

the Availability Digest™

Volume 11
Issue 9

--- achieving 100% uptime

September 2016

The digest of 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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The 2016 NonStop Technical Boot Camp will be held in San Jose, California, from November 13th to 16th at the Fairmont Hotel. November 13th are the Pre-Conference Seminars. This is the most comprehensive education and training event dedicated exclusively to the HPE NonStop community. Register on the Connect website at <https://www.eiseverywhere.com/ehome/nonstopbc2016>.

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Airline IT Systems – A Case Study in Availability Problems

Airlines depend heavily upon their IT systems for a myriad of applications – passenger check-in and services, baggage handling, flight scheduling, airport monitors, websites, and apps, among others. However, these systems are built on legacy systems deployed years ago. They are fragile, and upgrading them to meet new customer demands without outages has become an ever increasing problem.

In our last issue, we reported on Southwest Airlines' IT outage due to a failed router that grounded over 2,000 flights. In this issue, we describe Delta Air Lines' IT outage due to a transformer fire that also grounded more than 2,000 flights. British Air recently suffered a similar catastrophe.

In researching material for our articles, we are always on the lookout for trends that do not bode well for an industry or a group of companies. The airline industry is certainly one that is facing difficult challenges in the world of IT.

In addition to writing such articles for the *Digest*, we also write for others. If you have a magazine article or a case study that you would like written but cannot find the time, give us a call. We would be delighted to work with you.

Dr. Bill Highleyman, Managing Editor

Case Studies

HPE Spins Off Software Assets to Micro Focus

HPE has announced that it plans to spin off its non-core software assets and merge them with software company Micro Focus. This move represents an ongoing slimming of HPE by CEO Meg Whitman to strengthen the company's ability to focus on its primary mission – to deliver the promise of hybrid IT in which a company's data centers are efficiently integrated with its private clouds.

The Micro Focus spin-merge deal is valued at \$8.8 billion USD to HPE shareholders. The acquisition of HPE's non-core software by Micro Focus will position Micro Focus to be one of the world's largest software companies.

Earlier in 2016, HPE spun off its Enterprise Services Division and merged it with Computer Sciences Corporation (CSC) in a deal valued at \$8.5 billion USD. This technology services business also was not core to the company's strategy.

[--more--](#)

Never Again

Delta Air Lines Cancels 2,100 Flights Due to Power Outage

On August 8, 2016, a fire in Delta Air Line's data center in Atlanta, Georgia, USA, took down all of its computer operations and caused it to cancel 2,100 flights over the next three days. The company estimates that the outage cost it about \$150 million USD.

The fire was the result of a routinely scheduled switch for testing purposes to the backup generator. The fire caused a transformer to fail, killing one of the two power feeds to the data center.

Power is brought into Delta's data center from two separate utilities through opposite sides of the building to prevent power from being accidentally cut with a backhoe. Each server in the data center has redundant power supplies, and each power supply is supposed to be plugged into different power strips. However, 300 of Delta's 7,000 servers in the data center were not linked to an alternate power source.

[--more--](#)

Best Practices

Yahoo Hack Sets a Record – 500 Million Accounts

Yahoo has announced its discovery of the hacking of 500 million of its user accounts. This is by far the largest corporate breach ever reported. It is ahead of the 2013 MySpace hack of 300 million user accounts. Though the breach occurred in late 2014, Yahoo did not discover it until recently and did not report it until September 22, 2016.

Yahoo is in the process of being acquired by Verizon for \$4.8 billion USD. It is not yet clear whether this breach will affect the pending Verizon acquisition.

The Yahoo hack shows the importance of maintaining appropriate security precautions surrounding corporate data. Not only should facilities be in place to prevent intrusion from malicious outsiders, but monitoring systems should be employed to immediately detect any suspected intrusion.

[--more--](#)

ING Bank Down Ten Hours Due to Fire-Suppression Test

Fire-suppression testing strikes again. In 2010, WestHost, a major web-hosting company, was taken down for days by a fire suppression test, the noise of which damaged many of its hard disks. On Saturday, September 10, 2016, a similar test disabled an ING data center in Bucharest, Romania, for ten hours.

It is common for data centers to use Inergen fire suppression systems, as the Inergen gas is non-destructive to electronic equipment. However, the noise of the release of the Inergen gas is explosive. Coupled with the noise of the sirens, the vibrations can generate hard-disk drive errors and in some cases even damage the disks. During a recent test of its Inergen fire-suppression system, this is exactly what happened to ING. It took ING ten hours to bring its data center back into operation.

[--more--](#)

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.

Now with our 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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