

# the *Availability Digest*

[www.availabilitydigest.com](http://www.availabilitydigest.com)  
[@availabilitydig](https://twitter.com/availabilitydig)

## **@availabilitydig – Our November Twitter Feed of Outages** November 2017

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.



### **How forgetting to renew a domain name cost \$3m**

GoDaddy does it. Name.com does it. Namecheap does it. Amazon Web Services does it. HostGator does it. The wackily named CrazyDomains.com.au isn't all that crazy: it does it, too. They all offer auto-renewal of domain names. In fact, it's hard to find any registrar that *doesn't*. But perhaps Sorenson Communications found one. Or then again, perhaps employees' calendars all broke down simultaneously and failed to send reminders that the domain renewal was coming due. However, it happened, the Utah-based telco neglected to renew its domain. So, as these things go, it slipped silently off the Internet.

<https://t.co/SbB6rtTpeO>

### **Air National Guard restores FAA capabilities for Puerto Rico**

A week and a half post Hurricane Maria, it is hard to tell the Federal Aviation Administration was at "ground zero" and in the dark with no power or communication capabilities. Now, the air traffic flow at San Juan Luis Munoz Marin International Airport is back to normal thanks to the Air National Guard stepping in to help the FAA and to restore air operations for the island.

<https://t.co/3ochE2tlBZ>

### **The Sky Fell in Puerto Rico. The Microgrid Argument is not Chicken Little**

Hurricane Maria showed that warnings about the vulnerabilities of centralized electric grids – and the need for microgrid development — are not overstated. When the hurricane hit the U.S. territory on September 20th, it knocked out power to 100 percent of 1.57 million accounts served by the Puerto Rico Electric Power Authority (PREPA), the island's utility. Things were not much better 10 days later — 95 percent of the accounts remained without power. Worse, the destruction is so massive, with 80 percent of the island's transmission and distribution system destroyed, that power may not be fully restored to the island's 3.4 million people until next year. In fact, the Puerto Rico Electric Power Authority (PREPA), the island's utility, is warning that 50 percent of customers may still be without power two or three months from now.

<https://t.co/jXhy9PCHOz>

## **Oracle debuts autonomous cloud database for data warehouse workloads**

Oracle has launched an autonomous cloud database capable of patching cybersecurity weaknesses on its own accord. Oracle Autonomous Database Cloud uses machine learning to eliminate human maintenance and error, offering self-driving, self-scaling and self-repairing database functions. The company claims performance 10 times faster than and half the cost of Amazon's RedShift system. The autonomous cloud service offers customer simpler service and instant elasticity. The database comes with a 99.995% availability guarantee.

<https://t.co/0POnC5qvd3>

## **Grounded NOAA Hurricane Hunter Plane Has No Backup With 2 Months of Hurricane Season Left**

With more than two months of the Atlantic hurricane season left, NOAA's Hurricane Hunters have grounded the Gulfstream IV aircraft that flies over storms at high altitudes to gather data.

"Unbelievably, there is no backup," Florida Sen. Bill Nelson (D-FL) told the Palm Beach Post. "I've sounded the alarm on this until I'm blue in the face. The administration simply must act."

The plane, nicknamed Gonzo, suffered a series of three malfunctions in a period of eight days.

<https://t.co/kn9cGf1YRx>

## **Equifax's disastrous Struts patching blunder: THOUSANDS of other orgs did it too**

Thousands of companies may be susceptible to the same type of hack that recently struck Equifax.

The Equifax breach was the result of a vulnerable Apache Struts component. Software automation vendor Sonatype warns that 3,054 organisations downloaded the same Struts2 component exploited in the Equifax hack in the last 12 months. Additionally, more than 46,000 organisations downloaded versions of Struts and/or its sub-projects with known vulnerabilities despite perfectly safe versions being available. Altogether, upwards of 50,000 organisations might be vulnerable to attack.

<https://t.co/L0oYUQhpPp>

## **What's the Difference between Reliability and Resilience?**

The ability to keep the lights on in the event of a cyber-incident is a major concern for the electric sector. Power grid resilience and power grid reliability are both frequently, and often interchangeably, referenced in conversations about keeping the lights on. This begs the question: what is the difference between reliability and resilience? This brief describes the difference between reliability and resilience in relation to cyber-incidents and the power grid.

<https://t.co/UtGSa3Eo57>

## **AI to Help Power Grids Resist Disruptions**

The U.S. Department of Energy will explore whether artificial intelligence can help electric grids handle power fluctuations, avoid failures, resist damage, and recover faster from major storms, cyberattacks, solar flares and other disruptions. A new project, called GRIP, for Grid Resilience and Intelligence Project, has been awarded up to \$6 million over three years by the U.S. Department of Energy. GRIP is the first project to use artificial intelligence (AI) to help power grids deal with disturbances. It will develop algorithms to learn how power grids work by analyzing smart meter\_data, utility-scale SCADA (supervisory

2

control and data acquisition) data, electric vehicle charging data, and even satellite and street-view imagery.

<https://t.co/GUrL1AKfHp>

### **HPE's Spaceborne computer successfully powers up in space**

*Mark Fernandez, HPE Americas technology officer, discusses the successful launch to and installation of HPE's Spaceborn Computer on the International Space Station. The computer is the first high-performance commercial off-the-shelf (COTS) computer system to run one teraFLOP in space.*

<https://t.co/FNSho0T8Qz>

### **Microsoft Debuts Azure Availability Zones to Reduce Outage Risk**

Microsoft wants to take the worry out of deploying critical applications on its Azure cloud computing platform with Azure Availability Zones, a new high availability service. "Availability Zones increase Azure's resiliency capabilities and broaden options for customers to choose the business continuity solution that is right for their organization," explained Tom Keane, head of Global Infrastructure at Microsoft Azure. "We've also designed Availability Zones to give customers great confidence in delivering services with an industry-leading, financially-backed 99.99 percent virtual machines uptime SLA [service-level agreement] when generally available."

<http://bit.ly/2hu15ji>

### **How did cell carriers hold up during Irma? They don't have to tell you**

On the day after Hurricane Irma tore through Florida, more than one in four cellphone towers in the state were out of service, a worse knockout than hurricanes Sandy and Harvey inflicted. But if you want to know how well each cellphone carrier handled the storm, you're out of luck. A 4-year-old proposal to require America's cell carriers to publicly disclose how well they withstand and recover from major storms has languished.

<https://t.co/hR9JBGf5Jw>

### **Vodafone internet DOWN: Broadband services hit with SEVERE server issues across UK**

Vodafone Internet customers suffered an impromptu Broadband outage in late September. The issue affected users up and down the UK with no specific region hit.

<https://t.co/nFeneMkiF5>

### **Hackers exploit vendor trust in worm-like malware attack on CCleaner**

CCleaner, a popular system maintenance tool for Microsoft Windows devices, had a malicious malware implanted in its software, according to security researchers at Cisco Talos. The attack is said to have impacted 2.27 million users.

<https://t.co/ViO1bFc5jO>

## **14 Challenges/Strategies When Upgrading Your Legacy Platforms**

As the technology your business currently uses outpaces itself, there comes a time when you need to integrate a new platform into your company operations. With 2017 showing a flat projection for IT spending at most companies, now may not be the best time to add new IT initiatives. But it may be the ideal time to incorporate new technologies into your legacy systems to modernize and update them.

<https://t.co/rOEyoPLeAG>

### **Puerto Rico's power company was already bankrupt. Then Maria hit.**

Hurricane Maria has dealt a new blow to Puerto Rico's bankrupt electric company - causing widespread power outages and imposing costly repairs on a utility that was already struggling with more than \$9 billion in debt, poor service and sky-high rates. And that means more hardship for local residents, whose electric rates are already more than twice the national average.

<https://t.co/imGtT9J3FU>

### **Veeam helps BankservAfrica save on backup.**

Following its investment in new data centres and disaster recovery strategies, BankservAfrica, the largest automated clearing house and payment system operator in Africa, contracted Veeam® Software to modernise its backup and data protection systems. Processing billions of transactions annually for 23 banks and their 27-million customers while maintaining the safety and security of the South African National Payment System, BankservAfrica aims to provide real-time, continuous payment processing to ensure participating banks can service their customers around the clock.

<https://t.co/vWYW7lkaCQ>

### **New-look \$10 note rejected by vending, poker machines and supermarkets**

The new-look Australian \$10 note has been spat out by vending machines, self-serve checkouts, and poker machines in what has turned into a repeat of last year's \$5 bill roll-out disaster. The brand new \$10 note complete with high-tech security features was released in late September, despite fears it would be rejected by machines across the country. When the new banknote was purchased from the Reserve Bank of Australia, it was subjected to tests across Sydney. And while it passed some, it failed most.

<https://t.co/jZ3FEQxe8p>

### **Smarter networks make smarter airports**

Historically, airport operators have deployed and managed separate networks to support multiple use cases at the airport – including multiple operational wireless and wireline solutions as well as networks to support passenger services. These networks have typically been deployed at different times, built with different technologies, and managed by different departments. Is it any surprise that the network infrastructure has become unwieldy to manage and costly to operate? In light of this reality, airports are increasingly looking to move to a single, converged network to support all of their communication needs with strict data traffic segregation capabilities, service prioritization and predictable performance independent of scale.

<https://t.co/8hQS8AEEtI>

## **Beyond Lights-Out: Future Data Centers Will Be Human-Free**

The idea of a “lights-out” data center is not new, but it is evolving. Operators such as Hewlett Packard Enterprise and AOL have been long-term proponents of remote monitoring and management to reduce, or entirely replace, the need for dedicated on-site staff. The most well-known current advocate is probably colocation provider EdgeConneX that has integrated a lights-out approach into the fabric of its business.

<https://t.co/RDyeXh5pKf>

## **The Internet's security key is about to change, and you could get locked out**

For the first time ever, the Internet Corporation for Assigned Names and Numbers (ICANN) is about to change the cryptographic keys that help secure the system which helps organise the Internet with the allotment of domain names such as .com, .org and .net - the Domain Name System (DNS).

This will ensure a safer Internet. But if network operators, Internet service providers and small networks do not make a small upgrade to their systems, they could end up getting locked out of the Internet, when the keys are changed on October 11, 2017.

<https://t.co/yoYewPzz3u>

## **The First Major Network Crash, the Four-Hour Collapse of the ARPANET**

On October 27, 1980, the Arpanet collapsed. The ARPANET, predecessor of the modern Internet, was set up by the Department of Defense Advanced Research Projects Agency (DARPA). Initially, it linked four sites in California and Utah and later was expanded to cover research centers across the country. The network failure resulted from a redundant single-error detecting code that was used for transmission but not storage and a garbage-collection algorithm for removing old messages that was not resistant to the simultaneous existence of one message with several different time stamps. The combination of the events took the network down for four hours.

<https://t.co/kzXZpkZSgF>

## **The Equifax Breach and 5 Years of Missed Warning Signs**

In a keyword search through 5 years' worth of Equifax annual reports, terms that would suggest adequate risk awareness, such as *risk management*, *cyber risk*, *privacy*, *data security*, *data breach* or *information security*, barely appear at all. In fact, the term *cyber risk* does not appear once in any of the credit bureaus' annual reports in the last 5 years.

<https://t.co/E1iG2UVCLB>

## **Why You Need to Eliminate Your Single Point of Failure**

A single point of failure, SPoF, in your business can literally devastate your business overnight; yet many business leaders spend little or no time at all protecting their business against these risks! In 1995, a rogue trader brought down Barings Bank through fraudulent, unauthorized, speculative trading. The bank, which had been established in 1762, had a single point of failure and did not have controls in place to protect itself. Its SPoF destroyed it!

<https://t.co/TKvEKnYlbn>

## **What If Your Colo Fails: Preventing Disaster**

Although a data center network is designed not to fail, it does happen. When it does, it puts data owners in a precarious situation—especially when it's a colocation facility (colo) that goes down.

As recent situations have illustrated, the ramifications of a colo outage can be devastating. Case in point: two outages in U.K. data centers in July operated by one of the world's largest communications and colo providers reportedly took down 10 percent of voice and data traffic in and around London for more than four hours. Unfortunately for the businesses who operated out of those data centers, their mistaken assumptions that they had secured their data in a stable environment led to consequences.

<https://t.co/8b2yOQihJx>

## **Auckland Airport's Jet Fuel Supply Vulnerability is Well Known and Serious**

For years, different companies have been warning the New Zealand government that Auckland has a single point of failure when it comes to getting fuel. A single ten-inch pipe is responsible for getting most all fuel into New Zealand's largest city. Not just aviation fuel – petrol and diesel as well. In the middle of September, a farmer digging up swam kauri damaged the pipeline; and it could be out of action for weeks.

<https://t.co/vveYUwVcM4>

## **Safeguarding the Virtual Infrastructure from a Single Point of Failure**

As Mark Twain said, "Put all your eggs in one basket and then watch the basket," defines the clear implementation of redundant techniques to the virtual infrastructure, where the virtual infrastructure is a basket. It must contain the ability to boost the capacity of multiple hardware or software systems to function as a single logical unit with no signs of Single Points of Failure.

<http://bit.ly/2inco0s>

## **Interesting article - "A Flaw in the Design"**

David D. Clark, an MIT scientist whose air of genial wisdom earned him the nickname "Albus Dumbledore," can remember exactly when he grasped the Internet's dark side. He was presiding over a meeting of network engineers when news broke that a dangerous computer worm — the first to spread widely — was slithering across the wires.

<https://t.co/oofDYjU6ef>