Facility AnalytiX®

Predictive Software for Facilities Management

Predict and Improve Your Operations

Facility AnalytiX® is a complete, ongoing commissioning software solution based on ICONICS' advanced Fault Detection and Diagnostics (FDD) technology, which significantly reduces costs and improves operational efficiency. It incorporates a standard library of fault rules that can be customized to predict equipment failures and advise personnel of preventive actions. Optimize energy savings and improve overall safety with Facility AnalytiX. The unique FDD fault viewer quickly identifies the most costly faults to reduce downtime and costs to diagnose and repair. ICONICS' solutions for fault detection and diagnostics are based on advanced research by the United States National Institute of Standards and Technology (NIST).

Facility AnalytiX can save 15% or more in energy costs and reduce service cost by 50%

Using its advanced Fault Rules Engine, Facility AnalytiX calculates fault probability as well as all associated costs. It saves users configuration time by making integration easier, faster and more intuitive. The powerful Web-based Workbench provides an easy-to-use configuration and deployment environment. Facility AnalytiX integrates with the most popular BAS, SCADA, PLC and other systems used to monitor equipment conditions.

- Predict, Reduce and Eliminate Equipment Downtime

- Automatically Detect Faults and Receive Real-time Notifications

- Utilize Preconfigured Fault Rules in the Standard Rules Library

- Improve Overall Environmental Quality

- Reduce Maintenance and Determine Probable Causes

- Send Notifications "Anywhere, Anytime and On Any Platform"

- Return on Investment is Typically Between 12 to 18 Months

DETECT > DIAGNOSE > IMPROVE

Fault Detection and Diagnostics with Speed and Clarity

Fault Rules – A Fast Start to Ongoing Commissioning

Facility AnalytiX includes hundreds of preconfigured fault rules for the most popular types of Building Automation equipment. Each fault incorporates a rule, associated cost calculations, required points, description, and is completely parameterized to adapt to specific needs. Preconfigured Fault Rules allow users to move quickly into ongoing commissioning while they utilize pre-made rules or subtle changes to create powerful and predictive tools. Customizing existing Fault Rules saves time and gets applications up and running faster.

Fault State Tracking – A Clear View into Fault Lifecycles

Fault State Tracking is an important component of the Facility AnalytiX solution. The tracking logs when a fault incident becomes active and when it returns to an inactive state, allowing routines to calculate an "in-fault" duration for that incident. Providing better clarity into the lifecycle of faults for maintenance and operations, the new Fault State Tracking delivers enhanced understanding and management capabilities to key stakeholders. Log entries are made for each state of a fault's lifecycle when it becomes active or inactive and, most importantly, when faults are resolved by technicians or engineers. Fault State Tracking provides the ability to enter comments for the root cause of each fault, enabling maintenance and commissioning personnel to communicate actions taken during a fault's lifecycle and easily track, sort and filter on every state using the powerful Facility AnalytiX Viewer.

Top Products Award Winner

ICONICS received a "Top Products Award" for Facility AnalytiX from *Building Operating Management* (BOM). BOM magazine, which also publishes the FacilitiesNet online portal, recognized the power of Facility AnalytiX as a complete, ongoing commissioning software solution based on ICONICS' advanced Fault Detection and Diagnostics (FDD) technology, which significantly reduces costs and improves operational efficiency.

Visualization, Reporting, Connectivity and More

Rich Visualization and Reporting

Users can create rich visualization and collaboration dashboards that provide secure user roles for any browser or PC platform. Standard reports and charts such as Fault Detection, Diagnostic Causes and Corrective Action help to visualize operation and address inefficiencies in equipment performance before they impact the bottom line. Automatic notifications alert facility management, operators and maintenance personnel that corrective actions should be taken to prevent equipment failure and excessive use of energy.

Flexible, Open Standards and Connectivity

Facility AnalytiX' innovative universal connectivity design is built on industry open standards such as OPC Classic, OPC Unified Architecture, BACnet, SNMP, Modbus and Web Services. Facility AnalytiX can be plugged into any existing BAS, SCADA or control network. As an enterprise grows, Facility AnalytiX will flexibly scale to users' needs. Automatic device discovery makes it easy to point to equipment and start realizing value. Adding power and energy meters is easy, as most equipment manufacturers support these standards.

Key Features and Benefits

- Real-time Fault Detection and Diagnostics (FDD)
- Over 300 Fault Rules for Popular Building Equipment
- Predict, Reduce and Eliminate Equipment Downtime
- Fault State Tracking for Enhanced Analysis
- Automated Ongoing Commissioning Tool
- Certified for Windows 10® and Windows Server 2012®
- Helps to Meet LEED Certification
- Cost Calculations Help to Prioritize Faults
- FDD Viewer Presents List of Probable Causes

- Acquire and Catalog Knowledge of Skilled Experts
- Scalable from Single Location to Multi-site Campuses
- Rich Visualization via any Web-enabled Device
- Recalculate faults based on historical data
- Advanced timezone synchronization
- Optimizes the Efficiency of Your Operations
- Standard Fault Diagnostic Models for Popular Equipment:
  - Air Handling Units
  - Boilers
  - Chillers
  - Cooling Towers
  - Wind Turbines and Farms
  - Or define your own!

Applications

- Building Controls and HVAC
- Air Conditioning and Lighting
- Wind Turbine and Wind Parks
- Utilities and City Heating Stations
- Solar Facilities
- Geo Thermal and Bio Gas Power

- Water and Wastewater
- Heating and Cooling
- Oil and Gas
- Conveying and Packaging
- Pharmaceutical
- Heavy Industry

Advanced FDD for Any Application

Benefit from Built-In Expert Knowledge

Below are just a few examples of the many equipment maintenance concerns that Facility AnalytiX can handle and help quickly resolve.

Cooling Towers

- Fans cycling too frequently
- Poor fan temperature control
- Small range causing issue with heat rejection
- Fans and condenser pumps not interlocked properly

Chillers and Air Handling Units

- Compressor cycling on/off too frequently
- Water pumps are not interlocked properly
- Compressor and condenser fans are not interlocked properly
- Too many mode switches per hour
- Outside air enthalpy too low for mechanical cooling

Boilers

- Boiler is running when it should be shut down
- Hot water pump not synchronized properly with boiler
- Boiler is cycling on/off too frequently
- Hot water supply temperature is too low/high

When equipment failures occur, Facility AnalytiX analyzes current and historical information along with symptom/cause relationships that the system has been taught, executes probability algorithms and provides users guidance with a list of probable causes sorted by probability. This immediate guidance reduces mean time to diagnose and repair, reduces equipment downtime, and lowers overall maintenance costs.

Founded in 1986, ICONICS is an award-winning independent software provider offering real-time visualization, HMI/SCADA, energy management, fault detection, manufacturing intelligence, MES, and a suite of analytics solutions for operational excellence. ICONICS solutions are installed in 70 percent of the Global 500 companies around the world, helping customers to be more profitable, agile and efficient, to improve quality, and to be more sustainable.

ICONICS is leading the way in cloud-based solutions with its HMI/SCADA, analytics, mobile and data historian to help its customers embrace the Internet of Things (IoT). ICONICS products are used in manufacturing, building automation, oil and gas, renewable energy, utilities, water and wastewater, pharmaceuticals, automotive, and many other industries. ICONICS' advanced visualization, productivity, and sustainability solutions are built on its flagship products: GENESIS64™ HMI/SCADA, Hyper Historian™ plant historian, AnalytiX® solution suite, and MobileHMI™ mobile apps. Delivering information anytime, anywhere, ICONICS' solutions scale from the smallest standalone embedded projects to the largest enterprise applications.

ICONICS promotes an international culture of innovation, creativity, and excellence in product design, development, technical support, training, sales, and consulting services for end users, systems integrators, OEMs, and channel partners. ICONICS has over 350,000 applications installed in multiple industries worldwide.

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