Revised as of July 24, 2014

The information in this document applies to Sage ERP MAS 200 Version 4.50. Detailed product update information and support policies can be found on the Customer Portal at: <a href="http://na.sage.com/log-on/">http://na.sage.com/log-on/</a>

This document is intended to cover all information regarding the compatibility of various operating systems with Sage ERP MAS 200 as of July 24, 2014. Any operating system not listed should be considered *incompatible*.

**Note**: It is critical that before and during an installation, this document be thoroughly reviewed, along with the *Sage ERP MAS 200 Installation and System Administrator's Guide* and other documents found by clicking the Installation Information link of the main Sage ERP MAS 90 and 200 Support Web page. This Web page can be found on the Customer Portal at <a href="http://na.sage.com/log-on/">http://na.sage.com/log-on/</a>. If development partner or Extended Solutions customizations or modifications have been made to your Sage ERP MAS 200 software, coordinate with your Sage business partner and your development partner before installing Sage ERP MAS 200.

For information about integrated solutions compatibility, refer to the Integrated Solutions Compatibility Matrix on the Customer Portal at: <a href="http://na.sage.com/log-on/">http://na.sage.com/log-on/</a>
Sage ERP MAS 200 4.50 phone and web case support (retirement) end date is September 30, 2015. For more information, see Supported Versions document located here, <a href="https://partners.sagenorthamerica.com/irj/go/km/docs/sageKM/Sage%20MAS%2090%20and%20200/Assets/Sage%20100%20ERP%20Supported%20Versions.pdf">https://partners.sagenorthamerica.com/irj/go/km/docs/sageKM/Sage%20MAS%2090%20and%20200/Assets/Sage%20100%20ERP%20Supported%20Versions.pdf</a>

Web site content can change at any time. Sage has no control over, and cannot be responsible for, the content of other companies' Web sites.

If your platform is not listed in the matrices below, it is not supported.

Supported Workstations	Remarks
Windows 8.1 (32 and 64-bit) Professional and Enterprise	<ul> <li>Notes</li> <li>Microsoft C++ 2008 SP1 has to be installed prior to Sage ERP MAS 200 Installation.</li> <li>Refer KB 20216, if the following issue occurs, "The wrong version of Crystal Reports is installed on this workstation. Please re-run Workstation Setup"</li> <li>Sage CRM 7.1 Patch H Hotfix1 and above is supported.</li> </ul>
Windows 8 (32 and 64-bit) Professional and Enterprise	Notes  Microsoft C++ 2008 SP1 has to be installed prior to Sage ERP MAS 200 Installation.  Sage CRM 7.1 Patch H Hotfix1 and above is supported.
Windows 7 (32 and 64-bit) Professional, Enterprise, and Ultimate Service Pack 1	Not Supported  The items listed here are intended to be used for clarification purposes only, and are not intended to represent a comprehensive list of exclusions.  Windows 7 Home Basic and Windows 7 Home Premium editions are not supported.
Windows Vista (32-bit) Business, Enterprise, and Ultimate Service Pack 2	Not Supported  The items listed here are intended to be used for clarification purposes only, and are not intended to represent a comprehensive list of exclusions.  Windows Vista Home Basic and Windows Vista Home Premium editions are not supported.  Windows Vista 64-bit version is not supported.

Microsoft Dedicated Servers defined as Operating System software specifically designed to be used as a network server (not peer-to-peer)			
ERP Supported Servers	Remarks		
Windows Server 2012 R2(64-bit) Standard Windows Server 2012 (64-bit)	<ul> <li>Notes</li> <li>Sage ERP MAS 200 is a 32 bit application and will run seamlessly on a 64-bit operating system utilizing the WOW64 x86 emulator.</li> <li>If eBusiness Manager is installed, the ISAPI Plug-in must be installed manually for new Sage ERP MAS 200</li> </ul>		
Standard Windows Server 2008 (32 and 64-bit) Standard and Enterprise Service Pack 2 Windows Server 2008 R2 (64-bit)	<ul> <li>installations.</li> <li>If a Windows Server 2008 64-bit server is used as the IIS Server to connect to the Sage Web Engine, the Application Pool specified for the Web site must have True selected for the Enable 32-Bit Applications option.</li> <li>The eBusiness Web Services service can only be installed on Windows Server 2003 or 2008. Note that while the Sage 100 ERP 4.50 Server is supported on Windows Server 2012, the eBusiness Web Services is not. Users who are looking to make use of eBusiness Web Services should not install Sage 100 ERP 4.50 Server on Windows</li> </ul>		
Standard and Enterprise Service Pack 1  Windows Server 2003 (32-bit) Standard and Enterprise	<ul> <li>Server 2012. For more information, see the eBusiness Web Services Installation and Reference Guide found by clicking the Documentation link on the Sage ERP MAS 90 and 200 Autorun window.</li> <li>Refer KB 20216, if the following issue occurs in Windows 2012 R2 Server, "The wrong version of Crystal Reports is installed on this workstation. Please re-run Workstation Setup"</li> </ul>		
Service Pack 2 Windows Server 2003 R2 (32-bit) Standard and Enterprise Service Pack 2	<ul> <li>Recommendations</li> <li>Sage ERP MAS 200 should be installed on a dedicated member/application server. Although supported, certain Windows server configurations are not recommended due to possible instability and performance issues. Support from Sage Customer Support may be limited in the following circumstances:         <ul> <li>Running Sage ERP MAS 200 on a Windows server acting as an Active Directory domain controller managing a large number of user accounts, computer accounts, group policies, organizational units, remote sites, or other network resources.</li> <li>Running Sage ERP MAS 200 on any server actively running other applications or services, such as e-mail (for example, Exchange Server), IIS, fax programs, SQL Server, or other software.</li> </ul> </li> </ul>		
	<ul> <li>Not Supported</li> <li>The items listed here are intended to be used for clarification purposes only, and are not intended to represent a comprehensive list of exclusions.</li> <li>Running Sage ERP MAS 200 on any Windows Small Business Server operating system – regardless of the number of user and computer accounts it is managing, is not supported. Small Business Server runs Active Directory and Exchange Server by default, and that has been a factor in many reported cases of instability and performance issues. Instability may also result if Small Business Server is further configured to run other applications concurrently, such as IIS, Shared Fax Services, and SQL Server.</li> <li>Service Pack 1 on Windows Server 2003 is not supported.</li> <li>Using a server operating system as a Sage ERP MAS 200 workstation is not supported (not even as a client to another server). However, this configuration can be utilized for testing.</li> <li>Sage ERP and Sage CRM Suite were not designed for any version of Windows Datacenter Server and are not supported on this platform.</li> <li>Windows Server 2003 R2 64-bit is not supported.</li> </ul>		

Sage CRM Supported Server	Remarks
Windows Server 2012 R2 (64-bit)	Notes
Standard	<ul> <li>Microsoft SQL Server is required for Sage CRM Server.</li> </ul>
W' 1 9 2012 (C41:)	Sage CRM can be installed on MS SQL Server 2005, 2008 (32- and 64-bit), 2008 R2 and 2012 SP1 Standard and
Windows Server 2012 (64-bit)	Enterprise editions. Sage CRM 7.1 Patch H Hotfix1 and above supports SQL Server 2012.
Standard	• Sage CRM Server cannot be installed on a server running Microsoft Exchange or Lotus Notes Domino.
W. 1	<ul> <li>Sage CRM 7.1 Patch H Hotfix1 and above supports Windows Server 2012 and 2012 R2.</li> </ul>
Windows Server 2008 (32 and 64-bit)	Outlook Plug-In for Sage CRM
Standard and Enterprise Service Pack 2	■ To install CRM Outlook Integration, download the Outlook plug-in from within CRM in the My CRM menu >
Service 1 dek 2	Preferences tab. The user must be an Administrator or Power User of the client machine to install the Outlook
Windows Server 2008 R2 (64-bit)	plug-in.
Standard and Enterprise	■ If installing the CRM Outlook Integration in a Terminal Services environment, administrator rights are required
Service Pack 1	on the Terminal Services machine. All instances of Internet Explorer and Outlook must be closed to install the
	plug-in. At the time of the installation, exclusive access to the server is required for each user. After the plug-in is
Windows Server 2003 R2 (32-bit)	installed, administrator rights are no longer required.
Standard and Enterprise	<ul> <li>CRM Outlook client integration is supported only for e-mail accounts running on Microsoft Exchange Server.</li> </ul>
Service Pack 2	

Revised as of July 24, 2014

Terminal Services/Citrix Supported Servers	s Remarks		
Windows Server 2012 R2 (64-bit) Standard Windows Server 2012 (64-bit) Standard	Notes  Windows Server 2008 R2 Remote Desktop Services is a new name for former Terminal Services Service.  Terminal Services or Citrix must be installed on a supported version of Windows Server, such as 2003 or 2008.  Installing Sage ERP MAS 200 or Sage CRM Server on the same server as Terminal Services or Citrix is not		
Windows Server 2008 (32 and 64-bit) Standard and Enterprise Service Pack 2 Terminal Services	<ul> <li>supported.</li> <li>Windows thin clients are supported with Terminal Services and Citrix. For more information, refer to <a href="https://www.microsoft.com">www.microsoft.com</a></li> <li>For more information on Terminal Services/Citrix, see the Miscellaneous Notes section in this document.</li> <li>Sage CRM Notes</li> </ul>		
Windows Server 2008 R2 (64-bit) Standard and Enterprise Service Pack 1 Remote Desktop Services	<ul> <li>Running Sage CRM through Terminal Services or Citrix is only supported when run through a remote session to the Desktop and not as a Published Application.</li> <li>Sage CRM is supported on XenApp 5.0 32-bit version only</li> <li>Sage CRM is supported on Citrix XenApp 6.0 32- bit version only.</li> </ul>		
Windows Server 2003 (32-bit) Standard and Enterprise Service Pack 2 Terminal Services  Windows Server 2003 R2 (32-bit) Standard and Enterprise Service Pack 2 Terminal Services	<ul> <li>Not Supported         The items listed here are intended to be used for clarification purposes only, and are not intended to represent a comprehensive list of exclusions.     </li> <li>Service Pack 1 on Windows Server 2003 is not supported.</li> <li>Running Sage CRM on a Terminal Services session from a Terminal Services or Citrix server installed on a Windows Server 2003 is not supported.</li> <li>Citrix does not support Citrix XenApp 5.0 on Windows Server 2008 R2.</li> </ul>		
Citrix XenApp 5.0 Citrix XenApp 6.0 Citrix XenApp 6.5	Virtual Platforms		

#### Virtual Platforms

#### Notes

- All supported Operating Systems listed under the Supported Workstations, ERP Supported Servers and Sage CRM Supported Servers sections are supported when hosted on these Citrix virtual platform products.
- Hardware and software requirements (minimum and recommended) for Sage ERP MAS products apply to virtual environments as well.
- Some third party products might not support the same virtualization platforms as Sage ERP MAS products. For verification, please check with the third party vendor.

Revised as of July 24, 2014 Miscellaneous Notes

- 1. When running Sage ERP MAS 200 over a local area network (LAN) environment, the ping timings will vary depending on the speed and configuration of the network. Typical ping timings with 1,800 bytes of data should be 20–30 milliseconds or faster. Unacceptable ping speeds are over 40 milliseconds.
- 2. In the Sage ERP MAS 200 client/server environment, integrated applications do their processing at the workstation, not at the server. As a result, users may experience performance issues when running integrated applications from remote locations. Some of the applications affected include Crystal Reports, FRx, and F9.
  - Sage ERP MAS 200 includes a client/server based ODBC driver. This can be used instead of the client ODBC driver for faster processing.
- 3. Virtual private network (VPN) and wide area network (WAN) connections should be set up as point-to-point connections, as opposed to Internet connections, for better stability and performance. If an Internet connection is used, ensure the Internet Service Provider (ISP) can provide a guaranteed bandwidth; otherwise, users may experience dropped sessions and lost connections. With any type of low speed WAN connection, for each remote user, select the Low Speed Connection checkbox in User Maintenance.
- 4. If a VPN connection is used, keep in mind the following:
  - VPN solutions are either software-based, hardware-based (such as a VPN firewall), or a hybrid of both.
  - If a hardware-based solution is used on Level 3.x, verify that it supports secure, encrypted connections for applications that use back channels.
  - Software-based VPNs result in slower connection speeds due to the security overhead of encrypting the data. Hardware-based solutions run faster.
  - Low-speed connections are subject to considerable performance issues when using a software-based VPN. It may cause the connection to have a bandwidth of less than 128 Kbps. For information on guaranteed bandwidth requirements, see miscellaneous note above.
- 5. Suggestions for faster remote printing of Crystal reports over a WAN and virtual private network (VPN)are:
  - Using the Sage ERP MAS 200 Client/Server ODBC driver provided with Sage ERP MAS 200
  - Using Citrix or Terminal Services
  - Using non-graphical forms (those not based on Crystal Reports) if available
- 6. Always run Workstation Setup after installing, re-installing, or upgrading the Windows operating system, and verify that the Windows printers in Control Panel > Printers are still operational.
- 7. Verify that all hardware involved in running Sage ERP MAS 200 is on your operating system vendor's Hardware Compatibility List. Incompatible hardware can cause severe data corruption. For more information, refer to the Microsoft Hardware Compatibility List at: <a href="http://www.microsoft.com/whdc/hcl/default.mspx">http://www.microsoft.com/whdc/hcl/default.mspx</a>
- 8. The eBusiness Manager module may have additional separate program fixes for the Web Engine. You should apply the latest Web Engine bundle. For the latest program updates, go to the Customer Portal at: http://na.sage.com/log-on/
  - If third-party enhancements are installed, always contact your development partner to verify compatibility before installing any updates. Also note that some program fixes are specifically excluded from the program fix collection and should be installed only if you are experiencing the problem they address.
- 9. The eBusiness Web Services service can be installed only on a Windows Server platform, such as Windows Server 2003 or 2008. For more information, see the *eBusiness Web Services Installation and Reference Guide* found by clicking the Documentation link of the Sage ERP MAS 90 and 200 Autorun window.
- 10. Always validate compatibility of development partner enhancements before upgrading.
- 11. Sage is committed to supporting future Microsoft operating systems as they are released to market for all Sage ERP MAS 200 modules; however, Sage does not support beta-level operating systems. As new operating system levels are scheduled for general release, Sage will verify their compatibility, and this document will be updated when Sage's evaluations are completed.

- 12. Sage requires a guaranteed minimum bandwidth of 128 Kbps per user for running Sage ERP MAS 200 through a low speed remote connection. For each user, 256k or higher is recommended. Select the Low Speed Connection check box in the Sage ERP MAS 200 User Maintenance task.
- 13. TCP/IP must be installed and properly configured so that you can ping by computer name and IP address from the workstation to the server. The server must be able to ping the workstation by IP address. You must be able to use the Windows TELNET.EXE utility or equivalent to communicate with the Application Server on a specific port ID and IP address, or on a specific port ID and name from all workstations to the server. If this cannot be done, you must contact your Microsoft support organization. Sage Customer Support cannot assist with this task. For more information on connection requirements, refer to your Sage ERP MAS 200 Installation and System Administrator's Guide.
- 14. The Sage ERP MAS 200 Application Server is a Windows Sockets application that listens on a single port (default port 10000). You must open this port on your firewall/router so clients can properly connect to the Application Server. The client does not listen back on its own port, so opening ports for clients is not necessary. Also, the Application Server is compatible with Network Address Translation (NAT).
- 15. If the Sage ERP MAS 200 Application Server is configured to run as a service and you are experiencing "connection timed out" errors, white screens, hanging, or slow performance, but only after a certain number of Sage ERP MAS 200 users are in the system, review document <a href="SS3003-A">SS3003-A</a> on Customer Portal at <a href="http://na.sage.com/log-on/">http://na.sage.com/log-on/</a>. If you are running the Application Server on the desktop instead of running it as a service, the same problem may occur in a very large multi-user environment. If that is the case, review document SS3003-A on Customer Portal.
- 16. Wireless local area networks (WLANs) are not recommended for desktop or laptop connections, because using a wireless LAN may result in dropped packets and lost connections.
- 17. The Microsoft Fax Services feature provided with Windows Server 2003, 2008, 2012, 2012 R2, Windows Vista, Windows 7, Windows 8 and Windows 8.1 are supported with Paperless Office and batch faxing. For more information, refer to the Integrated Solutions Compatibility Matrix on the Customer Portal at: <a href="http://na.sage.com/log-on/">http://na.sage.com/log-on/</a>

Revised as of July 24, 2014

Recommended Minimum System Configuration			
	Recommended Minimum <sup>1</sup>		
Client Workstation	Processor	Physical Memory (RAM)	Available Memory (RAM) <sup>2</sup>
Workstation (client) operating system versions not listed in this document will not be supported with Sage ERP MAS 200 version 4.50.			
Windows 8.1 (32 and 64-bit) Professional and Enterprise	Intel Core 2 Duo	2 GB	512 MB
Windows 8 (32 and 64-bit) Professional and Enterprise	Intel Core 2 Duo	2 GB	512 MB
Windows 7 (32 and 64-bit) Professional, Enterprise, and Ultimate	Intel Core 2 Duo	2 GB	512 MB
Windows Vista Business, Enterprise, and Ultimate	Intel Core 2 Duo	2 GB	512 MB
Network Bandwidth		Recommended Minimum	
	100 Base-T – 100 Mbps at Full Dupl	ex	

<sup>1</sup>The recommended minimum is designed to ensure that the systems used for Sage ERP MAS 200 are capable of providing adequate performance with a standard complement of normally installed applications, such as virus protection software.

<sup>&</sup>lt;sup>2</sup> Regardless of the recommended minimums specified above, users should check the available memory on the workstation prior to installing Sage ERP MAS 200 and use the Windows Task Manager to check the Available Physical Memory on the Performance tab. A minimum of 512 MB of physical RAM should be available to Sage ERP MAS 200 when all other applications that will be used with Sage ERP MAS 200 are loaded. Sage cannot guarantee acceptable performance when running Sage ERP MAS 200 concurrently with other applications that consume system resources required for Sage ERP MAS 200 to perform at an optimum level.

Revised as of July 24, 2014  Recommended Minimum System Configuration for ERP and Sage CRM Servers			
	Recommended Minimum <sup>1</sup>		
ERP and Sage CRM Supported Servers	Processor	Memory (RAM)	Additional Requirements
Windows Server 2012 R2 (64-bit) Standard		2 GB + 4-6 MB per concurrent user	100 Mbps network connection
Windows Server 2012 (64-bit) Standard			
Windows Server 2008 (32 and 64-bit) Standard and Enterprise			
Windows Server 2008 R2 (64-bit) Standard and Enterprise Windows Server 2003 R2 (32-bit)			
Standard and Enterprise  Additional ERP Only Supported Servers	For 64-bit systems:	Memory (RAM)	Additional Requirements
Windows Server 2003 (32-bit) Standard and Enterprise	Intel or AMD 64-bit capable, such as Intel Xeon or Quad-Core AMD Opteron	1 GB + 4-6 MB per concurrent user	100 Mbps network connection
Terminal Services and Citrix	Specien	Memory (RAM)	Additional Requirements
Windows Server 2012 R2 Remote Desktop Services Windows Server 2012 Remote Desktop Services Windows Server 2008 R2 Remote Desktop Services Windows Server 2008 Terminal Services Windows Server 2003 Terminal Services Citrix XenApp 5.0 Citrix XenApp 6.0 Citrix XenApp 6.5	For 32-bit systems: Intel Pentium 4 class 2.4 GHz Dual processor recommended	Recommended minimum and as required by Terminal Services or Citrix, plus 128 MB per concurrent user <sup>2</sup>	100 Mbps network connection
ERP and Sage CRM Web Servers		Memory (RAM)	Additional Requirements
Windows Server 2012 R2		2 GB	Internet Information Services 8.0
Windows Server 2012		2 GB	Internet Information Services 8.0
Windows Server 2008 R2 Windows Server 2008		2 GB	Internet Information Services 7.0

<sup>&</sup>lt;sup>1</sup>The recommended minimum is designed to ensure the systems used for Sage ERP MAS 200 are capable of providing adequate performance with a standard complement of normally installed applications, such as virus protection software.

<sup>&</sup>lt;sup>2</sup>128 MB is based on an average of three concurrent tasks per user (Sage ERP MAS 200 Desktop plus two additional tasks, such as Sales Order Entry or Customer Maintenance). Averages of more than three concurrent tasks per user will require additional RAM.

Windows Server 2003		1 GB	Internet Information Services 6.0
E-mail Servers	Processor	Memory (RAM)	Additional Requirements
Microsoft Exchange Server 2003		2 GB	100 Mbps network connection
Microsoft Exchange Server 2007 (32-bit) Microsoft Exchange Server 2010 (64-bit) (Sage CRM 7.1 Patch H Hotfix1 and above is Supported)	Intel Pentium 4 class 2.8 GHz		