

Totally integrated IT/OT framework for next generation DMS

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Abstract

The key challenges in today's world of power distribution management are derived from an increasingly complex grid as the share of Smart Metering and Demand Response grows while the adaptation of distributed generation and energy storage inquires advanced solutions. One-way flows are evolving into multi-directional flows of energy and digital information. The resulting complexity requires a new, integrated approach to delivering the right information technology and operational technology solutions that will help define success for a smarter, interconnected and distributed future grid.

A next generation control center technology and a totally integrated IT/OT framework is the key to move towards a more digital grid

- **Advanced Operational IT**, as the Integration of Distribution SCADA, Outage Management and Advanced Fault & Network Analysis operated under a Common User Environment to increase operator's situational awareness and reduce fault location and service interruption time
- **Together with seamless enterprise IT integration** of external systems, such as GIS, CIS, IVR, Advanced Metering, Workforce Management and Asset Management systems via the CIM-based SOA integration framework is indispensable to better manage the grid and benefit from new business opportunities

There is great value in multiple data sources. Data and analytics will provide key enablers to manage the network differently. Today, utilities have access to new data from many different sources, such as smart meters and new data from sensors installed either as a new feature or installed directly on the network.

Valuable data derived from or to social media helps to improve field intelligence, effective allocation of resources, prioritization of efforts and time to repair as well as upfront information of customers.