

System Requirements for SAS[®] 9.2 Foundation for Microsoft[®] Windows[®] for 64-Bit Itanium-based Systems[®]



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Some software included in SAS Foundation may display a release number other than 9.2.

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Using the System Requirements

This document provides requirements for installing and running SAS 9.2 Foundation on Microsoft Windows for 64-Bit Itanium-based Systems. You must update your system to meet the minimum requirements before running SAS 9.2 Foundation.

These are the major requirements listed in the document:

- Software Requirements
- Hardware Requirements
- Additional Features
- Space Requirements
- Specific Product Requirements
- Graphics Hardware and Software Compatibility

For additional information and to view the latest system requirements for your system, please visit the SAS Install Center Web site, <http://support.sas.com/documentation/installcenter>.

For information about SAS Technical Support, please visit <http://support.sas.com/techsup/>.

Software Requirements

Preparing for Installation

Administrator Privilege

An installer must have administrator privilege to install various updates. This requirement ensures that SAS 9.2 Foundation can be completely and safely installed.

Anti-virus and/or Firewall Software

Before you start the System Requirements Wizard, it is recommended that you close your anti-virus and firewall software. Some anti-virus and/or firewall configurations can prevent an application from installing successfully.

If you are unable to close the anti-virus or firewall software, make sure that your configuration allows you to install software and to update the registry. If your SAS installation fails and you have mandatory anti-virus or firewall software running, please check with your system administrator.

Operating System

Windows Environments

SAS 9.2 Foundation is supported in the following environments:

- Microsoft Windows Server 2008 for Itanium-based Systems edition with SAS 9.2 TS Level 2M2.
- Microsoft Windows Server 2008 R2 for Itanium-based Systems edition with SAS 9.2 TS Level 2M3.
- Microsoft Windows Server 2003 for Itanium-base systems, Enterprise Edition updated with Service Pack 1
- Microsoft Windows Server 2003 for Itanium-base systems, Datacenter Edition updated with Service Pack 1

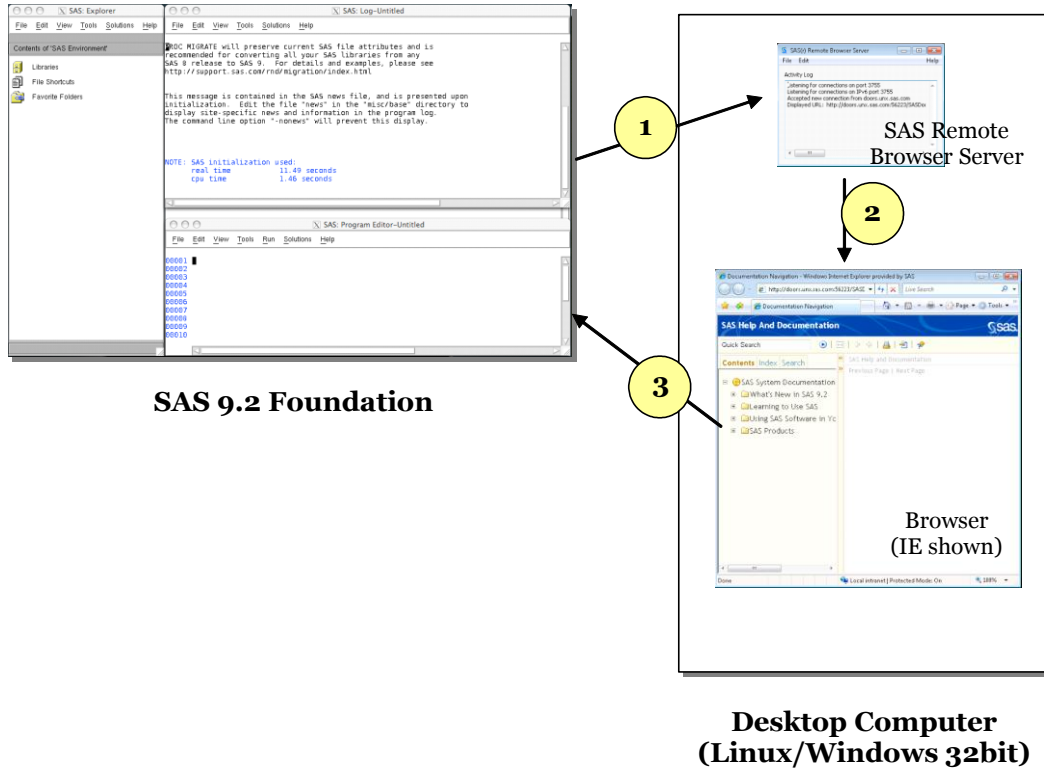
File System Requirements

The 8.3 filename convention must remain enabled. The use of file systems supporting long filenames is recommended.

Web Browser

SAS 9.2 Foundation uses a new system, Remote Browsing, for displaying Web-based information. Instead of running a browser on the workstation, SAS 9.2 Foundation sends the URL to your desktop computer for display in a Web browser. This removes the browser overhead from the server. This also allows display of output that requires browser plug-ins that do not run on a 64-bit computer. A small software agent named the Remote Browser Server is installed on your desktop computer to enable SAS to communicate with your browser. The process is illustrated below.

SAS creates a URL that references the information to be displayed (ODS output), then sends the URL to the SAS Remote Browser Server on your desktop computer (step 1). The Remote Browser Server then sends a request to the browser to display a page (step 2). The browser then reconnects to SAS to retrieve the information to be displayed and displays it in the browser (step 3).



To use remote browsing, your desktop computer must be one of the following platforms, and have installed one of the supported browsers.

Platform	Supported Browser
Windows XP/Vista 32-bit	Firefox 3.0.6
	Internet Explorer 6 with SP2 or Internet Explorer 7
Linux	Firefox 3.0.6

The Remote Browser Server must be installed and running for SAS to display web information. The installer for the Remote Browser Server can be found on support.sas.com (<http://support.sas.com/documentation/configuration/thirdpartysupport/v92/thirdparty92.html>), or directly downloaded from a SAS session.

For SAS to be able to use your Web browser, the browser must be configured to allow pop-up windows.

Hardware Requirements

SAS 9.2 Foundation on Microsoft Windows for 64-Bit Itanium-based Systems

Please note the following requirements for installation of SAS 9.2 Foundation for 64-Bit Windows.

Machines Supported

Intel Itanium processor family

Memory Requirements

Microsoft Windows Server 2003 Itanium Editions

1GB minimum or more for improved performance

1GB minimum of swapfile space

Monitors Supported

SVGA (resolution of 800x600 or higher)

Additional Features

The User Installation Experience in SAS 9.2

If you are upgrading to SAS 9.2 Foundation, please note that some of these features were not available in earlier releases of SAS software.

Internet Access

With Internet access, you can view and download documents from the SAS Install Center, and review material on the SAS Support Web site.

HTMLHelp Viewer

To conform to the native Windows environment, SAS Help and Documentation is provided in the compiled HTML format supported by the Microsoft HTML Help Viewer, which presents help information in the same layout used in Windows applications. This format is very compact and provides extensive searching capabilities. The highest level of functionality is available when Internet Explorer, Version 6, Service Pack 2 (or higher) is installed. Internet Explorer is provided with Windows Server.

SAS System Viewer

The SAS System Viewer is an application intended for the Windows environment as a *lightweight viewer* for SAS data files and other simple text-based files. The application lets you view the contents of SAS data files without using SAS and without requiring SAS 9.2 Foundation to be installed on your machine. You may distribute this application royalty-free in order to give other people the ability to view your SAS data.

The SAS System Viewer lets you view the following types of SAS data sets and SAS catalogs, which can reside on a local or network disk:

- SAS data sets generated by SAS 9, SAS 9.1.3, or SAS 9.2 Foundation for Windows.

- SAS Data sets generated by Version 8 of the SAS System for Windows.

- SAS data sets generated by any Version 6 release of the SAS System for Windows, OS/2, or DOS. These data sets can be compressed and/or encrypted. If you attempt to access an encrypted data set, the SAS System Viewer prompts you for the read password.

- SAS catalogs created by the SAS System for Windows or OS/2 generated by Release 6.04 through Release 6.12.

- SAS programs (.sas files), output listings (.lst files), logs (.log files), configuration files (.cfg files).

- Files created by SAS Institute's JMP product (.jmp files) that reside on a local or network disk.

- Other simple (ASCII) text-based files.

- HTML pages, such as output rendered by SAS 9, SAS 9.1.3, or SAS 9.2 Foundation.

You can also view cross-platform Version 6 data sets and catalogs (OpenVMS, MacOS, UNIX, OS/2, Windows, and DOS) that you can access from a disk, file server, or using the HTTP and FTP network protocols.

Installation of the SAS System Viewer requires about 4.8 MB of disk space. For more information about the SAS System Viewer, please see “Installing the SAS System Viewer” in the *User Installation Guide for SAS 9.2 Foundation on Microsoft Windows for 64-Bit Itanium-based Systems*.

Dynamic Data Exchange

Dynamic Data Exchange (DDE) allows for the exchange of data between SAS 9.2 Foundation and any other application supporting DDE. SAS 9.2 Foundation will act as a client only.

Electronic Mail

Send Mail... is provided as a menu item in the File pull-down menu. Send Mail... allows electronic mail messages to be initiated from SAS 9.2 Foundation. It is also possible to send mail using a data step file access method or SCL via SAS/AF software. The following mail APIs are supported - MAPI and VIM. This requires installation of third party products such as Microsoft Outlook, Microsoft Outlook Express, or Lotus Notes 4.0 (32-bit version only) and above. SMTP email server access via MAPI requires an Internet connection.

Lotus Notes

The Lotus Notes access method, NOTESDB, allows populating new documents directly to Lotus Notes from SAS 9.2 Foundation. The NotesSQL ODBC driver allows Lotus Notes documents to be accessed from within SAS 9.2 Foundation. An installed license of Lotus Notes Desktop is required. SAS 9.2 Foundation supports the 32-bit version of Lotus Notes 4.0 or later.

SAS Service Configuration Utility

The SAS Service Configuration Utility allows administrators to customize the operation of SAS 9.2 Foundation running as a service on a particular computer. It requires only 0.5 MB of space on the computer using the SAS Service Configuration Utility.

For additional information, refer to the SAS Service Configuration Utility chapter in *Configuration Guide for SAS 9.2 Foundation on Microsoft Windows for 64-Bit Itanium-based Systems*.

Space Requirements

The media you received contains all SAS software products. This media is customized by the SAS Installation Data for easy identification of the products for which you are licensed. The following list contains space requirements in MB for all of the products available with SAS 9.2 Foundation for Windows. Use this information to help you determine how much free disk space you must have available before you can install SAS 9.2 software. Disk space requirements will vary depending upon the blocking factor and compression algorithms that are in use on the installation disk drive. Product disk space values were determined with the HTMLHelp System in use.

Software Product	Disk Space (in MB)
Base SAS Software	1000.0
Report Fonts Software	359.9
SAS Credit Scoring Software	1.0
SAS Data Quality Server	47.7
SAS Install Qualification Tool	3.6
SAS Integration Technologies Software	81.0
SAS IT Management Adapter for SAP Software	1.3
SAS OLAP Server Software	11.8
SAS Providers for OLE DB	19.1
SAS Table Server Software	54.0
SAS/ACCESS Interface to DB2/UDB Software	1.8
SAS/ACCESS Interface to ODBC Server Software	2.0
SAS/ACCESS Interface to OLE DB Software	1.4
SAS/ACCESS Interface to Oracle Software	2.2
SAS/ACCESS Interface to PC Files Software	14.6
SAS/ACCESS Interface to R/3 Software	10.9
SAS/AF Software	5.8
SAS/ASSIST Software	20.6
SAS/CONNECT Software	4.3
SAS/EIS Software	25.9
SAS/ETS Software	96.1
SAS/FSP Software	3.4
SAS/Genetics Software	15.1
SAS/GIS Software	67.4
SAS/GRAPH Software	573.7
SAS High-Performance Forecasting Software	26.5
SAS/IML Software	32.9
SAS/INSIGHT Software	23.6
SAS/IntrNet Software	7.2
SAS/LAB Software	13.8
SAS/OR Software	80.7
SAS/QC Software	144.1
SAS/SECURE Software	1.1

Software Product	Disk Space (in MB)
SAS/Secure SSL Software	0.3
SAS/SHARE Software	1.4
SAS/STAT Software	219.9
SAS/TOOLKIT Software	6.4
SAS/Warehouse Administrator Software	22.8
Scalable Performance Data Client Software	1.5

DBCS Support

The following list contains space requirements in MB for SAS 9.2 components that offer DBCS support.

Software Product- DBCS Support	Disk Space (in MB)*
Core of SAS 9.2 DBCS Support Files	34.0
SAS/ACCESS Interface to DB2 DBCS Support Files	0.9
SAS/ACCESS Interface to Oracle DBCS Support Files	0.3
SAS/AF DBCS Support Files	0.5
SAS/CONNECT DBCS Support Files	1.1
SAS/EIS DBCS Support Files	0.4
SAS/Lab	1.9
SAS/SHARE DBCS Support Files	0.1
Total	39.20

Note about the DBCS Table

- * The actual disk space size has been rounded to the nearest tenth. Therefore, the values will differ slightly from the ones shown by the installer.

National Language Support (NLS)

The following list contains space requirements in MB for SAS 9.2 components that support Asian languages.

Languages Supported	Disk Space (in MB)*	See Table
Chinese – traditional	3.0	below
Chinese – simplified	174.0	below
Japanese	262.0	Page 9
Korean	174.0	Page 9

Asian Language Support

The following list contains space requirements in MB for SAS System components that support various Asian Languages.

Traditional Chinese Support	Disk Space (in MB)*
Base SAS Traditional Chinese Support Files	3.0

Simplified Chinese Support	Disk Space (in MB)*
Base SAS Simplified Chinese Support Files	47.8
SAS/ACCESS Interface to DB2 Simplified Chinese Support Files	0.9
SAS/ACCESS Interface to Oracle Simplified Chinese Support Files	0.9
SAS/AF Simplified Chinese Support Files	2.0
SAS/CONNECT Simplified Chinese Support Files	0.9
SAS/EIS Simplified Chinese Support Files	1.9
SAS/GIS Simplified Chinese Support Files	1.8
SAS/IntrNet Simplified Chinese Support Files	1.8
SAS/LAB Simplified Chinese Support Files	0.6
SAS/SHARE Simplified Chinese Support Files	0.8
Total	59.4

Japanese Support	Disk Space (in MB)*
Base SAS Japanese Support Files	78.1
SAS/ACCESS Interface to DB2 Japanese Support Files	0.9
SAS/ACCESS Interface to Oracle Japanese Support Files	0.9
SAS/AF Japanese Support Files	2.0
SAS/CONNECT Japanese Support Files	0.9
SAS/EIS Japanese Support Files	10.1
SAS/GIS Japanese Support Files	1.8
SAS/IntrNet Japanese Support Files	1.8
SAS/LAB Japanese Support Files	0.4
SAS/SHARE Japanese Support Files	0.8
Total	97.7

Korean Support	Disk Space (in MB)*
Base SAS Korean Support Files	47.8
SAS/ACCESS Interface to DB2 Korean Support Files	0.1
SAS/ACCESS Interface to Oracle Korean Support Files	0.1
SAS/AF Korean Support Files	2.0
SAS/CONNECT Korean Support Files	0.9
SAS/EIS Korean Support Files	1.9
SAS/GIS Korean Support Files	1.8
SAS/IntrNet Korean Support Files	1.6
SAS/LAB Korean Support Files	0.6
SAS/SHARE Korean Support Files	0.8
Total	57.6

Specific Product Requirements

Base SAS Software

Requirements for SPD Engine on Microsoft Windows:

SPDE will run with the minimum system specified in the Hardware Requirements section on page 4, but these are the minimum recommended system guidelines to make use of SPDE function:

- An SMP (symmetric multiprocessing) computer with at least two CPUs; four are preferred
- At least one I/O channel per two CPUs
- Enough disk drives to have at least one mount point per CPU isolated on its own disk; two mount points per CPU are better

The use of ODS Graphics in Base SAS software requires a SAS/GRAPH license.

SAS Activity-Based Management Software

The following products are included in SAS Activity-Based Management Data Integration and Enterprise BI Server. Unless explicitly licensed, use of this software is limited to SAS Activity-Based Management Data Integration and Enterprise BI Server.

- Base SAS software
- SAS Integration Technologies software
- SAS Metadata Bridges, three of choice
- SAS OLAP Server software
- SAS/ACCESS engine of choice
- SAS/ACCESS Interface to PC Files software
- SAS/AF software
- SAS/CONNECT software
- SAS/GRAPH software

Disk Space Required for SAS Activity-Based Management Data Integration and Enterprise BI Server:

SAS Activity-Based Management Data Integration and Enterprise BI Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: *If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Activity-Based Management Data Integration and Enterprise BI Server should be decreased by the disk space of any of the above products that have been previously installed.*

SAS Banking Intelligence Architecture Software

The following products are included in SAS Banking Intelligence Architecture Enterprise BI Server. Unless explicitly licensed, use of this software is limited to SAS Banking Intelligence Architecture Enterprise BI Server.

- Base SAS software
- SAS Enterprise Guide software
- SAS Integration Technologies software
- SAS/GRAPH software
- SAS/STAT software

Disk Space Required for SAS Banking Intelligence Architecture Enterprise BI Server:

SAS Banking Intelligence Architecture Enterprise BI Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Banking Intelligence Architecture Enterprise BI Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS BI Server Software

The following products are included in SAS BI Server. Unless explicitly licensed, use of this software is limited to SAS BI Server.

- Base SAS software
- SAS Integration Technologies software
- SAS/GRAPH software

Disk Space Required for SAS BI Server:

SAS BI Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS BI Server should be decreased by the disk space of any of the above products that have been previously installed.

Credit Scoring for SAS Enterprise Miner Software

SAS Enterprise Miner software is a prerequisite for the installation of Credit Scoring for SAS Enterprise Miner.

SAS Enterprise Miner Server includes Credit Scoring for SAS Enterprise Miner. Unless explicitly licensed, use of this software is limited to SAS Enterprise Miner Server.

Disk Space Required for SAS Enterprise Miner Server:

SAS Enterprise Miner Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: *If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Enterprise Miner Server should be decreased by the disk space of any of the above products that have been previously installed.*

SAS Data Integration Server Software

The following products are included in SAS Data Integration Server. Unless explicitly licensed, use of this software is limited to SAS Data Integration Server.

- Base SAS software
- SAS Integration Technologies software
- SAS Metadata Server software
- SAS/CONNECT software

Disk Space Required for SAS Data Integration Server:

SAS Data Integration Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: *If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Data Integration Server should be decreased by the disk space of any of the above products that have been previously installed.*

SAS Data Surveyor for SAP Software

Base SAS software is a prerequisite for the installation of SAS Data Surveyor for SAP.

The following products are included in SAS Data Surveyor for SAP. Unless explicitly licensed, use of this software is limited to SAS Data Surveyor for SAP.

- SAS Integration Technologies software
- SAS Metadata Server software
- SAS/ACCESS Interface to R/3 software
- SAS/CONNECT software

Disk Space Required for SAS Data Surveyor for SAP:

SAS Data Surveyor for SAP is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: *If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Data Surveyor for SAP should be decreased by the disk space of any of the above products that have been previously installed.*

SAS Digital Marketing Software

The following products are included in SAS Digital Marketing SAS Server. Unless explicitly licensed, use of this software is limited to SAS Digital Marketing SAS Server.

- Base SAS software
- SAS/GRAPH software
- SAS/SHARE software
- SAS Integration Technologies software

Disk Space Required for SAS Digital Marketing SAS Server:

SAS Digital Marketing SAS Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Digital Marketing SAS Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS Enterprise BI Server Software

The following products are included in SAS Enterprise BI Server. Unless explicitly licensed, use of this software is limited to SAS Enterprise BI Server.

- Base SAS software
- SAS Integration Technologies software
- SAS Metadata Server software
- SAS OLAP Server software
- SAS/AF software
- SAS/GRAPH software

Disk Space Required for SAS Enterprise BI Server:

SAS Enterprise BI Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: If you have SAS 9.2 Foundation already installed, then the amount of disk space required to install SAS Enterprise BI Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS Enterprise Data Integration Server Software

The following products are included in SAS Enterprise Data Integration Server. Unless explicitly licensed, use of this software is limited to SAS Enterprise Data Integration Server.

- Base SAS software
- Quality Knowledge Base locale of choice
- SAS Data Quality Server software
- SAS Integration Technologies software
- SAS Metadata Server software
- SAS/ACCESS engine of choice
- a second SAS/ACCESS engine of choice
- SAS/CONNECT software
- SAS/SHARE software

Disk Space Required for SAS Enterprise Data Integration Server:

SAS Enterprise Data Integration Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: If you have SAS 9.2 Foundation already installed, then the amount of disk space required to install SAS Enterprise Data Integration Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS Enterprise Miner 4.3 and 6.2

Base SAS software and SAS/STAT software are prerequisites for the installation of SAS Enterprise Miner Server.

The following products are included in SAS Enterprise Miner Server 4.3 and 6.1. Unless explicitly licensed, use of this software is limited to SAS Enterprise Miner Server.

- SAS Enterprise Miner software
- SAS Integration Technologies software
- SAS/ACCESS Interface to PC Files software
- SAS/CONNECT software
- SAS/ETS software
- SAS/GRAPH software
- SAS/OR software

For SAS Enterprise Miner Server 4.3 and 6.2, 2 GB of memory is required per concurrent user.

Disk Space Required for SAS Enterprise Miner Server 4.3 and 6.2:

The disk space required for the SAS Enterprise Miner Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install the SAS Enterprise Miner Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS Fair Banking Software

The following products are included in SAS Fair Banking Data Integration and Enterprise BI Server. Unless explicitly licensed, use of this software is limited to SAS Fair Banking Data Integration and Enterprise BI Server.

- Base SAS software
- SAS Integration Technologies software
- SAS Metadata Server software
- SAS OLAP Server software
- SAS/ACCESS Interface to PC Files software
- SAS/ACCESS engine of choice
- SAS/AF software
- SAS/CONNECT software
- SAS/GRAPH software
- SAS/SHARE software

Disk Space Required for SAS Fair Banking Data Integration and Enterprise BI Server:

SAS Fair Banking Data Integration and Enterprise BI Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: *If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Fair Banking Data Integration and Enterprise BI Server should be decreased by the disk space of any of the above products that have been previously installed.*

SAS Fraud Framework for Banking Software

The following products are included in SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server. Unless explicitly licensed, use of this software is limited to SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server.

- Base SAS software
- SAS/ACCESS engine of choice
- SAS/ETS software
- SAS/OR software
- SAS/QC software
- SAS/STAT software

In addition, SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server includes the following servers from other offerings. Please refer to the appropriate sections of this document for information about the composition of each.

- SAS Enterprise BI Server
- SAS Enterprise Data Integration Server
- SAS Enterprise Miner Server
- SAS Model Manager Server
- SAS Text Miner Server, including a SAS Text Miner language of choice

Disk Space Required for SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server:

SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table for more information.

Note: *If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server should be decreased by the disk space of any of the above products that have been previously installed.*

SAS Fraud Framework for Government Software

The following products are included in SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server. Unless explicitly licensed, use of this software is limited to SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server.

- Base SAS software
- SAS/ACCESS engine of choice
- SAS/ETS software
- SAS/OR software
- SAS/QC software
- SAS/STAT software

In addition, SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server includes the following servers from other offerings. Please refer to the appropriate sections of this document for information about the composition of each.

- SAS Enterprise BI Server
- SAS Enterprise Data Integration Server
- SAS Enterprise Miner Server
- SAS Model Manager Server
- SAS Text Miner Server, including a SAS Text Miner language of choice

Disk Space Required for SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server:

SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table for more information.

Note: If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS Fraud Framework for Health Care Software

The following products are included in SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server. Unless explicitly licensed, use of this software is limited to SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server.

- Base SAS software
- SAS/ACCESS engine of choice
- SAS/ETS software
- SAS/OR software
- SAS/QC software
- SAS/STAT software

In addition, SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server includes the following servers from other offerings. Please refer to the appropriate sections of this document for information about the composition of each.

- SAS Enterprise BI Server
- SAS Enterprise Data Integration Server
- SAS Enterprise Miner Server
- SAS Model Manager Server
- SAS Text Miner Server, including a SAS Text Miner language of choice

Disk Space Required for SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server:

SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table for more information.

Note: *If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server should be decreased by the disk space of any of the above products that have been previously installed.*

SAS Fraud Framework for Insurance Software

The following products are included in SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server. Unless explicitly licensed, use of this software is limited to SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server.

- Base SAS software
- SAS/ACCESS engine of choice
- SAS/ETS software
- SAS/OR software
- SAS/QC software
- SAS/STAT software

In addition, SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server includes the following servers from other offerings. Please refer to the appropriate sections of this document for information about the composition of each.

- SAS Enterprise BI Server
- SAS Enterprise Data Integration Server
- SAS Enterprise Miner Server
- SAS Model Manager Server
- SAS Text Miner Server, including a SAS Text Miner language of choice

Disk Space Required for SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server:

SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table for more information.

Note: *If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server should be decreased by the disk space of any of the above products that have been previously installed.*

SAS Fraud Framework for Telecommunications Software

The following products are included in SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server. Unless explicitly licensed, use of this software is limited to SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server.

- Base SAS software
- SAS/ACCESS engine of choice
- SAS/ETS software
- SAS/OR software
- SAS/QC software
- SAS/STAT software

In addition, SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server includes the following servers from other offerings. Please refer to the appropriate sections of this document for information about the composition of each.

- SAS Enterprise BI Server
- SAS Enterprise Data Integration Server
- SAS Enterprise Miner Server
- SAS Model Manager Server
- SAS Text Miner Server, including a SAS Text Miner language of choice

Disk Space Required for SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server:

SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table for more information.

Note: If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Fraud Framework Enterprise DI, Enterprise BI, and Analytics Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS High-Performance Forecasting Software

Base SAS software is a prerequisite for the installation of SAS High-Performance Forecasting.

SAS Information Delivery Portal Software

Base SAS is a prerequisite for the installation of SAS Information Delivery Portal software.

Software Included in SAS Information Delivery Portal software:

SAS Integration Technologies software is included in SAS Information Delivery Portal Server software. Unless explicitly licensed, use of this software is limited to SAS Information Delivery Portal Server software.

Disk Space Required for SAS Information Delivery Portal software:

SAS Information Delivery Portal Server software is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install Information Delivery Portal Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS Inventory Optimization Software

Base SAS is a prerequisite for SAS Inventory Optimization.

SAS Inventory Optimization software is included in SAS Inventory Optimization 2.1.

Disk Space Required for SAS Inventory Optimization software:

SAS Inventory Optimization is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: *If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Inventory Optimization should be decreased by the disk space of any of the above products that have been previously installed.*

SAS Metadata Server

The following products are included in SAS Metadata Server. Unless explicitly licensed, use of this software is limited to SAS Metadata Server.

- Base SAS software
- SAS/CONNECT software

Disk Space Required for SAS Metadata Server:

SAS Metadata Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: *If you have SAS 9.2 Foundation already installed, then the amount of disk space required to install SAS Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

SAS OLAP Server Software

Base SAS is a prerequisite for the installation of SAS OLAP Server software.

The following products are included in SAS OLAP Server software. Unless explicitly licensed, use of this software is limited to SAS OLAP Server.

- SAS OLAP Server software
- SAS/AF software
- SAS/GRAPH software

Memory:

The memory requirements for SAS OLAP Server software are dependent upon the complexity of the data. A minimum of 512 MB of space is required. Large applications will see performance improvements with more available memory.

SAS Profitability Management Software

The following products are included in SAS Profitability Management Data Integration and Enterprise BI Server. Unless explicitly licensed, use of this software is limited to SAS Profitability Management Data Integration and Enterprise BI Server.

- Base SAS software
- SAS Integration Technologies software
- SAS Metadata Server software
- SAS OLAP Server software
- SAS/ACCESS Interface to PC Files software
- SAS/ACCESS engine of choice
- SAS/AF software
- SAS/CONNECT software
- SAS/GRAPH software
- SAS/SHARE software

Disk Space Required for SAS Profitability Management Data Integration and Enterprise BI Server:

SAS Profitability Management Data Integration and Enterprise BI Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Profitability Management Data Integration and Enterprise BI Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS Social Network Analysis Server Software

The following products are included in SAS Social Network Analysis Enterprise Data Integration and BI Server. Unless explicitly licensed, use of this software is limited to SAS Social Network Analysis Enterprise Data Integration and BI Server.

- Base SAS software
- SAS/ACCESS engine of choice

In addition, SAS Social Network Analysis Enterprise Data Integration and BI Server includes the following servers from other offerings. Please refer to the appropriate sections of this document for information about the composition of each.

- SAS Data Integration Server
- SAS Enterprise BI Server

Disk Space Required for SAS Social Network Analysis Enterprise Data Integration and BI Server:

SAS Social Network Analysis Enterprise Data Integration and BI Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table for more information.

Note: If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Social Network Analysis Enterprise Data Integration and BI Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS Visual Data Discovery Software

The following products are included in SAS Visual Data Discovery Server. Unless explicitly licensed, use of this software is limited to SAS Visual Data Discovery Server.

- Base SAS software
- SAS Integrations Technologies software
- Standard SAS/ACCESS engine of choice
- SAS/GRAPH software
- SAS/STAT software

Disk Space Required for SAS Visual Data Discovery Server:

SAS Visual Data Discovery Server is the combined total space requirements for the SAS software products listed above. See the Space Requirements table on page 7 for more information.

Note: If you have SAS 9.2 Foundation installed already, then the amount of disk space required to install SAS Visual Data Discovery Server should be decreased by the disk space of any of the above products that have been previously installed.

SAS/ACCESS Interface to DB2 Software

Base SAS is required for the installation of SAS/ACCESS Interface to DB2 software.

Products Included:

- SAS/ACCESS Interface to DB2 software
- SAS Accelerator Publishing Agent software

DBMS Product Required: DB2 Universal Database, Version 8.1 FixPak 4 or higher (64-bit libraries)

SAS/ACCESS Interface to DB2 can be installed on a DB2 server or on a DB2 client node with an installation of the DB2 Run-Time Client, DB2 Application Development Client, or DB2 Administration Client. In addition, DB2 Connect must be installed to connect to DB2 databases that reside on AS/400, VSE, VM, MVS, and OS/390 systems.

SAS/ACCESS Interface to ODBC Software

Products Included:

- Base SAS software
- SAS/ACCESS Interface to ODBC software

DBMS Product Required: A 64-bit ODBC driver for the data source from which you want to access data

Before you can use SAS/ACCESS Interface to ODBC software, a 64-bit ODBC driver for the data source from which you want to access data is required. ODBC drivers are often available from DBMS vendors and other third party ODBC driver developers. The ODBC driver you choose may require additional DBMS software for network access. All required network software supplied by your database system vendor must be 64-bit-compliant.

Please see the *Configuration Guide for SAS 9.2 Foundation on Microsoft Windows for 64-Bit Itanium-based Systems*.

SAS/ACCESS Interface to OLE DB Software

Products Included:

- Base SAS software
- SAS/ACCESS Interface to OLE DB software

DBMS Product Required: An OLE DB data source provider

Before you can use SAS/ACCESS Interface to OLE DB software, an OLE DB provider for the data source from which you want to access data is required. OLE DB providers are often available from DBMS vendors and other third party software vendors. The OLE DB provider you choose may require additional DBMS software for network access. All required network software supplied by your database system vendor must be 64-bit-compliant.

SAS/ACCESS Interface to Oracle Software

Products Required:

- Base SAS software
- SAS/ACCESS Interface to Oracle software

DBMS Products Required:

The user may install an Oracle client on the same box with the products listed above, or an Oracle server may be used in place of the Oracle client.

The minimum required Oracle client/server release is Oracle 9i, Release 2 (64-bit libraries).

***Note:** In order to use the Bulk Load feature of this SAS product, you must have Oracle's SQL*Loader dataloading utility installed. This utility can be obtained by running the Oracle installer and selecting the Oracle Utilities product. Please refer to your Oracle documentation for information on SQL*Loader.*

SAS/ACCESS Interface to PC Files Software

Products Included:

- Base SAS software
- SAS/ACCESS Interface to PC Files software
- SAS PC Files Server, running on Windows 32-bit System or WOW64.

DBMS Products Required on Windows

- Microsoft Office 2007 System Driver: Data Connectivity Components (ACE)
- Microsoft Data Access Components (MDAC), Version 2.8 or higher

SAS/ACCESS Interface to PC Files software supports access to many different file formats files on Windows. Because Microsoft does not support the 64-bit version of Microsoft ACE Components, SAS/ACCESS Interface to PC Files software supports access to Microsoft Access database files and Microsoft Excel workbook files using the Client Server Model solution.

To access Microsoft Access database files (.mdb or .accdb), Microsoft Excel workbook files (.xls, .xlsb, .xlsm or .xlsx) or any ODBC supported data sources, SAS/ACCESS Interface to PC Files software requires SAS PC Files Server running on a Windows 32-bit system or a Windows 64-bit system with a WOW(Windows-On-Windows) subsystem.

SAS/AF Software

Products Required for Build Mode:

- Base SAS software
- SAS/AF software
- SAS/GRAPH software (to create and display some graphics objects)

Other products may be required depending on the application.

Products Required for Run Mode:

- Base SAS software
- SAS/GRAPH software (to display some graphics objects)

Other products may be required depending on the application.

Printers:

A color or gray scale printer is required for printing graphics-based objects.

Certain non-graphic objects may require SAS/GRAPH software to print depending on the object.

SAS/CONNECT Software

Product Included: Base SAS software

SAS/CONNECT software uses the TCP/IP access method and supports Microsoft's TCP/IP System Driver, which is provided with Windows.

SAS/EIS Software

Products Required for Build Mode:

- Base SAS software
- SAS/AF software
- SAS/EIS software
- SAS/FSP software
- SAS/GRAPH software

Other products may be required depending on the application.

Products Required for Run Mode:

- Base SAS software
- SAS/GRAPH software
- SAS/EIS software

Other products may be required depending on the application.

Memory: 128 MB required

SAS/ETS Software

The use of ODS Graphics in SAS/ETS software requires a SAS/GRAPH license.

SAS/GIS Software

Products Required for Build Mode:

- Base SAS software
- SAS/AF software
- SAS/GIS software
- SAS/GRAPH software

Other products may be required depending on the application.

Products Required for Run Mode:

- Base SAS software
- SAS/FSP software
- SAS/GIS software
- SAS/GRAPH software

Other products may be required depending on the application.

Printers:

A color or gray scale printer is required. The list of possible printers can be found in the Graphics Hardware and Software Compatibility section on page 27.

Display: 256 color display adapter strongly recommended.

SAS/GRAPH Software

The 32-bit version of Internet Explorer, Version 7 is required to run the SAS/GRAPH ActiveX Graph Control from a Web browser. The ActiveX Graph control is not supported on the 64-bit version of Internet Explorer.

The 32-bit version of Internet Explorer, Version 7 is also required to run the SAS/GRAPH Java Applets from a Web browser.

SAS/IntrNet Software

SAS/IntrNet software consists of several components that may be installed independently. SAS/IntrNet Server software is installed on an existing SAS System and is included on SAS 9.2 media.

CGI Tools and Applications

Application Dispatcher:

Requires Base SAS software and SAS/IntrNet Server software. The Application Broker component of the Application Dispatcher must be installed on a Web server.

htmSQL:

Requires Base SAS software, SAS/SHARE software, and a SAS/IntrNet software license (SETINIT). The htmSQL component must be installed on a Web server.

MDDB Report Viewer Application:

Requires Base SAS software; SAS/GRAPH software; SAS/IntrNet software; and SAS/EIS software or SAS OLAP Server software. The Application Dispatcher component must be installed and configured.

Xplore Sample Web Application:

Requires Base SAS software and SAS/IntrNet Server software. The Application Dispatcher component must be installed and configured.

Design-Time Controls:

Requires Base SAS software and SAS/IntrNet Server software. The Application Broker component of the Application Dispatcher must be installed on a Web server.

Java Tools and Applications

SAS/CONNECT Driver for Java:

Requires Base SAS software, SAS/CONNECT software, and SAS/IntrNet Server software. SAS/SHARE software must also be installed if data services are used. The Java Tools package must be installed on a Web server or a client system.

Tunnel Feature:

Must be installed on a Web server running on a UNIX or Windows system.

SAS/LAB Software

Products Included:

- Base SAS software
- SAS/FSP software (required for interactive data entry)
- SAS/GRAPH software
- SAS/LAB software

SAS/OR

The use of traditional graphics in SAS/OR software requires a SAS/GRAPH license.

SAS/QC

The use of ODS Graphics and traditional graphics in SAS/QC software requires a SAS/GRAPH license.

SAS/SHARE Software

Product Included: Base SAS software

SAS/SHARE software uses the TCP/IP access method and supports Microsoft's TCP/IP System Driver, which is provided with Windows.

SAS/TOOLKIT Software

Products Included:

- Base SAS software
- A compiler

The only language with a Production status for SAS/TOOLKIT software is C. Other languages have a Beta status.

SAS/Warehouse Administrator Software

Products Required for Build Mode:

- Base SAS software
- SAS/AF software (required only for API usage)

Products Required for Run Mode:

- Base SAS software
- Other products depending on application (e.g., SAS/ACCESS software for access to DBMS tables, SAS/CONNECT software for access to remote data, or SAS/AF software to access warehouse via method calls)

Printers:

- For printing graphics-based objects, a color or gray scale printer is required.
- Certain non-graphic objects may require SAS/GRAPH software to print depending on the object.

Graphics Hardware and Software Compatibility

Printers

SAS/GRAPH software supports PostScript, HP-GL, HP-GL/2, PCL, and other printer languages on printers from manufacturers such as Brother, Canon, Hewlett-Packard, IBM, Konica Minolta, Lanier, Lexmark, Okidata, QMS, Ricoh, Sharp, Xante, and Xerox.

SAS/GRAPH software supports any printer that you are using with Microsoft Windows via the WINPRTM (for monochrome printers), WINPRTG (for printers that support gray-scale shading), and WINPRTC (for color printers) device drivers.

Here is a partial list of printers that SAS/GRAPH software supports with native device drivers:

- CalComp ColorMaster, ColorMaster Plus, PlotMaster
- Canon Bubble Jet, Laser Shot
- Digital printers which support either SIXEL, HP PCL, Tektronix, or PostScript emulation modes
- Epson FX and LQ series printers (and all printers running in Epson emulation mode)
- Hewlett-Packard LaserJet, DeskJet, PaintJet, and DesignJet printers (and compatibles)
- IBM Graphics, Proprinter, and ColorJet printers
- PostScript printers (including color and gray-scale PostScript printers)
- QMS Colorgrafix with CGM interpreter
- QMS 800, 1200, 1500, 2200, and 2400 using QUIC or Tektronix emulation modes
- Talaris 800, 802, 1200, 1500, and 2400 using QUIC or Tektronix emulation modes
- Talaris printers using the EXCL language
- Tektronix Phaser printers (all models)
- Tektronix 4693 printers with Tektronix 4510 rasterizer
- Xerox 2700 and 4045 printers with a GRAPHX cartridge
- Xerox 3700 (with imaging board and at least 1M of memory)
- Xerox 4030 (contact Technical Support), 4213, 4235, and 4700
- Xerox 4700 printer
- Xerox 5775 color copier with an EFI Fiery attachment

Native drivers may also be available for additional printers not listed above and that do not support PostScript, HP-GL, or HP PCL. Contact SAS Technical Support for additional information on these drivers.

Images and Interfaces to Other Software

Included with SAS/GRAPH software are drivers that can produce Computer Graphics Metafiles (CGM) in binary, character, and clear-text formatted output for use by devices or software that support CGM, such as Word for Windows, WordPerfect for Windows, Harvard Graphics, and Lotus Freelance.

SAS/GRAPH software can generate encapsulated PostScript vector files, which can be exported to word processing packages such as Microsoft Word and WordPerfect.

SAS/GRAPH software can also generate Windows metafiles that can be exported to numerous packages including Microsoft Office, Lotus Smart Suite, and Perfect Office. Please contact SAS Technical Support for details.

SAS/GRAPH software's HPGL or HPGL2 driver can be used to produce files which can be transferred to most vector-based drawing programs such as CorelDraw and Micrografx Designer.

SAS/GRAPH software also has drivers for PDF and SVG along with image file formats of BMP, DIB, EMF, EPSI, PBM, PPM, GIF, JPEG, EMF, WMF, PNG, TIFF, and PaintBrush image formats.

In addition, SAS/GRAPH software can import graphics in the following formats:

- BMP - Microsoft Windows Bitmap
- DIB - Device Independent Bitmap
- EMF - Microsoft NT Enhanced Metafile
- EPSI - Encapsulated PostScript Interchange
- GIF - Graphics Interchange Format
- JPG - JPEG Files
- PBM - Portable Bitmap
- PCD - PHOTO CD
- PCX - PC PaintBrush
- PNG - Portable Network Graphics
- TGA - TARGA Format
- TIF - Tagged Image File Format
- WMF - Microsoft Windows Metafile Format
- XBM - X Window Bitmaps
- XWD - X Window Dump

Viewing HTML Pages Created with the ActiveX and Java Device Drivers

The ActiveX and Java device drivers allow you to create HTML pages from within SAS 9.2 Foundation.

Refer to the "SAS/GRAPH Software" section on page 24 for a list of browsers with which you can view HTML pages on this operating environment.

To view the Java applets, the Java plug-in must be installed on each client machine. On Windows systems, the user can install the plug-in when prompted if it is not already installed.



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