Sage 500 ERP

Version 2014

Compatibility and Resource Guide

Last Revised: Monday, 26 November, 2013

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Sage 500 ERP Compatibility and Resource Guide
Version 2014

Introduction

Sage 500 ERP is an enterprise level, multi-user client/server accounting software application and development platform. To correctly operate the software, certain requirements must be satisfied regarding the environment in which the software functions. These requirements include a database engine running on a server platform, a network backbone to handle remote data requests, and a client platform to present the user interface. The charts contained in this document represent supported compatibility of Sage 500 ERP with various platforms and third-party products. This information will help you properly configure and update the environment in which you operate Sage 500 ERP.

Support is provided for the product combinations indicated because they have been proven to operate under either fundamental or full functional testing protocols. If you are using an operating system, SQL Server version, service pack, or product that is not listed in this guide, Sage Customer Support will not provide full support for the product combination being used in conjunction with Sage 500 ERP. For more information on issues that should be addressed to Sage Customer Support, see the Introduction to Customer Support Web page accessed via Sage Customer/Partner portal at: http://na.sage.com/log-on/.

This compatibility document should be thoroughly reviewed prior to the installation of Sage 500 ERP, or implementation of any third-party products that are to be used in combination with this product. For information on known issues and installation instructions, refer to the Sage on-line knowledgebase or see the *Sage 500 ERP Installation and System Configuration Guide* accessed via: https://customers.sagenorthamerica.com/. For product overviews, see the Products page on the Sage Web site at: http://na.sage.com/sage-500-erp.

How to Use This Guide

This guide is divided into two sections: matrices containing compatibility information and text describing requirements and system configuration.

The compatibility information in the first section is in a table format. The matrix provided by each table details supported operating systems and database engines, the service packs and tested updates, as well as compatible add-on applications and tools. Review the information and notes.

The requirements detail the minimum configuration for servers and clients, as well as requirements for the systems you use with Sage 500 ERP. Review this text carefully as it also contains licensing information on Microsoft Windows, Microsoft SQL Server, and Sage 500 ERP.

Document Style Information

Links to publications stored on Web sites and cross-references to information are referenced in this guide. Click the underlined text to access information on Web sites when you are connected to the Internet, or to access bookmarks to other sections of this guide.

Sage 500 ERP Support Information

Mailing Address

Sage
Mid-Market Accounting Solutions
6561 Irvine Center Drive
Irvine, California USA 92618-2301

Phone Numbers

U.S./Canada Support	800.854.3415
U.S./Canada Support Fax	800.378.6560
Corporate	949.753.1222
Corporate Fax	949.753.6084

Support Hours of Operation

Monday through Friday   5:00 am – 5:00 pm PDT

Web Site Resources

Several on-line resources are available for Sage 500 ERP. These resources can be accessed using Sage Customer or Partner portal (as applicable) at: https://customers.sagenorthamerica.com or http://na.sage.com/log-on/.

Mid-Market Support Management
Contacts: https://customers.sagenorthamerica.com/irj/go/km/docs/sageKM/Sage%20MAS%20500/Assets/CSSKeyContacts.pdf
Self-Service Product Registration at:
http://registration.sagesoftware.com/registration/IssueRegistration.asp
Product Information at: http://na.sage.com/sage-500-erp
Product Solutions Directory (Sage 500 ERP add-ons) at: http://www.sagepss.com
Sage MAS Community Forums at: http://sagecity.na.sage.com/

Compatibility Information

The following applies to various compatibility sections in this document:

- Service Packs refer to updates from Microsoft or another third-party provider. In contrast, Sage delivers periodic updates to Sage 500 ERP that are known as Product Updates. Sage Product Updates are cumulative and require only the latest update to be installed.

- For additional guidelines and installation instructions, see the *Sage 500 ERP Installation and System Configuration Guide (install.pdf)*. Also, refer to the Product Lifecycle Schedule for the version and platform retirement dates available through Sage Customer and Partner portals.

- Sage 500 ERP is normally regression tested only with generally available releases of Microsoft service packs or similar updates. Critical updates, patches, and hot fixes released by Microsoft that affect systems, or services necessary for operation of Sage 500 ERP may also be tested under functional testing protocols and will be noted in the matrix. Less severe updates are generally not tested or certified with Sage 500 ERP. Review the patch information contained in this guide carefully. Additionally, refer to the Microsoft's article Why Service Packs are Better Than Patches located at: http://www.microsoft.com/technet/archive/community/columns/security/essays/srvpatch.mspx

- Sage 500 ERP is optimistically supported with updates available for supported operating system editions and components; however, if after due diligence, an operating system or component problem cannot be resolved, and that operating system contains untested updates, Sage Customer Support may defer to the supported updates within this guide. This general practice does not extend to SQL Server updates. Only supported updates should be applied to the SQL Server database engine and clients.

- Quality assurance testing is performed with the latest updates available for Sage 500 ERP with the latest supported updates to Windows, SQL Server, MDAC, and others listed in this guide. Previous updates to these components are not tested with current updates of Sage 500 ERP. To ensure a compatible environment, apply the latest supported updates listed in this guide with the latest Sage 500 ERP update. The minimum service pack listed is generally that which was available when this version of Sage 500 ERP was initially released.

SQL Server Platforms

- Developer Edition is supported on demo, test, and development systems only.
- Other editions are supported on demo, test, and production systems with some exceptions as noted below.

SQL Server 2008/R2 Editions	SQL Server 2012 Editions	Windows 2008 Server All Editions	Windows 2008 R2 Server All Editions	Windows 2012 Server All Editions
Developer Edition	Developer Edition	32-bit & 64-bit	32-bit & 64-bit	64-bit
SQL 2008/R2 Express	SQL 2012 Express	32-bit & 64-bit	32-bit & 64-bit	No Support
Standard Edition	Standard/Business Edition	32-bit & 64-bit	32-bit & 64-bit	64-bit
Enterprise Edition	Enterprise Edition	32-bit & 64-bit	32-bit & 64-bit	64-bit

SQL Server Platform Notes

- Production systems are those used in the daily operation and data entry tasks performed within Sage 500 ERP. Only the Express, Standard, and Enterprise Editions of SQL Server are supported in this role. For additional information on licensing, see Hardware and Licensing Considerations.

- In production systems, Sage 500 ERP client should not be installed on the server where SQL Server is installed.

- Check the system requirements from Microsoft for current Windows and SQL Server edition compatibility.

- Developer systems provide an enterprise platform on which to prepare, demonstrate, or test functionality modifications. The Developer Edition of SQL Server should be used for this purpose only and is not supported in a production environment.

- Demonstration or test systems are defined as those on which the Sage 500 ERP databases are installed for the purpose of demonstrating or testing functionality within the software.

- SQL Server 2008 Express is automatically installed when using the Sage 500 ERP Express Install when no version of SQL Server is present. This allows for demonstration or use of the functionality within the software without the need to install another edition of SQL Server. Use the Express Install for creating demonstration systems or production systems that will use SQL Server 2008 Express. You must choose a Windows Server edition of the operating system for the production SQL Server to service multiple clients (non-local).

- For SQL Server required settings, see SQL Server Configuration Requirements prior to installing SQL Server.

- Data Import Manager requires SQL Server Agent to run and is therefore not available with SQL Express.

SQL Server Demo and Test Platforms

SQL Server 2008/R2 Editions 32-bit & 64-bit	SQL Server 2012 Editions 32-bit & 64-bit	Windows 7 32-bit & 64-bit	Windows 8 32-bit & 64-bit	Windows Server 2008/R2 32-bit & 64-bit	Windows Server 2012 64-bit
Developer Edition	Developer Edition	X	X	X	X
Express	Express	X	X	X	X
Standard Edition	Standard Edition	X	X	X	X
Enterprise Edition	Enterprise Edition		X	X	X

SQL Server Demo and Test Platform Notes

- When registering Sage 500 ERP demonstration, test, or development systems, select the proper license type in the Maintain Site task according to the following:

  - Demonstration – Select this license type if you are a Sage partner.

  - Developer – Select this license type if you are a Sage 500 ERP Customization Tools developer.

  - Test – Select this license type if you are a Sage 500 ERP user.

- SQL Server 2008 Express is automatically installed when using the DB Express Install and no version of SQL Server is present.

- SQL Server 2008 Express is automatically installed when using the DB Express Install and no version of SQL Server is present.

- Developer editions are supported with Sage 500 ERP Customization Tools.

- Express editions are supported with Sage 500 ERP Small Business, Standard, or Enterprise SQL Server license.

- Standard editions are supported with Sage 500 ERP Standard or Enterprise SQL Server license.

- Enterprise editions are supported with Sage 500 ERP Enterprise SQL Server license.

- Data Import Manager requires SQL Server Agent to run and is not available with SQL Express.

SQL Server 2005 Express is not supported by Sage 500 ERP 2014.

SQL Server Service Packs and Updates

SQL Server 2012		
	Service Pack	**Remarks**
SQL Server Express 32-bit & 64-bit	**None**	Supported with all Sage 500 ERP editions.
Standard Edition 32-bit & 64-bit	**None**	• Supported with the Sage 500 ERP Enterprise Editions, or the Sage 500 ERP Standard Edition together with the SQL Server upgrade option. • Service packs should be applied to clients with SQL Client Utilities and SQL servers.
Business Intelligence Edition 32-bit & 64-bit	**None**	• Supported with the Sage 500 ERP Enterprise Editions, or the Sage 500 ERP Standard Edition together with the SQL Server upgrade option. • Service packs should be applied to clients with SQL Client Utilities and SQL servers.
Enterprise Edition 32-bit & 64-bit	**None**	• Supported with the Sage 500 ERP Enterprise Editions, or the Sage 500 ERP Standard Edition together with the SQL Server upgrade option. • Service packs should be applied to clients with SQL Client Utilities and SQL servers.

SQL Server 2008 R2		
	Service Pack	**Remarks**
SQL Server Express 32-bit & 64-bit	**SP2**	Supported with all Sage 500 ERP editions.
Standard Edition 32-bit & 64-bit	**SP2**	• Supported with the Sage 500 ERP Enterprise Editions, or the Sage 500 ERP Standard Edition together with the SQL Server upgrade option. • Service packs should be applied to clients with SQL Client Utilities and SQL servers.

Enterprise Edition 32-bit & 64-bit	**SP2**	• Supported with the Sage 500 ERP Enterprise Editions, or the Sage 500 ERP Standard Edition together with the SQL Server upgrade option. • Service packs should be applied to clients with SQL Client Utilities and SQL servers.

SQL Server 2008

	Service Pack	Remarks
SQL Server Express 32-bit & 64-bit	**SP3**	Supported with all Sage 500 ERP editions.
Standard Edition 32-bit & 64-bit	**SP3**	• Supported with the Sage 500 ERP Enterprise Editions, or the Sage 500 ERP Standard Edition together with the SQL Server upgrade option. • Service packs should be applied to clients with SQL Client Utilities and SQL servers.
Enterprise Edition 32-bit & 64-bit	**SP3**	• Supported with the Sage 500 ERP Enterprise Editions, or the Sage 500 ERP Standard Edition together with the SQL Server upgrade option. • Service packs should be applied to clients with SQL Client Utilities and SQL servers.

Operating System Service Packs

These service packs are supported on systems where the Sage 500 ERP client, Internet Applications, or databases are installed.

Windows Server Operating Systems		
	Minimum Service Pack	**Remarks**
Windows Server 2008 32-bit & 64-bit	SP2	
Windows Server 2008 R2 64-bit	SP1	
Windows Server 2012 64-bit	None	

Production Client Operating Systems

Windows OS	Windows 7 32-bit	Windows 7 64-bit	Windows 8 32-bit	Windows 8 64-bit
Minimum Service Pack	SP1	SP1	None	None

*Windows XP is not supported by Sage 500 ERP 2014

Thin-Client Solutions

	Supported	Remarks
Windows 2008 Terminal Services (32-bit & 64-bit)	X	• Can be used in single server or cluster configuration. • Terminal Services RemoteApp is supported.
Windows 2008 R2 Terminal Service (32-bit & 64-bit)	X	• Can be used in single server or cluster configuration. • Terminal Services RemoteApp is supported.
Windows 2012 Terminal Service (64-bit)	X	• Can be used in single server or cluster configuration. • Terminal Services RemoteApp is supported.
Citrix XenApp 6.0 or newer	X	• Can be used in single server or farm configuration, and should be published. • Should not be used as a production SQL Server.

Thin-Client Solutions Notes

- Client operating systems are typically where the client software is installed. Use the client install for this purpose.

- Windows Terminal Services is currently required for installation and operation of Citrix. For more information, see relevant subjects at: http://www.citrix.com or http://www.microsoft.com

MDAC Service Packs and updates

MDAC	Service Pack	Remarks
2.8	**SP1**	Installed with Sage 500 ERP client.

Note: Service packs and other supported updates for MDAC should be applied to all the clients.

Internet Applications Server Platforms

	Windows 8 (32-bit & 64-bit)*	Windows Server All Editions (32-bit & 64-bit)	Windows Server 2008/R2 All Editions (32-bit & 64-bit)	Windows Server 2012 All Editions (64-bit)	Remarks
Business Insights Dashboard	X	X	X	X	
Web Reports	X	X	X	X	Displays reports for registered modules only.

*Supported on demonstration systems only.

*Filter criteria options not supported for Business Insights Dashboard on Internet Explorer 9 and Internet Explorer 10

Internet Applications Server Platform Notes

- Production systems are those used in the inquiry and data entry tasks performed within the Sage 500 ERP Internet Applications. Terminal Services servers are not supported as production IIS servers.

- Demonstration or test systems are defined as those on which the Sage 500 ERP Internet Applications are installed for the purpose of demonstrating or testing functionality within the software. These are typically single-user systems employing the Express Edition of SQL Server.

- Review the *Sage 500 ERP Internet Applications Guide* for primary guidelines and installation instructions.

- The Internet Applications are not supported on a server running Active Directory Service (ADS). This service causes permission conflicts with certain components on which the Internet Applications rely. This is also inadvisable from a security perspective because of the nature of making this type of information available over the Internet.

- Internet Applications with IIS versions above 6.0 require Active Server Pages in your Web Services Extensions and to select the Run WWW service in IIS 5.0 isolation mode option in your Web site properties window. See the installation subjects in the Sage Online Knowledgebase for additional information.

Internet Applications Client Browsers

Local Client Installation				
	Internet Explorer 8.x	Internet Explorer 9.x	Internet Explorer 10.x	Remarks
Windows 7	X	X		
Windows 8			X	
Thin-Client Installation				
Windows 2008 Terminal Services	X			
Windows 2008 R2 Terminal Service	X	X		
Windows 2012 Terminal Service			X	
Citrix XenApp 6.0 or newer	X	X	X	Review compatibility with the Windows version you are using for Terminal Services.

Internet Applications Client Browser Notes

- Service packs and patches from Microsoft generally do not affect the Internet Applications clients.

- The Internet Applications are designed to work by connecting from your local browser to the site over the Internet or an intranet. These applications are not generally designed for multi-user access from a single thin-client platform like Terminal Services or Citrix.

- Users should add the Web site you use for Internet Applications to their list of trusted sites. Also, edit the trusted zone security settings to enable scripting for controls not marked as safe for scripting.

Virtualization Support

The table below summarizes compatibility of Sage 500 ERP with virtual products.

Company	Product	Compatibility
Citrix	XenApp 6.5 or newer	**Yes** (On all supported server OS)
Citrix	XenServer 5.x or newer	**Yes** (On all supported server OS)
VMware	VMWare Workstation 9.0.2	**Yes**
VMware	VMWare Workstation 6.0 or newer	**Yes** (On all supported server OS)
VMware	VMWare Server 3.5 or newer	**Yes** (On all supported server OS)
Microsoft	Terminal Services Windows 2008 (32 & 64bit)	**Yes**
Microsoft	Terminal Services Windows 2008 R2 (64-bit)	**Yes**
Microsoft	Terminal Services Windows 2012 (64-bit)	**Yes**
Microsoft	Virtual PC 2007 or newer	**Yes** (On all supported client OS)
Microsoft	Hyper-V	**Yes** (Supported on Windows 2008 Server and Windows Server 2012)
Microsoft	Hyper-V R2	**Yes** (Supported on Windows 2008 R2 Server only)

Virtualization Support Notes

- Testing has shown 12% to 15% performance degradation when running in virtual environments.

- Hardware and software requirements (minimum and recommended) for Sage 500 ERP apply to virtual environments as well.

- Third party products might not support the same virtualization platforms as Sage 500 ERP. For clarification please check with the vendor.

Integrated Products

	Product Version	Link/Update Version	Remarks
Sage HRMS	**2014**		Primary support is obtained from the http://na.sage.com/Sage-HRMS/Product-Support-and-Resources .
Sage Budgeting and Planning	**7.52**		• Sage Analytics contains Sage Budgeting and Planning (currently called Active Planner) and Sage Allocations. • Primary support is obtained from the http://www.sagespecialized.com/support/
Sage SalesLogix	**3.0.1.3**		Primary support for Sage SalesLogix and ERP Link is obtained here http://na.sage.com/sage-saleslogix/product-support
Sage Fixed Assets	**2013.1**	**7.4**	• Product and General Ledger links are supported by the http://na.sage.com/Sage-Fixed-Assets/Support/Sage-Business-Care • Includes Accounts Payable and Purchase Order asset tracking integration. For more information, see the Fixed Asset Accounting information in the Sage 500 ERP Help system. • Accounts Payable and Purchase Order links (FAS SDK) are available to download and are supported by Sage 500 ERP Customer Support. • Not supported on SQL Server 2012.
Sage Sales Tax	**2014**		• Sage 500 ERP adapter download will be made available by Avalara. • Primary AvaTax support is obtained from Avalara at: http://www.avalara.com
Sage Intelligence Reporting	**7.60.7129.006**		

Integrated Products Notes

- For Supported Client, Server, 32- and 64-bit compatibility, refer to the Integrated Product's Web site from the Specialized Business Solutions Division.

- Sage Advisor Update utility is supported on Windows 7, Windows Server 2008 and Windows Server 2008 R2. It is not supported on Windows 8 and Windows Server 2012.

Third-Party Application Compatibility

	Product Version	Link/Update Version	Remarks
Crystal Reports® for Sage	**XI R2**	**N/A**	Runtime components are installed with the client. Report designer is on the Sage 500 ERP DVD. The Crystal Reports package is a custom OEM build for Sage. It is the only version tested with Sage 500 ERP.
SAP Crystal Reports	**13**		
Microsoft Office Standard & Professional	**2007**	**Svc Pack 2**	• Includes Microsoft Project compatibility. • Microsoft Office 2007, 2010 or 2013 is required to interact with the pivot table and chart data elements in Sage 500 ERP Business Insights. For additional information, see the Microsoft Office Compatibility section of this guide. • In Microsoft Office Outlook 2010 and 2013, Doc Transmittal may not work unless Office is upgraded from an earlier version of MS Office.
	2010		
	2013		
Microsoft Office Web Components	**2003**	**Svc Pack 2**	• Displays and manipulates graphic elements in Business Insights. • For additional information, see the Microsoft Office Web Components Compatibility section of this guide.
.NET Framework	**4.0**	**N/A**	Installed with the Sage 500 ERP client.

*Microsoft Office 2003 is not supported by Sage 500 ERP 2014

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Development Tools and Controls

Tool/Control	Manufacturer	Version	Function	Remarks
Crystal Reports® for Sage **SAP Crystal Reports**	**SAP AG**	**XI R2** **13**	• Report designer used to build reports. • Runtime components are called from the report engine to display reports.	Report designer is located on the Tools and Utilities CD-ROM that accompanies the standard product.
ERwin	**Computer Associates**	**3.5.2 Service Pack 3**	CASE tool used in designing database schema and referential integrity.	Files included with Application Framework are saved as version 2.6 (lowest compatibility).
ImageMan	**GigaSoft**	**7.2**	Used in MRP Planning user interface in Manufacturing.	Included in the suite of controls from GigaSoft.
.NET Windows Controls	**Infragistics**	**NetAdvantage WinForm 2012: Vol 1 ASP.Net From 2010: Vol 3**	.NET control used in Sage 500 ERP Desktop and Business Insights.	Source code is not distributed for Sage 500 ERP Desktop or Business Insights.
.NET Windows Controls	**Syncfusion**	**8.4**	.NET control used in Sage 500 ERP Desktop and Business Insights.	Source code is not distributed for Sage 500 ERP Desktop or Business Insights.
MadCap Flare	**Madcap software**	**9.1.1**	Online Help and What's This? Help authoring tool.	Help files are included with the module source code.
ScheduleBoard	**GigaSoft**	**3.0.0.2**	Used in Schedule Generation user interface in Manufacturing.	Included in the suite of controls from GigaSoft.
Sheridan 3D (threed32.ocx)	**Infragistics**	**1.0.41.0**	Suite of controls used throughout user interface.	Included with the Customization Tools Application Framework and Visual Studio.
Spreadsheet Control (SPR32x30.ocx)	**FarPoint**	**8.0.14**	Grid control used throughout user interface.	License is not included with the Application Framework and must be purchased separately from FarPoint Technologies. (http://www.fpoint.com)
Visual Studio	**Microsoft**	**6.0 Service Pack 6**	Module user interfaces are written in Visual Basic 6.0.	• Enterprise Edition is required.

Enterprise Edition				• Professional Edition is incompatible.
Visual Studio Enterprise Developer	**Microsoft**	**2010**	.NET Framework used to develop Sage 500 ERP Desktop, Business Insights, Data Import Service, and Credit Card Processing.	Review required .NET Framework version in the Third-Party Application Compatibility section of this guide.

Schema Browser Platform

Schema Browser utility is available on a 32-bit system only. If you prefer to use a 64-bit environment, the schema browser information is also available in System Manager module in Sage 500 ERP and this is compatible with all clients that Sage 500 ERP supports.

Data Migrator Migrations

Sage ERP MAS 90 and 200	Sage ERP MAS 200 SQL	Supported	Not Supported	Sage PFW ERP	Remarks
3.60	3.60	X		v2010	
3.61	3.61	X		v5.9	
3.70	3.70	X			
3.71	3.71	X			
	3.72	X			
	3.73	X			
4.00			X		
4.05		X			
4.10		X			

Hardware and Licensing Considerations

The Windows Server, SQL Server, and Sage 500 ERP edition you use needs to correspond to your business requirements. Review the following information and edition limitations carefully before purchasing your systems and licenses.

Windows Licensing

The Windows Server operating systems are available in different editions with each having different licensing costs and limitations. Review the following information on Windows Servers at Microsoft's Web site:
http://www.microsoft.com/en-us/server-cloud/buy/default.aspx

You should review the following documentation on Microsoft's Web site for additional details on licensing and purchasing Windows Server operating systems:

- Windows 2008
  - System requirements
  - Pricing and licensing
  - Edition comparisons

- Windows 2008 R2
  - System requirements
  - Pricing and licensing
  - Edition comparisons

- Windows Server 2012
  - System requirements
  - Pricing and licensing
  - Edition comparisons

The SQL Server and Sage 500 ERP licensing sections of this guide will also help you in determining your requirements. The Comprehensive Product Licensing section contains additional information on licensing a complete Sage 500 ERP solution to meet your needs.

SQL Server Licensing

When choosing an edition of SQL Server, review the following feature comparison documentation on Microsoft's Web site:
http://www.microsoft.com/sql/prodinfo/features/compare-features.mspx

For additional details on licensing and purchasing SQL Server:

- Common SQL Server questions

- Feature comparison

- Supported feature by edition

- Choosing how to license SQL Server

- How to Buy

Sage 500 ERP Licensing

The platform and SQL Server edition you use normally corresponds to the Sage 500 ERP edition you license. Also examine limitations in the user range, available modules, companies and warehouses allowed. Upgrades to the SQL Server edition on which you can run Sage 500 ERP are also allowed.

	Sage 500 ERP Edition		
	Enterprise	**Standard**	**Small Business**
Customer Profile	250+ Employees $75m and up	20 – 500 Employees $25 – $100m	10 – 100 Employees $1 – $50m
User Range Permitted	Any	<= 30	<= 10
Database Platform	SQL Server 2008/2008 R2 Enterprise Edition or Standard	SQL Server 2008/2008 R2 Standard Edition or SQL 2008 Express	SQL Server 2008/2008 R2 Express *(Included)*
Typical Server OS Platform	Windows Server 2008 Standard, Advanced or Enterprise Edition	Windows Server 2008 Standard Edition	Windows Server 2008 Standard Edition
CRM Modules	SalesLogix	SalesLogix	
Modules Not Available	None	Source Code	Alerts*, Multicurrency*, Allocations*, Active Planner*, Software Development Kit (SDK), Source Code
Maximum Number of Companies in System	Unlimited	Unlimited	4
Maximum Number of Warehouses in Each Company	Unlimited	Unlimited	4

*Enhanced SQL Option required.

The Sage 500 ERP Small Business Edition automatically installs SQL Server 2008 Express when using the DB Express Install feature. This database engine is added to the system when no other SQL Server version is detected; therefore, you do not need to purchase SQL Server separately. Only one version of Microsoft SQL Server can reside on the operating system when using Sage 500 ERP Small Business Edition with SQL Server 2008 Express.

The Sage 500 ERP version you purchase can also be used with lower versions of SQL Server but not with higher versions unless you upgrade the SQL Server version with which you have licensed Sage 500 ERP. For example, Sage 500 ERP Standard Edition with SQL Server Standard licensing can be used with SQL Server Standard Edition and Express, but not SQL Server Enterprise Edition; however, the Sage 500 ERP Standard Edition with the SQL Server Enterprise Edition license can be run on SQL Server Enterprise, as well as all lower versions of SQL Server.

Comprehensive Product Licensing

The following table presents compatibility information inclusive of the Sage 500 ERP, Windows Server, and SQL Server editions without a separate SQL Server version upgrade. Recommended platform configurations are also included. Review the previous sections of this guide for licensing details, and SQL Server Hardware Requirements with the Hardware Recommendation Matrix for information on typical hardware configurations.

Sage 500 ERP Edition	Windows Edition	SQL Server Edition	IIS Recommendation	Recommended SQL Server Platform
Small Business	Windows Server 2008/2008 R2/2012 Standard, Advanced/Enterprise	Express	Windows Server 2008/2008 R2/2012 Web or Standard Edition	Windows Server 2008/2008 R2/2012 Standard Edition
Standard	Windows Server 2008/2008 R2/2012 Standard, Advanced/Enterprise	Standard Express	Windows Server 2008/2008 R2/2012 Web or Standard Edition	Windows Server 2008/2008 R2/2012 Standard Edition
Enterprise	Windows Server 2008/2008 R2/2012 Standard, Advanced/Enterprise	Enterprise, Standard, or Express	Windows Server 2008/2008 R2/2012 Web or Standard Edition	Windows Server 2008/2008 R2/2012 Standard or Enterprise Edition

SQL Server Hardware Requirements

Sage 500 ERP has certain platform and hardware configuration requirements. Verify that your servers and clients meet the minimum hardware configuration outlined. Supported operating systems and their updates are detailed in the SQL Server Platforms, Production Client Operating Systems, and the Internet Applications Server Platforms sections of this guide.

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Hardware

Sage recommends name-brand hardware over generic equivalents for both the client machines and servers. The benefit of quality, performance, and level of support from the mainstream manufacturers far exceeds the usually minor difference in cost over generic hardware. Most major manufacturers also have specification tools for OLTP or SQL servers that can be used to help define the hardware requirements.

In addition, Microsoft supports only hardware that appears on their Hardware Compatibility Listings (HCL). Verifying that your hardware appears on the HCL ensures Microsoft support. 64-bit Itanium processor is not supported by Sage 500 ERP. For information on Microsoft's compatibility list, refer to the Microsoft web site at:
http://www.microsoft.com/whdc/hcl/default.mspx

Minimum Requirements

The following table details guidelines for Windows, SQL Server, and Sage 500 ERP edition, and the hardware you typically require. You must meet or exceed Ram and disk space minimums above the operating system minimum requirements.

Sage 500 ERP Edition	Windows Edition	SQL Server Edition (Default Edition)	Minimum Requirements	Recommended Minimum
Small Business	Windows Server 2008/2008 R2/2012 Standard, Advanced/Enterprise	SQL Server Express	Single Pentium III 450 512 MB RAM 1 GB disk space	Single Pentium Xeon or better 1 GB RAM 2 GB disk space
Standard	Windows Server 2008/2008 R2/2012 Standard, Advanced/Enterprise	Standard or SQL Server Express	Dual Pentium III 450 512 MB RAM 1 GB disk space	Dual Pentium Xeon or better 2-4 GB RAM 4 GB disk space
Enterprise	Windows Server 2008/2008 R2/2012 Standard, Advanced/Enterprise	Standard or Enterprise	Dual Pentium III 450 512 MB RAM 1 GB disk space	Dual Pentium Xeon or better (Quad capable) 4-8 GB RAM 10 GB disk space

Variations in SQL Server edition and Sage 500 ERP edition licensing are allowed. Licensing variations are typically used to upgrade the SQL Server edition. For example, Sage 500 ERP Standard edition can be purchased with a SQL Server Enterprise edition upgrade. The default SQL Server editions listed are those compatible with corresponding Sage 500 ERP editions and do not require a separate upgrade.

Scaling Your Server

When reviewing your requirements for appropriate SQL Server hardware, consider the following:

CPU

A single processor server generally services about five users with Small Business Edition. Current dual processor servers can service about 30 to 50 concurrent users under the Standard (30-user limit) or Enterprise (unlimited users) editions of Sage 500 ERP.

Consider increasing processing power when servicing 50 or more users or when deploying under the following conditions:

- Distribution systems with greater than or equal to 30% of users.
- Manufacturing and distribution systems with greater than or equal to 30% of users.

Increase Memory

The minimum requirement of 1 GB of memory services about 10 users. Consider increasing the amount of memory to use under the following conditions:

- You are servicing more than 10 users or deploying distribution or manufacturing systems.

- Database sizes grow, or are expected to grow to more than 1 GB.

- Performance monitoring indicates disk paging due to insufficient memory.

Always Employ a RAID 1 or 10 Disk Array Configuration

Always employ a RAID 1 or 10 disk array configuration and abstract databases and objects. The following are more guidelines for this configuration:

- A minimum of 3 arrays for SQL Server objects are generally used:
  - One array for databases.
  - One array for the transaction log from the application database and the tempdb.
  - One array for the tempdb database (the tempdb is included with other logs).
- Add additional arrays when the performance monitor indicates drive bottlenecks to the following:
  - Abstract indexes for either all tables or table groups.
  - Group tables normally associated with heavy usage or specific modules, for example, tglAccount (read) and tglTransaction (write/read).

Symmetrical Multiprocessing Environment (SMP) and Performance

SQL Server works best in a symmetrical multiprocessing (SMP) environment; the more processors in the pool, the better the query processing performance. The following are additional performance considerations:

- Use the maximum amount of physical memory available to the server within the edition limitations.
  - Server performance may decrease due to excessive paging of memory to disk when the server is not dedicated.
- Review how SQL Server uses memory in the SQL Server documentation; the more data and procedures you can cache in memory, the faster the general performance.
- The best overall performance is achieved when the server and clients have hardware resources above the specified minimums and the server is dedicated to Sage 500 ERP or SQL Server services.
  - Production servers generally include memory well above the specified minimum: greater allocations of processor cache, 2 to 8 CPUs, or CPUs of greater power (Hyper-threading or dual-core Xeon) multiple RAID 1 or 10 arrays; fast switches and multiple NICs, and a host of other advanced hardware.
  - The server configuration will affect server performance in data manipulation, form load, and response times at the client.
  - Variations in the amount of data, number of users, and modules in use can affect performance.

Hardware to Scale Your Business

If you expect your business to grow, purchase hardware that can scale with your business. The following are more considerations:

- Instead of ordering a server limited to a maximum of two processors, order one with two processors that is expandable to four.
- Instead of specifying a memory configuration that fills all available slots, such as four modules with 1 GB of memory, select a configuration that allows you to easily add more memory, such as two modules with 2 GB of memory.
- Consider the limitations of the Windows and SQL Server editions you are deploying.
- Consider the best solution for your intended activity and SQL Server load when scaling your hardware.
  - Systems that surpass 100 users or process a large amount of data -- 30 GB or more database growth per year -- are considered large or higher volume sites.

Support of Large Number of Users

Supporting a large number of users typically requires a powerful SQL Server with multiple CPUs and additional memory and disk arrays.

- A good solution may be a blade solution with an attached Storage Area Network (SAN) that can also include a SQL Server cluster solution for reliability and a Windows Terminal Services cluster to ease administration.
- The network infrastructure might include a minimum of 1 GB connection between the devices with a minimum of 100 MB of Ethernet backbone.
- A storage solution is very important to overall performance. For example, processing 50 GB of data per year (approximately 10 million General Ledger transactions with supporting data from subsidiary modules) requires the ability to house this data, and to adequately process user requests against the data.
  - This can include data requests for reports, Business Insights, or data entry and posting that can aggregate millions of rows of data.
  - Solutions generally start at a large Storage Area Network, with dozens of drives in a number of arrays with a RAID 10 (0+1) configuration. This allows the ability to separate database and log files, and to configure file groups comprising different database objects to different arrays, all to improve performance.
- Perpetual review of the server performance is typically required for all customer sites using SQL Server, especially large or higher volume sites.
  - This is primarily because the data and sometimes the environment are changing at a constant pace.
  - How this affects a specific environment and how best to compensate for the changes is best handled by a qualified database administrator (DBA) well versed in working with SQL Server and Sage 500 ERP.

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Hardware Recommendation Matrix

Use the following matrix as an approximate guide to help in determining the basic hardware configuration to use for your Sage 500 ERP SQL Server. Typical usage scenarios are detailed with number of users, amount of data created per year, and module groups purchased.

Configuration	Processors	Memory	Minimum Data Drive Configuration	Sage ERP MAS 500 Edition	SQL Server Edition	Server Operating System Edition
1-10 users < 1 GB data Core, Dist	1	1 GB	2 - 18 GB drives arrayed in RAID 1 configuration	Small Business	SQL Server Express	Standard
11-30 users 1-5 GB data Core, Dist, Mfg	2	3 GB	Minimum 6 – 18 GB drives arrayed in RAID 1 configuration	Standard	Standard	Standard
11–30 users 6-10 GB data Core, Dist, Mfg	4	4 GB	Minimum 6 – 36 GB drives arrayed in RAID 1 or 10 configuration	Standard	Enterprise	Standard
31–60 users 2-4 GB data Core, Dist, Mfg	2	3 GB	Minimum 6 – 18 GB drives arrayed in RAID 1 or 10 configuration	Enterprise	Standard	Standard
31–60 users 1-5 GB data Core, Dist, Mfg	4	4 GB	Minimum 6 – 36 GB drives arrayed in RAID 1 or 10 configuration	Enterprise	Enterprise	Standard
31–60 users 6-15 GB data Core, Dist, Mfg	4	4-8 GB	Multi-drive RAID 1 or 10 storage enclosure or Storage Area Network	Enterprise	Enterprise	Standard-Enterprise
61–100 users 6-15 GB data Core, Dist, Mfg	4	8 GB	Multi-drive RAID 1 or 10 storage enclosure or Storage Area Network	Enterprise	Enterprise	Enterprise

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Configuration	Processors	Memory	Minimum Data Drive Configuration	Sage ERP MAS 500 Edition	SQL Server Edition	Server Operating System Edition
61–100 users 16-30 GB data Core, Dist, Mfg	4-8	8-16 GB	Multi-drive RAID 1 or 10 storage enclosure or Storage Area Network	Enterprise	Enterprise	Enterprise
61–100 users 31+ GB data Core, Dist, Mfg	4-8	16 GB	Storage Area Network (SAN)	Enterprise	Enterprise	Enterprise
101+ users	4-8	16-32 GB	Storage Area Network (SAN)	Enterprise	Enterprise	Enterprise

Additional Notes

- For more information, review the performance subjects in the Sage Online Knowledgebase, and general publications regarding SQL Server performance.

- These recommendations provide for generally adequate performance and require expertise in the configuration of hardware, SQL Server, and in working with Sage 500 ERP. Review this information, the referenced documentation, and consult certified hardware and SQL Server professionals for advice on the appropriate configuration for your business needs.

SQL Server Configuration Requirements

Sage 500 ERP requires that Microsoft SQL Server be installed on operating systems with supported service packs as specified in the SQL Server Platforms and Operating System Service Packs sections of this guide.

For a complete overview of the installation process, see the *Sage 500 ERP Installation and System Configuration Guide*. The Sage 500 ERP Database Utilities are installed at the SQL Server or a workstation where the SQL Client Utilities have been installed. The Sage 500 ERP Database Utilities are used to create or upgrade Sage 500 ERP databases.

Configuration Options

This section covers memory management and other SQL Server setting information. To view or change these settings, use SQL Server Management Studio. The amount and configuration of memory on the SQL server will affect system performance.

Memory

Refer to the Minimum Requirements section of this guide for minimum and recommended memory configurations. Follow Microsoft's recommendations for a dedicated SQL server when using fixed memory.

General recommendations:

- Exceed minimum requirements (see Minimum Requirements)

- Properly configure and tune your server (see Scaling your Server)

- Dedicate your server (Microsoft article Optimizing Server Performance)

- Allow SQL Server to manage the memory (Microsoft article Server Memory Options)

For detailed information on configuring your SQL Server options, see article SQL Server Configuration Parameters by Microsoft Press located at: http://www.microsoft.com/learning/books/default.mspx. Observe the requirements noted in the Minimum Requirements and Database Sizes and Settings sections of this guide.

Required Settings

The following table shows the supported Microsoft SQL Server configuration for Sage 500 ERP.

Setting	Requirement
SQL Collations	SQL Server 2008: Dictionary order, case-insensitive, for use with 1252 Character Set. SQL Server 2008: SQL_Latin1_General_CP1_CI_AS
Default language for user	English
Allow nested triggers	Selected
Query governor cost	0
Y2K support	1950 and 2049
Minimum concurrent user connections	15 x <number of client connections>
Default Connection Options	None of the Attribute values selected
Use Windows NT fibers	Unselected

Security and Domain Configuration

Sage 500 ERP supports both SQL Server and Windows Authentication security settings in SQL Server. You can create SQL Server users by creating Sage 500 ERP users or by granting access rights to users who have existing logins in domains or on the SQL Server. There are a number of methods that can be used in configuring security. For additional information, see the *Sage 500 ERP Installation and System Configuration Guide,* and the System Manager Maintain Users and Maintain Security Groups Help system.

Database Options and Sizing

You need to configure databases used by Sage 500 ERP to certain minimum sizes. The databases affected by these requirements are the following:

- SQL Server tempdb database

- SQL Server master database

- Application and Internet Application databases you use with Sage 500 ERP

SQL Server allows you to define growth parameters to automatically expand your database. For more information on dynamic resizing in SQL Server, refer to the SQL Server Books Online.

Master and Msdb Databases

The master and msdb databases in SQL Server should have at least 50 percent free space. You also should set the following options:

Setting	Recommendation
Database and transaction log	Automatically grow
	Unrestricted growth
Database	Simple

Tempdb Database

Sage 500 ERP uses tempdb extensively; therefore, the tempdb size must be at least 1024 MB or greater depending on your data processing volume. You also should set the following options:

Setting	Recommendation
Database and transaction log	Automatically grow
	Unrestricted growth or limit to amount of free drive space
Database	Simple

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New Sage 500 ERP Databases

When running the Sage 500 ERP Database Creation Utility, the program recommends a minimum database size for the databases. For production environments, you should change the application database size to at least 500 MB.

Use SQL Server's automatic resizing features to ensure that databases can accommodate the volume of transactions you require, or manually resize the databases to avoid the processing delays the autogrow option can cause.

Database Sizes and Settings

If you do not define growth parameters when you create the database, the databases and transaction logs cannot be smaller than the sizes specified in the Database Creation Utility. If you need to increase sizes later on, you can do so manually using the following recommendations:

Database or Log	Recommended Size or Increase
Application database	25 MB for every 5,000 expected General Ledger transactions (includes subsidiary module data)
Log size	Minimum 20% to 30% of the database size

Set the following options for the Sage 500 ERP application databases:

Setting	Requirement
Database and transaction log	Automatically grow in megabytes: 20
	Unrestricted growth or limit to amount of free drive space
Database	Recovery Model: Simple (when backup is performed once a day)
	Auto update statistics
	Torn page detection
	Auto create statistics
	Database level 100 for SQL Server 2008
	Database chaining (required for all Sage 500 ERP databases)

Existing Sage 500 ERP Databases (Upgrades)

If you are upgrading existing Sage 500 ERP databases, they need to meet the following minimum requirements:

Database	Amount of required available data space
Application database	100 MB of available data space

Review the Upgrading Existing Databases section of the *Sage 500 ERP Installation and System Configuration Guide* and the Sage Software Online Knowledgebase article titled How to upgrade Sage 500 ERP (Resolution ID: 144) for additional upgrade recommendations.

Local Client Requirements

Sage 500 ERP requires Windows operating systems with supported service packs or other updates as specified in the

- (Only English versions and locales are currently tested and supported.)
- A default print device for each Windows user account (required for Crystal Reports)

Microsoft Office Compatibility

The following Microsoft Office applications are required for the following Sage 500 ERP applications or features. For version compatibility, see the Third-Party Application section of this guide.

Sage 500 ERP Application	Microsoft Office Application
Business Insights (export functions)	Microsoft Excel, Word
Data Migrator (Assisted Company Setup)	Microsoft Excel
Data Porter	Microsoft Excel
Document Email	Microsoft Outlook*
Business Insights Dashboard	Microsoft Office
Export grid functionality	Microsoft Excel
Sage 500 ERP Office	Microsoft Office
Data Import Manager	Microsoft Excel

* Optional. Also supported with SMTP

If you have not installed any Microsoft Office applications, you can install them after installing the Sage 500 ERP client software, but you will need to register the MS Office DLL manually. For instructions, refer to the Registering the DLL File for Microsoft Office section of the *Sage 500 ERP Installation and System Configuration Guide*.

Microsoft Office Web Components Compatibility

The following Microsoft Office and Microsoft Office Web Components are required for the following Sage 500 ERP applications or features. For additional version compatibility information, see the Third-Party Application section of this guide.

Sage 500 ERP Application/Function	Web Components Version	Display	Manipulate
Business Insights Data View	**v11**	**X**	**X**
Business Insights Pivot Table	**v11**	**X**	**X**
Business Insights Chart	**v11**	**X**	**X**

You can install versions of the Web Components that differ from your Microsoft Office version, but the Microsoft Office version controls your ability to work within the application. For example, you can display pivot table data elements with Microsoft Office 2007 and Web Components 2007, but you cannot manipulate those data elements.

You can download the Microsoft Office Web Components, or activate this feature using instructions from Microsoft. Click the link below that corresponds to your Office version.

- Microsoft Office 2007

- Microsoft Office 2010

- Microsoft Office 2013

You must have a license to use the Microsoft Office Web Components. For information on configuring the web components settings, see the Microsoft article Managing Office Web Components.

Terminal Services Thin Client Requirements

Sage 500 ERP supports the use of Microsoft Terminal Services and Terminal Services RemoteApp to enable multiple user sessions to run concurrently on a shared server. You can use one Windows user account to establish multiple Windows Terminal sessions from the same terminal or different terminals.

This section explains the requirements for using Sage 500 ERP with Terminal Services. For more information, see the following:

- For instructions on setting up Sage 500 ERP to use Terminal Services and Terminal Services RemoteApp, see Client Installation in the *Sage 500 ERP Installation and System Configuration Guide*.

- For general information about using Terminal Services or Remote Desktop, see the Terminal Services or Remote Desktop documentation from Microsoft Web site.

Hardware

The server where Terminal Services is running needs to meet the following requirements:

- Dual Intel Pentium® IV class or higher processor (This allows you to add capacity as the number of users grows. Processor and memory requirements scale linearly.)

- A minimum of 512 MB of RAM plus an additional 128 MB for each typical user

- A minimum of 500 MB of available disk space

- SCSI hard drives (caching array recommended)

- A supported version of Microsoft Windows (see Production Client Operating Systems) (Only English versions and locales are currently tested and supported.)

Consider the following recommendations for best performance:

- High-performance and multiple network interface cards (NICs) for user connections

- Fast switch (1 GB recommended) between the SQL Server and Terminals Services server (Consider separate blades for SQL and Terminal Services on one blade server.)

- A microprocessor-based multi-port asynchronous communications adapter to reduce interrupt overhead for dial-in users

- Reduce network traffic by turning off the Sage 500 ERP startup logo with Business Desktop Configuration Utility (For information about using the Client Configuration Utility, refer to the *Sage 500 ERP Getting Started Guide*.)

- Employ the Remote Desktop Client available from Microsoft Web site.

Terminal Services RemoteApp

Starting from version 7.3, Sage 500 ERP supports Terminal Services RemoteApp.

Terminal Services RemoteApp (TS RemoteApp) enables organizations to provide access to standard Windows®-based programs from virtually any location to users with computers running Windows 7, Windows Server 2008, or Windows Server 2008 R2. TS RemoteApp is available to users with computers running Windows Server 2008 or above that have the new Remote Desktop Connection (RDC) client installed.

RemoteApp programs are programs that are accessed remotely through Terminal Services and appear as if they are running on the end user's local computer. Users can run RemoteApp programs side by side with their local programs. A user can minimize, maximize, and resize the program window and can easily start multiple programs at the same time. If a user is running more than one RemoteApp program on the same terminal server, the RemoteApp programs will share the same Terminal Services session.

Usage

When planning your Terminal Services implementation using Terminal Services or Terminal Services RemoteApp, only one instance of Sage 500 ERP can run under each Windows user account. You can have more than one user running Sage 500 ERP on Terminal Services; however, the users must have different Windows user accounts. You cannot use a Windows user account more than once to establish a Terminal session and run Sage 500 ERP.

Licensing

You may need to change the configuration of Terminal Services to enable additional users to use the Sage 500 ERP client software. By default, Terminal Services is installed as an administrator server. Configure it as an application server to use it as a production client.

To access Terminal Services, the client system needs to have a Terminal Client Access License (TCAL). You need to install Terminal Services Licensing and purchase Terminal Services licenses from Microsoft; otherwise, you are limited to two administrative connections. See the Microsoft web site for information on Terminal Services licensing.