

# **SAS<sup>®</sup> 9.1.3 Foundation System Requirements for Solaris<sup>®</sup> for x64**



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## Overview

This document provides requirements for installing and running SAS 9.1.3 Foundation for Solaris. You must update your system to meet the minimum requirements before running SAS 9.1.3 Foundation. The major requirements listed in the document are:

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

## Software Requirements

### Operating System

SAS is supported on Solaris 10 1/06 and higher. To determine which Solaris release you are running, look at the `/etc/release` file using the `% cat /etc/release` command. Your result should look something like this:

```
Solaris 10 1/06 s10x_u1wos_19a X86
Copyright 2005 Sun Microsystems, Inc. All Rights Reserved.
Use is subject to license terms.
Assembled 07 December 2005
```

Ensure that the first line includes a value of “Solaris 10 1/06” or higher.

If you use Solaris 10 06/06, SAS for Solaris x64 will receive errors upon initialization in display manager mode unless patch 119281-05 has been installed. This patch is available from the Sun vendor site.

SAS recommends that you apply the latest Sun Recommended Solaris Patch Cluster for x64 Solaris 10 to your Solaris 10 installation.

**Note:** *The patch levels listed were correct at the time this document was printed. However, patches required for Solaris are subject to unexpected change as development continues. To ensure you have the latest patch requirements, go to the Install Center Web page (<http://support.sas.com/documentation/installcenter/913/kit/index.html>) to find the most recent updates to this System Requirements document.*

SAS/IML and the SAS/OR procedures `INTPOINT` and `NETFLOW` will not operate on Intel hardware due to restrictions in the SUN high performance mathematics library. SAS anticipates a hot fix that addresses this issue will be available by 30 September 2006—please consult SAS Technical Support.

### Web Browser

SAS 9.1.3 Foundation requires Firefox 1.5.03. The correct version of Firefox can be downloaded from the Install Center (<http://support.sas.com/thirdpartysupport>).

For SAS to be able to use your Web browser, the browser must be configured to allow pop-up windows. In addition, elements of SAS require access to the SAS Web site and third-party Web sites. Contact your sys admin to ensure that your browser is configured to access external sites.

## Hardware Requirements

### ***Machines Supported***

#### **New requirements to be added**

- All models that support Solaris 10 for x64
- SAS 9.1.3 requires the x64 CPU architecture

### ***Distribution Media***

- CD-ROM

### ***Memory Requirements***

For general SAS activities (for example, query and reporting, simple statistics, data manipulation), we recommend 96 MB per user.

More memory is needed for memory-intensive tasks such as OLAP, data mining, heavy statistical analysis, multivariate analysis, formats, and any GUI-based applications. Please see the “Specific Products Requirements” section for more details on memory requirements for specific products.

### ***Terminals Supported***

- Any X Windows-based terminal or server that supports a minimum of 256 colors



## Space Requirements

The following list contains space requirements in MB for all of the products available with this release of SAS 9.1.3 Foundation for Solaris. Use this information to help you determine how much free disk space you must have available before you can install SAS 9.1.3 Foundation. In addition, SAS 9.1.3 Foundation requires approximately 30 MB of disk space on the /tmp partition to complete the installation.

Software Product	Required Disk Space	Additional Space for Samples/Optional Files
Base SAS Software	1152.0	8.4
Credit Scoring for SAS Enterprise Miner Software	1.3	0.0
SAS/ACCESS Interface to DB2 Software	4.7	0.2
SAS/ACCESS to Microsoft SQL Server Software	30.1	0.8
SAS/ACCESS Interface to MySQL Software	4.1	0.2
SAS/ACCESS Interface to ODBC Software	4.1	0.2
SAS/ACCESS Interface to Oracle Software	4.9	0.2
SAS/ACCESS Interface to PC Files Software	9.9	0.0
SAS/ACCESS Interface to Sybase Software	5.0	0.2
SAS/ACCESS Interface to Teradata Software	0.8	0.2
SAS/AF Software	10.3	0.0
SAS Anti-Money Laundering Alert Generation Software	554.9	5.0
SAS/ASSIST Software	21.8	0.0
SAS/CONNECT Software	11.4	0.2
SAS Data Quality Server Software	143.2	0.1
SAS/EIS Software	18.5	10.5
SAS Enterprise Miner Software	93.8	39.3
SAS/ETS Software	99.4	1.2
SAS/FSP Software	6.8	0.0
SAS/GENETICS Software	3.8	0.2
SAS/GIS Software	86.0	0.3
SAS/GRAPH Software	239.1	2.6
SAS High-Performance Forecasting Software	17.6	0.3
SAS/IML Software	25.3	0.7
SAS/INSIGHT Software	31.7	0.5
SAS Integration Technologies Software	16.0	0.4
SAS/IntrNet Software	4.6	1.2
SAS/LAB Software	36.7	0.0
SAS OLAP Server Software	12.8	0.0
SAS/OR Software	55.0	0.0
SAS/QC Software	115.1	3.5
SAS/SHARE Software	1.3	0.2
SAS/STAT Software	169.1	3.3
SAS/TOOLKIT Software	1.1	0.0

## SAS/GIS Census Tract Maps

State	Required Disk Space in MB
Alabama	13.2
Alaska	10.5
Arizona	4.1
Arkansas	11.8
California	18.6
Colorado	8.4
Connecticut	2.9
Delaware	0.9
District of Columbia	0.2
Florida	15.8
Georgia	16.3
Hawaii	1.7
Idaho	8.8
Illinois	14.6
Indiana	8.7
Iowa	8.8
Kansas	9.4
Kentucky	13.3
Louisiana	17.5
Maine	8.5
Maryland	4.5
Massachusetts	5.1
Michigan	13.5
Minnesota	19.9
Mississippi	9.9
Missouri	13.8

State	Required Disk Space in MB
Montana	13.2
Nebraska	7.8
Nevada	3.4
New Hampshire	2.9
New Jersey	4.4
New Mexico	4.9
New York	15.4
North Carolina	16.1
North Dakota	10.0
Ohio	12.2
Oklahoma	10.0
Oregon	10.1
Pennsylvania	14.8
Rhode Island	1.0
South Carolina	10.0
South Dakota	9.0
Tennessee	14.7
Texas	29.6
Utah	5.4
Vermont	2.2
Virginia	12.9
Washington	10.2
West Virginia	7.2
Wisconsin	14.0
Wyoming	7.3
<b>Total for all entries</b>	<b>509.4</b>

## SAS/GRAPH Map Data Sets

Data Set	Required Disk Space
Countries in Africa and Middle East Maps	7.3
Countries in Asia and Pacific Maps	22.1
Countries in Europe Maps	16.
North America Maps	5.5
Countries in Latin America and Caribbean Maps	7.1
Canada Maps	2.0
Continents Maps	25.8
World Map	25.8
Very Large US County Map, Unprojected	12.5
Large US County Map, Unprojected and Reduced	1.6
Large US Mainland County Map, Projected and Reduced	1.5
Large US State Outline Map, Unprojected	1.6
<b>Total for all entries</b>	<b>128.8</b>

## DBCS Support

The following list contains space requirements in MB for SAS 9.1.3 components that offer DBCS support.

Software Product	Required Disk Space
Base SAS Software	134.0
SAS/ACCESS Interface to DB2 Software	4.5
SAS/ACCESS to Microsoft SQL Server Software	0.8
SAS/ACCESS Interface to MySQL Software	4.0
SAS/ACCESS Interface to ODBC Software	0.8
SAS/ACCESS Interface to Oracle Software	3.8
SAS/ACCESS Interface to PC Files Software	8.1
SAS/ACCESS Interface to Sybase Software	3.9
SAS/AF Software	2.6
SAS/CONNECT Software	5.4
SAS/EIS Software	0.8
SAS Enterprise Miner Software	0.3
SAS/FSP Software	2.6
SAS/GRAPH Software	88.2
SAS/INSIGHT Software	15.2
SAS/LAB Software	16.4
SAS/QC Software	7.7
SAS/STAT Software	12.8

## Japanese Language

Japanese Support	Primary Encoding Required Disk Space	Additional Space for Samples/ Optional Files	Secondary Encoding Required Disk Space	Additional Space for Samples/ Optional Files
Base SAS Software	13.3	0.3	13.3	0.3
Credit Scoring for SAS Enterprise Miner Software	0.4	0.0	0.4	0.0
SAS Anti-Money Laundering Alert Generation Samples	0.4	0.0	0.4	0.0
SAS e-Data ETL Software	3.2	0.0	3.2	0.0
SAS Enterprise Miner Software	3.9	0.0	3.9	0.0
SAS/ETS Software	0.7	0.0	0.7	0.0
SAS/GRAPH Software	0.3	0.0	0.3	0.0
SAS/IntrNet Software	0.3	0.0	0.3	0.0
SAS OLAP Server Software	0.2	0.0	0.2	0.0
SAS/STAT Software	0.8	0.0	0.8	0.0
Countries in Asia and Pacific Maps	22.1	0.0	22.1	0.0

## Korean Language

Korean Support	Required Disk Space
Base SAS Software	8.7
SAS Anti-Money Laundering Alert Generation Samples	0.1
SAS/GRAPH Software	0.3
SAS OLAP Server Software	0.2
SAS/QC Software	0.2

## Chinese Simplified Language

Chinese Simplified Support	Required Disk Space
Base SAS Software	9.1
SAS Anti-Money Laundering Alert Generation Samples	0.4
SAS/GRAPH Software	0.2
SAS/IntrNet Software	0.3
SAS OLAP Server Software	0.2

## Chinese Traditional Language

Chinese Traditional Support	Required Disk Space
Base SAS Software	3.3
SAS Anti-Money Laundering Alert Generation Samples	0.1
SAS/GRAPH Software	16.7
SAS OLAP Server Software	0.2

## Czech Language

Czech Support	Required Disk Space
Base SAS Software	4.9
SAS Enterprise Miner Software	0.2
SAS/ETS Software	0.7
SAS/GENETICS Software	0.1
SAS/GRAPH Software	0.3
SAS/OR Software	0.6
SAS/QC Software	0.2
SAS/STAT Software	0.8

## French Language

French Support	Required Disk Space
Base SAS Software	24.0
SAS Enterprise Miner Software	0.2
SAS Data Quality Server Software	0.1
SAS/EIS Software	9.7
SAS/ETS Software	0.7
SAS/GENETICS Software	0.1
SAS/GRAPH Software	0.3
SAS/OR Software	0.6
SAS/QC Software	0.2
SAS/STAT Software	0.8

## German Language

German Support	Required Disk Space
Base SAS Software	5.2
SAS Enterprise Miner Software	0.2
SAS Data Quality Server Software	0.1
SAS/ETS Software	0.7
SAS/GENETICS Software	0.1
SAS/GRAPH Software	0.3
SAS/OR Software	0.6
SAS/QC Software	0.2
SAS/STAT Software	0.9

## Hungarian Language

<b>Hungarian Support</b>	<b>Required Disk Space</b>
Base SAS Software	4.9
SAS Enterprise Miner Software	0.2
SAS/ETS Software	0.7
SAS/GENETICS Software	0.1
SAS/GRAPH Software	0.3
SAS/OR Software	0.6
SAS/QC Software	0.2
SAS/STAT Software	0.8

## Italian Language

<b>Italian Support</b>	<b>Required Disk Space</b>
Base SAS Software	24.3
SAS Enterprise Miner Software	0.2
SAS Data Quality Server	0.1
SAS/ETS Software	0.8
SAS/GENETICS Software	0.1
SAS/GRAPH Software	0.4
SAS/OR Software	0.6
SAS/QC Software	0.2
SAS/STAT Software	0.9

## Portuguese Language

<b>Portuguese Support</b>	<b>Required Disk Space</b>
Base SAS Software	26.8
SAS Enterprise Miner Software	0.2
SAS Data Quality Server Software	0.1
SAS/ETS Software	0.7
SAS/GENETICS Software	0.1
SAS/GRAPH Software	0.6
SAS/OR Software	0.6
SAS/QC Software	0.2
SAS/STAT Software	0.8

## Russian Language

Russian Support	Required Disk Space
Base SAS Software	5.0
SAS Enterprise Miner Software	0.2
SAS/ETS Software	0.7
SAS/GENETICS Software	0.1
SAS/GRAPH Software	0.3
SAS/OR Software	0.6
SAS/QC Software	0.2
SAS/STAT Software	0.9

## Spanish (Castilian) Language

Spanish (Castilian) Support	Required Disk Space
Base SAS Software	18.2
SAS Enterprise Miner Software	0.2
SAS Data Quality Server Software	0.1
SAS/ETS Software	0.7
SAS/GENETICS Software	0.1
SAS/GRAPH Software	0.4
SAS/OR Software	0.6
SAS/QC Software	0.2
SAS/STAT Software	0.9

## Swedish Language

Swedish Support	Required Disk Space
Base SAS Software	5.0
SAS Enterprise Miner Software	0.2
SAS/ETS Software	0.7
SAS/GENETICS Software	0.1
SAS/GRAPH Software	0.3
SAS/OR Software	0.6
SAS/QC Software	0.2
SAS/STAT Software	0.8

## Specific Product Requirements

### **SAS/ACCESS Interface to DB2 Software**

#### **Products Required**

- Base SAS software
- SAS/ACCESS Interface to DB2 software

#### **DBMS Product Required**

- DB2 Universal Database, Version 7.1 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 Microsoft SQL Server Software**

#### **Products Required:**

- Base SAS software
- SAS/ACCESS Interface to Microsoft SQL Server software

### **SAS/ACCESS Interface to MySQL Software**

#### **Products Required**

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

#### **DBMS Products Required**

- MySQL Client 4.1.x
- MySQL Server 4.0 or later

For more information about SAS/ACCESS Interface to MySQL software, please see the MySQL chapter in *SAS/ACCESS Software for Relational Databases: Reference*.

### **SAS/ACCESS Interface to ODBC Software**

#### **Products Required**

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



## DBMS Products Required

- A compliant ODBC driver manager and ODBC driver (64-bit libraries)

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 in order to access the data.

You may have to edit the .odbc.ini file in your home directory with a text editor to configure data sources. Some ODBC driver vendors may allow a system administrator to maintain a centralized copy by setting an environment variable.

The ODBC drivers are ODBC API-compliant dynamic link libraries, referred to in UNIX as shared objects. You must include the full path to the dynamic link libraries in LD\_LIBRARY\_PATH so that the ODBC drivers can be loaded dynamically at run time.

For more information, please consult your ODBC driver vendor.

## SAS/ACCESS Interface to Oracle Software

### Products Required

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

### DBMS Products Required

SAS/ACCESS Interface to Oracle software can be installed on either a full Oracle RDBMS server node or on an Oracle client node.

The minimum required Oracle release is 10.2.0.1.0 (64-bit libraries).

## SAS/ACCESS Interface to PC Files Software

### Products Required

- Base SAS software
- SAS/ACCESS Interface to PC Files software

### Products Required on Windows

- SAS PC Files Server

### DBMS Products Required on Windows

- Microsoft Jet 4.0 Components
- Microsoft Data Access Components(MDAC), Version 2.7 or higher

SAS/ACCESS Interface to PC Files software supports access to delimited file (csv, tab), dBase file (.dbf), JMP file (.jmp), Excel file (.xls), Microsoft Access database file (.mdb) and virtually any data source through ODBC support on Windows.

However, to access Microsoft Access database file(.mdb), Microsoft Excel workbook file(.xls) or any ODBC supported data sources, SAS/ACCESS Interface to PC Files software requires the PC Files Server (pcfserver.exe) running on Windows. The PC Files Server (pcfserver.exe) component is shipped on the **SAS Client-Side Components** CDs.

## **SAS/ACCESS Interface to Sybase Software**

### **Products Required**

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

### **DBMS Products Required**

The following release of Sybase Open Client software is required:

- Sybase Open Client SDK (Software Developer's Kit) Software, Release 12.5.x (64-bit libraries)

The following is recommended:

- Adaptive Server Enterprise, Release 11.x or higher

**Note:** *SAS/ACCESS Interface to Sybase software no longer supports access to Microsoft SQL Server data. SAS/ACCESS Interface to Sybase software uses the CTLIB API calls to access the Sybase DBMS product. These CTLIB API calls are not supported by Microsoft SQL Server; therefore, you will have to use SAS/ACCESS Interface to ODBC software with an appropriate ODBC driver to obtain access to Microsoft SQL Server data.*

**Note:** *Sybase ASIQ, Release 12.x is not supported; SAS/ACCESS Interface to ODBC software must be used instead.*

## **SAS/ACCESS Interface to Teradata Software**

### **Products Required**

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

### **DBMS Products Required**

The following release of Teradata Client software is required:

- Teradata CLIV2 client libraries, TTU 8.2 for Solaris (64-bit libraries)

The following is recommended:

- Teradata FastExport utility, TTU 8.2 for Solaris.

**Note:** *The MultiLoad feature requires TTU 8.2 for Solaris.*

## **SAS Activity-Based Management Software**

### **SAS Activity-Based Management Data Integration and Enterprise BI Server**

**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/ACCESS engine of choice
- SAS/ACCESS Interface to PC Files software
- SAS/CONNECT software
- SAS/GRAPH software

- SAS Integration Technologies software
- SAS OLAP Server 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 for more information.

**Note:** *If you have SAS 9.1.3 Foundation already installed, 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 Activity-Based Management Metadata Server**

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

- Base SAS software
- SAS Metadata Server software

### **Disk Space Required for SAS Activity-Based Management Metadata Server:**

SAS Activity-Based Management Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Activity-Based Management Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

## **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**

- 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.

## SAS Anti-Money Laundering Software

**The following products are included in SAS Anti-Money Laundering Alert Generation Server.** Unless explicitly licensed, use of this software is limited to SAS Anti-Money Laundering Alert Generation Server.

- SAS Anti-Money Laundering Alert Generation software
- Base SAS software
- SAS/ACCESS engine of choice (SAS/ACCESS Interface to DB2, SAS/ACCESS Interface to Oracle, or SAS/ACCESS Interface to Teradata—please note that SAS Anti-Money Laundering software is considered "Pre-Production" when used with SAS/ACCESS Interface to Teradata)
- SAS/CONNECT software
- SAS Data Quality Server software
- SAS Enterprise Miner software
- SAS/ETS software
- SAS/GRAPH software
- SAS Integration Technologies software
- SAS Metadata Server software
- SAS/OR software
- SAS/SHARE software
- SAS/STAT software

### **Disk Space Required for SAS Anti-Money Laundering Alert Generation Server:**

The disk space required for SAS Anti-Money Laundering Alert Generation 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Anti-Money Laundering Alert Generation Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Banking Intelligence Architecture Software

### **SAS Banking Intelligence Architecture EBI Server**

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

- Base SAS software
- SAS Integration Technologies software
- SAS OLAP Server software
- SAS/STAT software

### **Disk Space Required for SAS Banking Intelligence Architecture EBI Server**

The disk space required for SAS Banking Intelligence Architecture EBI 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Banking Intelligence Architecture EBI Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Banking Intelligence Architecture Metadata Server

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

- Base SAS software
- SAS/CONNECT software
- SAS Integration Technologies 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 for more information.

**Note:** *If you have SAS 9.1.3 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 Banking Intelligence Architecture OLAP Server

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

- Base SAS software
- SAS Integration Technologies
- SAS OLAP Server

### Disk Space Required for SAS Banking Intelligence Architecture OLAP Server:

The disk space required for SAS Banking Intelligence Architecture OLAP 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Banking Intelligence Architecture OLAP Server should be decreased by the disk space of any of the above products that have been previously installed.*

## Base SAS Software

### External Tape Devices Supported

The TAPE device type is supported for the following tape devices:

- 4mm cartridge tapes
- 8mm cartridge tapes

### Requirements for SPD Engine on Solaris

- 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

## SAS BI Server

### SAS BI Server

#### Products Included in SAS BI Server:

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

#### Disk Space Required for SAS BI Server:

The disk space required for SAS 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 9.1.3 Foundation already installed, 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.*

### SAS BI Server Metadata Server

#### Products Included in SAS BI Server Metadata Server:

- Base SAS software
- SAS Metadata Server software

#### Disk Space Required for SAS BI Server Metadata Server:

The disk space required for SAS BI Server Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS BI Server Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS/CONNECT Software

#### TCP/IP Access Method:

- Any TCP/IP package that comes with the operating system

## SAS Credit Risk Management for Banking Software

**The following products are included in SAS Credit Risk Management for Banking Metadata Server.** Unless explicitly licensed, use of this software is limited to SAS Credit Risk Management for Banking Metadata Server.

- Base SAS software
- SAS Metadata Server software

#### Disk Space Required for SAS Credit Risk Management for Banking Metadata Server:

SAS Credit Risk Management for Banking Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Credit Risk Management for Banking Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Data Integration Server

### SAS Data Integration Server

#### Products Included in SAS Data Integration Server:

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

#### Disk Space Required for SAS Data Integration Server:

The disk space required for SAS Data Integration 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 9.1.3 Foundation already installed, 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 Integration Server Metadata Server

#### Products Included in SAS Data Integration Server Metadata Server:

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

#### Disk Space Required for SAS Data Integration Server Metadata Server:

The disk space required for SAS Data Integration Server Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Data Integration Server Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Digital Marketing

**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 Integration Technologies software
- SAS/SHARE 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 for more information.

**Note:** *If you have SAS 9.1.3 Foundation already installed, 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/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

- 96 MB required per concurrent user
- 128 MB recommended per concurrent user

### Printers

- For printing graphics-based objects, a color or gray scale printer is required.

## SAS Enterprise BI Server

### SAS Enterprise BI Server

#### Products Included in SAS Enterprise BI Server:

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

#### Disk Space Required for SAS Enterprise BI Server

The disk space required for SAS Enterprise 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 9.1.3 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 BI Server Metadata Server

#### Products Included in SAS Enterprise BI Server Metadata Server:

- Base SAS software
- SAS Metadata Server software



**Disk Space Required for SAS Enterprise BI Server Metadata Server:**

The disk space required for SAS Enterprise BI Server Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Enterprise BI Server Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

**SAS Enterprise Data Integration Server****SAS Enterprise Data Integration Server****Products Included in SAS Enterprise Data Integration Server:**

- Base SAS software
- SAS/ACCESS software of choice
- A second SAS/ACCESS software of choice
- SAS/CONNECT software
- SAS Data Quality Server and a Quality Knowledge Base of choice
- SAS Integration Technologies software
- SAS/SHARE software

**Disk Space Required for SAS Enterprise Data Integration Server:**

The disk space required for SAS Enterprise Data Integration 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 9.1.3 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 Data Integration Server Metadata Server****Products Included in SAS Enterprise Data Integration Server Metadata Server:**

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

**Disk Space Required for SAS Enterprise Data Integration Server Metadata Server:**

The disk space required for SAS Enterprise Data Integration Server Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Enterprise Data Integration Server Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Enterprise Intelligence Suite for Education

### SAS Enterprise Intelligence Suite Server

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

- Base SAS software
- Quality Knowledge Base locale of choice
- SAS/ACCESS engine of choice
- A second SAS/ACCESS engine of choice
- SAS/CONNECT software
- SAS Data Quality Server software
- SAS/ETS software
- SAS/GRAPH software
- SAS/IML software
- SAS/INSIGHT software
- SAS Integration Technologies software
- SAS OLAP Server software
- SAS/SHARE software
- SAS/STAT software

#### **Disk Space Required for SAS Enterprise Intelligence Suite Server:**

The disk space required for SAS Enterprise Intelligence Suite 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Enterprise Intelligence Suite Server should be decreased by the disk space of any of the above products that have been previously installed.*

### SAS Enterprise Intelligence Suite Metadata Server

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

- Base SAS software
- SAS/Connect software
- SAS Metadata Server software

#### **Disk Space Required for SAS Enterprise Intelligence Suite Metadata Server:**

The disk space required for SAS Enterprise Intelligence Suite Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Enterprise Intelligence Suite Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Enterprise Intelligence Suite OLAP Server

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

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

### **Disk Space Required for SAS Enterprise Intelligence Suite OLAP Server:**

The disk space required for SAS Enterprise Intelligence Suite OLAP 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Enterprise Intelligence Suite OLAP Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Enterprise Miner 5.3

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 5.3.** Unless explicitly licensed, use of this software is limited to SAS Enterprise Miner Server.

- SAS Enterprise Miner software
- SAS/CONNECT software
- SAS/ETS software
- SAS/GRAPH software
- SAS Integration Technologies software

### **Memory Required for SAS Enterprise Miner Server 5.3:**

- 1 GB required per concurrent user

### **Disk Space Required for SAS Enterprise Miner Server 5.3:**

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 for more information.

**Note:** *If you have SAS 9.1.3 Foundation already installed, 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/Genetics Software

### **Products Required:**

- Base SAS software
- SAS/Genetics software
- SAS/GRAPH software

## SAS/GIS Software

### Products Required for Build Mode

- Base SAS software
- SAS/AF software (recommended)
- 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 (recommended)
- 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.

## SAS Grid Manager Software

### SAS Grid Manager Control Server

Base SAS software and SAS/CONNECT software are prerequisites for the installation of SAS Grid Manager Control Server.

### SAS Grid Manager Metadata Server

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

- Base SAS software
- SAS Metadata Server software

### Disk Space Required for SAS Grid Manager Metadata Server:

SAS Grid Manager Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Grid Manager Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

### SAS Grid Manager Node

Base SAS software and SAS/CONNECT software are prerequisites for the installation of SAS Grid Manager Node.

## SAS GridClient

Base SAS software and SAS/CONNECT software are prerequisites for the installation of SAS GridClient.

## SAS High-Performance Forecasting Software

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

### Products Included in SAS High-Performance Forecasting:

- SAS High-Performance Forecasting software
- SAS/OR software (unless explicitly licensed, use of SAS/OR is limited to SAS High-Performance Forecasting)

### Disk Space Required for SAS High-Performance Forecasting:

The disk space required for SAS High-Performance Forecasting 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS High-Performance Forecasting should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS/IML Software

SAS/IML will not operate on Intel hardware due to restrictions in the SUN high performance mathematics library. SAS anticipates a hot fix that addresses this issue will be available by 30 September 2006—please consult SAS Technical Support.

## SAS Information Delivery Portal Software

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

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

- SAS Integration Technologies software

### Disk Space Required for SAS Information Delivery Portal Server:

SAS Information Delivery Portal 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Information Delivery Portal Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Insurance Intelligence Architecture Software

### SAS Insurance Intelligence Architecture EBI Server

**The following products are included in SAS Insurance Intelligence Architecture EBI Server.** Unless explicitly licensed, use of this software is limited to SAS Insurance Intelligence Architecture EBI Server.

- Base SAS software
- SAS Integration Technologies software
- SAS OLAP Server software
- SAS/STAT software

#### Disk Space Required for SAS Insurance Intelligence Architecture EBI Server

The disk space required for SAS Insurance Intelligence Architecture EBI 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Insurance Intelligence Architecture EBI Server should be decreased by the disk space of any of the above products that have been previously installed.*

### SAS Insurance Intelligence Architecture Metadata Server

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

- Base SAS software
- SAS/CONNECT software
- SAS Integration Technologies 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 for more information.

**Note:** *If you have SAS 9.1.3 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 Insurance Intelligence Architecture OLAP Server

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

- Base SAS software
- SAS Integration Technologies
- SAS OLAP Server

#### Disk Space Required for SAS Insurance Intelligence Architecture OLAP Server:

The disk space required for SAS Insurance Intelligence Architecture OLAP 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Insurance Intelligence Architecture OLAP Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Intelligence Storage

### SAS Intelligence Storage Server

#### Products Included in SAS Intelligence Storage Server:

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

#### Disk Space Required for SAS Intelligence Storage Server:

The disk space required for SAS Intelligence Storage 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Intelligence Storage Server should be decreased by the disk space of any of the above products that have been previously installed.*

### SAS Intelligence Storage Metadata Server

#### Products Included in SAS Intelligence Storage Metadata Server:

- Base SAS software
- SAS Metadata Server software

#### Disk Space Required for SAS Intelligence Storage Metadata Server:

The disk space required for SAS Intelligence Storage Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Intelligence Storage Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

## 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 9.1.3 media. Other SAS/IntrNet software components may be installed from the SAS Client-Side Components CD.

## 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.

## **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 client system.

### **Tunnel Feature**

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

## **SAS/LAB Software**

### **Products Required:**

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

## **SAS Manufacturing Intelligence Architecture Software**

### **SAS Manufacturing Intelligence Architecture EBI Server**

**The following products are included in SAS Manufacturing Intelligence Architecture EBI Server.** Unless explicitly licensed, use of this software is limited to SAS Manufacturing Intelligence Architecture EBI Server.

- Base SAS software
- SAS Integration Technologies software
- SAS OLAP Server software
- SAS/STAT software

### **Disk Space Required for SAS Manufacturing Intelligence Architecture EBI Server**

The disk space required for SAS Manufacturing Intelligence Architecture EBI 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Manufacturing Intelligence Architecture EBI Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Manufacturing Intelligence Architecture Metadata Server

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

- Base SAS software
- SAS/CONNECT software
- SAS Integration Technologies 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 for more information.

**Note:** *If you have SAS 9.1.3 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 Manufacturing Intelligence Architecture OLAP Server

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

- Base SAS software
- SAS Integration Technologies
- SAS OLAP Server

### Disk Space Required for SAS Manufacturing Intelligence Architecture OLAP Server:

The disk space required for SAS Manufacturing Intelligence Architecture OLAP 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Manufacturing Intelligence Architecture OLAP Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Marketing Optimization Software

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

- Base SAS software
- SAS Metadata Server software

### Disk Space Required for SAS Marketing Optimization Metadata Server:

SAS Marketing Optimization Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Marketing Optimization Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Metadata Server Software

### Products Required:

- Base SAS software
- SAS/CONNECT software
- SAS Integration Technologies 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 for more information.

**Note:** *If you have SAS 9.1.3 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

**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
- SAS Integration Technologies software

### Memory:

The memory requirements for SAS OLAP Server software are dependent upon the complexity of the data.

- 512 MB required

Large applications will see performance improvements with more available memory.

## SAS/OR Software

The SAS/OR procedures `INTPOINT` and `NETFLOW` will not operate on Intel hardware due to restrictions in the SUN high performance mathematics library. SAS anticipates a hot fix that addresses this issue will be available by 30 September 2006—please consult SAS Technical Support.

## SAS Profitability Management Software

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

- Base SAS software
- SAS/ACCESS engine of choice
- SAS/ACCESS Interface to PC Files software
- SAS/CONNECT software
- SAS/GRAPH software
- SAS Integration Technologies software

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

SAS Profitability Management 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Profitability Management Data Integration and BI Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Retail Intelligence Architecture Software

### SAS Retail Intelligence Architecture EBI Server

**The following products are included in SAS Retail Intelligence Architecture EBI Server.** Unless explicitly licensed, use of this software is limited to SAS Retail Intelligence Architecture EBI Server.

- Base SAS software
- SAS Integration Technologies software
- SAS OLAP Server software
- SAS/STAT software

#### Disk Space Required for SAS Retail Intelligence Architecture EBI Server

The disk space required for SAS Retail Intelligence Architecture EBI 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Retail Intelligence Architecture EBI Server should be decreased by the disk space of any of the above products that have been previously installed.*

### SAS Retail Intelligence Architecture Metadata Server

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

- Base SAS software
- SAS/CONNECT software
- SAS Integration Technologies 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 for more information.

**Note:** *If you have SAS 9.1.3 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 Retail Intelligence Architecture OLAP Server

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

- Base SAS software
- SAS Integration Technologies
- SAS OLAP Server

#### Disk Space Required for SAS Retail Intelligence Architecture OLAP Server:

The disk space required for SAS Retail Intelligence Architecture OLAP 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Retail Intelligence Architecture OLAP Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS/SHARE Software

### Products Required

- Base SAS software

### TCP/IP Access Method

- Any TCP/IP package that comes with the operating system

## SAS Space Optimizer Software

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

- Base SAS software
- SAS/GRAPH software
- SAS/OR software

### Disk Space Required for SAS Space Optimizer SAS Server:

SAS Space Optimizer SAS 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Space Optimizer SAS Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Space Planning Software

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

- Base SAS software
- SAS/GRAPH software

### Disk Space Required for SAS Space Planning SAS Server:

SAS Space Planning SAS 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Space Planning SAS Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS StoreCAD Plus Software

SAS StoreCAD Plus software requires SAS Space Planning.

**The following products are included in SAS StoreCAD Plus.** Unless explicitly licensed, use of this software is limited to SAS StoreCAD Plus.

- SAS StoreCAD Plus software

### Disk Space Required for SAS StoreCAD Plus:

SAS StoreCAD Plus 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS StoreCAD Plus should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Telecommunications Intelligence Architecture Software

### SAS Telecommunications Intelligence Architecture EBI Server

**The following products are included in SAS Telecommunications Intelligence Architecture EBI Server.** Unless explicitly licensed, use of this software is limited to SAS Telecommunications Intelligence Architecture EBI Server.

- Base SAS software
- SAS Integration Technologies software
- SAS OLAP Server software
- SAS/STAT software

### Disk Space Required for SAS Telecommunications Intelligence Architecture EBI Server

The disk space required for SAS Telecommunications Intelligence Architecture EBI 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Telecommunications Intelligence Architecture EBI Server should be decreased by the disk space of any of the above products that have been previously installed.*

### SAS Telecommunications Intelligence Architecture Metadata Server

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

- Base SAS software
- SAS/CONNECT software
- SAS Integration Technologies 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 for more information.

**Note:** *If you have SAS 9.1.3 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 Telecommunications Intelligence Architecture OLAP Server

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

- Base SAS software
- SAS Integration Technologies
- SAS OLAP Server

### **Disk Space Required for SAS Telecommunications Intelligence Architecture OLAP Server:**

The disk space required for SAS Telecommunications Intelligence Architecture OLAP 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Telecommunications Intelligence Architecture OLAP Server should be decreased by the disk space of any of the above products that have been previously installed.*

## SAS Value Chain Analytics Software

### SAS Value Chain Analytics ETL and BI Server

**The following products are included in SAS Value Chain Analytics ETL and BI Server.** Unless explicitly licensed, use of this software is limited to SAS Value Chain Analytics ETL and BI Server.

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

### **Disk Space Required for SAS Value Chain Analytics ETL and BI Server:**

SAS Value Chain Analytics ETL 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Value Chain Analytics ETL and BI Server should be decreased by the disk space of any of the above products that have been previously installed.*

### SAS Value Chain Analytics Metadata Server

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

- Base SAS software
- SAS Metadata Server software

**Disk Space Required for SAS Value Chain Analytics Metadata Server:**

SAS Value Chain Analytics Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Value Chain Analytics Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

**SAS Visual Data Discovery Software****SAS Visual Data Discovery Server**

**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/ACCESS engine of choice
- SAS/GRAPH software
- SAS Integration Technologies software
- SAS/STAT software

**Disk Space Required for SAS Visual Data Discovery Server:**

The disk space required for the SAS Visual Data Discovery 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 9.1.3 already installed, 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 Visual Data Discovery Metadata Server**

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

- Base SAS software

**Disk Space Required for SAS Visual Data Discovery Metadata Server:**

SAS Visual Data Discovery Metadata 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Visual Data Discovery Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*

**SAS Warranty Analysis Software**

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

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

**Disk Space Required:**

The disk space required for the SAS Warranty Analysis Metadata Server package 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 9.1.3 Foundation already installed, then the amount of disk space required to install SAS Warranty Analysis Metadata Server should be decreased by the disk space of any of the above products that have been previously installed.*



## Graphics Hardware and Software Compatibility

### Printers

SAS/GRAPH software provides device drivers for all Hewlett-Packard printers (and compatibles), and printers that support PostScript, HP-GL, HP PCL, and other printer languages. Here is a partial list of printers that SAS/GRAPH software supports:

- CalComp ColorMaster, ColorMaster Plus, PlotMaster
- Canon Bubble Jet, Laser Shot
- Digital printers that 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

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

### Terminals and Displays

SAS/GRAPH software supports graphics display on graphics terminals from DEC, Tektronix, HP, and on X Windows terminals. SAS/GRAPH software also supports graphics emulators that emulate any of the above terminals. Note the use of the SAS/GRAPH graphics editor requires an X Windows display or X Windows emulation software.

### Plotters

SAS/GRAPH software provides device drivers for all HP plotters supporting HP-GL or HP-GL/2, and plotters from other manufacturers that support the HP-GL or HP-GL/2 language. SAS/GRAPH software also supports Houston Instruments plotters using the DMPL language and ZETA plotters that support the GML language.

## **Film Recorders**

- SAS/GRAPH software provides device drivers that support the following film recorders:
- Genigraphics Masterpiece Camera System with SCODL interface
- Lasergraphics MPS 2000 film recorder with a Lasergraphics UI-100 or RASCOL rasterizer
- Matrix QCR and PCR cameras with Matrix QVP, MVP, or Lasergraphics rasterizers
- Polaroid Palette CI-3000 and CI-5000
- Presentation Technologies Montage film recorder

Support may be available for other film recorders not listed here. For details, contact SAS Technical Support.

## **Interfaces to Other Graphics Software**

Included with SAS/GRAPH software is a series of drivers that can produce Computer Graphics Metafiles (CGM) in binary, character, and clear-text formats. These drivers can be used to transfer SAS/GRAPH output to other products that support CGM input, such as Word for Windows, WordPerfect for Windows, Harvard Graphics, and Lotus Freelance, or to devices that can process CGM input.

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

Many other graphics and word processing applications can process files in Hewlett-Packard (HP-GL) format. The HPGL driver can be used to produce files that can be transferred to most applications that can process HP-GL files. In addition, there are drivers for PDF, PBM, PPM, GIF, JPEG, EMF, WMF, PNG, TIFF, EPSI, and PaintBrush image formats. To view a complete list of all SAS/GRAPH device drivers, submit the following SAS program:

```
proc gdevice c=sashelp.devices nofs;  
  list _all_;  
run; quit;
```

SAS/GRAPH software can also export graphics in the following formats:

- BMP - Microsoft Windows Bitmap
- EPS - Encapsulated PostScript
- GIF - Graphics Interchange Format
- PNG - Portable Network Graphics
- PPM - Portable Pixmap
- PS - PostScript Bitmap
- TIF - Tagged Image File Format
- XPM - X11 Pixmap
- JPG - JPEG Files
- XBM - X11 Bitmap

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

- BMP - Microsoft Windows Bitmap
- EPS - Encapsulated PostScript
- GIF - Graphics Interchange Format
- PBM - Portable Bitmap
- PCD - Kodak Photo-CD
- PCX - PC PaintBrush
- PGM - Portable Graymap
- PNG - Portable Network Graphics
- PNM - Portable Anymap PPM - Portable Pixmap
- TGA - Targa format
- TIF - Tagged Image File Format
- XBM - X11 Bitmap
- XPM - X11 Pixmap
- XWD - X Window Dump
- JPG - JPEG Files

### ***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 9.1.3.

Refer to the "Web Browser" section in this document 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. On other systems, the plug-in can be installed from one of the **Third Party Software Components** CDs. Follow the instructions included with the Java and web browser installation for your system to enable the Java plug-in.







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