Information Alliance, Inc.

Transforming data into decisions

Case Study

Enhanced Compliance Monitoring Through Data Integration

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Project Overview / Key Business Drivers

An Information Alliance client was faced with the need to improve compliance monitoring and reporting capabilities across a specific set of compliance programs. The key business drivers were regulatory compliance fine avoidance, the need to improve security on critical company IT assets, and the need for improved visibility into compliance violations, trends, and overall performance against compliance metrics. Achieving these goals required the formation of a project which would bring together data from multiple sources, integrate the data, and ultimately use the data to drive a data visualization scorecard/dashboard.

Challenges to Overcome

This initiative faced multiple challenges, including:

Multiple Source Systems - The need to source data from multiple source systems – each on a different technology platform. This required the recruitment of multiple skill sets, and the ability to look within each system and identify which data elements to extract.

Naming Conventions – Often times, similar data elements (e.g. asset name, asset type, effective date, etc.) in different source systems often have different naming conventions. These differences needed to be analyzed before mapping this data into common data structures.

Data Definitions – Similar data elements from different source systems may have common names, but have different meanings. Effective Date in one system might mean the date that the asset was installed on the network. Effective Date in another system might mean the date that the asset was first put into use. Again, these issues needed to be resolved before integrating the data.

Data Architecture – Business requirements and the need to accommodate future growth posed challenges to the data architecture and database design.

Information Alliance, Inc. Professional Services:

- Project management, including staffing and stakeholder relationship management
- Business analysis, including process modeling, user-interface mockups, and requirements documentation
- Data architecture, data modeling, data analysis, and ETL development
- QA testing, including development and execution of test scenarios, development of test data, and UAT oversight and guidance

Solution Summary

Through effective collaboration with business and technical stakeholders, an effective integrated data solution was designed, developed, tested, and implemented. Key aspects of the solution included:

Data Staging Layer – To preserve source system extracts in their original state, extracts were loaded into standalone staging tables. Extracts remained in these tables until confirmation of successful load routines.

User-Accessible Error tables – Incoming records not meeting data validation rules were not loaded into the main repository, but instead were loaded into error tables where they could be inspected by end users. Data errors were then corrected in the source systems, which then enabled the records to be successfully loaded during the next load cycle.

Dimensional Model – Subject-specific, dimensional data model was designed and implemented to support reporting and analytics, including an interactive control creation and monitoring dashboard.

Common ETL Logic – To ensure adherence to standard data definitions and formats, records from

multiple source systems were subjected to a common set of extraction, transformation, and load routines.

Load Sequencing – Ensuring accurate data integration required that source data extracts and lookup tables be loaded in a certain order. In addition to determining the proper load sequencing, opportunities for parallel load jobs were leveraged to ensure the integrated repository could be refreshed within the available load window.

Legacy System Integration – The new solution needed to integrate with the existing ERP system (SAP) and the IT asset management system (Remedy) for nightly extract delivery and to provide end users with links to source system records for data corrections.

Leveraging the Investment

Once implemented, the next order of business was to further leverage the new solution. There were multiple opportunities which could be pursued either in series or in parallel. These included:

Improve Upstream Data Entry – The accuracy and business benefit of the control monitoring is only as good as the quality and completeness of the data on which it is based. Data errors, null values, etc. which were present in error tables identified opportunities to improve upstream data entry processes and data validation rules on entry screens.

Enhance Analytics – Having a holistic view of integrated data and compliance performance across multiple business units presents opportunities to further leverage the data though enhanced analytic capabilities.

Additional Subject Matter – With a scalable data model, the solution had the ability to extend compliance monitoring to additional business areas through the sourcing and integration of new subject matter.

About Information Alliance, Inc.

Information Alliance, Inc. is an IT professional services firm dedicated to helping clients achieve their business goals by providing expertise in project management, business analysis, and data integration, with specialization in technology modernization and information delivery projects. Its depth and breadth of experience, coupled with a structured approach helps clients transform data into useful information.