

SAS® Analytics for IoT

A proven platform for communications network analytics and more



Key Benefits

With SAS® Analytics for IoT, you can:

- Maximize value from network investments by using new data sources - e.g., sensor data in conjunction with customer data - without clogging network backbone systems. SAS lets you integrate, visualize, transform and analyze IoT data from any source, including a network node, data center, hosted environment, edge device or cloud.
- Optimize your network analytics infrastructure by taking the algorithms to the data, reducing data movement and automating processes across your IoT network infrastructure, creating incremental and long-term business gains.
- Develop new business opportunities with a more dynamic platform for innovation, supporting both customer and network applications.

Overview

To build a cost-competitive business model for reliable network services delivery, communication service providers (CSPs) must increase the speed to insights to make data-driven decisions. Many CSPs are already collecting data from network elements and Internet of Things (IoT) connected devices, but they struggle to integrate customer data and to scale to meet business demands.

As analysts expect IoT numbers to soar to tens of billions of devices by 2020, these challenges will continue to constrain innovation and value generation. Traditional approaches to data management and analytics are not sufficient for generating value in this new connected world.

Simply collecting data from network elements, IoT-connected sensors, support systems or networked products is not enough. To benefit from the promise of IoT sensor data, CSPs must be able to shift analytics from traditional network sources and data centers toward IoT devices on the edge of the network. Challenges - and risks - arise from the complexity inherent in capturing and analyzing extreme volumes and varieties of IoT data. And these data streams continue to grow from the ever-increasing numbers of IoT devices, creating data torrents. Whether it's sensors on network elements, cabinets in data centers, field service trucks, monitoring devices or wireless antennas, CSPs need more flexibility about where, when and how to manage and analyze IoT data. And they must understand which data is relevant so they'll know what to store versus ignore. To get there, they need an automated solution that runs on a trusted analytics platform.

Does your network services function need to get more out of the IoT-connected world? With SAS® Analytics for IoT, you can:

- Use data at rest and data in motion to predict critical network equipment failures before they occur – avoiding the high cost of reactive network maintenance.
- Integrate new service offerings more efficiently. Edge algorithms smooth the transition between over-the-top services and network backbone stability.
- Get more accurate insight on network service assurance. Streaming analytics applied to data collected from network elements and transmission systems gives real-time insight into network outage events as they unfold, improving your ability to predict them in the future.
- Restore network services faster after a critical event, or prevent a network outage completely.
- Optimize network resources to minimize service interruptions and improve customer experience.
- Personalize network services for each customer, building brand loyalty and reducing customer churn, becoming the network service provider of choice, not just for communications services, but also for new IoT services.

The Solution

Building from a proven technology foundation, SAS integrates streaming data with analytics and visualization so you can get more value from IoT. Whether your data is at the edge, in motion or at rest, SAS technology helps you make fast decisions while reducing data movement and storage costs. Our solution covers the full analytics life cycle, starting with data capture and integration and extending to analytics and deployment. With SAS, you can:

- **Sense what matters in your network.** SAS incorporates a proven event stream processing engine so you can manage network data in real-time data. This includes intelligent filtering that deciphers signals from noise so you'll know what's relevant for your network.
- **Understand the signals in network data.** Use SAS to mine and analyze IoT data throughout the connected ecosystem. Combine network data with IoT data and other data sources – e.g., customer data – that add context and detect patterns of interest as events occur.
- **Act with speed and confidence.** SAS decision management capabilities drive real-time action from simple alerts to complex, automated responses driving improved network performance and reliability.

SAS Analytics for IoT encompasses event stream processing along with visualization and analysis capabilities in a storage platform of your choice. It supports analytics at the edge – as well as analysis, visualization and data integration on the server side (data center or cloud).

Capabilities

Support for the IoT analytics life cycle

IoT analytics opens many opportunities to transform the way you interact with your customers, products, services and operations. To capture its full value, you need an analytics platform that takes an enterprise approach.

Proven event stream processing capabilities

Our IoT solutions are built on SAS Event Stream Processing, which analyzes data in motion by processing huge volumes at very high rates (in the range of millions of events per second) with extremely low latency (in milliseconds) and can be embedded into network edge devices to shift intelligence to the edge.

Comprehensive analytics capabilities, proven data management techniques

SAS offers the widest and deepest range of analytics capabilities from basic reporting and traditional statistics to descriptive, predictive and prescriptive techniques as well as machine learning and artificial intelligence. We develop and continuously improve upon the latest techniques to find those best suited for high-frequency and streaming data. And our industry-leading data management capabilities can take IoT data generated anywhere and make it analytics ready.

Open IoT analytics platform

SAS runs on a wide variety of hardware platforms, including low-cost commodity hardware, supporting multiple open standard protocols, such as XML, Kafka, RabbitMQ, etc. It can exploit big data appliances and run in the cloud. SAS also works with many network technology hardware vendors to support embedded analytics in their network edge devices, especially IoT gateways.

Learn More

CSPs today are shifting from an IoT planning strategy to an IoT executing strategy. By fusing analytics with network data and IoT data, SAS enables network operations to make faster, better-informed decisions in this new landscape. Find out more at sas.com/analytics-iot.

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

