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Integrate All Operational Technology with Oracle Utilities Live Energy Connect

Securely bridge all your operational technology (OT) and IT assets with Oracle's operational technology message bus (OTMB) solution.

SIMPLIFY YOUR COMPLEX OPERATIONAL TECHNOLOGY ENVIRONMENT

The number of devices and applications connecting to the grid grows exponentially. Each new class of devices and systems brings its own requirements further compounding the complexity and challenge of ensuring reliable and safe power.

To meet integration challenges of today and tomorrow, savvy energy companies turn to Oracle Utilities Live Energy Connect (Oracle Utilities LEC) which operates as an OTMB to integrate all your OT. Oracle Utilities LEC supports legacy, current, and future devices and systems. It enables enterprise-wide monitoring, control, and decision-support while reducing the time, cost, and maintenance associated with traditional integration approaches. As seen in Figure 1, Oracle Utilities LEC creates an OTMB that connects IT and OT elements.

Key Features

Oracle Utilities Live LEC can be configured as an OTMB solution providing utilities with the following capabilities

- OT-centric middleware
- Embedded SCADA
- Analytics
- Measurement management
- Connections to ISO and RTO markets
- Machine-learning based load estimation
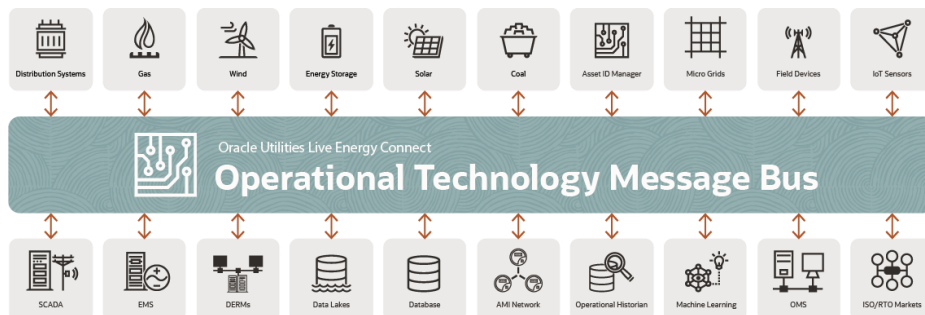- Operational historian

Figure 1. Oracle Utilities Live Energy Connect establishes an OTMB that streamlines integrations between the many disparate pieces in your OT environment.

A ROBUST INTEGRATION PLATFORM

Employ Oracle Utilities LEC to establish an OTMB that can help you maximize the potential of existing systems, future-proof operations, and build next-generation architectures. With it, you can:

- Create a secure platform to bridge all OT and IT.
- Simplify integration and scalability to address the shortcomings of traditional system architectures and point-to-point integrations that are difficult and expensive to maintain over time.
- View real-time data by connecting systems, devices, and applications to a common OTMB OT-centric middleware.

The next sections outline the key functionality and benefits of Oracle Utilities LEC.

OT-Centric Middleware

Oracle Utilities LEC is OT-centric middleware purpose built to fulfill OT architectural imperatives including:

- Protect life, equipment, and the environment.
- Maintain service reliability.
- Operationalize real-time, bidirectional control.
- Support lossy and messy radio networks.
- Respond to regulatory quality requirements.

Analytics

- Enable operators to have a complete view of their entire fleet and actively manage assets based on real-time OT data.
- Capture operational intelligence from any asset with any utility protocol, including ICCP, DNP3, MODBUS, OPC, REST, and more.
- Transform OT data for consumption by visualization with in-memory embedded data manipulation via Python.
- Tightly integrate to an open source historian with Oracle Utilities LEC InfluxDB Adapter.

Embedded SCADA

- Directly control and monitor millions of devices within your OT application via Oracle Utilities LEC.
- Eliminate the need to deploy a standalone SCADA system.
- Seamlessly integrate with external SCADA systems and other grid systems.
- Embed SCADA functionality into distributed energy management systems (DERMS), advanced distribution management systems (ADMS), sensor, and other grid systems.
- Incorporate 50 built-in filters for data manipulation such as scaling, accumulators, and dead banding.

Measurement Management

- Automatically keep geographic information systems (GIS), outage management systems (OMS), ADMS, DERMS, SCADA, and other grid systems in sync when devices are added, removed, or moved with Oracle Utilities LEC Asset ID Manager.
- Eliminate manual reconciliation of tags and data points.
- Reduce maintenance and chance of human error.

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ISO Market Connections

- Establish real-time ICCP connection to independent system operator (ISO)/ regional transmission organization (RTO) power markets with Oracle LEC ICCP solution.
- Ensure consistent transactions with operational and trading systems.
- Manage real-time ICCP connection as a fixed price, turnkey offering.
- Apply unsurpassed industry knowledge and ISO/RTO experience to your implementation.

Operational Historian

- Store, archive, and retrieve real-time operational data with Oracle Utilities Live Energy Connect InfluxDB Adaptor.
- Collect data from any source.
- Maximize uptime with a clustered architecture.
- Deliver exceptional query and storage performance with advanced algorithms.
- Simplify the management and storage of generated data with integrated data retention, storage, and filtering policies.
- Integrate grid applications with real-time and historical data.

STREAMLINE YOUR OT ENVIRONMENT

With its deep functionality, Oracle Utilities Live Energy Connect can help you save OT integration time, money, and maintenance cost. Contact Oracle Utilities to learn more.

The Oracle Utilities LEC Platform

Oracle's smart grid data and intelligence solutions for utility companies enable confident, real-time management of power grid assets for

- Critical infrastructure network segmentation and protection
- Independent system operator (ISO)/regional transmission organization (RTO) connectivity
- SCADA, OMS, and DMS real-time state monitoring, control, and communication
- Demand response aggregation
- Visualization
- Data analytics

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