CONTINUOUS APPLICATION AVAILABILITY FOR WATER AND WASTEWATER FACILITIES

Always-on infrastructure for virtualizing industrial automation environments

Water and wastewater organizations are dealing with many challenges including aging infrastructures, increasing regulatory oversight and workforce challenges. Additionally, these challenges are draped with the backdrop of tight fiscal budgets and heightened concern over issues such as water pollution and clean water sourcing. Events, such as the ongoing contamination problems in Flint, Michigan, is just one example, albeit extreme, of water issues becoming front page news—a consequence that no society or organization can afford.

Top issues in the water industry

The 2016 annual American Water Works Association report identifies the renewal and replacement of aging water and wastewater infrastructures and financing for capital improvements as the key issues facing the water and wastewater industry.

Many water and wastewater control systems are badly in need of updating as they run on aging hardware with outdated and often unsupported or costly to support operating systems and applications. Updating these systems with modern automation infrastructure yields quick returns and prepares for new and future applications—without the need to make a huge investment. Additionally, new technology offers options to further increase productivity and consolidate multiple industrial control systems and applications onto a single platform.

Key benefits

- **Availability without compromise**
  The Stratus ftServer® provides an integrated, redundant solution that leverages VMware® or Microsoft® Hyper-V® virtualization to deliver the highest levels of availability and performance on a standard Intel® based server.

- **Continuous availability without modifications**
  Stratus ftServer systems are redundant solutions that promote operational simplicity and do not require duplicate application and software installs. With continuous self-monitoring capabilities, Stratus ftServer detects and handles faults before they result in any system or application downtime.

- **Compliance without complexity**
  The Stratus ftServer prevents unplanned downtime and data loss. This ability to eliminate data loss while maintaining complete and accurate record keeping and reporting on a continuous basis reduces the impact of compliance processes and regulatory headaches.

The key operational challenge faced by water and wastewater professionals with their critical automation systems is to eliminate unplanned downtime caused by failures and the need to quickly and accurately diagnose problems when they occur. Aside from reverting to time consuming and expensive remedies such as temporary manual operation, one of the most challenging areas is dealing with unanticipated control system failures in SCADA, HMI and Historian applications. Problems range from unexplained application slowdowns to outright application failures—which often go undetected for some period of time—to PC or server hardware failures. In today's environment, the need to provide accurate records and reporting is a critical part of the regulatory framework so the prevention of data loss is paramount.

Diagnosing problems, rebuilding systems and restoring applications can be very time consuming. And when it comes to operating systems and application patches that must be applied to multiple machines, most people really wonder if there is a way to simplify the whole process of keeping everything updated and secure while maintaining continuous availability.

"Keeping the water on is a public health and safety issue. We can't tolerate any downtime. Replacing clustered failover systems with Stratus ftServers saved us a lot of money and simplified the entire operation. I've never looked back."

Ken Osborne
SCADA supervisor
Pinellas County Utilities

How Stratus provides continuous availability for water and wastewater operations

For many of the water and wastewater organizations across the world, Stratus has been an important solution partner as they seek to modernize their automation environments while addressing the above challenges. This is because water and wastewater operations need uptime along with the operational simplicity that is ensured by Stratus technology and services.

Additionally, the demand for continuous availability computing infrastructure has only increased as water and wastewater organizations consolidate and simplify their systems and applications by leveraging the latest server virtualization technologies. Stratus allows industrial customers to gain all the benefits of virtualization while reducing complexity and risk.

The Stratus ftServer® provides the highest levels of availability, virtualization and easy maintenance in one integrated solution. It prevents downtime and data loss before it occurs, without a performance hit to your system or applications. Supporting Windows, Linux and a choice of the leading virtualization technologies, the ftServer's 'always-on' capabilities are achieved with advanced replicated processing and real-time management and monitoring. This operationally simple solution is quickly and easily installed and provides operational and maintenance visibility for the utmost protection. The ftServer is serviced by automatically generated replacement parts ordering and technician-level component replacement servicing. This eliminates the need for IT intensive resources. Famous for its longevity—giving you the miles you need out of your system—the ftServer runs and keeps on running without the need for frequent technical refreshes well into the future.

Find out more
To learn more about application failure prevention, visit **www.stratus.com**.