

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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Connect – HP's largest and most engaged IT professional user community.

Join us at the NonStop Advanced Technical Boot Camp in San Jose, November 3rd through 5th. Sunday's Preconference Day includes in-depth, half- and full-day NonStop education seminars. Monday's and Tuesday's Education Days feature dozens of breakout sessions and vendor talks.

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The 2013 NonStop Advanced Technical Boot Camp Takes Place this November

Once again, the NonStop Advanced Technical Boot Camp, organized by Connect, the Independent HP Business Technology Community User Group, will bring the latest news and technology updates to those attending. The Boot Camp will be held in San Jose, California, USA, from November 3rd through November 5th. It will feature over fifty technical presentations offered by HP staff, customers, and partners. A full range of Significant Interest Groups will meet during the conference as well. Almost thirty NonStop partners will discuss their solutions in the Partners' Pavilion.

This year's Boot Camp promises to be a truly international event. Japan already has committed to a sizeable presence, and many are expected from Europe and the U.K. as well.

This is THE event of the year to network with your peers in the NonStop community. You can find full details for the Boot Camp in our [Best Practices](#) article in this issue of the Digest. It's entitled "2013 NonStop Advanced Technical Boot Camp."

Dr. Bill Highleyman, Managing Editor

Never Again

Nasdaq Taken Down by Software Flaw

Thursday, August 22, 2013, was a bad day for the stock market. The Nasdaq stock exchange went down for most of the afternoon, halting trading in major stocks such as Microsoft, Apple, Google, and Facebook. 3,200 stocks were paralyzed. The outage is being called the “flash freeze” after the 2010 “flash crash,” during which high-frequency computer trading dropped the Dow by 1,000 points for a few minutes

Initially, Nasdaq offered no explanation for the outage. Then over the next several days, active finger-pointing took place between Nasdaq and its major competitor, the New York Stock Exchange (NYSE). Finally, Nasdaq admitted that the outage was caused by a software failure in one of its systems, but one that was aggravated by the NYSE. A heavy burst of messages from the NYSE electronic trading system overwhelmed Nasdaq’s market reporting system, and Nasdaq suffered a failover fault as it tried to switch to its backup system.

Outages such as this latest flash freeze are likely to become more common as exchanges and brokerage firms compete to offer the fastest and most comprehensive services. Exchange systems are only going to get more complex, with more opportunities for headline-setting failures.

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Best Practices

2013 NonStop Advanced Technical Boot Camp

Connect, the Independent HP Business Technology Community, is once again hosting the NonStop Advanced Technical Boot Camp following a very successful conference attended by hundreds last year. The three-day Boot Camp will be held in San Jose, California, from November 3 to November 5, 2013.

The NonStop Boot Camp will feature over fifty presentations on all things NonStop. The talks will be given by HP staff, customers, and partners. The first day, Sunday, will be dedicated to in-depth preconference seminars offered by NonStop partners. The next two days will be filled with the technical presentations and with partner presentations in the Vendor Theaters.

The Boot Camp will take place at the DoubleTree Hotel in San Jose, a short ride (and free shuttle service) from San Jose International Airport. Full information describing the Boot Camp may be found on the Connect Community web site.

The NonStop Advanced Technical Boot Camp is THE annual event for NonStop technicians and managers from around the world to get together for networking and education. If you are a NonStop user, be sure to attend this important event.

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Availability Topics

Active/Active on Commodity Servers

In a recent post to our LinkedIn Continuous Availability Forum, I asked the question, "Why is Active/Active stuck in the mainframe world?" This was one of the most active threads we have had on the Forum, and there were many good points made. All agreed that active/active has not found a place in the commodity server marketplace.

There were two main themes throughout the thread to explain this.. One was the effect on system performance imposed by active/active bidirectional data replication. The other was system architecture limitations that had to be observed in order for an application to be active/active-ready.

Architecting an application to be active/active-ready will certainly add complexity to the project implementation.. However, if the cost of downtime is high, the additional cost and schedule required for an active/active implementation may be well worth it.

Many applications using commodity Windows and Linux servers suffer major costs due to downtime. Though it may be difficult (and perhaps impossible) to modify existing applications to run in a distributed environment, organizations should consider implementing new mission-critical applications to run active/active. The savings in downtime costs may well overwhelm the cost of some architectural complexities.

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Product Reviews

OpenVMS Emulation on PCs

According to HP's latest roadmap, OpenVMS on Integrity will be supported for several years. However, support for OpenVMS on VAX and Alpha machines may potentially end in the next two to three years. Reprogramming critical OpenVMS applications to run on different machines is an expensive, time-consuming, and risky proposition.

One alternative is to run existing OpenVMS applications under emulation on modern-day commodity x.86 PC servers. In this article, we review vtAlpha and vtVAX, a pair of emulators that allow OpenVMS and Tru64 applications to run unchanged on bare-metal or virtualized Intel or AMD x86 servers.

Aged software is reliable. Its bugs have been worked out, its features have been fine-tuned, and its users have mastered it. Good software does not wear out and often does not become obsolete. So why not keep it? vtAlpha and vtVAX allows companies to do just that.

vtAlpha and vtVAX are but one example of existing products that support Alpha and VAX emulation. In addition, there are companies that provide support for current hardware installations of VAX and Alpha systems.

HP continues to support OpenVMS on its Integrity systems. These may be candidates in the future for emulation when HP product support ends.

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Tweets

@availabilitydig – The Twitter Feed of Outages

A challenge every issue for the Availability Digest is to determine which of the many availability topics out there win coveted status as Digest articles. We always regret not focusing our attention on the topics we bypass.

With our new Twitter presence, we don't have to feel guilty. This article highlights some of the @availabilitydig tweets that made headlines in recent days.

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