



Migration Solutions for the End of XP

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About This Document

Scope of the Document

This document discusses what the end of Windows® XP means for automation software users, including the potential risks of continuing to use XP, options for upgrading, and best practices for migrating from XP. The intended audience includes anyone in Building Automation, Manufacturing, Renewable Energy, Oil and Gas, Water and Wastewater, Automotive, or any other industry still using Windows XP in their operations and in need of a migration solution.

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Document History

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XP End-of-Life

On April 8th, 2014, Microsoft® ended support for the Windows XP operating system.

What It Means

This means that if you are currently running Windows XP you are no longer protected from new security threats and will not be able to get support when something goes wrong. Although the XP operating system has and will continue to work, and can even still be installed and activated since this date, the more time spent running XP the longer you expose yourself to a number of potential risks.



Potential Risks

Continuing to operate on XP may compromise both the security and performance of your enterprise.

Not having support available for the system you rely on to keep operations going makes you an easy target for anyone interested in stealing your data and hurting operations. Without the ability to stay up to date on security patches, the likelihood of theft of your classified data, viruses, and other cyber-attacks goes up – and, unfortunately, anti-virus software will not be enough to protect you. Data can also be lost or damaged simply because the system decides to malfunction. In either case, Microsoft will not be able to provide technical support to remedy the problem. Additionally, the longer the operating system you use has been unsupported by Microsoft, the harder it will be to find support for your outdated system from independent software vendors and hardware manufacturers, making it very difficult to near-impossible to recover.

With unresolved technical issues and compromised systems come unexpected and sudden equipment failure, unplanned downtime, and loss of productivity. Despite this, about one third of today's computers are still running XP. "While Microsoft has been warning customers about the deadline for years, the end users and OEMs have been slow to react," says ARC Advisory Group's Vice President Craig Resnick. For end users in any industry, it is critical to take action – undoubtedly, the cost of downtime, recovering data, repairing equipment, and other efforts spent fixing the damage done, will be much greater in the long term than will be the investment in migrating now *before* failure occurs.

"Migrating to a new HMI software package based on a current supported operating system, such as Microsoft Windows 8.1 or Windows 7, ensures that users will receive security updates to protect their plants and machines."

– Craig Resnick,
ARC Advisory Group, Vice President

The Good News

So we know that the bad news is that if you are still running Windows XP anywhere across the enterprise, there are many potential risks. The good news, however, is that you can still take action. There are a number of options for migrating away from XP, and the newer technology available offers better security and enhanced performance.

Migrating from XP

Technology is rapidly evolving much faster than it ever has and will continue to do so. Businesses will need to be adaptable to these changes and in turn will get the flexibility and benefits of what the newest technology enables them to do. With each new technology is the potential to improve security and performance, accomplish things faster, and work more efficiently.

Options for Upgrading

Windows 7 is one option many choose to migrate to from XP. It provides a similar look and feel to XP and provides good interoperability. However, being released in 2009, it is already several years old.



Although a greater learning curve may be involved with adopting Windows 8.1, the newest operating system offers greater security and is both faster and easier to deploy than Windows 7.

As the number of widely dispersed assets grows, there is a greater need for secure, remote access to data and collaboration among mobile workers. The greatest advantage with implementing Windows 8.1 is mobility. “Users and OEMs are deploying more mobility solutions for a wide variety of mobile devices such as tablets and smart phones,” says Resnick, “performing remote

monitoring; and bringing in more data.” The ability to collect and analyze exponentially growing sets of data is at an unprecedented level. Anyone with a mobile device can use best in class apps to remotely monitor assets, instantly access operational key performance indicators (KPIs) and respond to alarms and alerts in real time.

Another key feature of operating on Windows 8.1 is an enhanced user experience. The Smart Tile-based dashboards provide a seamless experience from desktops to mobile devices and eliminate the need to search for information among various apps by allowing users to monitor the most critical KPIs right from the home screen. Touch technology allows users to navigate intuitively and drill-down for more details on demand. Microsoft’s latest mobile devices designed to run Windows 8.1 also offer increased energy efficiency, increased battery life, and faster start up times.

ICONICS’ solutions are fully compatible with all of the latest Windows operating systems, including Windows 7 and Windows 8.1, as well as Windows Server® 2008 and Windows Server 2012.



Getting Started

To get started, it is critical to have a clear understanding of where you stand. This includes knowing what operating systems are running throughout your enterprise and identifying precisely where they are being used. With this, you can evaluate your options, estimate the costs and time involved, and decide on a migration plan that works best for you. ICONICS offers a free risk analysis to help you get started with a customized solution. Additionally, assistance is available from a certified Microsoft partner to learn more about your options.

Best Practices for Migrating to a New System

Upgrading from a 32-bit system to a 64-bit one may be daunting at first, but there are several architectural benefits that can immediately increase performance and enable new methods to improve productivity. ICONICS believes that it is important for anyone migrating from Windows XP to take advantage of not only new software features, but to fundamentally look at SCADA system architecture. Once the basic system is upgraded and running, customers can utilize pilot systems or virtual machines to assess modernized architectures.



Modularity

The newest ICONICS technology is based on a modular architecture that allows customers to split up components for performance reasons. Using virtual machines and high-powered servers a number of different functions can be optimized. Introduced a few years ago Load Balancing and the separation of Middle-Tier and Back End Servers can greatly increase the flexibility and performance of systems. Based on the updated architecture it's important to gauge whether or not your solution can benefit. By adding modularity you'll gain flexibility in locating computers and even allow for virtualization up front or in the future. For systems with high client or data loads Load Balancing can be used to dynamically shed the load associated with bursts of data or client activity, while maintaining a redundancy-ready system.

Hardware

Hesitation to reinvest in SCADA can stem from an aversion to upgrading system hardware. While central servers running data collection, alarming and HMI screens require the power and resources of new 64-bit servers, HMI clients can be run via web browsers on the older 32-bit hardware. Clients often require the least restrictive system requirements due to the design of the modular server-client architectures adopted by newer SCADA systems.

Another consideration that is a result of a chance to upgrade the SCADA hardware rather than a move to 64-bit software is the path of virtualization. By utilizing the newest server technology multiple virtual machines can be run on the same server reducing the total number of servers needed to run the same legacy SCADA services. This will decrease cost and streamline IT demands of the whole SCADA system.

Software

The end of support for Microsoft Windows XP highlights a key problem with running on older technology. As the industry moves forward upgrading becomes more difficult as the length of installations increases. ICONICS challenges customers to see the end of life of Windows XP as an opportunity. Not only an opportunity to run some of the latest technology, but to fundamentally change the way that we look at project lifecycles. Paired with virtualization, which can simplify backup and restore processes, doing incremental upgrades can be a straightforward way of protecting the system for the long term.



Upgrading from Third Party Products

Due to ICONICS' use of open standards our newest software is able to connect and merge historical data into our system to reduce the engineering time and cost associated with upgrades. With ICONICS, users can leave data in the existing databases and access it through OLE DB or ODBC Connectors. These connections will function as simply another data source and can be visualized, used for mathematical manipulation, trended or collected as historical data within the ICONICS system. Optionally, merging software also offered by ICONICS can bring data into SQL databases as well for faster report generation and historical analysis.

Connect with ICONICS

The first step to any upgrade is to list out the machinery and data sources needed. ICONICS offers Quality Professional Services (QPS) to aid any customer or System Integrator ready to configure and run a 64-bit system. By working with ICONICS and providing a list of data sources and goals ICONICS can ensure that all data connections are available and offer feedback on where to begin considering the latest technology and industry philosophy. From that point on ICONICS can be used to help upgrade the architecture, communications, logging mechanisms, and HMI screens.



Founded in 1986, ICONICS is an award-winning independent software developer offering real-time visualization, HMI/SCADA, energy, fault detection, manufacturing intelligence, MES and a suite of analytics solutions for operational excellence. ICONICS solutions are installed in 70% of the Fortune 500 companies around the world, helping customers to be more profitable, agile and efficient, to improve quality and 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 & gas, renewable energy, utilities, water/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 300,000 applications installed in multiple industries worldwide.

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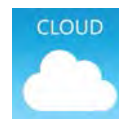
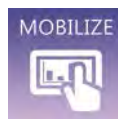
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