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## Highlights:

- Improve network reliability with robust service management and near real-time monitoring
  - Manage the expanding number of linked devices in an increasingly complex network
  - Proactively detect and quickly respond to problems with in-depth root cause analyses and topology from a single viewpoint
  - Build an integrated network operations center to develop greater intelligence and insights that generate significant business improvements
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# IBM Intelligent Metering Network Management

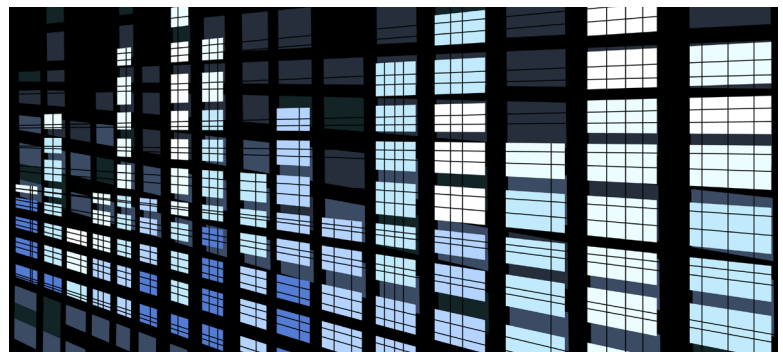
*Monitor and control your smart grid infrastructure*

## Overview

Today's intelligent utility network differs from the communication infrastructure of the past. It is digital, high-speed, two-way and crowded with IP-enabled distributed devices. The number of endpoints is exploding, expanding network coverage from the substation into the home and business. The IBM® Intelligent Metering Network Management solution can help your utility company manage increasingly complex communication networks and IP-enabled devices deployed to support smart grid and smart metering projects.

## Manage complexity across a smart grid

As utility companies establish IP-enabled networks with smarter meters and sensors on the grid, the formerly separate IT, grid and communication networks require integrated network visibility, control and automation. Smart meter deployment and communication network implementation—from the substation to the customer—require sophisticated operational management to monitor alerts and ever-changing network events while tracking changes. How well this is done affects service levels and customers' perception of their service availability. Intelligent Metering Network Management technology provides the capability to collectively manage many linked devices with a highly complex flow of information and helps utilities create an integrated network operations center.



The Intelligent Metering Network Management solution makes your business smarter by offering several innovations.

- Monitoring events in near real time from multiple sources in a manager of managers environment, including:
  - Grid or meter vendor solutions
  - Meter data management systems (MDMSs)
  - Distribution automation (DA) systems
  - Substation automation (SA) systems
  - Element management systems (EMSS) or network management systems (NMSs)
- Proactively detecting problems by using an in-depth, root cause analysis and topology view from a single point for:
  - Grids
  - Advanced metering infrastructure (AMI)
  - Supervisory controls and data acquisitions (SCADA)
  - DA or SA network devices and systems
- Running analyses and accessing actionable intelligence for operational problems, incidents, trouble or ticket management by using rules and policy-based correlation and enrichment of events and data from various grid, AMI, MDMS, SCADA, DA or SA systems and applications

## Meet your business challenges by using new capabilities

The Intelligent Metering Network Management solution was designed to provide the capabilities your company needs to overcome its toughest challenges.

### Business capabilities:

- Reduce the cost and complexity of overall utility operations and maintenance
- Improve customer satisfaction with minimized outage and faster restoration
- Reduce the carbon footprint by conserving energy with improved demand response systems

### Operational capabilities:

- Quickly locate outages or problems in the field related to AMI and DA or SA grids
- Place the right people and equipment on a repair truck
- Report and provide dashboards for operators to gain visibility of operations
- Predict failures in advance to facilitate smooth operations 24 hours a day, every day of the week

### Technological capabilities:

- Monitor and manage AMI and grid network operations with a unified, flexible solution
- Monitor the health and performance of large-scale networks of millions of meters and grid devices
- Consolidate, analyze and respond to entire grid and AMI network events or alarms
- Manage the physical features, faults, changes and configuration of grid and AMI network devices

## Benefit from feature-rich service management

Utility companies are designing, building and managing communication networks with requirements for improved security, reliability and scalability. IBM Intelligent Metering Network Management technology—part of the smart-metering-and-beyond solution from IBM—provides a robust service management approach with near real-time monitoring of the various devices residing on transmission and distribution grids.

The Intelligent Metering Network Management solution delivers capabilities from IBM Tivoli® Netcool® software to monitor and manage the network across smart meters, cell relays and concentrators, meter head-ends, applications and systems. The core capabilities enable utility companies to:

- Consolidate events and alarms in a “manager of managers” environment through IBM Tivoli Netcool/OMNIBus

- Correlate event and problem management with IBM Tivoli Netcool/Impact
- Enable network discovery, topology visualization and root cause analysis with IBM Netcool Network Management
- Manage configurations and changes to remote devices with security policy and intelligent backup through IBM Tivoli Netcool Configuration Manager

**Add additional capabilities with IBM solutions:**

- Secure data, systems and applications with IBM Security Solutions and integration with IBM WebSphere® DataPower®
- Simplify management of business events and rules in one simpler engine through the IBM WebSphere Decision Server platform
- Analyze high-volume, near real-time data with IBM InfoSphere® Streams and IBM Netezza® Data Warehouse Appliance technology
- Employ rich business analytics and reporting solutions using IBM SPSS® and IBM Cognos® technology
- Take advantage of AMI security and operational dashboards with IBM Security and Business Service Management technology
- Improve asset lifecycle management with IBM Maximo® software

The Intelligent Metering Network Management solution is built on the IBM Solution Architecture for Energy and Utilities Framework (SAFE). SAFE is a software platform designed to enable data and business process integration for solutions throughout the energy value chain. The SAFE framework supports open and industry standards that help align technology with business objectives and offers industry accelerators to speed deployment of the Intelligent Metering Network Management solution's capabilities.

## **Scale and integrate, one project at a time**

To help prevent outages and improve fault detection across the breadth of the intelligent utility network, Intelligent Metering Network Management tools can help your utility integrate service management for multiple devices and networks into a single network operations view. Your utility company can manage service level agreements (SLAs) for various projects including AMIs, outage management systems (OMSs), MDMSs, enterprise asset management (EAM) or distribution management systems (DMSs).

You can also create a feature-rich service management system one step at a time by integrating AMI, DMS, OMS and other systems as they are implemented. With a robust service management approach, your utility can automate business processes such as meter and sensor installation, remote connections or disconnects, and trouble ticket management. As you move actionable information across the grid on a timelier basis, you can better connect people, assets and actions. This integrated network communications infrastructure helps link business resources, transmission and distribution networks and customer service.

## **Rely on our experience to succeed**

The Intelligent Metering Network Management solution, built on the SAFE framework, can help you work smarter by focusing on value, using new opportunities and acting with speed. Work with IBM. We have trusted experience, skills and technology based on delivering more than 150 smart grid projects around the globe. Gain better visibility, control and automation of your intelligent utility network with help from the IBM Intelligent Metering Network Management solution.

## **For more information**

To learn more about IBM Intelligent Metering Network Management solutions, please contact your IBM marketing representative, IBM Business Partner, or visit the following website:

[ibm.com/software/tivoli/intelligent-metering/](http://ibm.com/software/tivoli/intelligent-metering/)



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