Historian Migration

Need a historian migration with a proven methodology?

Generalized tools and templates can facilitate many common activities required in a historian migration project. Emerson's Data Management consultants work in partnership with major historian systems providers such as OSIsoft and Capstone Technologies and have vendor certified technical consultants who are well equipped to handle all aspects of a historian migration project.

Emerson's Data Management consultants specialize in designing, implementing and supporting real-time, historian based, reporting and integration solutions. We specialize in historian system design, reporting and analysis tool implementations, production data integration solutions and custom software development. Our focus is to help your organization use real time data to monitor and manage performance and identify optimization opportunities.

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What Emerson Can Do For You?

Historian systems migration projects arise for several different reasons and take various shapes and forms. Most commonly, migration projects are driven by mergers and acquisitions, a need to change software vendors, or caused due to a general system/architecture restructuring. With our expertise and proven methodology, Emerson's Data Management practice has an impeccable track record in delivering successful results in this area.

Mergers and Acquisitions

Whether divesting or integrating a new information source into the existing information infrastructure, the new information source may be an asset or fleet of assets, or another heterogeneous historian system.

The Data Management consultants performed the data integration when a large oil and gas exploration, development and production company made a number of strategic acquisitions of oil and natural gas properties to expand and diversify its business line. Similarly, we helped a large vertically integrated utility client with integrating a new gas plant acquired into their information system. The acquired asset used the Honeywell PHD system but we setup an integration to the PI system as this is what was used in the client's corporate environment. The consultants also helped a major energy distributor put together a detailed implementation plan for the acquisition of a large gas plant.

Vendor Changes

Often, an initial historian system is chosen as a prototype or pilot project, but client teams decide to pursue a different historian system. The reason for choosing a different vendor may be due to IT strategy or driven by functional advantages in one vendor's system over another. This category of project involves migrating all data flows to the new system and eventually decommissioning the older system.

The Data Management practice consultants helped to transition one of the world's largest integrated oil companies from the Honeywell PHD system used initially for one of their SAGD plants to OSIsoft's PI system. We are currently working on transforming the infrastructure at another large multinational energy corporation to use the OSIsoft PI system instead of the Honeywell PHD system to streamline operations.

Architectural Improvements

Over time, all companies mature and so too their technological landscape. Clients find that what may have started out as a pilot implementation is insufficient and must be re-architected. Or, over time decentralized information sources outgrow anticipated usage and begin to cause maintenance concerns and thus must be centralized. Technological advancements also make a case for re-architecting systems over time as more robust and simplified architectures are now made possible. This not only applies to core systems or interfaces but also reporting solutions and analytics. For example, a task which was previously completed using a standalone computer program may now be completed by an out-of-the-box capability or reporting tool or analytics package.

Data Management consultants assisted a major US-based independent natural gas, natural gas liquids, and petroleum producer in consolidating its site PI systems into a single corporate enterprise system to save costs and streamline maintenance. We also helped introduce high availability architectures and revamp existing applications and reports at a large number of different clients to increase system uptime and take advantage of new capabilities offered by modern historian product packages.

Methodology

Emerson uses a detail-oriented methodology that focuses on minimizing operational impact of migration and integration activities. We are aware of the key challenges typically part of such migration projects and understand what deliverables are required to ensure a successful result. Our historian migration projects typically follow a three-stage implementation including planning, execution, and warranty. While this is similar to the traditional SDLC, our bottom-up methodology stresses traceability of all items at each phase so that our implementations carry minimal risk. At each stage we emphasize client involvement so that our clients always remain connected with the direction of the project.

Planning

In this phase we determine the scope of the project and ask relevant questions to determine and document all client requirements. We have an exhaustive specification of information requirements which are documented during this phase. If it is relevant, we assist with a vendor-agnostic software selection study to determine what will best suit the client's needs. Requirements are classified in different groups (architectural, data recovery, reporting) and are revisited during detailed planning and execution to ensure nothing is missed. We go through each detail, including each server object, scheduled task or script to ensure its function is accounted for when performing server migrations.

Execution

Detailed execution plans are developed and reviewed with the client team, and a timeline is established for the changes. We strive to maximize availability of systems and typically recommend parallel implementations until a brief cutover is required to fully transition the system. We have a rigorous approach for testing and develop detailed test plans often involving mock cutovers. These test plans are executed in non-Production environments and then form a feedback loop for our execution plans. If non-Production environments are not available, we make every effort to test using alternative methods such as mocking or simulation. Emerson has in-house tools to assist with several common tasks such as display conversion and data backfill.

Throughout the post-implementation phase, we help develop and fine-tune monitoring for our client systems. Additionally, we develop comprehensive documentation for all systems and processes that have been put in place. During the execution of key project activities, we often note items or processes that have potential for improvement in the existing environment and make a note of these in recommendations that are submitted at the end of the project.

Contact us today to learn more about our case examples and how we can help your organization.

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