Gridstream
Meter Data Management
System

Landis+Gyr⁺
manage energy better

Data Management for Today's Smart Grid—Turning Data into Insight
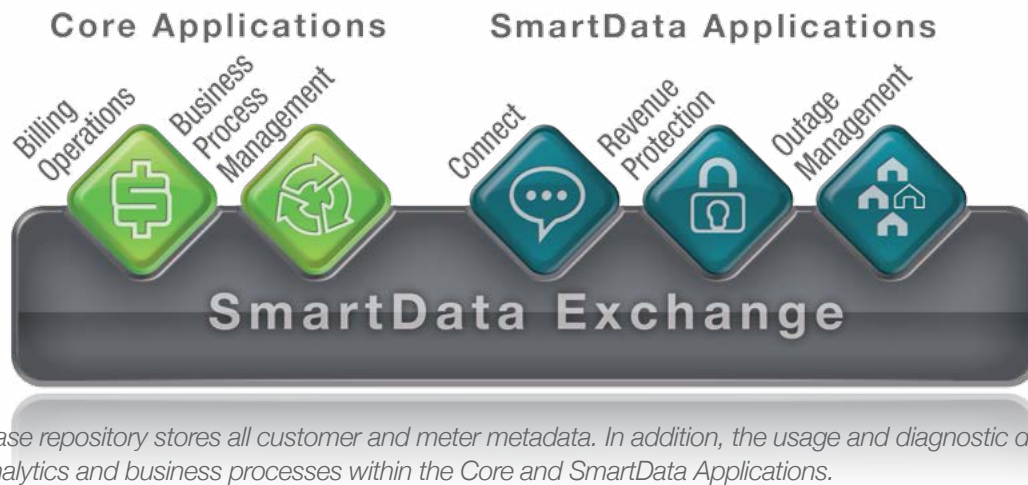
Overview

Landis+Gyr's Gridstream® Meter Data Management System validates, manages and controls data from advanced meters and smart grid devices. It is complemented by application extensions that analyze usage and event patterns. The MDMS is offered through flexible delivery models as a standalone enterprise solution or aligned component of a vertically integrated solution. The MDMS supports event analysis to improve outage detection and theft detection, and also can support prepayment roll-outs. It can be implemented and managed by the utility or selected in either a SaaS or fully managed service model.

The Gridstream MDMS collects and analyzes rich sensor data to provide valuable insights for maximizing billing efficiency and accuracy, service reliability, and grid stability. Its business process management capabilities streamline operational activities via robust automation functionality. Key features of the Gridstream MDMS solution include:

- **Validation, Estimation and Editing Rules (VEE):** Ensure data integrity; non-conforming data becomes an estimation or is flagged for review.

- **Virtual Metering:** Apply intelligence to aggregate or frame usage or calculate the net energy delivered to consumers participating in renewable energy programs.

- **Billing Determinant:** Measured or calculated values used to determine bills, accounting for net energy delivered or received and individual rates.

- **Event Administration:** Receive event flags and execute the desired action.

- **Exception Management:** Process all validation and estimation exceptions that are not automatically handled by VEE rules.

- **Work Flow Orchestration:** Manage and combine a chain of prescribed transactions, track and report throughout all steps.

- **Automated Group Management:** Group devices by technology type, rate and class type, and geography to ease event administration, work flows and composite command execution.

- **Integration Hub:** Provides a unifying integration point and system of record to consolidate, analyze, and normalize metering and asset data information from a variety of sources.

- **Data Access and Transaction Integrity:** Processes and delivers valid and accurate data to/from other utility systems in support of business operations and analytics.

- **Data Repository/Data Governance:** Provides an enterprise-wide data repository of metering and asset information. Governs data versioning, use and access.

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Gridstream MDMS

Core Applications

Billing Operations

Business Process Management

SmartData Applications

Connect

Revenue Protection

Outage Management

SmartData Exchange

A finely tuned database repository stores all customer and meter metadata. In addition, the usage and diagnostic data provides the foundation for the analytics and business processes within the Core and SmartData Applications.

SmartData Exchange

Part of the Gridstream MDMS offering includes a SmartData Exchange, which provides cost-effective integration capability. This SmartData Exchange capability consists of interfaces that natively pass messages based on International Electrotechnical Commission 61968 family of CIM standards. In addition, SmartData Exchange provides the flexibility that offers translations to support utility defined interfaces, plus MultiSpeak® and SAP's MDUS interfaces.

SmartData Applications

Better yet, SmartData Applications lets utilities predict the future with smart meter data that extends well past billing operations to quickly detect energy theft, proactively respond to outages and connect with customers in more meaningful ways. SmartData Applications apply additional analytic-based intelligence to the data within the Core Applications for specific use cases. The extensions are optional and can be added to the total Gridstream MDMS offering at any time giving the utility the flexibility to determine when to introduce advanced functionality. Gristream MDMS deployment options:

1. Standalone 3-tier architecture
2. Landis+Gyr Cloud Services

GRIDSTREAM MDMS CAPABILITIES

■ **Core Applications:** Mission critical functions for meter data management systems:
  • Contain analytics and business rules for efficient billing operation.
  • Apply business process logic to streamline the movement of data throughout all processing steps and adjacent systems

■ **SmartData Applications:** Extend the Core Data Application for many advanced use cases including:
  • Outage process optimization
  • Theft detection
  • Customer engagement and others

■ **SmartData Exchange:** Standards based integration suite with two missions:
  • Manage passing common information model (CIM) messages to and all MDMS applications
  • Store translation adapters to pass messages to and from adjacent solutions

FEATURES & BENEFITS:
Why Landis+Gyr makes a difference.

■ Advanced billing support with VEE, net & virtual metering and time-based pricing
■ Long-term repository for billing and non-billing sensor data
■ Business process automation
■ Flexibly extended with packaged analytics to support current and future use case
■ Cost effective integration
■ Sensor event management, analysis and correlation

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