Experion® History Integration

Product Information Note

Experion Tag Synchronization for Uniformance® PHD automates tag building and maintenance.

Making Integration Reliable, Consistent, and Easy

Reliable, accurate process history is critical to enable regulatory compliance, process excellence, and accurate business decisions. Inconsistent or missing data can result in significant financial or legal penalties. Yet, these critical data needs must be met in the lowest cost manner possible, to ensure ongoing financial success.

Uniformance® PHD provides advanced history for Experion with years of on-line history storage across multiple Experion clusters. PHD also provides many advanced history features valued by engineering and business users such as flexible data aggregation, on-demand calculations, and centrally locating Experion and other DCS data. This history is available on the plant network, ensuring that potentially large numbers of users can utilize this data without impacting plant operations. The challenge is to ensure this potentially large volume of data can be provided to the business without generating extra data management work.

PHD / Experion Integration meet these needs in a low-cost manner by:

- Automating maintenance and configuration tasks
- Ensuring efficient, accurate data collection
- Providing the operator visibility to plant-wide data.

PHD helps plant managers make better and faster decisions with superior data management. It can, move data from operational to business/analytical level enabling better decisions. The advantages of PHD Experion integration are:

- Ability to collect a high volume for data without loading the controllers
- Protection from data loss – in the event of a network outage or server downtime, the missing history is backfilled from Experion
- Ability to view PHD data directly from the Experion trend using the PHD point server
Automated Tag Maintenance – reducing costs, increasing consistency

Traditional historian maintenance is performed through periodic or on-demand Management of Change processes. Such processes require significant manual intervention, and it can often be days before valuable process history data is available to engineers and managers. Additionally, such processes often involve error-prone manual steps that may result in incorrect data collection. PHD answers this challenge by automating the management of tag configuration changes between the control system and the plant-wide PHD historian.

When integrated with Experion, PHD provides automated tag maintenance without the need for a Management of Change process. When an Experion point is added to local history, or undergoes a configuration change, those changes are automatically sent to PHD, with no manual intervention required.

- Synchronization lowers system management cost. Ongoing tag maintenance is automated, freeing up key resources to perform other tasks.
- Tag Synchronization makes PHD start-up easy. PHD may be layered on Experion using default settings, and the entire PHD tag database will be created automatically.
- Tag Synchronization rules ensure consistent data. Automation eliminates the risk of manually generated errors, while application of tag synchronization rules ensures that all tags consistently comply with customer-specific specifications.

These features ensure that PHD’s data is accurately configured on a timely basis, without the requirement for ongoing manual intervention.

This tag synchronization uses rule-based processing. The PHD system comes with a default set of tag synchronization rules, so new PHD systems may be started up quickly, and more advanced options can be tuned later, as the site’s use of PHD becomes more sophisticated. And, a start-up tag load is very quick – an entire PHD tag database can be built, and data collection can start, often in less than 15 minutes!

PHD’s automated tag maintenance provides a highly reliable solution. If PHD is not running when an Experion point change occurs, the tag synchronization function automatically receives and applies pending tag changes as soon as the connection between Experion and PHD is re-established.

Tag maintenance occurs when there has been a change to the Experion database. This ensures that tag maintenance incurs very little load on the Experion server. Other historian solutions provide tag synchronization by periodically examining the entire Experion point database whether there has been a change or not. Searching the properties of thousands of points for changes can be resource-intensive, and may cause Experion display response times to be impacted.

Experion Link – Consistent, Efficient Data Collection

Plant historians provide value by providing a long-term store of potentially very large amounts of data. This data must be consistently collected and stored without incurring undue load on the control system. When used with Experion, PHD provides a high-performance plant historian, with minimal impact to the Experion control system.

This integrated data collection provides:

- Minimal Experion System Loading PHD places negligible load on the Experion control system by heavily leveraging the data already available in Experion history and Experion’s data cache. Less integrated historians may generate two times the number of data requests against the Experion control system.
- Consistent Operator and Engineering Data PHD’s data link ensures that operators using the Experion DCS, and PHD users such as managers and operators, are all working from consistent historical data. This enables decisions to be made consistently throughout the operation.
• A Highly Reliable Solution In the event of a planned or unplanned PHD outage, history data will be recovered from the data available in the Experion history database. Robust fail-over to a secondary Experion server may be achieved, ensuring a loss of connectivity to the primary server will not impact PHD data availability.

Consolidated Event Journal
Beginning with R310, PHD provides history for both events and process data from Experion. Users have the historical data and tools to view process alarms, events, and process changes alongside charts and graphics to better understand trends, and troubleshoot conditions leading to process anomalies.

PHD and Experion Trend

If the CEJ Server fails during event collection, the system recovers history data based on the last successful date and time, ensuring that the CEJ holds a consistent record of historical events.

Note: PHD CX does not support Consolidated Event Journal (CEJ). CEJ is a licensable option for PHD for Enterprise.

Empowering the Operator - Trending
Operators not only need to be able to monitor and optimize their own unit. Operators also need to have a high level of visibility into data that may not be available locally such as laboratory data, planning data, or data from external control systems. This data is typically all available on the PHD plant-wide historian.

PHD / Experion Integration introduce the PHD Point Browser.

This new component may be installed on the Experion server, and allows the operator to trend PHD values on the same trend as local Experion DCS data. The operator is given full visibility into all plant data, without the need for special training or tools.

Migration
Migration to Uniformance® PHD R321 is seamless and easy with following advantages:

• “One-hop” migration from the R21x series
• Minimum disruption and no loss of data
• Does not need server upgrade hardware changes or even data reformatting when running on 64-bit servers.

PHD/Experion Integration Technical Specifications

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<thead>
<tr>
<th>PARAMETER</th>
<th>SPECIFICATION</th>
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<tbody>
<tr>
<td>EXPERION SERVER</td>
<td>Experion PKS releases 310 or later</td>
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<tr>
<td></td>
<td>Experion LX R110 and newer</td>
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<td></td>
<td>PlantCruise R110 and newer</td>
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<tr>
<td>PHD SERVER</td>
<td>PHD releases 300, 310, 320 and 321</td>
</tr>
<tr>
<td></td>
<td>PHD CX release 330</td>
</tr>
<tr>
<td>CONSOLIDATED EVENT JOURNAL</td>
<td>PHD releases 300, 310, 320 and 321</td>
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Real-time Digital Intelligence through Unified Data, Analytics and Visualization

Through its Uniforce® Suite, Honeywell offers integrated, best-in-class data, analytics and visualization products built on a common platform to meet complex customer challenges, deliver significant business value, and reduce total cost of ownership.

A fully integrated suite where all types of data are efficiently captured and stored for easy retrieval. In the Uniforce Suite, information is easily visualized and explored for effective engineering analysis. Events are predicted and detected based on underlying patterns and correlations, and process intelligence is used for better business decision-making—all performed within the context of an asset model.

Uniforce PHD
Capture and Store Real-time Process and Event Data across the Enterprise.

Uniforce KPI
Define, Track, Analyze and Improve KPIs for Performance Management.

Uniforce Asset Sentinel
Monitor Plant Performance and Equipment Health.

Uniforce Insight
Visualize Process Conditions and Investigate Events from Any Web Browser.

Uniforce Support Services
This product comes with worldwide, premium support services through our Benefits Guardianship Program (BGP). BGP is designed to help our customers improve and extend the usage of their applications and the benefits they deliver, ultimately maintaining and safeguarding their advanced applications.

Honeywell provides a complete portfolio of service offerings to extend the life of your plant and provide a cost-effective path forward to the latest application technology. Honeywell services include:

- Software installation services
- On-site engineering services
- Migration services
- Scope expansion services
- Assessment services
- Performance baseline and tuning services
- Customized training

For More Information
Learn more about how Honeywell’s PHD/Experion Integration is superior to any other DCS/Historian integration, visit uniforce.com or contact your Honeywell Account Manager.

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