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SAS[®] 9.4 Guide to Software Updates

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SAS® 9.4 Guide to Software Updates

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Using This Book

Audience

This document is for existing SAS customers who are upgrading an existing SAS 9.4 deployment. The initial release of SAS 9.4 TS1M0, Rev. 940_13w26 was in July 2013. The purpose of this document is to notify customers about changes that they might see in SAS 9.4 and how those changes might affect their site. Specific information about migrating your metadata and SAS content is available in the *SAS Intelligence Platform: Migration Guide*.

This document is organized into the following parts:

- “Planning for a Software Update” helps you assess whether your site is ready for a software upgrade.

Here is some of the information that you want to review as you plan to update the software at your site:

- ☐ what products you currently have installed at your site
- ☐ how future software updates might impact your site
- ☐ what functionality has been deprecated or will be deprecated in the future
- ☐ new requirements for operating systems and third-party software
- “Installing SAS 9.4” provides links to the resources that you can use to install SAS 9.4.
- “Product Details and Requirements” can include the following types of information for each product that runs on SAS 9.4:
 - ☐ any steps that you might need to perform before you upgrade to a new release

- any software changes that might result in different behavior from a previous release

What's New

What's New in SAS 9.4 Guide to Software Updates

Overview

SAS 9.4 Guide to Software Updates is cumulative and is updated whenever there is an update of a SAS product. The following topics will help you determine what changes were made after the initial release of SAS 9.4, which shipped in July 2013.

November 2015 (SAS 9.4, Rev. 940_15w47)

SAS Event Stream Processing 3.2 shipped a new release. For more information, see [Chapter 44, “SAS Event Stream Processing,” on page 219](#).

These products shipped a maintenance release:

- the first maintenance release for SAS Contextual Analysis 14.1. For more information, see [Chapter 23, “SAS Contextual Analysis,” on page 139](#).
- the first maintenance release for SAS Fraud Management 4.2. For more information, see [Chapter 48, “SAS Fraud Management,” on page 233](#).

October 2015 (SAS 9.4, Rev. 940_15w42)

These products shipped a new release:

- SAS High-Performance Risk 3.5. For more information, see [Chapter 52, “SAS High-Performance Risk,”](#) on page 247.
- SAS Risk Dimensions 6.5. For more information, see [Chapter 75, “SAS Risk Dimensions,”](#) on page 349.

These products shipped a maintenance release:

- the first maintenance release for SAS Anti-Money Laundering 6.3. For more information, see [Chapter 16, “SAS Anti-Money Laundering,”](#) on page 115.
- the first maintenance release for SAS Customer Due Diligence 6.3. For more information, see [Chapter 25, “SAS Customer Due Diligence,”](#) on page 145.
- the first maintenance release for SAS Enterprise Case Management 6.3. For more information, see [Chapter 37, “SAS Enterprise Case Management,”](#) on page 189.
- the second maintenance release for SAS Social Network Analysis Server 6.2. For more information, see [Chapter 78, “SAS Social Network Analysis Server,”](#) on page 359.

August 2015 (SAS 9.4, Rev. 940_15w33)

These products shipped a new release:

- SAS Merchandise Intelligence 5.4, which includes SAS Size Optimization 3.4. For more information, see [Chapter 68, “SAS Merchandise Intelligence,”](#) on page 321.

- SAS Visual Analytics 7.3 is now available. For more information, see [Chapter 83, “SAS Visual Analytics,”](#) on page 379.

July 2015 (SAS 9.4, Rev. 940_15w29)

These products shipped a new release:

- SAS Business Rules Manager 3.1. For more information, see [Chapter 21, “SAS Business Rules Manager,”](#) on page 131.
- SAS Contextual Analysis 14.1. For more information, see [Chapter 23, “SAS Contextual Analysis,”](#) on page 139.
- SAS Decision Manager 3.1. For more information, see [Chapter 33, “SAS Decision Manager,”](#) on page 177.
- SAS Data Integration Studio 4.901. For more information, see [Chapter 29, “SAS Data Integration Studio,”](#) on page 165.
- SAS Enterprise Miner 14.1. For more information, see [Chapter 40, “SAS Enterprise Miner,”](#) on page 199.
- SAS Environment Manager 2.5. For more information, see [Chapter 41, “SAS Environment Manager,”](#) on page 205.
- SAS/ETS 14.1. For more information, see [Chapter 43, “SAS/ETS,”](#) on page 215.
- SAS Forecast Server 14.1. For more information, see [Chapter 47, “SAS Forecast Server,”](#) on page 229.
- SAS Fraud Management 4.2. For more information, see [Chapter 48, “SAS Fraud Management,”](#) on page 233.
- SAS/IML 14.1. For more information, see [Chapter 53, “SAS/IML,”](#) on page 249.
- SAS Model Manager 14.1. For more information, see [Chapter 69, “SAS Model Manager,”](#) on page 325.
- SAS/OR 14.1. For more information, see [Chapter 72, “SAS/OR,”](#) on page 337.

- SAS/QC 14.1. For more information, see [Chapter 73, “SAS/QC,”](#) on page 341.
- SAS/STAT 14.1. For more information, see [Chapter 79, “SAS/STAT,”](#) on page 361.
- SAS Studio 3.4. For more information, see [Chapter 80, “SAS Studio,”](#) on page 365.
- SAS Text Miner 14.1. For more information, see [Chapter 82, “SAS Text Miner,”](#) on page 373.

These products were updated as part of the third maintenance release for SAS 9.4:

- Base SAS. For more information, see [Chapter 13, “Base SAS,”](#) on page 87.
- SAS/ACCESS software. For more information, see [Chapter 14, “SAS/ACCESS,”](#) on page 103.
- SAS/CONNECT. For more information, see [Chapter 22, “SAS/CONNECT,”](#) on page 135.
- SAS Data Quality Server. For more information, see [Chapter 31, “SAS Data Quality Server,”](#) on page 173.
- SAS In-Database Technologies. For more information, see [Chapter 55, “SAS In-Database Technologies,”](#) on page 259.
- SAS/GRAPH. For more information, see [Chapter 49, “SAS/GRAPH,”](#) on page 235.
- SAS Grid Manager. For more information, see [Chapter 50, “SAS Grid Manager,”](#) on page 239.
- SAS Integration Technologies. For more information, see [Chapter 57, “SAS Integration Technologies,”](#) on page 271.
- SAS Intelligence Platform. For more information, see [Chapter 58, “SAS Intelligence Platform,”](#) on page 277.
- SAS/IntrNet. For more information, see [Chapter 59, “SAS/IntrNet,”](#) on page 293.
- SAS Management Console. For more information, see [Chapter 63, “SAS Management Console,”](#) on page 305.
- SAS OLAP Server. For more information, see [Chapter 70, “SAS OLAP Server,”](#) on page 331.

- SAS/SECURE. For more information, see [Chapter 77, “SAS/SECURE,”](#) on page 353.

May 2015 (SAS 9.4, Rev. 940_15w20)

These products shipped a new release:

- SAS Credit Scoring for Banking 5.4. For more information, see [Chapter 24, “SAS Credit Scoring for Banking,”](#) on page 143.
- SAS Event Stream Processing 3.1. For more information, see [Chapter 44, “SAS Event Stream Processing,”](#) on page 219.
- SAS High-Performance Risk 3.4. For more information, see [Chapter 52, “SAS High-Performance Risk,”](#) on page 247.
- SAS IT Resource Management 3.6. For more information, see [Chapter 61, “SAS IT Resource Management,”](#) on page 301.
- SAS Marketing Operations Management 6.4. For more information, see [Chapter 65, “SAS Marketing Operations Management,”](#) on page 313.
- SAS Risk Dimensions 6.4. For more information, see [Chapter 75, “SAS Risk Dimensions,”](#) on page 349.
- SAS Risk Management for Banking 3.3. For more information, see [Chapter 76, “SAS Risk Management for Banking,”](#) on page 351.
- SAS Visual Analytics 7.2. For more information, see [“SAS Visual Analytics 7.2”](#) on page 391.

These products shipped a maintenance release:

- the second maintenance release for SAS Forecast Analyst Workbench 5.2. For more information, see [Chapter 46, “SAS Forecast Analyst Workbench,”](#) on page 225.

- the second maintenance release for SAS Inventory Optimization 5.2. For more information, see [Chapter 60, “SAS Inventory Optimization Workbench,”](#) on page 297.
- the second maintenance release for SAS OpRisk VaR 6.1. For more information, see [Chapter 71, “SAS OpRisk VaR,”](#) on page 335.

These products were also updated:

- SAS Add-In 7.11 for Microsoft Office. For more information, see [Chapter 15, “SAS Add-In for Microsoft Office,”](#) on page 109.
- SAS Enterprise Guide 7.11. For more information, see [Chapter 39, “SAS Enterprise Guide,”](#) on page 193.

March 2015 (SAS 9.4, Rev. 940_15w12)

These products shipped a new release:

- SAS Data Remediation 2.2. For more information, see [Chapter 32, “SAS Data Remediation,”](#) on page 175.
- SAS Digital Marketing 6.4. For more information, see [Chapter 35, “SAS Digital Marketing,”](#) on page 183.
- SAS Marketing Automation 6.4. For more information, see [Chapter 64, “SAS Marketing Automation,”](#) on page 309.
- SAS Marketing Optimization 6.4. For more information, see [Chapter 66, “SAS Marketing Optimization,”](#) on page 315.
- SAS MDM 4.2. For more information, see [Chapter 67, “SAS MDM \(Master Data Management\),”](#) on page 319.
- SAS Real-Time Decision Manager 6.4. For more information, see [Chapter 74, “SAS Real-Time Decision Manager,”](#) on page 345.

- SAS Task Manager 2.2. For more information, see [Chapter 81, “SAS Task Manager,” on page 371](#).
- SAS Visual Process Orchestration 2.2. For more information, see [Chapter 84, “SAS Visual Process Orchestration,” on page 395](#).

February 2015 (SAS 9.4, Rev. 940_15w08)

These products shipped a new release:

- SAS Asset Performance Analytics 6.1. For more information, see [Chapter 17, “SAS Asset Performance Analytics,” on page 119](#).
- SAS Customer Link Analytics 5.6. For more information, see [Chapter 27, “SAS Customer Link Analytics,” on page 153](#).
- SAS Episode Analytics 2.2. For more information, see [Chapter 42, “SAS Episode Analytics,” on page 213](#).
- SAS Studio 3.3. For more information, see [Chapter 80, “SAS Studio,” on page 365](#).

Several SAS solutions or products are now shipped with SAS Visual Analytics components. For some of these solutions, you can delay the deployment of the SAS Visual Analytics components. To address this issue, the documentation now includes an [“Adding SAS Visual Analytics to Your Deployment” on page 84](#) topic.

January 2015 (SAS 9.4, Rev. 940_15w04)

These products shipped a new release:

- SAS Anti-Money Laundering 6.3. For more information, see [Chapter 16, “SAS Anti-Money Laundering,” on page 115](#).

- SAS Customer Due Diligence 6.3. For more information, see [Chapter 25, “SAS Customer Due Diligence,”](#) on page 145.
- SAS Enterprise Case Management 6.3. For more information, see [Chapter 37, “SAS Enterprise Case Management,”](#) on page 189.
- SAS Financial Management 5.5. For more information, see [Chapter 45, “SAS Financial Management,”](#) on page 221.
- SAS Visual Scenario Designer 6.3. For more information, see [Chapter 85, “SAS Visual Scenario Designer,”](#) on page 397.

SAS Social Network Analysis Server 6.2 shipped its first maintenance release. For more information, see [Chapter 78, “SAS Social Network Analysis Server,”](#) on page 359.

November 2014 (SAS 9.4, Rev. 940_14w47)

These products are new:

- SAS Business Data Network 3.1. For more information, see [Chapter 20, “SAS Business Data Network,”](#) on page 129.
- SAS Lineage 3.1. For more information, see [Chapter 62, “SAS Lineage,”](#) on page 303.

These products shipped a new release:

- DataFlux Data Management Studio 2.6. For more information, see [“DataFlux Data Management Studio 2.6”](#) on page 161.
- DataFlux Web Studio 2.5. For more information, see [“DataFlux Web Studio 2.5”](#) on page 163.
- SAS High-Performance Risk 3.3. For more information, see [Chapter 52, “SAS High-Performance Risk,”](#) on page 247.

Here are the documentation enhancements for this release:

- Some SAS solution software orders include SAS Visual Analytics Administration and Reporting. For more information about this component, see [“SAS Visual Analytics Administration and Reporting” on page 388](#).
- Information about how to update a deployment with a clustered metadata server. For more information, see [“Clustered Metadata Servers” on page 285](#).

October 2014 (SAS 9.4, Rev. 940_14w41)

These products shipped a new release:

- SAS Add-In 7.1 for Microsoft Office. For more information, see [Chapter 15, “SAS Add-In for Microsoft Office,” on page 109](#).
- SAS Enterprise GRC 6.1. For more information, see [Chapter 38, “SAS Enterprise GRC,” on page 191](#).
- SAS Enterprise Guide 7.1. For more information, see [Chapter 39, “SAS Enterprise Guide,” on page 193](#).
- SAS Environment Manager 2.4. For more information, see [Chapter 41, “SAS Environment Manager,” on page 205](#).
- SAS Visual Analytics 7.1. For more information, see [Chapter 83, “SAS Visual Analytics,” on page 379](#).

SAS Web Parts 6.1 for Microsoft SharePoint shipped a second maintenance release (6.12). For more information, see [Chapter 86, “SAS Web Parts for Microsoft SharePoint,” on page 399](#).

September 2014 (SAS 9.4, Rev. 940_14w36)

SAS IT Resource Management 3.5 is now available. For more information, see [Chapter 61, “SAS IT Resource Management,” on page 301](#).

August 2014 (SAS 9.4, Rev. 940_14w32)

These products shipped a new release:

- SAS Business Rules Manager 2.2. For more information, see [Chapter 21, “SAS Business Rules Manager,” on page 131](#).
- SAS Data Integration Studio 4.9. For more information, see [Chapter 29, “SAS Data Integration Studio,” on page 165](#).
- SAS Decision Rules Manager 2.2. For more information, see [Chapter 33, “SAS Decision Manager,” on page 177](#).
- SAS Enterprise Miner 13.2. For more information, see [Chapter 40, “SAS Enterprise Miner,” on page 199](#).
- SAS Environment Manager 2.3. For more information, see [Chapter 41, “SAS Environment Manager,” on page 205](#).
- SAS/ETS 13.2. For more information, see [Chapter 43, “SAS/ETS,” on page 215](#).
- SAS/IML 13.2. For more information, see [Chapter 53, “SAS/IML,” on page 249](#).
- SAS Model Manager 13.1. For more information, see [Chapter 69, “SAS Model Manager,” on page 325](#).
- SAS/OR 13.2. [Chapter 72, “SAS/OR,” on page 337](#).
- SAS/QC 13.2. [Chapter 73, “SAS/QC,” on page 341](#).

- SAS/STAT 13.2. [Chapter 79, “SAS/STAT,” on page 361.](#)
- SAS Studio 3.2. For more information, see [Chapter 80, “SAS Studio,” on page 365.](#)
- SAS Text Miner 13.2. For more information, see [Chapter 82, “SAS Text Miner,” on page 373.](#)

These products were updated as part of the second maintenance release for SAS 9.4:

- Base SAS 9.4_M2. For more information, see [Chapter 13, “Base SAS,” on page 87.](#)
- SAS/ACCESS 9.4_M2 Interface to Hadoop, SAS/ACCESS 9.4_M2 Interface to Oracle, SAS/ACCESS 9.4_M2 Interface to PC Files. For more information, see [Chapter 14, “SAS/ACCESS,” on page 103.](#)
- SAS/CONNECT 9.4_M2. For more information, see [Chapter 22, “SAS/CONNECT,” on page 135.](#)
- SAS 9.4_M2 In-Database Technologies. For more information, see [Chapter 55, “SAS In-Database Technologies,” on page 259.](#)
- SAS 9.4_M2 Integration Technologies. For more information, see [Chapter 57, “SAS Integration Technologies,” on page 271.](#)
- SAS 9.4_M2 Intelligence Platform. For more information, see [Chapter 58, “SAS Intelligence Platform,” on page 277.](#)
- SAS/IntrNet 9.4_M2. For more information, see [Chapter 59, “SAS/IntrNet,” on page 293.](#)
- SAS Management Console 9.4_M2. For more information, see [Chapter 63, “SAS Management Console,” on page 305.](#)
- SAS OLAP Server 9.4_M2. For more information, see [Chapter 70, “SAS OLAP Server,” on page 331.](#)
- SAS/SECURE 9.4_M2. For more information, see [Chapter 77, “SAS/SECURE,” on page 353.](#)

These products shipped a maintenance release:

- SAS BI Dashboard 4.4_M2. For more information, see [Chapter 18, “SAS BI Dashboard,” on page 121](#).
- SAS Information Delivery Portal 4.4_M2. For more information, see [Chapter 54, “SAS Information Delivery Portal,” on page 253](#).
- SAS Information Map Studio 4.4_M2. For more information, see [Chapter 56, “SAS Information Map Studio,” on page 265](#).
- SAS Web Report Studio 4.4_M2. For more information, see [Chapter 87, “SAS Web Report Studio,” on page 403](#).

June 2014 (SAS 9.4, Rev. 940_14w23)

These products shipped a new release:

- SAS Fraud Management 4.1. For more information, see [Chapter 48, “SAS Fraud Management,” on page 233](#).
- SAS OpRisk VaR 6.1. For more information, see [Chapter 71, “SAS OpRisk VaR,” on page 335](#).

The first maintenance release for SAS High-Performance Risk 3.1 is available. For more information, see [Chapter 52, “SAS High-Performance Risk,” on page 247](#).

May 2014 (SAS 9.4, Rev. 940_14w19)

These products shipped a new release:

- DataFlux Authentication Server 4.1 and DataFlux Secure 2.5. For more information, see [Chapter 28, “SAS and DataFlux,” on page 157](#).
- SAS Customer Intelligence 6.3, which includes these products:

- SAS Digital Marketing 6.3
- SAS Marketing Automation 6.3
- SAS Marketing Optimization 6.3
- SAS Real-Time Decision Manager 6.3

For more information, see [Chapter 26, “SAS Customer Intelligence,”](#) on page 149.

- SAS Decision Services 6.3 is a new release. For more information, see [Chapter 34, “SAS Decision Services,”](#) on page 181.
- SAS Federation Server 4.1. For more information, see [Chapter 28, “SAS and DataFlux,”](#) on page 157.
- SAS Merchandise Intelligence 5.2, which includes these products:
 - SAS Revenue Optimization 5.2, which includes SAS Markdown Optimization, SAS Regular Price Optimization, and SAS Promotion Optimization
 - SAS Size Optimization 3.2, which includes SAS Size Profiling and SAS Pack Optimization
 - SAS Retail Forecasting 5.2

For more information, see [Chapter 68, “SAS Merchandise Intelligence,”](#) on page 321.

The first maintenance release of SAS Studio 3.1 is now available. For more information, see [Chapter 80, “SAS Studio,”](#) on page 365.

The documentation is enhanced to include this information:

- Several SAS Data Surveyor products are no longer supported. For more information, see [“Deprecated Functionality in SAS 9.4”](#) on page 29.
- The Deployment and Backup Recovery tool enables you to specify a central, network-accessible vault location. For more information, see [“Deployment Backup”](#) on page 283.

April 2014 (SAS 9.4, Rev. 940_14w14)

These products shipped a new release:

- SAS Anti-Money Laundering 6.2. For more information, see [Chapter 16, “SAS Anti-Money Laundering,” on page 115](#).
- SAS Data Quality Accelerator 2.5 for Teradata. For more information, see [Chapter 30, “SAS Data Quality Accelerator for Teradata,” on page 169](#).

These products shipped a maintenance release:

- SAS Data Remediation 2.1_M1. For more information, see [Chapter 32, “SAS Data Remediation,” on page 175](#).
- SAS MDM 4.1_M1. For more information, see [Chapter 67, “SAS MDM \(Master Data Management\),” on page 319](#).
- SAS Task Manager 2.1_M1. For more information, see [Chapter 81, “SAS Task Manager,” on page 371](#).

Documentation enhancements include the addition of a DataFlux Data Management Server 2.5 topic. For more information, see [“DataFlux Data Management Server 2.5” on page 161](#).

March 2014 (SAS 9.4, Rev. 940_14w11)

SAS Studio 3.1 is a new product. For more information, see [Chapter 80, “SAS Studio,” on page 365](#).

SAS Visual Analytics 6.4 is a new product release. For more information, see [Chapter 83, “SAS Visual Analytics,” on page 379](#).

Here are the documentation updates for this release:

- In SAS 9.4, the SAS Data Management Standard 2.41 offering replaces the SAS Enterprise Data Integration Server offering. For more information, see [“Migrating SAS Enterprise Data Integration Server to SAS 9.4” on page 159](#).
- When you order SAS Enterprise Miner 13.1, you also conditionally license SAS/IML, which is required for some functionality in SAS Enterprise Miner. For more information, see [“SAS Enterprise Miner 13.1” on page 202](#).
- An exception for clustering of the middle-tier servers was added to the content for the SAS Intelligence Platform. For more information, see [“Exceptions to the Middle-Tier Clustering Support” on page 280](#).

December 2013 (SAS 9.4, Rev. 940_13w51)

These products shipped a new release.

- SAS Data Integration Studio 4.7_M1 and 4.8. For more information, see [Chapter 29, “SAS Data Integration Studio,” on page 165](#).
- SAS Document Conversion Server 13.1. For more information, see [Chapter 36, “SAS Document Conversion Server,” on page 185](#).
- SAS Enterprise Miner 13.1. For more information, see [Chapter 40, “SAS Enterprise Miner,” on page 199](#).
- SAS Environment Manager 2.1 (SAS 9.4_M1). For more information, see [Chapter 41, “SAS Environment Manager,” on page 205](#).
- SAS/ETS 13.1. For more information, see [Chapter 43, “SAS/ETS,” on page 215](#).
- SAS Financial Management 5.4. For more information, see [Chapter 45, “SAS Financial Management,” on page 221](#).
- SAS Forecast Server 13.1. For more information, see [Chapter 47, “SAS Forecast Server,” on page 229](#).

- SAS High-Performance Risk 3.2. For more information, see [Chapter 52, “SAS High-Performance Risk,”](#) on page 247.
- SAS/IML 13.1. For more information, see [Chapter 53, “SAS/IML,”](#) on page 249.
- SAS IT Resource Management 3.4. For more information, see [Chapter 61, “SAS IT Resource Management,”](#) on page 301.
- SAS/OR 13.1. [Chapter 72, “SAS/OR,”](#) on page 337.
- SAS/QC 13.1. [Chapter 73, “SAS/QC,”](#) on page 341.
- SAS/STAT 13.1. [Chapter 79, “SAS/STAT,”](#) on page 361.
- SAS Text Miner 13.1. For more information, see [Chapter 81, “SAS Task Manager,”](#) on page 371.
- SAS Visual Analytics 6.3. For more information, see [Chapter 83, “SAS Visual Analytics,”](#) on page 379.
- SAS Web Parts 6.11 for Microsoft SharePoint. For more information, see [Chapter 86, “SAS Web Parts for Microsoft SharePoint,”](#) on page 399.

These products are updated as part of the first maintenance release for SAS 9.4.

- [Chapter 14, “SAS/ACCESS,”](#) on page 103
- [Chapter 22, “SAS/CONNECT,”](#) on page 135
- [Chapter 49, “SAS/GRAPH,”](#) on page 235
- [Chapter 55, “SAS In-Database Technologies,”](#) on page 259
- [Chapter 57, “SAS Integration Technologies,”](#) on page 271
- [Chapter 58, “SAS Intelligence Platform,”](#) on page 277
- [Chapter 70, “SAS OLAP Server,”](#) on page 331

These products also shipped a maintenance release.

- The first maintenance release of the SAS Add-In for Microsoft Office 6.1 is now available. For more information, see [Chapter 15, “SAS Add-In for Microsoft Office,”](#) on page 109.

- The first maintenance release of SAS Enterprise Guide 6.1 is now available. For more information, see [Chapter 39, “SAS Enterprise Guide,” on page 193](#).

November 2013 (SAS 9.4, Rev. 940_13w45)

A chapter was added for the new release of SAS Anti-Money Laundering 6.1. For more information, see [Chapter 16, “SAS Anti-Money Laundering,” on page 115](#).

The DataFlux chapter has been updated to reflect that SAS has now fully integrated the DataFlux suite of data quality, data integration, data governance, and master data management solutions. For more information, see [Chapter 28, “SAS and DataFlux,” on page 157](#).

In addition, the documentation was enhanced in these ways:

- a new chapter that explains how to undeploy SAS web applications. For more information, see [Chapter 7, “Undeploying SAS Web Applications,” on page 45](#).
- a new chapter for the SAS High-Performance Analytics Infrastructure. For more information, see [Chapter 51, “SAS High-Performance Analytics Infrastructure,” on page 243](#).



Part 1

Introduction to Updating SAS Software at Your Site

Chapter 1

Understanding the Process for Software Updates 3

1

Understanding the Process for Software Updates

<i>Common Terminology for Software Updates</i>	3
<i>Policy Statement for Maintenance Releases and Product Releases</i>	4
<i>The General Process for Software Updates</i>	5

Common Terminology for Software Updates

These terms are used throughout this document and are defined here so that you can understand how these terms are used in conjunction with SAS products.

Software update is a general term for any modification that is provided by the vendor for existing software.

- *Upgrades*, also known as “new releases,” introduce new functionality and have a new release number.
- *Maintenance releases* are applied to the installed software at your site. Maintenance releases are cumulative. For example, the third maintenance release contains all of the new features and enhancements for the first, second, and third maintenance releases. If you choose not to install a maintenance release, you automatically

receive all of the content in that maintenance release when you next upgrade your version of SAS. For example, if you decide not to install the second maintenance release, when you install the third maintenance release, you get the software updates from the second and third maintenance releases.

There are two types of maintenance releases:

- *SAS maintenance release* is a maintenance release for SAS Foundation. This type of maintenance release includes software changes for multiple SAS products, such as Base SAS and SAS/GRAPH.
- *product-specific maintenance release* is a maintenance release for a specific product, such as the first maintenance release for SAS Forecast Server. This type of maintenance release includes software changes for a single SAS product.
- *Hot fixes* are as-needed updates that are generally included in each maintenance release, but hot fixes can also be made available after the maintenance release has shipped. To verify that you have the latest hot fixes for the products at your site, see [Technical Support Hot Fixes](#).

Policy Statement for Maintenance Releases and Product Releases

SAS has the following policy for maintenance releases and product releases:

- When you install a software update, you receive the maintenance release or product release that was available when you placed your order. If a new maintenance release or product release is available, you need to place a new order to get those software updates.
- SAS creates custom maintenance packages based on the software that is licensed at your site. You do not select the products to update.
- Because of the dependencies between SAS products, you cannot perform these tasks:

- You cannot partially install a maintenance release or update a single product. The SAS deployment tools determine which SAS products to update. You must upgrade all of the SAS software in a specific deployment whether that deployment is on one machine or multiple machines.
- You cannot uninstall a maintenance release.
- Maintenance releases are cumulative. For example, the third maintenance release contains all of the new features and enhancements from the first, second, and third maintenance releases.
- Maintenance releases update the SAS software that is currently deployed at your site.
- Before installing a maintenance release, back up your current SAS deployment.

Note: In general, SAS maintenance releases do not include any updates to JMP products. For more information, see [JMP Software Updates](#). Beginning with SAS 9.3, the JMP Clinical, JMP Genomics, and SAS Visual Data Discovery (for the desktop) products are installed and maintained with SAS installers. These products no longer use a separate JMP installer.

The General Process for Software Updates

Regardless of whether you are upgrading to a new product release, applying a SAS (Foundation) maintenance release, or applying a product-specific maintenance release, the general process for updating the software at your site is the same.

- 1 Learn about the availability of new product releases or maintenance releases from your SAS account representative, from the SAS website, or from this document.
- 2 Run a deployment registry report to determine what products you currently have installed at your site. For more information, see [“How to Run the Deployment Registry Report” on page 14](#).

3 Assess the impact of upgrading the software at your site.

After running the deployment registry report, you know the release numbers for the products at your site. Compare these release numbers to the release numbers of the products in this document. A difference in release numbers helps you identify what products at your site have updates.

By reviewing the product-specific information in this document, you can determine how upgrading your software could affect your site. For example, you learn about any new features that are available and how those features might affect your existing SAS content. You also learn any post-configuration steps that you need to complete before you start using the product.

4 Contact your SAS account representative to request a new product release or maintenance release. To request a maintenance release, the SAS installation representative at your site can also use the self-service application that is available from the Maintenance Release Announcement. See the “Request a Maintenance Release” topic at the bottom of the [Maintenance Release Announcement](#).

5 Review your software order. After you request a maintenance release, a product upgrade, or a new SAS product, you receive a Software Order E-mail (SOE), which lists the product bundle that you ordered and the software revision number (for example, SAS 9.4, Rev. 940_13w26).

6 Prepare your site for the software updates. These preparations include downloading the order to a SAS 9.4 Software Depot, creating backups, determining how long the upgrade takes, and notifying users about the scheduled update. You also perform any pre-installation steps for the products at your site. You determined these pre-installation steps when you assessed the impact of the software update at your site.

7 Install and configure any software updates. When you run the SAS Deployment Wizard, SAS automatically detects any files on your system that are older than the files in your order. If there are software updates to be installed for products already in your deployment, the SAS Deployment Wizard goes into Update mode. If no software updates need to be installed, the SAS Deployment Wizard does not go into Update mode, and you can exit the SAS Deployment Wizard.

Depending on your order, you might have new products to add to your deployment. Adding these products might require that you run the SAS Deployment Wizard a second time. For more information, see [“Adding a New Product” on page 71](#).

- 8** Complete any post-configuration steps for the products at your site. You determine these post-configuration steps when you assess the impact of the software update at your site. To determine the post-configuration steps, see the “Product Details and Requirements” section.



Part 2

Planning for a Software Update

Chapter 2

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Chapter 3

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2

Determining the Product Release Numbers for Products at Your Site

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 - Understanding Technical Support Numbers 11
 - Product-Specific Release Numbers for Other SAS Products 12
 - Understanding Maintenance Release Numbers 13
- How to Run the Deployment Registry Report* 14
- Understanding the Contents of the Deployment Registry Report* 14

Understanding Product Release Numbers

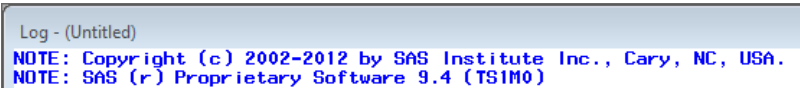
Understanding Technical Support Numbers

Each release of SAS has a unique Technical Support level (TSLEVEL). The format of a Technical Support level is TSxMy. For example, the Technical Support level for SAS 9.4 is TS1M0. In documentation or on SAS websites, you might see SAS 9.4 (TS1M0).

To determine the Technical Support level for the SAS release that you are running at your site:

- 1 Start SAS.

- On Windows, double-click the `sas.exe` file in your SAS installation directory. An example of the SAS installation directory is `C:\Program Files\SASHome\SASFoundation\9.4`. You can also start SAS from the **Start** menu. For example, select **Start ► Programs ► SAS ► SAS 9.4 (English)**.
 - On UNIX, enter `./sas -nodms` at a command prompt. To exit, type `endsas;`.
 - On z/OS, enter `sas o(nodms)`. To exit, type `endsas;`. You can also invoke SAS in a batch job. Look for the Technical Support level in the SASLOG DD output stream.
- 2 In Windows and UNIX environments, review the information at the top of the log when SAS starts.



```
Log - (Untitled)
NOTE: Copyright (c) 2002-2012 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software 9.4 (TS1M0)
```

To view this information in the SAS Display Manager, select **Help ► About SAS 9**.

Note: If you are working in a z/OS environment, look for the 9.4 (TS1Mx) string in the output.

Product-Specific Release Numbers for Other SAS Products

SAS products use product-specific release numbers. To determine what products are running at your site, generate a deployment registry report. For more information, see [“How to Run the Deployment Registry Report” on page 14](#).

The following table shows examples of some product release numbers for products that shipped in SAS 9.4:

Product Name	Release Number
Base SAS	9.4
SAS Add-In for Microsoft Office	7.1

Product Name	Release Number
SAS Enterprise Miner	14.1
SAS Management Console	9.4
SAS Visual Analytics	7.3

Understanding Maintenance Release Numbers

After you install a maintenance release, the product release number for updated products changes to include maintenance-specific identification, such as M1. This maintenance number is incremented by one for each maintenance release of that product. However, a maintenance release (such as the first maintenance release for SAS 9.4) might not contain updates for all SAS products. Therefore, maintenance numbers can differ across SAS products. To determine the maintenance numbers for products at your site, generate a deployment registry report. For more information, see [“How to Run the Deployment Registry Report” on page 14](#).

Product Name	Release Number
Base SAS	9.4_M1
SAS Add-In for Microsoft Office	6.1_M1
SAS Enterprise Guide	6.1_M1
SAS/GRAPH	9.4_M1

As this table shows, all products currently have a maintenance release number of M1.

Suppose Base SAS shipped a second maintenance release. Then the maintenance release number for Base SAS would be M2. Then, the maintenance release numbers are different because there have been two maintenance releases for Base SAS.

If the other products in the table are not updated in the second maintenance release for SAS 9.4, their maintenance release number stays M1.

For more information about product numbers, see [SAS Provides New Product-Specific Release Numbers](#).

How to Run the Deployment Registry Report

Before upgrading your SAS products, you need the product release numbers for all SAS products at your site. To determine these product release numbers for each machine in your SAS deployment, generate a deployment registry report and save it for future reference. For more information about how to generate this report, see SAS Note 35968 at <http://support.sas.com/kb/35/968.html>.

Note: If you did not generate a deployment registry report before you upgraded the software at your site, you can determine your product release number for each SAS product at your site by reviewing the Deployment Summary that is generated by the SAS Deployment Wizard (when you upgrade your software). For more information, see “[The Deployment Summary for the Installation](#)” on page 61.

Understanding the Contents of the Deployment Registry Report

The deployment registry report lists all of the SAS 9.4 products that are installed in the same SAS installation directory (**SAS Home**).

Note: The deployment registry report lists all of the installed products. However, these products might not be configured at your site.

For example, if your deployment includes an installation of SAS Visual Analytics Designer, the deployment registry report could include the following entry:

Host: lax

Product Code: bidesignmid
Version: 7.2
Display Name: SAS Visual Analytics Designer
Display Version: 7.2

The **Display Version** field shows that SAS Visual Analytics Designer 7.2 is installed at your site.

3

Reviewing Current and Future Software Updates

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The Importance of Understanding Current and Future Software Updates

Before installing a software update, you might want to know about future product updates or plans to deprecate functionality. Learning this information early in your planning process enables you to determine the following information:

- when to place your software order. For example, suppose you are running SAS Enterprise Guide and SAS Enterprise Miner at your site. A new release of SAS Enterprise Guide might be available in June, but the new release of SAS Enterprise Miner is not available until August. To minimize your downtime and go through the installation process only once, you decide to place your order in August when you can get both new products.

For help with determining when to place a software order, contact your SAS account representative.

- how plans to deprecate functionality could affect your site. For more information, see [“Deprecated Functionality in SAS 9.4” on page 29](#).

Current Product Releases

Product Releases by Release Date

Use this table to determine when a product release initially shipped. For a list of the products in your order, see the `install_doc/order-number/ordersummary.html` file in your SAS Software Depot. If you are installing SAS from a DVD, the `ordersummary.html` file is available on SAS Software Disc 1 in the `install_doc\order-number` directory.

You can also use the Software Order E-mail or Software Order Information to determine the revision number for the software in your order. For more information, see [Chapter 8, “Reviewing Your Software Order,” on page 51](#).

Note: The table is not a comprehensive list of all the products that shipped at a specific time. For more information about a specific product, contact your SAS account representative.

Release Date (Revision Number)	Products
July 2013 (SAS 9.4, Rev. 940_13w26)	Base SAS 9.4 DataFlux Authentication Server 3.2 SAS/ACCESS 9.4 Interface to Aster SAS/ACCESS 9.4 Interface to DB2 SAS/ACCESS 9.4 Interface to Greenplum SAS/ACCESS 9.4 Interface to Hadoop SAS/ACCESS 9.4 Interface to Netezza SAS/ACCESS 9.4 Interface to Oracle SAS/ACCESS 9.4 Interface to PC Files SAS/ACCESS 9.4 Interface to Postgres SAS/ACCESS 9.4 Interface to Teradata SAS/ACCESS 9.4 Interface to Vertica SAS Add-In 6.1 for Microsoft Office SAS/AF 9.4 SAS AppDev Studio 4.4 SAS/ASSIST 9.4 SAS/CONNECT 9.4 SAS Data Integration Studio 4.7 SAS Data Surveyor for SAP SAS 9.4 Data Quality Server SAS Enterprise Guide 6.1 SAS Environment Manager 2.1 SAS Enterprise Miner 12.3 SAS Federation Server 3.2 SAS Forecast Server 12.3 SAS Forecasting for Desktop 12.3 SAS/GIS 9.4

Release Date (Revision Number)	Products
July 2013 (SAS 9.4, Rev. 940_13w26) (cont.)	SAS/GRAPH 9.4 SAS Grid Manager 9.4 SAS High-Performance Computing Management Console 2.1 SAS High-Performance Risk 3.1 SAS/IML 12.3 SAS 9.4 In-Database Code Accelerator for Teradata and Greenplum SAS Information Map Studio 4.4 SAS 9.4 Integration Technologies SAS/IntrNet 9.4 SAS Inventory Optimization 2.3 SAS LASR Analytic Server 2.1 SAS Management Console 9.4 SAS Model Manager 12.3 SAS 9.4 OLAP Server SAS/QC 12.3 SAS Risk Dimensions 6.1 SAS Scalable Performance Data Server 4.8 SAS Scoring Accelerator for Netezza and Oracle SAS/SECURE 9.4 SAS Text Miner 12.3 SAS Theme Designer 4.1 for Flex SAS Visual Analytics 6.2 SAS Web Parts 6.1 for Microsoft SharePoint SAS Web Report Studio 4.4
July 2013 (SAS 9.4, Rev. 940_13w30)	SAS Decision Manager 2.1 SAS 9.4 In-Database Products
September 2013 (SAS 9.4, Rev. 940_13w36)	SAS Data Quality Accelerator for Teradata 2.4

Release Date (Revision Number)	Products
October 2013 (SAS 9.4, Rev. 940_13w40)	DataFlux Authentication Server 3.2 DataFlux Data Management Server 2.5 DataFlux Data Management Studio 2.5 DataFlux Secure 2.5 SAS Contextual Analysis 12.3 SAS Data Management Console SAS Data Quality Accelerator for Teradata 2.4 SAS Data Remediation 2.1 SAS Job Monitor 2.1 SAS MDM 4.1 SAS Visual Process Orchestration 2.1
November 2013 (SAS 9.4, Rev. 940_13w45)	SAS Anti-Money Laundering 6.1 SAS Customer Due Diligence 6.1 SAS Peer Group Analysis 6.1 SAS Quality Knowledge Base for Contact Information 22

Release Date (Revision Number)	Products
December 2013 (SAS 9.4, Rev. 940_13w51)	Base SAS 9.4_M1 SAS/ACCESS 9.4_M1 Interface to PC Files SAS Add-In 6.1_M1 for Microsoft Office SAS/CONNECT 9.4_M1 SAS Data Integration Studio 4.8 SAS Enterprise Guide 6.1_M1 SAS Enterprise Miner 13.1 SAS/ETS 13.1 SAS Financial Management 5.4 SAS Forecast Server 13.1 SAS High-Performance Computing Management Console 2.4 SAS High-Performance Risk 3.2 SAS/IML 13.1 SAS 9.4 In-Database Products SAS 9.4_M1 Integration Technologies SAS 9.4_M1 Intelligence Platform SAS LASR Analytic Server 2.2 SAS 9.4_M1 OLAP Server SAS/OR 13.1 SAS/QC 13.1 SAS/STAT 13.1 SAS Theme Designer 4.2 for Flex SAS Text Miner 13.1 SAS Visual Analytics 6.3 SAS Web Parts 6.11 for Microsoft SharePoint
March 2014 (SAS 9.4, Rev. 940_14w11)	SAS Strategy Management 5.6 SAS Studio 3.1 SAS Visual Analytics 6.4

Release Date (Revision Number)	Products
April 2014 (SAS 9.4, Rev. 940_14w14)	SAS Anti-Money Laundering 6.2 SAS Data Quality Accelerator 2.5 for Teradata SAS Data Remediation 2.1_M1 SAS MDM 4.1_M1 SAS Task Manager 2.1_M1
May 2014 (SAS 9.4, Rev. 940_14w19)	SAS Decision Services 6.3
June 2014 (SAS 9.4, Rev. 940_14w23)	SAS Fraud Management 4.1 SAS High-Performance Risk SAS Quality Knowledge Base for Contact Information 23

Release Date (Revision Number)	Products
August 2014 (SAS 9.4, Rev. 940_14w32)	Base SAS 9.4_M2 SAS/ACCESS 9.4_M2 Interface to Hadoop SAS/ACCESS 9.4_M2 Interface to Oracle SAS/ACCESS 9.4_M2 Interface to PC Files SAS BI Dashboard 4.4_M2 SAS/CONNECT 9.4_M2 SAS Data Integration Studio 4.9 SAS Enterprise Miner 13.2 SAS Environment Manager 2.3 SAS/ETS 13.2 SAS Forecast Server 13.2 SAS/IML 13.2 SAS 9.4_M2 In-Database Technologies SAS Information Delivery Portal 4.4_M2 SAS Information Map Studio 4.4_M2 SAS/InterNet 9.4_M2 SAS 9.4_M2 Integration Technologies SAS 9.4_M2 Intelligence Platform SAS Management Console 9.4_M2 SAS Model Manager 13.1 SAS 9.4_M2 OLAP Server SAS/OR 13.2 SAS/QC 13.2 SAS/SECURE 9.4_M2 SAS/STAT 13.2 SAS Studio 3.2 SAS Text Miner 13.2 SAS Web Report Studio 4.4_M2
September 2014 (SAS 9.4, Rev. 940_14w36)	SAS IT Resource Management 3.5

Release Date (Revision Number)	Products
October 2014 (SAS 9.4, Rev. 940_14w41)	SAS Add-In 7.1 for Microsoft Office SAS Enterprise GRC 6.1 SAS Enterprise Guide 7.1 SAS Environment Manager 2.4 SAS Visual Analytics 7.1 SAS Web Parts 6.12 for Microsoft SharePoint
November 2014 (SAS 9.4, Rev. 940_14w47)	DataFlux Data Management Studio 2.6 DataFlux Web Studio 2.5 SAS Business Data Network 3.1 SAS High-Performance Risk 3.3 SAS Lineage 3.1
January 2015 (SAS 9.4, Rev. 940_15w04)	SAS Anti-Money Laundering 6.3 SAS Customer Due Diligence 6.3 SAS Enterprise Case Management 6.3 SAS Financial Management 5.5 SAS Social Network Analysis Server 6.1 SAS Visual Scenario Designer 6.3
February 2015 (SAS, Rev. 940_15w08)	SAS Asset Performance Analytics 6.1 SAS Customer Link Analytics 5.6 SAS Episode Analytics 2.2 SAS Studio 3.3
March 2015 (SAS 9.4, Rev. 940_15w12)	SAS Data Remediation 2.2 SAS Digital Marketing 6.4 SAS Marketing Automation 6.4 SAS Marketing Optimization 6.4 SAS MDM 4.2 SAS Real-Time Decision Manager 6.4 SAS Task Manager 2.2 SAS Visual Process Orchestration 2.2

Release Date (Revision Number)	Products
May 2015 (SAS 9.4, Rev. 940_15w20)	SAS Add-In 7.11 for Microsoft Office SAS Credit Scoring for Banking 5.4 SAS Enterprise Guide 7.11 SAS Event Stream Processing 3.1 SAS Forecast Analyst Workbench 5.2_M2 SAS Fraud Management 4.2 SAS High-Performance Risk 3.4 SAS Inventory Optimization 5.2_M2 SAS IT Resource Management 3.6 SAS Marketing Operations Management 6.4 SAS OpRisk VaR 6.1 SAS Risk Dimensions 6.4

Release Date (Revision Number)	Products
July 2015 (SAS 9.4, Rev. 940_15w29)	SAS/ACCESS software 9.4_M3
	SAS Business Rules Manager 3.1
	SAS/CONNECT 9.4_M3
	SAS Contextual Analysis 14.1
	SAS Data Integration Studio 4.901
	SAS Data Quality Server 9.4_M3
	SAS Decision Manager 3.1
	SAS Enterprise Miner 14.1
	SAS Environment Manager 2.5
	SAS/ETS 14.1
	SAS Forecast Server 14.1
	SAS/GRAPH 9.4_M3
	SAS Grid Manager 9.4_M3
	SAS/IML 14.1
	SAS In-Database Technologies 9.4_M3
	SAS Integration Technologies 9.4_M3
	SAS Intelligence Platform 9.4_M3
	SAS/IntrNet 9.4_M3
	SAS Management Console 9.4_M3
	SAS Model Manager 14.1
	SAS/OR 14.1
	SAS/QC 14.1
	SAS/STAT 14.1
	SAS Studio 3.4
	SAS Text Miner 14.1
August 2015 (SAS 9.4, Rev. 940_15w33)	SAS Merchandise Intelligence 5.4
	SAS Visual Analytics 7.3

Release Date (Revision Number)	Products
October 2015 (SAS 9.4, Rev. 940_15w42)	SAS Anti-Money Laundering 6.3_M1 SAS Customer Due Diligence 6.3_M1 SAS Enterprise Case Management 6.3_M1 SAS High-Performance Risk 3.5 SAS Risk Dimensions 6.5 SAS Social Network Analysis Server 6.2_M2
November 2015 (SAS 9.4, Rev. 940_15w47)	SAS Contextual Analysis 14.1_M1 SAS Event Stream Processing 3.2 SAS Fraud Management 4.2_M1

Learning More about Each Product Release

The *SAS Guide to Software Updates* book explains how software updates for SAS 9.4 can affect an existing SAS deployment. Use this documentation in conjunction with the following SAS websites and documents:

- The “Issues Addressed” website is compiled by SAS Technical Support and lists the specific problems that were fixed in SAS 9.4. Customers who want to review a summary of all the issues that were addressed in a SAS product can review this website.
- *What’s New in SAS 9.4* provides a high-level overview of the new features and enhancements to products that are available in SAS 9.4.
- SAS 9.4 product-specific documents, such as a product’s Help or user’s guide, provide detailed information about how to use the new features and enhancements.

To access these documents, see the [Maintenance Release Announcement for SAS 9.4](#).

Deprecated Functionality in SAS 9.4

- Beginning with SAS 9.4, no third-party web application server is required. Web application servers (such as Oracle WebLogic, IBM WebSphere, and JBoss) are no longer supported. Instead, the SAS 9.4 middle-tier software includes SAS Web Application Server and SAS Web Server for use as an HTTP server.
- SAS Remote Services are not used by SAS 9.4. Although SAS Remote Services are still available to support custom applications, SAS Remote Services are not started by default.
- The embedded database is now SAS Web Infrastructure Platform Data Server. SAS Table Server from SAS 9.2 and SAS Framework Data Server from SAS 9.3 are no longer supported.
- Beginning with SAS 9.4, these SAS Data Surveyor products are no longer supported:
 - SAS Data Surveyor for Siebel
 - SAS Data Surveyor for Salesforce.com
 - SAS Data Surveyor for Oracle Applications
 - SAS Data Surveyor for Clickstream Data
- SAS/LAB and SAS/INSIGHT are not supported in SAS 9.4.
- Starting with the second maintenance release for SAS 9.4, Teradata is no longer a supported database for the SAS Web Infrastructure Platform.

4

Updating Operating Environments and Third-Party Software

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Support for Operating Environments

To determine the level of support for each operating environment (for example, which editions of Windows Server 2008 are supported), see [Supported Operating Systems](#). These pages list any new support for operating environments as well as the operating environments that are no longer supported.

Additional Support for Third-Party Software

When you initially installed your third-party software, these products should have met the minimum requirements that are documented on the [Third-Party Software Requirements for Use with SAS Software and Applications](#) website.

However, third-party vendors sometimes release updates to address defects and security issues. Before installing SAS 9.4, verify that your site is using the required

versions of third-party software. SAS 9.4 delivers some software components that are based on commercially available third-party software. For example, SAS Web Application Server is based on VMware tc Server, and SAS Web Server is based on VMware vFabric Web Server. When you apply upgrades and patches, do not upgrade or patch any software components that are delivered with SAS. SAS maintains this third-party software, so you are always running the correct version.

For more information, see [Chapter 58, “SAS Intelligence Platform,” on page 277](#).

SAS also delivers the Java 7 JRE software as part of a SAS 9.4 deployment. This software is the baseline for SAS products that run on SAS 9.4. SAS also delivers updates for the JRE. These updates can be applied without updating other SAS software. For more information, see [SAS Third-Party Software Requirements - Java 7 Updates](#) and [Security Bulletins from SAS](#).



Part 3

Preparing Your Site for a Software Update

Chapter 5

***Assessing the Effect on Products at Your Site* 35**

Chapter 6

***Using Backups and Restoring Customizations* 39**

Chapter 7

***Undeploying SAS Web Applications* 45**

5

Assessing the Effect on Products at Your Site

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Review the List of Products at Your Site

Before you apply a software update to your site, review the list of products that will be updated on a machine. From the SAS Deployment Wizard, generate a list of the product updates that SAS will apply to the current machine. This list of product updates could vary for each machine at your site, so it is important that you generate this list on every machine that runs SAS 9.4.

Note: If no product updates are required for a machine, then you will not see a list of product updates, and your installation of the product upgrade or maintenance release is complete on that machine.

To view SAS products that will be updated on a machine:

- 1 Run the SAS Deployment Wizard from the software depot that contains your SAS 9.4 installation.

Note: In a Windows environment, you must be an administrator to run the SAS Deployment Wizard, but you do not have to use the same user ID that you used to

install SAS 9.4. In UNIX environments, you must use the same user ID that you used to install SAS 9.4. For both operating environments, the SDW_YYYY-mm-dd-hh.mm.ss.log file lists the ID for the current user.

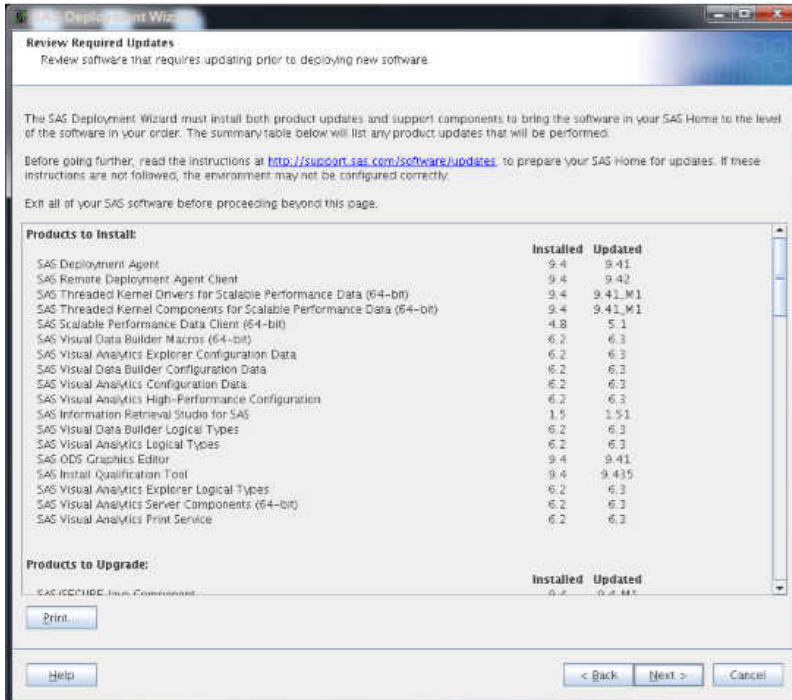
From the highest-level directory in your SAS Software Depot, start the SAS Deployment Wizard by using the command for your operating environment.

Table 5.1 How to Start the SAS Deployment Wizard

Operating System	Start-up Commands for the SAS Deployment Wizard
Windows	setup.exe -record Note: If you are running Windows Vista, Windows 7, or Windows Server 2008, you might have to right-click on the setup.exe file and select Run as administrator .
UNIX	setup.sh -record
z/OS	setup.rexx -record To use a temporary directory other than /tmp, specify - templocation new-temp-dir.

TIP Starting in the second maintenance release for SAS 9.4, a recorded response file is created automatically, so you do not need to specify the -record option.

- 2 In the Review Required Updates step, click **Print** to print the list of required updates for the current machine. (Alternatively, you can copy and paste this content into another document, such as an e-mail.) Review the list of products in the Update Summary section.
- Note:** If no product updates are required, then the list of required updates does not appear, and you can exit the SAS Deployment Wizard.



- 3 Because you are not installing any software at this time, click **Cancel** to exit the SAS Deployment Wizard.

After reviewing the contents of the list of required updates and assessing the effect on products at your site, you can install these product updates by restarting the SAS Deployment Wizard.

Note: When you exit the SAS Deployment Wizard, the list of product updates is not saved. When you install the software, a Deployment Summary for the installation (which contains this list of product updates) is saved to the *SAS-installation-directory/InstallMisc/InstallLogs* directory.

Review the Product Details and Requirements

After obtaining the list of products that will be updated, review the product information in Part 5 “Product Details and Requirements.”

Reviewing these product topics now will enable you to perform the following tasks:

- prepare for any feature changes that will affect your site
- identify any pre-installation or post-configuration steps that need to be performed for the products that you have installed at your site
- plan for additional time to complete any product-specific steps for each updated product

If no topic is listed for a product, then no product-specific steps are required for that product.

6

Using Backups and Restoring Customizations

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Estimating Disk Space Requirements

When you apply a SAS maintenance release, here are the four areas that might require additional disk space:

- SAS Software Depot

- SAS installation directories
- SAS configuration directories
- space for the deployed SAS web applications

Note: For more information, see [“Undeploying the SAS Web Applications” on page 47](#).

The specific size increase depends on how SAS is deployed at your site.

Some of this increase in disk space is temporary because you can remove some files after applying a maintenance release. For more information, see [“General Information about Creating and Removing Backup Files” on page 40](#).

Understanding the SAS Backup and Recovery Tool

General Information about Creating and Removing Backup Files

Before you update an existing SAS deployment, you must stop all SAS servers. It is recommended that you back up all the files in your SAS installation and configuration directories. Use the Backup and Recovery tool to create backups of the installation and configuration directories for SAS for each machine in your deployment, and use these backups if you need to restore your previous SAS deployment. The Backup and Recovery tool should be configured on the main machine for the middle tier.

Note: To back up the SAS installation directory, you can use operating system commands or third-party tools.

CAUTION! You cannot combine orders from different SAS releases (for example, SAS 9.3 and SAS 9.4) in the same software depot. When you initially install SAS 9.4, you are required to create a new software depot.

CAUTION! When restoring backups that were created with operating system commands or third-party tools, you must preserve the original datetime stamps on the files.

If you need more disk space, after the maintenance release has been installed, use the SAS Update File Cleanup Utility to remove the backups that SAS created in the `SASHome` directory. This utility must be run under the user ID that was used to install SAS. For more information about this utility, see *SAS Deployment Wizard and SAS Deployment Manager 9.4: User's Guide*.

Additional backup folders are created for the web application server. For example, a backup folder might be in the `SASServer [n] _1` directory. This backup folder can be quite large because it contains the entire contents of the `SASServer [n] _1` directory. You should consult this folder if you need to reapply any customizations after updating your software. After the customizations have been applied and validated, you can delete these backup directories.

Steps to Complete When Upgrading to SAS 9.4 or SAS 9.4_M1

If the Backup and Recovery tool is configured on multiple machines in your SAS 9.4 deployment, complete these steps to upgrade your SAS software to SAS 9.4 or the first maintenance release for SAS 9.4:

- 1 Unconfigure the Backup and Recovery tool on the main machine for the middle tier.
- 2 In SAS Management Console, open the Configuration Manager. In the SAS Application Infrastructure section, verify that the SAS Deployment Backup and Recovery tool is not listed.
- 3 Configure the Backup and Recovery tool only on the main machine for the middle tier.
- 4 Follow the instructions for upgrading your software. For more information, see [“Install and Configure a Software Update” on page 66](#).

On the other machines where the SAS Deployment Backup and Recovery tool is deployed, complete these steps:

- 1 To disable the software update:

- a Follow the instructions for upgrading your software. For more information, see [“Install and Configure a Software Update” on page 66](#). Complete the install directory update.
 - b In the `SASHome-directory/SASDeploymentManager/9.4/product_data/svrbackupevm_94110_cd388_prt__xx_sp0__1/configure/svrbackupevm_default.properties` files, change all of the configuration script targets to `false`. (Setting these targets to `false` ensures that none of these targets are run on this machine.)
 - c To clean the environment, delete these files:
 - the WAR files in the configuration directory for the SAS server. For example, delete `SAS-configuration-directory/Levn/Web/WebAppServer/SASServer_n/sas_webapps/sas.svcs.admin.backup.war`.
 - `SAS-configuration-directory/Levn/Web/WebAppServer/SASServer_n/conf/Catalina/localhost/SASDeploymentBackup.xml`.
 - `SAS-configuration-directory/Levn/Web/WebAppServer/SASServer_n/sas_webapps/sas.svcs.admin.backup.war`.
- 2 After you update your software on all hosts, open the `sas.conf` file. Verify that the URL in the `ProxyPass` entry for `SASDeploymentBackup` contains the host name of the main machine for the middle tier.

Steps to Complete When Upgrading to SAS 9.4_M2 or SAS 9.4_M3

If you are applying the second or third maintenance release for SAS 9.4, the configuration script automatically configures the Backup and Recovery tool.

After you update your software, complete these steps:

- 1 Verify that the URL in the `ProxyPass` entry for `SASDeploymentBackup` contains the host name of the main machine for the middle tier.

2 Restart the SAS Web Server.

Effect on Customizations

Customizations to EAR and WAR Files

If you did not manually configure your SAS Web Application Servers, SAS rebuilds the enterprise archive (EAR) files and redeploys the web applications archive (WAR) files for all web applications at your site. (Examples of web applications include SAS Web Report Studio and the SAS Information Delivery Portal.)

Therefore, customizations that you made to the applications after initial deployment can be lost if you do not make a copy of the changed files. Here are some common customizations:

- configuring web authentication
- configuring a custom HTTP time-out value
- creating custom content such as a portlet for the SAS Information Delivery Portal
- creating custom themes

Customizations to `_usermods` Configuration Files

For the SAS Metadata Server, SAS Application Servers, and SAS/SHARE Servers, SAS provides configuration files that you can use to specify site-specific modifications to the server's start-up options and the `autoexec.sas` file. Any configuration file that you can modify contains `_usermods` in its name. Any modifications to these files are kept when you apply a maintenance release or upgrade to a new product.

For more information, see [“Reference: Configuration Files for SAS Servers”](#) in *SAS Intelligence Platform: System Administration Guide*.

Record the Value of the Scheduling Services Cache Locator Port

If you originally migrated from SAS 9.3 to SAS 9.4, you might be prompted for the Scheduling Services Cache Locator port when you apply your software update. The SAS Deployment Wizard displays the default value, even if you configured a different value for the port. If you see this prompt, you need to specify the same value that was used in the initial SAS 9.4 deployment.

Before updating your software, record the current port value. On UNIX and Windows environments, this port value appears in the *SAS-configuration-directory/Levn/Web/gemfire/instances* directory. For example, if the port number is 41448, you should see this directory: *SAS-configuration-directory/Levn/Web/gemfire/instances/Ins_41448*.

You can also find this port value in these ways:

- On UNIX environments, see the value of the `LOCATOR_PORT=` option in the *SAS-configuration-directory/Levn/Web/gemfire/instances/gemfire-locator.sh* script.
- On Windows environments, see the value of the `set.INSTANCE_PORT=` option in the *SAS-configuration-directory\Levn\Web\gemfire\instances\wrapper.conf* file.

Record Any Additional Customizations at Your Site

After your initial installation of SAS, you might make additional customizations (such as modify port numbers or add web servers) at your site. Before you upgrade to a new product release or apply a maintenance release, note any customizations that you made, so you can restore these customizations after your software update. For some web applications, customizations can be found in the *Levconfig\Web\Application\application-name\customer* directory. For more information, see [“Using Configuration Manager”](#) in *SAS Intelligence Platform: Middle-Tier Administration Guide*.

7

Undeploying SAS Web Applications

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About the SAS Web Application Server

The middle tier of the SAS 9.4 Intelligence Platform includes a SAS Web Application Server and a SAS Web Server for use as an HTTP server. Both of these components can be installed and configured automatically with the SAS Deployment Wizard when you install the middle tier. The middle tier of the Intelligence Platform software is supported on all 9.4 platforms except for z/OS.

For more installation and configuration information, see [SAS 9.4 Support for Web Application Servers and HTTP Servers](#).

About Undeploying the SAS Web Applications

Note: Starting with the January 2014 release (SAS 9.4, TS1M1, Rev. 940_14w04), SAS includes a web application server. As a result, if your order is from January 2014 or later, undeploying the SAS web applications before updating your software is optional. To determine the revision number for your order, see your Software Order Email or your SAS Order Information. For more information, see [Chapter 8, “Reviewing Your Software Order,”](#) on page 51.

When you update the software at your site, SAS automatically performs these tasks:

- rebuilds all SAS web applications
- redeploys all SAS web applications
- restarts your web application servers

Before updating your software, you might want to undeploy the SAS web applications if the update includes a new or renamed web application and the existing web application is no longer supported. If you undeploy the SAS web applications, you need to do so only on the tier where the software is being updated. If the SAS Deployment Wizard does not go into Update mode, then no software updates are required, and you do not need to undeploy your SAS web applications on that tier.

Effect on Any Modifications to Your Web Server Files

When SAS rebuilds and redeploys the SAS web applications on your web server, any modifications that you specified for your web server (such as a reverse proxy setup) might be overwritten. After updating the SAS software at your site, review the files for your web server to determine whether you need to restore these modifications.

Revert Any Manual TLS Configuration Changes

Any manual changes to the TLS configuration must be reverted to the original non-TLS values before applying a maintenance release or upgrading any software. These manual changes to the TLS configuration can be reapplied to the upgraded system. For more information, see [“Configuring SAS Web Server Manually for HTTPS” in SAS Intelligence Platform: Middle-Tier Administration Guide](#).

Undeploying the SAS Web Applications

Determining the Amount of Disk Space Needed

CAUTION! Updating the middle tier can consume a lot of disk space.

When you undeploy your SAS web applications, a backup directory is created for each instance of the SAS Web Application Server. Your existing WAR files are saved in this backup directory.

When you upgrade your software and the SAS web applications are redeployed, a new set of WAR files is delivered. Before updating the middle tier, verify that you have enough disk space for the backups and the new WAR files. A good estimate is approximately double the current disk space for your existing SAS web applications.

After your users successfully log on to the web applications and verify that everything is working properly, you can delete these backup files.

Undeploying All Applications for a Managed Server

To undeploy all applications for a managed server, use the script for your operating environment:

- Windows: `SAS-configuration-directory\Levn\Web\Scripts\AppServer\appsrvconfig.cmd undeploy application all server SASServern`
- UNIX and Linux: `SAS-configuration-directory/Levn/Web/Scripts/AppServer/appsrvconfig.sh undeploy application all server SASServern`

Undeploy a Single Application

To undeploy a single application, use the script for your operating environment:

- Windows: `SAS-configuration-directory\Levn\Web\Scripts\AppServer\appsrvconfig.cmd undeploy application application-name server SASServern`
- UNIX and Linux: `SAS-configuration-directory/Levn/Web/Scripts/AppServer/appsrvconfig.sh undeploy application application-name server SASServern`

To determine the value for *application-name*, see the `application.nn.name` property in the `SAS-configuration-directory/Levn/Web/Scripts/AppServer/props/appserver.properties` file.



Part 4

Installing Your Software Order

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8

Reviewing Your Software Order

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What Is in My Order?

When determining what products will be updated at your site, it is often useful to review the list of products in your software order. SAS provides two resources that you can use to determine what is in your order and when your order was placed.

- Software Order Email (SOE)
- SAS Order Information (SOI)

Software Order Email

The Software Order Email (SOE) is sent to you after you request a software update. Here is an example of the information that you might see in the SOE if you requested SAS 9.4:



SAS® ESD Software Order Email

You received this Software Order Email (SOE) because you have purchased a license for **SAS Software Order 00001** and you chose to receive your software via Electronic Software Delivery (ESD). The depot created during the download process will include the required licensing files.

Note: Any evaluation or newly licensed products that are listed will run on a temporary SAS installation data file (SID file), a license file that consists of customized installation and product authorization information, to allow you to use the software before the invoice is paid (if applicable). For licensed products, you will receive a full-term SAS installation data file after full payment is received.

If any site information or order information is incorrect, or SAS should not be sending you email, please contact Contracts Support at 1-800-727-0225 (press option 3).

Your Order Information:

Order Number:
SAS Installation Key:
Deployment Type:
Date:
Space Required for SAS Software Depot:
Software Status:

00001
YOUR-SITE-KEY1
Planned (Deployment plan needed)
July 23, 2015
49.5GB
Production

SAS Installation Representative
Your Name

Email Address
your.name@your-company.com


Tech Support Site Number
00000001

Information for Tech Support Site 0000001:

Site Name:
Tech Support Site Number:
Contracts Site Number:
Operating System:
Internal Reference:
License Files:

YOUR-SITE-NAME
0000001
000001
Linux® for x86
SAS 9.4 64-bits TS1M3, Rev. 940_15w33
LSF94_000001_00000001_LINUX_x86-64.txt, SAS94_000001_00000001_LINUX_x86-64.txt

Product(s) Ordered
Base SAS



In the SOE, review the following information:

- the **Deployment Type** field.
 - If **Basic** is the deployment type, then you are installing only SAS Foundation at your site. Some of the products that are included with SAS Foundation are Base SAS, SAS/ACCESS software, and SAS/GRAPH. For more information about SAS Foundation, see [“Understanding SAS Foundation” on page 82](#).
 - If **Planned (Deployment plan needed)** is the deployment type, then a deployment plan is needed when you initially install SAS or when you are adding a product that requires configuration to your SAS deployment. For more information, see [“About Deployment Plans” in SAS Intelligence Platform: Installation and Configuration Guide](#).
- the **Internal Reference** field to confirm that your order is for SAS 9.4.

To determine when your order was placed, use the revision number in the **Internal Reference** field. In this example, the revision number is **Rev. 940_15w33**, which means that the software order is from the 33rd week of 2015.
- the list of products ordered to determine whether any new products are included in your order. Any new products that you are licensing are indicated by an asterisk.

SAS Order Information

After you download your order to an existing SAS Software Depot, you can use the SAS Order Information (SOI) file to determine the contents in your order and when the order was placed. The location of the SOI is in your SAS Software Depot. On Windows, this path is `install_doc\order-number\soi.html`. On UNIX and z/OS, this path is `install_doc/order-number/soi.html`.

Here is an example of the information that you might see in the SAS Order Information file.

SAS Order Information		
The following information is essential for the installation and support of your software from SAS. Please take special note of the SAS installation key below which may be required during the installation process.		
Your Order Information:		
Order Number:	000001	
SAS Installation Key:	YOUR-SITE-KEY1	
Deployment Type:	Planned (Deployment plan needed)	
Date:	July 23, 2015	
Space Required for SAS Software Depot:	49.6GB	
Software Status:	Production	
<u>SAS Installation Representative</u>	<u>Email Address</u>	<u>Tech Support Site Number</u>
Your Name	your-name@your-company.com	00000001
Information for Tech Support Site 00000001:		
Site Name:	YOUR-SITE-NAME	
Tech Support Site Number:	00000001	
Contracts Site Number:	000001	
Operating System:	Linux® for X64	
Internal Reference:	SAS 9.4 64-bits TS1M3, Rev. 940_15w33	
License Files:	LSF94_000001_00000001_LINUX_x86-64.txt,SAS94_000001_00000001_LINUX_x86-64.txt	
Product(s) Ordered		
Base SAS		
Platform Suite for SAS		
Quality Knowledge Base Locale, English United States		
SAS Business Rules Manager		
SAS Data Integration Server		

In the SOI, review the following information:

- the **Deployment Type** field.
 - If **Basic** is the deployment type, then you are installing only SAS Foundation at your site. Some of the products that are included with SAS Foundation are Base

SAS, SAS/ACCESS software, and SAS/GRAPH. For more information about SAS Foundation, see [“Understanding SAS Foundation” on page 82](#).

- If **Planned (Deployment plan needed)** is the deployment type, then a deployment plan is needed when you initially install SAS or when you are adding a product that requires configuration to your SAS deployment. For more information, see [“About Deployment Plans” in SAS Intelligence Platform: Installation and Configuration Guide](#).

- the **Internal Reference** field to confirm that your order is for SAS 9.4.

To determine when your order was placed, use the revision number in the **Internal Reference** field. In this example, the revision number is **Rev. 940_15w33**, which means that the software order is from the 33rd week of 2015.

- the list of products ordered to determine whether any new products are included in your order. Any new products that you are licensing are indicated by an asterisk.

9

Understanding the SAS Software Depot

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What Is the SAS Software Depot?

The SAS Software Depot is a directory that consists of a collection of SAS installation files that represent one or more orders. The depot contains the SAS Deployment Wizard executable, one or more deployment plans (if you have a planned deployment), a SAS installation data file, order data, and product data. Before you can install SAS, you must have a software depot. During a SAS software download, the SAS Download Manager downloads your order, verifies it, and automatically creates the SAS Software Depot.

Note: When you install SAS 9.4, you are required to create a new software depot. You cannot combine SAS 9.3 and SAS 9.4 orders in the same software depot. However, all maintenance releases and software upgrades in the SAS 9.4 lifecycle can be added to an existing SAS 9.4 Software Depot.

For more information about the SAS Software Depot, see these resources:

- “Creating SAS Software Depots” in *SAS Intelligence Platform: Installation and Configuration Guide*

- [SAS Installation Note 39379: Documentation and Frequently Asked Questions for the SAS Software Depot](#)
- [SAS Note 38236: Validating SAS Software Depots on Windows Using the SAS Software Depot Checker](#)

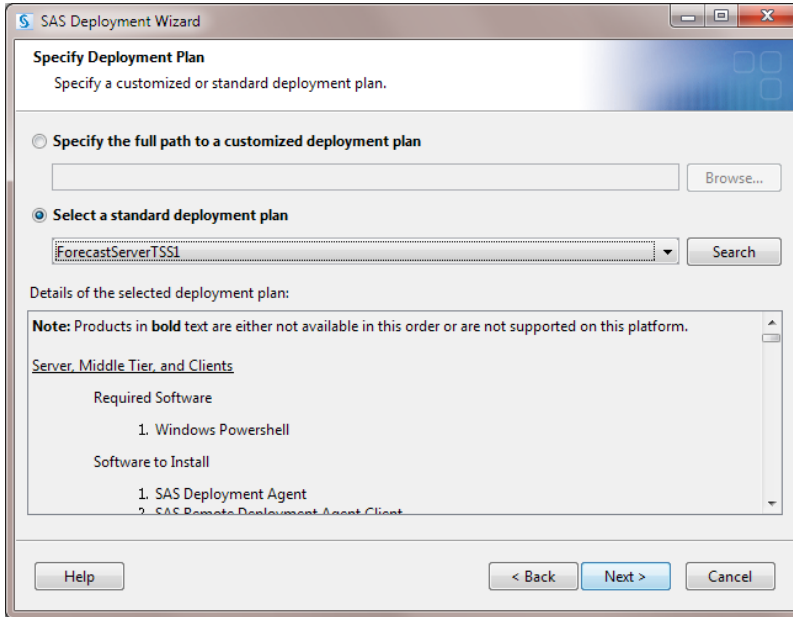
Comparing Your Plan File to the Contents of Your Depot

When you initially install SAS 9.4 or when you add a product to an existing SAS 9.4 deployment, the SAS Deployment Wizard uses a plan file to install and configure your SAS products. You can use a standard deployment file that is provided by SAS. The benefit of downloading a standard deployment file from SAS is all the extra files that you receive (such as a pre-installation checklist) in addition to the plan.xml file. Standard deployment plans are available from [9.4 Standard Deployment Plans](#).

Note: If you need to create a custom deployment plan, contact your SAS account representative or professional services representative. For more information, see [SAS Note 44320: Using deployment plans during a SAS installation](#).

To see what products will be installed and configured, review the plan.xml file before you start the SAS Deployment Wizard. To view a diagram of your customized deployment plan, see details_diagram.html (optimized for Firefox) or details_diagram_for_ie7.mht (optimized for Internet Explorer) files that came with your custom plan file.

In the SAS Deployment Wizard, compare the contents of your plan file with the items in your SAS Software Depot. In the **Specify Deployment Plan** step, you can see the structure of the selected plan file. Items that are in bold, black font are either not in your order or are not supported on this platform. If software is missing from your order, contact your SAS account representative.



TIP Standard deployment plans are available in your SAS Software Depot and [9.4 Standard Deployment Plans](#). If you need to create a custom deployment plan, copy your plan.xml file to the `plan_files` directory in your SAS Software Depot. By default, the plan files in this directory are displayed in the **Specify the full path to a customized deployment plan** field.

After you complete your installation, a copy of the plan file that you used is saved in the `SAS-configuration-directory/Levn/Utilities` directory. An example of this directory path on Windows is `C:\SAS\Config\Lev1\Utilities\plan.date_time.xml`.

10

Understanding the SAS Installation Files

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What Are the Instruction.html Files and the Deployment Summary?

When you apply a software update, SAS automatically creates several files that you can use to determine what products were updated, verify that the update was successful, and troubleshoot any errors.

- Instructions.html and UpdateInstructions.html
- Deployment Summary for the installation

Instructions.html and UpdateInstructions.html Files

After you install SAS for the first time, configure a new product, or reconfigure an existing product, you must complete the manual steps in the Instructions.html file to complete your deployment. The latest version of the Instructions.html file is available from a link in the last step of the SAS Deployment Wizard and in the *SAS-configuration-directory/Levn/Documents/* directory. When you open the Instructions.html file, you see a document titled “Configuration Guidelines and Details for *your-machine-name*.” This document contains the validation steps for the last deployment that you performed. Previous versions of the Instructions.html file are available from the *SAS-configuration-directory/Levn/Documents/Backup* directory. You might need to refer to a previous Instructions.html file to re-validate your deployment.

After you install a maintenance release or upgrade to a new product release, you could see an UpdateInstructions.html file, which contains the configuration steps that you must manually complete. The UpdateInstructions.html file could contain a subset of steps from the original Instructions.html file, or it could contain new steps that you must complete because you are applying a maintenance release or upgrading to a new product. The latest version of the UpdateInstructions.html file is available from the *SAS-configuration-directory/Levn/Documents* directory. Previous versions of the UpdateInstructions.html file are available from the *SAS-configuration-directory/InstallMisc/InstallLogs* directory.

Note: If you need to re-validate your deployment after a software update, use the Instructions.html file from your initial deployment.

The Deployment Summary for the Installation

How to Locate the Deployment Summary for the Installation

A Deployment Summary for the installation process is saved in the *SAS-installation-directory/InstallMisc/InstallLogs* directory. If you exit the SAS Deployment Wizard without installing any updates, then the Deployment Summary is not saved to this directory.

Note: A Deployment Summary for each previous installation is saved in the home directory of the user ID that was used to install SAS. The Deployment Summary for the latest installation of the maintenance release is always available from *SAS-installation-directory/InstallMisc/InstallLogs*.

About Each Section in the Deployment Summary

Update Summary

The Update Summary lists the products that were updated. Only products that were previously installed on your machine are updated during a maintenance release or when you upgrade to a new product release.

The updates are divided into two categories.

- The Products to Install category lists any new products that you installed or any products that you upgraded to a new release.
- The Products to Upgrade category lists the products that were updated when you applied a software upgrade, such as a SAS maintenance release or a product-specific maintenance release.

For each product in the Update Summary, there are two columns of release numbers:

- The Installed column lists the product release number that was on your machine before you applied the maintenance release or product upgrade.
- The Updated column lists the product release number that is on your machine after you applied the maintenance release or product upgrade.

For each product in the Deployment Summary, review the information in “Product Details and Requirements” to determine the post-configuration steps that are necessary for your site. If you do not complete these post-configuration steps, you might experience unexpected behavior or errors that will affect the use of your SAS software.

Installation Section

The Installation section lists whether each product update installed successfully. In the following example, all products installed successfully, so you can complete any post-configuration steps for these products.

Installation

Completed successfully - SAS Deployment Manager
 Completed successfully - SAS Management Console (Update)
 Completed successfully - SAS Deployment Tester Plug-in for SAS Management Console (Update)
 Completed successfully - SAS Table Server Plug-ins for SAS Management Console (Update)
 Completed successfully - SAS Web Infrastructure Client (Update)
 Completed successfully - SAS Forecast Server Plug-ins for SAS Management Console (Update)
 Completed successfully - SAS ESRI Map Manager Plug-in for SAS Management Console (Update)
 Completed successfully - SAS Enterprise Miner Plug-in for SAS Management Console (Update)
 Completed successfully - SAS Foundation Services (Update)
 Completed successfully - SAS Web Infrastructure Platform (Update)
 Completed successfully - SAS Analytics Platform (Update)
 Completed successfully - SAS Information Delivery Portal (Update)
 Completed successfully - SAS Web Report Studio (Update)
 Completed successfully - SAS Shared Services (Update)
 Completed successfully - SAS Information Delivery Portal JPS Extension (Update)
 Completed successfully - SAS BI Dashboard (Update)
 Completed successfully - SAS Help Viewer for the Web (Update)
 Completed successfully - SAS Information Delivery Portal Help and Documentation (Update)

However, if a product installation failed or completed with errors (such as the SAS Add-In for Microsoft Office in the following example), review the audit files for that product.

Completed successfully - SAS Information Map Studio (Update)
 Completed successfully - SAS Intelligence Platform Object Framework (Update)
 Completed successfully - SAS Locale Setup Manager (Update)
 Completed successfully - SAS Metadata Bridges (Update)
 Completed successfully - SAS OLAP Cube Studio (Update)
 Completed successfully - SAS Web Application Themes
 Completed with errors - SAS Add-in for Microsoft Office
 Completed successfully - SAS Data Integration Studio
 Completed successfully - SAS Data Integration Studio (Update)
 Completed successfully - SAS Enterprise Guide

Note: The installation of the SAS Add-In for Microsoft Office might fail if Microsoft Office is not on the machine or if a Microsoft Office product is open.

11

Installing SAS 9.4

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About the Installation Process

You install software updates by using the SAS Deployment Wizard. If any product updates are required, then the SAS Deployment Wizard goes into Update mode and installs those product updates on that machine. Updates that are installed apply only to the software that is already installed at your site. No new software is installed during this process. If you have a planned deployment and your SAS Home directory contains one or more configuration directories, then after installation and deployment is complete, the SAS Deployment Manager opens so that you can configure your environment.

If a machine does not require any product upgrades, then the SAS Deployment Wizard does not go into Update mode, and the installation of the software update is complete for that machine. Simply click **Cancel** to exit the SAS Deployment Wizard.

If you are installing SAS 9.4 for the first time, see these resources to determine the steps for installing and configuring SAS 9.4 at your site:

- QuickStart Guides at <http://support.sas.com/documentation/installcenter/94>

■ *SAS Intelligence Platform: Installation and Configuration Guide*

For migration information, see *SAS Intelligence Platform: Migration Guide*.

For specific product documentation, see <http://support.sas.com/documentation/onlinedoc>.

Install and Configure a Software Update

To install a software update for SAS 9.4:

- 1 Stop all LASR Analytic Servers by using the SAS Visual Analytics Administrator. For more information, see *SAS Visual Analytics: Administration Guide*
- 2 Terminate all active SAS sessions, daemons, spawners, and servers, except for the SAS Deployment Agent running on each of your servers. It is important to stop the SAS servers in the inverse order that they were started. For more information, see “Overview of Server Operation” in *SAS Intelligence Platform: System Administration Guide*.

Note: In AIX operating environments, after you stop all the servers and processes, you must clear the AIX file cache to avoid any locked files when you apply the maintenance release. To clear this cache, run the `/usr/sbin/slibclean` command by using the root user ID.

- 3 Verify that all machines where you are installing the software update are installed with SAS 9.4 software.

Note: In a Windows environment, you must be an administrator to run the SAS Deployment Wizard. You do not have to use the same user ID that you used to install SAS 9.4. In UNIX environments, you must use the same user ID that you used to install SAS 9.4. If you are deploying SAS on a multiple-machine, distributed system, you must install software on your computer in a particular order. For more information, see “Installation Order Rules for Multiple Machine Deployments” in *SAS Intelligence Platform: Installation and Configuration Guide*.

- 4 For each machine in your deployment, start the SAS Deployment Wizard from the highest-level directory in your SAS Software Depot. You can start the SAS Deployment Wizard in the following ways:

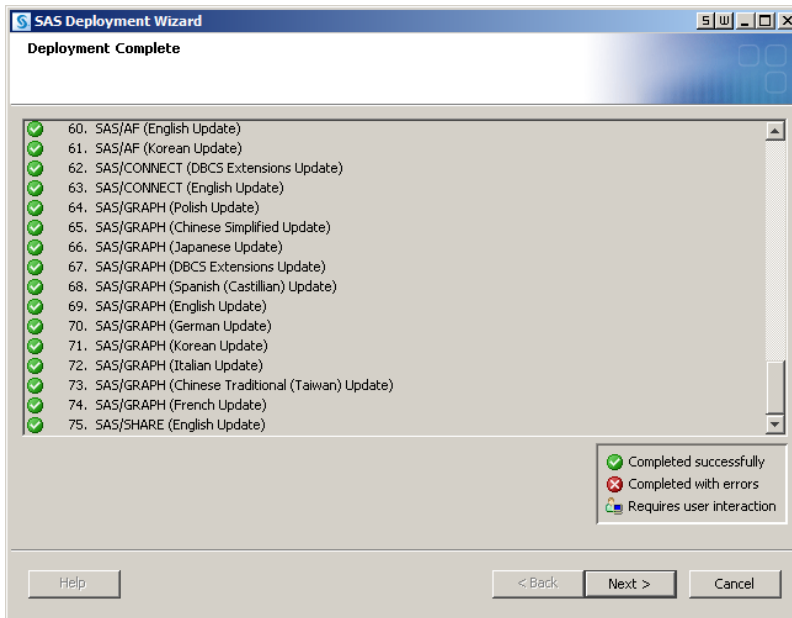
Table 11.1 *How to Start the SAS Deployment Wizard*

Operating System	How to Start the SAS Deployment Wizard
Windows	<p>Double-click <code>setup.exe</code> in the highest-level directory in your SAS Software Depot.</p> <p>Note: If you are running Windows Vista, Windows 7, or Windows Server 2008, you might have to right-click the <code>setup.exe</code> file and select Run as administrator.</p>
UNIX	<p>Execute <code>setup.sh</code> from the highest-level directory in your SAS Software Depot.</p>
z/OS	<p>For basic deployments, type <code>setup.rexx</code> to run the SAS Deployment Wizard.</p> <p>For planned deployments:</p> <ul style="list-style-type: none"> ■ The first invocation of the SAS Deployment Wizard is to install the metadata server as a 64-bit application: <code>setup.rexx -z64</code> ■ The second invocation of the SAS Deployment Wizard is to install the remainder of your SAS 9.4 order as a 31-bit application: <code>setup.rexx</code> <p>To use a temporary directory other than <code>/tmp</code>, specify <code>-templocation new-temp-dir</code>.</p> <p>Note: If you install SAS using the <code>-nojobsubmit</code> option, the process for applying a software update differs from the process that is described in this document. For more information, see Documentation for a SAS 9.4 installation in z/OS operating environment at support.sas.com.</p>

- 5 Select your order and the location of the `SASHome` directory. The SAS Deployment Wizard goes into Update mode and installs any product updates on that machine.

Note: If a machine does not require any product updates, the SAS Deployment Wizard does not go into Update mode and the installation of the maintenance release on that machine is complete. Click **Cancel** to exit the SAS Deployment Wizard.

6 After the deployment is complete, click **Next** in the SAS Deployment Wizard.



Note: If you have a basic deployment, your software update is complete, and you can ignore the remaining steps. If you have a planned deployment, continue with step 6.

7 Add or verify your CA or site-signed certificates. The process for adding certificates depends on the maintenance release of SAS 9.4. SAS recommends upgrading to the latest release of SAS 9.4 as soon as possible.

- Starting in the **third maintenance release** for SAS 9.4, a default CA certificate bundle is shipped with SAS. You add additional certificates by using the SAS Deployment Manager. For more information, see [“Working with CA Certificates for TLS and HTTPS Security” on page 97](#).
- If you are upgrading to the **first or second maintenance release** for SAS 9.4, you must re-import your site certificate into the SAS private JRE default truststore (the `cacerts` file).

Importing a certificate into a keystore is accomplished with the Java `keytool -importcert` command. The location of the `cacerts` file in the SAS private JRE is `SAS-installation-directory/SASHome/SASPrivateJavaRuntimeEnvironment/9.4/jre/lib/security`.

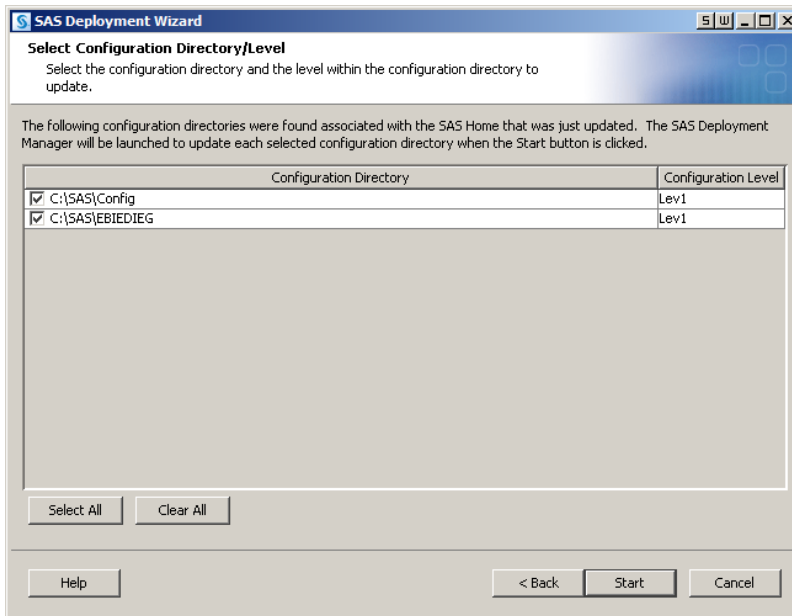
For example, on Windows, the command that you run is similar to this:

```
cd C:\Program Files\SASHome\SASPrivateJavaRuntimeEnvironment\9.4\jre\
lib\security ..\..\bin\keytool -importcert -keystore cacerts -file mycert.crt
```

TIP The default password for cacerts is `changeit`. This password is documented on the Oracle website.

For more information, see the Java documentation at <http://docs.oracle.com/javase/6/docs/technotes/tools/solaris/keytool.html>.

- 8 In the Select Configuration Directory/Level step of the SAS Deployment Wizard, select the configuration directories that you want to update, and then click **Start**. The SAS Deployment Manager opens to guide you through the configuration steps.



Note: If you click **Cancel**, you have installed but not configured the software updates. You must configure the updated SAS products before you can run them. To complete these configuration steps at a later time, see “[Configure SAS Products](#)” in *SAS Intelligence Platform: Installation and Configuration Guide*.

- 9 If necessary, restart the SAS Metadata Server. In Windows and UNIX environments, the SAS Metadata Server restarts automatically.

- In Windows environments, the following message appears in the SAS Deployment Manager if the SAS Metadata Server is not running:

A SAS Metadata Server is not currently running on the Port.

To continue the configuration steps, restart the SAS Metadata Server manually. For more information, see “[Using SAS Management Console to Operate SAS Servers](#)” in *SAS Intelligence Platform: System Administration Guide*.

- To restart the SAS Metadata Server manually in UNIX environments:
 - 1 At a UNIX prompt, navigate to the directory where the SAS Metadata Server is configured.
 - 2 Type `./MetadataServer.sh start`.

10 In the Specify Connection Information panel of the SAS Deployment Manager, enter the user ID and password of an unrestricted administrative user (for example, `sasadm@saspw`).

11 Use the SAS Deployment Manager to update the configuration of your environment. The panels that appear depend on your deployment. You must complete each panel. When prompted for passwords for database IDs, you must use the same passwords that you used to install SAS 9.4.

Note: In the SAS Web Infrastructure Database JDBC Properties panel, the SAS Deployment Manager prompts you for the password for the JDBC connection for the Web Infrastructure Platform. You must specify the password for the JDBC connection. For more information about how alternative databases are configured, see “Configuring an Alternative Database for SAS Web Infrastructure Platform Services” at <http://support.sas.com/resources/thirdpartysupport/v94/appservers/SharedServicesAlternativeDatabase.pdf>.

When you update your configuration, SAS automatically starts your SAS servers, configures your web application servers, and rebuilds and redeploys your SAS web applications.

When the configuration is complete, the Deployment Summary opens. You need this information later to determine whether there are additional post-configuration steps for any of your products.

Note: The Deployment Summary for the installation is automatically saved. If the Deployment Summary does not open automatically or if you need it later, you can open it from your SAS installation directory. For more information, see [“The Deployment Summary for the Installation” on page 61](#).

- 12** Complete any necessary configuration steps for your web application server.
- 13** Review the list of products in the Update Summary section of the Deployment Summary. For each product that was updated, determine whether there are additional configuration steps to complete.
- 14** After the upgrade is complete, clear the cache in your web browser.
- 15** To validate the changes to your web application servers and SAS web applications, review the validation sections in your Instructions.html file.

Adding a New Product

Your software order might include products that you are adding to your current deployment. Before you install any new products, you must apply any software updates. If any updates are detected, the SAS Deployment Wizard automatically goes into Update mode the first time that you start the wizard. After you apply these updates, you must restart the SAS Deployment Wizard to install any new products on each tier. In the SAS Deployment Wizard (which you will use to install the new products), verify that the SAS installation data file (SID file) you select is for the order that contains the new products. You might need to click **Browse** to select the correct SID file. Then you will need to configure each tier. For more information, see “Adding SAS Products” in *SAS Intelligence Platform: Installation and Configuration Guide*.

If you are adding a SAS solution to an existing SAS 9.4 deployment (or if you need to renew your software license for a SAS solution), use the SAS Deployment Manager to update the SID file in the metadata. Verify that the SID file you select is for the order that contains the new products. You might need to click **Browse** to select the correct

SID file. For more information, see the “Software License Renewal Instructions” for your operating environment.

- [Software License Renewal Instructions—SAS 9.4 for Microsoft Windows for x64 Planned Deployment](#)
- [Software License Renewal Instructions—SAS 9.4 for UNIX Environments Planned Deployment](#)

Installing a Hot Fix

Hot fixes that were released before the current maintenance release are automatically installed when you run the SAS Deployment Wizard. Additional hot fixes might be available for your products. If so, now is a good time to install these hot fixes. To determine whether there are additional hot fixes for your products, see <http://ftp.sas.com/techsup/download/hotfix/hotfix.html>.

The SAS Download Manager automatically downloads the necessary SAS hot fixes required by the SAS products in your order. However, these hot fixes are not automatically applied by the SAS Deployment Wizard during the update of your existing SAS environment.

Note: You can force the SAS Download Manager to skip downloading hot fixes when downloading and creating your SAS Software Depot.



Part 5

Product Details and Requirements

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12

Introduction to Product Details and Requirements

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How Do I Use This Documentation?

In general, the process for installing and configuring all SAS products is the same. You can perform this installation and configuration by using the SAS Deployment Wizard.

However, some products require that you perform steps before upgrading to a new release or perform post-configuration steps after installing the product. The “Product Details and Requirements” section of this document contains information about product changes and any pre-installation and post-configuration steps that you need to perform for a specific SAS product. Each chapter begins with an upgrade path table. In the table, find the row for your current release and the release that you are upgrading to. The last column in that row contains the high-level steps that you must perform to install and configure a SAS product. It is important that you review the documentation for all

products at your site before updating the software at your site, so you can create a complete installation and configuration checklist for your site.

If a product is not listed in this part, then no pre-installation or post-configuration steps are required.

Note: To determine the product release numbers for each machine in your SAS deployment, generate a deployment registry report. For more information, see [“How to Run the Deployment Registry Report” on page 14](#).

Understanding SAS Foundation

If the following products are in your SAS 9.4 software order, they are installed with SAS Foundation:

- Base SAS
- SAS/AF
- SAS/ASSIST
- SAS/ACCESS
- SAS/CONNECT
- SAS Data Quality Server
- SAS/EIS
- SAS/ETS
- SAS/FSP
- SAS/GIS
- SAS/GRAPH
- SAS/IntrNet
- SAS Integration Technologies

- SAS OLAP Server
- SAS/SECURE
- SAS/SHARE
- SAS Studio

Before you start the SAS Deployment Wizard, check the “Product Details and Requirements” section of this document to determine whether any product pre-installation or post-configuration steps are required.

Installing Multiple Products

Often, you are updating several software products at the same time. If this is true for your site, you do not need to install each SAS product separately. The SAS Deployment Wizard identifies any files in your SAS Software Depot that are older than the files in your software order, so these software updates are made at the same time. For example, your software order might contain SAS Model Manager 13.1 and SAS Forecast Server 13.2. When you run the SAS Deployment Wizard, both products are installed by default.

Adding a New Product

Your software order might include products that you are adding to your current deployment. Before you install any new products, you must apply any software updates. If any updates are detected, the SAS Deployment Wizard automatically goes into Update mode the first time that you start the wizard. After you apply these updates, you must restart the SAS Deployment Wizard to install any new products on each tier. In the SAS Deployment Wizard (which you will use to install the new products), verify that the SAS installation data file (SID file) you select is for the order that contains the new products. You might need to click **Browse** to select the correct SID file. Then you will need to configure each tier. For more information, see “Adding SAS Products” in *SAS Intelligence Platform: Installation and Configuration Guide*.

If you are adding a SAS solution to an existing SAS 9.4 deployment (or if you need to renew your software license for a SAS solution), use the SAS Deployment Manager to update the SID file in the metadata. Verify that the SID file you select is for the order that contains the new products. You might need to click **Browse** to select the correct SID file. For more information, see the “Software License Renewal Instructions” for your operating environment.

- [Software License Renewal Instructions—SAS 9.4 for Microsoft Windows for x64 Planned Deployment](#)
- [Software License Renewal Instructions—SAS 9.4 for UNIX Environments Planned Deployment](#)

Adding SAS Visual Analytics to Your Deployment

Many SAS 9.4 products and solutions include SAS Visual Analytics components. The integration of SAS Visual Analytics might require some additional hardware at your site. Adding these components to your deployment also requires updating your plan.xml file. Before applying any software updates to your current deployment, you need to decide whether you want to deploy the SAS Visual Analytics components now or delay their deployment.

If your site meets the minimum system requirements and you want to add SAS Visual Analytics components to your deployment now, complete these steps:

- 1 Work with your SAS account representative to add the SAS Visual Analytics components to your plan.xml file.
- 2 After you have updated and saved the revised plan.xml file, follow the process for applying software updates. For more information, see [“Install and Configure a Software Update” on page 66](#).
- 3 To add new products to your deployment, run the SAS Deployment Wizard a second time. For more information, see [“Adding a New Product” on page 83](#).

If your site does not meet the minimum system requirements, you might decide to delay the deployment of the SAS Visual Analytics components. However, you can still use the SAS Deployment Wizard to apply any other software updates. For more information, see [“Install and Configure a Software Update” on page 66](#). You can also add any new products. For more information, see [“Adding a New Product” on page 83](#).

Note: If you delay the deployment of the SAS Visual Analytics components, you will not be able to use SAS Mobile BI.

When you are ready to add the SAS Visual Analytics components to your deployment, simply complete the previous steps. For more specific information, see the administrator’s documentation for your SAS product or solution.

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Base SAS

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Determining Your Update Path for Base SAS

Upgrading an Existing Base SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4	9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “Base SAS 9.4_M2” on page 96 and “Base SAS 9.4_M3” on page 97 (if appropriate).</div><div>2</div><div>To upgrade to the latest release for SAS 9.4, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M1	9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “Base SAS 9.4_M2” on page 96 and “Base SAS 9.4_M3” on page 97 (if appropriate).</div><div>2</div><div>To upgrade to the latest release for SAS 9.4, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M2	9.4_M3	<div><div>1</div><div>Before you upgrade, see “Base SAS 9.4_M3” on page 97.</div><div>2</div><div>To upgrade to the latest release for SAS 9.4, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to Base SAS 9.4

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<div><div><div>1</div><div>Before you migrate, see “Base SAS 9.4” on page 89, “Base SAS 9.4_M2” on page 96 , and “Base SAS 9.4_M3” on page 97 (if appropriate).</div></div><div><div>2</div><div>Install and configure SAS 9.4.</div></div></div> <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none">■ QuickStart Guides in the SAS Install Center■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For migration information, see the following resources:</p> <ul style="list-style-type: none">■ <i>SAS Intelligence Platform: Migration Guide</i>■ the product documentation page for Base SAS

Base SAS 9.4

Changes to the Default Values in the sasv9.cfg File

The values of the SORTSIZE and MEMSIZE system options have changed in the sasv9.cfg file.

- In Windows environments, the default value of SORTSIZE has changed from 256M to 1G.

- In UNIX environments, the default value of SORTSIZE has changed from 256M to 1G. The default value of MEMSIZE has changed from 512M to 2G.

You might need to verify that the systems at your site can handle this amount of memory.

SAS Procedures

CONTENTS, COPY, MIGRATE, and SORT procedures

The International Components for Unicode (ICU) libraries, used by SAS for linguistic collation, have been upgraded from version 4.2 to version 4.8.1. The new ICU version uses locale data from version 2.0 of the Unicode Common Locale Data Repository (CLDR), improves language support, and provides software fixes. For more information, see <http://site.icu-project.org/download/48> and <http://cldr.unicode.org/index/downloads/cldr-2-0>.

A change in the ICU version that is used by SAS can affect the interpretation of some data sets sorted by previous versions of SAS. For more information, see the documentation for the SORT procedure, COPY procedure, and MIGRATE procedure in *Base SAS Procedures Guide*.

The output from the CONTENTS procedure or the CONTENTS statement now shows the ICU version number of a data set that is linguistically sorted.

FORMAT procedure

The range to specify a default length of an informat, picture, or format is 1–32767.

PRINT procedure

The PROC PRINT statement STYLE= option style attributes for the HEADER location no longer affect the Obs column heading. You specify style attributes for the Obs column heading by using the OBSHEADER location.

PRINTTO procedure

The PROC PRINTTO PRINT= statement opens the LISTING destination. You no longer need to specify the ODS LISTING statement before you use the PRINTTO procedure.

QDEVICE procedure

Here are some important updates for SAS 9.4:

- The PROC QDEVICE DEVLOC= option enables you to specify a device library other than the SAS/GRAPH Gdevice libraries and the Sashelp library. You can report on the first occurrence of a device, or you can report on all occurrences of a device in the Gdevice and Sashelp libraries.
- The PROC QDEVICE CATALOG= option enables you to specify a catalog, other than the DEVICES catalog, to search.
- The DEVICE statement and the PRINTER statement allow the wildcards * and ? in device names and printer names.
- The value for a Windows printer device type, as reported by the TYPE variable, is Printer Interface Device. Printer Interface Device replaces the value System Printer.
- For all reports, the NAMETYPE variable has been renamed to TYPE.
- For all reports except the General report, information about prototypes has been removed. The PROTOTYPE variable information is now reported in only the General report.
- Character variable lengths in report output data sets now have a fixed length of 128 characters. The LENGTH statement is no longer required when reports are merged or concatenated.

System Options

The EXTENDOBSCOUNTER (EOC) system option is new for SAS 9.4. In SAS 9.3, this option was available only as a data set option and a LIBNAME option.

- If you are creating data sets with SAS 9.4 and those data sets need to be backward compatible with a SAS release earlier than SAS 9.3, set the EXTENDOBSCOUNTER system option to NO.
- If your SAS 9.4 data sets are not going to be read by a SAS release earlier than SAS 9.3, set the EXTENDOBSCOUNTER system option to YES.

The default values have changed for these system options:

System Option	New Default Value
CPUCOUNT=	ACTUAL or 4 for systems that have more than four processors
DMSOUTSIZE=	2,147,483,647
LRECL=	32,767
PDFCOMMENT	PDFCOMMENT
YEARCUTOFF=	1926

ODS Changes

- In SAS 9.4, the default HTML style for z/OS environments has changed from Default to Htmlblue.
- The ODS.TAGSETS RTF statement now supports the BACKGROUNDIMAGE= style attribute.
- The following enhancements have been made to the ODS GRAPHICS statement:
 - The default for the ANTIALIASMAX= option has changed from 600 to 4000.
 - The default device driver for the RTF and TAGSETS.RTF destination has changed to EMF.
- The default style for all Printer family destinations (PS, PDF, PCL) has changed from Styles.Printer to Styles.Pearl.

If you are upgrading from a previous release of SAS, note that several new defaults were implemented in SAS 9.3 for the SAS windowing environment in UNIX and Windows operating environments.

Area of Change	Previous Default	New Default Beginning with SAS 9.3
Output Destination	LISTING	HTML
Default style for HTML destination	Styles.Default	Styles.HTMLBlue
ODS Graphics	OFF	ON
Where graphs are saved	Current SAS directory	SAS Work Library

The previous defaults are still used when you run SAS in batch mode.

Because of the changes in the default values, you will see the following changes:

- Results are displayed in the HTMLBlue style, which is a modern style well suited for displaying graphs and tables together. Prior to SAS 9.3, tables were displayed in monospace, and graphs were displayed using the LISTING style.
- Analytical procedures that support ODS Graphics automatically create graphs. Prior to SAS 9.3, you had to explicitly enable ODS Graphics.
- Tables and graphs are displayed together in the HTML results viewer window. Prior to SAS 9.3, tables and graphs were displayed separately in the Output and Graph windows.
- Graphs are no longer saved in the current SAS directory by default. Instead, they are saved in the directory that corresponds to your SAS Work library. Hence, by default, graphs are automatically deleted at the end of your SAS session. You can specify a different directory in your SAS preferences.

For more information, see the *SAS Output Delivery System: User's Guide*.

Changes Required for Your Existing SAS Graph Template Language Programs

DENSITYPLOT Statement

In SAS 9.4, the WEIGHT= option of the KERNEL() distribution option in the DENSITYPLOT statement is changed to WEIGHTFUNCTION=. This change enables the addition of the WEIGHT= option in the DENSITYPLOT statement. Beginning with SAS 9.4, the WEIGHT= option is not valid in the KERNEL() distribution option and results in a syntax error. If your existing SAS programs specify the WEIGHT= option in the KERNEL() distribution option, you must change the option to WEIGHTFUNCTION=.

BARCHART Statement

In SAS 9.4, the BARCHART statement STAT=PCT option displays percentages between 0 and 100 in order to be consistent with other GTL statements. In prior releases, STAT=PCT displayed proportional values between 0 and 1. To restore the proportional value in SAS 9.4, change STAT=PCT to STAT=PROPORTION.

Font Changes

Here are the font changes in SAS 9.4:

- The new Unicode fonts, Arial Unicode MS and Times New Roman Uni, replace the Monotype Sans WT and Thorndale Duospace WT Unicode fonts.

New Unicode Font	Fonts Being Replaced
Arial Unicode MS	Monotype Sans WT TC Monotype Sans WT J Monotype Sans WT K
Times New Roman Uni	Thorndale Duospace WT SC Thorndale Duospace WT TC Thorndale Duospace WT J Thorndale Duospace WT K

- CSongGB18030C_Light, MYingHei_18030_C-Medium, and CSongGB19030-LightHWL replace the Simplified Chinese fonts.

New Font	Font Being Replaced
CSongGB18030C_Light	Sim Sun
MYingHei_18030_C-Medium	Sim Hei
CSongGB19030-LightHWL	NSimSun

Extending the Observation Count for a 32-Bit SAS Data File

SAS 9.4 enhances the extended observation count functionality by automatically creating a 32-bit SAS data file with an extended observation count and by providing the EXTENDOBSCOUNTER= system option. In SAS 9.4, by default, the EXTENDOBSCOUNTER= data set option, LIBNAME statement option, and system option are set to YES. Therefore, in SAS 9.4, if you do not want a SAS data file created with an extended observation count, you must specify EXTENDOBSCOUNTER=NO. For more information, see [“Extending the Observation Count in a 64-Bit Operating Environment” in SAS Language Reference: Concepts](#).

Base SAS 9.4_M2

Changes Required for Your Existing SAS Graph Template Language Programs

PBSPLINEPLOT Statement

In the second maintenance release for SAS 9.4, these changes might impact your existing SAS programs:

- The DEGREE= PBSPLINE regression option range is changed from 0–174 to 0–10. If the DEGREE= option value is outside of this range, an error results and the graph is not generated. If your existing SAS programs specify in a PBSPLINEPLOT statement a value for DEGREE= that is greater than 10, you must change the value to a value in the range of 0-10.
- The DEGREE= and NKNOTS= PBSPLINE regression options cannot both be 0. If both options are set to 0, an error results and the PBSPLINE plot is not generated. If your existing SAS programs specify in a PBSPLINEPLOT statement DEGREE=0 and NKNOTS=0, you must change one of the values to a nonzero value.

REGRESSIONPLOT Statement

In the second maintenance release for SAS 9.4, the DEGREE= regression option range is changed from 0-174 to 1-10. If the DEGREE= option value is outside of this range, an error results and the graph is not generated. If your existing SAS programs specify in a REGRESSIONPLOT statement a value for DEGREE= that is outside of the 1-10 range, you must change the value to a value that is within the 1-10 range.

Deprecated Options for GTL Statements

GTL Statement	Deprecated Option	Replaced By
AXISTABLE	HEADERLABEL=	TITLE= option
	HEADERLABELATTRS=	TITLEATTRS= option
SCATTERPLOT	MARKERCOLORGRADIENT=	COLORRESPONSE= option
	MARKERSIZERESPONSE=	SIZERESPONSE= option
	MARKERSIZEMAX=	SIZEMAX= option
	MARKERSIZEMIN=	SIZEMIN= option
	OUTLINEDMARKERCHARACTERS=	TEXTPLOT statement
SCATTERPLOTMATRIX	MARKERCOLORGRADIENT=	COLORRESPONSE= option
SURFACEPLOTPARM	SURFACECOLORGRADIENT=	COLORRESPONSE= option

You can continue to use the deprecated options. However, SAS recommends that you switch to the new options or alternate statement as soon as possible.

Base SAS 9.4_M3

Working with CA Certificates for TLS and HTTPS Security

SAS uses CA certificates to verify the communication process when you use HTTPS protocols or Transport Layer Security (TLS). In the [third maintenance release](#) for SAS

9.4, the SAS Deployment Wizard automates the process of updating the TLS certificates in UNIX and z/OS environments and for Java applications on Windows and UNIX. SAS provides a default CA certificate bundle. The installation also includes the files that are used as the trusted list of certificates.

For SAS 9.4 deployments that were created before the third maintenance release of SAS 9.4, you had to manually set the SSLCALISTLOC option in the configuration file to point to your CA certificates. When you updated your software after the initial deployment, any configuration files were overwritten, and you had to manually add the SSLCALISTLOC option again.

When you update your software, the SAS Deployment Wizard looks through all configuration files for any manual additions of the SSLCALISTLOC option. To prevent any interference with the new trusted CA bundle, all manual additions of the SSLCALISTLOC option are commented out in the configuration file. After you finish the software update, your SAS software uses the new trusted CA bundle that shipped with the software update.

If you need to use any additional self-signed or site-signed CA certificates, you must add these certificates to the new trusted CA bundle. You can add certificates to the trusted CA bundle by using the Add Certificate task in the SAS Deployment Manager. Adding CA certificates should be repeated for each machine in the deployment.

Note: You need to add your certificates only the first time that you upgrade to the third maintenance for SAS 9.4. In subsequent upgrades, you do not need to use the SAS Deployment Manager to add these certificates unless you have new or updated certificates. Any new or updated certificates need to be added to the trusted CA bundle.

For more information, see *SAS Deployment Wizard 9.4 and SAS Deployment Manager 9.4: User's Guide* and "Setting Up CA Certificates for SAS Deployment" in *SAS Intelligence Platform: Installation and Configuration Guide*.

Note: Starting in the third maintenance release for SAS 9.4, manually adding any self-signed or site-signed CA certificates to the `cacerts` file is no longer supported.

Hadoop Support

- The requirements for connecting to a Hadoop cluster using either the HADOOP procedure or the FILENAME, Hadoop access method have changed. There is an alternate method for specifying the location of the Hadoop configuration files so that you no longer have to merge properties from multiple Hadoop configuration files and then use the CFG= option to specify the location. You can now use the SAS_HADOOP_CONFIG_PATH environment variable to specify the location of the configuration files. For more information, see the documentation for the HADOOP procedure in *Base SAS Procedures Guide*.
- The CONCAT and DIR Hadoop options in the FILENAME, Hadoop access method are now mutually exclusive because the SAS_HADOOP_CONFIG_PATH environment variable is available.

Output Delivery System (ODS)

- The default EPUB version has changed from EPUB2 to EPUB3. You can change the default EPUB version by updating the SAS registry. For more information, see “Changing ODS EPUB Destination Default Value” in *SAS Output Delivery System: User's Guide*.
- The ODS EPUB and ODS EPUB3 statements no longer support the ENCODING= option. ODS uses the encoding that is specified in the SAS Registry. For more information, see “Changing the ODS EPUB and EPUB3 Encoding Settings” in *SAS Output Delivery System: User's Guide*.

National Language Support (NLS)

The ManxGaelic_UnitedKingdom (gv_GB) locale is no longer supported, and the I18N level has changed for numerous functions. For more information, see “Internationalization Compatibility for SAS String Functions” in *SAS National Language Support (NLS): Reference Guide*.

Procedures

- The new HEADERS statement in PROC HTTP replaces the HEADERIN and CT procedure options. You now can use the new HEADERS statement to specify header requests without providing a fully formatted input file via a fileref. For more information, see “HEADERS Statement” in *Base SAS Procedures Guide*.
- The default method for PROC HTTP when the METHOD or IN options are not specified has changed from POST to GET. For more information, see the PROC HTTP METHOD option in *Base SAS Procedures Guide*.
- For web servers that support caching, the HTTP procedure now uses connection caching and cookie caching by default. For more information, see “HTTP Procedure” in *Base SAS Procedures Guide*.
- The default value of BUFSIZE has changed in PROC MIGRATE. The new default is the buffer page size of the current session. To continue using the previous behavior (which is to clone the page size of the members from the source library), specify BUFSIZE=KEEPSIZE. For more information, see “MIGRATE Procedure” in *Base SAS Procedures Guide*.

SAS Macro Facility

The MVARSIZE system option now has a default value of 65534.

Changes Required for Your Existing SAS Graph Template Language Programs

BARCHART Statement

In SAS 9.4, the BARCHART statement STAT=PCT option now displays percentages in the range 0–100 in order to be consistent with other GTL statements. In prior releases, STAT=PCT displays proportional values in the range 0–1. To restore the proportional values in SAS 9.4 and later releases, change STAT=PCT to STAT=PROPORTION.

In the third maintenance release for SAS 9.4, the COLORSTAT= option is added to the BARCHART statement. The COLORSTAT= option is enabled by the

COLORRESPONSE= option. The COLORSTAT= option specifies the statistic to be calculated for the data range of the bar-color gradient. The default is SUM. For existing SAS programs that use the BARCHART statement, if STAT= is used with COLORRESPONSE= in the BARCHART statement and STAT= specifies a statistic other than SUM, then the bar-chart colors and color statistic might change from those of previous releases. In that case, to restore the original colors and color statistic, set COLORSTAT= in the BARCHART statement to the same statistic that is specified in STAT=.

DENSITYPLOT Statement

In SAS 9.4, the WEIGHT= option of the KERNEL() distribution option in the DENSITYPLOT statement is changed to WEIGHTFUNCTION=. This change enables the addition of the WEIGHT= option in the DENSITYPLOT statement. Starting with SAS 9.4, the WEIGHT= option is not valid in the KERNEL() distribution option and results in a syntax error. If your existing SAS programs specify the WEIGHT= option in the KERNEL() distribution option, then you must change WEIGHT= to WEIGHTFUNCTION=.

HEATMAPPARM Statement

In the third maintenance release for SAS 9.4, the DISCRETEX= and DISCRETEY= options are added to the HEATMAPPARM statement. These options specify whether the X or Y axis is discrete. The default is FALSE. For existing SAS programs that use the HEATMAPPARM statement, if the X axis is discrete, the DISCRETEX=TRUE option must be specified in the HEATMAPPARM statement. Likewise, if the Y axis is discrete, the DISCRETEY=TRUE option must be specified in the HEATMAPPARM statement. Otherwise, the heat map might not be drawn.

WATERFALLCHART Statement

In the third maintenance release for SAS 9.4, the COLORSTAT= option is added to the WATERFALLCHART statement. The COLORSTAT= option is enabled by the COLORRESPONSE= option. The COLORSTAT= option specifies the statistic to be calculated for the data range of the color gradient. The default is SUM. For existing SAS programs that use the WATERFALLCHART statement, if STAT= is used with COLORRESPONSE= in the WATERFALLCHART statement and STAT= specifies a statistic other than SUM, then the chart colors and color statistic might change from

those of previous releases. In that case, to restore the original colors and color statistic, set `COLORSTAT=` in the `WATERFALLCHART` statement to the same statistic that is specified in `STAT=`.

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SAS/ACCESS

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Determining Your Update Path for SAS/ACCESS

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4	9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS/ACCESS 9.4_M1” on page 106, “SAS/ACCESS 9.4_M2” on page 107, and “SAS/ACCESS 9.4_M3” on page 107 (if appropriate).</div><div>2</div><div>To upgrade to the latest release for SAS 9.4, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M1	9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS/ACCESS 9.4_M2” on page 107 and “SAS/ACCESS 9.4_M3” on page 107 (if appropriate).</div><div>2</div><div>To upgrade to the latest release for SAS 9.4, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M2	9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS/ACCESS 9.4_M3” on page 107.</div><div>2</div><div>To upgrade to the latest release for SAS 9.4, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2 9.2, 9.2_M2, 9.2_M3	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you migrate, see “SAS/ACCESS 9.4” on page 105, “SAS/ACCESS 9.4_M1” on page 106, “SAS/ACCESS 9.4_M2” on page 107, and “SAS/ACCESS 9.4_M3” on page 107 (if appropriate).</div></div> <div><div>2</div><div>Install and configure SAS 9.4.</div></div> <div><div>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</div><div><div>■ QuickStart Guides in the SAS Install Center</div><div>■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i></div></div><div><div>For migration information, see the following resources:</div><div><div>■ <i>SAS Intelligence Platform: Migration Guide</i></div><div>■ the product documentation page for SAS/ACCESS</div></div></div></div>

SAS/ACCESS 9.4

Beginning with SAS 9.4, the SAS/ACCESS engines no longer support HP-UX or Linux x86 operating environments.

SAS/ACCESS 9.4 to PC Files imports data from JMP files saved in JMP 7 or later formats, and it exports data to files in JMP 7 or later formats. File formats in JMP 3 through JMP 6 are no longer supported. Support for these newer file formats enables you to access JMP files from mobile apps such as the JMP Graph Builder iPad app. For more information, see “JMP Files” in *SAS/ACCESS Interface to PC Files: Reference*.

- The META statement is used only for importing and exporting JMP files. META is no longer supported and is ignored. Instead, extended attributes are automatically used. If a file has extended attributes, they are automatically transferred to the new file when that file is imported or exported. For example, when importing a JMP file with extended attributes, the attributes are automatically attached to the new SAS data set.
- The META data type for JMP files has been replaced by support for extended attributes. META is ignored in programs, and a NOTE is generated about it in the SAS log.
- The ROWSTATE data type is generated by JMP and is used to store several row-level characteristics. If the JMP file contains row state information, PROC IMPORT stores this information as a new variable with the name `_rowstate_`. If the EXPORT procedure finds a column named `_rowstate_`, the procedure converts this column into the row state information in the output JMP file. For more information, see “JMP Data Types” in *SAS/ACCESS Interface to PC Files: Reference*.
- JMP variable names can be up to 255 characters in length.
- Because you can use the Base SAS IMPORT and EXPORT procedures on JMP files without a SAS/ACCESS license, the preceding information applies to SAS 9.4 as well.

SAS/ACCESS 9.4_M1

The first maintenance release for the SAS/ACCESS 9.4 software shipped in December 2013. The SAS/ACCESS Interface to Relational Databases and the SAS/ACCESS Interface to PC Files include some new and enhanced options.

Also, in the SAS/ACCESS Interface to PC Files when you open a Microsoft Excel workbook (XLSX format), all other worksheets in the workbook have their formulas automatically recalculated. This includes any formulas that reference a sheet that has been added or replaced by PROC EXPORT DBMS=XLSX.

SAS/ACCESS 9.4_M2

The second maintenance release for the SAS/ACCESS 9.4 software shipped in August 2014.

In SAS/ACCESS 9.4 Interface to PC Files, these SAS LIBNAME options are no longer supported: FILELOCK=, CONNECTION=, and CONNECTION_GROUP=.

In the SAS/ACCESS Interface to Hadoop, HiveServer2 is the default Hive protocol. To set the location of Hadoop configuration files, you use the SAS environment variable SAS_HADOOP_CONFIG_PATH and not the CFG= LIBNAME option. The CFG= option is deprecated.

For the SAS/ACCESS Interface to Oracle, starting with Oracle 12c, the default data type for SAS character variables in SAS output has changed to either VARCHAR2 or CLOB, depending on the length of the variable.

SAS/ACCESS 9.4_M3

The third maintenance release for the SAS/ACCESS 9.4 software shipped in July 2015.

In the third maintenance release for SAS 9.4, these SAS/ACCESS features are different:

- The format for specifying octal codes using the BL_ESCAPE= data set option has changed. Specifying these codes with a preceding 'E' is no longer supported. For example, instead of E'\24', specify this code as the three-digit octal code, \024.
- The default value of the SQLGENERATION= system option is now (NONE DBMS='TERADATA DB2 ORACLE NETEZZA ASTER GREENPLM HADOOP SAPHANA IMPALA HAWQ').
- For Hadoop, the NUMTASKS= LIBNAME option is no longer supported.
- For Impala, you can use 'IMPALA' in the LIBNAME statement to specify this engine.

- For MySQL, these functions now require SQL_FUNCTIONS=ALL before they can be passed to MySQL: BYTE, COMPRESS, DATE, DATEPART, DATETIME, LENGTH, REPEAT, ROUND, SOUNDIX, SUBSTR, TIME, TIMEPART, TODAY.
- For OLE DB, the COMPRESS function can be passed via the SQL pass-through facility only when SQL_FUNCTIONS=ALL.
- For PostgreSQL, the COMPRESS and COT functions can be passed automatically via the SQL pass-through facility. These functions do not require SQL_FUNCTIONS=ALL.
- For Teradata, the SUM4 function was removed from the list of functions that can be passed via the SQL pass-through facility. The TRIM function can be passed automatically and does not require SQL_FUNCTIONS=ALL. The LENGTH function does require SQL_FUNCTIONS=ALL.

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SAS Add-In for Microsoft Office

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Determining Your Update Path for the SAS Add-In for Microsoft Office

Upgrading an Existing SAS 9.4 Deployment

The SAS Add-In 6.1 for Microsoft Office and the SAS Add-In 7.1 for Microsoft Office run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.1 (SAS 9.4)	6.1_M1 (SAS 9.4_M1); 7.1, 7.11 (SAS 9.4_M2)	<ol style="list-style-type: none">1 Before you upgrade, see “SAS Add-In 6.1_M1 for Microsoft Office” on page 113 and “SAS Add-In 7.1 for Microsoft Office” on page 114 (if appropriate).2 To upgrade to the latest release of the SAS Add-In for Microsoft Office, see “Install and Configure a Software Update” on page 66.
6.1_M1 (SAS 9.4_M1)	7.1, 7.11 (SAS 9.4_M2)	<ol style="list-style-type: none">1 Before you upgrade, see “SAS Add-In 7.1 for Microsoft Office” on page 114.2 To upgrade to the latest release of the SAS Add-In for Microsoft Office, see “Install and Configure a Software Update” on page 66.
7.1 (SAS 9.4_M2)	7.11 (SAS 9.4_M2)	<ol style="list-style-type: none">1 Before you upgrade, see “SAS Add-In 7.1 for Microsoft Office” on page 114.2 To upgrade to the latest release of the SAS Add-In for Microsoft Office, see “Install and Configure a Software Update” on page 66.

Migrating to SAS 9.4

The SAS Add-In 7.1 for Microsoft Office and the SAS Add-In 6.1 for Microsoft Office work with SAS 9.2, SAS 9.3, and SAS 9.4. This documentation assumes that you want to run the SAS Add-In for Microsoft Office on SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.1, 4.3 (SAS 9.3)	6.1 (SAS 9.4); 6.1_M1 (SAS 9.4_M1); 7.1, 7.11 (SAS 9.4_M2)	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS Add-In 6.1 for Microsoft Office” on page 112, “SAS Add-In 6.1_M1 for Microsoft Office” on page 113, and “SAS Add-In 7.1 for Microsoft Office” on page 114 (if appropriate). 2 To migrate to the new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>. 3 To complete any post-configuration steps, see <i>SAS 9.4 Intelligence Platform: Desktop Administration Guide</i>.
6.1 (SAS 9.4), 6.1_M1 (SAS 9.4_M1),	7.1, 7.11 (SAS 9.4_M2)	To migrate within the same SAS release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .
7.1, 7.11 (SAS 9.4_M2)	7.1 7.11 (SAS 9.4_M2)	To migrate within the same release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .

Managing Multiple Installations of the SAS Add-In for Microsoft Office

You can install multiple releases of the SAS Add-In for Microsoft Office on your computer. The release of the SAS add-in determines what SAS content you can access.

- You can use the SAS Add-In 7.1 for Microsoft Office and SAS Add-In 6.1 for Microsoft Office to access SAS 9.4, SAS 9.3, and SAS 9.2 content.
- You can use the SAS Add-In 5.1 for Microsoft Office to access SAS 9.3 and SAS 9.2 content.

You can use only one release of the SAS add-in at a time. The functionality that is available in the SAS add-in depends on the roles and capabilities that are assigned in SAS Management Console. These settings are release specific. If you are running the SAS Add-In 6.1 for Microsoft Office, you can use only those capabilities that are defined for the 6.1 release. If you are running the SAS Add-In 5.1 for Microsoft Office, you can use only those capabilities that are defined for the 5.1 release. For more information about roles and capabilities for the SAS Add-In for Microsoft Office, see *SAS Intelligence Platform: Desktop Application Administration Guide*.

If you have administrative privileges, use the SAS Add-In for Microsoft Office Utility to select which release of the SAS add-in to enable for selected Microsoft Office applications. (Always use the SAS Add-In for Microsoft Office Utility that is included with the latest release of the SAS add-in.) For more information about this utility, see the Help for the SAS Add-In for Microsoft Office.

SAS Add-In 6.1 for Microsoft Office

Since the 5.1 release, the SAS Add-In for Microsoft Office has been available as either a 32-bit application or a 64-bit application. If you are using a 32-bit Microsoft Windows operating system, then you must use the 32-bit version of the SAS Add-In for Microsoft Office. If you are using a 64-bit Windows operating system, then you can run either the

32-bit version or the 64-bit version of the SAS Add-In for Microsoft Office. Your version of the SAS Add-In for Microsoft Office must match your version of Microsoft Office. For example, if you are running the 32-bit version of Microsoft Office, you must use the 32-bit version of the SAS Add-In for Microsoft Office.

Note: Third-party ActiveX controls are not supported in 64-bit versions of Microsoft Office. If you are running in a 64-bit environment, use the ActiveX image format for your SAS content.

Here are some of the new features in the SAS Add-In 6.1 for Microsoft Office:

- support for Microsoft Office 2013, 2010, and 2007
- enhancements to the automation interfaces, including new objects that enable you to work with reports from SAS Visual Analytics
- support for the Excel XP tagset
- new tasks, such as High-Performance Logistic Regression, High-Performance Linear Regression, SAS Rapid Predictive Modeler, and SAS Recency, Frequency, and Monetary, that provide more integration with other SAS products

A new stand-alone installer is available for the SAS Add-In for Microsoft Office. For more information, see *SAS Deployment Wizard and SAS Deployment Manager 9.4: User's Guide*, available at <http://support.sas.com/deploywizug94.html>.

SAS Add-In 6.1_M1 for Microsoft Office

Before upgrading to the first maintenance release for the SAS Add-In 6.1 for Microsoft Office, review these notes about interoperability with SAS Visual Analytics:

- Using the first maintenance release for the SAS Add-In for Microsoft Office, you can open reports from SAS Visual Analytics 6.2 and 6.3. However, you cannot open reports from SAS Visual Analytics 6.1.
- The SAS Add-In for Microsoft Office 6.1 supported reports from SAS Visual Analytics 6.1. When you upgrade from 6.1 to 6.1_M1, you must upgrade from SAS Visual Analytics 6.1 to SAS Visual Analytics 6.2 or 6.3.

- To use SAS Visual Analytics 6.4, you must apply a hot fix. For more information, see [SAS Note 52813](#).

SAS Add-In 7.1 for Microsoft Office

A new task interface replaces the Task Gallery that was available in the SAS Add-In 6.1 for Microsoft Office. To access this new interface, click **Task** on the **SAS** tab.

The tasks are no longer available as options from the **Task** drop-down menu on the **SAS** tab. To turn on the **Task** drop-down menu, use the new **Show menu for built-in tasks on the Ribbon** option in the Options dialog box.

Also, the **Show Prompts** option on the **SAS** tab has been replaced by the **Report Controls** option. This new option shows the entire report and the prompts. With the report controls, you can filter, drill, expand, collapse, and brush the data.

The SAS Add-In 7.11 for Microsoft Office includes additional features and enhancements. For more information, see the software product page for the [SAS Add-In for Microsoft Office](#).

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Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.1, 6.1_M1, 6.2, 6.2_M1 6.3 (SAS 9.4)	6.3_M1 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.

Migrating to SAS 9.4

To run SAS Anti-Money Laundering 6.1, 6.2, or 6.3, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.2_M1 (SAS 9.3) 6.1, 6.1_M1, 6.2, 6.2_M1, 6.3 (SAS 9.4)	6.3_M1 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.
6.3_M1 (SAS 9.4)	6.3_M1 (SAS 9.4)	To migrate within the same release, see <i>SAS Anti-Money Laundering 6.3: Installation, Configuration, and Administration Guide</i> .

About SAS Anti-Money Laundering

SAS shipped these releases of SAS Anti-Money Laundering:

- SAS Anti-Money Laundering 6.1 in October 2013
- SAS Anti-Money Laundering 6.2 in April 2014
- SAS Anti-Money Laundering 6.3 in January 2015
- the first maintenance release for SAS Anti-Money Laundering 6.3 in October 2015

For more information about this release, contact your SAS account representative and see the product documentation page for [SAS Anti-Money Laundering](#).

Note: The documentation for SAS Anti-Money Laundering is available only to customers who license this product.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.1, 6.1_M1, 6.1_M2 (SAS 9.4)	6.1, 6.1_M1, 6.1_M2 (SAS 9.4)	To migrate within the same release, see <i>SAS Asset Performance Analytics 6.1: Administrator's Guide</i> .

SAS Asset Performance Analytics 6.1

SAS shipped the second maintenance release for SAS Asset Performance Analytics 6.1 in February 2015. For more information about this release, contact your SAS account representative.

For the product documentation, see the product documentation page for [SAS Asset Performance Analytics](#).

Note: The documentation for SAS Asset Performance Analytics is available only to customers who license this product.

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SAS BI Dashboard

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Determining Your Update Path for SAS BI Dashboard

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
4.4 (SAS 9.4)	4.4_M1 (SAS 9.4_M1)	<div><div>1</div><div>To upgrade to the latest release of SAS BI Dashboard 4.4, see “Install and Configure a Software Update” on page 66.</div></div> <div><div>2</div><div>Complete the post-configuration steps in “Updating Favorites in Your Web Browser” on page 124.</div></div>
4.4_M1 (SAS 9.4_M1)	4.4_M2 (SAS 9.4_M2)	
4.4_M2 (SAS 9.4_M2)	4.4_M3 (SAS 9.4_M3)	

Migrating to SAS 9.4

To run SAS BI Dashboard 4.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
4.31, 4.31_M1, 4.31_M2 (SAS 9.3) 4.3 (SAS 9.2_M3)	4.4, 4.4_M1, 4.4_M2, 4.4_M3 (SAS 9.4)	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS BI Dashboard 4.4” on page 123. 2 To migrate to the new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>. 3 Complete the post-configuration steps in “Updating Favorites in Your Web Browser” on page 124 and <i>SAS 9.4 Intelligence Platform: Web Application Administration Guide</i>.
4.4, 4.4_M1, 4.4_M2 (SAS 9.4)	4.4, 4.4_M1, 4.4_M2, 4.4_M3 (SAS 9.4)	To migrate within the same SAS release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .
4.4_M3 (SAS 9.4)	4.4_M3 (SAS 9.4)	To migrate within the same release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .

SAS BI Dashboard 4.4

SAS BI Dashboard 4.4 has the same features and enhancements as SAS BI Dashboard 4.3 and 4.31. The only difference is that SAS BI Dashboard 4.4 runs on SAS 9.4.

SAS BI Dashboard 4.3

If you are running SAS BI Dashboard 4.2, you must upgrade to SAS BI Dashboard 4.3 before upgrading to SAS BI Dashboard 4.4. If you upgrade from 4.2 to 4.4, your data explorations in SAS Web Report Studio 4.2 might not convert properly. For more information, see [Chapter 87, “SAS Web Report Studio,” on page 403](#).

When upgrading to SAS BI Dashboard 4.3, you have these options:

- You can upgrade to the latest release of SAS 9.2. SAS BI Dashboard 4.3 runs on SAS 9.2.

To upgrade to the latest release of SAS 9.2, see [Planning for Maintenance Releases and Product Upgrades for SAS 9.2](#).

- You can upgrade to the latest release of SAS 9.3. SAS BI Dashboard 4.31 runs on SAS 9.3.

When you upgrade to SAS 9.3, you can migrate, or you can create a new deployment. For specific steps, see *SAS 9.3 Intelligence Platform: Migration Guide* (if you are migrating to the new release) or *SAS 9.3 Intelligence Platform: Installation and Configuration Guide* (if you are creating a new deployment). For post-configuration steps, see *SAS 9.3 Intelligence Platform: Web Application Administration Guide*.

Updating Favorites in Your Web Browser

After the deployment of any new release, you must change the release number in the resolved URL that you use to open the product. For example, if you upgraded from 4.3 to 4.4, then the updated URL is `http://server:port/SASLogon/index.jsp?_sasapp=BI+Dashboard+4.4&`.

If you saved the URL for the previous release as a Favorites link in a web browser, then this link is broken when you upgrade to the new release. You must re-create this favorite

for the new release. You can also access SAS BI Dashboard 4.4 by using this unresolved link: `http://server:port/SASBIDashboard`.

Determining Your Update Path for SAS BI Portal

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Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
4.4 (SAS 9.4)	4.4_M1 (SAS 9.4_M1), 4.4_M2 (SAS 9.4_M2), 4.4_M3 (SAS 9.4_M3)	To upgrade to the latest release of SAS BI Portal 4.4, see “Install and Configure a Software Update” on page 66 .
4.4_M1 (SAS 9.4_M1), 4.4_M2 (SAS 9.4_M2)	4.4_M2, (SAS 9.4_M2), 4.4_M3 (SAS 9.4_M3)	

Migrating to SAS 9.4

To run SAS BI Portal 4.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
4.31, 4.31_M1, 4.31_M2 (SAS 9.3) 4.3 (SAS 9.2_M3)	4.4, 4.4_M1, 4.4_M2, 4.4_M3 (SAS 9.4)	To migrate to a new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i> . To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i> .
4.4, 4.4_M1, 4.4_M2 (SAS 9.4)	4.4, 4.4_M1, 4.4_M2 , 4.4_M3 (SAS 9.4)	To migrate within the same SAS release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .
4.4_M3 (SAS 9.4)	4.4_M3 (SAS 9.4)	To migrate within the same release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .

SAS BI Portal 4.4

SAS BI Portal 4.4 shipped in July 2013 and runs on SAS 9.4.

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SAS Business Data Network

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About SAS Business Data Network

SAS Business Data Network initially shipped in November 2014. It is an application that enables you to manage a business data term list. SAS Business Data Network supports a collaborative approach to managing the following information:

- descriptions of business terms, including their requirements and attributes
- related source data and reference data
- contacts (such as technical owners, business owners, and interested parties)
- relationships between terms and processes (such as Data Management Studio jobs, services, and business rules)

By linking terms to business rules and data monitoring processes, SAS Business Data Network provides a single entry point for all data consumers to better understand their data. Data stewards, IT staff, and enterprise architects can use the terms to promote a common vocabulary across projects and business units. Permissions can be set to allow only specific users to access and control the data in SAS Business Data Network.

SAS Business Data Network also provides workflow support that enables you to divide the responsibilities for creating, reviewing, and approving terms among the members of your team. In this way, each role can be fulfilled by the most qualified member of the team.

For more information, see the software product page for [SAS Business Data Network](#).

SAS Business Data Network 3.1

This product is new for SAS 9.4. To determine whether SAS Business Data Network is in your order, review your Software Order Email or the SAS Order Information file. For more information, see [Chapter 8, “Reviewing Your Software Order,” on page 51](#).

If SAS Business Data Network is in your order, you must run the SAS Deployment Wizard a second time to add SAS Business Data Network to your deployment. For more information, see [“Adding a New Product” on page 83](#).

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SAS Business Rules Manager

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Determining Your Update Path for SAS Business Rules Manager

Upgrading an Existing SAS 9.4 Deployment

SAS Business Rules Manager 2.1, 2.2, and 3.1 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources	
2.1 (SAS 9.4)	2.2 (SAS 9.4_M2), 3.1 (SAS 9.4_M3)	1	Before you upgrade, see “SAS Business Rules Manager 2.2” on page 133 and “SAS Business Rules Manager 3.1” on page 134 .
		2	To upgrade to the latest release of SAS Business Rules Manager, see “Install and Configure a Software Update” on page 66 .
		3	Complete the post-installation configuration steps in <i>SAS Business Rules Manager: Administrator’s Guide</i> .
2.2 (SAS 9.4_M2)	3.1 (SAS 9.4_M3)	1	Before you upgrade, see “SAS Business Rules Manager 3.1” on page 134 .
		2	To upgrade to the latest release of SAS Business Rules Manager, see “Install and Configure a Software Update” on page 66 .
		3	Complete the post-installation configuration steps in <i>SAS Business Rules Manager: Administrator’s Guide</i> .

Migrating to SAS 9.4

To run SAS Business Rules Manager 2.1 or 2.2, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
1.2 (SAS 9.3_M2)	2.1 (SAS 9.4), 2.2 (SAS 9.4_M2), 3.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Business Rules Manager 2.2” on page 133 and “SAS Business Rules Manager 3.1” on page 134. 2 To migrate to the new release, see <i>SAS Business Rules Manager: Administrator’s Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>.
2.1 (SAS 9.4), 2.2 (SAS 9.4_M2)	2.2 (SAS 9.4_M2), 3.1 (SAS 9.4_M3)	To migrate to the latest release of SAS Business Rules Manager, see <i>SAS Business Rules Manager: Administrator’s Guide</i> .
3.1 (SAS 9.4_M3)	3.1 (SAS 9.4_M3)	To migrate within the same release, see <i>SAS Business Rules Manager: Administrator’s Guide</i> .

SAS Business Rules Manager 2.2

If you are upgrading from a previous release of SAS Business Rules Manager, note these changes:

- Business contexts have been removed.
- The Designer and Definitions workspaces have been consolidated. Users do not have to switch between workspaces.
- The Business Rules Manager Users group is no longer created during the installation process. The Decision Manager Users group is created instead.
- Rule flow tests and test results are now saved in the file system. Users can delete test cases, including the test results, that are no longer needed. Administrators can delete test results directly from the file system.

In addition, SAS Business Rules Manager 2.2 provides new features and enhancements that enable you to perform these tasks:

- create libraries and register tables in the SAS Metadata Repository
- send rule flows through approval workflows and track workflow tasks
- manage versions of rule sets and rule flows
- create rule flows as stored processes
- run a wizard to generate and import vocabularies, rule sets, and rule flows from an input data source by using the Decision Tree, Scorecard, Market Basket Analysis, or Recency Frequency Monetary discovery techniques
- execute rule flows inside the databases by using the SAS In-Database Code Accelerator for Teradata and Greenplum
- selectively include rule sets in a rule flow
- display the terms and lookup tables that are used in a rule set
- import terms from an input data table
- search for rule sets by term

SAS Business Rules Manager 3.1

SAS Business Rules Manager 3.1 runs on the third maintenance release for SAS 9.4.

Beginning with SAS Business Rules Manager 3.1, the rule set editor does not automatically add the term name in an expression that begins with a minus sign (–). For example, if you enter `-10` for term, SAS Business Rules Manager interprets this as `term = -10`. (The behavior for positive values has not changed. The value `+10` is still interpreted as `term = term +10`.)

For more information, see the software product page for [SAS Business Rules Manager](#).

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SAS/CONNECT

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Determining the Update Path for SAS/CONNECT

Upgrading to an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4, 9.4_M1, 9.4_M2	9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS/CONNECT 9.4_M1” on page 138, “SAS/CONNECT 9.4_M2” on page 138, and “SAS/CONNECT 9.4_M3” on page 138 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS/CONNECT 9.4, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you migrate, see “SAS/CONNECT 9.4” on page 137, “SAS/CONNECT 9.4_M1” on page 138, “SAS/CONNECT 9.4_M2” on page 138, and “SAS/CONNECT 9.4_M3” on page 138 (if appropriate).</div></div> <div><div>2</div><div>Install and configure SAS 9.4.</div></div> <div><p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p><ul style="list-style-type: none">■ QuickStart Guides in the SAS Install Center■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i><p>For migration information, see the following resources:</p><ul style="list-style-type: none">■ <i>SAS Intelligence Platform: Migration Guide</i>■ the product documentation page for SAS/CONNECT</div>

SAS/CONNECT 9.4

The following SAS/CONNECT spawner options are no longer supported:

- -TIMESTAMP
- -LOGEVENTS
- -SECURITY | -NOSECURITY
- -DELETE

The following SAS/CONNECT spawner options have been replaced:

- CNTSPAWN replaces the deprecated SPAWNER command (in Windows operating environments) and the deprecated SASTCPD command (in UNIX and z/OS operating environments) as the new spawner start-up command.
- –UNINSTALL replaces the –DELETE option.
- –LOGCONFIGLOC replaces the –LOGEVENTS and –TIMESTAMP options.
- –SSPI authentication is no longer enabled by default on the SAS/CONNECT spawner.

SAS/CONNECT 9.4_M1

In December 2013, SAS shipped the first maintenance release for SAS 9.4, which includes the new LOCKDOWN statement and LOCKDOWN system option. With LOCKDOWN, SAS server administrators can create a restricted environment in which the SAS client has access to a limited set of directories and files. All other directories and files are inaccessible. In addition to there being access restrictions on directories and files, there are restrictions on how SAS/CONNECT users can sign on when running SAS in a locked-down state. For more information about the LOCKDOWN feature in SAS/CONNECT, see “Locked-Down SAS Sessions” in *SAS/CONNECT User’s Guide*.

SAS/CONNECT 9.4_M2

In August 2014, SAS shipped the second maintenance release for SAS 9.4.

SAS/CONNECT 9.4_M3

In July 2015, SAS shipped the third maintenance release for SAS 9.4.

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SAS Contextual Analysis

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Determining Your Update Path for SAS Contextual Analysis

Upgrading an Existing SAS 9.4 Deployment

SAS Contextual Analysis 12.3, 13.2, and 14.1 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
12.3 (SAS 9.4), 13.2 (SAS 9.4_M2)	13.2 (SAS 9.4_M2); 14.1 and 14.1_M1 (SAS 9.4_M3)	<div><div>1</div>Before you upgrade, see “About SAS Contextual Analysis” on page 140.</div> <div><div>2</div>To upgrade to the latest release of SAS Contextual Analysis, see “Install and Configure a Software Update” on page 66.</div>

Migrating to SAS 9.4

To run SAS Contextual Analysis 13.2 and 14.1, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
13.2 (SAS 9.4_M2)	13.2 (SAS 9.4_M2); 14.1 and 14.1_M1 (SAS 9.4_M3)	For more information, contact your SAS account representative.
14.1, 14.1M1 (SAS 9.4_M3)	14.1, 14.1_M1 (SAS 9.4_M3)	

About SAS Contextual Analysis

SAS Contextual Analysis is a web-based categorization application that combines aspects of the power of SAS Text Miner and components of SAS Enterprise Content Categorization into a single user interface. Using SAS Contextual Analysis, you can build classification models that can automatically categorize a set of input documents. You can modify the text model to meet your needs.

SAS Contextual Analysis enables you to identify key textual topics in your document collections, automatically generate Boolean linguistic rules, and refine the model and use it to categorize documents. You can also take advantage of concept extraction capabilities by writing your own rules. (A concept is a property such as a book title, last name, city, gender, and so on.)

SAS has shipped these releases:

- SAS Contextual Analysis 12.3 in October 2013

- SAS Contextual Analysis 13.2 in August 2014
- SAS Contextual Analysis 14.1 in July 2015
- the first maintenance release for SAS Contextual Analysis 14.1 in November 2015

For more information about these releases, contact your SAS account representative and see the software product page for [SAS Contextual Analysis](#).

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SAS Credit Scoring for Banking

Determining the Update Path for SAS Credit Scoring for Banking

Upgrading an Existing SAS 9.4 Deployment

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Determining the Update Path for SAS Credit Scoring for Banking

Upgrading an Existing SAS 9.4 Deployment

SAS Credit Scoring for Banking 5.3 and 5.4 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
5.3 (SAS 9.4)	5.4 (SAS 9.4)	For more information about how to upgrade to the latest release, see <i>SAS Credit Scoring: Upgrade and Migration Guide</i> .

Migrating to SAS 9.4

To run SAS Credit Scoring for Banking 5.3 or 5.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.1, 5.2 (SAS 9.3)	5.3, 5.4 (SAS 9.4)	For more information, see <i>SAS Credit Scoring: Upgrade and Migration Guide</i> .
5.3 (SAS 9.4)	5.4 (SAS 9.4)	
5.4 (SAS 9.4)	5.4 (SAS 9.4)	

About SAS Credit Scoring for Banking

SAS shipped these releases of SAS Credit Scoring for Banking:

- SAS Credit Scoring for Banking 5.3 in April 2014
- SAS Credit Scoring for Banking 5.4 in May 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Credit Scoring for Banking](#).

Note: The documentation for SAS Credit Scoring for Banking is available only to customers who license this product.

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SAS Customer Due Diligence

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Determining Your Update Path for SAS Customer Due Diligence

Upgrading an Existing SAS 9.4 Deployment

SAS Customer Due Diligence 6.1, 6.2, and 6.3 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.1, 6.2, 6.3 (SAS 9.4)	6.3_M1 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.

Migrating to SAS 9.4

SAS Customer Due Diligence 6.1, 6.2, and 6.3 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.1, 6.2, 6.3 (SAS 9.4)	6.3_M1 (SAS 9.4)	For more information about how to migrate to the latest release, contact your SAS account representative.

SAS Customer Due Diligence 6.1

SAS shipped SAS Customer Due Diligence 6.1 in November 2013. For more information about this release, contact your SAS account representative.

For the product documentation, see the product documentation page for [SAS Customer Due Diligence](#).

Note: The documentation for SAS Customer Due Diligence is available only to customers who license this product.

SAS Customer Due Diligence 6.2

SAS shipped SAS Customer Due Diligence 6.2 in April 2014. For more information about this release, contact your SAS account representative.

For the product documentation, see the product documentation page for [SAS Customer Due Diligence](#).

Note: The documentation for SAS Customer Due Diligence is available only to customers who license this product.

SAS Customer Due Diligence 6.3

SAS shipped SAS Customer Due Diligence 6.3 in January 2015. This release includes some SAS Visual Analytics components. For more information about how to deploy these components, see [“Adding SAS Visual Analytics to Your Deployment” on page 84](#).

The first maintenance release for SAS Customer Due Diligence 6.3 shipped in October 2015.

For more information about the new features and enhancements in this release, contact your SAS account representative and see the product documentation page for [SAS Customer Due Diligence](#).

Note: The documentation for SAS Customer Due Diligence is available only to customers who license this product.

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SAS Customer Intelligence

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Determining the Update Path for SAS Customer Intelligence

Upgrading an Existing SAS 9.4 Deployment

SAS Customer Intelligence includes these products:

- SAS Digital Marketing
- SAS Marketing Automation
- SAS Marketing Optimization
- SAS Real-Time Decision Manager

SAS Customer Intelligence 6.3 and 6.4 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.3 (SAS 9.4)	6.4 (SAS 9.4)	For more information about this release, contact your SAS account representative.

Migrating to SAS 9.4

To run SAS Customer Intelligence 6.3 or 6.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.1, 5.41 (SAS 9.3)	6.3, 6.4 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.
6.3 (SAS 9.4)	6.4 (SAS 9.4)	To migrate to SAS Customer Intelligence 6.4, contact your SAS account representative.
6.4 (SAS 9.4)	6.4 (SAS 9.4)	To migrate within the same release, see the documentation for SAS Customer Intelligence.

SAS Customer Intelligence 6.3

These products are included in SAS Customer Intelligence 6.3, which shipped in May 2014:

- SAS Digital Marketing 6.3

- SAS Marketing Automation 6.3
- SAS Marketing Optimization 6.3
- SAS Real-Time Decision Manager 6.3

For more information about this release, contact your SAS account representative and see the product documentation page for [SAS Customer Intelligence](#).

Note: The documentation for SAS Customer Intelligence is available only to customers who license this product.

SAS Customer Intelligence 6.4

These products are included in SAS Customer Intelligence 6.4, which shipped in March 2015:

- SAS Digital Marketing 6.4
- SAS Marketing Automation 6.4
- SAS Marketing Optimization 6.4
- SAS Real-Time Decision Manager 6.4

For more information about this release, contact your SAS account representative and see the product documentation page for [SAS Customer Intelligence](#).

Note: The documentation for SAS Customer Intelligence is available only to customers who license this product.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.5 (SAS 9.4)	5.6 (SAS 9.4)	For more information about how to migrate to the latest release, contact your SAS account representative.
5.6 (SAS 9.4)	5.6 (SAS 9.4)	

SAS Customer Link Analytics 5.5

SAS shipped SAS Customer Link Analytics 5.5 in March 2014. For more information about this release, contact your SAS account representative.

For the product documentation, see the product documentation page for [SAS Customer Link Analytics](#).

Note: The documentation for SAS Customer Link Analytics is available only to customers who license this product.

SAS Customer Link Analytics 5.6

SAS shipped SAS Customer Link Analytics 5.6 in February 2015. This release includes some SAS Visual Analytics components. For more information about how to deploy these components, see “[Adding SAS Visual Analytics to Your Deployment](#)” on page 84.

For more information about the new features and enhancements in this release, contact your SAS account representative and see the product documentation page for [SAS Customer Link Analytics](#).

Note: The documentation for SAS Customer Link Analytics is available only to customers who license this product.

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SAS and DataFlux

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About SAS and DataFlux

SAS has fully integrated the DataFlux suite of data quality, data integration, data governance, and master data management solutions. Incorporating the DataFlux brand into SAS helps customers build a more integrated information management approach

that goes beyond data management and governance to support analytics and decision management.

Some DataFlux products are being enhanced and changing their names to SAS, and others will in the future. For example, in the SAS 9.4 release, DataFlux Federation Server has been enhanced and become SAS Federation Server. In this release, SAS has also created new web-based products that include new features and some functionality from earlier DataFlux products, such as SAS MDM for master data management. Certain SAS data management offerings include these newer versions of the SAS products.

Instead of being licensed separately, DataFlux products are now part of SAS software offerings that include other SAS products as well. For example, the SAS Data Management offering includes Base SAS and the SAS Metadata Server as well as DataFlux Data Management Studio and Data Management Server.

These DataFlux products are now part of SAS software offerings:

- DataFlux Authentication Server
- DataFlux Data Management Server
- DataFlux Data Management Studio
- DataFlux Expression Language
- DataFlux Quality Knowledge Base for Contact Information (See also SAS Quality Knowledge Base.)
- DataFlux Quality Knowledge Base for Product Data (See also SAS Quality Knowledge Base.)
- DataFlux Secure
- DataFlux Web Studio

In certain SAS data management offerings, the following SAS products replace older DataFlux products:

- SAS Event Stream Processing Engine

- SAS Federation Server, which includes SAS Federation Server Manager and SAS Drivers for Federation Server
- SAS MDM, which includes new products such as SAS Data Remediation and SAS Task Manager

The following DataFlux products are still supported but are used only in earlier software releases:

- DataFlux dfPower Studio and DataFlux Integration Server
- DataFlux Event Stream Processing Engine
- DataFlux Federation Server, which includes DataFlux Federation Server Manager and DataFlux Drivers for ODBC and JDBC.
- DataFlux qMDM Solution

For more information, see product names that begin with “DataFlux” on the [SAS Product Documentation](#) page.

For more information, see the product-specific software pages in the [SAS Product Listing: Index A-Z](#).

Migrating SAS Enterprise Data Integration Server to SAS 9.4

In SAS 9.4, the SAS Data Management Standard 2.41 offering replaces the SAS Enterprise Data Integration Server offering. For more information, see the software product page for [SAS Data Management and SAS Data Integration Server](#).

SAS Enterprise Data Integration Server included SAS/SHARE, but the SAS Data Management Standard offering does not. As a result, your source environment might include SAS/SHARE, but your migrated SAS 9.4 environment will not.

Note: In SAS Management Console, if you see a SAS/SHARE server in the metadata, this server reference is a remnant from the source environment. No SAS/SHARE server is listed in the SAS configuration directory.

If you want to continue using SAS/SHARE, contact your SAS account representative. If your site is licensed for SAS/SHARE, work with your SAS account representative to include SAS/SHARE in your software order.

Migration Issue for SAS Data Management

If you are migrating and getting SAS Data Management or any components for SAS Data Management (such as SAS Job Monitor, SAS Task Manager, SAS Data Remediation, or SAS Visual Process Orchestration) for the first time, you might encounter migration failures in the November 2014 release of SAS 9.4 (SAS 9.4, Rev. 940_14w47). For more information, see [SAS Note 54631](#).

Determining Your Update Path for DataFlux Products

To upgrade from a previous release, complete the steps described in your product's installation and configuration guide or in the product's administrator's guide.

DataFlux Authentication Server 4.1

The DataFlux Authentication Server 4.1 software is now required for use with the SAS Federation Server and the DataFlux Web Studio Server only. Other DataFlux clients and servers can use the DataFlux Authentication Server 4.1 software as they did in previous releases.

The installation process for the UNIX and Linux operating environments now configures host authentication. Formerly, this configuration process took place after installation. Now, after installation, you can reconfigure authentication as needed, as described in *DataFlux Authentication Server 4.1 Administrator's Guide*.

You use the SAS Deployment Wizard to configure the metadata for DataFlux Authentication Server 4.1 and SAS Federation Server 4.1. However, before the 4.1 release, no metadata existed for these products. As a result, you must run the SAS Deployment Wizard twice to upgrade from the 3.2 release to the 4.1 release.

During the first run, the SAS Deployment Wizard applies any maintenance releases and installs any product updates. Because no metadata exists yet for DataFlux Authentication 4.1 and SAS Federation Server 4.1, you cannot configure these products. You must run the SAS Deployment Wizard a second time to complete the configuration steps.

DataFlux Data Management Server 2.5

The DataFlux Data Management Server 2.5 supports the ability to authenticate users against the SAS Metadata Repository. Beginning with SAS 9.4, the SAS Metadata Server can be configured to run in a clustered node in order to support high availability.

However, the DataFlux Data Management Server 2.5 is not aware of metadata server clusters. Therefore, it connects to the host and port address of a single node in the cluster. This configuration works as expected as long as the addressed node is running.

DataFlux Data Management Studio 2.6

Previous releases of DataFlux Data Management Studio included administrative interfaces for DataFlux Business Data Network. These interfaces have been removed. DataFlux Business Data Network has been replaced by a new web client, SAS Business Data Network. For more information, see [Chapter 20, “SAS Business Data Network,” on page 129](#).

Similarly, previous releases of DataFlux Data Management Studio exported lineage information to DataFlux Business Data Network. DataFlux Data Management Studio now exports lineage information to a new web client, SAS Lineage Viewer. For more information, see [Chapter 62, “SAS Lineage,” on page 303](#).

DataFlux Secure

DataFlux Secure 2.41

DataFlux Secure 2.41 is now installed as part of the regular installation process for these products:

- DataFlux Authentication Server 2.41
- DataFlux Data Management Server 2.41
- DataFlux Data Management Studio 2.41
- DataFlux Web Studio 2.41
- DataFlux Web Studio Server 2.41
- SAS Federation Server 3.2
- SAS Federation Server Client 3.2
- SAS Federation Server Manager 3.2

DataFlux Secure is installed in a disabled state. If you have not used DataFlux Secure before, and if you do not want to use it now, then do not change your previous configuration files as you move them forward into 2.41.

If you have used DataFlux Secure before, then you need to configure all of your products to enable the provided security features. To enable and configure DataFlux Secure, see *DataFlux Secure: Administrator's Guide*.

If you want to configure DataFlux Secure for the first time, you need to enable and configure DataFlux Secure on all instances of the products listed earlier. Global enablement ensures that the same level of protection is provided for all of your servers, clients, and network connections.

DataFlux Secure 2.5

DataFlux Secure 2.5 applies to these products:

- DataFlux Authentication Server 4.1
- DataFlux Data Management Server 2.5
- DataFlux Data Management Studio 2.5
- DataFlux Web Studio 2.5
- DataFlux Web Studio Server 2.5
- SAS Federation Server 4.1
- SAS Federation Server Client 4.1
- SAS Federation Server Manager 4.1
- SAS Visual Process Orchestration 2.1 Runtime Server
- SAS Visual Process Orchestration 2.1 web client

DataFlux Secure 2.5 is installed in a disabled state. To enable and configure DataFlux Secure, see *DataFlux Secure: Administrator's Guide*.

DataFlux Authentication Server now provides automated configuration of authentication in UNIX and Linux installations. The server now starts automatically after all installations. The server also now enables the generation of user names in log files, instead of metadata IDs. And the server does not start if a port number is not specified during installation. Administrators can now add users with the ASBATCH utility and the AdminLoginManagementPolicy option.

DataFlux Web Studio 2.5

- If you update DataFlux Web Studio 2.4.1 to DataFlux Web Studio 2.5 and DataFlux Data Management Studio 2.5 to DataFlux Management Studio 2.6 at the same time, you must add the following options to the `app.cfg` file for the DataFlux Web Studio

Server. If you do not add these options, DataFlux Web Studio Server will not start after you upgrade the software.

- ☐ `BASE/REPOS_VERSION_ACCEPT_LOW=8`
- ☐ `BASE/REPOS_VERSION_ACCEPT_HIGH=8`
- DataFlux Web Studio 2.5 no longer contains the Business Data Network module. SAS Business Data Network 3.1 and SAS Lineage 3.1 are available as separate products. For more information, see [Chapter 20, “SAS Business Data Network,” on page 129](#) and [Chapter 62, “SAS Lineage,” on page 303](#).

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SAS Data Integration Studio

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Determining Your Update Path for SAS Data Integration Studio

Updating an Existing SAS 9.4 Deployment

SAS Data Integration Studio 4.7, 4.8, and 4.9 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources	
4.7 (SAS 9.4)	4.8 (SAS 9.4_M1), 4.9 (SAS 9.4_M2), 4.901 (SAS 9.4_M3)	1	Before you upgrade, see “SAS Data Integration Studio 4.7_M1 and 4.8” on page 168 and “SAS Data Integration Studio 4.7_M2 and 4.9” on page 168 (if appropriate).
		2	To upgrade to SAS Data Integration Studio 4.8 or 4.9, see “Install and Configure a Software Update” on page 66.
4.8 (SAS 9.4_M1)	4.9 (SAS 9.4_M2), 4.901 (SAS 9.4_M3)	1	Before you upgrade, see “SAS Data Integration Studio 4.7_M2 and 4.9” on page 168.
		2	To upgrade to SAS Data Integration Studio 4.9, see “Install and Configure a Software Update” on page 66.

Migrating to SAS 9.4

To run SAS Data Integration Studio 4.7, 4.8, or 4.9, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
4.6 (SAS 9.3)	4.7 (SAS 9.4), 4.8 (SAS 9.4_M1), 4.9 (SAS 9.4_M2), 4.901 (SAS 9.4_M3)	<div><div>1</div><div>Before you upgrade, see “SAS Data Integration Studio 4.7” on page 167, “SAS Data Integration Studio 4.7_M1 and 4.8” on page 168 , and “SAS Data Integration Studio 4.7_M2 and 4.9” on page 168 (if appropriate).</div></div> <div><div>2</div><div>To migrate to SAS 9.4, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>.</div></div>

SAS Data Integration Studio 4.7

In releases prior to SAS Data Integration Studio 4.5, error tables for Data Validation transformations were not specified with a full path. In these earlier releases, the path was specified as a text string that contained the libref and table name. This text string no longer suffices to specify the error table.

SAS Data Integration Studio 4.5 (and later) provides two ways to register an error table in metadata:

- Use the **Error & Exception** tab in the properties window for the transformation.
- Right-click on the transformation and select **Add Error Table**.

After you have registered an error table in the metadata, complete these steps:

- 1

Double-click the port for the error table (the second port in the hierarchy of ports on the Data Validation transformation).
- 2

Click the **Physical Storage** tab.
- 3

Specify the name of an error table and point to the library in which it is registered. This name could be the name of the error table for the job that you migrated.

4 Save your changes.

SAS Data Integration Studio 4.7_M1 and 4.8

SAS Data Integration Studio 4.7_M1 is actually SAS Data Integration Studio 4.8, which shipped in December 2013. When you upgrade to SAS Data Integration Studio 4.8, the SAS Deployment Wizard and the deployment registry list the release number as 4.7_M1. However, after you install SAS Data Integration Studio, the release number that appears in the software is 4.8.

SAS Data Integration Studio 4.7_M2 and 4.9

SAS Data Integration Studio 4.7_M2 is actually SAS Data Integration Studio 4.9, which shipped in August 2014. When you upgrade to SAS Data Integration Studio 4.9, the SAS Deployment Wizard and the deployment registry list the release number as 4.7_M2. However, after you install SAS Data Integration Studio, the release number that appears in the software is 4.9.

You cannot use the **Analyze in Web Viewer** option in SAS Data Integration Studio unless the SAS Lineage web client is installed. If the SAS Lineage web client is available on your network, you can use it to display lineage for tables and external files that are used in SAS Data Integration Studio. For more information, see [Chapter 62, “SAS Lineage,”](#) on page 303.

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SAS Data Quality Accelerator for Teradata

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Determining Your Update Path for SAS Data Quality Accelerator for Teradata

Upgrading an Existing SAS 9.4 Deployment

SAS Data Quality Accelerator 2.4, 2.5, and 2.6 for Teradata run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
2.4 (SAS 9.4)	2.5, 2.6 (SAS 9.4)	<div><div>1</div><div>Before you upgrade, see “SAS Data Quality Accelerator 2.5 for Teradata” on page 171 and “SAS Data Quality Accelerator 2.6 for Teradata” on page 171 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS Data Quality Accelerator for Teradata, see “Install and Configure a Software Update” on page 66.</div></div>
2.5 (SAS 9.4)	2.6 (SAS 9.4)	<div><div>1</div><div>Before you upgrade, see “SAS Data Quality Accelerator 2.6 for Teradata” on page 171.</div></div> <div><div>2</div><div>To upgrade to SAS Data Quality Accelerator 2.6 for Teradata, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
2.4, 2.5 (SAS 9.4)	2.5, 2.6 (SAS 9.4)	To migrate within the same SAS release, see <i>SAS In-Database Products: Administrator's Guide</i> .

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
2.6 (SAS 9.4)	2.6 (SAS 9.4)	To migrate within the same release, see <i>SAS In-Database Products: Administrator's Guide</i> .

SAS Data Quality Accelerator 2.5 for Teradata

SAS Data Quality Accelerator 2.5 for Teradata shipped in March 2014. Here are the changes to the existing stored procedures:

- The session-based stored procedures have been retired. The accelerator now provides one set of data quality stored procedures, which specify the locale as a stored procedure parameter. To use the locale value set with `DQ_SET_LOCALE()`, customers specify NULL in the locale parameter.
- The data quality stored procedure syntax has been changed such that optional parameters are specified at the end of the syntax specification.

To remove the session-based variants and use the new syntax, you need to rewrite your existing client programs.

SAS Data Quality Accelerator 2.6 for Teradata

SAS Data Quality Accelerator 2.6 for Teradata shipped in February 2015. SAS Data Quality Accelerator 2.6 for Teradata includes internal enhancements that provide improved memory management and streamline the software infrastructure. For more information, see the software product page for [SAS Data Quality Accelerator](#).

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SAS Data Quality Server

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SAS 9.4 Data Quality Server 174

Determining Your Update Path for SAS Data Quality Server

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4, 9.4_M1, 9.4_M2	9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS 9.4 Data Quality Server” on page 174.</div></div> <div><div>2</div><div>To upgrade to the latest release for SAS 9.4, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

To run SAS Data Quality Server 9.4, you must be running SAS 9.4 You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4	<div><div><div>1</div><div>Before you migrate, see “SAS 9.4 Data Quality Server” on page 174.</div></div><div><div>2</div><div>Install and configure SAS 9.4.</div></div></div> <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none">■ QuickStart Guides in the SAS Install Center■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For migration information, see the following resources:</p> <ul style="list-style-type: none">■ <i>SAS Intelligence Platform: Migration Guide</i>■ the product documentation page for SAS Data Quality Server

SAS 9.4 Data Quality Server

The SAS integration of DataFlux products has resulted in resource changes that might affect SAS Data Quality customers. For technical support, licensing (new and renewals), and downloads, as well as documentation and training, customers now use the resources on the [SAS Support site](#). The MyDataFlux Portal is no longer supported.

In SAS 9.3, all functions and procedures that contain the DQSRV prefix were deprecated. The DQSRV functions were used with the DataFlux Integration Server. However, the DMSRV functions support the DataFlux Data Management Server.

SAS Data Remediation

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Determining Your Update Path for SAS Data Remediation

Upgrading an Existing SAS 9.4 Deployment

SAS Data Remediation 2.1 and 2.2 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
2.1, 2.1_M1 (SAS 9.4)	2.2 (SAS 9.4)	For more information about this release, contact your SAS account representative.

Migrating to SAS 9.4

SAS Data Remediation 2.1 is a new product that runs on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
2.1, 2.1_M1 (SAS 9.4)	2..2 (SAS 9.4)	To migrate to SAS Data Remediation 2.2, see <i>SAS MDM: Administrator's Guide</i> .
2.2 (SAS 9.4)	2.2 (SAS 9.4)	To migrate within the same release, see <i>SAS MDM: Administrator's Guide</i> .

About SAS Data Remediation

SAS shipped these releases of SAS Data Remediation:

- the first maintenance release for SAS Data Remediation 2.1 in April 2014
- SAS Data Remediation 2.2 in March 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Data Remediation](#).

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SAS Decision Manager

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Determining Your Update Path for SAS Decision Manager

Upgrading an Existing SAS 9.4 Deployment

SAS Decision Manager 2.1, 2.2, and 3.1 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
2.1 (SAS 9.4)	2.2 (SAS 9.4_M2)	<ol style="list-style-type: none">1 Before you upgrade, see “SAS Decision Manager 2.2” on page 179.2 To upgrade to the latest release of SAS Decision Manager, see “Install and Configure a Software Update” on page 66.3 Complete the post-upgrade steps in <i>SAS Decision Manager: Administrator’s Guide</i> .
2.2 (SAS 9.4_M2)	3.1 (SAS 9.4_M3)	<ol style="list-style-type: none">1 Before you upgrade, see “SAS Decision Manager 3.1” on page 179.2 To upgrade to the latest release of SAS Decision Manager, see “Install and Configure a Software Update” on page 66.3 Complete the post-upgrade steps in <i>SAS Decision Manager: Administrator’s Guide</i>.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
2.1 (SAS 9.4), 2.2 (SAS 9.4_M2)	2.2 (SAS 9.4_M2), 3.1 (SAS 9.4_M3)	To migrate to the latest release of SAS Decision Manager, see <i>SAS Decision Manager: Administrator’s Guide</i> .
3.1 (SAS 9.4_M3)	3.1 (SAS 9.4_M3)	To migrate within the same release, see <i>SAS Decision Manager: Administrator’s Guide</i> .

SAS Decision Manager 2.2

If you are upgrading to SAS Decision Manager 2.2, note these changes:

- Business contexts have been removed.
- The Designer and Definitions workspaces have been consolidated. Users do not have to switch between workspaces.
- The Business Rules Manager Users group is no longer created during the installation process. The Decision Manager Users group is created instead.
- Rule flow tests and test results are now saved in the file system. Users can delete test cases, including the test results, that are no longer needed. Administrators can delete test results directly from the file system.
- Decision flow functionality is not available in SAS Decision Manager 2.2, but is available in SAS Real-Time Decision Manager.
- The full functionality of the SAS Model Manager Java Client application and the Workflow Console web-based application have been integrated into SAS Decision Manager 2.2.

SAS Decision Manager 3.1

SAS Decision Manager 3.1 runs on the third maintenance release for SAS 9.4.

Beginning with SAS Decision Manager 3.1, the rule set editor does not automatically add the term name in an expression that begins with a minus sign (-). For example, if you enter `-10` for term, SAS Decision Manager interprets this as `term = -10`. (The behavior for positive values has not changed. The value `+10` is still interpreted as `term = term +10`.)

For more information, see the software product page for [SAS Decision Manager](#).

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SAS Decision Services

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SAS Decision Services 6.3 182

Determining the Update Path for SAS Decision Services

Upgrading an Existing SAS 9.4 Deployment

SAS Decision Services 6.2 and 6.3 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.2 (SAS 9.4)	6.3 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.

Migrating to SAS 9.4

To run SAS Decision Services 6.2 or 6.3, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.6, 5.5, 5.5_M1 (SAS 9.3) 5.4, 5.4_M1 (SAS 9.2)	6.3, 6.2 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.
6.2 (SAS 9.4)	6.3 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.
6.3 (SAS 9.4)	6.3 (SAS 9.4)	To migrate within the same release, see the documentation for SAS Decision Services 6.3.

SAS Decision Services 6.3

SAS shipped SAS Decision Services 6.3 in May 2014.

For more information about this release, contact your SAS account representative and see the product documentation page for [SAS Decision Services](#).

Note: The documentation for SAS Decision Services is available only to customers who license this product.

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SAS Digital Marketing

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Determining Your Update Path for SAS Digital Marketing

Upgrading an Existing SAS 9.4 Deployment

SAS Digital Marketing 6.3 and 6.4 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.3 (SAS 9.4)	6.4 (SAS 9.4)	For more information about this release, contact your SAS account representative.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.1, 5.41 (SAS 9.3)	6.3, 6.4 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.
6.3 (SAS 9.4)	6.4 (SAS 9.4)	To migrate to SAS Digital Marketing 6.4, contact your SAS account representative.
6.4 (SAS 9.4)	6.4 (SAS 9.4)	To migrate within the same release, contact your SAS account representative.

About SAS Digital Marketing

SAS shipped these releases of SAS Digital Marketing:

- SAS Digital Marketing 6.3 in May 2014
- SAS Digital Marketing 6.4 in March 2015

For more information, contact your SAS account representative and see the product documentation page for [SAS Customer Intelligence](#).

Note: The documentation for SAS Digital Marketing is available only to customers who license this product.

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SAS Document Conversion Server

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About SAS Document Conversion Server

The SAS Document Conversion Server is a helper service that extracts plain text from file formats, so that the text can be analyzed by SAS Text Miner. File formats include PDF, Microsoft Office (DOC, DOCX, PPT, PPTX, XLS, XLSX), OpenOffice.org (ODT, ODP, ODS), and RTF. By default, the **Text Import** node and the %TMFILTER macro communicate with the SAS Document Conversion Server on TCP port 7111.

For more information about SAS Text Miner, see [Chapter 82, “SAS Text Miner,”](#) on page 373.

Determining Your Update Path for SAS Document Conversion Server

Upgrading an Existing SAS 9.4 Deployment

SAS Document Conversion Server is installed as part of SAS Text Miner. SAS Text Miner 12.3 and 13.1 run on SAS 9.4.

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
SAS Text Miner 12.3 (SAS Document Conversion Server 12.3)	SAS Text Miner 13.1 (SAS Document Conversion Server 13.1)	<p>For more information about how to request this new release and the features that are available, contact your SAS account representative.</p> <p>To upgrade to SAS Document Conversion Server 13.1, see “SAS Document Conversion Server 13.1” on page 188.</p>

Migrating to SAS 9.4

To run SAS Text Miner 12.3 or 13.1, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
SAS Text Miner 12.1 or 12.1_M1 (SAS Document Conversion Server 12.1 or 12._M1)	SAS Text Miner 12.3 or 13.1 (SAS Document Conversion Server 12.3 or 13.1)	For more information about how to request this new release and the features that are available, contact your SAS account representative.
SAS Text Miner 5.1_M1 (SAS Document Conversion Server 5.1_M1)		To upgrade to SAS Document Conversion Server 12.3 or 13.1, see “SAS Document Conversion Server 12.3” on page 187 or “SAS Document Conversion Server 13.1” on page 188 .

SAS Document Conversion Server 12.3

SAS Document Conversion Server 12.3 is automatically installed when you upgrade to SAS Text Miner 12.3. For more information about prerequisites, how to operate the SAS Document Conversion Server, and how to change the port, see the `SAS_Document_Conversion_readme.pdf` in the **ReadMeFiles** directory in your SAS Software Depot.

To upgrade to SAS Document Conversion Server 12.3:

- 1 In the Windows Control panel, use the Add or Remove Programs functionality to uninstall the SAS Document Conversion Server.
- 2 Run the SAS Deployment Wizard to update all relevant components, including the first maintenance release for SAS Text Miner 5.1.

- 3 After this installation is complete, run the SAS Deployment Wizard again and install only the SAS Document Conversion Server.

SAS Document Conversion Server 13.1

SAS Document Conversion Server 13.1 is automatically installed when you upgrade to SAS Text Miner 13.1. For more information about prerequisites, how to operate the SAS Document Conversion Server, and how to change the port, see the `SAS_Document_Conversion_readme.pdf` in the **ReadMeFiles** directory in your SAS Software Depot.

To upgrade to SAS Document Conversion Server 13.1:

- 1 In the Windows Control panel, use the Add or Remove Programs functionality to uninstall the SAS Document Conversion Server.
- 2 Run the SAS Deployment Wizard to update all relevant components, including the first maintenance release for SAS Text Miner 5.1.
- 3 After this installation is complete, run the SAS Deployment Wizard again and install only the SAS Document Conversion Server.

Note: In UNIX operating environments, after you upgrade to SAS Document Conversion Server 13.1, you have both a 12.3 and a 13.1 directory. To manage your installation of SAS Document Conversion Server, use the scripts in the new 13.1 directory. To remove the 12.3 directory, run `uninstall.sh` in the 12.3 directory (which removes the contents of the directory), and then delete the 12.3 directory.

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Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.1, 6.1_M1, 6.2, 6.2_M2, 6.3 (SAS 9.4)	6.3_M1 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You are Upgrading To (SAS Release)	High-Level Steps and Resources
6.1, 6.1_M1, 6.2, 6.2_M2, 6.3 (SAS 9.4) 3.2_M1 (SAS 9.3)	6.3_M1 (SAS 9.4)	For more information about how to migrate to the latest release of SAS Enterprise Case Management, see <i>SAS Enterprise Case Management: Administrator's Guide</i> .

SAS Enterprise Case Management

SAS shipped these releases of SAS Enterprise Case Management:

- SAS Enterprise Case Management 6.1 in October 2013.
- SAS Enterprise Case Management 6.2 in April 2014.
- SAS Enterprise Case Management 6.3 in January 2015. This release includes some SAS Visual Analytics components. For more information about how to deploy these components, see [“Adding SAS Visual Analytics to Your Deployment” on page 84](#).
- the first maintenance release for SAS Enterprise Case Management 6.3 in October 2015.

For more information about the new features and enhancements in each release, contact your SAS account representative.

For the product documentation, see the product documentation page for [SAS Enterprise Case Management](#).

Note: The documentation for SAS Enterprise Case Management is available only to customers who license this product.

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SAS Enterprise GRC

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Determining Your Update Path for SAS Enterprise GRC

Updating an Existing SAS 9.4 Deployment

SAS Enterprise GRC 6.1 is the first release on SAS 9.4.

Migrating to SAS 9.4

To work with SAS Enterprise GRC 6.1, you must be running SAS 9.4. To migrate from a previous release of SAS Enterprise GRC, see *SAS Enterprise GRC: Installation and Configuration Guide*.

SAS Enterprise GRC 6.1

SAS Enterprise GRC 6.1 shipped in October 2014. For more information about the new features in this release, see the software product page for [SAS Enterprise GRC](#).

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SAS Enterprise Guide

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Determining Your Update Path for SAS Enterprise Guide

Updating an Existing SAS 9.4 Deployment

SAS Enterprise Guide 7.1 and 6.1 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.1 (SAS 9.4)	6.1_M1 (SAS 9.4_M1); 7.1, 7.11 (SAS 9.4_M2)	<div><div>1</div>Before you upgrade, see “SAS Enterprise Guide 6.1_M1” on page 197 and “SAS Enterprise Guide 7.1” on page 198 (if appropriate).</div> <div><div>2</div>To upgrade to the latest release of SAS Enterprise Guide, see “Install and Configure a Software Update” on page 66.</div>

Migrating to SAS 9.4

SAS Enterprise Guide 7.1 and 6.1 work with SAS 9.2, SAS 9.3, and SAS 9.4. This documentation assumes that you want to run SAS Enterprise Guide on SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.1, 4.3 (SAS 9.3)	6.1 (SAS 9.4); 6.1_M1 (SAS 9.4_M1); 7.1, 7.11 (SAS 9.4_M2)	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS Enterprise Guide 6.1” on page 195, “SAS Enterprise Guide 6.1_M1” on page 197, and “SAS Enterprise Guide 7.1” on page 198 (if appropriate). 2 To migrate to the new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>. 3 To complete any post-configuration steps, see <i>SAS 9.4 Intelligence Platform: Desktop Application Administration Guide</i>.
6.1 (SAS 9.4), 6.1_M1 (SAS 9.4_M1)	7.1, 7.11 (SAS 9.4_M2)	To migrate within the same SAS release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .
7.1, 7.11 (SAS 9.4_M2)	7.1, 7.11 (SAS 9.4_M2)	To migrate within the same release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .

SAS Enterprise Guide 6.1

Removal of Several Styles

In SAS 9.4, these styles were removed:

- Astronomy.css
- Banker.css
- beige.css
- brick.css
- brown.css
- Curve.css
- d3d.css
- Education.css
- EGDefault82.css
- Electronics.css
- Gears.css
- Magnify.css
- Money.css
- Rsvp.css
- sansprinter.css
- Science.css
- serifprinter.css
- Sketch.css
- Solutions.css
- Theme.css
- Tom.css
- Watercolor.css

The removal of these styles could affect the SAS Enterprise Guide user in either of these ways:

- If your default style in SAS Enterprise Guide is set to one of the styles that were removed, you will not see any styles when you open a result. The HTML appears white, and the default for any SAS Report content defaults to sasweb. If you rerun the SAS Enterprise Guide project, the style is reset to HtmlBlue.
- The code or SAS task that generates the results refers to a style that has been removed. In this case, you must edit the code to refer to an existing style, or contact SAS Technical Support to obtain a ZIP file that contains the removed styles.

Changes from Earlier Releases

If you are upgrading from SAS Enterprise Guide 4.3 or an earlier release, these considerations might apply to your site:

- SAS Enterprise Guide repositories are no longer supported. All metadata must be stored in a SAS Metadata Repository.
- Administration tasks (such as administering servers, users, and user groups) must be done using SAS Management Console (instead of through SAS Enterprise Guide Explorer).
- Tasks are no longer enabled or disabled for user groups, so task assignments for SAS Enterprise Guide users are not maintained. Any restrictions on SAS Enterprise Guide tasks must be made through roles and administered through SAS Management Console. For more information, see the SAS Enterprise Guide chapter in the *SAS Intelligence Platform: Desktop Application Administration Guide*.
- Beginning with SAS Enterprise Guide 4.3, external file references are stored as relative paths. Use pathnames that are relative to the current location of the project file instead of using a full path.

SAS Enterprise Guide 6.1_M1

The first maintenance release for SAS Enterprise Guide 6.1 shipped in December 2013. SAS Enterprise Guide is available as either a 32-bit application or a 64-bit application. If

you are using a 32-bit Microsoft Windows operating system, then you must run the 32-bit version of SAS Enterprise Guide. If you are using a 64-bit Windows operating system, then you can run either the 32-bit version or the 64-bit version of SAS Enterprise Guide.

To use SAS Visual Analytics 6.4 with the first maintenance release for SAS Enterprise Guide 6.1, you must apply a hot fix. For more information, see [SAS Note 52813](#).

SAS Enterprise Guide 7.1

SAS Enterprise Guide 7.1 shipped in October 2014. SAS Enterprise Guide 7.11 shipped in May 2015. These releases provide more integration with SAS Visual Analytics. For more information about these releases, see the software product page for [SAS Enterprise Guide](#).

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SAS Enterprise Miner

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Determining Your Update Path for SAS Enterprise Miner

Updating an Existing SAS 9.4 Deployment

SAS Enterprise Miner 12.3, 13.1, 13.2, and 14.1 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
12.3 (SAS 9.4)	13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<div><div>1</div><div>Before you upgrade, see “SAS Enterprise Miner 13.1” on page 202, “SAS Enterprise Miner 13.2” on page 202, and “SAS Enterprise Miner 14.1” on page 203 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS Enterprise Miner, see “Install and Configure a Software Update” on page 66.</div></div>
13.1 (SAS 9.4_M1)	13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<div><div>1</div><div>Before you upgrade, see on page 202 and “SAS Enterprise Miner 14.1” on page 203 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS Enterprise Miner, see “Install and Configure a Software Update” on page 66.</div></div>
13.2 (SAS 9.4_M2)	14.1 (SAS 9.4_M3)	<div><div>1</div><div>Before you upgrade, see “SAS Enterprise Miner 14.1” on page 203.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS Enterprise Miner, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

To run SAS Enterprise Miner 12.3, 13.1, 13.2, or 14.1, your site must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
12.1, 12.1_M1 (SAS 9.3)	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS Enterprise Miner 12.3” on page 201, “SAS Enterprise Miner 13.1” on page 202, and “SAS Enterprise Miner 14.1” on page 203 (if appropriate). 2 Follow the steps in <i>SAS Enterprise Miner: Administration and Configuration Guide</i> (for your release) to migrate from a previous release or to create a new deployment.
12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2)	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	To migrate within the same SAS release, follow the steps in <i>SAS Enterprise Miner Administration and Configuration Guide</i> (for your release).
14.1 (SAS 9.4_M3)	14.1 (SAS 9.4_M3)	To migrate within the same release, follow the steps in <i>SAS Enterprise Miner 14.1: Administration and Configuration Guide</i> .

SAS Enterprise Miner 12.3

For more information about this release, see the software product page for SAS Enterprise Miner at <http://support.sas.com/software/products/miner>.

SAS Enterprise Miner 12.3 does not support middle-tier clustering. As a result, SAS Enterprise Miner runs on the master node in the cluster. If the master node is not

available, SAS Enterprise Miner is not available (even if other SAS applications are available on other nodes in the cluster).

If you are upgrading from an earlier release of SAS Enterprise Miner, note these changes:

- Beginning with SAS Enterprise Miner 12.1, SAS consolidated the version numbers for the main analytical products. Before the consolidation, the most recent version number for SAS Enterprise Miner was 7.1.
- Beginning with SAS Enterprise Miner 12.1, the SAS Analytics Platform server was deprecated. The SAS Analytics Platform service is not used for any SAS 9.3 (or later) products or solutions.

SAS Enterprise Miner 13.1

When you order SAS Enterprise Miner 13.1, your site is also conditionally licensed for SAS/IML to enable specific functionality in SAS Enterprise Miner. You must install SAS/IML to use the **Open Source Integration** node on the **Utility** tab. For more information about how to install SAS/IML, see [“Adding a New Product” on page 83](#).

Support for middle-tier clustering was added in this release.

SAS Enterprise Miner 13.2

When you order SAS Enterprise Miner 13.2, your site is also conditionally licensed for SAS/IML to enable specific functionality in SAS Enterprise Miner. You must install SAS/IML to use the **Open Source Integration** node on the **Utility** tab. For more information about how to install SAS/IML, see [“Adding a New Product” on page 83](#).

SAS Enterprise Miner 13.2 shipped in August 2014. This release adds support for SAP HANA and Scalable Data Engine (SPD Engine). For more information about SAS Enterprise Miner 13.2, see the software product page for [SAS Enterprise Miner](#).

SAS Enterprise Miner 14.1

When you order SAS Enterprise Miner 14.1, your site is also conditionally licensed for SAS/IML to enable specific functionality in SAS Enterprise Miner. You must install SAS/IML to use the **Open Source Integration** node on the **Utility** tab. For more information about how to install SAS/IML, see [“Adding a New Product” on page 83](#).

SAS Enterprise Miner 14.1 shipped in July 2015. This release supports PMML 4.2 and includes a new **High-Performance Bayesian Network** node. For more information about SAS Enterprise Miner 14.1, see the software product page for [SAS Enterprise Miner](#).

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SAS Environment Manager

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Determining Your Update Path for SAS Environment Manager

Upgrading an Existing SAS 9.4 Deployment

SAS Environment Manager 2.1 runs on SAS 9.4. The first release of SAS Environment Manager 2.1 shipped with the initial release of SAS 9.4. The second release of SAS Environment Manager shipped with the first maintenance release for SAS 9.4. SAS

Environment Manager 2.3 and 2.4 run on the second maintenance release for SAS 9.4. SAS Environment Manager 2.5 runs on the third maintenance release for SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
2.1 (SAS 9.4)	2.1 (SAS 9.4_M1); 2.3 and 2.4 (SAS 9.4_M2); 2.5 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Environment Manager 2.1 (SAS 9.4_M1)” on page 208, “SAS Environment Manager 2.3 and SAS Environment Manager 2.4” on page 210, and “SAS Environment Manager 2.5” on page 211 (if appropriate). 2 To upgrade to the latest release, see “Install and Configure a Software Update” on page 66.
2.1 (SAS 9.4_M1)	2.3 and 2.4 (SAS 9.4_M2); 2.5 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Environment Manager 2.3 and SAS Environment Manager 2.4” on page 210 and “SAS Environment Manager 2.5” on page 211 (if appropriate). 2 To upgrade to the latest release, see “Install and Configure a Software Update” on page 66.
2.3 or 2.4 (SAS 9.4_M2)	2.4 (SAS 9.4_M2); 2.5 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Environment Manager 2.3 and SAS Environment Manager 2.4” on page 210 and “SAS Environment Manager 2.5” on page 211 (if appropriate). 2 To upgrade to the latest release, see “Install and Configure a Software Update” on page 66.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
2.1 (SAS 9.4)	2.1 (SAS 9.4_M1); 2.3 (SAS 9.4_M2); 2.4 (SAS 9.4_M2); 2.5 (SAS 9.4_M3)	To migrate within the same SAS release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .
2.3 (SAS 9.4_M2)	2.3 (SAS 9.4_M2); 2.4 (SAS 9.4_M2); 2.5 (SAS 9.4_M3)	
2.4 (SAS 9.4_M2)	2.4 (SAS 9.4_M2); 2.5 (SAS 9.4_M3)	
2.5 (SAS 9.4_M3)	2.5 (SAS 9.4_M3)	

About SAS Environment Manager

SAS Environment Manager, which is new with SAS 9.4, is an operational monitoring and management system for SAS deployments. SAS Environment Manager incorporates VMware's Hyperic technology in order to offer enterprise-class operational features. This new application includes plug-ins that are especially designed for the administration, management, and monitoring of SAS technologies. Agents on each managed host enable SAS Environment Manager to automatically discover server

resources, gather health and availability information, perform control actions, collect usage information, and monitor logs.

The web-based interface enables administrators to perform these tasks:

- use the application's dashboard to obtain a snapshot of resource availability, recent control actions, favorite resources, saved charts, recent alerts, and selected metrics
- create personalized dashboards for particular SAS Environment Manager roles or for particular users
- drill into information about the current status of each resource, the availability of the resource over time, and detailed metrics in numeric and graphical format
- perform control actions for the SAS Web Application Server and for servers on the SAS server tier
- view and filter currently active alerts, display a deployment-wide view of events, and identify resources that are down or that have unfixed alerts
- configure the application to include SAS log messages and resource configuration changes in events
- view a list of the folders and folder contents that are stored in SAS metadata, and view details about an object's metadata

SAS Environment Manager is not currently a replacement for SAS Management Console, and no functionality has been removed from SAS Management Console.

For more information, see the *SAS Environment Manager: User's Guide*.

SAS Environment Manager 2.1 (SAS 9.4_M1)

In December 2013, SAS shipped SAS Environment Manager 2.1, which runs on the first maintenance release of SAS 9.4. This release changes how SAS Environment Manager users and roles are managed in a SAS environment, and introduces the capability to synchronize users and roles between SAS Environment Manager and SAS metadata.

Users in SAS Environment Manager are mapped to users that are created in SAS metadata. During installation, three user groups are created in SAS metadata to contain SAS Environment Manager users. Users that are members of these groups are mapped to user definitions in SAS Environment Manager with corresponding roles. Here are the user groups and their corresponding roles:

Group Name in SAS Metadata	Role in SAS Environment Manager
SAS_EV_Super_User	Super User Role
SAS_EV_Guest	Guest Role
SAS_EV_AppServer_Tier	SAS App Tier Role

For example, users that are added to the group SAS_EV_Guest are added as users in SAS Environment Manager under the Guest role when the users are synchronized.

When you install SAS Environment Manager 2.1, all existing SAS Environment Manager user definitions are automatically added to the SAS_EV_Guest group in metadata. After the existing users have been added to the SAS_EV_Guest group, use SAS Management Console to modify the user definitions or assign the users to other SAS_EV groups in metadata.

After you have defined new users in SAS metadata, sign on to SAS Environment Manager. Select **Manage ► Synchronize Users**. User definitions are created for all users that are defined in the three SAS_EV groups in metadata. Any SAS Environment Manager users that are not associated with user definitions in metadata are deleted.

If you sign on to SAS Environment Manager by using a user ID that is defined in metadata, and if the user ID is a member of one of the SAS_EV groups but is not defined in SAS Environment Manager, a user definition is automatically created in SAS Environment Manager and assigned to the correct role.

SAS Environment Manager 2.3 and SAS Environment Manager 2.4

In August 2014, SAS shipped SAS Environment Manager 2.3, and in October 2014, SAS shipped SAS Environment Manager 2.4. Both of these releases run on the second maintenance release for SAS 9.4.

When you perform an upgrade in place and the release number for SAS Environment Manager does not change, these backup folders are created in the *SAS-configuration-directory/sas/Levn/Web/SASEnvironmentManager* directory:

- `agent-backup_date-time`
- `server-backup_date-time`

After the installation is validated, you can delete these directories.

When you perform an upgrade in place and the release number for SAS Environment Manager changes, two folders are created on the server because the version number for Hyperic is included in the name of the directory. For example, if you are upgrading from SAS Environment Manager 2.1 to 2.3, the version of Hyperic changed between these releases. As a result, you see these two folders in the *SAS-configuration-directory/Levn/Web/SASEnvironmentManager* directory after the software upgrade:

- `server-5.0.0-EE`
- `server-5.8.0-EE`

Any new plug-ins for SAS Environment Manager might be deployed to the original directory (`server-5.8.0-EE`) rather than to the new location (`server-5.8.0-EE`). For example, these JAR files might appear in the *SAS-configuration-directory/Levn/Web/SASEnvironmentManager/server-5.0.0-EE/hq-server/webapp/ROOT/WEB-INF/hq-plugins/* directory:

- `emi-framework-plugin.jar`

- `emi-reportcenter-plugin.jar`
- `emi-snapshot-plugin.jar`

You might also have these new JAR files in the *SAS-configuration-directory/Levn/Web/SASEnvironmentManager/server-5.0.0-EE/hq-server/webapp/ROOT/WEB-INF/hq-plugins/emi_framework/lib* directory.

- `sas.sasev.framework.common.jar`
- `sas.sasev.framework.plugins.common.jar`
- `sas.sasev.framework.plugins.impl.jar`

In order for the new plug-ins to work in the latest release of SAS Environment Manager, you must copy these files and directories to the new location (`server-5.8.0-EE`). Then you should delete the old location (`server-5.8.0-EE`). You might need to restart SAS Environment Manager to see the new plug-ins.

SAS Environment Manager 2.5

SAS Environment Manager 2.5 shipped in July 2015 and runs on the third maintenance release for SAS 9.4.

If you modified certain default locations or settings in the SAS Environment Manager Service Architecture, you must manually change these settings in SAS Environment Manager 2.5. Then you must run the `ugipinit` script. Here are some changes that you must manually update:

- Content that you stored in metadata folders must be manually imported. The update process backed up this information, so you must import the data from the backup location.
- Changes that you made to the service architecture configuration were not saved. You must apply these changes manually.
- `LIBNAME` statements that you changed in the service architecture `autoexec` files must be manually entered. The old files were backed up, so you can use the files as

a reference for making the changes. However, you cannot use the old autoexec files with the new version of the application.

If you used the SAS Grid Manager plug-in for SAS Environment Manager, the functions of this plug-in have been replaced by a SAS Grid Manager module. For more information, see [Chapter 50, “SAS Grid Manager,” on page 239](#).

If you are upgrading from SAS Environment Manager 2.4 and you did not enable the SAS Environment Manager Service Architecture, you can ignore the message about the update failing.

For more information about this release, see the software product page for [SAS Environment Manager](#).

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SAS Episode Analytics 2.1 and 2.2 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
2.1 (SAS 9.4)	2.2 (SAS 9.4)	For information about the new features and enhancements in this release, contact your SAS account representative.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
2.1, 2.2 (SAS 9.4)	2.2 (SAS 9.4)	To migrate within the same release, see the documentation for SAS Episode Analytics.

SAS Episode Analytics

SAS shipped SAS Episode Analytics 2.2 in February 2015.

For more information about this release, contact your SAS account representative.

For the product documentation, see the product documentation page for [SAS Episode Analytics](#).

Note: The documentation for SAS Episode Analytics is available only to customers who license this product.

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SAS/ETS

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Determining Your Update Path for SAS/ETS

Upgrading Your Existing SAS 9.4 Deployment

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
12.3 (SAS 9.4)	13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<div><div>1</div><div>Before you upgrade, see “About SAS/ETS” on page 217.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS/ETS, see “Install and Configure a Software Update” on page 66.</div></div>
13.1 (SAS 9.4_M1)	13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	
13.2 (SAS 9.4_M2)	14.1 (SAS 9.4_M3)	

Migrating to SAS 9.4

To run SAS/ETS 12.3, 13.1, 13.2, or 14.1, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
12.1 (SAS 9.3) 9.3_M1, 9.3	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “About SAS/ETS” on page 217. 2 Install and configure SAS 9.4. <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none"> ■ QuickStart Guides in the SAS Install Center ■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For migration information, see the following resources:</p> <ul style="list-style-type: none"> ■ <i>SAS Intelligence Platform: Migration Guide</i> ■ the product documentation page for SAS/ETS

About SAS/ETS

SAS has shipped these releases of SAS/ETS:

- SAS/ETS 12.3 shipped in July 2013. This is essentially a maintenance release, with the exception that high-performance procedures for use in single-machine mode have been added.
- SAS/ETS 13.1 shipped in December 2013. For more information about the new features and enhancements in SAS/ETS 13.1, see [What’s New in SAS/ETS 13.1](#).

- SAS/ETS 13.2 shipped in August 2014. For more information about the new features and enhancements in SAS/ETS 13.2, see [What's New in SAS/ETS 13.2](#).
- SAS/ETS 14.1 shipped in July 2015. For more information about the new features and enhancements in SAS/ETS 14.1, see [What's New in SAS/ETS 14.1](#).

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Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
2.1, 2.2, 2.3 (SAS 9.4)	3.1. 3.2 (SAS 9.4)	For more information about how to migrate to this release, contact your SAS account representative.
3.2 (SAS 9.4)	3.2 (SAS 9.4)	For more information about how to migrate to this release, contact your SAS account representative.

About SAS Event Stream Processing

SAS shipped these releases of SAS Event Stream Processing:

- SAS Event Stream Processing Engine 2.2 in April 2014.
- SAS Event Stream Processing Engine 2.3 in November 2014.
- SAS Event Stream Processing 3.1 in May 2015. Starting with this release, the product name has changed to SAS Event Stream Processing.
- SAS Event Stream Processing 3.2 in November 2015.

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Event Stream Processing](#).

Note: The documentation for SAS Event Stream Processing is available only to customers who license this product.

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SAS Financial Management

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SAS Financial Management 5.4 222

SAS Financial Management 5.5 222

Determining the Update Path for SAS Financial Management

Upgrading an Existing SAS 9.4 Deployment

SAS Financial Management 5.4 and 5.5 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.4 (SAS 9.4)	5.5 (SAS 9.4)	For more information about how to upgrade to this release, contact your SAS account representative.

Migrating to SAS 9.4

To run SAS Financial Management 5.4 or 5.5, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.4 (SAS 9.4) 5.3, 5.3_M1 (SAS 9.3)	5.5 (SAS 9.4)	To migrate or create a new deployment, see <i>SAS Financial Management 5.5: Installation and Configuration Guide</i>

SAS Financial Management 5.4

SAS shipped SAS Financial Management 5.4 in December 2013.

For more information about this release, contact your SAS account representative and see the product documentation page for [SAS Financial Management](#).

Note: The documentation for SAS Financial Management is available only to customers who license this product.

SAS Financial Management 5.5

SAS shipped SAS Financial Management 5.5 in January 2015. This release includes some SAS Visual Analytics components. For more information about how to deploy these components, see [“Adding SAS Visual Analytics to Your Deployment” on page 84](#).

For more information about the new features and enhancements in this release, contact your SAS account representative and see the product documentation page for [SAS Financial Management](#).

Note: The documentation for SAS Financial Management is available only to customers who license this product.

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Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
5.2 (SAS 9.4)	5.2_M2 (SAS 9.4)	For more information about how to upgrade to the latest release, see <i>SAS Forecast Analyst Workbench: Upgrade and Migration Guide</i> .

Migrating to SAS 9.4

To run SAS Forecast Analyst Workbench 5.2, you must be running SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.1 (SAS 9.3)	5.2, 5.2_M2 (SAS 9.4)	For more information about how to migrate to this release, see <i>SAS Forecast Analyst Workbench: Upgrade and Migration Guide</i> .
5.2, 5.2_M2 (SAS 9.4)	5.2_M2 (SAS 9.4)	

About SAS Forecast Analyst Workbench

SAS Forecast Analyst Workbench is the demand planning module of the SAS Demand-Driven Planning and Optimization suite. SAS Forecast Analyst Workbench helps planners and analysts track, monitor, and predict the demand for products and services. SAS Forecast Analyst Workbench helps organizations gain instant visibility and understanding of the demand for their products without relying on personal judgments.

Depending on the license that your organization has, you can use the following modules of the SAS Forecast Analyst Workbench:

- Collaboration Planning Workbench
- New Product Forecasting

SAS shipped these releases of SAS Forecast Analyst Workbench:

- SAS Forecast Analyst Workbench 5.2 in August 2014
- the second maintenance release for SAS Forecast Analyst Workbench in May 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Forecast Analyst Workbench](#).

Note: The documentation for SAS Forecast Analyst Workbench is available only to customers who license this product.

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SAS Forecast Server

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Determining Your Update Path for SAS Forecast Server

Upgrading an Existing SAS 9.4 Deployment

SAS Forecast Server 12.3, 13.1, 13.2, and 14.1 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
12.3 (SAS 9.4)	13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<div><div>1</div><div>Before you upgrade, see “About SAS Forecast Server” on page 231.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS Forecast Server, see “Install and Configure a Software Update” on page 66.</div></div>
13.1 (SAS 9.4_M1)	13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	
13.2 (SAS 9.4_M2)	14.1 (SAS 9.4_M3)	

Migrating to SAS 9.4

To run SAS Forecast Server 12.3, 13.1, 13.2, or 14.1, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
12.1, 4.1 (SAS 9.3)	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<div><div>1</div>Before you migrate, see “About SAS Forecast Server” on page 231.<div>2</div>To migrate to the new release, see <i>SAS Forecast Server: Migration Guide</i> (for your release). To create a new deployment, see <i>SAS Forecast Server: Administrator’s Guide</i> (for the release at your site).</div>
12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2)	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	To migrate within the same SAS release, see <i>SAS Forecast Server: Migration Guide</i> (for the release at your site).
14.1 (SAS 9.4_M3)	14.1 (SAS 9.4_M3)	To migrate within the same release, see <i>SAS Forecast Server 14.1: Migration Guide</i> .

About SAS Forecast Server

SAS Forecast Server 12.3 is the first release of SAS Forecast Server that runs on SAS 9.4. SAS Time Series Studio, which is a component of SAS Forecast Server, is production software in this release.

Software orders of SAS Forecast Server also include SAS Forecast Server Procedures. In earlier releases of SAS Forecast Server, these procedures were called High-Performance Forecasting.

For more information about SAS Forecast Server, see <http://support.sas.com/software/products/forecast>.

SAS Forecast Server 12.3 does not support clustering of the middle-tier servers. Because middle-tier clustering is not supported, SAS Forecast Server runs on the master node in the cluster. If the master node is not available, SAS Forecast Server is not available (even if other SAS applications are available on other nodes in the cluster).

If you are upgrading from an earlier release of SAS Forecast Server, note these changes:

- Beginning with SAS Forecast Server 12.1, SAS consolidated the version numbers for the main analytical products. Before the consolidation, the most recent version number for SAS Forecast Server was 4.1.
- Beginning with SAS Forecast Server 4.1, the SAS Analytics Platform server was deprecated. The SAS Analytics Platform service is not used for any SAS 9.3 (or later) products or solutions.

SAS also shipped these releases:

- SAS Forecast Server 13.1 in December 2013. Support for middle-tier clustering was added in this release.
- SAS Forecast Server 13.2 in August 2014.
- SAS Forecast Server 14.1 in July 2015. This release includes SAS Forecast Server Client, a new web-based interface that you can use to segment and forecast your data.

For more information about these releases, contact your SAS account representative and see the software product page for [SAS Forecast Server](#).

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SAS Fraud Management

Determining the Update Path for SAS Fraud Management

Upgrading an Existing SAS 9.4 Deployment

Migrating to SAS 9.4

About SAS Fraud Management

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Determining the Update Path for SAS Fraud Management

Upgrading an Existing SAS 9.4 Deployment

SAS Fraud Management 4.1 and 4.2 run on SAS 9.4.

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
4.1	4.2, 4.2_M1	For more information about how to upgrade to the latest release, contact your SAS account representative.

Migrating to SAS 9.4

To run SAS Fraud Management 4.1 or 4.2, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
3.3, 3.3_M1 (SAS 9.3)	4.1, 4.2, 4.2_M1 (SAS 9.4)	For more information, contact your SAS account representative.
4.1, 4.2 (SAS 9.4)	4.2, 4.2_M1 (SAS 9.4)	
4.2_M1 (SAS 9.4)	4.2_M1 (SAS 9.4)	

About SAS Fraud Management

SAS shipped these releases of SAS Fraud Management:

- SAS Fraud Management 4.1 in June 2014
- SAS Fraud Management 4.2 in July 2015
- the first maintenance release for SAS Fraud Management 4.2 in November 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Fraud Management](#).

Note: The documentation for SAS Fraud Management is available only to customers who license this product.

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SAS/GRAPH

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Determining Your Update Path for SAS/GRAPH

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4	9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div>Before you upgrade, see “SAS/GRAPH 9.4_M1” on page 237 and “SAS/GRAPH 9.4_M2” on page 238 (if appropriate).</div> <div><div>2</div>To upgrade to the latest release of SAS/GRAPH 9.4, see “Install and Configure a Software Update” on page 66.</div>

Migrating to SAS 9.4

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M2, 9.3_M3	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<div><div><div>1</div><div>Before you migrate, see “SAS/GRAPH 9.4” on page 237, “SAS/GRAPH 9.4_M1” on page 237, and “SAS/GRAPH 9.4_M2” on page 238 (if appropriate).</div></div><div><div>2</div><div>Install and configure SAS 9.4.</div></div></div> <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none">■ QuickStart Guides in the SAS Install Center■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For migration information, see the following resources:</p> <ul style="list-style-type: none">■ <i>SAS Intelligence Platform: Migration Guide</i>■ the product documentation page for SAS/GRAPH

SAS/GRAPH 9.4

For more information about SAS/GRAPH 9.4, see the software product page for [SAS/GRAPH](#).

SAS/GRAPH 9.4_M1

Starting in the first maintenance release for SAS 9.4, if you are using a hyphen in your NAME= option, be aware that the hyphen ‘-’ is converted to an underscore. For catalog-

based output, the NAME= option enables you to specify a name for the GRSEG entry and the graphics output filename, if generated.

Note: For more information about significant changes that occurred in SAS 9.4, see [“Base SAS 9.4” on page 89](#).

SAS/GRAPH 9.4_M2

Prior to the second maintenance release for SAS 9.4, if the NAME= option specifies a value that is greater than eight characters and begins with a number, SAS prepends an underscore to the graphics output filename. The GRSEG entry name continues to prepend an underscore to the NAME= value that begins with a number.

Starting in the second maintenance release for SAS 9.4, when the NAME= value is greater than eight characters and begins with a number, the graphics output filename is the NAME= value specified and an underscore is no longer prepended. When the NAME= value is eight characters or less, the graphics output filename continues to be equivalent to the GRSEG entry name.

SAS/GRAPH 9.4_M3

SAS shipped the third maintenance release for SAS/GRAPH in July 2015. For more information about SAS/GRAPH 9.4, see the software product page for [SAS/GRAPH](#).

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SAS Grid Manager

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SAS Grid Manager 9.4_M3 240

Determining Your Update Path for SAS Grid Manager

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4, 9.4_M1, 9.4_M2	9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS Grid Manager 9.4_M3” on page 240.</div></div> <div><div>2</div><div>To upgrade to the latest release for SAS 9.4, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

To run SAS Grid Manager 9.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you migrate, see “SAS Grid Manager 9.4_M3” on page 240.</div></div> <div><div>2</div><div>Install and configure SAS 9.4.</div></div> <div><div></div><div>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</div></div> <div><div></div><div><div>■ QuickStart Guides in the SAS Install Center</div><div>■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i></div></div><div><div></div><div>For migration information, see the following resources:</div></div><div><div></div><div><div>■ <i>SAS Intelligence Platform: Migration Guide</i></div><div>■ the product documentation page for SAS Grid Manager</div></div></div></div>

SAS Grid Manager 9.4_M3

The SAS Grid Manager plug-in for SAS Environment Manager 2.4 has been replaced by the SAS Grid Manager module for SAS Environment Manager 2.5. Although the old plug-in continues to operate, the new module provides enhanced functionality and an improved user interface. If you are using the new SAS Grid Manager module, you should remove the old SAS Grid Manager plug-in.

To remove the old plug-in, delete the `GridManagerPlugin` folder from the `hqu` directory. A typical location is `/Web/SASEnvironmentManager/server-5.8.0-EE/hq-engine/hq-server/webapps/ROOT/hqu`.

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SAS High-Performance Analytics Infrastructure

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About SAS High-Performance Analytics Infrastructure

The SAS High-Performance Analytics infrastructure consists of these products:

- SAS High-Performance Computing Management Console
- SAS High-Performance Deployment of Hadoop
- SAS High-Performance Analytics Environment (also referred to as the SAS High-Performance Node Installation)

Determining Your Update Path for SAS High-Performance Analytics Infrastructure

Before you upgrade to the latest release of SAS High-Performance Analytics Infrastructure, see *SAS High-Performance Analytics Infrastructure: Installation and Configuration Guide*. For more information, see the product documentation page for [SAS High-Performance Analytics Infrastructure](#).

Upgrading to the latest version of the infrastructure requires upgrading SAS High-Performance Analytics Environment. If you overwrite the software on the cluster (or move the existing software and install in the same path), then the upgraded or migrated SAS software runs without modification.

Depending on your current version, upgrading the SAS High-Performance Analytics Environment can provide this functionality:

- Create a high-speed parallel connection that delivers data from your remote data source to the SAS High-Performance Analytics Environment on the analytic cluster.
- Perform text analysis in SAS LASR Analytic Server with SAS Visual Analytics and to run PROC HPTMINE and HPTMSCORE with SAS Text Miner.

If you choose to install the software in a different directory on the cluster, specify the new path as follows:

- For SAS LASR Analytic Servers, see “Add a LASR Analytic Server” in *SAS Intelligence Platform: Data Administration Guide*.
- For SAS High-Performance Risk, see “Change the SAS High-Performance Risk Property Values” in *SAS High-Performance Risk: Administrator's Guide*.

Note: The infrastructure documentation and the documents in the preceding list are available only to customers who license these products.

SAS High-Performance Analytics Infrastructure 2.8

The following list identifies the changes that affect the upgrade process:

- SAS High-Performance Deployment of Hadoop includes Apache Hadoop 2.4. This is an upgrade from Apache Hadoop 0.23.1. The `hadoopInstall` configuration program includes a new prompt for configuring YARN. Configuring YARN is optional, but the configuration program is available as an experimental feature for resource management.
- The SAS High-Performance Analytics environment includes a `resource.settings` file that can be used to integrate with the YARN resource management. The file also offers settings for managing memory and CPU resources, even if you do not use YARN.
- The SAS High-Performance Computing Management Console has removed support for managing memory with cgroups. Memory management is available with the features listed in the preceding two bullets.

For more information about upgrading, see *SAS High-Performance Analytics Infrastructure: Installation and Configuration Guide*.

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Upgrading an Existing SAS 9.4 Deployment

SAS High-Performance Risk 3.1, 3.2, 3.3, 3.4, and 3.5 run on SAS 9.4.

SAS High-Performance Risk 3.1, 3.2, 3.3, 3.4, and 3.5 run on SAS 9.4.

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
3.1, 3.2, 3.2_M1, 3.3, 3.4	3.5	For more information about how to upgrade to the latest release, contact your SAS account representative.

Migrating to SAS 9.4

To run SAS High-Performance Risk 3.1, 3.2, 3.3, 3.4, or 3.5, you must be running SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
3.1, 3.2, 3.3, 3.4 (SAS 9.4)	3.5 (SAS 9.4)	For more information about how to migrate to this release, contact your SAS account representative.
3.5 (SAS 9.4)	3.5 (SAS 9.4)	

About SAS High-Performance Risk

SAS shipped these releases of SAS High-Performance Risk:

- SAS High-Performance Risk 3.2 in December 2013. Some of the new features in this release require that you update to SAS High-Performance Analytics Infrastructure 2.4 (or later).
- the first maintenance release for SAS High-Performance Risk 3.2 in June 2014.
- SAS High-Performance Risk 3.3 in November 2014.
- SAS High-Performance Risk 3.4 in May 2015.
- SAS High-Performance Risk 3.5 in October 2015.

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS High-Performance Risk](#).

Note: The documentation for SAS High-Performance Risk is available only to customers who license this product.

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SAS/IML

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 Migrating to SAS 9.4 251

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Determining Your Update Path for SAS/IML

Upgrading an Existing SAS 9.4 Deployment

SAS/IML 12.3, 13.1, 13.2, and 14.1 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
12.3 (SAS 9.4)	13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<div><div>1</div><div>Before you upgrade, see “About SAS/IML” on page 251.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS/IML, see “Install and Configure a Software Update” on page 66.</div></div>
13.1 (SAS 9.4_M1)	13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	
13.2 (SAS 9.4_M2)	14.1 (SAS 9.4_M3)	

Migrating to SAS 9.4

To run SAS/IML 12.3, 13.1, 13.2, or 14.1, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
12.1 (SAS 9.3) 9.3_M1, 9.3	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you migrate, see “About SAS/IML” on page 251. 2 Install and configure SAS 9.4. <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none"> ■ QuickStart Guides in the SAS Install Center ■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For migration information, see the following resources:</p> <ul style="list-style-type: none"> ■ <i>SAS Intelligence Platform: Migration Guide</i> ■ the product documentation page for SAS/IML

About SAS/IML

SAS has shipped these releases of SAS/IML:

- SAS/IML 12.3 shipped in July 2013. This release is a maintenance release with no new features.
- SAS/IML 13.1 shipped in December 2013. For more information about the new features and enhancements in SAS/IML 13.1, see [What’s New in SAS/IML 13.1](#).

- SAS/IML 13.2 shipped in August 2014. For more information about the new features and enhancements in SAS/IML 13.2, see [What's New in SAS/IML 13.2](#).
- SAS/IML 14.1 shipped in July 2015. For more information about the new features and enhancements in SAS/IML 14.1, see [What's New in SAS/IML 14.1](#).

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SAS Information Delivery Portal

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Determining Your Update Path for the SAS Information Delivery Portal

Upgrading an Existing SAS 9.4 Deployment

SAS Information Delivery Portal 4.4 runs on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
4.4 (SAS 9.4)	4.4_M1 (SAS 9.4_M1), 4.4_M2 (SAS 9.4_M2)	<div><div>1</div><div>To upgrade to the latest release of SAS Information Portal 4.4, see “Install and Configure a Software Update” on page 66.</div></div> <div><div>2</div><div>Complete any post-configuration steps. For more information, see “Updating Favorites in Your Web Browser” on page 257.</div></div>

Migrating to SAS 9.4

To run SAS Information Delivery Portal 4.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
4.31, 4.31_M1, 4.31_M2 (SAS 9.3) 4.3 (SAS 9.2_M3)	4.4, 4.4_M1, 4.4_M2 (SAS 9.4)	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS Information Delivery Portal 4.4” on page 256. 2 To migrate to the new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>. 3 Complete any post-configuration steps in “Updating Favorites in Your Web Browser” on page 257 and <i>SAS 9.4 Intelligence Platform: Web Application Administration Guide</i>.
4.2 (SAS 9.2)	4.4_M2 (SAS 9.4)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Information Delivery Portal 4.3” on page 256 and “SAS Information Delivery Portal 4.4” on page 256. 2 To migrate to the new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>. 3 Complete any post-configuration steps in “Updating Favorites in Your Web Browser” on page 257 and <i>SAS 9.4 Intelligence Platform: Web Application Administration Guide</i>.
4.4 (SAS 9.4)	4.4, 4.4_M1 (SAS 9.4)	To migrate within the same SAS release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
4.4_M1 (SAS 9.4)	4.4_M1 (SAS 9.4)	To migrate within the same release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .

SAS Information Delivery Portal 4.4

The list of features and enhancements for the SAS Information Delivery Portal has remained the same since the 4.2 release. The only difference between these releases is the version of SAS that is required to run the SAS Information Delivery Portal.

Release of SAS Information Delivery Portal	Release of SAS
SAS Information Delivery Portal 4.4	SAS 9.4
SAS Information Delivery Portal 4.31	SAS 9.3
SAS Information Delivery Portal 4.3	SAS 9.2

Note: Starting in SAS Information Delivery Portal 4.4 (which runs on SAS 9.4), data explorations are no longer converted to reports during migration or promotion.

SAS Information Delivery Portal 4.3

Note: This section is relevant only if you are upgrading to either SAS Information Delivery Portal 4.4 or the first maintenance release for SAS Information Delivery Portal 4.4. These releases run on SAS 9.4 or the first maintenance release for SAS 9.4, respectively. These steps are not required if you are upgrading to the second

maintenance release for SAS Information Delivery Portal 4.4, which runs on the second maintenance release for SAS 9.4.

If you are running SAS Information Delivery Portal 4.2, you must upgrade to SAS Information Delivery Portal 4.3 before you upgrade to SAS Information Delivery Portal 4.4. If you upgrade from 4.2 to 4.4, your data explorations in SAS Web Report Studio 4.2 might not convert properly. For more information, see [Chapter 87, “SAS Web Report Studio,” on page 403](#).

When you upgrade to SAS Information Delivery Portal 4.3, you have these options:

- You can upgrade to the latest release of SAS 9.2. SAS Information Delivery Portal 4.3 runs on SAS 9.2.

To upgrade to the latest release of SAS 9.2, see [Planning for Maintenance Releases and Product Upgrades for SAS 9.2](#).

- You can upgrade to the latest release of SAS 9.3. SAS Information Delivery Portal 4.31 runs on SAS 9.3.

When you upgrade to SAS 9.3, you can migrate, or you can create a new deployment. For specific steps, see *SAS 9.3 Intelligence Platform: Migration Guide* (if you are migrating to the new release) or *SAS 9.3 Intelligence Platform: Installation and Configuration Guide* (if you are creating a new deployment). For post-configuration steps, see *SAS 9.3 Intelligence Platform: Web Application Administration Guide*.

Updating Favorites in Your Web Browser

After the deployment of any new release, you must change the release number in the resolved URL that you use to open the product. For example, if you upgraded from 4.3 to 4.4, the updated URL is `http://server.port/SASLogon/index.jsp?_sasapp=Info+Delivery+Portal+4.3`.

If you saved the URL for the previous release as a Favorite link in a web browser, then this link is broken when you upgrade to the new release. You must re-create this favorite

for the new release. You can also access the SAS Information Delivery Portal by using this unresolved link: `http://server:port/SASPortal`.

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SAS In-Database Technologies

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- SAS 9.4_M3 In-Database Technologies* 262

Determining Your Update Path for SAS In-Database Technologies

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4	9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS 9.4_M1 In-Database Technologies” on page 262, “SAS 9.4_M2 In-Database Technologies” on page 262, and “SAS 9.4_M3 In-Database Technologies” on page 262 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS 9.4 In-Database Technologies, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M1	9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS 9.4_M2 In-Database Technologies” on page 262 and “SAS 9.4_M3 In-Database Technologies” on page 262 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS 9.4 In-Database Technologies, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M2	9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS 9.4_M3 In-Database Technologies” on page 262.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS 9.4 In-Database Technologies, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<ol style="list-style-type: none"> <li>1 Before you migrate, see “SAS 9.4 In-Database Technologies” on page 261, “SAS 9.4_M1 In-Database Technologies” on page 262, “SAS 9.4_M2 In-Database Technologies” on page 262, and “SAS 9.4_M3 In-Database Technologies” on page 262 (if appropriate). <li>2 Install and configure SAS 9.4. <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none"> <li>■ QuickStart Guides in the SAS Install Center <li>■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For pre-installation and post-configuration information, see <i>SAS 9.4 In-Database Products: Administrator’s Guide</i> on the product documentation page for SAS In-Database Technology.</p>

SAS 9.4 In-Database Technologies

Beginning with SAS 9.4, in-database processing has been enhanced by the addition of SAS In-Database Code Accelerator for Teradata and Greenplum. SAS In-Database Code Accelerator enables you to publish a thread program to the database and execute the thread program in parallel inside the database.

In-database scoring for Netezza has been enhanced by the addition of the SAS Embedded Process. The SAS Embedded Process is a SAS server process that runs within Netezza to read and write data.

SAS 9.4_M1 In-Database Technologies

In the first maintenance release for SAS 9.4, the default behavior for SAS In-Database Code Accelerator has changed. DS2 code is not executed inside the database by default. You must set either the new DS2ACCEL system option to ANY or the PROC DS2 DS2ACCEL option to YES to enable DS2 code to run inside the database. For more information, see the *SAS DS2 Language Reference* and *Base SAS Procedures Guide*.

SAS 9.4_M2 In-Database Technologies

The second maintenance release for SAS 9.4 shipped in August 2014.

SAS 9.4_M3 In-Database Technologies

The third maintenance release for SAS 9.4 shipped in July 2015. In this release, the installation and configuration of the SAS Embedded Process for Hadoop has been improved and simplified.

- For Cloudera and Hortonworks, Cloudera Manager and Ambari can be used to install the SAS Embedded Process and the SAS Hadoop MapReduce JAR files.
- For IBM BigInsights, MapR, and Pivotal HD, the in-database deployment package is delivered to the client from the SAS Install Depot and manually installed.

In addition, the SAS Embedded Process and the SAS Hadoop MapReduce JAR files are installed with one script instead of with two separate scripts. The new process has a smaller client footprint and a faster installation.

Also, the SAS Embedded Process for Hadoop has been rewritten and no longer runs as a Linux service. For more information, see *SAS In-Database Products: Administrator's*

Guide. The installation and configuration of the SAS Embedded Process for Teradata has been improved and simplified. The in-database deployment package is delivered to the client from the SAS Install Depot. The new process has a smaller client footprint and a faster installation.

For more information about this release, see the product documentation page for [SAS In-Database Technology](#).

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SAS Information Map Studio

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Determining Your Update Path for SAS Information Map Studio

Upgrading an Existing SAS 9.4 Deployment

SAS Information Map Studio 4.4 runs on SAS 9.4.

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
4.4 (SAS 9.4)	4.4_M1 (SAS 9.4_M1), 4.4_M2 (SAS 9.4_M2)	To upgrade to the latest release of SAS Information Map Studio, see “Install and Configure a Software Update” on page 66.
4.4_M1 (SAS 9.4_M1)	4.4_M2 (SAS 9.4_M2)	To upgrade to the latest release of SAS Information Map Studio, see “Install and Configure a Software Update” on page 66.

Migrating to SAS 9.4

To run SAS Information Map Studio 4.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
4.31, 4.31_M1, 4.31_M2 (SAS 9.3)	4.4, 4.4_M1, 4.4_M2 (SAS 9.4)	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS Information Map Studio 4.4” on page 268. 2 To migrate to the new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>. 3 Complete the post-configuration steps in <i>SAS 9.4 Intelligence Platform: Desktop Applications Guide</i>
4.2 (SAS 9.2, SAS 9.2_M1, SAS 9.2_M2), 4.2_M2 (SAS 9.2_M3)	4.4_M2 (SAS 9.4)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Information Map Studio 4.31” on page 269 and “SAS Information Map Studio 4.4” on page 268. 2 To migrate to the new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>. 3 Complete the post-configuration steps in <i>SAS 9.4 Intelligence Platform: Desktop Applications Guide</i>
4.4, 4.4_M1 (SAS 9.4)	4.4, 4.4_M1, 4.4_M2 (SAS 9.4)	To migrate within the same SAS release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .
4.4_M2 (SAS 9.4_M1)	4.4_M2 (SAS 9.4_M2)	To migrate within the same release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .

SAS Information Map Studio 4.4

About Updates to SAS Information Map Studio

The list of features and enhancements for SAS Information Map Studio has remained the same since SAS Information Map Studio 4.2. The only difference between these releases is the version of SAS that is required to run SAS Information Map Studio.

Release of SAS Information Map Studio	Release of SAS
SAS Information Map Studio 4.4	SAS 9.4
SAS Information Map Studio 4.31	SAS 9.3
SAS Information Map Studio 4.2	SAS 9.2

Special Considerations When Upgrading SAS Information Map Studio

- SAS Information Map Studio cannot open an information map that uses the advanced join model, assigned results filter, or localized properties features that were introduced in SAS 9.3. You can use the INFOMAPS procedure in SAS 9.3 and later to add these features to an information map. If you use the INFOMAPS procedure, you must continue using the procedure to work with the information map.
- For SAS Information Map Studio, continue to use stored processes that are compatible with SAS 9.2. Upgrading stored processes to use new features that are available in SAS 9.3 might cause errors when the upgraded stored processes are used by information maps. If you have already upgraded your stored processes and you are experiencing problems, you can make your stored processes compatible with SAS 9.2. For more information, see the Make Compatible feature in the Help for SAS Management Console.

- If you cannot find a stored process in SAS Information Map Studio, the **Hide from user** option might have been specified for the stored process. This option is available in SAS 9.3 and later.

SAS Information Map Studio 4.31

Note: This section is relevant only if you are upgrading to either SAS Information Map Studio 4.4 or the first maintenance release for SAS Information Map Studio 4.4. These releases run on SAS 9.4 or the first maintenance release for SAS 9.4, respectively. These steps are not required if you are upgrading to the second maintenance release for SAS Information Map Studio 4.4, which runs on the second maintenance release for SAS 9.4.

If you are running SAS Information Map Studio 4.2, you must upgrade to SAS Information Map Studio 4.2_M2 before you upgrade to SAS Information Map Studio 4.4. If you upgrade from 4.2 to 4.4, your data explorations in SAS Web Report Studio 4.2 might not convert properly. For more information, see [Chapter 87, “SAS Web Report Studio,” on page 403](#).

When you upgrade to SAS Information Map Studio 4.31, you have these options:

- You can upgrade to the latest release of SAS 9.2. SAS Information Map Studio 4.2_M2 runs on the third maintenance release for SAS 9.2.
To upgrade to the latest release of SAS 9.2, see [Planning for Maintenance Releases and Product Upgrades for SAS 9.2](#).
- You can upgrade to the latest release of SAS 9.3. SAS Information Map Studio 4.31 runs on SAS 9.3.

When you upgrade to SAS 9.3, you can migrate, or you can create a new deployment. For specific steps, see *SAS 9.3 Intelligence Platform: Migration Guide* (if you are migrating to the new release) or *SAS 9.3 Intelligence Platform: Installation and Configuration Guide* (if you are creating a new deployment). For post-configuration steps, see *SAS 9.3 Intelligence Platform: Web Application Administration Guide*.

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SAS Integration Technologies

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Determining Your Update Path for SAS Integration Technologies

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4, 9.4_M1, 9.4_M2	9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS 9.4_M1 Integration Technologies” on page 275 , “SAS 9.4_M2 Integration Technologies” on page 275, and “SAS 9.4_M3 Integration Technologies” on page 275 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS 9.4 Integration Technologies, see “Install and Configure a Software Update” on page 66.</div></div>

Determining Your Upgrade Path for SAS Integration Technologies

To run SAS Integration Technologies 9.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4. 9.4_M1, 9.4_M2, 9.4_M3	<ol style="list-style-type: none"> Before you migrate, see “SAS 9.4 Integration Technologies” on page 274, “SAS 9.4_M1 Integration Technologies” on page 275, “SAS 9.4_M2 Integration Technologies” on page 275, and “SAS 9.4_M3 Integration Technologies” on page 275 (if appropriate). Install and configure SAS 9.4. <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none"> ■ QuickStart Guides in the SAS Install Center ■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For migration information, see the following resources:</p> <ul style="list-style-type: none"> ■ <i>SAS Intelligence Platform: Migration Guide</i> ■ the product documentation page for SAS Integration Technologies

SAS 9.4 Integration Technologies

SAS Stored Processes

PROC STP executes stored processes remotely by default. In SAS 9.3, they were executed locally by default. If you want to use PROC STP to execute a stored process locally, specify the `SERVER=LOCAL` option.

In SAS 9.3, new features were made available for stored processes. If your client does not support the new stored process features, then you might need to make your stored process compatible with 9.2. For more information about how to make stored processes compatible with SAS 9.2, see the Help in SAS Management Console.

SAS BI Web Services

Resource suffixes for RESTful web service access have been updated. The following table shows the new 9.4 suffixes compared to their 9.3 suffixes:

Suffix for SAS 9.3	Updated Suffix for SAS 9.4
/parameters/	/outputParameters/
/streams/	/dataTargets/
/packages/	/packageEntries/

If you are upgrading from an earlier release, note that in SAS/IntrNet 9.3, SAS BI Web Services for .NET was discontinued. SAS BI Web Services for Java supports .NET versions of generated web services that are migrated from SAS 9.2 in a way that is transparent for clients.

SAS Publishing Framework

Event publishing has been discontinued, and the event publishing documentation has been removed. Instead, use PROC HTTP to issue HTTP requests and receive responses from an HTTP server.

SAS Foundation Services

In SAS Foundation Services, the Event Broker Service is no longer available.

SAS 9.4_M1 Integration Technologies

The first maintenance release for SAS 9.4 Integration Technologies shipped in December 2013. For more information about this release, see the software product page for [SAS Integration Technologies](#).

SAS 9.4_M2 Integration Technologies

The second maintenance release for SAS 9.4 Integration Technologies shipped in August 2014. For more information about this release, see the software product page for [SAS Integration Technologies](#).

SAS 9.4_M3 Integration Technologies

The third maintenance release for SAS 9.4 Integration Technologies shipped in July 2015. In this release, the App.AllowGuest initialization parameter has been added for the SAS Stored Process Web Application. This parameter causes a **Guest** option to display on the SAS Logon Manager sign-in screen. When the AllowGuest parameter is

set to **true**, App.AllowGuest must also be set to **true**, or GuestUsername and GuestPassword must be set.

For more information about this release, see the software product page for [SAS Integration Technologies](#).

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SAS Intelligence Platform

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Determining Your Update Path for SAS Intelligence Platform

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4	9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS Intelligence Platform 9.4_M1” on page 288, “SAS Intelligence Platform 9.4_M2” on page 289, and “SAS Intelligence Platform 9.4_M3” on page 290 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS 9.4 Intelligence Platform, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

To run the SAS 9.4 Intelligence Platform, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS Intelligence Platform 9.4_M1” on page 288, “SAS Intelligence Platform 9.4_M2” on page 289, and “SAS Intelligence Platform 9.4_M3” on page 290 (if appropriate). 2 To migrate to the new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>.
9.4, 9.4_M1, 9.4_M2	9.4, 9.4_M1, 9.4_M2, 9.4_M3	To migrate within the same SAS release, see <i>SAS Intelligence Platform: Installation and Configuration Guide</i> .
9.4_M3	9.4_M3	To migrate within the same SAS release, see <i>SAS Intelligence Platform: Installation and Configuration Guide</i> .

SAS 9.4 Intelligence Platform System Administration

Changes to the Middle Tier

Beginning with SAS 9.4, a web application server, such as JBoss, IBM WebSphere, or Oracle WebLogic, is no longer required. Also, you do not need to download and install a Java Development Kit for the middle tier.

SAS 9.4 includes SAS Web Application Server. It is based on VMware vFabric tc Server. The middle tier includes SAS Web Server, an HTTP server that is based on VMware vFabric Web Server. The SAS deployment tools can install and configure these servers automatically with the following features:

- horizontal and vertical clustering of SAS Web Application Server

- load-balancing proxy server configuration of SAS Web Server
- HTTPS support for SAS Web Server with CA-signed certificates or self-signed certificates

The new SAS Environment Manager offers monitoring and management features for these servers. For more information, see [Chapter 41, “SAS Environment Manager,” on page 205](#).

The SAS 9.4 middle tier includes JMS Broker for Java Message Services. A Cache Locator is installed and configured on the middle-tier machine. The Cache Locator is used by SAS Web Application Server to locate other SAS applications that use a distributed data cache for sharing information.

The SAS Remote Services application is deprecated, and SAS Enterprise Business Intelligence deployments do not use the server. The SAS Remote Services application is included with the software for backward compatibility with custom applications that rely on it.

Exceptions to the Middle-Tier Clustering Support

When you deploy SAS 9.4, you have the option of clustering your middle-tier servers. Not all products support this clustering. If you configure a clustered middle-tier environment and you deploy one of the products that do not support clustering, the non-supporting product runs on only one node in the cluster. If that node is not available, the product is not available (even if other SAS applications are available on other nodes in the cluster). For more information, see *SAS Intelligence Platform: Middle-Tier Administration Guide*.

The following table lists the products that do not support this clustering feature.

Product	Release Number	Notes
SAS BI Dashboard	4.4	
SAS Business Rules Manager	2.1	Support was added in SAS Business Rules Manager 2.2.

Product	Release Number	Notes
SAS Contextual Analysis	12.3	Support was added in SAS Contextual Analysis 13.2.
SAS Cost and Profitability Management Mid-Tier	8.1	
SAS Decision Manager	2.1	Support was added in SAS Decision Manager 2.2.
SAS Digital Marketing	6.3	
SAS Enterprise Miner	12.3	Support was added in SAS Enterprise Miner 13.1.
SAS Financial Management	5.4	
SAS Forecast Server	12.3	Support was added in SAS Forecast Server 13.1.
SAS IT Resource Management	3.4, 3.5	Support was added in SAS IT Resource Management 3.6.
SAS Model Manager	12.3	Support was added in SAS Model Manager 13.1.
SAS Risk Management for Banking	3.2	
SAS Security Intelligence Workbench	6.1	
SAS Text Miner	12.3	Support was added in SAS Text Miner 13.1.
SAS Time Series Studio	12.3	Support was added in SAS Time Series Studio 13.1.

Changes to the SAS Logon Manager

Before updating your software, review these changes to the SAS Logon Manager:

- In SAS 9.3, the SAS Logon Manager application could be configured to log application response measurement (ARM) information for logon and logoff activities. For SAS 9.4, SAS Logon Manager uses a different architecture. The new architecture does not support ARM monitoring.
- For sites that prevented concurrent logon sessions in SAS Logon Manager, the name of the policy that provides this feature has changed. In SAS 9.3, the `Policy.DisableConcurrentUserLogins` property accepted a value of `true`. In SAS 9.4, setting the value of `Policy.ConcurrentUserLogins` to `deny` prevents concurrent logons in the same way that setting `Policy.DisableConcurrentUserLogins` to `true` prevents concurrent logons in SAS 9.3.
- SAS 9.4 introduces a global single sign-on session. (The default value is 12 hours.) In previous releases, when a user reached the HTTP session time-out interval (with a default value of 30 minutes), the user was logged off and had to provide credentials and reauthenticate to use the application or any other SAS web application. In SAS 9.4, the global single sign-on session enables the user to access a timed-out application, or any other SAS web application, and get a new HTTP session without reauthenticating. The SAS 9.3 and earlier behavior can be reproduced by configuring the **Log user off on timeout** policy for SAS Logon Manager.

For more information, see *SAS Intelligence Platform: Middle-Tier Administration Guide*.

SAS Web Infrastructure Platform Data Server

SAS Web Infrastructure Platform requires a transactional data store for middle-tier data such as alerts, comments, and workflows, as well as data for the SAS Content Server. To avoid the expense of licensing a third-party vendor database and to offer complete support through SAS software, SAS provided a data server to meet this need.

In the SAS 9.2 release, SAS Table Server was offered. In the SAS 9.3 release, SAS Framework Data Server was offered. In SAS 9.2 and SAS 9.3, respectively, the SAS

Table Server and SAS Framework Data Server could be replaced with a third-party vendor database. Using a customer-selected database was popular for deployments that included a SAS solution that required a database such as Oracle. The transactional needs for the solution and the middle tier could be consolidated in one database and avoided the need for additional administration of a data server offered by SAS.

SAS 9.4 includes SAS Web Infrastructure Platform Data Server. The data server is based on PostgreSQL 9.1.9. Besides fulfilling the role of data store for middle-tier data, it also stores transactional information for SAS Environment Manager. The EVManager database instance that is used by SAS Environment Manager depends on the SAS Web Infrastructure Platform Data Server to log performance data. This dependency cannot be met by a third-party vendor database.

If you used a third-party vendor database for SAS 9.2 or SAS 9.3, the SharedServices database instance can continue to use the third-party vendor database when updating to SAS 9.4. However, you must use the SAS Web Infrastructure Platform Data Server for the SAS Environment Manager database (the EVManager database instance).

Deployment Backup

The Deployment Backup and Recovery tool, which is new with SAS 9.4, provides an integrated method for backing up and recovering your SAS content across multiple tiers and machines. If this tool is configured, it automatically backs up the following components on the SAS server tier, middle tier, and data tier:

- the metadata server repositories, the repository manager, and all of the files in the metadata server's configuration directory.
- the contents of the `Data`, `SASEnvironment`, and server configuration directories for each server on the SAS server tier. (If symbolic links in these directories point to other locations, the referenced locations are not backed up.)
- all databases that are managed by the SAS Web Infrastructure Platform Data Server.

By default, the tool backs up these items automatically every Sunday at 1:00 a.m. All components (except the metadata server) are backed up to the following path on their respective host machines: ***SAS-configuration-directory/Levn/Backup/Vault***. By default, backups are retained there for 30 days.

For metadata server backups, the tool uses the metadata server backup utility and its configured backup location and retention policy.

The Deployment Backup and Recovery tool also enables you to specify a central, network-accessible vault location. A central vault is highly recommended for multiple-machine deployments. For deployments that are not current with the second maintenance release for SAS 9.4, a central vault is required if your middle-tier environment includes a clustered SAS Content Server. If a central vault is specified, the backups from each host machine are copied to the central vault following each backup operation. By default, files are retained in the central vault for 30 days.

The Deployment Backup and Recovery tool includes batch scripts that you can use to perform these tasks:

- execute an ad hoc (unscheduled) backup
- specify a different backup schedule, a different vault location, or additional directories under *SAS-configuration-directory/Levn* that you want to back up
- display information such as the current schedule, the current configuration, and detailed backup history
- complete a full or partial recovery from one of the backups

If your deployment has a heterogeneous operating system environment, you can use the Deployment Backup and Recovery Tool only if your deployment is current with the first maintenance release for SAS 9.4. A heterogeneous environment is one in which the host machines that are included in the backup are in different operating system families (for example, both UNIX and Windows). The first maintenance release also includes support for manually configuring a central vault location in heterogeneous deployments.

For more information, see “Using the Deployment Backup and Recovery Tool” in *SAS Intelligence Platform: System Administration Guide*.

Metadata Server Backup and Recovery

The default backup schedule for the stand-alone metadata server backup has been changed from seven days a week to six days a week (daily except Sunday) at 1:00 a.m. If you migrate from SAS 9.3 to SAS 9.4, the migration utility performs these tasks:

- migrates your metadata server backup schedule and retention policy to the new deployment. (If no metadata server backup schedule or retention policy is defined in your SAS 9.3 deployment, none will be specified in your SAS 9.4 deployment.)
- removes from the SAS 9.4 metadata server backup schedule any backups that are scheduled on Sunday from 00:00 through 11:59 a.m. This prevents conflicts with the metadata server backup that is performed every Sunday at 1:00 a.m. by the Deployment Backup and Recovery tool.

Do not schedule stand-alone metadata server backups during this time if the Deployment Backup and Recovery tool has been configured.

- sets the metadata server backup destination to the location that you specify in the SAS Deployment Wizard. The default destination is *SAS-configuration-directory/Levn/SASMeta/MetadataServer/Backups* in your SAS 9.4 configuration directory.

In the first maintenance release for SAS 9.4, the metadata server script includes a `-recover` option. This option starts a server that is not currently running, and then restores the server's metadata repository from the most recent backup. The option provides an easy way to recover a server or node that is unresponsive. For more information, see "Backing Up and Recovering the SAS Metadata Server" in *SAS Intelligence Platform: System Administration Guide*.

Clustered Metadata Servers

SAS 9.4 provides the option of implementing a metadata server cluster. This feature provides redundancy and high availability of the metadata server, which is a core component of the SAS infrastructure. Clustering ensures that the server continues to operate if a server host machine fails. These servers can be monitored, and in SAS

Environment Manager, you can view reports for metrics, such as health, availability, and quorum status.

If your SAS 9.4 deployment includes a clustered metadata server, be aware of the following special considerations:

- To start a clustered metadata server, use your preferred method (for example, the server script, SAS Environment Manager, or Windows Service Manager) to start each of the nodes in the cluster. The nodes can be started in any order.
- Make sure that all of the nodes are running before you start components that depend on the metadata server.
- The Active Server Properties dialog box, which is available in the **Metadata Manager** node of SAS Management Console, includes a new **Cluster** tab that displays the overall status of the cluster. Individual nodes can be monitored in SAS Environment Manager and in SAS Management Console Server Manager.
- The following administrative functions cannot be performed on a server that is running with the cluster option:
 - completing a metadata server recovery
 - backing up the metadata server with the REORG option
 - running the optimizeIMDB command option of the metadata server script
 - running the Metadata Analyze and Repair tools

To perform one of these functions, use the startNoCluster option of the metadata server script to start a single node without the clustering option. After performing the function, restart (or stop and start) the node to place it in cluster mode as the master node. Then start the other nodes in the cluster. The master node updates the other nodes with the new data from the recovery, REORG, optimizeIMDB, or analyze and repair operation.

- The logging facility creates a separate log for each node in the cluster. The logs are stored on their respective host machines and are available for viewing in SAS Management Console.
- Effective with the second maintenance release for SAS 9.4, metadata server clustering is supported on z/OS. In previous SAS 9.4 releases, metadata server

clustering is supported only on UNIX and Windows. All of the nodes in the cluster must have the same operating system.

To update a deployment with a clustered metadata server:

- 1** Terminate all active SAS sessions, daemons, spawners, and servers.
- 2** Upgrade the first node (that is, the initially configured metadata server). The node is restarted automatically after the upgrade.
- 3** Update the remaining nodes in the cluster.
- 4** Update the remaining tiers in your deployment.

For more information, see “Using Metadata Server Clustering” in *SAS Intelligence Platform: System Administration Guide*.

SAS Information Delivery Portal

In SAS Information Delivery Portal 4.4 (which runs on SAS 9.4), data explorations are no longer converted to reports during migration or promotion.

SAS Deployment Agent

The SAS Deployment Agent, which is new with SAS 9.4, is required for some administration activities such as creating new servers, configuring middle-tier clustering, and using the Deployment Backup and Recovery tool. For more information, see “Starting and Stopping the SAS Deployment Agent” in *SAS Intelligence Platform: System Administration Guide*.

SAS Intelligence Platform 9.4_M1

Deployment Backup

Effective with the first maintenance release for SAS 9.4, the Deployment Backup and Recovery tool includes the following changes:

- The syntax has changed for the `sas-backup` and `sas-list-backups` commands.
- The input file specifications have changed for the following commands: `sas-backup`, `sas-set-backup-schedule`, and `sas-remove-backup-schedule`.
- The `sas-status-backup` command can be used only to display the status of a backup operation. It no longer reports the status of recoveries.
- An alert email is generated if a backup or recovery is unsuccessful. By default, the email is sent to the system administrator email address that was specified in the SAS Deployment Wizard.
- A new offline recovery command (`sas-recover-offline`) can restore files from the deployment backup when some resources are unavailable or have been taken offline.
- On UNIX machines, it is no longer necessary to list the backup user (typically, the SAS Installer user) in the `etc/sudoers` file.

Metadata Server Recovery

In the first maintenance release for SAS 9.4, the metadata server script includes a `-recover` option. This option starts a single node and then restores the node's metadata repository from the most recent backup, which provides an easy way to recover a server or node that is unresponsive.

Server Start-up Order

In the first maintenance release for SAS 9.4, the documentation was changed to recommend that the SAS Web Server be started before the SAS Web Application Server. This start-up order helps ensure optimum performance when web applications are initialized. The `sas.servers` script has also been changed to incorporate the new order.

SAS Intelligence Platform 9.4_M2

SAS Web Infrastructure Platform Data Server

Effective with the second maintenance release for SAS 9.4, Teradata is no longer supported as an alternate data server for SAS Web Infrastructure Platform Services.

Deployment Backup

Effective with the second maintenance release for SAS 9.4, the Deployment Backup and Recovery tool includes the following changes:

- If you have specified a central vault location, the local backups are deleted from each host machine after they are successfully copied to the central vault. However, metadata server backups are not deleted from the location that is used by the metadata server backup utility.
- A central vault location is no longer required if your middle-tier environment includes a clustered SAS Content Server.
- When you use `sas-update-backup-config` to specify a central vault location, the location is automatically added to the `BackupServer.ini` file.
- The syntax has changed for `sas-remove-backup-schedule` and `sas-remove-backup-customdir`. JSON files are no longer used with these commands.
- The input data specifications for `sas-add-backup-customdir` have changed.

- Error messages have been modified to improve clarity.
- The recovery process uses `checksums` to validate the contents of the specified backup directory against the originally created backup. If the validation fails, a warning message is generated and the recovery is not performed. To perform the recovery without validating the files, you can specify the new `forced` option be used with the recovery command to perform the recovery without validating the files.
- Commands can be run from any directory.

Batch Relationship Reporting Tools

In the second maintenance release for SAS 9.4, the terminology has changed for reports produced by the `sas-relationship-reporter` batch command. For example, the term `Contains` replaces the term `Includes`.

Changes in SAS Mobile BI

SAS Mobile BI 7.1 has a new user interface. The new interface does not include a banner. For this reason, support for the configuration properties that customize the banner in the native mobile viewers is discontinued in SAS Mobile BI 7.1.

SAS Intelligence Platform 9.4_M3

SAS Environment Manager

SAS Environment Manager 2.5 shipped with the third maintenance release for SAS 9.4. The stored process reports in the Report Center have been replaced with stored process prompts, and the SAS Environment Management Data Mart now supports a federated data mart structure.

The new SAS Backup Manager can be accessed from the **Administration** tab of SAS Environment Manager. The SAS Backup Manager is an easy-to-use interface for scheduling, configuring, monitoring, and performing integrated backups. The interface

incorporates most of the functions of the Deployment Backup and Recovery tool's batch commands.

Deployment Backup

In the **third maintenance release** for SAS 9.4, the Deployment Backup and Recovery tool includes these changes:

- The command `sas-update-backup-config` has a new syntax and new filtering capabilities.
- The following commands have been deprecated: `sas-display-backup-source-config`, `sas-add-backup-customdir`, `sas-display-backup-customdir`, and `sas-remove-backup-customdir`. For equivalent functionality, use `sas-display-backup-config` and `sas-update-backup-config`.
- Some of the labels in the input file for `sas-recover-offline` and `sas-recover` have been changed.

Batch Relationship Reporting Tools

Automatic loading of relationship data is configured by default to execute on an hourly basis. Cleaning of relationship data is configured by default to execute daily at 11:00 p.m.

Deprecated Features

SAS has deprecated support of the SAS Audit, Performance, and Management package. The functionality provided by the package was integrated into SAS Environment Manager 2.4.

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SAS/IntrNet

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Determining Your Update Path for SAS/IntrNet

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4	9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS/IntrNet 9.4_M1” on page 295, “SAS/IntrNet 9.4_M2” on page 296, and “SAS/IntrNet 9.4_M3” on page 296 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS/IntrNet 9.4, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M1	9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS/IntrNet 9.4_M2” on page 296 and “SAS/IntrNet 9.4_M3” on page 296 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the second maintenance release for SAS 9.4, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M2	9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS/IntrNet 9.4_M3” on page 296.</div></div> <div><div>2</div><div>To upgrade to the third maintenance release for SAS 9.4, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

To run the latest release of SAS/IntrNet, you must upgrade to SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS/IntrNet 9.4” on page 295, “SAS/IntrNet 9.4_M1” on page 295, “SAS/IntrNet 9.4_M2” on page 296, and “SAS/IntrNet 9.4_M3” on page 296 (if appropriate). 2 Install and configure SAS 9.4. <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none"> ■ QuickStart Guides in the SAS Install Center ■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For migration information, see the following resources:</p> <ul style="list-style-type: none"> ■ <i>SAS Intelligence Platform: Migration Guide</i> ■ the product documentation page for SAS/IntrNet

SAS/IntrNet 9.4

Beginning with SAS/IntrNet 9.3, the SAS/IntrNet Configuration Utility was replaced by the SAS/IntrNet Service Tasks in the SAS Deployment Manager. The Create a New IntrNet Service utility on Windows and the inetcfg.pl script on UNIX are no longer available.

SAS/IntrNet 9.4_M1

The first maintenance release for SAS/IntrNet 9.4 shipped in December 2013. For more information about this release, see the product documentation page for [SAS/IntrNet Software](#).

SAS/IntrNet 9.4_M2

The second maintenance release for SAS/IntrNet 9.4 shipped in August 2014. In this release, the default value for DebugMask has changed from 32767 to 0, which indicates that all debug values are disabled. For more information about this release, see the product documentation page for [SAS/IntrNet Software](#).

SAS/IntrNet 9.4_M3

The third maintenance release for SAS/IntrNet 9.4 shipped in July 2015. For more information about this release, see the product documentation page for [SAS/IntrNet Software](#).

Determining Your Update Path for SAS Inventory Optimization Workbench

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
5.2 (SAS 9.4)	5.2_M2 (SAS 9.4)	For more information about how to upgrade to the latest release, see <i>SAS Inventory Optimization Workbench: Upgrade and Migration Guide</i> .

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
5.2 (SAS 9.4)	5.2_M2 (SAS 9.4)	For more information about how to upgrade to the latest release, see <i>SAS Inventory Optimization Workbench: Upgrade and Migration Guide</i> .

Migrating to SAS 9.4

To run SAS Inventory Optimization Workbench 5.2, you must be running SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.1 (SAS 9.3)	5.2, 5.2_M2 (SAS 9.4)	For more information about how to migrate to this release, see <i>SAS Inventory Optimization Workbench: Upgrade and Migration Guide</i> .
5.2, 5.2_M2 (SAS 9.4)	5.2_M2 (SAS 9.4)	

About SAS Inventory Optimization Workbench

SAS Inventory Optimization Workbench is an inventory optimization and planning module of the SAS Demand-Driven Planning and Optimization suite. SAS Inventory Optimization Workbench helps inventory analysts and buyers track, monitor, and predict the inventory for products. SAS Inventory Optimization Workbench helps organizations with a single-echelon or multi-echelon network gain instant visibility and an understanding of the inventory performance for their products without relying on manual calculations and judgments.

SAS shipped these releases of SAS Inventory Optimization Workbench:

- SAS Inventory Optimization Workbench 5.2 in August 2014
- the second maintenance release for SAS Inventory Optimization Workbench in May 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Inventory Optimization Workbench](#).

Note: The documentation for SAS Inventory Optimization Workbench is available only to customers who license this product.

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SAS IT Resource Management

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About SAS IT Resource Management 302

Determining Your Update Path for SAS IT Resource Management

Upgrading an Existing SAS 9.4 Deployment

SAS IT Resource Management 3.4, 3.5, and 3.6 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
3.4 (SAS 9.4_M1), 3.5 (SAS 9.4_M2)	3.6 (SAS 9.4_M2)	<div><div>1</div>Before you upgrade, see “About SAS IT Resource Management” on page 302.</div> <div><div>2</div>To upgrade to the latest release of SAS IT Resource Management, see “Install and Configure a Software Update” on page 66.</div>

Migrating to SAS 9.4

To run SAS IT Resource Management 3.4, you must be running the first maintenance release for SAS 9.4. To run SAS IT Resource Management 3.5 or 3.6, you must be running the second maintenance release for SAS 9.4. You can migrate to the latest release of SAS 9.4, or you can create a new deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
3.3, 3.21 (SAS 9.3)	3.4 (SAS 9.4_M1); 3.5, 3.6 (SAS 9.4_M2)	<div><div>1</div>Before you migrate, see <i>What's New in SAS IT Resource Management</i>.</div> <div><div>2</div>To migrate to the new release, see <i>SAS IT Resource Management : Migration Guide</i>.</div>
3.4 (SAS 9.4_M1), 3.5 (SAS 9.4_M2)	3.6 (SAS 9.4_M2)	To migrate to SAS IT Resource Management 3.5, see <i>SAS IT Resource Management 3.5: Migration Guide</i> .
3.6 (SAS 9.4_M2)	3.6 (SAS 9.4_M2)	To migrate within the same release, see <i>SAS IT Resource Management 3.6: Migration Guide</i> .

About SAS IT Resource Management

SAS shipped these releases of SAS IT Resource Management:

- SAS IT Resource Management 3.4 in December 2013
- SAS IT Resource Management 3.5 in September 2014
- SAS IT Resource Management 3.6 in May 2015

To view the documentation for this product, see the product documentation page for [SAS IT Resource Management](#).

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SAS Lineage

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About SAS Lineage

SAS Lineage is a new product that initially shipped in November 2014. SAS Lineage 3.1 is a web-based diagram component for visualizing relationships between objects. It is used as a stand-alone lineage and relationship viewer that can be accessed by SAS database management and business intelligence applications. The component has two modes: first, a network diagram displays all relationships. Second, two left-to-right dependency diagrams are available: one that displays data governance information (governance) and another that displays parent and child relationships only (impact analysis). The relationship information displayed in these diagrams is drawn from the Relationship database that is a part of the Web Infrastructure Platform Data Server.

SAS Lineage 3.1

If this product is in your order, you must run the SAS Deployment Wizard a second time to add this product to your deployment. For more information, see [“Adding a New Product” on page 83](#).

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SAS Management Console

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Determining Your Update Path for SAS Management Console

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4	9.4_M1, 9.4_M2, 9.4_M3	1 Before you upgrade, see “SAS Management Console 9.4” on page 307.
9.4_M1,	9.4_M2, 9.4_M3	2 To upgrade to the latest release of SAS Management Console 9.4, see “Install and Configure a Software Update” on page 66.
9.4_M2	9.4_M3	

Migrating to SAS 9.4

To run the latest release of SAS Management Console, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you migrate, see “SAS Management Console 9.4” on page 307.</div></div> <div><div>2</div><div>To migrate to the new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>.</div></div>
9.4, 9.4_M1, 9.4_M2, 9.4_M3	9.4, 9.4_M1, 9.4_M2, 9.4_M3	To migrate within the same SAS release, see <i>SAS Intelligence Platform: Installation and Configuration Guide</i> .
9.4_M3	9.4_M3	To migrate within the same SAS release, see <i>SAS Intelligence Platform: Installation and Configuration Guide</i> .

Managing Multiple Installations of SAS Management Console

You can install SAS Management Console 9.4, 9.3, and 9.2 on the same machine. Use the same version of SAS Management Console to connect to the SAS server. For example, use SAS Management Console 9.4 to connect to SAS 9.4 servers, and use SAS Management Console 9.3 to connect to SAS 9.3 servers. Do not try to connect to a different version of a SAS server.

SAS Management Console 9.4

The Application Monitor plug-in has been removed.

In SAS 9.3, new features were made available for stored processes. If your client does not support the new stored process features, then you might need to make your stored process compatible with 9.2. For more information about how to make stored processes compatible with SAS 9.2, see the Help in SAS Management Console.

In SAS Management Console 9.3, the Backup Wizard and the Replication Wizard were removed from the Metadata Manager plug-in. These wizards have been replaced by the Server Backup and Restore facility, which is in the Metadata Utilities folder of the Metadata Manager plug-in. If you have created or scheduled any backup or restore jobs, these jobs will not run in SAS Management Console 9.4. You must use the Server Backup and Restore facility to re-create those jobs.

SAS has shipped these releases of SAS Management Console:

- first maintenance release for SAS Management Console 9.4 in December 2013
- second maintenance release for SAS Management Console 9.4 in August 2014
- third maintenance release for SAS Management Console in July 2015

For more information about these releases, see the product documentation page for [SAS Management Console](#).

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SAS Marketing Automation

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Determining Your Update Path for SAS Marketing Automation

Upgrading an Existing SAS 9.4 Deployment

SAS Marketing Automation 6.3 and 6.4 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.3 (SAS 9.4)	6.4 (SAS 9.4)	For more information about this release, contact your SAS account representative.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.1, 5.41 (SAS 9.3)	6.3, 6.4 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.
6.3 (SAS 9.4)	6.4 (SAS 9.4)	To migrate to SAS Marketing Automation 6.4, see <i>SAS Marketing Automation: Migration Guide</i> .
6.4 (SAS 9.4)	6.4 (SAS 9.4)	To migrate within the same release, see <i>SAS Marketing Automation: Migration Guide</i> .

SAS Marketing Automation 6.3

SAS Marketing Automation 6.3 shipped in May 2014. For more information, contact your SAS account representative.

SAS Marketing Automation 6.4

SAS Marketing Automation 6.4 shipped in March 2015. This release includes some SAS Visual Analytics components. For more information about how to deploy these components, see [“Adding SAS Visual Analytics to Your Deployment” on page 84](#).

If you already have these SAS Visual Analytics components installed, you still need to create a plan file, and you need to run the SAS Deployment Wizard a second time to add the SAS LASR Analytic Server components for SAS Marketing Automation to your deployment. Use the product documentation to complete the correct migration and deployment steps for your site.

For more information, see the product documentation page for [SAS Customer Intelligence](#).

Note: The documentation for SAS Marketing Automation is available only to customers who license this product.

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SAS Marketing Operations Management

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Upgrading an Existing SAS 9.4 Deployment

Migrating to SAS 9.4

About SAS Marketing Operations Management

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Determining the Update Path for SAS Marketing Operations Management

Upgrading an Existing SAS 9.4 Deployment

SAS Marketing Operations Management 6.3 and 6.4 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.3 (SAS 9.4)	6.4 (SAS 9.4)	For more information about how to upgrade to the latest release, contact your SAS account representative.

Migrating to SAS 9.4

To run SAS Marketing Operations Management 6.3 or 6.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.0 (SAS 9.3)	6.3, 6.4 (SAS 9.4)	For more information, contact your SAS account representative.
6.3 (SAS 9.4)	6.4 (SAS 9.4)	
6.4 (SAS 9.4)	6.4 (SAS 9.4)	

About SAS Marketing Operations Management

SAS shipped these releases of SAS Marketing Operations Management:

- SAS Marketing Operations Management 6.3 in August 2014
- SAS Marketing Operations Management 6.4 in May 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Marketing Operations Management](#).

Note: The documentation for SAS Marketing Operations Management is available only to customers who license this product.

Determining Your Update Path for SAS Marketing Optimization

SAS Marketing Optimization 6.3 and 6.4 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.3 (SAS 9.4)	6.4 (SAS 9.4)	For more information about this release, contact your SAS account representative.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.1, 5.41 (SAS 9.3)	6.3, 6.4 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.
6.3 (SAS 9.4)	6.4 (SAS 9.4)	To migrate to SAS Marketing Optimization 6.4, see <i>SAS Marketing Optimization: Migration Guide</i> .
6.4 (SAS 9.4)	6.4 (SAS 9.4)	To migrate within the same SAS release, see <i>SAS Marketing Optimization: Migration Guide</i> .

SAS Marketing Optimization 6.3

SAS Marketing Optimization 6.3 shipped in May 2014. For more information, contact your SAS account representative.

SAS Marketing Optimization 6.4

SAS Marketing Optimization 6.4 shipped in March 2015. This release includes some SAS Visual Analytics components. For more information about how to deploy these components, see [“Adding SAS Visual Analytics to Your Deployment” on page 84](#).

If you already have these SAS Visual Analytics components installed, you still need to create a plan file, and you need to run the SAS Deployment Wizard a second time to add the SAS LASR Analytic Server components for SAS Marketing Optimization to your deployment. Use the product documentation to complete the correct migration and deployment steps for your site.

For more information, see the product documentation page for [SAS Customer Intelligence](#).

Note: The documentation for SAS Marketing Optimization is available only to customers who license this product.

Determining Your Update Path for SAS MDM

SAS MDM 4.1 and 4.2 run on SAS 9.4.

Migrating to SAS 9.4

SAS MDM 4.1 is a new product that runs on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
4.1, 4.1_M1 (SAS 9.4)	4.2 (SAS 9.4)	To migrate to SAS MDM 4.2, see <i>SAS MDM: Administrator's Guide</i> .
4.2 (SAS 9.4)	4.2 (SAS 9.4)	To migrate within the same release, see <i>SAS MDM: Administrator's Guide</i> .

About SAS MDM

SAS MDM integrates its master data management technologies with the master data management technologies in SAS 9.4. SAS MDM is a web-based application that is accessed through SAS Data Management Console. SAS MDM provides a single, accurate, and unified view of corporate data, integrating information from various data sources into one master record. SAS enables you to develop master data management processes, and it provides the technology required to analyze existing data resources, build a unified view of that information, and manage that master view of data over time.

SAS shipped these releases of SAS MDM:

- the first maintenance release for SAS MDM 4.1 in April 2014
- SAS MDM 4.2 in March 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS MDM](#).

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SAS Merchandise Intelligence

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Determining the Update Path for SAS Merchandise Intelligence

Upgrading an Existing SAS 9.4 Deployment

SAS Merchandise Intelligence 5.2 and 5.4 include SAS Revenue Optimization and SAS Size Optimization. These products run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.2 (SAS 9.4)	5.4 (SAS 9.4_M3)	For more information about how to request this new release and the features that are available, contact your SAS account representative.

Migrating to SAS 9.4

To run SAS Merchandise Intelligence 5.2 or 5.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
4.2 (SAS 9.3)	5.2 (SAS 9.4); 5.4 (SAS 9.4_M3)	For more information about how to request this new release and the features that are available, contact your SAS account representative.
5.2 (SAS 9.4)	5.4 (SAS 9.4_M3)	

SAS Merchandise Intelligence 5.2

These products are included in SAS Merchandise Intelligence 5.2:

- SAS Revenue Optimization 5.2, which includes SAS Markdown Optimization, SAS Regular Price Optimization, and SAS Promotion Optimization
- SAS Size Optimization 3.2, which includes SAS Size Profiling and SAS Pack Optimization
- SAS Retail Forecasting 5.2

SAS Merchandise Intelligence 5.4

These products are included in SAS Merchandise Intelligence 5.4:

- SAS Revenue Optimization 5.2, which includes SAS Markdown Optimization, SAS Regular Price Optimization, and SAS Promotion Optimization
- SAS Size Optimization 3.4, which includes SAS Size Profiling and SAS Pack Optimization
- SAS Retail Forecasting 5.2

Additional Information

For more information about SAS Merchandise Intelligence, contact your SAS account representative and see the product documentation page for [SAS Merchandise Intelligence](#).

Note: The documentation for SAS Merchandise Intelligence is available only to customers who license this product.

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SAS Model Manager

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Determining Your Update Path for SAS Model Manager

Upgrading an Existing SAS 9.4 Deployment

SAS Model Manager 12.3, 13.1, and 14.1 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
12.3 (SAS 9.4), 13.1 (SAS 9.4_M2)	13.1 (SAS 9.4_M2), 14.1 (9.4_M3)	<div><div>1</div>Before you upgrade, see “SAS Model Manager 13.1” on page 328 and “SAS Model Manager 14.1” on page 329 (if appropriate).</div> <div><div>2</div>To upgrade to the latest release of SAS Model Manager, see “Install and Configure a Software Update” on page 66.</div> <div><div>3</div>Complete the post-upgrade steps in <i>SAS Model Manager: Administrator’s Guide</i>.</div>

Migrating to SAS 9.4

To run SAS Model Manager 12.3, 13.1, or 14.1, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
12.1, 3.1, 3.1_M1 (SAS 9.3)	12.3 (SAS 9.4), 13.1 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<div><div>1</div>Before you migrate, see “SAS Model Manager 12.3” on page 327, “SAS Model Manager 13.1” on page 328, and “SAS Model Manager 14.1” on page 329 (if appropriate).</div> <div><div>2</div>To migrate to the new release, see <i>SAS Model Manager: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>.</div> <div><div>3</div>Complete the post-installation, configuration, and verification steps in <i>SAS Model Manager: Administrator’s Guide</i>.</div>

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
14.1 (SAS 9.4_M3)	14.1 (SAS 9.4_M3)	To migrate within the same release, see <i>SAS Model Manager: Migration Guide</i> .

SAS Model Manager 12.3

SAS Model Manager 12.3 includes many new and enhanced features that benefit users and administrators:

- create and manage multiple projects in a control group
- monitor performance of champion models for all projects within a control group and publish the models to the SAS Metadata Repository
- schedule performance monitoring tasks
- specify multiple data sources and collection dates when defining performance monitoring tasks
- manage models that are published to a database
- create folders, projects, and versions by using macros
- create and view reports within a workflow activity
- view the process flow diagram for a workflow

In addition, SAS Model Manager 12.3 provides support for these areas:

- SAS Enterprise Miner Random Forest (HPFOREST) models, as well as the SAS/ETS COUNTREG and SEVERITY models
- multiple SAS application servers when scoring or retraining a model, and monitoring performance of champion and challenger models

SAS Model Manager 12.3 does not support middle-tier clustering. As a result, SAS Model Manager runs on the master node in the cluster. If the master node is not available, SAS Model Manager is not available (even if other SAS applications are available on other nodes in the cluster).

If you are upgrading from a previous release of SAS Model Manager, note these changes:

- In the 12.1 release, additional pre-installation configuration tasks were added to create and configure the new SAS Model Manager database, before the Software Deployment Wizard is run. In SAS Model Manager 12.3, the default database type is the Web Infrastructure Platform Data Server. SAS Model Manager also supports third-party databases, including DB2, MySQL, Oracle, PostgreSQL, and SQL Server.
- SAS Model Manager 12.3 on SAS 9.4 no longer uses the multicast address and port configuration.
- Beginning with the 12.1 release of SAS Model Manager, SAS consolidated the version numbers for the main analytical products. Before the consolidation, the most recent version number for SAS Model Manager was 3.1.
- Beginning with SAS Model Manager 3.1, the SAS Analytics Platform server was deprecated.

SAS Model Manager 13.1

SAS Model Manager 13.1, which shipped in August 2014, runs on the second maintenance release for SAS 9.4. The SAS Model Manager Java Client application and the Workflow Console web-based application have been replaced with an integrated web-based application. The SAS Model Manager Client installation is no longer required on a user's desktop. SAS Model Manager 13.1 includes many new and enhanced features that benefit users and administrators and enable them to perform these tasks:

- create libraries and register tables in the SAS Metadata Repository
- manage workflows and track workflow tasks

- publish models to Hadoop and SAP HANA
- manage all versions within a project in one place
- schedule recurrent jobs
- retrain models based on the dashboard project status
- specify performance options for using dynamic data sources and generating dashboard reports
- specify additional reporting options
- attach documents and add comments

If you are upgrading from a previous release of SAS Model Manager, note these changes:

- When you upgrade from SAS Model Manager 12.3 to 13.1, you must complete additional post-upgrade steps. For more information, see *SAS Model Manager: Administrator's Guide*.
- The web application URL has been changed to be consistent across the SAS Enterprise Decision Management product offerings. The SAS Model Manager Java Client application is no longer available from a user's desktop or via the Java Web Start URL.

SAS Model Manager 14.1

SAS Model Manager 14.1, which shipped in July 2015, runs on the third maintenance release for SAS 9.4. SAS Model Manager 14.1 includes many new and enhanced features that benefit users and administrators and enable them to perform these tasks:

- manage SAS Factory Miner models that are registered in the SAS Model Manager model repository
- add model dependencies and view the relationships using SAS Lineage
- manage model versions

- import, update, and export generic models at the folder level
- access the inventory of all models in the same category view
- add and edit model keywords
- add multiple user-defined properties to a model at one time
- search the model inventory with improved performance and filter the search results by the date modified, model properties, and user-defined properties

For more information about the new features and enhancements in this release, see the product documentation page for [SAS Model Manager](#).

If you are upgrading from SAS Model Manager 12.3 or 13.1 to 14.1, you must complete additional post-upgrade steps. For more information, see *SAS Model Manager: Administrator's Guide*.

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SAS OLAP Server

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SAS 9.4 OLAP Server 333

Determining the Update Path for SAS OLAP Server

Upgrading Your Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4	9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS 9.4 OLAP Server” on page 333.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS 9.4 OLAP Server, see “Install and Configure a Software Update” on page 66.</div></div>

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4_M1	9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS 9.4 OLAP Server” on page 333.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS 9.4 OLAP Server, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M2	9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS 9.4 OLAP Server” on page 333.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS 9.4 OLAP Server, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

To run the latest release of SAS OLAP Server, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you migrate, see “SAS 9.4 OLAP Server” on page 333.</div></div> <div><div>2</div><div>Install and configure SAS 9.4.</div></div> <div><div>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</div><div><div>■ QuickStart Guides in the SAS Install Center</div><div>■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i></div></div><div><div>For migration information, see the following resources:</div><div><div>■ <i>SAS Intelligence Platform: Migration Guide</i></div><div>■ the product documentation page SAS OLAP Server</div></div></div></div>

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.4	9.4, 9.4_M1, 9.4_M2, 9.4_M3	To migrate within the same SAS release, see <i>SAS Intelligence Platform: Migration Guide</i> .
9.4_M3	9.4_M3	To migrate within the same release, see <i>SAS Intelligence Platform: Migration Guide</i> .

SAS 9.4 OLAP Server

SAS has shipped these releases of SAS OLAP Server:

- first maintenance release for SAS 9.4 OLAP Server in December 2013. The LOCKDOWN option and statement are supported by the SAS OLAP Server.
- second maintenance release for SAS 9.4 OLAP Server in August 2014.
- third maintenance release for SAS 9.4 OLAP Server in July 2015.

For information about the new features and enhancements in these releases, see the product documentation for [SAS OLAP Cube Studio](#) and [SAS OLAP Server](#).

SAS OpRisk VaR

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Determining Your Update Path for SAS OpRisk VaR

Upgrading an Existing SAS 9.4 Deployment

SAS OpRisk VaR 6.1 runs on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.1, 6.1_M1 (SAS 9.4)	6.1_M2 (SAS 9.4)	For more information about how to upgrade to the latest release, contact your SAS account representative.

Migrating to SAS 9.4

To run SAS OpRisk VaR 6.1, you must be running SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.1, 4.21 (SAS 9.3)	6.1, 6.1_M1, 6.2_M2 (SAS 9.4)	For more information about how to migrate to this release, contact your SAS account representative.
6.1, 6.1_M1, 6.1_M2 (SAS 9.4)	6.1_M2 (SAS 9.4)	

About SAS OpRisk VaR

SAS shipped these releases of SAS OpRisk VaR:

- SAS OpRisk VaR 6.1 in June 2014
- the second maintenance release for SAS OpRisk VaR 6.1 in May 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS OpRisk VaR](#).

Note: The documentation for SAS OpRisk VaR is available only to customers who license this product.

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SAS/OR

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Determining Your Update Path for SAS/OR

Upgrading an Existing SAS 9.4 Deployment

SAS/OR 12.3, 13.1, 13.2, and 14.1 run on SAS 9.4.

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
12.3 (SAS 9.4)	13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<div><div>1</div>Before you upgrade, see “About SAS/OR” on page 340.</div> <div><div>2</div>To upgrade to the latest release of SAS/OR, see “Install and Configure a Software Update” on page 66.</div>

Migrating to SAS 9.4

To run SAS/OR 12.3, 13.1, 13.2, or 14.1, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
12.1 (SAS 9.3) 9.3, 9.3_M1	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you migrate, see “About SAS/OR” on page 340. 2 Install and configure SAS 9.4. <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none"> ■ QuickStart Guides in the SAS Install Center ■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For migration information, see the following resources:</p> <ul style="list-style-type: none"> ■ <i>SAS Intelligence Platform: Migration Guide</i> ■ the product documentation page for SAS/OR
12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2)	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	To migrate within the same SAS release, see <i>SAS Intelligence Platform: Migration Guide</i> .
14.1 (SAS 9.4_M3)	14.1 (SAS 9.4_M3)	To migrate within the same release, see <i>SAS Intelligence Platform: Migration Guide</i> .

About SAS/OR

SAS has shipped these releases:

- SAS/OR 12.3 shipped in July 2013. This release is essentially a maintenance release, with the exception that high-performance features for use in single-machine mode have been added.
- SAS/OR 13.1 shipped in December 2013. For more information about the new features and enhancements, see [What's New in SAS/OR 13.1](#).
- SAS/OR 13.2 shipped in August 2014. For more information about the new features and enhancements, see [What's New in SAS/OR 13.2](#).
- SAS/OR 14.1 shipped in July 2015. For more information about the new features and enhancements, see [What's New in SAS/OR 14.1](#).

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SAS/QC

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Determining Your Update Path for SAS/QC

Upgrading an Existing SAS 9.4 Deployment

SAS/QC 12.3, 13.1, 13.2, and 14.1 run on SAS 9.4.

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
12.3 (SAS 9.4)	13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<div><div>1</div>Before you upgrade, see “About SAS/QC” on page 344.</div> <div><div>2</div>To upgrade to the latest release of SAS/QC, see “Install and Configure a Software Update” on page 66.</div>

Migrating to SAS 9.4

To run SAS/QC 12.3, 13.1, 13.2, or 14.1, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
12.1 (SAS 9.3) 9.3, 9.3_M1	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you migrate, see “About SAS/QC” on page 344. 2 Install and configure SAS 9.4. <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none"> ■ QuickStart Guides in the SAS Install Center ■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For migration information, see the following resources:</p> <ul style="list-style-type: none"> ■ <i>SAS Intelligence Platform: Migration Guide</i> ■ the product documentation page for SAS/QC
12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2)	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	To migrate within the same SAS release, see <i>SAS Intelligence Platform: Migration Guide</i> .
14.1 (SAS 9.4_M3)	14.1 (SAS 9.4_M3)	To migrate within the same release, see <i>SAS Intelligence Platform: Migration Guide</i> .

About SAS/QC

SAS has shipped these releases:

- SAS/QC 12.3 shipped in July 2013. This release runs on SAS 9.4 and is a maintenance release with no new features.
- SAS/QC 13.1 shipped in December 2013. For more information about the new features and enhancements, see [What's New in SAS/QC 13.1](#)
- SAS/QC 13.2 shipped in August 2014. For more information about the new features and enhancements, see [What's New in SAS/QC 13.2](#).
- SAS/QC 14.1 shipped in July 2015. For more information about the new features and enhancements, see [What's New in SAS/QC 14.1](#).

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.1, 5.41 (SAS 9.3)	6.3, 6.4 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.
6.3 (SAS 9.4)	6.4 (SAS 9.4)	To migrate to SAS Real-Time Decision Manager 6.4, contact your SAS account representative.
6.4 (SAS 9.4)	6.4 (SAS 9.4)	To migrate within the same release, contact your SAS account representative.

SAS Real-Time Decision Manager 6.3

SAS Real-Time Decision Manager 6.3 shipped in May 2014. For more information, contact your SAS account representative.

SAS Real-Time Decision Manager 6.4

SAS Real-Time Decision Manager 6.4 shipped in March 2015. This release includes some SAS Visual Analytics components. For more information about how to deploy these components, see [“Adding SAS Visual Analytics to Your Deployment” on page 84](#).

If you already have these SAS Visual Analytics components installed, you still need to create a plan file, and you need to run the SAS Deployment Wizard a second time to add the SAS LASR Analytic Server components for SAS Real-Time Decision Manager to your deployment. Use the product documentation to complete the correct migration and deployment steps for your site.

For more information, see the product documentation page for [SAS Customer Intelligence](#).

Note: The documentation for SAS Real-Time Decision Manager is available only to customers who license this product.

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SAS Risk Dimensions

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Determining Your Update Path for SAS Risk Dimensions

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.1, 6.2, 6.3, 6.4 (SAS 9.4)	6.5 (SAS 9.4)	For more information about how to upgrade to the latest release, contact your SAS account representative.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
5.4, 5.5 (SAS 9.3)	6.1, 6.2, 6.3, 6.4, 6.5 (SAS 9.4)	For more information about how to migrate to this release, contact your SAS account representative.
6.5 (SAS 9.4)	6.5 (SAS 9.4)	

About SAS Risk Dimensions

SAS shipped these releases of SAS Risk Dimensions:

- SAS Risk Dimensions 6.1 in July 2013
- SAS Risk Dimensions 6.2 in December 2013
- SAS Risk Dimensions 6.3 in November 2014
- SAS Risk Dimensions 6.4 in May 2015
- SAS Risk Dimensions 6.5 in October 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Risk Dimensions](#).

Note: The documentation for SAS Risk Dimensions is available only to customers who license this product.

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SAS Risk Management for Banking

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Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
3.2 (SAS 9.4)	6.3 (SAS 9.4)	For more information about how to upgrade to the latest release, contact your SAS account representative.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
3.2 (SAS 9.4)	3.3 (SAS 9.4)	For more information about how to migrate to this release, contact your SAS account representative.

About SAS Risk Management for Banking

SAS shipped these releases of SAS Risk Management for Banking:

- SAS Risk Management for Banking 3.2 in February 2014
- SAS Risk Management for Banking 3.3 in May 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Risk Management for Banking](#).

Note: The documentation for SAS Risk Management for Banking is available only to customers who license this product.

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SAS/SECURE

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Determining Your Update Path for SAS/SECURE

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site	Release That You Are Upgrading To	High-Level Steps and Resources
9.4	9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS/SECURE 9.4_M1” on page 356, “SAS/SECURE 9.4_M2” on page 356, and “SAS/SECURE 9.4_M3” on page 357 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS/SECURE 9.4, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M1	9.4_M2, 9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS/SECURE 9.4_M2” on page 356 and “SAS/SECURE 9.4_M3” on page 357 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS/SECURE 9.4, see “Install and Configure a Software Update” on page 66.</div></div>
9.4_M2	9.4_M3	<div><div>1</div><div>Before you upgrade, see “SAS/SECURE 9.4_M3” on page 357.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS/SECURE 9.4, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

To run SAS/SECURE 9.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS deployment.

Current Release at Your Site	Release That You Are Migrating To	High-Level Steps and Resources
9.3, 9.3_M1, 9.3_M2	9.4, 9.4_M1, 9.4_M2, 9.4_M3	<div><div>1</div><div>Before you migrate, see “SAS/SECURE 9.4” on page 355, “SAS/SECURE 9.4_M1” on page 356, “SAS/SECURE 9.4_M2” on page 356, and “SAS/SECURE 9.4_M3” on page 357 (if appropriate).</div></div> <div><div>2</div><div>Install and configure SAS 9.4.</div></div> <div><div>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</div><div><div>■ QuickStart Guides in the SAS Install Center</div><div>■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i></div></div><div><div>For migration information, see the following resources:</div><div><div>■ <i>SAS Intelligence Platform: Migration Guide</i></div><div>■ the product documentation page for SAS/SECURE</div></div></div></div>

SAS/SECURE 9.4

For software delivery purposes, SAS/SECURE is a product within the SAS System. In SAS 9.4, SAS/SECURE is included with the Base SAS software. In earlier releases, SAS/SECURE was an add-on product that was licensed separately. This change makes strong encryption available in all deployments (except where prohibited by import

restrictions). For more information about import and export restrictions, see *Encryption in SAS*.

SAS/SECURE is installed with the Base SAS software. However, the default encryption is now SASProprietary. To use the higher form of encryption that is provided by SAS/SECURE, specify the NETENCRYPT system option or set the NETENCALG= system option to a value of RC2, RC4, DES, TRIPLEDES, or AES.

SAS/SECURE 9.4_M1

When working with encryption in SAS, note these changes in the first maintenance release for SAS 9.4.

- For TLS encryption, SAS sets the default location of the Certificate Authority (CA) trust list to *SAS-configuration-directory/levn/certs/cacert.pem* for UNIX and z/OS foundation servers. This default location is specified by the SSLCALISTLOC= option in the configuration files.
- For TLS encryption on UNIX and z/OS foundation servers, the SSL_CERT_DIR and SSLCACERTDIR environment variables can now be used to point to the location of the site- and CA-signed certificates. Certificates can also be found at the location pointed to by the SSLCALISTLOC= option.

SAS/SECURE 9.4_M2

The second maintenance release for SAS/SECURE 9.4 shipped in August 2014.

Updated versions of OpenSSL are provided via hot fixes. For more information, see [OpenSSL Version and Library Files Available for Each Version of SAS](#) and *Encryption in SAS*.

SAS/SECURE 9.4_M3

Starting in the third maintenance release for SAS 9.4, the SLCALISTLOC option is now set by default to *SAS-Home/SASSecurityCertificateFramework/1.1/cacerts/trustedcerts.pem*. The trustedcerts.pem file is generated from a trusted CA bundle redistributed from Mozilla. Additional site CA certificates can be added using the new SAS Deployment Manager tasks for adding and removing CA certificates.

Note: The *SAS-configuration-directory/levn/certs/cacert.pem* file that you used in previous releases is no longer supported.

Updated versions of OpenSSL are provided via hot fixes. For more information, see [OpenSSL Version and Library Files Available for Each Version of SAS](#) and *Encryption in SAS*.

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SAS Social Network Analysis Server

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Migrating to SAS 9.4

About SAS Social Network Analysis Server

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Determining Your Update Path for SAS Social Network Analysis Server

Upgrading an Existing SAS 9.4 Deployment

SAS Social Network Analysis Server 6.2 runs on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.2, 6.2_M1 (SAS 9.4)	6.2_M2 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.

Migrating to SAS 9.4

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.2, 6.2_M1 (SAS 9.4) 3.1_M1 (SAS 9.3)	6.2_M2 (SAS 9.4)	For more information about how to migrate to the latest release of SAS Social Network Analysis Server, see <i>SAS Social Network Analysis Server: Administration Guide</i> .

About SAS Social Network Analysis Server

SAS shipped these releases of SAS Social Network Analysis Server 6.2:

- SAS Social Network Analysis Server 6.2 in April 2014
- the first maintenance release for SAS Social Network Analysis Server 6.2 in January 2015
- the second maintenance release for SAS Social Network Analysis Server 6.2 in October 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Social Network Analysis Server](#).

Note: The documentation for SAS Social Network Analysis Server is available only to customers who license this product.

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SAS/STAT

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Determining the Update Path for SAS/STAT

Upgrading an Existing SAS 9.4 Deployment

SAS/STAT 12.3, 13.1, 13.2, and 14.1 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
12.3 (SAS 9.4)	13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<div><div>1</div>Before you upgrade, see “About SAS/STAT” on page 364.</div> <div><div>2</div>To upgrade to the latest release of SAS/STAT, see “Install and Configure a Software Update” on page 66.</div>

Migrating to SAS 9.4

To run SAS/STAT 12.3, 13.1, 13.2, or 14.1, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
12.1 (SAS 9.3) 9.3, 9.3_M1	12.3 (SAS 9.4) 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you migrate, see “About SAS/STAT” on page 364. 2 Install and configure SAS 9.4. <p>To determine the steps for installing and configuring SAS 9.4 at your site, see the following resources:</p> <ul style="list-style-type: none"> ■ QuickStart Guides in the SAS Install Center ■ <i>SAS Intelligence Platform: Installation and Configuration Guide</i> <p>For migration information, see the following resources:</p> <ul style="list-style-type: none"> ■ <i>SAS Intelligence Platform: Migration Guide</i> ■ the product documentation page for SAS/STAT
12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2)	12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	To migrate within the same SAS release, see <i>SAS Intelligence Platform: Migration Guide</i> .
14.1 (SAS 9.4_M3)	14.1 (SAS 9.4_M3)	To migrate within the same release, see <i>SAS Intelligence Platform: Migration Guide</i> .

About SAS/STAT

SAS has shipped these releases:

- SAS/STAT 12.3 shipped in July 2013. This release is essentially a maintenance release, with the exception that high-performance procedures for use in single-machine mode have been added.
- SAS/STAT 13.1 shipped in December 2013. For more information about the new features and enhancements, see [What's New in SAS/STAT 13.1](#).
- SAS/STAT 13.2 shipped in August 2014. For more information about the new features and enhancements, see [What's New in SAS/STAT 13.2](#).
- SAS/STAT 14.1 shipped in July 2015. For more information about the new features and enhancements, see [What's New in SAS/STAT 14.1](#).

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SAS Studio

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About SAS Studio

What Is SAS Studio?

SAS Studio is a development application for SAS that you access through your web browser. With SAS Studio, you can access your data files, libraries, and existing programs, and you can write new programs. You can also use the predefined tasks in SAS Studio to generate SAS code. When you run a program or task, SAS Studio connects to a SAS server to process the SAS code. The SAS server can be a hosted

server in a cloud environment, a server in your local environment, or a copy of SAS on your local machine. After the code is processed, the results are returned to SAS Studio in your browser.

SAS Studio supports multiple web browsers, such as Microsoft Internet Explorer, Apple Safari, Mozilla Firefox, and Google Chrome.

In addition to writing and running your own SAS programs, you can use the predefined tasks that are included with SAS Studio to analyze your data. The tasks are based on SAS System procedures and provide access to some of the most commonly used graph and analytical procedures. You can also use the default task template to write your own tasks.

How to Add SAS Studio to Your Deployment

SAS Studio is included with a wide variety of SAS products and solutions and can be used in every type of SAS deployment. SAS Studio is available in three editions: SAS Studio Mid-Tier (the enterprise edition), SAS Studio Single-User, and SAS Studio Basic. To add SAS Studio Mid-Tier to a planned deployment, see [“Adding a New Product” on page 83](#).

To add SAS Studio – Single User or SAS Studio Basic, see the installation and configuration steps in *SAS Studio: Administrator's Guide* on the [SAS Studio](#) product documentation page.

Determining the Update Path for SAS Studio

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
3.1 (SAS 9.4)	3.1_M1, 3.2, 3.3, 3.4 (SAS 9.4)	<div><div>1</div><div>Before you upgrade, see “SAS Studio 3.1_M1” on page 368, “SAS Studio 3.2” on page 368, “SAS Studio 3.3” on page 369 , and “SAS Studio 3.4” on page 369 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS Studio, see “Install and Configure a Software Update” on page 66.</div></div>
3.2 (SAS 9.4)	3.3, 3.4 (SAS 9.4)	<div><div>1</div><div>Before you upgrade, see “SAS Studio 3.3” on page 369 and “SAS Studio 3.4” on page 369 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS Studio, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

SAS Studio is new for SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To	High-Level Resources and Steps
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3.1, 3.2, 3.3, 3.4 (SAS 9.4)	3.1, 3.2, 3.3, 3.4 (SAS 9.4)	To migrate within the same SAS release, see <i>SAS Intelligence Platform: Migration Guide</i> .
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SAS Studio 3.1_M1

In May 2014, SAS shipped the first maintenance release for SAS Studio 3.1. This maintenance release includes localization support and updates to the SAS Studio Basic Edition. When you run the SAS Deployment Wizard, you can verify that SAS Studio 3.1 is being updated from the Review Required Updates step. (Your current version should be 3.1, and the updated version should be 3.1_M1.)

After your software update is complete, review the `SASStudioInstructions.html` file to complete any post-installation steps. You can also verify this upgrade-in-place by reviewing the SAS Studio log files in `SASHome/InstallMisc/InstallLogs`.

Note: If you specified a sudo password in your initial deployment of SAS Studio, this password is not saved. After the software update, you might need to rerun the `setup.sh` file to reconfigure SAS Studio and to provide the sudo password.

SAS Studio 3.2

SAS Studio 3.2 shipped in August 2014.

In SAS Studio 3.1, the tasks used Apache Velocity 1.5. In SAS Studio 3.2, the tasks use Apache Velocity 1.7. This change affects these three graph tasks: Bar Chart, Scatter Plot, and Series Plot. If you save one of these tasks as a CTK file or in your **My Tasks** folder in SAS Studio 3.1 and then try to run the task in SAS Studio 3.2, the generated SAS code is incorrect. To work around this issue, remove any CTK files or tasks in your **My Tasks** folder that use the Bar Chart, Scatter Plot, and Series Plot tasks. Then re-create these CTK files or tasks in your **My Tasks** folder in SAS Studio 3.2.

For more information about this release, see the product documentation page for [SAS Studio](#).

SAS Studio 3.3

SAS Studio 3.3 shipped in February 2015. When using SAS Studio 3.1 or SAS Studio 3.2, you might have added a snippet or task, changed preference settings, and so on. These changes were saved to a file in your home directory. For example, if you added a snippet, this change was saved in the `.mysnippets` directory. If you changed a preference, this change was saved in the `.mypreferences` directory.

Starting in SAS Studio 3.3, these files are saved in a common directory called `.sasstudio`. When you install SAS Studio 3.3, any customized files from SAS Studio 3.1 or 3.2 are copied to the `.sasstudio` directory. If you make additional changes in SAS Studio 3.1 or 3.2, these changes are not saved in the SAS Studio 3.3 files. When you are finished working with SAS Studio 3.1 or 3.2, delete any `.mysnippets`, `.mypreferences`, and so on, directories.

Starting in SAS Studio 3.3, each connection of SAS Studio creates two SAS processes. Each process has its own `work` directory. One process is for the execution of code, and the other process is dedicated to file I/O. These processes are not delayed or blocked by the execution of other processes.

SAS Studio 3.4

SAS Studio 3.4 shipped in July 2015. Before you upgrade to a new release of SAS Studio, clear the cache for your web browser. Clearing your cache should remove any obsolete files.

If you are migrating from SAS Studio 3.3 in a Windows operating environment, any data that is not saved in your `My Documents` folder is not available in SAS Studio 3.4. You must manually move this data from SAS Studio 3.3 to SAS Studio 3.4.

For more information about this release, see the product documentation page for [SAS Studio](#).

Determining Your Update Path for SAS Task Manager

Upgrading an Existing SAS 9.4 Deployment

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
2.1, 2.1_M1 (SAS 9.4)	2.2 (SAS 9.4)	For more information about this release, contact your SAS account representative.

SAS Task Manager 2.1 is a new product that runs on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
2.1, 2.1_M1 (SAS 9.4)	2.2 (SAS 9.4)	To migrate to SAS Task Manager 2.2, see <i>SAS MDM: Administrator's Guide</i> .
2.2 (SAS 9.4)	2.2 (SAS 9.4)	To migrate within the same release, see <i>SAS MDM: Administrator's Guide</i> .

About SAS Task Manager

SAS shipped these releases of SAS Task Manager:

- the first maintenance release for SAS Task Manager 2.1 shipped in April 2014
- SAS Task Manager 2.2 shipped in March 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Task Manager](#).

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SAS Text Miner

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Determining Your Update Path for SAS Text Miner

Upgrading an Existing SAS 9.4 Deployment

SAS Text Miner 12.3, 13.1, 13.2, and 14.1 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
12.3 (SAS 9.4)	13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Text Miner 13.1” on page 376, “SAS Text Miner 13.2” on page 376, and “SAS Text Miner 14.1” on page 377 (if appropriate). 2 When you install and configure SAS Enterprise Miner, you can also install and configure SAS Text Miner. For more information, see <i>SAS Enterprise Miner: Administration and Configuration Guide</i>.
13.1 (SAS 9.4_M1)	13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Text Miner 13.2” on page 376 and “SAS Text Miner 14.1” on page 377 (if appropriate). 2 When you install and configure SAS Enterprise Miner, you can also install and configure SAS Text Miner. For more information, see <i>SAS Enterprise Miner: Administration and Configuration Guide</i>.
13.2 (SAS 9.4_M2)	14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Text Miner 14.1” on page 377. 2 When you install and configure SAS Enterprise Miner, you can also install and configure SAS Text Miner. For more information, see <i>SAS Enterprise Miner: Administration and Configuration Guide</i>.

Migrating to SAS 9.4

To run SAS Text Miner 12.3, 13.1, 13.2, or 14.1, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
12.1, 12.1_M1 (SAS 9.3) 5.1_M1 (SAS 9.3)	12.3 (SAS 9.4) 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS Text Miner 12.3” on page 376, “SAS Text Miner 13.1” on page 376, “SAS Text Miner 13.2” on page 376, and “SAS Text Miner 14.1” on page 377 (if appropriate). 2 When you install and configure SAS Enterprise Miner, you can also install and configure SAS Text Miner. For more information, see <i>SAS Enterprise Miner: Administration and Configuration Guide</i>.
12.3 (SAS 9.4), 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2)	12.3 (SAS 9.4) 13.1 (SAS 9.4_M1), 13.2 (SAS 9.4_M2), 14.1 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS Text Miner 13.1” on page 376, “SAS Text Miner 13.2” on page 376, and “SAS Text Miner 14.1” on page 377 (if appropriate). 2 To migrate within the same SAS release, see <i>SAS Enterprise Miner: Administration and Configuration Guide</i>.
14.1 (SAS 9.4_M3)	14.1 (SAS 9.4_M3)	To migrate within the same release, see <i>SAS Enterprise Miner 14.1: Administration and Configuration Guide</i> .

SAS Text Miner 12.3

For more information about the new features and enhancements in SAS Text Miner 12.3, see the software product page for [SAS Text Miner](#).

If you are upgrading from a previous release of SAS Text Miner, note these changes:

- SAS Document Conversion Server is automatically installed when you upgrade SAS Text Miner.
- Beginning with SAS Text Miner 12.1, SAS consolidated the version numbers for the main analytical products. Before the consolidation, the most recent version number for SAS Text Miner was 5.1.
- Beginning with SAS Text Miner 5.1, the **Text Miner** node that was available in previous releases of SAS Text Miner was replaced by the functionality in other SAS Text Miner nodes. Also, the DOCPARSE procedure was replaced by the TGPARSE procedure. If you currently use the DOCPARSE procedure, modify your code to use the TGPARSE procedure.

SAS Text Miner 13.1

SAS Text Miner 13.1 shipped in December 2013. For more information about the new features and enhancements in SAS Text Miner 13.1, see the product documentation page for [SAS Text Miner](#).

SAS Text Miner 13.2

SAS Text Miner 13.2 shipped in August 2014. For more information about the new features and enhancements in SAS Text Miner 13.1, see the product documentation page for [SAS Text Miner](#).

SAS Text Miner 14.1

SAS Text Miner 14.1 shipped in July 2015.

If you are upgrading from a previous release of SAS Text Miner, note these changes:

- A new HPBOOLRULE procedure replaces macros in the **Text Rule Builder** node. For more information about the benefits of running the **Text Rule Builder** node with the HPBOOLRULE procedure and how you can specify to run the **Text Rule Builder** node as it functioned prior to SAS Text Miner 14.1, see the documentation for SAS Text Miner.
- The TGPARSE procedure has been replaced with the HPTMINE procedure in the **Text Parsing** node when the parsing language is Chinese, Dutch, English, Finnish, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish, or Turkish. For these languages, parsing is now multithreaded. The TGPARSE procedure continues to be called when the parsing language is Arabic, Czech, Danish, Greek, Hebrew, Hungarian, Indonesian, Norwegian, Polish, Romanian, Slovak, Swedish, Thai, or Vietnamese.

For more information about the new features and enhancements in SAS Text Miner 14.1, see the software product page for [SAS Text Miner](#).

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SAS Visual Analytics

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Determining Your Update Path for SAS Visual Analytics

Upgrading Your Existing SAS 9.4 Deployment

SAS Visual Analytics 6.2, 6.3, 6.4, 7.1, 7.2, and 7.3 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.2 (SAS 9.4)	6.3 (SAS 9.4_M1); 6.4 (SAS 9.4_M1 and SAS 9.4_M2),; 7.1, 7.2 (SAS 9.4_M2); 7.3 (SAS 9.4_M3)	<div><div>1</div><div>Before you upgrade, see “SAS Visual Analytics 6.3” on page 385, “SAS Visual Analytics 6.4” on page 387, “SAS Visual Analytics 7.1” on page 388, “SAS Visual Analytics 7.2” on page 391, and “SAS Visual Analytics 7.3” on page 394 (if appropriate).</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS Visual Analytics, see <i>SAS Visual Analytics: Installation and Configuration Guide</i>.</div></div>

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.3 (SAS 9.4_M1)	6.4 (SAS 9.4_M1 and SAS 9.4_M2); 7.1, 7.2 (SAS 9.4_M2); 7.3 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Visual Analytics 6.4” on page 387, “SAS Visual Analytics 7.1” on page 388, “SAS Visual Analytics 7.2” on page 391, and “SAS Visual Analytics 7.3” on page 394 (if appropriate). 2 To upgrade to the latest release of SAS Visual Analytics, see <i>SAS Visual Analytics: Installation and Configuration Guide</i>.
6.4 (SAS 9.4_M2)	7.1, 7.2 (SAS 9.4_M2); 7.3 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Visual Analytics 7.1” on page 388, “SAS Visual Analytics 7.2” on page 391, and “SAS Visual Analytics 7.3” on page 394 (if appropriate). 2 To upgrade to the latest release of SAS Visual Analytics, see <i>SAS Visual Analytics: Installation and Configuration Guide</i>.
7.1 (SAS 9.4_M2)	7.2 (SAS 9.4_M2); 7.3 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Visual Analytics 7.2” on page 391 and “SAS Visual Analytics 7.3” on page 394 (if appropriate). 2 To upgrade to the latest release of SAS Visual Analytics, see <i>SAS Visual Analytics: Installation and Configuration Guide</i>.
7.2 (SAS 9.4_M2)	7.3 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Visual Analytics 7.3” on page 394. 2 To upgrade to the latest release of SAS Visual Analytics, see <i>SAS Visual Analytics: Installation and Configuration Guide</i>.

Migrating to SAS 9.4

To run SAS Visual Analytics 6.2, 6.3, 6.4, 7.1, 7.2, or 7.3, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.1 (SAS 9.3)	6.2 (SAS 9.4); 6.3 (SAS 9.4_M1); 6.4 (SAS 9.4_M1 and SAS 9.4_M2); 7.1, 7.2 (SAS 9.4_M2); 7.3 (SAS 9.4_M3_	<div><div>1</div><div>Before you migrate, see “SAS Visual Analytics 6.2” on page 383, “SAS Visual Analytics 6.3” on page 385, “SAS Visual Analytics 6.4” on page 387, “SAS Visual Analytics 7.1” on page 388, “SAS Visual Analytics 7.2” on page 391, and “SAS Visual Analytics 7.3” on page 394 (if appropriate).</div></div> <div><div>2</div><div>To migrate or create a new deployment, see <i>SAS Visual Analytics: Installation and Configuration Guide</i>.</div></div>
6.2 (SAS 9.4)	6.2 (SAS 9.4); 6.3 (SAS 9.4_M1); 6.4 (SAS 9.4_M1 and SAS 9.4_M2); 7.1, 7.2 (SAS 9.4_M2); 7.3 (SAS 9.4_M3)	<div><div>1</div><div>Before you migrate, see “SAS Visual Analytics 6.3” on page 385, “SAS Visual Analytics 6.4” on page 387, “SAS Visual Analytics 7.1” on page 388, “SAS Visual Analytics 7.2” on page 391, and “SAS Visual Analytics 7.3” on page 394 (if appropriate).</div></div> <div><div>2</div><div>To migrate or create a new deployment , see <i>SAS Visual Analytics: Installation and Configuration Guide</i>.</div></div>
6.3 (SAS 9.4_M1 and SAS 9.4_M2)	6.3 (SAS 9.4_M1); 6.4 (SAS 9.4_M1 and SAS 9.4_M2); 7.1, 7.2 (SAS 9.4_M2); 7.3 (SAS 9.4_M3)	<div><div>1</div><div>Before you migrate, see “SAS Visual Analytics 6.4” on page 387, “SAS Visual Analytics 7.1” on page 388, “SAS Visual Analytics 7.2” on page 391, and “SAS Visual Analytics 7.3” on page 394 (if appropriate).</div></div> <div><div>2</div><div>To migrate or create a new deployment, see <i>SAS Visual Analytics: Installation and Configuration Guide</i>.</div></div>

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.4 (SAS 9.4_M1)	6.4 (SAS 9.4_M2); 7.1, 7.2 (SAS 9.4_M2); 7.3 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS Visual Analytics 6.4” on page 387, “SAS Visual Analytics 7.1” on page 388, “SAS Visual Analytics 7.2” on page 391, and “SAS Visual Analytics 7.3” on page 394 (if appropriate). 2 To migrate or create a new deployment, see <i>SAS Visual Analytics: Installation and Configuration Guide</i>.
7.1, 7.2 (SAS 9.4_M2)	7.3 (SAS 9.4_M3)	<ol style="list-style-type: none"> 1 Before you migrate, see “SAS Visual Analytics 7.3” on page 394. 2 To migrate or create a new deployment, see <i>SAS Visual Analytics: Installation and Configuration Guide</i>.
7.3 (SAS 9.4_M3)	7.3 (SAS 9.4_M3)	To migrate within the same release, see <i>SAS Visual Analytics: Installation and Configuration Guide</i> .

SAS Visual Analytics 6.2

New Default Application Theme

In earlier releases of SAS Visual Analytics, the default application theme was called Blue Steel. Beginning with SAS Visual Analytics 6.2, the default application theme is called Corporate.

SAS Visual Analytics Designer

- In earlier releases of SAS Visual Analytics, reports that were created in SAS Visual Analytics Designer automatically had a dark report theme. Beginning with SAS Visual Analytics 6.2, users can select the SAS Light or SAS Dark report theme. Any

reports that were created in SAS Visual Analytics 6.1 retain the dark report theme. The new report themes have some differences from the previous releases. For example, table and graph titles are no longer bold, and the thickness of some lines has increased.

- Beginning with SAS Visual Analytics 6.2, lists of data items in SAS Visual Analytics Designer are sorted based on the data set locale. For example, if you view Chinese data in a browser with an English locale, then the data items are sorted based on the data set's Chinese locale.
- Beginning with SAS Visual Analytics 6.2, two map report objects are available in SAS Visual Analytics Designer. The report object known as a geo map in previous releases is now called a geo bubble map. The name was changed to distinguish it from the new geo region map.

SAS Visual Analytics Viewer

- When a report is opened, it is fully expanded. The right pane, which contains the Comments and Properties tabs, is collapsed and section tabs are not displayed. The right pane can be expanded, and an icon is available for accessing navigation between sections.
- In previous releases of SAS Visual Analytics, reports in SAS Visual Analytics Viewer automatically had a dark report theme. Beginning with SAS Visual Analytics 6.2, users can select the SAS Light or SAS Dark report theme. Any reports that were created in SAS Visual Analytics 6.1 retain the dark report theme. The new report themes have some differences from the previous releases. For example, table and graph titles are no longer bold, and the thickness of some lines has increased.

Adjustments to the Security Model

Certain aspects of the security model (relating to metadata-layer permissions, capabilities, and signature files) have been refined. For more information, see *SAS Visual Analytics: Administration Guide*.

Increased Constraints on Table Names

Restrictions on table names have increased. For more information, see *SAS Visual Analytics: Administration Guide*.

SAS Visual Analytics 6.3

SAS High-Performance Analytics Infrastructure 2.4

Some new features in SAS Visual Analytics 6.3 require that you upgrade to SAS High-Performance Analytics Infrastructure 2.4. For more information, see *SAS High-Performance Analytics Infrastructure: Installation and Configuration Guide*. Also, see *SAS Visual Analytics: Administration Guide* for information about how to reconfigure the LASR Analytic Servers.

SAS Visual Analytics Home Page

Guest access does not provide individualized features on the home page, such as history or preferences.

SAS Visual Analytics Designer

Beginning with SAS Visual Analytics 6.3, pie charts do not include slices with a missing value or a zero.

SAS Visual Data Builder

Some functionality that was added to SAS Foundation is not automatically applied when you upgrade from SAS Visual Analytics 6.2 to 6.3.

Note: These steps are not required if you are migrating to SAS Visual Analytics 6.3. They are required only if you are performing an upgrade in place.

To complete your upgrade, perform these steps on any tier where a SAS Application Server (with a SAS Workspace Server) is installed:

- 1 Stop all SAS processes.
- 2 Restart the SAS Deployment Wizard.
- 3 Select the **Install SAS Foundation and Related Software** option.
- 4 From the list of products, select the **SAS Foundation** check box.
- 5 Select the **Advanced Programming for SAS LASR Analytic Server** check box.
- 6 Complete your installation.

Note: If you need to click **Retry** when using the SAS Deployment Manager, you might see this error message: Failed to update service database: VDBService. You can ignore this error. It is generated because the SAS Deployment Manager attempts to modify a configuration table a second time.

SAS Visual Analytics Viewer

- Report authors can disable object selection, so you might not be able to select some report objects.
- If you are using guest access, some features such as comments, alerts, and the banner are not available.

Adjustments to the Security Model

The standard membership structure has changed. Every registered user should be explicitly assigned to at least one metadata group. In the new standard structure, membership in the SASUSERS implicit group no longer provides access to exploration and design functionality. Instead, a new group, Visual Analytics Users, provides access to that functionality. For more information, see *SAS Visual Analytics: Administration Guide*.

In the metadata, requirements for the Delete permission are replaced by requirements for the Write permission.

Changes in SAS Visual Analytics Administrator

Actions that were previously displayed directly on the menu bar are now within the **LASR** menu and the **Tools** menu.

Some of the icons for loading data have changed.

SAS Visual Analytics 6.4

SAS High-Performance Analytics Infrastructure 2.5

Some new features in SAS Visual Analytics 6.4 require that you upgrade to SAS High-Performance Analytics Infrastructure 2.5. For more information, see *SAS High-Performance Analytics Infrastructure: Installation and Configuration Guide*. Also, see *SAS Visual Analytics: Administration Guide* for information about how to reconfigure the LASR Analytic Servers.

Changes to Importing Data

- In SAS Visual Analytics 6.3, you could import data from files and servers only with SAS Visual Data Builder. Starting in SAS Visual Analytics 6.4, the variety of data sources that you can import has increased, and self-service import functionality is available in SAS Visual Analytics Explorer and SAS Visual Analytics Designer as well.
- In SAS Visual Analytics 6.3 when you imported tweets from Twitter, you had to register an application with Twitter. Starting in SAS Visual Analytics 6.4, you no longer need to perform this registration. Instead, you are routed to the Twitter website to log on to your Twitter account and authorize SAS Visual Analytics.

SAS Visual Analytics 7.1

SAS Visual Analytics Administration and Reporting

Starting in October 2014 (SAS 9.4, Rev. 940_14w41), SAS ships SAS Visual Analytics Administration and Reporting with some SAS solution software orders.

SAS Visual Analytics Administration and Reporting is a component piece included in many SAS 9.4 solutions and technology packages to provide enhanced reporting and printing capabilities. Administration and reporting is supported on Linux and Windows machines only. If you have a hardware constraint, you can delay your deployment of the administration and reporting portion of your order until later. For more information, see “Add SAS Visual Analytics Administration and Reporting” in *SAS Intelligence Platform: Installation and Configuration Guide*.

Alert Notification Preferences for SAS Visual Analytics Designer and SAS Visual Analytics Viewer

In SAS Visual Analytics 6.4, two preferences (**Send email messages** and **Send SMS text messages**) were available for alert notifications. Starting in SAS Visual Analytics 7.1, a new **Use the system default for alert notifications** preference has been added. (The **Use the system default for alert notifications** option uses the defaults that are set by an administrator in the SAS Preferences Manager product.) If you selected the **Send email messages** or the **Send SMS text messages** preference in the 6.4 release, then the new 7.1 preference will override that preference. You have to reset your preference or you will not receive alert notifications from the designer or the viewer.

SAS Visual Analytics Home Page

In SAS Visual Analytics 6.4 and earlier, you could set a preference for **Show this number of recent items** between one and 16 items. The default was nine items.


Starting in SAS Visual Analytics 7.1, the range for recent items is a minimum of zero and a maximum of 25 items. The default is 10 items.

SAS Visual Analytics Designer

- In SAS Visual Analytics 6.4, the **Subscription and Notification** tab on the Add Alert window had a Send email to the subscribers option. Starting in SAS Visual Analytics 7.1, this option is called **Send notifications to the subscribers** because users can now specify a preference for how alert notifications are sent from both the designer and the viewer. Email and SMS text messages are options for alert notifications.
- In SAS Visual Analytics 6.4 and earlier, the **Enable selection in the viewers** check box on the **Properties** tab for a stored process was not selected by default. Starting in SAS Visual Analytics 7.1, this check box is selected by default for all stored processes that are added to new reports. This change does not affect existing stored processes in a report.
- In SAS Visual Analytics 6.4 and earlier, the bullet, slider, thermometer, dial, and speedometer gauges were displayed individually under the **Gauges** heading on the **Objects** tab in SAS Visual Analytics Designer. Starting in SAS Visual Analytics 7.1, there is a single **Gauge** report object listed under the **Other** heading on the **Objects** tab. After you drag and drop the **Gauge** report object onto the report canvas, you can use the **Type** property on the **Properties** tab to specify that you want a bullet, slider, thermometer, dial, or speedometer gauge to be displayed in a report.
- Starting in SAS Visual Analytics Designer 7.1, use the Add Recipients window to select the users that you want to email a report to. In previous releases of SAS Visual Analytics, the name of this window was Add Identities.
- In SAS Visual Analytics Designer 6.3 and 6.4, you could not select bubbles, bars, pie slices, and lines in an animated graph. Starting in the 7.1 release, you can select bubbles, bars, pie slices, and lines in an animated graph. The interaction filter is based on the category value (or values) and the selected frame in the animation.

Changes in Administration

- On the **LASR Tables** and **LASR Servers** tabs:

- ☐ Most of the tab toolbar icons affect only those objects that have a selected (checked) check box.
- ☐ Clicking on the cell next to a check box changes the check box's state.
- ☐ The icon for the **Get Status** action is .
- ☒ The Administer permission affects the ability to set a server's tables limit in the administrator. (The ReadMetadata and WriteMetadata permissions are also required.)
- ☒ The VA.EP.Capable.* extended attributes no longer have any effect. (In the 6.4 release, these extended attributes were used by administrators to explicitly specify whether to attempt parallel loads. In the current release, explicit specification is replaced by automatic detection.)
- ☒ SAS Mobile BI 7.1 has a new user interface. The new interface does not include a banner. For this reason, support for the configuration properties that customize the banner in the native mobile viewers is discontinued.
- ☒ From SAS Office Analytics 7.1, authentication to SAS Visual Analytics no longer uses SAS Visual Analytics Transport Service. For this reason, actions and information on the **Mobile Devices** tab in the administrator have no impact on SAS Enterprise Guide, SAS Add-in for Microsoft Office, and SAS Web Parts for SharePoint.
- ☒ The log4j configuration files for the explorer, designer, and web viewer are modified as follows:
 - ☐ Each record in the generated logs includes the application name and identifies the connected user.
 - ☐ An APM (SAS Audit, Performance, and Measurement package) log4j configuration file is provided for future use with SAS Environment Manager. Do not modify the log4j configuration files that have an **_apm** suffix.
 - ☐ For the SAS_LASR_COMMANDS_FILE appender, generated log files include **LASRActions** in their filenames, and loggers are based on a daily rolling file appender.

- The following predefined directory name no longer includes a version number: *SAS-configuration-directory/Applications/VisualAnalytics*.

SAS Visual Analytics 7.2

SAS Visual Analytics Home Page

- In SAS Visual Analytics 7.1 and earlier, there was only one appearance of the home page. Starting in SAS Visual Analytics 7.2, there is a new preference for the default appearance of the home page, which is set to **Administrator default**. There are two appearance choices for users: Modern and Classic . (Classic has the same appearance as the home page in SAS Visual Analytics 7.1 and earlier.)


Note: The Modern appearance does not support right-to-left (RTL) languages. To force the use of the appearance that supports RTL languages, specify a value of `classic` for the configuration property `home.ui.mode`. The property is on the **Visual Analytics Hub** node in the Configuration Manager in SAS Management Console. For more information, see the *SAS Intelligence Platform: Web Application Administration Guide*.

- In SAS Visual Analytics 7.1 and earlier, there was an **Other Content** area that displayed lists of explorations, reports, stored processes, stored process reports, queries, or tables that someone with the Visual Analytics: Administration role had added for users. Starting in SAS Visual Analytics 7.2, there is no longer an **Other Content** area. If your site had an **Other Content** area, that area upgrades to a published collection. The published collection is displayed as a collection tile on the home page with the Modern appearance, and as a folder under the **My Content** heading on the home page with the Classic appearance.

SAS Visual Analytics Administration

- In the metadata layer, the Read permission is enforced for interactions with an encrypted SASHDAT library.

Note: In order to support encryption of SASHDAT, you must apply the SAS Intelligence Platform 9.4m2f and the SAS Visual Analytics 7.2 hot fixes. After the hot fixes are applied, you must re-add the Hadoop Server and the SAS Data in HDFS Library resource templates in SAS Management Console. For more information, see *SAS Visual Analytics: Installation and Configuration Guide (Distributed SAS LASR)*.

- On the **LASR Tables** and **LASR Servers** tabs, some columns are initially hidden. To show or hide a column, right-click on any column heading, and then select the column.
- The **LASR Tables** tab does not include a Compression column. In the Status column,  indicates a compressed table. To view the original size of a compressed table, place your pointer over the table's Size cell.
- Initially, the Folders pane is collapsed. To access the Folders pane, select **View ► Folders** from the main menu.
- In a new deployment that offers guest access, the property App.AllowGuest is set on individual software components, rather than at the suite level.
- The Build Analytical Model capability in SAS Visual Statistics is in the Visual Analytics Explorer category.
- The SAS Visual Statistics high-cardinality properties have names that begin with vae.modeling.
- The home page is independent from the SAS Visual Analytics suite.
 - The property vah.client.ui.mode is replaced by a new home page property, home.ui.mode.
 - The property va.supportSharedThumbnails must be managed on two separate nodes: **Visual Analytics Hub** and **Visual Analytics**.
 - Capabilities for using the home page are in the Visual Analytics Hub category, which is parallel to the Visual Analytics category.
 - The Visual Analytics Data Administrators group is a member of the new Home:Administration role.

- ❑ The home page's software component (Visual Analytics Hub) is a direct child of SAS Application Infrastructure.
- ❑ A new property, `home.exclude.capability.users`, blocks home page modification by anonymous users.
- ❑ A new property, `home.allow.anonymous.user.personalization`, temporarily unblocks home page modification by anonymous users.
- ❑ Home page administration is documented in *SAS Intelligence Platform: Web Application Administration Guide*.

SAS Visual Analytics Viewer

- In SAS Visual Analytics 7.1 and earlier, there was only one appearance for the viewer. Starting in SAS Visual Analytics 7.2, there is a new preference for the default appearance of the viewer, which is set to **Administrator default**. There are two appearance choices for users: modern (preproduction) and classic. (Classic has the same appearance as the viewer in SAS Visual Analytics 7.1 and earlier.)

Note: For the viewer, the modern appearance is preproduction in SAS Visual Analytics 7.2.

- In SAS Visual Analytics 7.1 and earlier (and in the classic appearance), you can click a prompt icon to display the prompt dialog box for a prompted stored process. You can use the prompt dialog box to change prompt values for the stored process and to re-execute the stored process. In the modern appearance in SAS Visual Analytics 7.2, stored processes are executed with their default prompt values and those values cannot be changed in the viewer.

SAS Visual Statistics

In SAS Visual Analytics 7.2, the features of SAS Visual Statistics have been integrated into the user interface for SAS Visual Analytics Explorer. If SAS Visual Statistics is licensed at your site, then the data modeling features are available.

SAS Visual Analytics 7.3

SAS Visual Analytics Administration

- Management of audit data is simplified.
 - In the SAS Web Infrastructure Platform's SharedServices database, predefined archive rules cause audit records that are older than 30 days to be archived.
 - You can start a scheduled task that periodically purges records from the full AUDIT_VISUALANALYTICS table in the autoload drop zone for administrative data.
- If the `vav.ui.mode` property is not specified, the web viewer uses the modern presentation mode, unless a user selects the classic presentation mode (by using the setting or preference for the web viewer's **Default Appearance**) or uses a web browser that does not support the modern presentation mode.
- Access to external geo map servers is subject to cross-domain proxy constraints.

SAS Visual Analytics Viewer

In SAS Visual Analytics 7.2, the modern appearance of the SAS Visual Analytics Viewer was preproduction. In SAS Visual Analytics 7.3, the modern appearance is production.

Determining Your Update Path for SAS Visual Process Orchestration

SAS Visual Process Orchestration 2.1 and 2.2 run on SAS 9.4.

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Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
2.1 (SAS 9.4)	2.2 (SAS 9.4)	For more information about this release, contact your SAS account representative.

Migrating to SAS 9.4

SAS Visual Process Orchestration 2.1 is a new product that runs on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
2.1 (SAS 9.4)	2.2 (SAS 9.4)	To migrate to SAS Visual Process Orchestration 2.2, see <i>SAS MDM: Administrator's Guide</i> .
2.2 (SAS 9.4)	2.2 (SAS 9.4)	To migrate within the same release, see <i>SAS MDM: Administrator's Guide</i> .

SAS Visual Process Orchestration 2.2

SAS Visual Process Orchestration 2.2 shipped in March 2015. For more information, see the product documentation page for [SAS Visual Process Orchestration](#).

Determining Your Update Path for SAS Visual Scenario Designer

SAS Visual Scenario Designer is a new product in SAS 9.4.

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Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.2, 6.2_M2 (SAS 9.4)	6.3 (SAS 9.4)	For more information about how to request this new release and the features that are available, contact your SAS account representative.

Migrating to SAS 9.4

SAS Visual Scenario Designer is a new product in SAS 9.4.

About SAS Visual Scenario Designer

SAS shipped these releases of SAS Visual Scenario Designer:

- SAS Visual Scenario Designer 6.2 in May 2014
- SAS Visual Scenario Designer 6.3 in January 2015

For more information about these releases, contact your SAS account representative and see the product documentation page for [SAS Visual Scenario Designer](#).

Note: The documentation for SAS Visual Scenario Designer is available only to customers who license this product.

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SAS Web Parts for Microsoft SharePoint

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Determining Your Update Path for SAS Web Parts for Microsoft SharePoint

Upgrading an Existing SAS 9.4 Deployment

SAS Web Parts 6.1 for Microsoft SharePoint runs on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
6.1	6.11, 6.12, 6.13	<div><div>1</div><div>Before you upgrade, see “About SAS Web Parts for Microsoft SharePoint” on page 401.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS Web Parts for Microsoft SharePoint by using the SAS Deployment Wizard, see “Install and Configure a Software Update” on page 66.</div></div>
6.11, 6.12	6.12, 6.13	<div><div>1</div><div>Before you upgrade, see “About SAS Web Parts for Microsoft SharePoint” on page 401.</div></div> <div><div>2</div><div>To upgrade to the latest release of SAS Web Parts for Microsoft SharePoint by using the SAS Deployment Wizard, see “Install and Configure a Software Update” on page 66.</div></div>

Migrating to SAS 9.4

To run SAS Web Parts 6.1 for Microsoft SharePoint, you must be running SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
6.1 (SAS 9.4)	6.1 (SAS 9.4); 6.11 (SAS 9.4_M1); 6.12 and 6.13 (SAS 9.4_M2)	To migrate within the same release, see <i>SAS Intelligence Platform: Installation and Configuration Guide</i>
6.12 (SAS 9.4_M2)	6.12 and 6.13(SAS 9.4_M2)	

About SAS Web Parts for Microsoft SharePoint

Beginning with the 6.11 release, you can perform an upgrade-in-place of SAS Web Parts if you manually install SAS Web Parts for Microsoft SharePoint. The `Install-SASWebParts` function and the `Enable-SASWebParts` function now support the `-Upgrade` parameter. If SAS Web Parts 6.1 for Microsoft SharePoint is installed and you want to upgrade to 6.11, use the `-Upgrade` parameter. When you upgrade, SAS automatically uninstalls the 6.1 release before installing the 6.11 release. If a default profile exists in the 6.1 release, this information remains intact during the upgrade.

For more information about these functions, see *SAS Web Parts for Microsoft SharePoint: Administrator's Guide*.

SAS also shipped these releases of SAS Web Parts for Microsoft SharePoint:

- SAS Web Parts 6.12 for Microsoft SharePoint in October 2014
- SAS Web Parts 6.13 for Microsoft SharePoint in May 2015

For more information, see the software product page for [SAS Web Parts for Microsoft SharePoint](#).

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SAS Web Report Studio

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Determining Your Update Path for SAS Web Report Studio

Upgrading an Existing SAS 9.4 Deployment

SAS Web Report Studio 4.4, 4.4_M1, 4.4_M2, and 4.4_M3 run on SAS 9.4.

Current Release at Your Site (SAS Release)	Release That You Are Upgrading To (SAS Release)	High-Level Steps and Resources
4.4 (SAS 9.4)	4.4_M1 (SAS 9.4_M1), 4.4_M2 (SAS 9.4_M2), 4.4_M3 (SAS 9.4_M3)	<div><div>1</div>Before you upgrade, see “SAS Web Report Studio 4.4” on page 406.</div> <div><div>2</div>To upgrade to the latest release of SAS Web Report Studio 4.4, see “Install and Configure a Software Update” on page 66.</div> <div><div>3</div>To complete any post-configuration steps, see “Updating Favorites in Your Web Browser” on page 407.</div>

Migrating to SAS 9.4

To run SAS Web Report Studio 4.4, you must be running SAS 9.4. You can migrate to SAS 9.4, or you can create a new SAS 9.4 deployment.

Current Release at Your Site (SAS Release)	Release That You Are Migrating To (SAS Release)	High-Level Steps and Resources
4.31, 4.31_M1, 4.31_M2 (SAS 9.3)	4.4, 4.4_M1, 4.4_M2, 4.4_M3 (SAS 9.4)	<ol style="list-style-type: none"> 1 Before you upgrade, see “SAS Web Report Studio 4.3” on page 405 and “SAS Web Report Studio 4.4” on page 406. 2 To migrate to the new release, see <i>SAS 9.4 Intelligence Platform: Migration Guide</i>. To create a new deployment, see <i>SAS 9.4 Intelligence Platform: Installation and Configuration Guide</i>. 3 To complete any post-configuration steps, see “Updating Favorites in Your Web Browser” on page 257 and <i>SAS 9.4 Intelligence Platform: Web Application Administration Guide</i>.
4.4, 4.4_M1, 4.4_M2 (SAS 9.4)	4.4, 4.4_M1, 4.4_M2, 4.4_M3 (SAS 9.4)	To migrate within the same SAS release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .
4.4_M3 (SAS 9.4)	4.4_M3 (SAS 9.4)	To migrate within the same release, follow the steps in <i>SAS 9.4 Intelligence Platform: Migration Guide</i> .

SAS Web Report Studio 4.3

Note: This section is relevant only if you are upgrading to either SAS Web Report Studio 4.4 or the first maintenance release for SAS Web Report Studio 4.4. These releases run on SAS 9.4 or the first maintenance release for SAS 9.4, respectively.

These steps are not required if you are upgrading to the second maintenance release for SAS Web Report Studio 4.4, which runs on the second maintenance release for SAS 9.4.

In SAS Web Report Studio 4.3, data explorations were converted to reports. If any of the converted objects are based on cubes, then during migration this conversion does not succeed until the cube files are rebuilt. If the LoadContent step displays a warning during migration, follow the instructions in the Instructions.html file to build the cube files and modify and rerun the LoadContent scripts.

If you are running SAS Web Report Studio 4.2, you must upgrade to SAS Web Report Studio 4.3 before upgrading to SAS Web Report Studio 4.4. If you upgrade from 4.2 to 4.4, your data explorations might not convert properly.

When upgrading to SAS Web Report Studio 4.3, you have these options:

- You can upgrade to the latest release of SAS 9.2. SAS Web Report Studio 4.3 runs on SAS 9.2.

To upgrade to the latest release of SAS 9.2, see [Planning for Maintenance Releases and Product Upgrades for SAS 9.2](#).

- You can upgrade to the latest release of SAS 9.3. SAS Web Report Studio 4.31_M2 runs on SAS 9.3.

When you upgrade to SAS 9.3, you can migrate, or you can create a new deployment. For specific steps, see *SAS 9.3 Intelligence Platform: Migration Guide* (if you are migrating to the new release) or *SAS 9.3 Intelligence Platform: Installation and Configuration Guide* (if you are creating a new deployment). For post-configuration steps, see *SAS 9.3 Intelligence Platform: Web Application Administration Guide*.

SAS Web Report Studio 4.4

The Format dialog box for a percent of total no longer has a currency option.

For information about the new features and enhancements in SAS Web Report Studio 4.4, see “What’s New in SAS Web Report Studio 4.4” on the product documentation page for [SAS Web Report Studio](#).

SAS shipped these releases of SAS Web Report Studio:

- the first maintenance release for SAS Web Report Studio 4.4 in December 2013
- the second maintenance release for SAS Web Report Studio 4.4 in August 2014
- the third maintenance release for SAS Web Report Studio 4.4 in July 2015

Updating Favorites in Your Web Browser

After the deployment of any new release, you must change the release number in the resolved URL that you use to open the product. For example, if you upgraded from 4.3 to 4.4, then the updated URL is `http://server:port/SASLogon/index.jsp?_sasapp=Web+Report+Studio+4.4&`.

If you saved the URL for a previous release as a Favorite link in a web browser, then this link is broken when you upgrade to the new release. You must re-create this favorite for the new release. You can also access SAS Web Report Studio 4.4 by using this unresolved link: `http://server:port/SASWebReportStudio`.

Recommended Reading

Here is the recommended reading list for this title:

- *SAS Deployment Wizard and SAS Deployment Manager 9.4: User's Guide*
- *SAS Intelligence Platform: Desktop Application Administration Guide*
- *SAS Intelligence Platform: Installation and Configuration Guide*
- *SAS Intelligence Platform: Middle-Tier Administration Guide*
- *SAS Intelligence Platform: Migration Guide*
- *SAS Intelligence Platform: System Administration Guide*
- *SAS Intelligence Platform: Web Application Administration Guide*
- *What's New in SAS 9.4*

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Glossary

planned deployment

a method of installing and configuring a SAS business intelligence system. This method requires a deployment plan that contains information about the different hosts that are included in the system and the software and SAS servers that are to be deployed on each host. The deployment plan then serves as input to an installation and configuration tool called the SAS Deployment Wizard.

SAS configuration directory

the location where configuration information for a SAS deployment is stored. The configuration directory contains configuration files, logs, scripts, repository files, and other items for the SAS software that is installed on the machine.

SAS Deployment Manager

a cross-platform utility that manages SAS deployments. The SAS Deployment Manager supports functions such as updating passwords for your SAS deployment, rebuilding SAS Web applications, and removing configurations.

SAS Deployment Wizard

a cross-platform utility that installs and initially configures many SAS products. Using a SAS installation data file and, when appropriate, a deployment plan for its initial input, the wizard is designed to prompt the customer for all the remaining input at the start of the session so that the customer does not have to monitor an entire deployment.

SAS installation directory

the location where your SAS software is installed. This location is the parent directory to the installation directories of all SAS products. The SAS installation directory is also referred to as SAS Home in the SAS Deployment Wizard.

software order e-mail (SOE)

an e-mail message that is sent to your site that announces the availability of the software and details the order. It also lists the initial installation steps and, for SAS 9.3, contains instructions for using Electronic Software Delivery (ESD), if applicable.

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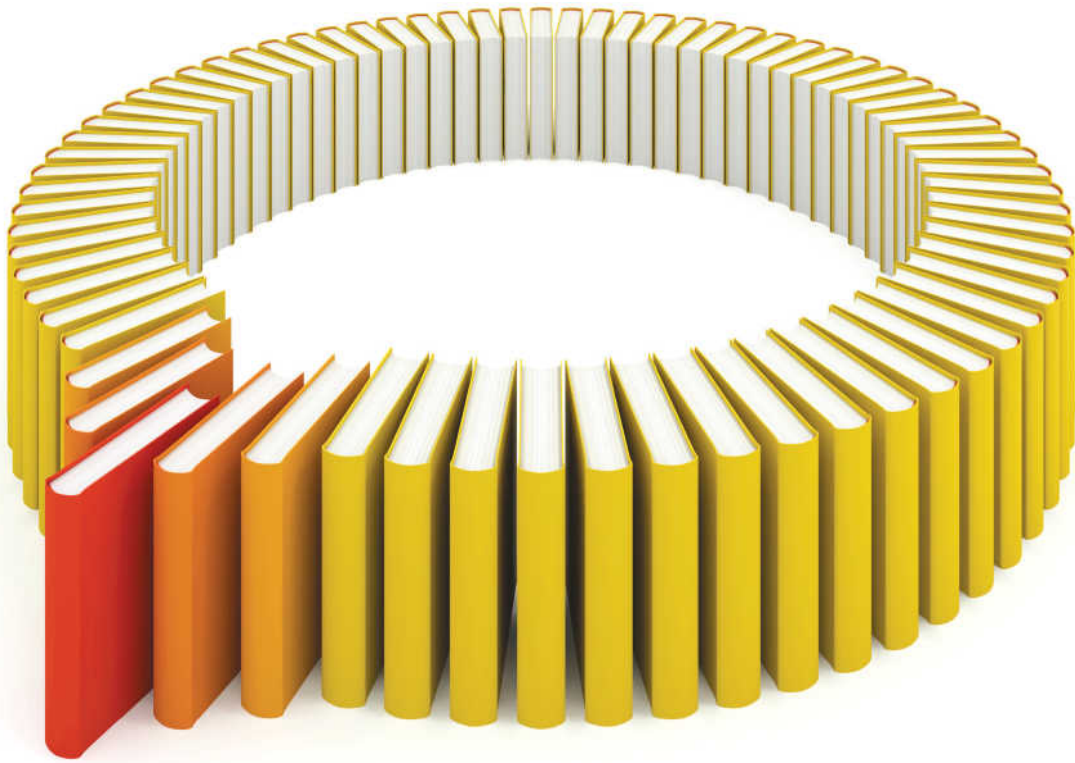
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