Technical Writing

The articles you read in the Availability Digest result from years of experience in researching and writing a variety of technical documents and marketing content. It's what we do best, and we provide our services to others who value high-quality content created by IT specialists. Ask us about
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Happy New Year to One and All

Tempus fugit – time flies! We are just closing out our twelfth calendar year of issuing the Availability Digest. Our first issue was published in October, 2006. Our article archive, which can be found at http://www.availabilitydigest.com/articles.htm, contains over 500 articles that we have posted. Our articles cover a wide range of topics, from Never Again disaster stories to Best Practices.

We look forward to publishing informational articles in the coming years. If you have a topic that you would like covered, let us know at editor@availabilitydigest.com. We'll do our best to accommodate you.

Our stories in this issue are examples of what we write for the Digest and for others. If you have an article, a case study, or a white paper that you would like written, we encourage you to contact us. We also provide consulting services and seminars on high- and continuous availability.

Dr. Bill Highleyman, Managing Editor

Never Again

Fire Takes Down Atlanta Airport

Hartsfield-Jackson Atlanta International Airport (Atlanta, Georgia, USA) is the busiest airport in the world. It accommodates over a quarter million passengers daily.

On Sunday, December 17, 2017, the airport lost all power, including its backup power source, due to a fire. The fire began about 1 PM in an underground tunnel that carries seven power lines from two sources to the airport. The fire destroyed the power lines, plunging the airport into darkness. The airport was out of service for eleven hours. Flights all over the world had to be canceled as they could not be cleared into Atlanta. This left planes improperly positioned for their scheduled flights and created days of confusion for passengers.

[--more--](#)

Best Practices

Keylogger Found on HP Laptops

A 'keylogger' is a keystroke recording tool. It records covertly every keystroke that a user makes on his laptop; and the keylogger can, if desired, send the entered text to a remote location. The person using the keyboard is unaware that his actions are being monitored. Keyloggers are most often used for the purpose of stealing passwords or other confidential information. A keylogger can be implemented via either software or hardware.

Security researcher Michael Myng has identified keylogging code in HP laptops. Further investigation by HP revealed that the keylogging code is embedded in the Synaptics touchpad drivers of hundreds of models of HP laptops dating back to 2012.

I use an HP laptop. Am I concerned? I should be, and I am. However, it seems that there is no evidence that the keylogger has ever been put into play to record and send confidential information.

[--more--](#)

Swapping Data Replication Engines with Zero Downtime

A mission-critical application often runs in redundant systems to ensure that it is always available to its users. Such a system may be configured as an active/passive pair, in which one system runs the production workload while the other system is standing by, ready to take over application processing in the event that the production system fails. Alternatively, the system can be configured as an active/active architecture, in which both systems are processing transactions. A data replication engine is used to keep the databases of the two systems synchronized.

Sometimes, companies may decide to change data replication engines or to upgrade to a new version of the existing data replication engine. With mission-critical applications, it is necessary to do so without taking the applications down – a zero downtime migration (ZDM). Furthermore, it is imperative that a backup copy of the database is always available, ready to take over if the production database fails. The backup database must be kept synchronized with the production database while the data replication engine is being migrated.

In this article, we describe how a data replication engine can be changed without taking down either applications or the backup database.

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Availability Topics

Cloud Resiliency

Reliable and resilient application architectures are fundamental to today's data centers. *Reliable* means that the failure of a system component is rare. *Resilient* means that if a component does fail, it can be restored to service or that its services can be transferred to another operational component quickly. In today's data centers, reliability and resiliency are achieved by incorporating redundant servers whose databases are kept synchronized via data replication. In this way, the backup server is immediately ready to take over processing should the production server fail.

The emergence of cloud computing has dramatically changed the way we think about application resiliency. When an application is running in the cloud, thin provisioning and auto-scaling maximize the efficiency of the resources made available to the application. If an application's workload should suddenly increase, the cloud immediately can assign additional resources to it to handle the new workload. If the application's workload decreases, the cloud can recover unneeded resources from the application.

Furthermore, spinning up secondary and tertiary disaster-recovery environments is easy, as the cloud simply assigns the resources necessary to these environments. This provides a level of resiliency not found in typical data-center environments.

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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.

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.

[--more--](#)

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