Advanced Solutions

Honeywell

Honeywell Asset Manager™

Asset Manager provides the tools to help you manage the health of your automation and production assets. With real-time visibility into the actual health status of your plant or mill equipment, users from operations, maintenance, reliability and other departments will have a consistent understanding to properly execute production and maintenance plans.

A common problem in the processing industries is the difficulty to analyze high volumes of data to understand the true condition of assets and equipment. Operations have a myriad of alarms to deal with, but no intelligent indication of the equipment health status. Maintenance plans often are inappropriate for the current state of the equipment and they end up reacting to unplanned events. The reliability department is constrained by the results of periodic condition inspections to prioritize their work to effectively deploy their skills. As a result of the current condition not being visible and consistently represented to the maintenance, operations and reliability departments, equipment is damaged or fails with little or no warning.

To enable visibility into asset health status, users from Operations, Maintenance and Reliability departments must each have access to the same data. Asset Manager is designed to combine disparate sources of equipment health data into a single, common set that can provide the appropriate information with the appropriate context for varied user roles. Integration with both Honeywell and leading third-party applications, such as IBM® Maximo®, enables easier decision making in order to maintain asset integrity and support operations reliability.

Asset Manager, as the central technology enabler for condition-based monitoring, providing a single view of real-time asset monitoring data.

Asset Manager Benefits

Promote collaboration and data sharing across remote asset management teams

Asset Manager is built on Intuition™, the next evolution in enterprise-wide information integration and real-time visualization. With built in tools for the end-user to collaborate with other peers and experts, users can improve personnel productivity with searchable information that resides in document libraries and wikis.

Extend equipment life and increase reliability and availability

Published data suggests as much as 10% of a company's revenue is wasted on unplanned events. Asset Manager will alert your users to symptoms of failures so that assets are attended to prior to a costly downtime event.

Automate and standardize best practices

Original Equipment Manufacturers recommended monitoring can be integrated into Asset Manager to be performed automatically. Asset Manager's embedded algorithms, (bearing, shaft, gear and centrifugal pump impeller,) and fault models provide consistent analysis output. With the use of common data, maintenance and operation teams can effectively collaborate using standard mechanical health trends, process trends and notifications.

**Integrate real-time monitoring data to improve maintenance planning**

Asset Manager allows you to use your maintenance, operations and reliability resources effectively. Rather than deploy people to run down asset health status around your facility, let Asset Manager accomplish this automatically and alert your team in real-time when a possible abnormal condition is detected.

POWERED BY
MATRIKON

Visualize data and events from virtually all of your assets

Effective maintenance planning can only happen when the true state of the equipment is known. The mechanical health trends and other symptom and fault modeling capabilities of Asset Manager allows your maintenance team to focus on the right assets and schedule the appropriate work given its condition with the appropriate urgency. Why spend money doing costly preventive maintenance when Asset Manager enables you to execute an effective condition based maintenance program? Asset Manager provides the information necessary to aid in making decisions related to deferring preventive or planned maintenance as well as prioritizing early interventions.
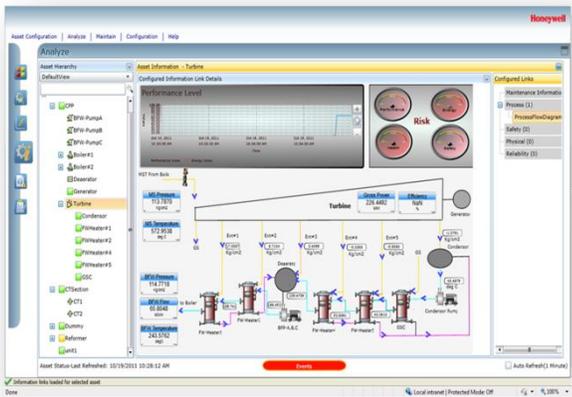
Asset Manager dashboards provide easy-to-understand updates of equipment health.
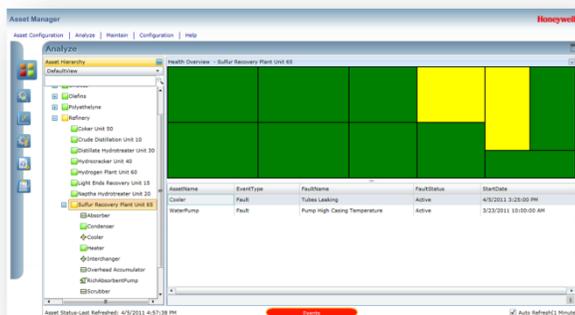
Asset Manager tree maps provide graphic visualization of equipment health and criticality.

Asset Manager Features

At a high level, Asset Manager provides the ability to perform condition monitoring, performance monitoring and control system and instrumentation monitoring. To accomplish this requires the advanced features of the new Asset Manager including:

Anticipate Equipment Failure with Better Data Integration

- Built on Intuition™
  - o Open Connectivity and Vendor Neutrality
  - o Integrate data and events from virtually any source using proven OPC technologies

Collaborate with Industry-Leading Expert Knowledge

- Single interface for all users to collaborate
  - o Relevant documentation and application accessible from within the portal
  - o Improved training and knowledge transfer to junior team members
- Extensive library of built-in standard fault, calculation and performance models
  - o Rotating equipment
  - o Vibration monitoring
  - o Standard performance models for pumps
  - o GPAllied fault models
- Integration of performance models from other sources
  - o Microsoft® Excel®
  - o UniSim® Design steady state models
  - o Additional native models (compressors, heat exchangers, turbines, etc.)

Act Proactively to Reduce Equipment Failure

- Automated workflows that enforce standard operating procedure
  - o Alert appropriate personnel of current asset conditions via e-mail or direct alerts to operator consoles
- Interface with SAP® and Maximo to address potential failures
  - o Raise and track work requests directly from Asset Manager

Deployment Process

Typically, Asset Manager is deployed as depicted in the flow diagram on page 4. Without routine access to equipment health data, it is impossible to determine the current status of assets. Thus, Asset Manager must first be configured to gather required data from existing and new sources. Industry standard OPC is used for this purpose coupled with a highly-efficient, data driven execution engine that eliminates inefficient polling of data.

Once data is available, users can configure calculation and fault models to truly represent the status of the monitored assets. Fault models are very flexible and can be easily given context so as to only execute models appropriate for the current state of the asset. Honeywell also offers a rich set of pre-built fault models to ensure users quickly get value from their Asset Manager system.

Alerts based on the executed fault models are now available to appropriate personnel in the plant or mill. You no longer have to rely on interpreting process data and various alarms to ascertain whether an asset is healthy – Asset Manager does it for you. Further, recommended actions can be presented for faults such that standardized responses to the abnormal condition can be initiated before the asset fails, causes secondary damage, shuts down production, etc.

If further analysis is needed to understand an abnormal condition, Asset Manager provides trending tools, fault histories, links to relevant documentation and so on to assist in the problem solving efforts.

Asset Manager's thin client user interface provides intuitive status monitoring and navigation tools to assure users can focus their attention on the right equipment. Equipment criticality is ingrained into all aspects of Asset Manager, making it easy to prioritize maintenance activities.
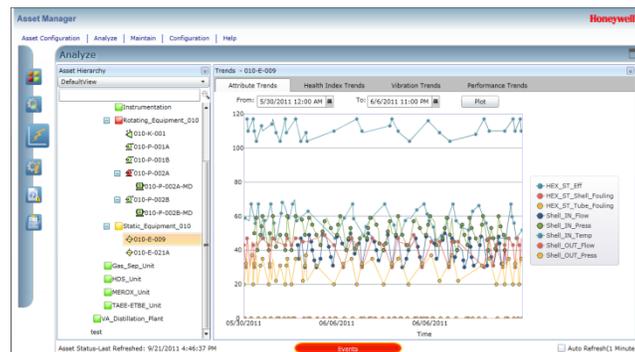
Asset Manager provides history-based performance analysis.
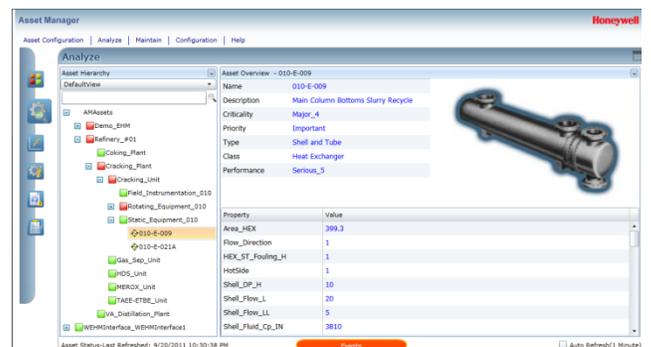
Typical Asset Manager System

Asset Manager is typically deployed on a server residing a level above or on the same level as the data sources with which it needs to communicate. The server stores configuration information as well as history to support trending and reporting functions. All data acquisition and model execution is performed by the server as well. Finally, the server also functions as a web server to deliver the thin clients to user desktops. These browser-based thin clients are used by personnel of various roles to configure and manage Asset Manager as well to support the users that monitor and analyze the health of the configured assets

Asset Manager can support a large number of assets of varying types in this typical system arrangement. The software architecture of Asset Manager is designed with the flexibility to allow the various components to be distributed to support unique performance, capacity and topology requirements.

Summary

Asset Manager is a technology enabler designed to fit your work processes as you drive toward higher reliability and risk-based maintenance goals.

Honeywell is the expert, global source for enterprise-wide real-time asset management solutions, covering all elements of Condition-Based Monitoring, Reliability and Maintenance management. Honeywell's in-house expertise is supported by recognized industry partners to provide wall-to-wall integrated consulting services, software and solutions, tailored to the specific needs and intricacies of each client. With more than 30 years of experience across the process industries as the stable, capable and supportive choice, clients choose Honeywell to achieve a clear understanding of how their assets are performing in order to maximize asset uptime.

Asset information may be stored in Asset Manager, or linked to external systems.
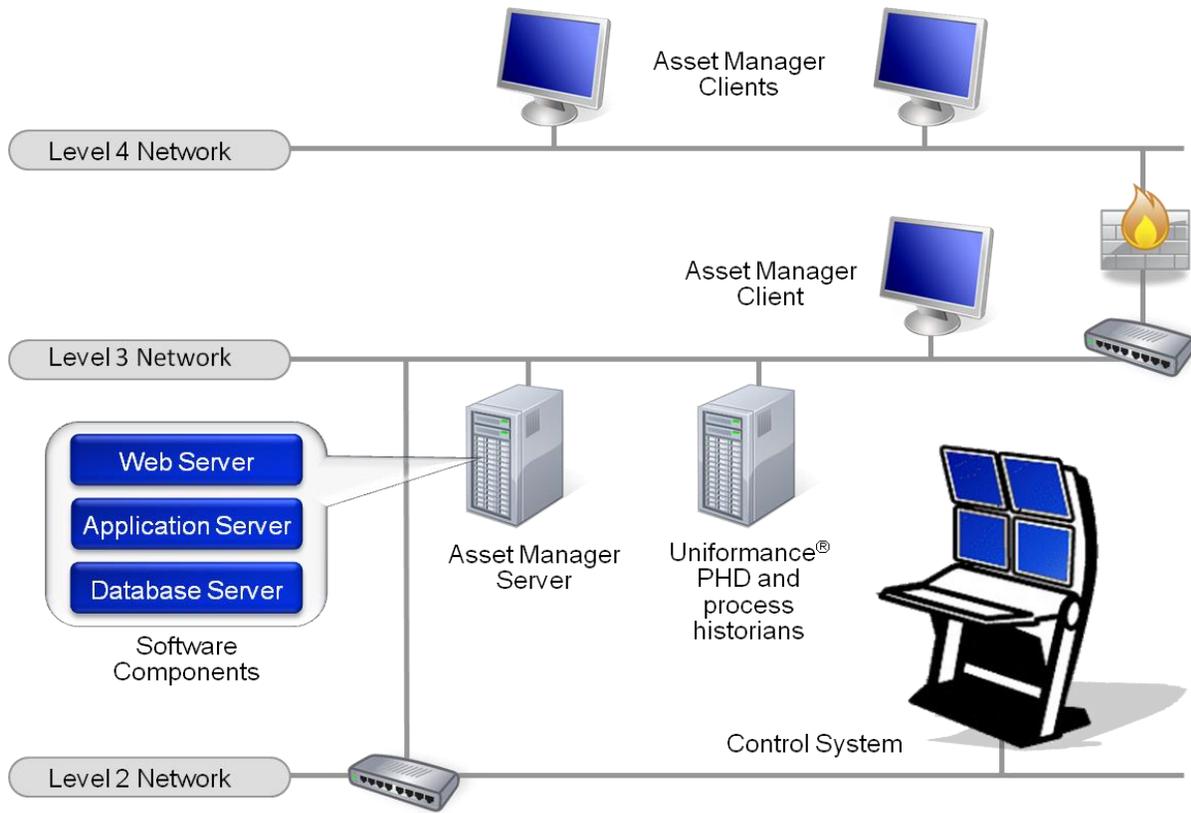
Typical Asset Management System

'Powered by Matrikon' symbolizes that this product/solution is system and application independent.

For more information:
For more information about Asset Manager, visit our website www.honeywellprocess.com or contact your Honeywell account manager.

Honeywell Process Solutions
1250 West Sam Houston Parkway South
Houston, TX 77042

Honeywell House, Arlington Business Park,
Bracknell, Berkshire, England RG12 1EB UK

Shanghai City Centre, 100 Junyi Road
Shanghai, China 20051
www.honeywellprocess.com

PN-12-16-ENG
May 2012
© 2012 Honeywell International Inc.

Honeywell