# Grid Analytics

## Oracle Utilities Network Management System
## Oracle DataRaker
## Oracle Utilities Analytics

Utilities today accumulate enormous amounts of data that provide unprecedented potential for business opportunity. However, most lack analytics needed to unlock the value of the data. Oracle solves that challenge for utilities, providing them with a powerful grid analytics solution that delivers new ways of leveraging grid, asset, customer, and community data. Using it, utilities can better predict risk, improve planning, and manage capital.

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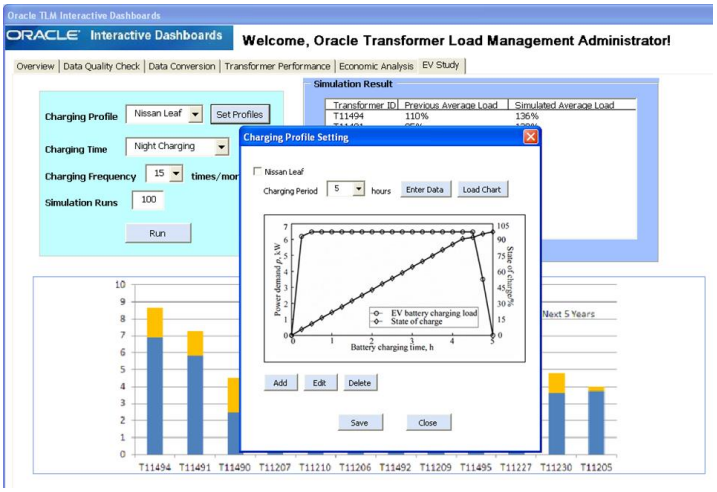
## Pre-emptively eliminate risk and capacity constraint

**Oracle Utilities Network Management System** (NMS) is a grid analytics platform, managing the convergence of data from enterprise applications such as customer information systems (CIS) and geospatial information systems (GIS) as well as real-time technologies like supervisory control and data acquisition (SCADA) and advanced metering infrastructure (AMI). **Oracle DataRaker** aggregates NMS and third-party data and delivers powerful cloud-based grid analytics services for continual improvement and risk mitigation. Additionally, **Oracle Utilities Analytics** provides pre-built dashboards and reporting tools for Oracle Utilities NMS that make it easier to manage, visualize, and share data-driven insight. Utilities can leverage these powerful analytics solutions for mission-critical benefits, such as:

- Harnessing historic, time-stamp, and third party data to predict patterns leading to asset risk, such as overloaded transformers
- Identifying poorly performing assets based on condition and performance parameters
- Improving visibility to the network for capacity planning and outages




Leverage data for new and valuable insight, such the impact of electric vehicle charging on transformers

### KEY BENEFITS

- Leverage data across the enterprise
- View historical data from any historian interface to expand and improve decision making
- Identify asset conditions that lead to overloads and outages
- Mitigate the risk of distributed energy resources
- Eliminate capital expense due to unanticipated capacity constraint
- Communicate more effectively with executives and public officials
- Improve network model accuracy and ability to serve customers

### RELATED SOLUTIONS

- Oracle Utilities Operational Device Management
- Oracle Utilities Work and Asset Management
- Oracle Utilities Operations Mobile Application
- Oracle Utilities Mobile Workforce Management
- Oracle Smart Grid Gateway
- Oracle Utilities Meter Data Management
- Oracle Utilities Distributed Energy Resource Management Solution

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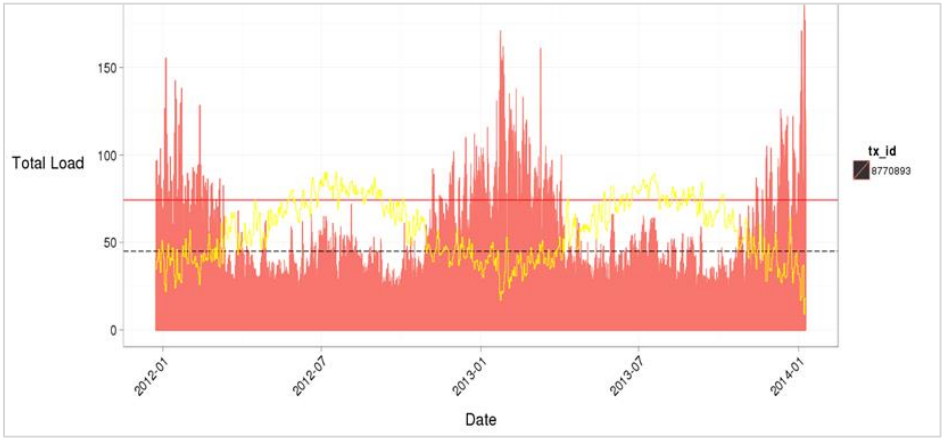
## Reduce transformer overloads and network model errors

Oracle DataRaker can identify unseen correlations between data and asset performance, enabling a utility to pre-emptively predict and avoid failure. For example, DataRaker can pinpoint over- and under-utilized assets and create alarms so that failure is proactively prevented. And by continually monitoring voltage data down to the device level, Oracle DataRaker can spot network errors. You benefit by:

- Preventing over loaded transformers and other stressed assets from failing
- Reducing peak loading on feeders with poor load factors
- Identifying equipment inaccuracies in the GIS model




Oracle DataRaker continually identifies hidden risk and error in the network and assets

## Improve planning and risk management for distributed energy

As consumers connect more distributed energy resources (DER) into the grid, their intermittency creates real risk to reliability and grid health. While utilities can't control how or when these resources are connected, they can use Oracle NMS and Oracle DataRaker to reduce the risks they pose.

Oracle Utilities NMS enables utilities to model the load profile of each and every distributed energy resource, accounting for location, condition of use, and other attributes unique to an asset. Oracle DataRaker then creates risk models from sample data of customer DER records and specific class models. Oracle Utilities NMS applies that model to the DER population to reduce risk—in real time and continually. Business planning and health improve from:

- Reducing asset failure by Identifying and managing negative performance patterns via cloud-based analysis and network modeling of DER sensor data
- Incorporating DER, community, and economic data into load forecasting to improve views of how growth will affect capacity or spur the need for capital investment and work.

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Hardware and Software, Engineered to Work Together