the *Availability Digest*

@availabilitydig – Our October Twitter Feed of Outages
October 2016

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.

Meteors, disasters and the diesel generators

In August of 2003, it was just after 4 pm. I was leaving a vendor event, where I was watching a professional tennis match. I was looking forward to the weekend ahead with a light Friday on the schedule. I could not have known how wrong I was, and then my cell phone began to ring. My boss was on the phone. The street lights ahead of me had gone out. That wasn't the harbinger that in retrospect it should have been. Boss: "Get in to the office. The power has gone out." Me: "For the office?" Boss: "Worse." Me: "Toronto?" Boss: "Worse." Me: "Ontario?" Boss: "All of it." The phone then went dead and with it the northeastern part of North America went dark. It would be a good seven hours before any lights would come back on again.

https://t.co/OSwkzHu53L

SA blackout: why and how?

South Australia and its 1.7 million residents were left without power on Wednesday evening, 28 September, following severe storms. SA Premier Jay Weatherill confirmed two tornados destroyed three elements of critical infrastructure, which led to the power system protecting itself with a shutdown. "Essentially what happened is a massive set of power was removed; and when that happens, it trips the system."

https://t.co/Wp4TZPhFHu

From the Availability Digest: HPE Spins Off Software Assets to Micro Focus

HPE now has announced its plans to spin off its non-core software assets and to merge them (a spin-merge) with software-company Micro Focus. This move represents a strategic slimming of HPE by CEO Meg Whitman to strengthen the company's 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 spin-merge deal is valued at $8.8 billion USD to HPE shareholders.

https://t.co/SVPswQfYGH

Disaster Recovery Planning Actually Starts with Planning to Fail

For disaster recovery done right, failure is not only an option – it's mandatory. Despite the obvious costs of unplanned downtime and the damage done to brands, many companies end up caught with either an inadequate disaster recovery (DR) plan or none at all. Market researcher IDC estimates that as many as 50 percent of organizations have DR plans that fall short of the mark. To establish the foundation of a thorough DR plan, you need to accept five tenets and assumptions. The first is the following: "Planning to Failover is Planning to Fail."

https://t.co/yU7LBHczop

Microsoft is Going Green (MSFT)

Microsoft Corporation has earned raves for doing something for the environment: the company pledges to use 50% renewable energy by 2018, an incredible feat considering that the firm recently opened new data centers in Germany. The software giant plans to go green by boosting energy efficiency of its data centers, working on better energy storage solutions, as well as conducting regular maintenance when using intermittent energy sources such as solar, and wind.

https://t.co/UuDlUAyzxR

Not willing to risk superstorm "shop of horrors" again, NYC neighborhood plans microgrid.

It was Superstorm Sandy that prompted Paul Garrin, founder of the Beyond the Grid microgrid project, to assemble a team of experts and community members to create a community microgrid in the city of New York's Lower East Side. The team won $100,000 in the first round of funding in the New York Prize competition, a $40 million competition to help microgrid development in the state.

https://t.co/lG3JlUrayh

Puerto Rico struggles after massive power outage

Frustration mounted across Puerto Rico in late September amid record-high heat as the U.S. territory struggled to restore electricity more than two days after a power plant fire caused an island-wide blackout when it shut down an aging utility grid. The blackout affected the entire island of 3.5 million people.

https://t.co/OpSYYIqKcE

A Loud Sound Just Shut Down a Bank's Data Center for 10 Hours

We all are aware of the dangers that can bring down a data center - human error, fire, power issues, floodings, earthquakes, and so on. However, you probably were not aware that excessive noise can damage hard drives, which as a result can bring down a complete datacenter! Technical people and customers of ING Bank in Romania recently discovered the effect of sound on hard disks. ING Romania performed a fire extinguishing test in the Bucharest datacenter on 10 September. Staff of ING opened the cylinders to dump the inert gas into the datacenter. However the noise of the gas dump was at such level that the vibration damaged many hard drives and resulted in servers being unavailable to customers.

https://t.co/DR7YcMZL78

ASX blames hardware failure for Monday's technical glitch

Five days after the technical glitch which halted trading on Monday, 19 September, the Australian Stock Exchange (ASX) blames a complex and unprecedented hardware glitch for the outage. The malfunction caused a complete database failover to the disaster recovery system (DRS). However, not all parts of ASX Trade successfully connected to the DRS database.

https://t.co/F2bBiIo3kW

More inspections planned after 911 failure

Sprint Wireless leaders said they will put new measures in place to avoid another outage that prevented customers in August from dialing 911 on their mobile phones. Sprint has explained that a defective part prevented Sprint Wireless from sustaining wire line service during a PEPCO power outage Aug. 16. A switch, or multi-floor device that enables the wireline and mobile services to work, failed after the tertiary, or third, backup power failed. According to a Sprint representative, "This particular switch failure was a very unusual circumstance."

bit.ly/2d3DIM0

'Vodafail' plagues network

A mass Vodafone outage plagued customers across Australia in late September, with customers left unable to make calls, text or use the Internet. The outage lasted about seven hours in total, with the 'Vodafail' hashtag trending on Twitter, reminiscent of the telco's widely publicised network issues of 2010, 2011 and 2012. Vodafone put the outage down to a "router issue."

https://t.co/RmUMvD10hB

Your dentist is probably using horribly insecure patient software

You might now have one extra reason not to want to go to the dentist. Advisories have been issued over three sets of software commonly used by dentists after a security researcher found hard-coded credentials that could give an attacker full access to patient data.

https://t.co/kXdd0YqZH3

National Grid on the Future of Storm Resiliency

With the peak of hurricane season right around the corner, storm resiliency is a top concern at National Grid. As global climate change continues to increase the frequency and intensity of storms during hurricane and winter seasons, we must improve crisis preparedness and response. We need to ensure that emergency services have the power they so critically need and that companies like us can focus on getting customers and businesses back up and running as quickly as possible.

https://t.co/fPoqpV3yNY

The birth and troubled childhood of an American supergrid

It may seem ironic that the pioneer of projects that could lead to the sharpest increase in emissions-free electricity in the United States started in Wyoming, the state that leads U.S. production of coal, ranks in the top 10 for natural gas production, and pumps 2 percent of the nation's oil.

https://t.co/YuDhoSCIgQ

What's your IT department's strategy for website downtime?

Website disruptions are more than a mere annoyance. They can quickly add up, leading to declines in productivity and revenue. These website errors not only affect your end-users, they also pull key players away from other projects to help put out the fire to avoid major profit losses.

https://t.co/IQS2wthrRi

Grid Assurance: a new alliance to protect the US transmission system

Six US energy giants have allied to establish a new company to maintain a national inventory of grid equipment so that vital transmission systems damaged by attacks or natural disasters quickly can be restored. The modern electric grid loses power 285% more often than the one in 1984, when records began, at an annual cost to businesses of USD $150bn. The root causes include aging infrastructure, a lack of investment in grid modernisation, and policy gaps at local and federal level, exacerbated by increased energy demand. Add to that threats from terrorism and climate change, and it is no surprise that federal agencies and policymakers have identified enhancing transmission system resiliency as a national priority.

https://t.co/QNIoQS59kd

How solar storms put the world on the brink of nuclear war in 1967

A new research paper says a 1967 solar storm on the sun, which can cause a spectacular northern lights show, nearly led to a nuclear war at the height of the Cold War.

https://t.co/MQ35dy2xso

Undersea cables keep global enterprise networks afloat

Subsea cabling is out of sight, but it shouldn't be out of mind. Many organizations don't realize just how dependent they are on underwater fiber to stay online and in business.

https://t.co/jSwXwQowEV

Not availability-related, just an FYI. Tropical vs. Non-Tropical: What's The Difference?

A tropical (or warm core) cyclone (area of low pressure) usually forms over warm waters in the tropics. Air rises rapidly around the edges of the center of the storm. Sinking air in the center of the storm heats up the air, so the storm has warm temperatures from the surface all the way up to high levels of the atmosphere. Hurricanes and tropical storms are (warm core) tropical cyclones. A non-tropical (or cold core) storm has the coldest temperatures in the center of the storm. Temperatures cool as you move higher in the atmosphere and there is a trough at the highest levels. Unlike tropical (warm core) storms, winds are not as concentrated near the center of the storm but can spread out for hundreds of miles from it.

https://t.co/lHTlcRa4Sm

The emerging Darwinian approach to analytics and augmented intelligence

When utilized well, cognitive tools help humans identify patterns and surface previously undetected cyberattack patterns on your company, customer buying behavior or predictive signals of catastrophic equipment failure based on readings from sensor-enabled devices. But as your business inevitably becomes more algorithmic, you're faced with the next problem: Many algorithms, once discovered, have a remarkably short shelf-life. Algorithmic excellence in analytics requires more than just great math. You must also become as agile at killing off weak or vanquished algorithms as a NASCAR pit crew is at changing worn tires.

https://t.co/bfnP7Q6S3v

Outages to continue, 3 power plants still down

Guam Power Authority lost about 60 percent of its power-generating capacity Tuesday, 6 September, causing outages and traffic jams when signal lights went dark. The problem started when Cabras 1 shut down on Sept. 1, followed by Cabras 2's failure around 10 a.m. Tuesday. Both had the capacity to generate 66 megawatts each and combined could supply nearly half of what the island needs during peak times. Hours later on Tuesday, GPA confirmed two power generating units owned by Marianas Energy Co., a major supplier of island-wide power, also stopped working.

https://t.co/ocQDFa5UR6

Google gets faster in Asia as 26 Tbps undersea cable extends to its largest data center in the region

In 2014, a six-member consortium of companies consisting of Google, China Mobile International, China Telecom Global, Global Transit, KDDI, and Singtel, unveiled plans to create a 9,000 km transpacific undersea cable system spanning from Oregon on the west coast of the U.S. to Japan. This year, the cable — which is designed to deliver 60 terabits-per-second (Tbps) of bandwidth across the Pacific — was open for service. Now, this FASTER cable system has been extended from Japan to Taiwan, which just happens to be the home of Google's largest data center in Asia.

https://t.co/qhTjuDrXf5

What Facebook Has Learned from Regularly Shutting Down Entire Data Centers

Facebook has one of the boldest approaches to testing its infrastructure resiliency. The Facebook data center team regularly shuts down entire sites to see how its application will behave and to learn what improvements can be made. The idea to do these kinds of stress tests was born after Hurricane Sandy wreaked havoc on Internet infrastructure on the East Coast in 2012. Facebook's head of engineering and infrastructure recently shared some of the big lessons that the company has learned from its "fire drills."

https://t.co/AwRxGw9bjO

British Airways Computer Problems Cause Widespread Delays

British Airways said its flights were gradually returning to normal on Tuesday, 6 September, after a still-unexplained computer problem disabled the airline's self-service check-in kiosks for several hours at a number of international airports, causing significant delays.

https://t.co/MuV6jgdD6N

How to keep the lights on amid global warming

"When I dream about Hurricane Katrina (and I still do), it always starts with the refrigerators. Kenmore, GE, Whirlpool, Frigidaire, Amana. Hundreds of thousands of these abandoned appliances stood duct-taped shut on the curbs and yards of homes throughout New Orleans. Many were spray-painted with whimsical or forbidding messages. 'Funky. Not in a good way.' 'Free Beer and Maggots.' 'Smells like FEMA.' 'The Bowels of Hell await you within!!'

https://t.co/NFneQkY4qP

One Data Center Standard to Rule Them All?

Several years ago, TechXact founded an organization called International Data Center Authority to develop a standard that would give companies a way to assess the performance of their IT infrastructures, starting with power and cooling infrastructures and ending with software applications the infrastructures are built to support. The technical committee IDCA put together to develop the standard consists of senior engineering and operations staff from several well-known companies, including eBay, LinkedIn, and AIG, an architecture branch chief who oversees cloud and hosting for US Courts, as well as TechXact's own employees. IDCA's self-imposed deadline to deliver the standard is about four and a half months away.

https://t.co/fINui0Cpd1

SSP IT Failure Cripples Insurance Brokers

On 26 August, a power outage in the Solihull area (U.K.) hit a major data centre that was hosting the systems for SSP. The power outage caused damage to discs in their Storage Area Network (SAN) and affected all customers hosted in the data centre, rendering them unable to use their online systems to process quotations or insurance certificates. The provider assured customers that they were working around the clock to get systems back to normal as fast as possible. By 1 September, customers were yet to have access to their systems when the SaaS Provider experienced a further hardware failure in its storage facility, which stemmed from the original power failure, and set back its timeline for getting service restored.

http://www.planb.co.uk/ssp-it-failure/

Gabon shuts down Internet for four days in biggest nationwide blackout ever

Gabon's government shut down its Internet for a full four days following protests over President Ali Bongo's re-election to presidency. The country's networks were plunged into darkness for 104 hours, making it the longest nationwide outage since Libya during the Arab Spring protests in 2011.
The switch was flipped just before 9pm on Wednesday, 31 August, with Gabon Telecom cutting off connection to 91% of the country's IP addresses and mobile Internet as violence erupted in the streets of the capital, Libreville, over claims of electoral fraud. The only remaining systems reported to be operating were connections to satellites.

https://t.co/Fevt3Fzcs4