

Interactive data exploration and discovery combined with the ability to easily build and adjust huge numbers of predictive models on the fly.

SAS® Visual Statistics on G-Cloud

Governments around the world are facing significant challenges. They need to improve benefits and services for their citizens while lowering costs. Combating fraud and improper payments is an escalating problem. Improving public safety and national security remains a high priority. Health care demands are skyrocketing and so are health care costs.

Public Sector organisations produce, collect, and store an unprecedented amount of increasingly diverse data that could be used to help solve these problems. Traditional approaches to gathering insights from data are no longer adequate given the volume, velocity, and variety of data that today's governments must manage. It is becoming increasingly critical for the Public Sector to find new ways to transform data into useful information to drive actions.

With SAS Visual Statistics on G-Cloud, data scientists, statisticians and analysts can begin to solve these increasing levels of challenges, they can collaborate and iteratively refine analytical models to make decisions based on accurate insights to:

- Analyse the work and performance of government, allowing decision makers to assess the impact of government policies and actions.
- Provide information to Parliaments and Political Assemblies about the state of the nation to help inform future policies.
- Allow Public Sector organisations to carry out their business, making informed decisions based on evidence.
- Provide a picture of the economy and society to allow for the development and evaluation of economic and social policies.
- Provide statistics to businesses to help them run effectively and efficiently.
- Help analysts, researchers, scholars, and students with their work.
- Collaborate internationally so people can compare data across countries.

With SAS Visual Statistics, changing market conditions or shifts in behaviour can be rapidly reflected in the developed analytical models. Fast experimentation, iterative building and refinement of well-qualified models produces valuable insights that can be appropriately acted on. SAS Visual Statistics enhances productivity and collaboration for analytics and business teams, while supporting governance and centralised administration for IT.

Why is SAS Visual Statistics important?

With SAS Visual Statistics, changing market conditions or shifts in customer behaviour can be rapidly reflected in analytical models. Fast experimentation and iterative building and refinement of well-qualified models for each segment or group produces valuable insights that can be appropriately acted on. It enhances productivity and collaboration for analytics and business teams, while supporting governance and centralised administration for IT

What does SAS Visual Statistics do?

SAS Visual Statistics enables the user to interactively explore data and build descriptive and predictive models using either a visual drag-and-drop interface or a programming interface. Data scientists can collaborate with business analysts to refine models for better insights that can be appropriately acted on. Distributed, in-memory processing shortens data exploration and model development time.

For whom is SAS Visual Statistics designed?

SAS Visual Statistics is primarily designed for use by statisticians, data scientists, programmers and citizen data scientists who need to build, refine, and evaluate predictive models to get powerful insights.

Benefits

- **Surface new opportunities to improve efficiency.** Data scientists and statisticians can operate on observations at a granular level using the most appropriate analytical modelling technique for the problem they are trying to solve. The result? Unprecedented speed in uncovering insights and finding new ways to optimise performance.
- **Improve the productivity of your analytics staff.** SAS Visual Statistics reduces manual experimentation and improves collaboration. Multiple users can visually interact with data adding or changing variables, removing outliers, etc. and instantly see how those changes affect predictive power. If a model does not meet the needs of business or domain experts, your analytics staff can quickly go back and refine it.
- **Dramatically shorten model development time and put better models into action sooner.** It's easy to build and refine models to target specific groups or segments and run numerous scenarios simultaneously. Analytical professionals can ask more what-if questions and get relevant answers because refined models produce better results. Then put those results into action with automatically generated score code for more timely outcomes.
- **Empower users with the programming language of their choice.** Python, Java, R and Lua programmers can experience the power of SAS Visual Statistics without learning to program in SAS. Give them the flexibility to access trusted and tested SAS machine learning and statistical algorithms from other coding environments.
- **Gain ultimate scalability.** The distributed, in-memory environment means IT can easily scale up and out as data needs grow, numbers of users increase, or they tackle more complex problems. Built-in failover management in distributed environments guarantees submitted jobs always finish and computing resources are available whenever needed.
- **Bring analytics in-house without the deployment challenges.** Spend your budget on the analytics team you want instead of support staff you need to support the hardware. With managed SaaS offerings on SAS Viya, you get a reliable platform along with the experts to support it. You avoid the time, risk and upfront costs of on-site deployment.

Products included in SAS Visual Statistics

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® Visual Statistics

Explore data and build or adjust predictive analytical models with this solution running on the SAS Viya platform. Data scientists, statisticians, and analysts can collaborate and iteratively refine models for each segment or group to make decisions based on accurate insights.

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3. SAS® Studio Analyst and SAS® Studio Engineer

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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4. 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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5. SAS® for Microsoft 365

Use the power of SAS analytics and access data directly from Microsoft Excel, Microsoft Word, Microsoft PowerPoint and Microsoft Outlook with this component object model add-in. While the functionality varies among Microsoft applications, it's generally the same among Excel, PowerPoint and Word and enables you to run analyses, generate reports and share SAS content with other users at your site.

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6. 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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7. 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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8. SAS/QC®

Improve products, optimise processes and increase levels of customer satisfaction with statistical process control software. SAS/QC enables you to go beyond basic process control to incorporate more advanced statistical analyses for additional insights into processes and product improvements.

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9. SAS/CONNECT®

This client/server toolset establishes connections between networked computers with different operating systems and offers scalability through parallel SAS processing. By providing the ability to manage, access and process data in a distributed and parallel environment, SAS/CONNECT enables users and developers to combine computing resources across varying architectures and SAS releases.

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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 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 Viya capabilities from their preferred programming environment. In addition, public REST APIs enable developers to easily add content created with SAS Viya 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 Visual Statistics 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 and is based on users that are comprised of Analytics Viewers (for e.g., report consumers) and Analytics Developers. 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 analytics service such as model development, analysis, data engineering 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 Visual Statistics please visit https://www.sas.com/en_gb/software/visual-statistics.html