

Experion Virtualization Solutions

Product Information Note

Experion Virtualization Solutions lead the industry with a turnkey approach to bringing the major benefits of virtualization to customers in the process industries.

Today's industrial and manufacturing enterprises face immense pressures in both constructing new plants as efficiently as possible, and operationally to reduce rising lifecycle maintenance costs while maintaining or improving reliability. Additionally, the immense skills shortage being experienced today is requiring companies to do more with less, now more than ever.

Intelligently leveraged, virtualization provides innovative methods to tackle the key challenges that our industry faces.

Benefits in New Plant Construction

With the ever-increasing demand for resources and manufactured goods, plants are becoming more complex than ever and face constant pressures to reduce time to production and build costs. Virtualization helps address the challenges facing customers constructing new plants through:

- **Extended Design Freeze Dates** - By leveraging virtualized staging resources, development work can start as soon as there is a minimum set of requirements to begin engineering. Given that this work can commence without requiring actual controller or server hardware, it provides valuable additional time for design work.
- **Delayed Hardware Purchases** - Given that development can start even without having to purchase computer hardware, the final purchase of this equipment can be delayed ensuring that there is no costly and disruptive mid-project refresh required. Additionally, having the latest hardware when the plant goes into production is ensured.
- **Virtual Factory Acceptance Tests** - With Experion Virtualization, these formal tests can be conducted through Honeywell's private cloud environment, allowing greater collaboration and ensuring greater requirements alignment at any point in time.
- **Enhanced Design Options** – Experion Virtualization Solutions provides a wide range of design options to meet the needs of all systems. Options are available for multi-node, highly resilient clusters and for small, single-node installations.



Honeywell has taken a unique approach to delivering the benefits of virtualization to our customers by providing a complete experience from installation to support that is comprehensive, allowing you to run more of your system virtualized and reap greater benefits. We also understand that end-users are always looking to reduce complexity, improve performance, reliability and supportability and our solutions are designed with that in mind.

Benefits for Existing Operations

In a demanding economy, industrial companies must find ways to do more with less, which means reducing operating costs while maintaining or increasing production levels. As such, there is an urgent need to identify inefficiencies and ensure operations are as productive and economical as possible. Virtualization helps address the challenges facing existing plants through:

- **Hardware Refresh Optimization** - Experion Virtualization Solutions allow more than one workload to run on a physical server. This reduces the quantity of hardware components required for and therefore the total number of refreshes that need to be conducted over a period of time. When a refresh is required, it can be done online and transparent to operations.
- **Facility and Utility Benefits** - With a reduction in the amount of computer hardware required to run Experion PKS, there is a corresponding reduction in the space, power, cooling and maintenance required. Through the use of thin clients, Station nodes are both more secure and quieter, while providing full access to peripherals such as the IKB/OEP keyboards and Orion Console Operator Touch Panel.
- **System Management Benefits** - Experion Virtualization Solutions provide a single view into the virtual infrastructure. Though this single portal, you can see the performance of the virtual environment, access the desktops, and turn virtual machines on and off. New virtual machines can also be deployed from this same portal. In a traditional system, it can take weeks to deploy a piece of computer hardware, but with a virtualized Experion PKS system, a new workload can be deployed in minutes using preconfigured templates.
- **High Availability Solutions for Computer Hardware** - Experion Virtualization provides integration with Experion Backup and Restore, and virtualization High Availability features provide the ability to automatically restart virtual machines on another physical machine in the event of a hardware failure. These factors combine to provide better availability than traditional physical deployments.
- **Improved Hardware, OS and Third-Party App Compatibility** - Before virtualization, operating systems and applications running inside of them had to be compatible with certain hardware platforms. With Experion Virtualization Solutions, compatibility is driven by what the hypervisor can support rather than by the underlying hardware. Third-party application compatibility is improved through virtualization, allowing greater portability and eliminating the need to perform a reinstallation during hardware refresh.
- **Simplified, Lower Risk Upgrades and Patching** – Upgrading hardware with Experion Virtualization Solutions is easy, and depending on the cluster type, it can be performed totally transparent to the process options. In the event of an unexpected issue, snapshot capabilities allow for a rapid rollback of the node to a known good point in time.

Experion Virtualization Benefits

Honeywell is committed to virtualization technology and the benefits it provides to our customers worldwide. Experion Virtualization Solutions deliver a comprehensive range of offerings in the following areas:

- **Virtual infrastructure providing the software and hardware needed to run virtual machines** - Experion Virtualization Solutions are unique in the ability to supply all the components of a tested, turnkey virtual infrastructure, install it, and provide best practices and configuration guidance. On the support side, customers only have one telephone number to call to obtain support for the entire solution regardless of where the problem is. Experion Virtualization Solutions are powered by Nutanix and VMware, the industry's leading providers of virtualization products and solutions.
- **Support for any type of Experion PKS deployment virtualized along with other Honeywell Applications** - Experion Virtualization Solutions can be used to run all different types of Experion PKS deployments, from full on-process systems of any size and complexity, SCADA deployments, off-process systems, and smaller configurations with our Experion HS and LS products. In addition to Experion PKS, Honeywell supports a full range of our Advanced Solutions products, including alarm management, historian, and simulation solutions. Please refer to the HPS Virtualization Specification for the full range of supported applications.
- **Global Support** – Honeywell has a global team or resources and service capabilities to help customers design, implement, manage, and support their virtualization infrastructure. We provide back-to-back support in the areas of technical assistance, training, execution, and aftermarket services, whether you are building a new plant or implementing virtualization at an existing facility.

How to Get Started

Contact your Honeywell Account Manager to find out more about how Experion Virtualization Solutions can transform your business. Honeywell can start by providing an assessment of the virtualization opportunities in your facility and quantify the business return that moving to a virtual environment can bring to your facility.

The good news for industrial companies is that virtualization can be applied gradually, starting small and growing over time. While Honeywell can provide a Virtualized Experion PKS on-process system at any time, Honeywell customers can start small by using virtualization with:

- **Off-process deployments** - Off-process development systems are by their nature non-critical, making them a great place to start applying virtualization.
- **Non-critical support applications nodes** - Where supported by the vendor, industrial sites can begin to virtualize non-critical support applications such as active directory servers, endpoint protection and security applications, and OPC servers.

Why buy Honeywell's Experion Virtualization Solutions?

- Reference virtual designs optimized for the process control industry
- Custom networking design templates, provisioning aids, and configuration stacks that are available exclusively from Honeywell
- Tested for performance with various Experion PKS and Advanced Solutions products
- Modular designs with advanced virtualization capabilities for complete protection against hardware downtime
- Full GTAC support for all layers of the stack
- Simplified design and ordering experience
- Standardized and hassle-free project execution by Honeywell engineering teams
- Reduced configuration time on site
- Superior support experience over the life of the platform.
- Extensive hardware-software integration with automated and simplified deployment, update, and system expansion tools

For More Information

To learn more about Honeywell's Premium Platform for Experion® Virtualization solutions, visit <https://hwl.co/virtualization> or contact your Honeywell Account Manager.

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