

Transform data into trustworthy assets for AI and Analytics to achieve faster time to value.

SAS® Data Engineering on G Cloud

As organisations continue to generate and collect increasing amounts of data, managing and organising this information can become overwhelming. Poor data management can lead to a host of problems including reduced efficiency, increased costs, compliance issues and even reputational damage.

It's critical to have a robust data infrastructure that can support your business operations and provide insights that support decision making. Many organisations struggle to keep up with the volume and complexity of their data, particularly due to outdated data processes, legacy ETL applications and inefficient custom coding practices. These bottlenecks can cause delays that could put you at a competitive disadvantage. Without proper data management, organisations may encounter problems such as data duplication, inconsistency, security issues and regulatory noncompliance. This can cause significant damage to your organisation, affecting everything from operations to customer satisfaction.

The Challenge

You need comprehensive solutions to help tackle ever-evolving data management challenges – a fully integrated solution for seamlessly delivering and optimising data, in a variety of use cases.

By taking a broad and comprehensive approach, data and analytics leaders are better equipped to unlock insights, drive innovation and stay ahead of the curve in today's ever-changing digital landscape.

Some common challenges include:

- Data management teams are under increased pressure to optimise their operations, leading them to focus on automating data preparation and integration processes.
- Organisations are transforming their workflows to gain maximum benefit from agile practices such as DataOps.
- Organisations that lack the capability to provide a strong foundation of data management capabilities are bound to fail when trying to launch AI and data science initiatives.
- Internal teams are constantly pushing for more autonomy, with varying levels of data maturity.

Our Approach

As part of a comprehensive, cloud-native advanced analytics platform, SAS delivers specialised, cohesive, and automated data management capabilities to support varied and extensive AI and analytics use cases. SAS' data management solution helps organisations with:

- Better end-to-end delivery of the data supply chain.
- Faster time to delivery when adding new data (own or third-party) to existing analytics and data science models.
- Easier fulfilment of regulatory requirements to meet data transparency expectations.
- Composable data and analytics applications (i.e., arrangeable according to requirements) that empower business teams.

Our cloud-based platform, SAS Viya, combines machine learning and natural language processing to automate manual tasks, improve productivity and performance, giving you quick access to high-quality, catalogued data with end-to-end lineage and governance. We help give your organisation the edge needed to outpace competitors while also allowing you to seize new opportunities.

The SAS Difference

Our solution transforms data into a vital business resource and enables powerful decisions based on clean, reliable information. The integrated suite of capabilities offers consistent results across any data type or source for maximum confidence in your analytics outcomes.

Why is SAS Data Engineering important?

Unlock your data's potential and unleash unlimited insights.

With our powerful cloud-native tools, you can access, ingest, process, and govern your data, achieving better outcomes while democratising information sharing throughout your business.

At the same time, governance capabilities help IT promote consistency and reuse.

What does SAS Data Engineering do?

Breakdown Data Silos:

- Seamless connectivity to popular cloud platforms, on-premises, and multi-cloud data sources
- Access, integrate, cleanse, and transform data, no matter where it resides.
- Deploy and execute models within the database, data warehouse or data lake house to increase productivity and achieve optimal results faster.

Simplify Data Infrastructure:

- Easily add advanced, prebuilt snippets and tasks to reduce code debt, while promoting reuse, data consistency and transparency.
- Built-in machine learning and AI capabilities scan data and make intelligent transformation suggestions, enabling automated workflow at the click of a button.
- Jumpstart your data engineering efforts with multilanguage code support and a powerful low-code visual flow builder.

Trust Your Data:

- Industry-leading data profiling, data quality and entity resolution technologies help users assess the scope and nature of data quality problems across your data workflow.
- Accelerate data discovery with automated agents. Evaluate the fitness of data while ensuring governance and monitoring of confidential data with an information privacy assessment.
- Gain real-time visibility into complex data workloads to reduce analytic errors and increase the production efficiency of data operations.

Built for the Modern Data Stack:

- Enable continuous analytic deployment, centralised version control and unified data understanding through popular open-source integrations with GIT, Airflow and Great Expectations.
- Develop a comprehensive understanding of your enterprise data by integrating SAS assets with third-party metadata through the open metadata standard.

With SAS Data Engineering on G-Cloud, you'll be able to:

Break down data silos:

- Seamlessly connect to popular cloud platforms, on-premises, and multi-cloud data sources.
- Minimize data movement and accelerate processing.
- Apply complex data processing and analytics at the source.

Modernise your analytics workflows:

- Build robust data pipelines to ingest, transform and serve the highest-quality data.
- Provide seamless collaboration between technical and business users.
- Integrate SAS with popular open-source tools to boost productivity.

Improve trust in data:

- Enable users to find, catalogue and evaluate the fitness of data assets.
- Help users better establish business rules for data quality.
- Strengthen trust and respond confidently to regulatory compliance.

For whom is SAS Data Engineering designed?

SAS Data Engineering is designed for teams and organisation that wants to deliver robust data pipelines to service a wide variety of use cases, with a modern, cloud-native Data Engineering platform. It also provides IT with an easy way to govern and manage data integrity and security.

Products included in SAS Data Engineering

1. SAS® Visual Analytics

Visualise and discover relevant relationships in your data. Create and share interactive reports and dashboards, and use self-service analytics to quickly assess probable outcomes for smarter, more data-driven decisions.

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2. SAS® Studio Analyst and SAS® Studio Engineer (see pricing document for breakdown)

Access data files, libraries and existing programs – or write new ones – with this developmental web application accessible through your browser. With SAS Studio, you can use predefined tasks to generate SAS code. When you run a program or task, the technology processes the SAS code on a SAS server, which can be a server in a cloud environment, in your local environment, or SAS installed on your local machine. After the code is processed, the results are returned to SAS Studio in your browser.

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3. SAS® Information Governance

Capture and enrich metadata for files, tables and other information assets. SAS Information Catalog can be used as the repository of metadata, including information on entities, attributes, relationships and domains. It enables you to discover and document how data fits together, plus it provides a common vocabulary around data.

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4. SAS/ACCESS®

Providing data access to more of your data sources so you can make better decisions faster. These interfaces are out-of-the-box solutions that provide enterprise data access and integration between SAS and third-party databases. SAS/ACCESS interfaces enable your SAS solutions to read, write, and update data no matter what native databases or platforms you use.

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5. SAS® Data Preparation

This offering adds enhancements to the SAS Viya platform, including advanced data profiling features, data quality transformations for SAS® Data Studio and programming interfaces for data quality operations.

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6. SAS® Intelligent Decisioning (included within Advanced)

Combining business rules management, decision processing, real-time event detection, decision governance, and SAS' powerful advanced analytics capability provides unprecedented ability to automate and manage decisions across the enterprise. SAS Intelligent Decisioning enables organisations to conduct real-time customer interactions and automate operational business decisions at scale. It supports a wide variety of customer-facing activities such as personalised marketing and next best action, and customer-impacting decisions including credit services and fraud prevention.

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Service Model

SAS is provided as Managed Cloud Software and includes software, hardware, and hosting services for a contracted period. This is an advantageous way to help Public Sector organisations get started with analytics and alleviate implementation problems. You load your data onto the SAS cloud environment or through the option of a SAS/ACCESS engine. SAS/ACCESS engines provide an automated way to seamlessly read, write and update access to data before building your analytics.

SAS runs a secure, cloud-based service on your behalf, giving you the benefits of our most advanced software and scalable platform architecture – managed and supported by our own experts.

- Each dedicated cloud software instance running SAS uses a predefined storage allowance to manage your data requirements and keep them secure and backed up. This solution is supported with ongoing management and administration. All these elements are backed by a 99 percent uptime warranty.
- SAS services are regularly reviewed and audited to ensure your data is secure and maintained according to national and international privacy legislation.
- Our teams know how to get the most from the SAS Platform. With experience acquired across public, financial, health care and commercial sectors, they are familiar with common regulatory compliance requirements.

Deployment options

This is primarily delivered as a SAS Managed Cloud service. In addition to the commercial bundles listed, non-standard offers are an option to meet specific customer requirements and to align to customer Cloud deployment strategies not met through SAS Managed Cloud. All non-standard options will be priced on application based on an equivalent pricing methodology. Further delivery options include:

- **On-site deployments** – Including distributed servers to meet growing data, increasing workloads and scalability requirements.
- Alternative Cloud deployments - Enterprise hosting; private or public cloud (e.g., BYOL in Amazon, Azure, or Google Cloud) or Platform as a Service such as Red Hat OpenShift.

In addition, our REST API provides customers an option to build or integrate external applications around SAS Viya.

Service Deliverables

The managed offerings include the following service deliverables:

- Commissioning and provisioning of the predefined hosted infrastructure, including compute, network, and storage.
- Preconfigured security and connectivity for users and data (based on the limits per tier).
- Pre-installed software.
- Ongoing support of any up-front service customisation that is implemented by SAS.
- Ongoing support with software administration and management.
- 99 percent uptime SLA.
- 30-minute incident response time for software availability issues.
- Data protection warranties and a documented data classification and handling process.
- Regularly scheduled backups.
- Patching and updates applied as part of the agreed SAS software release cadence.

Open to other programming languages

While SAS Visual Viya is designed primarily for business users who prefer a visual interface, it does include a programming interface for those who want to write their own SAS code.

And if your programmers prefer to work in other languages, like Python, R, Lua, or Java, that is OK too. They can call SAS Visual Analytics capabilities from their preferred programming environment. In addition, public REST APIs enable developers to easily add content created with SAS Visual Analytics to other applications.

SAS Workload Management

SAS Workload Management Provides a web-based tool for monitoring and managing resources, users, and jobs and serves as an interface for configuring and managing high-availability services and defining alerts when thresholds are exceeded.

SAS Job Flow Scheduler

The Job Flow Scheduling Service enables you to monitor and schedule jobs from a variety of sources in SAS Viya and to create and schedule job flows, which can contain multiple jobs and conditions.

SAS Cloud Data Exchange

SAS Cloud Data Exchange allows SAS Viya users to connect a database which could be either co-located at SAS Viya platform, other cloud environment or located at an on-premises data centre. SAS Cloud Data Exchange enables user to securely exchange on-premises data from behind a firewall to the SAS Viya platform in the cloud. All data transfer/exchange occurs on secured standard-based communications along with sophisticated authentication and authorisation.

Pricing

SAS Data Engineering is priced on a user basis and as an annual hosted license fee payable in advance. Fees include a one-time implementation and on-boarding charge. Each environment includes 4TB of cloud storage. The pricing provided within the pricing section of the listing is for representational purposes.

The Cloud infrastructure is sized based on the volume of data loaded into the system, the number of concurrent users accessing the system and the type of analytical workload that is running.

During initial discussion, SAS system sizing will be made available for review and validation against requirements. Should requirements sit outside of these parameters, SAS and the customer will participate in a discovery exercise to identify and undertake the appropriate activity to re-size and recalculate costs based on the output of the exercise.

Additional services such as custom process development, data analysis or reporting services are available via the SAS Cloud Support Service which is also available on G-Cloud.

Learn More

To learn more about SAS Data Engineering please visit https://www.sas.com/en_gb/software/data-engineering.html