

# STRATUS FTSERVER® AND WONDERWARE

Low Cost of Ownership in Manufacturing Environments with Simplified Virtualization



Virtualization has become standard practice in organizations of all types and

sizes around the world, due to the advantages it offers such as agility, efficiency, and scalability compared to traditional physical infrastructures. In manufacturing environments, however, additional considerations must be made when virtualizing real-time manufacturing systems. Issues such as system performance, expected lifecycle, network and bandwidth considerations, long term cost of ownership, supportability, availability and reliability become critical to these applications.

**Manufacturing Operations** are highly dependent on these Industrial automation systems to be able to reliably produce product and ensure quality. Operations are also typically responsible for using, maintaining, and managing these environments. These applications, besides generating huge volumes of true real-time data, need to be very responsive to react to users and machinery accordingly. As a result, manufacturing systems:

- Need to be highly available, reliable and easily maintained
- Cannot have unexpected/unplanned downtime
- Cannot be managed with the same policies, procedures and techniques as business systems
- Cannot be hosted in a corporate data center

## Simplicity vs. Complexity

### SAN Based Cluster

- Highly complex
- Expensive
- Specialized IT resources
- Downtime and failover must be tolerated

### Stratus ftServer®

- Simple to run and maintain
- Supportable by any technical resource
- Perfect to protect VMWare and Hyper V environments
- Fault tolerant out-of-the-box

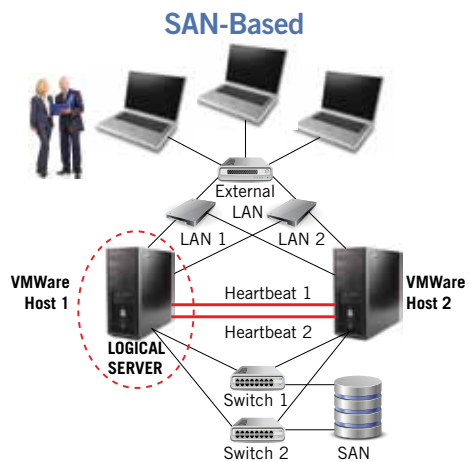
Because these systems must run locally at each plant, the solutions must be simple enough to be managed with existing plant resources. Typically local resources do not have deep knowledge about virtualized environments built on complex SAN-based clusters. A solution that is easy to use and maintain has become a necessity for plant information systems.

Virtualization is game changing technology, but once you virtualize multiple critical plant floor applications onto a single server, any hardware issues you have will take down every application on that server. Hyper V and VMWare typically leverage clustering (SAN based) technology to establish a High Availability (HA) environment to protect against these types of catastrophic failures. However, clustering does come with significant issues.



### SAN-Based Clustered Environments:

- Are expensive, highly complex, and difficult to maintain
- Cannot be managed by typical plant personnel and require specialized IT resources
- Don't offer complete availability and outage protection



Move to Simplicity

\$\$\$ > \$\$

### ftServer-Based



	Stratus	VMWare Cluster	Hyper V Cluster
Number of Required Servers	1	2	2
SAN Required	No	1 Minimum	1 Minimum
Dedicated Switches Required	No	2	2
Software/OS Licenses	1 set	2 sets	2 sets
Architecture	Simple	Complex	Complex
Configuration	Simple	Complex	Complex
Maintenance	Simple	Complex	Complex
Failover	Instant	Minutes	Minutes
Application Restart	No	Yes	Yes
In-Flight Data Loss	No	Yes	Yes
Cores Per VM for Fault Tolerance	Not limited	Limited to 1 core on 1 VM	FT not available
Support	24/7/365 real-time	Varies	Varies
Average Hardware Usable Life	8+ years	3 years	3 years
Remote Software Updates	Stratus support	None	None
Overnight Part Replacement	Stratus support	Varies	Varies
Hot Swappable Parts	Yes	No	No

Stratus ftServers provide the ultimate Availability protection for VMWare and Hyper V environments and can be managed and maintained with basic technical resources found at any plant. No other solution offers as simple and effective a strategy as Stratus.

You cannot protect your software with a single Dell or HP Server and some redundant power supplies. Any hardware issue will disrupt your applications and production. Clusters are expensive, complex, and extremely difficult to manage from plant to plant. Only Stratus offers a complete, simple, out-of-the-box solution for Fault Tolerance that any technical resource can easily manage.

### About Stratus

Stratus keeps all your Manufacturing applications up and running 24/7/365, enabling you to meet your production, revenue and quality goals. We offer a range of flexible high availability solutions that are easy to deploy and manage, and backed by a support structure with a 30-year track record of success. Most important, we've partnered with leading industrial application companies — including Wonderware and others — to ensure you get an always-on solution tailored to your specific business needs. Together, we have thousands of implementations in major industrial sectors such as pharmaceuticals, power and energy, water management, food and beverage, oil and gas, chemicals, consumer goods, automotive, and more. To learn more, visit [stratus.com](http://stratus.com) or contact Wonderware North at 877-900-4996.



Specifications and descriptions are summary in nature and subject to change without notice.

Stratus and the Stratus Technologies logo are trademarks or registered trademarks of Stratus Technologies Bermuda Ltd. All other marks are the property of their respective owners. ©2014 Stratus Technologies Bermuda Ltd. All rights reserved. 141117