

# SAS® Data Governance

Give your data some guidance - and make it work for your business



## What does SAS® Data Governance do?

SAS Data Governance helps you maintain a consistent set of policies, processes and owners for your corporate information - including big data sets in Hadoop and Impala. You'll spend less time managing your data - and more time managing your business - with our patented solution.

## Why is SAS® Data Governance important?

With SAS Data Governance, you can put the necessary processes in place to more effectively manage all of your data assets and critical information. And you can boost collaboration between business and IT so everyone in your organization is on the same page.

## For whom is SAS® Data Governance designed?

It is designed for all business departments with an emphasis on data stewardship, executive managers who consume governed data, and IT members who are key stakeholders in overseeing the data governance program.

You've done the dirty work. Your data is in good shape, and you're ready to move your business forward. Customer data matched and complete? Check. Product information well-defined and consistent? Check. Now what? How do you maintain that high level of quality and make your data work for you?

SAS Data Governance helps you build the set of policies, processes and boundaries you put in place to holistically manage your data. You establish how you want your data to behave and then let the technology work behind the scenes while you run your business.

You might be surprised by what happens when your data has rules. Workflows run better. Business and IT are on the same page. Reporting and monitoring get easier. Policies are complied with. And you can finally relax knowing that your high-quality data will continue to be right.

## Key Benefits

- **Always have trusted data.** SAS Data Governance protects your business information and provides oversight so you don't have to continuously patrol your processes.
- **Get on the same page.** Store business terms and related technical metadata in the business glossary, visualize relationships and lineage, and remediate issues from within the same user interface.
- **Go from data governance to big data governance.** SAS Data Governance can expand your data governance program to include Hadoop data, via Hive.
- **Reduce risk by automating compliance management.** With unified, consistent reference data, you can more easily meet risk objectives. SAS provides the governance capabilities needed for compliance, including validation and integrity controls, as well as robust audit trails, version snapshots and lineage information.

## Overview

SAS Data Governance involves a combination of technology and services that enable you to manage data and help your business achieve consistency and transparency for the long term.

### Enterprise data governance

If you're like most organizations, you have a set of business policies and rules that apply to both new and existing data - but with multiple applications enforcing them. SAS Data Governance unifies your efforts, providing a common business glossary and centralized lineage and relationships for easier maintenance. As a result, you have a central business rule repository that governs data across all applications and databases.

### Business data glossary

An intuitive, browser-based GUI makes it easy to create and maintain a single glossary of common business terms in the SAS Business Data Network. You can create descriptions and associated conditions of usage, providing your IT team with guidance for business rules, all via a workflow-driven

term-creation and editing process. This improves business and IT collaboration and helps you take a data governance program from concept to reality. Import terms from CSV files and integrate with other applications via the exposed REST API. Finally, create snapshots to better meet regulatory audit requirements.

## Lineage and metadata management

The patented SAS Data Governance solution provides data lineage capabilities

via SAS Lineage, along with the SAS Business Data Network to help document and manage metadata across systems – from both SAS and third-party tools, transformation jobs and data models. SAS Lineage, a lineage visualization tool, allows you to explore relationships and conduct impact analysis to see how changes to one data element might affect information in other systems. With SAS Metadata Bridge, users can import third-party lineage metadata. This includes third-party ETL jobs, data transformation logic and data models.

## Security and governance policy enforcement

The ability to not only keep your data secure, but also quickly identify and correct problems, is integral to success. SAS Data Governance provides lineage capabilities for both technical and business metadata to watch for changes, assess impacts, query the logical types and update the metadata repository. You can manage access to business terms at a granular level, allowing only authorized individuals to view or change data elements for specific terms.

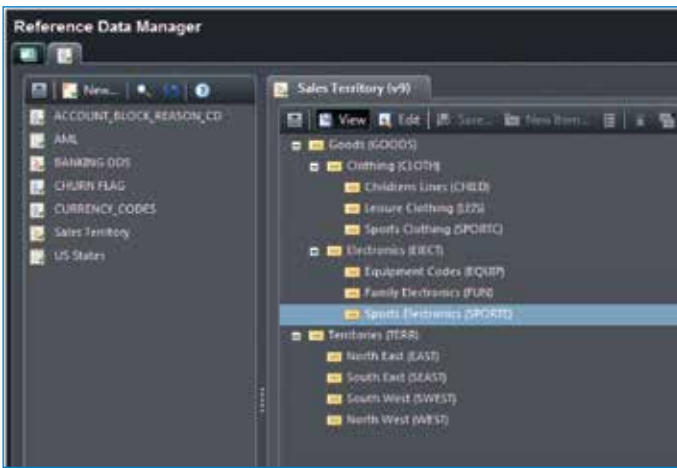


Figure 1. Reference Data Manager offers a web-based interface that can be used across departments and lines of business to store and manage lists, name and value pairs, and hierarchies referenced by data management processes.

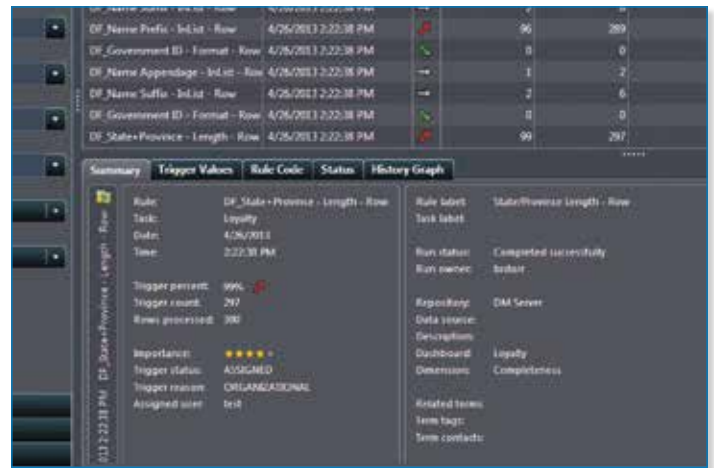


Figure 2. The SAS Data Governance viewer provides the design, development and monitoring environment for proactive data governance so you can identify which records are causing rule violations and determine how to remediate them.

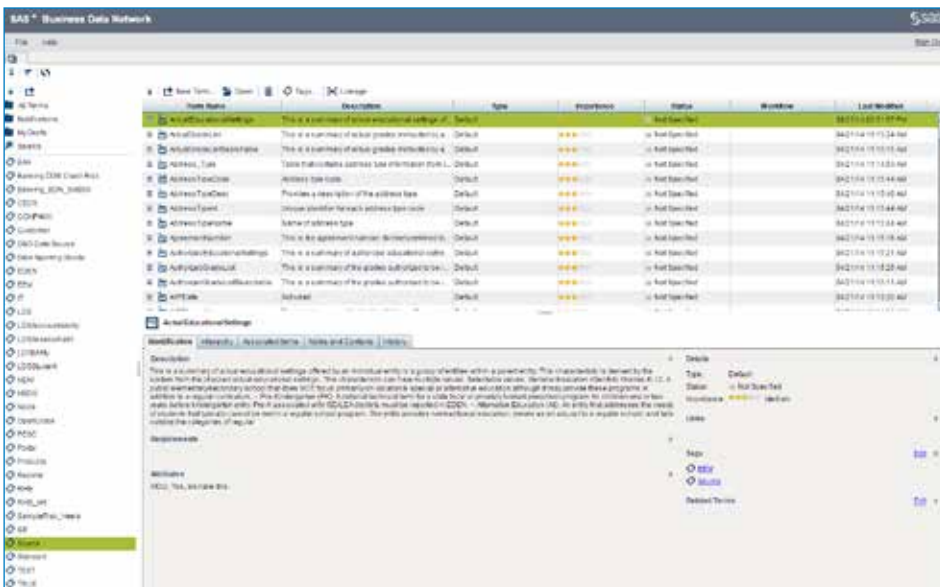


Figure 3. SAS Business Data Network allows business and IT users to collaborate on the creation of business terms, establish links to the term and examine related data elements.

## Enhanced user experience

Data stewards not only need the ability to manage data, update processes and track progress, but also the ability to do it quickly and efficiently. SAS Data Governance provides a browser-based data management console that enables you to access all data governance interfaces from a single location. You'll have more control than ever when it comes to correcting issues, modifying procedures and establishing business rules.

## Data remediation

Early detection of problems is critical to managing data. With data remediation, both business and IT personnel can quickly identify and correct issues before they cause bigger problems downstream.

## Business rule validation

Your organization has standards for its data quality and business processes, and business rule validation helps enforce those standards. You can promptly identify and minimize the costs associated with previously undetected data quality issues and business rule violations. Plus, you can develop and refine all-encompassing business rules that govern your data in the same interface.

## Integration with SAS® Data Management solutions

SAS Data Governance fully integrates with SAS Data Quality and SAS Data Management to store and visualize relationships across tables, databases and different source applications for data that needs to be governed. And you can identify any data outliers and gain insight into source data integrity.

## Visualization and reporting

With SAS Visual Analytics Administration and Reporting, you can create reports and share information about data governance initiatives, monitor data health and check the status of remediation issues.

To learn more about SAS Data Governance, download white papers, view screenshots and see other related material, please visit [sas.com/datagovernance](https://sas.com/datagovernance).

# Key Features

## Enterprise data governance

- Supports the consistent maintenance and use of data attributes through a common data model and centralized data maintenance and access processes.
- Enables ongoing conformance with rules and quality through data profiling and business rule monitoring.
- Allows you to create visualizations or reports to track remediation issues or monitor data health.

## Business data glossary

- Create and manage common business terms across the enterprise.
- Store and apply definitions to guide all data management processes.
- Reuse, manage and report on the use of a single glossary.
- Safeguard sensitive or protected information through secure access to glossary content data.
- Import terms from CSV files and integrate with other applications via the exposed REST API.
- Create "point in time" snapshots of terms to meet regulatory audit requirements.

## Lineage and metadata management

- Lineage visualization and metadata management allow you to visualize and manage technical and business metadata - and understand the impact of changes to data elements.
- Automatically scan for changes in metadata and save them to the repository.
- View relationships and impact analysis across both SAS and third-party data transformation jobs, data models and other data elements.

## Security and governance policy enforcement

- Role-based access to authorized data stewards helps you manage access to attribute content by role.
- Granular, role-based security allows you to secure access to sensitive information when creating and editing workflows.

## Seamless user experience

- Web-based console enables the ability to search and display entities, as well as add, modify and retire entities and hierarchies.
- Data stewards can manage metadata for entities, attributes and transformations.
- Reporting capabilities enable critical metrics views and trends, tracking progress of data initiatives.
- A unified web-based console enables monitoring, data governance, business rules and data stewardship components.

## Data remediation

- Workflows for governing stewardship and other business processes can be designed, published and reused.
- Workflows define case management activities of issues flagged during data definition and monitoring processes, allowing for run-time drill-through of tasks associated with active workflows.
- When problems are identified during a load process, the remediation interface enables data stewards to review records and resolve issues.

## Key Features (continued)

### Business rule validation

- Ensure data meets organizational standards for data quality and business processes.
- Identify, profile and validate reference data from any source system on any platform.
- Validate data against standard statistical measures and customized business rules.
- Create and manage business rules across processes.
- Maintain and manage history and data change management in a single interface.

### Integration with SAS® Data Management solutions

- Store and display relationships across tables and databases - and across different source applications.
- Discover and validate data patterns and formats, and view relationships across elements.
- Enforce standards for both product and customer data sets.
- Detect data that falls outside predetermined limits and gain insight into source data integrity.
- Use an intuitive interface to build customizable business rules to find data that does not comply with established standards.
- Establish alerts to signal when data is out of compliance with established policies.

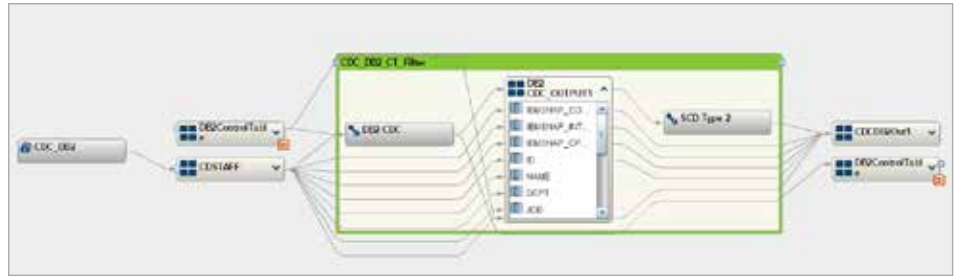


Figure 4. SAS Lineage provides impact analysis to determine how changing one attribute might affect other reports, databases or systems, across both SAS and third-party tools and data elements.

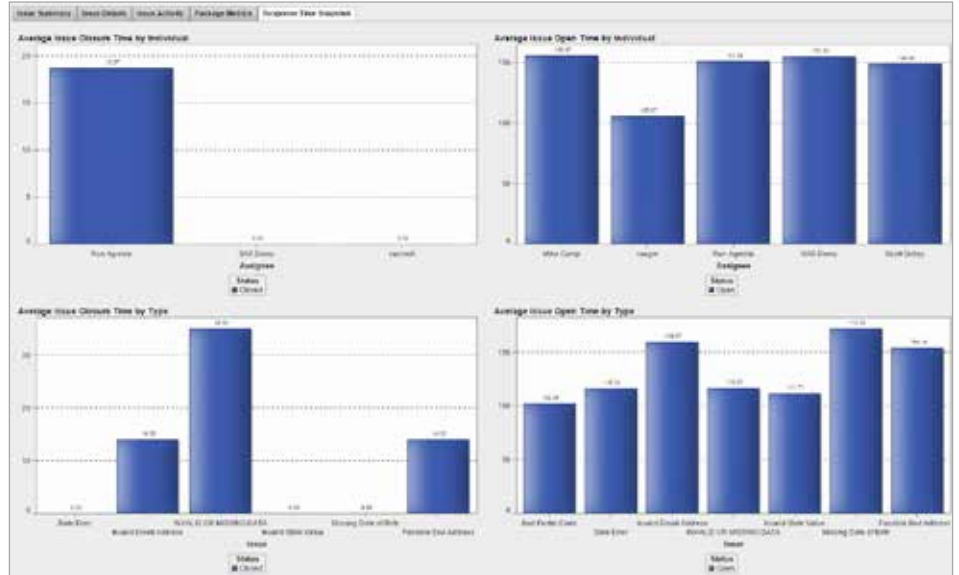


Figure 5. Create reports to share information about data governance initiatives, data health and remediation issues with SAS Visual Analytics Administration and Reporting.

Issue	Package	Item	Subject Area	Application	Importance	Status	Assignee	Age (Days)
INVALID DR #	ISSUES 13 0078	ANYWHERE	PERSON	SAS NEW	High	In Progress	SAS Demo	87
INVALID DR #	ISSUE ADDRESS	KEBA BONEY	PERSONAL	SAS NEW	High	Closed	SAS Demo	92
INVALID DR #	Check Name	WELLS FARGO	PERSONAL	SAS NEW	High	In Progress	SAS Demo	94
Data Error	Weekly Batch Load 12 - New Cury	Customer	Demis	SAS NEW	High	In Progress	Rick Agresta	94
Data Error	Weekly Batch Load 12 - New Cury	Customer	Demis	SAS NEW	High	Open	Mike Cury	99
INVALID DR #	Weekly School Data - Books Elementary	SCHOOL	SAS NEW	High	Open	Open	Scott Okey	99
Data Error	Weekly Batch Load 12 - Stephen Jones	Customer	Demis	SAS NEW	High	In Progress	Rick Agresta	107
INVALID DR #	Weekly Data - Wood County, Ohio	DISTRICT	SAS NEW	High	Clean Issue	Data Management 3	107	
INVALID DR #	Weekly Data - Highgate County, Ohio	DISTRICT	SAS NEW	High	Clean Issue	Data Management 3	107	
Data Error	Weekly Batch Load 2 - Bill James	Customer	Demis	SAS NEW	High	In Progress	Rick Agresta	128
Data Error	Weekly Batch Load - John Smith	Customer	Demis	SAS NEW	High	Open	Rick Agresta	128

The interface also shows a detailed view of the selected issue: 'Weekly Batch Load 12 - New Cury - Data Error'. It indicates the status is 'In Progress', assigned to 'Rick Agresta', and has a due date of '01/09/18'. The issue description is 'Please review and update as needed'.

Figure 6. Review records and resolve issues with the remediation interface.

To contact your local SAS office, please visit: [sas.com/offices](http://sas.com/offices)

