SAS® for Smart Grid Data Management

Making sense of the data to deliver business insights

Overview

Data management tools are critical in helping utilities IT professionals capture, analyze and distribute smart grid data. Typically, only limited data management capabilities are bundled with point solutions for meters, communication devices, asset management systems and other components of a smart grid rollout. Utilities need a comprehensive platform that integrates and rationalizes data regardless of source, and takes action on that data in real time by surfacing it to analytical or storage systems according to the business processes defined in metadata.

SAS data management solutions create an advanced infrastructure that improves the performance of utilities embracing the use of high data volumes emanating from smart meters, sensors, devices and a new communications network. SAS delivers a platform to capture, validate and analyze data, manage duplications or missing elements, and then make cleansed data available to other software applications throughout the organization for optimal enterprise performance and decision-making processes.

Challenges

- **Difficulty managing new data types and sources.** The influx of new data sources in the smart grid environment raises pressing issues of data accuracy, latency, and governance.

- **Connecting business silos.** This task becomes much more complex with the deluge of additional customer and network information.

- **Inadequate computing resources.** To keep pace and make real-time decisions, utilities need advanced computing technologies – like high performance computing and in-database analytics.

- **Inability to align IT and network resources.** To be effective, utilities must ensure that IT and OT resources are coordinated and in sync with corporate smart grid objectives.
A Robust Framework for Enterprise Data Management

Why SAS®?
SAS helps utilities by providing solutions that help maximize return on investment, reduce costs, improve business operations and implement new technologies smoothly. SAS enhances operational efficiency by turning massive amounts of raw data collected from the field into valuable predictive and forecast information for improved decision making.

Ensure Accurate, Timely Data
To maximize ROI from your smart grid investments, SAS offers data profiling, data enrichment, data monitoring and data consolidation. As a result, you can run your business with the peace of mind that comes from knowing you have comprehensive, reliable data to underpin your decisions. SAS provides:
- Data profiling to help you assess data by examining the structure, completeness, suitability and relationships of your information assets.
- Data enrichment for appending geographic, demographic, product hierarchy or other internal or external information to your data.
- Data monitoring so you can create customized rules to validate and audit operational processes and to automate the enforcement of business rules in batch or real-time operations across the enterprise.
- Data consolidation that profiles data to understand its actual content before the extract, transform and load process occurs. This step ensures that data is consistent and useful.

Optimize Data Flow and Improve Governance
SAS helps you reduce the cost of doing business by using streamlined, automated transactions that:
- Establish business rules to integrate and update data for decision support.
- Manage a single, consistent set of policies and processes for monitoring and managing all corporate data.
- Ensure high-quality, high-value information drives your business.

Manage KPIsRelated to Smart Grid Technologies
With SAS, you’ll be able to address key performance indicators related to implementation of new smart grid technologies. SAS enables you to:
- Understand IT system capacity and availability for expansion.
- Meet expectations for data reliability, processing of complex events or deployment of analytical algorithms.
- Rationalize data coming from multiple meter data management systems.
- Monitor customer and financial performance measures related to smart grid investments for regulatory compliance reporting.
How SAS® Can Help

Flexibility to Fit Your Needs
From one-time data migrations to complex, ongoing, real-time data integration projects, SAS offers solutions that are appropriate for everyone’s unique circumstances and organizational requirements. Choosing from flexible architecture and delivery options, it’s easy to find a solution that’s suited to your needs.

A Comprehensive Solution for a True Enterprise View
Only SAS offers a world-class data management framework combined with the industry’s most comprehensive suite of business analytics software and industry solutions. With a multitude of features – all designed to work together – you can standardize data across multiple systems and business units to gain the true enterprise view you need to make optimal decisions.

Ability to Combine and Analyze Huge Data Volumes
By using a variety of high-performance computing options, only SAS enables you to combine and quickly analyze huge quantities of data to make discoveries, solve complex problems and deploy accurate results and information across the enterprise. Profile, monitor and actively manage the quality of your enterprise data, with continual confidence that your data is trustworthy.

Components

Enterprise Data Management
Meet the full spectrum of your enterprise data management needs with data access, ETL and ELT capabilities, integrated data quality and an interactive data integration development environment.

High-Performance Computing
To deliver better performance, manage diverse workloads and guarantee uptime, SAS offers high-performance computing technology in the form of SAS In-Database and SAS Grid Computing. High-performance computing manages the execution of advanced analytics within a data warehouse, or allocates computing-intensive SAS applications appropriately across hardware resources to improve business continuity and process large volumes of SAS programs more efficiently.

IT Resource Management
The most flexible and customizable IT management solution on the market, SAS IT Resource Management enables a fact-based approach to managing your IT infrastructure. Because it delivers utilization, availability and performance information, it helps you know and forecast IT resource needs.

Key Differentiators

Only SAS for smart grid data management provides you with:

• Flexible solutions to address a variety of unique circumstances, from simple to complex.
• An integrated, comprehensive suite of business analytics software and industry solutions.
• The ability to combine and quickly analyze huge quantities of data.

“SAS provides you with a very broad spectrum in how you can manipulate your data. You can have lots of data feeds coming in and out, involving different companies. SAS is uniquely placed because it enables you to work with any form of data.”

Chris Lodge,
Head of Data and Customer Insight,
EDF Energy
Master Data Management

Provide a unified view of data assets for more accurate analytic results and enhanced decision making. Establish a master record of each unique business entity within the organization. Rapid delivery utilizes prebuilt data models that can be customized to the specific needs of your enterprise.

Data Quality

Profile, cleanse, augment and integrate data for enterprise-scale projects and for use with SAS Analytics to create new insights that help solve complex business problems.

About SAS

SAS is the leader in business analytics software and services, and the largest independent vendor in the business intelligence market. Through innovative solutions delivered within an integrated framework, SAS helps customers at more than 50,000 sites improve performance and deliver value by making better decisions faster. Since 1976 SAS has been giving customers around the world THE POWER TO KNOW®.