



# Meter Data Management

Itron Enterprise Edition™

Energy data drives your business and with the emergence of Smart Metering and the Smart Grid, deploying a robust meter data management solution is essential to a utility's future success. While collecting meter data can be efficient and automatic, putting that data in the hands of people who can leverage its value is often difficult and error-prone.

Too often, utilities rely on multiple systems and data stores maintained in isolation—patching, integrating, manipulating and maintaining multiple systems. In our current energy environment, where data must be collected more frequently and in smaller increments for residential, commercial and industrial (C&I) customers, the potential for confusion increases dramatically. The volumes of interval data produced by an advanced metering infrastructure (AMI) system are integral to offering customers advanced rates. This requires that their AMI system work in close concert with their CIS/billing system. To bridge the gap between the two systems, utilities rely on meter data management. The ideal solution is a central repository where consistent, secure and auditable processes are enforced, and where all users can access accurate and reliable meter data.

Itron Enterprise Edition (IEE) Meter Data Management (MDM) is an industry leading

MDM solution and is a highly scalable enterprise application to centralize the collection, processing, storage, and complex analysis of meter and other utility-related data.

Itron's MDM solution offers reliable processes and interfaces regardless of the meter data's source or destination. This simplified environment significantly reduces the likelihood of errors when utilizing meter data. IEE MDM also allows a utility to change how and when they collect data, and deploy the most cost-effective meter reading technologies without affecting infrastructure.

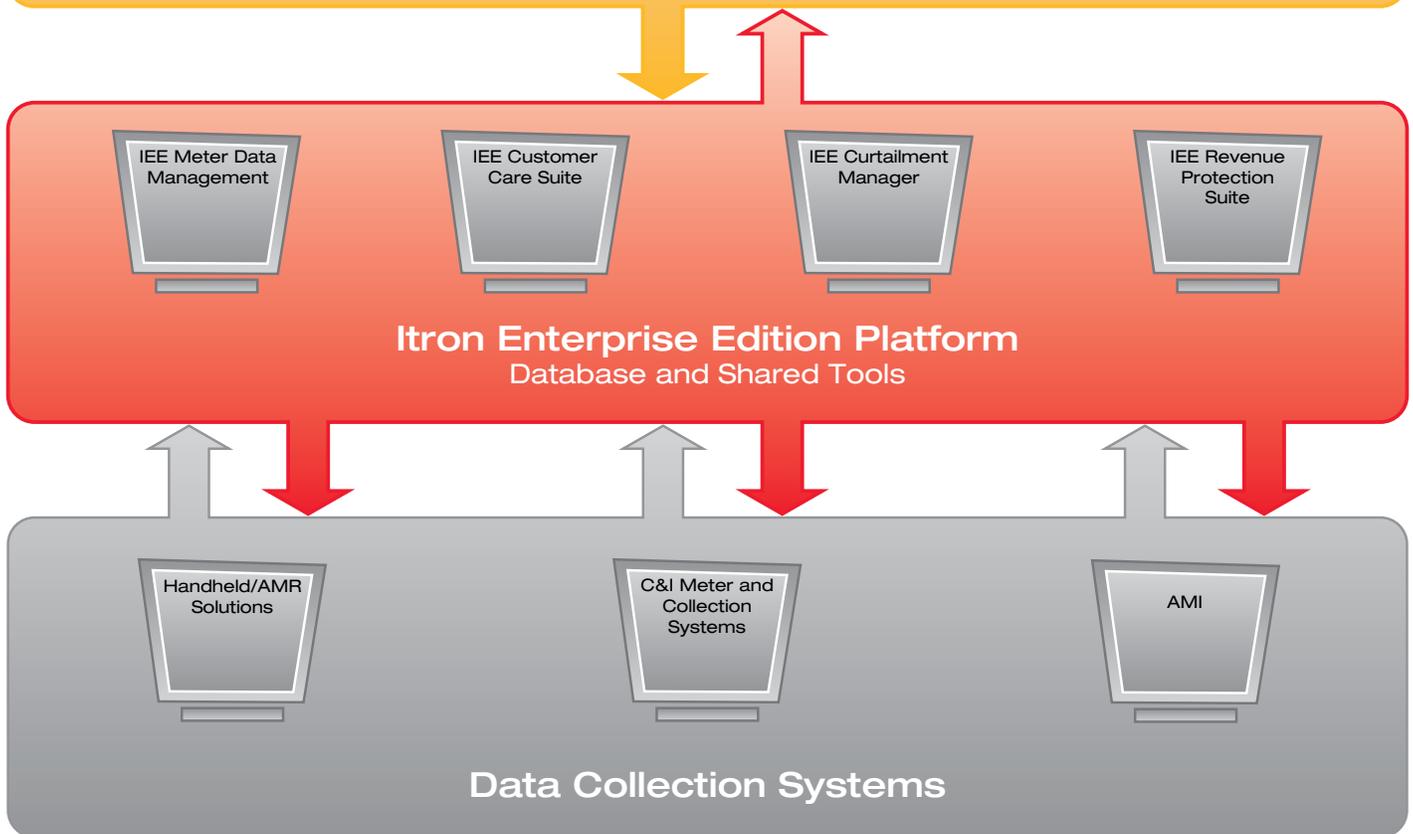
IEE MDM provides consistent, meaningful data to upstream utility applications and is a critical component to Smart Metering, especially when implemented prior to a large-scale residential rollout. IEE MDM eases IT integration of AMI, and facilitates the distribution of meter data across the

utility enterprise by framing the volumes of interval data retrieved from the field into manageable and familiar information. Additionally, by consolidating reading data from multiple collection systems into IEE MDM, utilities can set consistent validation routines to truly evaluate the performance of their AMI systems.

IEE MDM provides the critical capabilities your company needs to help execute and realize the full benefits of a Smart Metering deployment including:

- » Improved demand response through dynamic pricing programs such as Critical Peak Pricing, Time-of-Use, Peak Time Rebate, and other demand response rate programs
- » Reduce field service costs through centrally brokered new two-way remote connect and disconnect and on-demand read capabilities

## Utility Operational and Back-office Systems



- » Support for simpler, faster and less expensive rollout of advanced metering technologies gained by reducing the number of maintained interfaces between collection and billing systems
- » Increased quality of data from operating a single, central repository, instead of separate inconsistently managed systems
- » Reduced IT implementation and maintenance costs from improving the interoperability of applications with centralized interfaces to AMI systems and utility back-office systems
- » Improved data reliability with consistent and enforceable processes
- » Reduced manual manipulation of data for your largest, most demanding customers
- » Improved security and accountability through consistent auditing and versioning of all data
- » Improved customer service by providing agents with more granular and

timely information to resolve customer inquiries quickly

### KEY FEATURES

#### Robust integration using Service-oriented Architecture

- » IEE MDM provides both file-based and robust asynchronous and synchronous Web Service API's for two way integration with AMI collection systems, an enterprise service bus, and utility back office systems such as billing, work management and outage management. Flexible integration options reduces total cost of ownership as utilities can leverage their investment in existing software, wrapping those interfaces in APIs that can communicate with IEE
- » Out-of-the-box integration with Itron's OpenWay® smart metering solution and production-proven integration with other third party AMI technology providers

#### Data collection integration

- » Store, secure and version control all of your residential and C&I data in one data repository. Use IEE MDM to consolidate multiple MV-90 xi head-end applications into one central data repository

#### Robust validation, estimation and editing (VEE)

- » IEE MDM has extensive VEE rules and a robust calculation engine for interval and register data to supply billing-quality information fully capable of meeting rigorous governmental financial standards worldwide and simultaneously support different VEE rules for non-billing scenarios

#### Scalability

- » High volume AMI processing supports millions of interval meters to meet the needs of even the largest AMI deployment. Third party-verified benchmark studies have been performed on Oracle and SQL database systems on every major release

### **Broad set of AMI interaction and controls**

- » Two-way integration with AMI systems to broker and execute key AMI functions such as on-demand reads, meter reprograms and remote connect/disconnect. Also provides packaged integration to SAP CCS as part of the SAP Lighthouse Council
- » Itron's meter data management solution, Itron MDUS (Meter Data Unification and Synchronization) is an SAP-qualified business solution. Itron MDUS ensures the compatibility between Itron software and SAP solutions to provide a seamless, end-to-end business process which reduces implementation time and risk and lowers the total cost of ownership

### **Flexible role-based security provisions**

- » Users require no access to the database or to system directories. All Web Services interfaces in IEE MDM are developed using Microsoft's Windows Communication Foundation (WCF) to take full advantage of the run-time configurable aspect of security. IEE MDM implements a comprehensive security structure that includes auditing and tracking of critical business data, as well as logging for operational tasks and modifications of reading data via manual editing, estimation or validation

### **Integrated Microsoft queuing technology**

- » Workflows are provided for both application logging, security logging and large-scale device event routing

### **SPECIFICATIONS**

- » Database Platforms: Oracle® 10gR2 on any Oracle-certified OS/hardware platform, or Microsoft® SQL Server® 2008 R2 on Microsoft Windows 2003 Server SP2 Enterprise Edition
- » Operating Systems: Windows Server 2003 R2 SP2 for Server side application. Windows XP and Vista for IEE MDM rich client .NET 2.0 SP1, 3.0 SP1, 3.5 SP1 frameworks for both application server and rich client
- » VMWare: Application Servers are supported on 32-bit VM environments in production as long as resources allocated to those VMs are appropriately sized. Databases are not supported in VM environments
- » Support for Oracle Partitioning on Microsoft SQL Server partitions for scale deployments
- » Tested for up to 9.6 million meters set to hourly data collection
- » Rich Client Update and Installer tested on Internet Explorer 6.x and Mozilla Firefox browsers



At Itron, we're dedicated to delivering end-to-end smart grid and smart distribution solutions to electric, gas and water utilities around the globe. Our company is the world's leading provider of smart metering, data collection and utility software systems, with over 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water.

To realize your smarter energy and water future, start here: [www.itron.com](http://www.itron.com)

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