

# **SAS<sup>®</sup> Financial Management 5.4: Installation and Configuration Guide**



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### **SAS Financial Management 5.4: Installation and Configuration Guide**

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# Chapter 1 — Getting Started with SAS Financial Management and SAS Capital Planning and Management

## *Before you begin the installation*

### **SAS Software Order and SAS Software Depot**

Your SAS Software Order E-Mail (SOE) will provide you with information about how to download your SAS Software Depot. Follow those instructions to download your software and create a SAS Software Depot. An instructional video for 9.4 Software Depots is at this location:  
<http://support.sas.com/documentation/installcenter/gettingstarted/94/index.html>

### **QuickStart Guide**

Your SAS Software Order E-Mail (SOE) and the SAS Download Manager instruct you to follow the steps in the *QuickStart Guide: SAS® 9.4 Planned Deployments using Electronic Software Delivery*.

A link to the *QuickStart Guide* is found in your SAS Software Order. You can also access it in the `depotsummary.html` file which is located at the top level of the SAS Software Depot.

### **Deployment Plan and SAS 9 Pre-Installation Checklist**

These solutions require you to complete a planned installation.

#### ***Deployment Plan***

A deployment plan is an XML-based description of the topology for your SAS system. The deployment plan describes the intended final SAS software environment. It is used in the SAS software deployment process to tell the SAS Deployment Wizard which software components to install and configure on each machine.

A deployment plan will be generated and provided for each deployment. The SAS Planning Application can be used only by SAS representatives. You must log in with a valid sas.com e-mail address before accessing the Planning Application 2.0. More information about the planning application is found in the SAS Planning Application, <http://support.sas.com/planning>.

#### ***Pre-Installation Checklist***

The *SAS 9 Pre-Installation Checklist* document is found in the same directory as the deployment plan and will explain the users, groups and third party software are needed on each tier of this deployment. In these instructions, “pre-installation checklist” refers to this customized document.

### **Migration Guides**

If you have already installed SAS Financial Management 4.4/4.4.1 and want to maintain data, please refer to the *SAS Performance Management Solutions: 9.1.3 to 9.2 Migration Guide*.

If you have already installed SAS Financial Management 5.1 or 5.2 and want to maintain data, please refer to the *SAS Financial Management 5.3: Migration Guide*.

If you have already installed SAS Financial Management 5.3 or 5.2 and want to maintain data, please refer to the *SAS Financial Management 5.4: Migration Guide*.

## Chapter 2 — Pre-Installation Steps

### Steps to Perform Before You Install SAS Software

For important information about these steps, complete the pre-installation checklist and read the *SAS 9.4 Intelligence Platform Installation and Configuration Guide* which can be found here:

<http://support.sas.com/documentation/onlinedoc/intellplatform/index.html>

### Operating System Users and Groups

Create the users and groups that are specified in the pre-installation checklist for each tier of your installation.

### Third Party Software and System Requirements

The *QuickStart Guide* contains a link to the System Requirements on SAS Install Center. Review the system requirements for the products that you will install. Install the required third party products. SAS Financial Management system requirements and SAS Capital Planning and Management system requirements can be found here:

<http://support.sas.com/documentation/onlinedoc/fm/index.html>

The 9.4 Third Party documentation is located here:

<http://support.sas.com/resources/thirdpartysupport/v94/index.html>

### UNIX Hostname

The hostname command should return the fully qualified hostname for your servers. Verify this by issuing the hostname command:

```
hostname
yourhost.yourdomain.com
```

If your site requires a shortened form of the hostname, remember to use that name consistently throughout your configuration steps.

### Alternate Database Server

Please note the following items if you are using a third party PostgreSQL data server instead of the SAS Supplied Data Server for SAS solutions content.

- SAS Financial Management supports using PostgreSQL 9.1.9 or higher. Other databases are not supported for SAS Financial Management content.
- If the SAS Financial Management database is third party, fill in the “SAS Financial Management Database Information” section of the pre-installation checklist.
- Create an account in the database that is a super user. During installation and configuration, the SAS Deployment Wizard will prompt for this user. The default ID is `sqladmin`.
- The super user account will be used to create a database named `sasdm`. This name cannot be modified.
- During installation and configuration, the SAS Deployment Wizard prompts for a separate user to be created for this database. The default is `sasdmdbadm`.
- Windows services are not created or managed for a third party database.

- On UNIX, there is a startup script which should be updated to include the Financial Management base. See your “Configuration Guidelines and Details” file (`instructions.html`) for more information on its location.

In addition, if the SAS Shared Services database is third party, fill in the data in the pre-installation checklist section, “SAS Shared Services Database” and refer to this document:

<http://support.sas.com/resources/thirdpartysupport/v94/appservers/SharedServicesAlternativeDatabase.pdf>

## Chapter 3 — Install and Configure SAS Software

### SAS Deployment Wizard

#### Adding SAS Financial Management to an Existing SAS 9.4 Intelligence Platform Deployment

Follow the steps outlined in *SAS 9.4 Intelligence Platform Installation and Configuration Guide* “Managing your SAS Deployment: Adding SAS Products.” This document can be found here:

<http://support.sas.com/documentation/cdl/en/biig/63852/PDF/default/biig.pdf>

#### SAS Deployment Wizard

The *QuickStart Guide* explains how to launch the SAS Deployment Wizard. Use the SAS Deployment Wizard Help and SAS 9.4 Intelligence Platform documentation to guide you as needed. In addition, see the *SAS Deployment Wizard and SAS Deployment Manager 9.4: User’s Guide*:

<http://support.sas.com/documentation/installcenter/en/ikdeploywizug/66034/PDF/default/user.pdf>

### Installation on Two Tiers (Data Tier/Mid-Tier and Client Tier)

#### Client Tier

Refer to “Chapter 5 — Installing Client Applications” on page 11 for information about the installation of the client software.

#### Before You Begin the Data Tier and Mid-Tier on a Single Server

This document, *SAS Financial Management 5.4: Installation and Configuration Guide* covers prompts and windows that apply only to Financial Management and SAS Capital Planning and Management.

Refer to the *SAS 9.4 Intelligence Platform Installation and Configuration Guide* for detailed information about the steps that are not specific to SAS Financial Management. This guide is necessary and required for installing SAS Financial Management.

<http://support.sas.com/documentation/onlinedoc/intellplatform/index.html>

#### Verify External Users and Groups

1. Verify that the following users and group have been created on the data tier machine as instructed in the pre-installation checklist.

	Windows	UNIX
SAS Installer	mydomain\installer-ID	sas
SAS Spawned Servers account	mydomain\sassrv	sassrv
SAS First User	mydomain\sasdemo	sasdemo
Solutions Host User	mydomain\sassln	sassln
SAS Server Users group	SAS Server Users	sas

- On Windows, the SAS Installer account should be available in the long term for future SAS maintenance.



- On AIX, make sure that the **User can LOGIN?** setting is set to *true* for the SAS Installer ID.
  - On UNIX, do not use *root* as the SAS Installer account.
2. Follow the instructions for your platform:
    - On Windows, verify that SAS Server Users group has the user right “Log on as a batch job.” The SAS Spawnd Servers Account (sassrv) and the Solutions Host User (sassln) can be added to this group to obtain this right or it can be assigned by the SAS Deployment Wizard.
    - On UNIX, verify that the SAS Spawnd Servers and SAS Installer account are members of the same group and that the group is the primary group for both groups.

### **UNIX Mid-Tier**

Refer to the pre-installation steps for the mid-tier:

<http://support.sas.com/resources/thirdpartysupport/v94/appservers/preinstall.html>

Refer to the *SAS Financial Management 5.4: Performance Guide* for solution-specific settings for the hard limit on number of open file descriptors and the soft limit on maximum number of processes on Red Hat Enterprise Linux (RHEL) 6 platform.

## **Software Deployment Wizard for Data Tier and Mid-Tier on a Single Server**

1. On the **Select Products to Install** dialog, select “Server and Middle Tier” as the machine.
2. Select *Typical* in the **Select Configuration Prompting Level** dialog.
 

*Note:* If you select “Custom” for the prompting level, do not check the checkbox to **Secure JMS Resources** in the dialog **Web Application Server: Secure JMS Resources**.
3. When you are prompted for the “**SAS Internal Account: Solutions Administrator**,” enter a password for the `slnadm` user. This is not an external system user.
4. For the solution-specific dialogs listed below, the following information supplements the Help screens:
  - A. **SAS Financial Management Database Server** dialog; accept the default or enter the hostname and port number of your database server instance for SAS Financial Management. Click the checkbox if you plan to use your own database server for solution content.
  - B. **SAS Solutions Services Mid-Tier: ODCS** dialog; accept the default or enter the host name and port number of your ODCS server. The default port is specified in your pre-installation checklist for the application server that you specified in your plan file.
  - C. **External Account: Solutions Host User** dialog; enter the user that you defined for access to SAS Datasets by JDBC. The default user name is `sassln`.
  - D. **Database Account: Database Administrator** dialog; specify the database account credentials for the Financial Management Database Administrator identity. The default user name is `sqladmin`. Enter a userid and password. This is not an operating system account but is used to secure and administer the SAS Financial Management database.
  - E. **Database Account: SASSDM Database Administrator** dialog; the default database account identity is `sassdmdbadm`. Enter a userid and password. This is

not an operating system account but is used to secure and administer the SASSDM database.

5. At the Deployment Summary dialog, press **Start**.

## **Installation on Three Tiers (Data Tier, Mid-Tier and Client Tier)**

This document, *SAS Financial Management 5.4: Installation and Configuration Guide* covers prompts and windows that apply only to Financial Management and SAS Capital Planning and Management.

Refer to the *SAS 9.4 Intelligence Platform Installation and Configuration Guide* for detailed information about the steps that are not specific to SAS Financial Management. This guide is necessary and required for installing SAS Financial Management.

<http://support.sas.com/documentation/onlinedoc/intellplatform/index.html>

### **Client Tier**

Refer to “Chapter 5 — Installing Client Applications” on page 11 for information about the installation of the client software.

### **Before You Begin the Data Tier**

#### **Verify External Users and Groups**

1. Verify that the following users and group have been created on the data tier machine as instructed in the pre-installation checklist.

	<b>Windows</b>	<b>UNIX</b>
SAS Installer	mydomain\installer-ID	sas
SAS Spawnd Servers account	mydomain\sassrv	sassrv
SAS First User	mydomain\sasdemo	sasdemo
Solutions Host User	mydomain\sassln	sassln
SAS Server Users group	SAS Server Users	sas

- On Windows, the SAS Installer account should be available in the long term for future SAS maintenance.
  - On AIX, make sure that the **User can LOGIN?** setting is set to *true* for the SAS Installer ID.
  - On UNIX, do not use *root* as the SAS Installer account.
2. Follow the instruction for your platform:
    - On Windows, verify that SAS Server Users group has the user right “Log on as a batch job.” The SAS Spawnd Servers Account (sassrv) and the Solutions Host User (sassln) can be added to this group to obtain this right or it can be assigned by the SAS Deployment Wizard.
    - On UNIX, verify that the SAS Spawnd Servers and SAS Installer account are members of a same group and that group is the primary group for both groups.

## Software Deployment Wizard for Data Tier

1. Select *Server* as the machine in the “**Select Products to Install**” dialog.
2. Specify *Typical* in the **Select Configuration Prompting Level** dialog. If the default values are appropriate for your site, you can accept many of the SAS Deployment Wizard dialogs as they are presented. Noted below are changes that need to be made.
3. When you are prompted for the **SAS Internal Account: Solutions Administrator**, enter a password for the `slnadm` user. This is not an external system user.
4. For the solution-specific dialogs listed below, the following information supplements the Help screens:
  - A. **SAS Financial Management Database Server** dialog; accept the default or enter the hostname and port number of your database server instance for SAS Financial Management. Click the checkbox if you plan to use your own database server for solution content.
  - B. **External Account: Solutions Host User** dialog; enter the external user account that you have defined for access to SAS Datasets by JDBC. The default user name is `sassln`.
  - C. **Database Account: Database Administrator** dialog; specify the database account credentials for the Financial Management Database Administrator identity. The default user name is `sqladmin`. Enter a userid and password. This is not an operating system account but is used to secure and administer the SAS Financial Management database.
  - D. **Database Account: SASSDM Database Administrator** dialog; the default database account identity is `sassdmbadm`. Enter a userid and password. This is not an operating system account but is used to secure and administer the SASSDM database.
5. At the **Deployment Summary** dialog press *Start*.

## Before You Begin the Mid-Tier

### UNIX

Refer to the pre-installation steps for the mid-tier:

<http://support.sas.com/resources/thirdpartysupport/v94/appservers/preinstall.html>

See the *SAS Financial Management 5.4: Performance Guide* for solution-specific settings for the hard limit on number of open file descriptors and the soft limit on maximum number of processes on Red Hat Enterprise Linux (RHEL) 6 platform.

## Software Deployment Wizard for Mid-Tier

1. In the **Select Products to Install** dialog, select “Middle Tier” as the machine.
2. Specify *Typical* in the **Select Configuration Prompting Level** dialog. If the default values are appropriate for your site, you can accept many of the SAS Deployment Wizard dialogs as they are presented. Noted below are changes that need to be made.
 

**Note:** If you select “Custom” for the prompting level, do not check the checkbox to **Secure JMS Resources** in the dialog **Web Application Server: Secure JMS Resources**.

3. In the **SAS Metadata Server** dialog, enter or change the server name to the fully qualified hostname of the data tier server.
4. When prompted for the **SAS Internal Account: Solutions Administrator**, enter the password for the `slnadm` user that you entered in the same dialog on the data tier server. This is not an operating system user.
5. For the solution-specific dialogs listed below, the following information supplements the Help screens:
  - A. **SAS Solutions Services Mid-Tier: ODCS** dialog; accept the default or enter the host name and port number of your ODCS server.
  - B. **External Account: Solutions Host User** dialog; enter the user that you defined for access to SAS Datasets by JDBC. The default user name is `sassln`. This external user is typically local to the data tier server.
  - C. **Database Account: Database Administrator** dialog; the default user name is `sqladmin`. Enter a userid and password. This is not an operating system account but is used to secure and administer the SAS Financial Management database. Enter the same password provided in the same dialog in the Software Deployment Wizard for the data tier machine.
  - D. **Database Account: SASSDM Database Administrator** dialog; the default database account identity is `sassdmdbadm`. Enter a userid and password. This is not an operating system account but is used to secure and administer the SASSDM database. Enter the same password provided in the same dialog in the Software Deployment Wizard for the data tier machine.
6. At the **Deployment Summary** dialog, press **Start**.

## Installation on Multiple Tiers

This document, *SAS Financial Management 5.4: Installation and Configuration Guide* covers prompts and windows that apply only to Financial Management and SAS Capital Planning and Management.

Refer to the *SAS 9.4 Intelligence Platform Installation and Configuration Guide* for detailed information about the steps that are not specific to SAS Financial Management. This guide is necessary and required for installing SAS Financial Management.

<http://support.sas.com/documentation/onlinedoc/intellplatform/index.html>

## Topologies supported

SAS Financial Management software can be deployed across multiple tiers. The available tiers are listed below. If you are installing on these tiers or a subset of them, install them in this order:

1. Metadata Server
2. Web Infrastructure Platform Data Server
3. FM Database Server
4. FM Data Server
5. Mid-Tier Server

If the 'ODCS Read-only Server' is on a separate machine, a recoverable error occurs. During the "Web Application Server Configuration" step, SASFinancialManagement and SASFinancialManagementMobile web apps (SASServer3) fail to start. The log contains this message: "Application 'ODCS for Sol WebServices 5.4' does not exist." Click on

- continue** to complete the configuration of the mid-tier. After the ODCS Server has been configured, restart SAServer3.
6. ODCS Read-only Server
  7. FM Web Data Entry Server
  8. FM Query Processors

## **Configuration Guidelines and Details**

Open the `Instructions.html` file found in the configuration directory in a browser.

For example, if `/SAS/Config` is the path to your configuration directory, then open `/SAS/Config/Lev1/Documents/Instructions.html`.

Perform the manual configuration and validation steps outlined in the Configuration Guidelines and Details for 'Server Name' document (`Instructions.html`). Then follow any SAS Financial Management specific post-configuration steps in "Chapter 4 — Post-Configuration Guide."

**Note:** *SAS Capital Planning and Management has steps for loading sample data in the `Instructions.html` file for the data tier machine.*

## Chapter 4 — Post-Configuration Guide

### **Additional Resources**

After you complete the installation and configuration of your software, follow the post-configuration steps in the *SAS Financial Management 5.4 System Administration Guide*.

The *SAS Financial Management 5.4: Performance Guide* describes performance tuning parameters and guidelines for SAS web applications, the web application servers, Java Virtual Machines (JVM), and operating systems. For best performance after your initial installation, begin the tuning process immediately after installation and configuration.

Both these guides and application specific guides can be found here:

<http://support.sas.com/documentation/onlinedoc/fm/index.html>

The *SAS 9.4 Intelligence Platform: System Administration Guide* provides additional general information on System Administration and can be found here:

<http://support.sas.com/documentation/cdl/en/bisag/64875/PDF/default/bisag.pdf>

## Chapter 5 — Installing Client Applications

### About the Client Applications

Client applications must be installed on Windows machines. The following client applications are available for SAS Financial Management:

#### SAS Financial Management Studio

SAS Financial Management Studio enables users to build and manage the infrastructure for SAS Financial Management, including cycles, models, dimensions, and form sets.

#### SAS Financial Management Add-In for Microsoft Excel

SAS Financial Management Add-In for Microsoft Excel is used by financial process administrators, form submitters or approvers, and financial report creators. This add-in connects a desktop copy of Microsoft Excel to the middle tier and provides access to SAS Financial Management data. With this client, users can take the following actions:

- build reports that are based on data in the SAS Financial Management database
- build forms for entering financial or operational data into the database
- enter financial planning data

#### Client Applications in SAS Intelligence Platform

In addition to the Financial Management client applications, other client applications are in your order. For more information, refer to the system requirements for SAS Financial Management or SAS Capital Planning and Management.

### Specifying a SAS Environment File for New Installations

SAS Financial Management Studio and SAS Financial Management Add-In for Microsoft Excel use the SAS environment file (`sas-environment.xml`). This file enables desktop client applications to determine the location of required services on the middle tier and to obtain a list of services available in the environment.

During the installation, you are asked to supply the URL for the SAS environment file (`sas-environment.xml`). In the default path described below, `server` is the name of the middle tier server that you want to connect to. The port defaults to 80 for Windows and 7980 for UNIX.

```
http://server.domain:port/sas/sas-environment.xml
```

For more information about this URL, see “Configuring the SAS Environment Files” in the *SAS Financial Management System Administration Guide*.

#### Java Runtime Environment (JRE)

SAS Financial Management Studio requires the use of a Java Runtime Environment (JRE) on the client tier that is provided by SAS and installed by the SAS Deployment Wizard. Please refer to the SAS 9.4 section of the Third-Party Software Requirements Web page for more information, <http://support.sas.com/resources/thirdpartysupport/>

If you want SAS Financial Management Studio to use a different JRE, add a `-vm` option to `fmstudio.ini` file, with the path to the appropriate EXE or DLL file. This file is found in `<SAS-`

`installation-directory>\SASFinancialManagement\5.4`. The `-vm` option must appear before the `-vmargs` line. Here is an example:

```
-vm  
C:\j2sdk1.7.0_25\jre\bin\client\jvm.dll  
-vmargs  
...
```

## **Installing SAS Financial Management Add-in for Microsoft Excel and SAS Financial Management Studio**

### **Software Deployment Wizard for Client Tier**

1. Launch the SAS Deployment Wizard from the `setup.exe` file in your SAS Software Depot.
2. If you are installing SAS Financial Management clients only, check *Install SAS Software* from the “**Select Deployment Type**” dialog. Select *Perform a Planned Deployment*. If you are installing other SAS clients, be sure that *Install SAS Software* and *Configure SAS Software* are both checked.
3. Enter the path to your deployment plan from the **Specify Deployment Data** dialog.
4. Select *Clients* as the machine in the **Select Deployment Step and Products to Install** dialog.
5. Select the location of your SAS installation data file in the **Specify SAS Installation Data File** dialog.
6. Select languages needed from the **Select Language Support** dialog.
7. In the **Select Microsoft Applications** dialog; if you are installing SAS Add-in for Microsoft Office, check the Microsoft Applications that you wish to use with SAS Add-in for Microsoft Office.
8. In the **SAS Environments URL** dialog, enter the URL that defines the SAS Environments that you have access to. Check with your site administrator for this value. The default is <http://host:port/sas/sas-environment.xml>. For more information, see “Specifying a SAS Environment File for New Installations” above.
9. Most installations will use the recommended Java Runtime Environment. For more information, see the section “Java Runtime Environment (JRE)” above.
10. If you are configuring, then specify *Typical* in the **Select Configuration Prompting Level** dialog. In the **Specify Configuration Information** dialog, select a directory where configuration files will be stored. Complete the configuration prompts for additional SAS Software.
11. At the **Deployment Summary** dialog press *Start*.

### **Secure Socket Layer Post-Install Step**

Import the server’s certificate into your browser’s trusted signer’s area so the browser knows it can trust the certificate. A self-signed certificate must be in the Windows System trust store, not the private JRE trust store.

For detailed instructions, consult your browser’s Help window.





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