Modernizing Your SAS® UIs: Removing Dependencies on Adobe Flash

§sas®

Contents

Introduction

Adobe announced that it intends to move its Flash technology to end-of-life status at the end of 2020. This has implications for a subset of SAS offerings that rely on the Adobe Flash Player to provide interactive Adobe Flex user interfaces created using the Adobe Flash Builder. This document will help you evaluate your SAS environment and provide you with the next steps if you need to take any action.

Use this self-assessment to understand which SAS software needs your attention and how that software is being used within your organization.

This technical paper provides information to help you plan for the future of SAS deployments that include products with Adobe Flash dependencies.

About Adobe Flash Technology

Adobe announced that they will stop updating and distributing Adobe Flash Player at the end of 2020. This is the technology that SAS used to develop and deliver interactive user interfaces that are based on Adobe Flex. Most browser vendors disabled Flash Player by default in 2019. Users who want to continue to use Flash must specifically choose to enable that functionality in their browser. All web browsers will completely disable Flash by the end of 2020. Only certain web browser versions will allow the Adobe Flash plug-in to function in 2021, in conjunction with an appropriate version of the Adobe Flash Player. Another option for users who need to use Flash beyond 2020 is to use back-level browser software or to contract with an enterprise distributor of Adobe Flash Player. Corporations, agencies, and individuals might see this as an unacceptable option since security patches and new features will not be available and SAS Technical Support does not support using SAS in a back-level browser.

Browser-Specific Information

- See the blog from Microsoft for details about the plan to support Flash in Microsoft browsers after 2020.

- Based on the information from Microsoft, note the following:

    o Edge (Chromium) v85 will not support Flash after 2020.

    o Edge (Legacy) v41 will support the Flash plug-in until (and including) March 2021. Also, Microsoft will not support Edge Legacy after March 9, 2021.

    o Internet Explorer (IE) 11 will support the Flash plug-in until (and including) August 2021.

- See SAS 9.4 Support for Web Browsers and Plug-Ins for more information.

How SAS Uses Adobe Flash Player

Discontinuation of Adobe Flash support impacts the entire software industry, not just SAS software. The majority of SAS software in use by our customers today does not contain Flash and is not impacted. However, SAS does have around 100 offerings that contain Flash dependencies that include solutions built on SAS® 9.3 and SAS® 9.4.

Product offerings based on SAS® Viya® do not use Flash. They are based on HTLM5 instead. Read the official SAS support policy.

SAS® Viya®

SAS Viya is a cloud-enabled extension to the SAS® platform. It provides customers with a direct modernization for SAS environments. SAS Viya has a complete modern architecture that is built to support a range of user interfaces including those designed around HTML5 and CSS3.

SAS® 9.4 and SAS® Viya® Functional Comparison provides an overview of the differences between these two technologies. Use this comparison to help you to upgrade and migrate.

Modernizing to SAS Viya is a great way to remove dependencies on Adobe Flash. The end of life of Flash presents an opportunity to explore the benefits of moving to SAS Viya. Learn more about SAS Viya and consult your account executive. If you are not ready to embrace SAS Viya, upgrading your SAS 9.4 environment to the latest maintenance level is a simple and effective route to ensuring continuity into 2021.

What Should I Do?

The remainder of this document spells out methods to evaluate your current environment and gives guidance on your next steps.

First, take stock of your existing environments and use cases. You need to identify all the SAS products that you have deployed that use Adobe Flash interactive user interfaces on each machine where they are installed and configured. You must understand how your user community is using those products and those workloads (batch or interactive). The output of this assessment provides the information needed to decide the best upgrade options. The choice of upgrade route depends on factors including training needs, project timing, outage schedules, and so on.

SAS® 9.4M7 Security Considerations

Although this guide is focused on SAS 9.x environments that contain user interfaces that are dependent on Adobe Flash, you are encouraged to evaluate those SAS environments that do not have Flash but are not yet on SAS 9.4M7. The SAS 9.4M7 maintenance release contains important security patches and new facilities that should be applied as soon as possible. For more information, see this security white paper.

For more information about upgrading to SAS 9.4M7, see Install and Configure a Software Update in *SAS® 9.4 Guide to Software Updates and Product Changes* (HTML) or search for "Install and Configure a Software Update" in *SAS® 9.4 Guide to Software Updates and Product Changes* (PDF).

Assessing the SAS Environment

SAS 9 Content Assessment is a collection of applications designed to help you understand various characteristics of your SAS 9.4 system. SAS 9.4 deployments vary greatly in terms of what products are installed and configured, how the products are used, and what content (for example, code, output, metadata) has been produced.

From the collection of applications, use the SAS 9 Content Assessment – System Evaluation application to perform an assessment that includes, among many things, what products you have installed. However, after you perform a system evaluation, it is essential that you create a DeploymentRegistry.html file to access this information.

Create and Inspect the DeploymentRegistry.html File

The deployment registry report lists all the SAS 9.4 products that are installed in the same SAS installation directory (SAS Home). However, these products might not be configured at your site. For more information about how to generate this report, see SAS Usage Note 35968: Using the ViewRegistry Report and other methods to determine the SAS® 9.2 and later software releases and hot fixes that are installed.

Compare the list of products with the products in the table in Appendix 1: SAS Software Based on Adobe Flash.

Next Steps

If you have installed software that is listed in the table, then you need to determine how that software is being used. If jobs are being exclusively run in batch, then the UI based on Adobe Flex is not used. Therefore, you can continue to use this product into 2021. SAS recommends that you update the product as soon as possible.

 If any of the products based on Flex is used interactively, you need to expedite an update strategy.

Stand-Alone Cases

What Constitutes a Stand-Alone Case?

Your situation is stand-alone if all the following conditions are true:

- You have only one SAS product or solution that is installed and the version of that SAS product has an Adobe Flash dependency (for example, SAS® Visual Analytics or SAS® Enterprise BI).
- You have not implemented manual Transport Layer Security (TLS). You can have TLS on the web server, but it must have been configured by SAS® Deployment Wizard.
- You have not enabled high availability.
- You do not use a proxy or clustered middle tier.

How to Handle a Stand-Alone Case

See Adding, Updating, and Upgrading SAS Software in *SAS® 9.4 Intelligence Platform: Installation and Configuration Guide* for details about how to update your system to SAS software that does not rely on Adobe Flash.

If your SAS deployment uses SAS® 9.2 or SAS® 9.3, follow the instructions in *SAS® Intelligence Platform: Migration Guide*.

It is very important that you follow the instructions carefully. If you receive any errors, then stop and contact SAS Technical Support.

More Complex Cases

You need guidance for any of the following conditions:

- You have multiple products.
- You have manually enabled TLS for the web application server or web server.
- You have enabled high availability.
- You use a proxy.
- You have a clustered middle tier.

Contact your account executive or SAS Customer Success Manager for guidance.

Appendix 1: SAS Software Based on Adobe Flash

SAS has defined a roadmap to aid customers in their transition from SAS software releases that have Adobe Flash dependencies to SAS software that relies on new, modern user interfaces. SAS is replacing user interfaces that rely on Adobe Flash with interfaces based on HTML5. SAS has also upgraded the SAS 9.4 server with maintenance release 7 (SAS 9.4M7) to support clients that are built with these HTML5 interfaces. This appendix shows the plan for each SAS offering as well as for the planned availability date, so that you can plan your upgrade activity.

Table 1 shows SAS products and solutions with Flash dependencies and the availability of an alternative.

Table 1. SAS Products with Adobe Flash Dependencies and SAS Products without Adobe Flash Dependencies

SAS Product with Adobe Flash Dependencies	SAS Product without Adobe Flash Dependencies
SAS® Anti-Money Laundering 5.2 - 5.2M1 on SAS 9.3 SAS® Anti-Money Laundering 6.1 - 6.3M1 on SAS 9.4 or SAS® Anti-Money Laundering 6.2M1 on SAS 9.4M2 SAS® Anti-Money Laundering 7.1 on SAS 9.4M5 or earlier	SAS® Anti-Money Laundering 7.1 on SAS 9.4M6 or later
SAS® Asset and Liability Management for Banking Server 3.1 - 5.1 on 9.2 - 9.4	SAS® Asset and Liability Management Server 5.1.2 on 9.4M6 or later
SAS® Asset Performance Analytics 6.1 - 6.2M1 on SAS 9.4	SAS® Asset Performance Analytics 6.3 on SAS 9.4M6 or later or SAS® Analytics for IoT 7.1 on SAS® Viya 3.5 or later (Not a full functional replacement)
SAS® Banking Analytics Architecture 4.6 to 5.1 on SAS 9.3 to 9.4M5	SAS® Banking Analytics Architecture 5.1 on SAS 9.4M6 or later
SAS® BookRunner® Standard Customer is using SAS® BookRunner 12.0 - 12.5 on SAS 9.2 -9.4 Customer is using SAS® Commodity Risk Analytics 4.1 on SAS 9.4	Discuss with your account executive.
SAS® Business Rules Manager 2.1 on SAS 9.4, 2.2 on SAS 9.4M2, 3.1 on SAS 9.4M3, 3.2 on SAS 9.4M4, and 3.2M1 on SAS 9.4M6	SAS® Business Rules Manager 3.3 on SAS 9.4M6 or later or SAS® Intelligent Decisioning 5.3 on SAS® Viya 3.4 or later
SAS® Campaign Management 6.1 - 6.5 on SAS 9.3 - 9.4M5	SAS® Campaign Management 6.6 on 9.4M6 or later or

	SAS® 360 Engage Direct 19.11 or later Versions prior to SAS® Campaign Management 6.1 do not include Flash and customers can stay on the current version.
SAS® Campaign Management for Banking 5.1 - 5.4 on SAS 9.3 - 9.4M5	SAS® Campaign Management 6.6 on SAS 9.4M6 or later
SAS® Campaign Management for Insurance 5.1 - 5.4 on SAS 9.3 - 9.4M5	SAS® Campaign Management 6.6 on SAS 9.4M6 or later
SAS® Campaign Management for Retail 5.1- 5.4 on SAS 9.3 - 9.4M5	SAS® Campaign Management 6.6 on SAS 9.4M6 or later
SAS® Campaign Management for Telecom 5.1 - 5.4 on SAS 9.3 - 9.4M5	SAS® Campaign Management 6.6 on SAS 9.4M6 or later
SAS® Capital Planning and Management 2.1 - 2.2 on 9.4M1 - 9.4M2	SAS® Financial Management 5.6 on SAS 9.4M6 or later
SAS® Capital Requirements for Market Risk on SAS 9.4	SAS® Capital Requirements for Market Risk 9.4M6 or later or SAS® Risk Stratum 7.4: Computation with SAS Risk Stratum core v03.2020 on SAS 9.4M6 or later
SAS® Collaborative Planning Workbench 5.3M1 or earlier on SAS 9.4 or earlier	SAS® Collaborative Planning Workbench 5.4 on SAS 9.4M6 or later or SAS® Demand Planning 8.23 on SAS® Viya 3.5 or later
SAS® Contextual Analysis 12.x - 15.x on SAS 9.4	SAS® Visual Text Analytics 8.3 or later, on SAS® Viya 3.4 or later
SAS® Cost and Profitability Management Advanced 8.1 - 8.3 on SAS 9.4	SAS® Cost and Profitability Management 8.4 on SAS 9.4M6 or later
SAS® Cost and Profitability Management Standard 8.1 - 8.3 on SAS 9.4	SAS® Cost and Profitability Management 8.4 on SAS 9.4M6 or later
SAS® Credit Assessment Manager 7.3 - 7.4 on SAS 9.4M5	SAS® Credit Assessment Manager 7.4 on SAS 9.4 M6 or later
SAS® Credit Risk for Banking 3.11 - 3.4 on SAS 9.3 - 9.4	SAS® Solution for Stress Testing v06.2020 on SAS 9.4M6 or later
SAS® Credit Scoring 5.2 - 6.2 on SAS 9.4	SAS® Credit Scoring 6.3 on SAS 9.4M6 or later or SAS® Risk Modeling 8.1 on SAS® Viya 3.5 or later

SAS® Criminal Justice Data Integration and Analytics	Discuss with your account executive.
SAS® Currency Transaction Reporting 6.1 - 6.3M1 on SAS 9.4 or SAS® Currency Transaction Reporting 7.1 on SAS 9.4M5	SAS® Currency Transaction Reporting 7.1 on SAS 9.4M6 or later
SAS® Customer Due Diligence 6.1 - 6.3M1 on SAS 9.4 or SAS® Customer Due Diligence 7.1 on SAS 9.4M5	SAS® Customer Due Diligence 7.1 on SAS 9.4M6 or later
SAS® Customer Experience Personalization 6.1 - 6.5 on SAS 9.3+	SAS® 360 Engage Digital, 16.03 or later
SAS® Customer Link Analytics 5.4 - 6.5 on SAS 9.3 - 9.4M6	SAS® Customer Link Analytics is retired and is no longer available. SAS® Visual Data Mining and Machine Learning might be a replacement for some customers.
SAS® Data Governance 2.41, 2.6, 2.7 on SAS 9.4	SAS® Data Governance 2.8 on SAS 9.4M6 or later
SAS® Data Management Advanced 2.5, 2.6, 2.7 on SAS 9.4	SAS® Data Management Advanced 2.8 on SAS 9.4M6 or later
SAS® Data Management Standard 2.5, 2.6, 2.7 on SAS 9.4	SAS® Data Management Standard 2.8 on SAS 9.4M6 or later
SAS® Data Quality Advanced 2.41, 2.6, 2.7 on SAS 9.4	SAS® Data Quality Advanced 2.8 on SAS 9.4M6 or later
SAS® Data Quality for Midsize Business 2.41, 2.6, 2.7 on SAS 9.4	SAS® Data Quality for Midsize Business 2.8 on SAS 9.4M6 or later
SAS® Data Quality Standard 2.41, 2.6, 2.7 on SAS 9.4	SAS® Data Quality Standard 2.8 on SAS 9.4M6 or later
SAS® Decision Manager 2.1 on SAS 9.4, 2.2 on SAS 9.4 M2, 3.1 on SAS 9.4M3, 3.2 on SAS 9.4M3, and 3.2M1 on SAS	SAS® Decision Manager 3.3 on SAS 9.4M6 or later or SAS® Intelligent Decisioning 5.3 on SAS® Viya 3.4 or later
SAS® Demand-Driven Forecasting on any version SAS® Demand Forecasting for Retail on any version	SAS® Demand Driven Planning & Optimization 5.4 on SAS 9.4M6 or later or SAS® Demand Planning 8.23 on SAS® Viya 3.5 or later
SAS® Demand Signal Repository 5.3M1 or earlier on SAS 9.4 or earlier	SAS® Demand Signal Repository 5.4 on SAS 9.4M6 or later or

	SAS® Demand Planning 8.23 on SAS® Viya 3.5 or later
SAS® Detection and Investigation on SAS 9.4M5 and SAS® Viya 3.5	Discuss with your account executive. Upgrade to SAS 9.4M6 for the other SAS products used with SAS® Detection and Investigation
SAS® Detection and Investigation for Banking any version of SAS 9.4M5 and SAS® Viya 3.5	Discuss with your account executive. Upgrade to SAS 9.4M6 for the other SAS products used with SAS® Detection and Investigation for Banking
SAS® Detection and Investigation for Government on SAS 9.4M5 and SAS® Viya 3.5	Discuss with your account executive. Upgrade to SAS 9.4M6 for the other SAS products used with SAS® Detection and Investigation for Government
SAS® Detection and Investigation for Health Care on SAS 9.4M5 and SAS® Viya 3.5	Discuss with your account executive. Upgrade to SAS 9.4M6 for the other SAS products used with SAS® Detection and Investigation for Health Care
SAS® Detection and Investigation for Insurance on SAS 9.4M5 and SAS® Viya 3.5	Discuss with your account executive. Upgrade to SAS 9.4M6 for the other SAS products used with SAS® Detection and Investigation for Insurance
SAS® Digital Marketing 6.1 - 6.5 on SAS 9.4	SAS® 360 Engage Email 19.03 or later
SAS® Drug Development 4.1 - 4.5 on SAS 9.2 - 9.3	SAS® Life Science Analytics Framework 5.1 on SAS 9.4M5 or later
SAS® Energy Forecasting 3.2 - 4.1 on SAS Version 9.4	SAS® Energy Forecasting 4.3 on SAS 9.4M6 or later
SAS® Enterprise Analytics for Education Advanced on 9.4M2 - 9.4M6	SAS® Enterprise Analytics for Education Advanced on SAS 9.4M6
SAS® Enterprise Analytics for Education Standard on 9.4M2 - 9.4M6	SAS® Enterprise Analytics for Education Standard on SAS 9.4M6
SAS® Enterprise BI Server 4.2 - 4.4 on SAS 9.2 - 9.4 (M1 - M6)	SAS® Enterprise BI Server 4.4 on SAS 9.4M6 or later SAS® BI Dashboard Viewer 4.41 (included in SAS® Enterprise BI Server M6 and M7) replaces Flash-based BI Dashboard Viewer. BI Dashboard Designer remains Flash-based in M6 and is removed in M7 or SAS® Visual Analytics 7.5 on SAS 9.4M6 or later or SAS® Visual Analytics 8.5 on SAS® Viya 3.5 or later

SAS® Enterprise Case Management 6.3M1 on SAS 9.4M5 or earlier	SAS® Enterprise Case Management 6.3M1 on SAS 9.4M6 or SAS® Visual Investigator 10.6 on SAS Viya 3.5
SAS® Enterprise GRC for Compliance Management 6.1 on SAS 9.4M4	SAS® Governance and Compliance Manager 7.4 on SAS 9.4M6 or later
SAS® Enterprise GRC for Risk Management 4.2 - 6.1 on SAS 9.2 - 9.4M4	SAS® Governance and Compliance Manager 7.4 on SAS 9.4M6 or later
SAS® Enterprise Intelligence Suite for Education SAS 9.2 - 9.4 (M1 - M6)	SAS® Enterprise Intelligence Suite for Education comprises the following offerings: SAS® Enterprise BI Server 4.4 on SAS 9.4M6 or later 　SAS® BI Dashboard Viewer 4.41 (included in SAS® Enterprise BI Server M6 and M7) replaces Flash-based BI Dashboard Viewer. 　BI Dashboard Designer remains Flash-based in M6 and is removed in M7 or SAS® Visual Analytics 7.5 on SAS 9.4M6 or later or SAS® Visual Analytics 8.5 on SAS® Viya 3.5 or later or SAS® Data Management Advanced 2.8 on SAS 9.4M6 or later
SAS® Enterprise Model Management 2.x - 14.2 on SAS 9.2 - 9.4	SAS® Enterprise Model Manager 14.3 on SAS 9.4M6 or later or SAS® Visual Data Mining and Machine Learning 8.2 and SAS® Model Manager 15.1 on SAS Viya 3.3 or later
SAS® Expected Credit Loss 2.31 on SAS 9.4	SAS® Expected Credit Loss 2.31 on SAS 9.4M6 or later or SAS® Risk Stratum 7.4 with SAS® Risk Stratum Core v03.2020 on SAS 9.4M6
SAS® Federation Server 3.2, 4.1, 4.2 on SAS 9.4	SAS® Federation Server 4.2 with SAS® Federation Server Manager 4.3 on SAS 9.4M6 or later
SAS® Field Quality Analytics 6.1 - 6.2M1 on SAS 9.4	SAS® Field Quality Analytics 6.3 on SAS 9.4M6 or later or SAS® Analytics for IoT 7.1 on SAS® Viya 3.5 or later
SAS® Financial Crimes Monitor 2.3 - 6.2 on SAS 9.4M5	Discuss with your account executive. SAS® Financial Crimes Monitor 6.3 on SAS 9.4M6 or SAS® Detection and Investigation on SAS® Viya 3.5

SAS® Financial Management 5.3 - 5.5 on SAS 9.3 - 9.4	SAS® Financial Management 5.6 on SAS 9.4M6 or later
SAS® Firmwide Risk for Banking 2.1 - 3.4 on SAS 9.2-9.4M5	SAS® Solution for Stress Testing v06.2020 on SAS 9.4M6 or later
SAS® Firmwide Risk for Solvency II 2.1 - 9.1 on SAS 9.2-9.4	SAS Firmwide Risk for Solvency II on SAS 9.4M6 or SAS Solution for Solvency II (v05.2020) on SAS 9.4M6
SAS® for Patron Value Optimization-Advanced SAS 9.4	Discuss with your account executive.
SAS® for Procurement Integrity 6.2M4 on SAS 9.4M6	Discuss with your account executive. SAS 9.4M6 for the other SAS products used with SAS® for Procurement Integrity or SAS® Continuous Monitoring for Procurement Integrity on SAS® Viya 3.5 and SAS 9.4M6
SAS® Forecast Analyst Workbench 5.3M1 or earlier on SAS 9.4 or earlier	SAS® Forecast Analyst Workbench 5.4 on SAS 9.4M6 or later or SAS® Demand Planning 8.23 on SAS Viya 3.5 or later
SAS® Fraud Framework for Government on SAS 9.4M5	Discuss with your account executive. SAS 9.4M6 for the other SAS products used with SAS® Fraud Framework for Government or SAS® Detection and Investigation for Government on SAS® Viya 3.5
SAS® Fraud Framework for Health Care on SAS 9.4M5	Discuss with your account executive. SAS 9.4M6 for the other SAS products used with SAS® Fraud Framework for Health Care or SAS® Detection and Investigation for Health Care on SAS® Viya 3.5
SAS® Fraud Framework for Insurance on SAS 9.4M5	Discuss with your account executive. SAS 9.4M6 for the other SAS products used with SAS® Fraud Framework for Insurance or SAS® Detection and Investigation for Insurance on SAS® Viya 3.5

SAS® Fraud Network Analysis on SAS 9.4M5	Discuss with your account executive. SAS 9.4M6 for the other SAS products used with SAS® Fraud Network Analysis or SAS® Detection and Investigation for Banking on SAS® Viya 3.5

SAS® Governance and Compliance Manager 4.1 - 7.4 on SAS 9.2 - 9.4M6	SAS® Governance and Compliance Manager 4.1 – 6.1.
	    With SAS Professional Services, migrate to GRC 6.1 then using SAS services migration scripts, to SAS® Governance and Compliance Manager 7.4 or later.
	
	SAS® Governance and Compliance Manager 7.3 - 7.4
	    Upgrade or migrate to SAS® Governance and Compliance Manager 7.4 or later.

SAS® High-Performance Risk 3.2 - 4.2 on SAS 9.4	SAS® High-Performance Risk 4.2 on SAS 9.4M6 or later or SAS® Risk Engine 8.2 on SAS® Viya 3.5 or later
SAS® Insurance Analytics Architecture 3.2 - 6.1 on SAS 9.1.3 - 9.4	SAS® Insurance Analytics Architecture 6.1 on 9.4M6 or later
SAS® Inventory Optimization 5.3M1 or earlier on SAS 9.4 or earlier	SAS® Inventory Optimization Engine 5.4 on SAS 9.4M6 or later or SAS® Inventory Optimization Engine on SAS® Viya 3.5 or later
SAS® IT Resource Management 3.2 - 3.9 on SAS 9.2 - SAS 9.4M5	SAS® IT Resource Management 3.10 on SAS 9.4M6 or later
SAS® Life Science Analytics Framework 4.6-4.7 on SAS 9.4	SAS® Life Science Analytics Framework 5.1 on SAS 9.4M5 or later
SAS® Markdown Optimization 5.2 Customer is using SAS® Visual Analytics Administration and Reporting	SAS® Markdown Optimization 5.41M2 with SAS® Visual Analytics Administration and Reporting 7.5 on SAS 9.4M6
SAS® Market Risk for Banking 2.1 - 3.4 on SAS 9.2 - 9.4M5	SAS® Solution for Stress Testing v06.2020 on SAS 9.4M6 or later
SAS® Market Risk Management for Insurance 2.1 - 3.4 on SAS 9.2 - 9.4M5	SAS® Solution for Stress Testing v06.2020 on SAS 9.4M6 or later
SAS® Marketing Automation 6.1 - 6.5 on SAS 9.2 - 9.4	SAS® Marketing Automation 6.6 on 9.4M6 or later or SAS® 360 Engage Direct 19.11 or later

SAS® Marketing Operations Management 6.1 - 6.6 on SAS 9.4M5	Discuss with your account executive. SAS 360 Plan 18.03 or later
SAS® Marketing Optimization 6.1 - 6.5 on SAS 9.2 - 9.4	SAS® Marketing Optimization 6.6 on 9.4m6 or later or SAS® 360 Engage Optimize, 19.11 or later
SAS® MDM Advanced 4.1, 4.2, 4.3 on SAS 9.4	SAS® Data Quality Advanced 2.8 or SAS® Data Management Advanced 2.8 or later
SAS® MDM Standard 4.1, 4.2, 4.3 on SAS 9.4	SAS® Data Quality Standard or Advanced 2.8 or SAS® Data Management Standard or Advanced 2.8 or later
SAS® Merchandise Allocation Customer is using SAS® Merchandise Allocation with any module of SAS® Integrated Merchandise Planning and SAS® Visual Analytics Administration and Reporting on versions 9.4 or earlier	SAS® Merchandise Allocation 4.2 on SAS 9.4M6 or later
SAS® Merchandise Assortment Planning 6.4 - 6.7 on SAS 9.4 or earlier Customer is using SAS® Visual Analytics Administration and Reporting	SAS® Merchandise Assortment Planning 6.8 on SAS 9.4M6 or later or SAS® Assortment Planning 8.23 on SAS® Viya 3.5 or later
SAS® Merchandise Financial Planning 6.4 - 6.7 on SAS 9.4 or earlier Customer is using SAS® Visual Analytics Administration and Reporting	SAS® Merchandise Financial Planning 6.8 on SAS 9.4M6 or later or SAS® Financial Planning 8.23 on SAS® Viya 3.5 or later
SAS® Model Implementation Platform 2.1-3.2 on SAS 9.4	SAS® Model Implementation Platform 3.2 on 9.4M6 or later
SAS® Model Manager 2.x - 14.2 on SAS 9.2 - 9.4	SAS® Model Manager 14.3 on SAS 9.4M6 or later or SAS® Model Manager 15.1 on SAS® Viya 3.3 or later
SAS® Model Risk Management 6.1 - 7.4 on SAS 9.4M2 – 9.4M6 prior to June 18, 2019 (19w25) versions	SAS® Model Risk Management 7.4 (v04.2020 released on June 18, 2019 (19w25) or later on SAS 9.4M6 or later
SAS® OpRisk VaR, SAS® EGRC 6.1 on SAS 9.4M4	Refer to product-specific strategies • SAS® Enterprise GRC for Risk Management • SAS® OpRisk VaR or SAS® Risk Stratum Enterprise on SAS 9.4M6 or later where both solutions, SAS® Governance and

	Compliance Manager and SAS® Solution for Stress Testing (candidate for SAS OpRisk VaR) can coexist
SAS® Pack Optimization 3.4 on SAS 9.4 Customer is using SAS® Visual Analytics Administration and Reporting	SAS® Pack Optimization 3.41M2 with SAS® Visual Analytics Administration and Reporting 7.5 on SAS 9.4M6 or later
SAS® Predictive Modeling Workbench for SAP HANA 2.1 on SAS 9.4M2	SAS® Predictive Modeling Workbench for SAS HANA 2.1 on SAS 9.4M6 or later
SAS® Production Quality Analytics 6.2 - 6.2M1 on SAS 9.4	SAS® Production Quality Analytics 6.3 on SAS 9.4M6 or later or SAS® Analytics for IoT 7.1 on SAS® Viya 3.5 or later
SAS® Promotion Price Optimization 5.2 Customer is using SAS® Visual Analytics Administration and Reporting	SAS® Promotion Price Optimization 5.41M2 with SAS® Visual Analytics Administration and Reporting 7.5 on SAS 9.4M6 or later
SAS® Qualitative Assessment Manager 7.3 on SAS 9.4M5	SAS® Qualitative Assessment Manager 7.4 on SAS 9.4M6 or later or SAS® Solution for Stress Testing on SAS 9.4M6 or later
SAS® Quality Analytic Suite 6.1 - 6.2M1 on SAS 9.4	SAS® Quality Analytic Suite Foundation 6.3 on SAS 9.4M6 or later or SAS® Analytics for IoT 7.1 on SAS® Viya 3.5 or later
SAS® Real-Time Decision Manager 6.3 on SAS 9.4M2, 6.4 on SAS 9.4M3, or 6.5 on SAS 9.4M4	SAS® Real-Time Decision Manager 6.6 on SAS 9.4 M6 or SAS® Intelligent Decisioning 5.3 on SAS® Viya 3.4 or later
SAS® Regulatory Risk Management 4.x - 6.1 on SAS 9.4	SAS® Regulatory Risk Management 6.1 (v04.2020) on SAS9.4M6
SAS® Retail Intelligence Architecture on any version	SAS® Intelligent Planning 8.23 on SAS® Viya 3.5
SAS® Risk Analytics Builder 2.2 on SAS 9.4	SAS® Risk Analytics Builder 2.2 on SAS 9.4M6 or later using SAS® Visual Analytics 7.5 or later
SAS® Risk Dimensions 5 - 6.12 on SAS 9.1.3 - 9.4M6	If you are using BI Dashboard, then upgrade to SAS® Risk Dimensions 6.12 on 9.4M6 or later SAS® High-Performance Risk 4.2 on SAS 9.4M6 or later or SAS® Risk Engine 8.2 on SAS Viya 3.5 or later

SAS® Risk and Finance Workbench 2.2 - 3.1 on SAS 9.4	SAS® Risk and Finance Workbench 3.2 on SAS 9.4M6 or later
SAS® Risk Modeling Workbench 2.1 - 2.2 on SAS 9.4	SAS® Risk Modeling Workbench 2.2 toolset on SAS 9.4M6 or later, using SAS® Visual Analytics 7.5 or later
SAS® Size Profiling 3.4 Customer is using SAS® Visual Analytics Administration and Reporting	SAS® Size Profiling 3.41M2 with SAS® Visual Analytics Administration and Reporting 7.5 on SAS 9.4M6 or later
SAS® Social Network Analysis Server 2.3M1 and earlier on SAS 9.3 or earlier	SAS® Social Network Analysis 6.2M4 on SAS 9.4M6 and other Flash-free products in the bundle
SAS® Text Analytics for Education on SAS 9.4	SAS® Visual Text Analytics 8.3 or later on SAS® Viya 3.4 or later
SAS® Transaction Monitoring Optimization on SAS 9.4M5	SAS® Visual Analytics 7.5 on SAS 9.4M6 or SAS® Financial Crimes Analytics 10.6 on SAS® Viya 3.5
SAS® Underwriting Risk Management for P and C Insurance Server 2.12 - 9 on SAS 9.3 to 9.4M5	SAS® Underwriting Risk Management for P and C Insurance on SAS 9.4M6
SAS® Visual Analytics 7.1 - 7.4 on SAS 9.4	SAS® Visual Analytics 7.5 on SAS 9.4M6 or later or SAS® Visual Analytics 8.5 on SAS® Viya 3.5 or later
SAS® Visual Scenario Designer on SAS 9.4M5	SAS® Visual Scenario Designer 6.3M1 on SAS 9.4M6 and latest Flash-free version of SAS® Visual Analytics
SAS® Visual Statistics 7.1 - 7.4 on SAS 9.4	SAS® Visual Statistics 7.5 on SAS 9.4M6 or later or SAS® Visual Statistics 8.5 on SAS® Viya 3.5 or later

SAS

To contact your local SAS office, please visit: sas.com/offices