

the Availability Digest™

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--- achieving 100% uptime

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The digest of current topics on Continuous Availability. More than Business Continuity Planning.
BCP tells you how to **recover** from the effects of downtime.
CA tells you how to **avoid** the effects of downtime.

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Happy 250th To Us

As we end our sixth year of publishing the Availability Digest, we have accumulated about 250 articles covering a wide range of availability topics, from our Never Again horror stories to our Geek Corner for the mathematically inclined. We have reported on general availability topics and best practices. We have reviewed books and products focusing on high availability. Most importantly, we have covered many high-availability success stories in our case studies.

We actively encourage article submissions from our readers. However, almost all of our articles have been written by me as Managing Editor of the Availability Digest. Only four articles have been submitted by others over the six-year period of our existence, including this issue's XYPRO article describing "Malware as a Service."

I want to once again encourage any one of you who has a topic of interest in the general realm of availability to submit a paper to us. We will work with you to polish the paper if you want. Wouldn't it be nice to include in your resume that you are a published author!

If you are truly averse to writing, but your company needs white papers, technical brochures, or case studies, consider our writing services. You can judge the quality of our work from our Digest articles.

Dr. Bill Highleyman, Managing Editor

Best Practices

Malware as a Service

The cloud has spawned many types of services – Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS), and others. Now add a new one. According to the 2011 Data Breach Investigations Report (DBIR), recently published by Verizon, it's *Malware as a Service (MaaS)*.

Verizon's 2011 DBIR sends a clear message – small companies, watch out. The Internet has become a source of free or low-cost malware that is easily customizable to meet every hacker's needs. Malware as a Service significantly reduces the skill set needed by a cybercriminal to launch automated attacks. The result is a shift in the demographics of information-asset attacks from large corporations to smaller companies.

The DBIR suggests two reasons for this change in attack demographics – the success of law enforcement and the emergence of Malware as a Service. Law-enforcement successes are motivating cybercriminals to look for softer, less risky targets. Malware as a Service is making the effort of attacking smaller companies more attractive.

In this article, we look at the DBIR's path to these conclusions.

[--more--](#)

Availability Topics

Stratus Puts \$50,000 Where Its Mouth Is - Again

Two years ago, Stratus bet \$50,000 that its fault-tolerant ftServer would not go down in the first six months of operation. If you bought a system by the end of February, 2010, and if it failed in its first six months of operation, Stratus would pay you \$50,000 in cash (or in product credit if you wanted). How did it do on this wager? It didn't pay out a cent, thus illustrating its claim to six 9s of availability.

Stratus is now doing it again but with a slightly different twist – virtualization. Stratus is betting \$50,000 that Tier 1 enterprise applications are virtualization-ready and will not fail – provided they are running on Stratus ftServers and VMware's vSphere cloud operating system.

Continuous availability is no longer a technological problem. It is an exercise in balancing system cost with downtime cost. Stratus' ftServer is an affordable starting point to achieve extreme availabilities. Stratus says so – with its wallet.

[--more--](#)

Help! My Data Center is Down! – Part 3: Internet Outages

What good is a data center if no one can talk to it? Today's data centers depend upon the networks that allow users to access them online reliably and with fast response times.

In the "old" days, a company had control over its communication network. It leased lines that it used exclusively for its purposes. If it lost communications, it had direct access to its communication carrier for rapid repair. For critical applications, companies installed redundant communication facilities so that they could continue in operation even in the presence of a communications failure on one of their lines.

Not so true today. More and more, companies are relying on the public Internet to connect their users with company data centers. But how reliable is the Internet? It is not a guaranteed service. It is a best-efforts service.

In our previous articles in this series, we related horror stories of unimaginable power failures and storage failures that took down the best-designed data centers. In this article, we explore some notable Internet failures that rendered data centers useless even though they were otherwise fully operational.

[--more--](#)

Product Reviews

Raima's High-Availability Embedded Database

Embedded processing systems are everywhere. You probably cannot go a day without interacting with dozens of these powerful systems. Software applications embedded in microprocessor chips control airplanes and toasters. They provide the intelligence for our smart phones and GPS devices. Manufacturing robots and patent-monitoring systems depend upon them. The average car today is run by about forty microprocessors with forty million lines of code.

Complex embedded applications often require sophisticated, efficient, and high-performing databases. Raima's RDMe database fulfills this need. It can be configured as an elemental network database requiring less than 400K bytes of memory all the way up to a sophisticated SQL relational database.

RDMe has many features to support high-availability applications with a goal of achieving five 9s availability and 100% data protection. It can be geographically distributed in peer and hierarchical architectures.

RDMe is a mature database. It has been used in hundreds of thousands of embedded installations over the last twenty-five years.

[--more--](#)

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