find SQL Servers on client computers. The SQL Browser listens for incoming requests for SQL Server resources and provides information about SQL Server instances that are installed on the computer. Use the UDP protocol and 1434 default port.

## Backup Requirements

Eyefinity recommends using *multiple* back up methods and backing up your data to *multiple* files in case one backup file is corrupt. Work with your data backup provider or certified operating system and networking technician to determine which solution is best for you.

For more information about backup media, refer to the “Backing Up and Restoring Data” document, which can be found online at [www.eyefinity.com/dam/eyefinity/documentation/OM/Backing-Up-SQL-and-Access-Databases.pdf](http://www.eyefinity.com/dam/eyefinity/documentation/OM/Backing-Up-SQL-and-Access-Databases.pdf).

Backup Method	Recommended Solution
Online	iBackup Powered by DataHEALTH 800.269.3666 or <a href="mailto:salesom@eyefinity.com">salesom@eyefinity.com</a>  Practice Shadow by Think Smart Group, Inc. 800.941.4913.
Local	For SQL databases, Veritas Backup Exec with Agent for Applications and Databases <a href="http://www.veritas.com">http://www.veritas.com</a>

## Installation Requirements

The OfficeMate software installation requirements are listed below. Adhering to these requirements will greatly improve the OfficeMate software installation process.

<b>NOTE</b>	Eyefinity highly recommends employing certified operating system and networking technicians to install and manage your computer systems. OfficeMate does <i>not</i> provide support for networks.
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Requirement	Notes
Remote Access	We recommend Remote Desktop Protocol (RDP) for remote access through Microsoft Terminal Services.
Administrator Access Privileges	
Microsoft Terminal Services Access	Terminal Services access must be enabled and tested before installing OfficeMate software.

## Implementation Methods

You can implement OfficeMate software in a terminal services or standalone environment. The figures below illustrate the main components and data flow of OfficeMate software using the terminal services and standalone implementation methods.

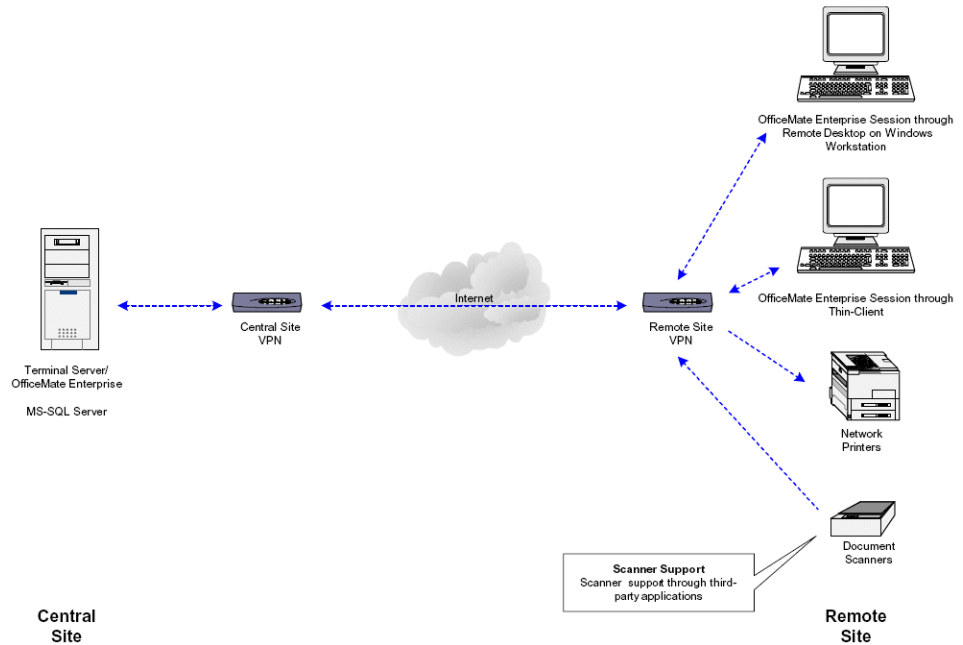


Figure 1-1: OfficeMate Software Terminal Services Implementation Method

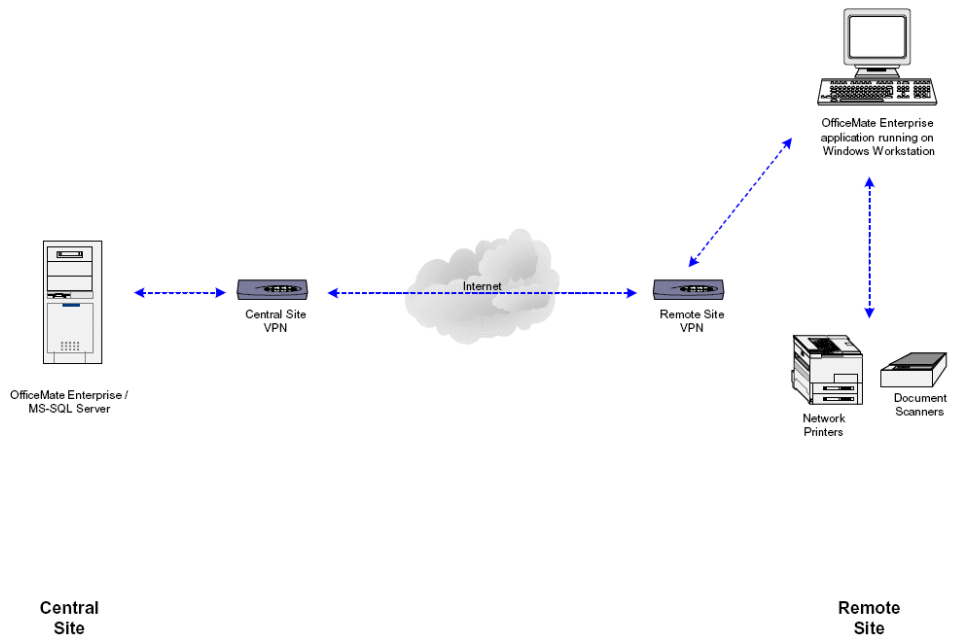


Figure 1-2: OfficeMate Software Standalone Implementation Method



The features of using terminal services and standalone implementations are detailed in the table below so that you can properly set up the implementation environment of your choice.

Feature	Terminal Services	Standalone
Software Updates	Server only.	Each client.
Additional Terminal Server Licensing	Yes	No
VPN Network Required	Recommended	Yes
Higher-End Workstations Required as Clients	No, but the workstations must meet remote desktop system requirements.	Yes
Thin Client Support	Yes	No
Peripherals Support	Yes, through third-party applications.	No