

FOCUS ON BUSINESS CONTINUITY INSTEAD OF DISASTER RECOVERY



Why Preventing Disasters is Better Than Trying to Recover from Them



Introduction

Organizations expend tremendous amounts of time and money to develop and implement disaster recovery (DR) strategies. After all, the risk of business disruption

is great—and costly. In fact, according to research firm Aberdeen Group, one hour of downtime costs the average company \$163,674.14¹. This is only cost associated with lost labor and revenue. It does not take into consideration intangibles such as tarnished brand and customer attrition.

There is also more at risk: Failure to meet industry or government regulations may result in hefty fines; and loss of business-critical data could compound the financial impact significantly. The question is, how much of a financial hit can an organization tolerate? Given Aberdeen's findings, even a few minutes of downtime could mean substantial loss. Yet, most DR plans only address large events such as fire, widespread power outage, or natural disaster. While potentially impactful, these events are rare. Much more common are everyday “disasters” such as server failures, memory meltdowns, and human error. In fact, according to Rick Schuknecht of the Uptime Institute 73% of data center downtime is caused by human error.

In its survey, Aberdeen found that the average organization suffered more than two downtime events in a 12-month period, with some downtime events extending for nearly five hours.² Moreover, the process of recovering took nearly as long. Disaster recovery is simply not an appropriate solution for such frequent and disruptive situations. Instead, organizations should be able to work through system faults or site-level problems and avoid any disruption to business operations entirely.

Disaster Recovery vs. Business Continuity

It is common for organizations to use the terms “disaster recovery” and “business continuity” (BC) practically interchangeably. Yet, they are two very different strategies. Aberdeen provides a useful distinction:

- **Business Continuity** – disaster prevention that enables an organization to maintain business operations during a crisis
- **Disaster Recovery** – the process of restoring infrastructure functionality following a crisis (primarily needed in the absence or failure of a BC plan)

Stratus contends that to address the common server failures and human errors that cause 73% of downtime, organizations must adopt a business continuity strategy that prevents downtime and protects against data loss. Simply put, if a “recovery” is necessary, that implies damage has already been incurred. Prevention is a practical way to avoid costly damages in the first place.

Organizations are taking several steps toward strengthening their BC plans. For example, many are adopting server virtualization for greater agility and data mobility. Virtualization allows multiple virtual machines (VMs) to share the resources of a single physical server. If one VM crashes, it can be independently rebooted without affecting the others. VMs can also be moved easily from one physical server to another, often without disrupting operations. However, if the physical server fails, all the VMs running on it also fail.

Clustering is a common way to address the downtime risk of virtualization, however it comes at the price of increased complexity and cost. Clustering requires highly sophisticated software, along with specialized expertise to write and test failover scripts. Many IT organizations lack the trained staff and financial resources to support this type of approach.

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The Stratus Always-on Solution for Business Continuity

Stratus prevents downtime with an always-on solution that includes built-in virtualization. Leveraging 30 years of high-availability and fault-tolerance expertise, Stratus® everRun® Enterprise is a comprehensive software solution that runs on standard Intel®-based servers and supports Windows® and Linux® operating environments. everRun Enterprise incorporates a full range of capabilities to enable business continuity and ensure data integrity, along with 24/7/365 monitoring and management (Figure 1). The result is a solution that enables organizations to work through everyday faults without disruption, as well as survive site-wide outages or regional natural disasters.

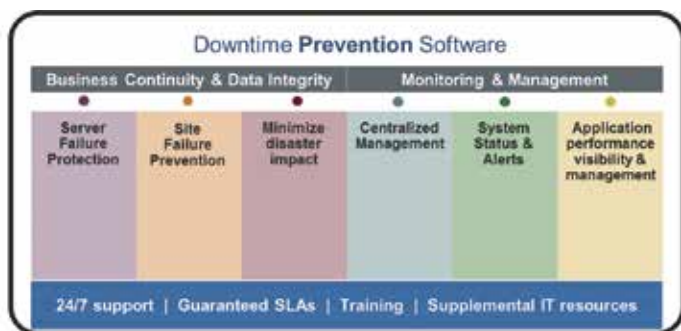


Figure 1: Stratus everRun Enterprise Downtime Prevention Software

Stratus everRun Enterprise deploys quickly and easily without the need for specialized expertise or changes to applications. In fact, the solution installs in a few hours using existing skill-sets and industry-standard hardware. Moreover, it is the only availability solution that can run both single and multi-threaded Windows and Linux applications in fault-tolerant mode, with no changes to the application.

Redundancy and fault tolerance are provided by the Stratus Availability Engine, which mirrors an application on two physical servers (Figure 2). With the Stratus Availability Engine, if one server fails, the application continues to run on the other server with no interruptions or lost data. It preserves all in-flight transactions, including data in memory and cache, so no restarts are necessary.

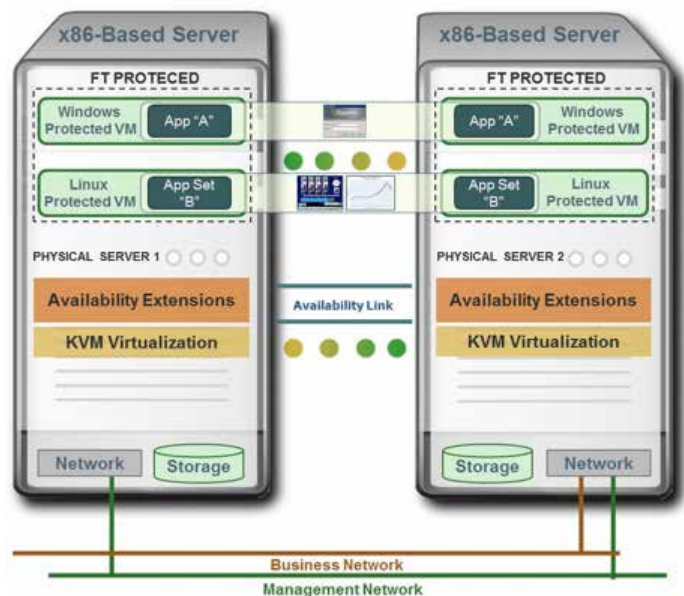


Figure 2 – Stratus Availability Engine Architecture

To protect against site loss due to accidents or natural disasters, Stratus also offers integrated add-on solutions for everRun Enterprise. For example, everRun SplitSite Cross Campus Availability protects against localized disasters with application fault tolerance across physically separated sites using synchronous replication (Figure 3). Data is safely replicated and remains available at all times.

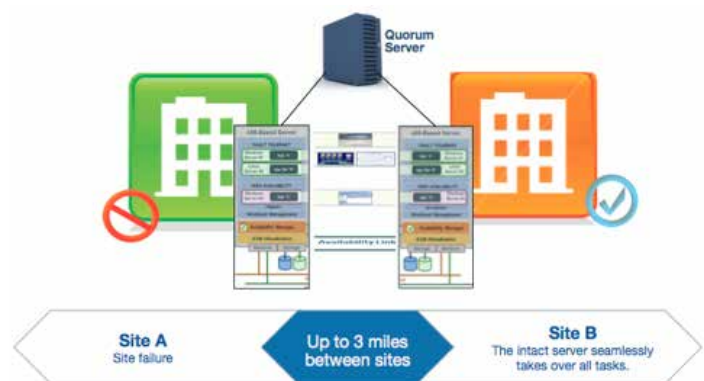


Figure 3 – Stratus SplitSite

For protection over greater distances, Stratus also offers everRun Enterprise Disaster Recovery, which provides integrated asynchronous replication between sites over a wide area network connection. With everRun Enterprise Disaster Recovery, organizations achieve the geographic separation needed to comply with industry and government regulations for offsite data protection. Most important, it ensures business continuity by always maintaining a recent copy of the data at the remote site with the ability to quickly restart applications at a known point in time.

In addition, Stratus OneView provides a centralized administrative console to manage the entire always-on infrastructure. OneView aggregates everRun systems so administrators can build and deploy virtual machines, designate servers for fault-tolerant pairs, select application availability mode, and configure servers across multiple deployments all through a single pane of glass on the local user interface. OneView also enables administrators to monitor and manage business continuity by selecting primary and target systems for failover, managing replication settings, and setting recovery time and recovery point objectives. OneView even collects data from all everRun Enterprise servers and reports on their health, including sending alerts if a problem is detected.

With Stratus always-on solutions, organizations also have the added assurance of remote system and application monitoring by the Stratus support center. Stratus technicians keep watch 24/7/365 and provide immediate notification via email, text, or SMTP alert if any issues arise. In many instances, Stratus can perform remote diagnostics and automatically restart applications if needed. This high level of preemptive problem detection and resolution is all part of a complete downtime prevention solution that is the core of true business continuity.

Conclusion

While disaster recovery is an essential level of business protection, it does not address everyday server faults, drive crashes, and human mistakes, which account for 73% of downtime in the typical organization. Invoking an elaborate disaster recovery plan for these frequent, relatively short-duration events is simply not responsive enough or cost-effective. Instead, organizations can prevent downtime with a business continuity strategy that incorporates virtualization and fault tolerance. Recommended next steps include:

- Review the number of downtime events occurring annually, including average length of each event, longest outage duration, and time to recover
- Calculate the cost of downtime per hour
- Identify critical applications for which downtime would have the most detrimental impact
- Create a business continuity strategy and formal plan, if one does not exist
- Survey current infrastructure capabilities and acquire needed technologies to enable downtime prevention

Stratus everRun Enterprise addresses all sources of downtime — large and small — by simply preventing common system problems that so often cause lost productivity, lost data, and lost revenue. It is a flexible software solution that runs on industry-standard servers and supports a variety of operating environments. everRun Enterprise deploys quickly and allows applications to run without changes. Moreover, it is a trusted solution built on a legacy of running most-critical applications for organizations of all sizes, from small-to-medium sized businesses to Global Fortune 500 enterprises.

With Stratus everRun Enterprise, organizations get a complete, integrated solution for business continuity and disaster recovery that prevents downtime, greatly reducing the risk of costly consequences such as financial loss, tarnished reputation, compromised data, and customer attrition.

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Find out more about Stratus everRun Enterprise

For complete details on how Stratus everRun Enterprise delivers always-on availability and seamless business continuity for enterprise applications, visit www.stratus.com.

¹ Source: Aberdeen Group, Analyst Insight, June 2013

² Ibid.

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About Stratus

Stratus Technologies is the leading provider of infrastructure-based solutions that keep your applications running continuously in today's always-on world.

Stratus always-on solutions can be rapidly deployed without changes to your applications. Our platform solutions provide end-to-end operational support with integrated hardware, software and services. Our software solutions are designed to provide always-on capabilities to applications running in your chosen environment – physical, virtualized or cloud. Our approach and our people enable us to identify problems that others miss and prevent application downtime before it occurs. Multiple layers of proactive diagnostic, monitoring and self-correcting services are backed by a global team of engineers who provide immediate support no matter where in the world your system is located.

If **always-on** is an application requirement, Stratus Technologies has a solution that fits.