the Availability Digest

@availabilitydig – Our September Twitter Feed of Outages
September 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.

America's first offshore wind **farm is off Rhode Island coast**

A just-completed project, though relatively tiny, off the coast of the U.S. state of Rhode Island is at the forefront of a sea-based transition to renewable energy.

https://t.co/AfivYvfInT

Gain value from your move to the IoT **with continuous** availability**. John Fryer explains how in this blog post**

It's often difficult to fully understand the impact of modernizing an automation system and how an investment in fault-tolerant platforms from Stratus, along with updated Programmable Automation Controllers (PACs), can deliver rapid results. For Columbia Pipeline Group, the answer is approximately $2.3 million in 2014 alone, even with a partial pipeline upgrade. Using the Stratus ftServer platform, which delivers high availability in excess of five nines (99.999%), Columbia has achieved an overall system-wide availability level of over 99.5%.

https://t.co/Zl5IeNYOjs

From the Availability Digest: Ever see the 1964 thriller "Failsafe"? What one character said then is so true now

It is certainly true that the more complex a system is, the more likely it is that it will provide erroneous outputs. Computers are a major class of this sort of system. Because their actions are governed by the humans who program them, and because humans are not fail-safe, neither are computers. Though the movie "Failsafe" was not about computers per se, it emphasized the frailty of humans in complex situations.

https://t.co/1e8d2Zl1GS

Forget Software—Now Hackers Are Exploiting Physics

Practically every word we use to describe a computer is a metaphor. "File," "window," even "memory" all stand in for collections of ones and zeros that are themselves representations of an impossibly complex maze of wires, transistors and the electrons moving through them. But when hackers go beyond those abstractions of computer systems and attack their actual underlying physics, the metaphors break.

https://t.co/n3LclWNbwM

Unreliable Wireless Network Left First Responders High And Dry During Louisiana Floods

Having already endured Hurricanes Katrina and Rita, the U.S. state of Louisiana has once again suffered catastrophic floods. During the two hurricanes, all of the commercial wireless networks went down amid the devastation and were no more available for first responders than they were for citizens trying to make and receive calls to loved ones. During the current flood, while some commercial wireless networks have fared better than others, the communications failures during this month's flooding are a reminder yet again of why our first responders need a resilient, reliable and purpose-built wireless network.

https://t.co/a7oSVB7ZCM

Line-of-Sight Antenna Paves New Data Routes for NYC

Almost a century ago, it was the very symbol of technology and ingenuity: the giant transmitter tower beaming signals into the heavens. The crown jewel of the Empire State Building has always been an antenna. Today, we've renewed the word "wireless" into the common vernacular; no longer does it sound antiquated, like "microcomputer," "Hayes modem," or "MTV music video." And in the latest signal that everything old is new again, the biggest news in New York City data centers this week may be the completion of a very large antenna complex.

https://t.co/3JOmmKTRS8

Why America's newest stock exchange is preparing for failure

America has a new stock exchange. IEX, the company founded by the heroes of Michael Lewis' book "Flash Boys," is in the process of launching as an exchange after winning regulatory approval in July. This gradual process started on Friday, August 19th, and involves slowly adding stocks until the market is fully up and running by September 2nd. IEX built its systems from the get-go to compete with one another in an approach borrowed from NASA. IEX calls this approach "Active-Active," and the simple way to explain it is that there are two boxes full of tech; and each thinks it's the only box. Whichever one gets there first gets the job, and the second result is ignored.

https://t.co/orEu7NEIA7

DC 911 outage caused by equipment failure, but investigation continues

An equipment failure knocked out Washington, D.C.'s 911 service for more than 90 minutes overnight on Sunday, 28 August. The outage began about 11:35 p.m. and lasted until 1:15 a.m. In that time, calls were routed to two 10-digit phone numbers established as a backup. Officials ruled out the possibility that the outage was a result of an outside hack or malicious activity but do not know why the equipment failed.

https://t.co/77ee607MhK

The DNSSEC master key securing DNS is about to change. Should we be worried?

This October, a group of up to seven VIP cryptographic keyholders will meet in a windowless secure room in a building in El Segundo, California (USA). Few beyond the retiring world of Internet engineering have heard of this group let alone understand the significance of what they get up to. With no fanfare and barely any publicity, they have been meeting like this four times a year since 2010 in get-togethers that turn out to matter hugely to the security of the Internet's Domain Name System (DNS). Organised by Internet authority ICANN, the October meeting or 'ceremony' will be the most important yet. For the first time since it was adopted in 2010, the master key (called the Root Zone Key Signing Key or KSK) that lies at the heart of the Domain Name System Security Extensions (DNSSEC) system used to secure DNS queries will be changed or 'rolled over'.

https://t.co/aPf44c58Ri

To Storm-Proof Hoboken, a Microgrid

With 80 percent of her city underwater and the power out, Hoboken (New Jersey) Mayor Dawn Zimmer climbed the stairs to a senior apartment facility and found a woman, alone and in tears. She'd been trapped in her home, unable to leave the building without elevator service, and she needed her medication. "They left us in the dark," she said. Superstorm Sandy in October 2012 gave Zimmer a new priority for her administration—preparing this New Jersey city of 50,000 across the Hudson River from Manhattan for the next disaster.

https://t.co/3WeosReHh1

Amtrak Arrives in Microgrid **Era Ahead of Schedule**

Amtrak is running ahead of schedule. The Washington, D.C.-based national train giant is one of the first transit systems to plan a community microgrid so that it can keep its operations running during power outages.

https://t.co/6HUDtSwOWr

Deutsche Bank Again Fails Swaps Reporting Duties, CFTC Says

Deutsche Bank AG's swap dealer unit failed to report required data for five days earlier this year and continues to report incomplete and late information, violating an order from the Commodity Futures Trading Commission (CFTC).

https://t.co/PJ32CzWLUQ

HPE's Itanium server refresh should come in mid-2017

Hewlett Packard Enterprise plans to refresh its Itanium server range around the middle of next year, employing Intel's long-promised "Kittson" successor to the current Itanium 9500 series ("Poulson") chips.

https://t.co/MY5Xbppo2c

Why Offsite Backups Are Critical

We've come a long way since the days of tape backup. Today, backing up to an offsite location is as simple as having an Internet connection; yet too many businesses still don't use offsite data replication. In fact, various studies show roughly one-third of businesses don't back up at all, while another third do so routinely. Everyone else backs up sporadically,

https://t.co/UQ2dxhFk68

Putting the test back into DevOps

The DevOps community is all about speed and high-quality releases; and since mobile applications and websites drive traffic and revenue, companies can't afford to have site crashes or send out buggy releases. To emphasize the importance of testing, people are putting it back into DevOps, literally, so it shifts both left and right to the development and the operations team.

https://t.co/fNPZQ3z0N9

Winning or losing, it's all about performance. Here's how to build yours in

Performance is all around us. It's something we experience every moment of our waking lives, When systems perform as expected, all is well. You barely even notice. But what a difference it makes when performance fails you.

https://t.co/hawVwqWC74

What is Continuous Testing and How is it Even Possible?

Continuous Integration calls for code to be always working. Continuous Delivery and Continuous Deployment just up the stakes, saying that we must be able to roll out a working configuration to production at any time. *The only way to prove code and configurations are working is to test them.* That's why we need Continuous Testing.

https://t.co/QQbNtRK58I

Open VMS Bootcamp / September 25-28, 2016 / Nashua New Hampshire USA

The Connect OpenVMS Boot Camp is THE 2016 event for the global community of OpenVMS practitioners to gather for four days of technical content and peer-to-peer networking in the New England area.

https://t.co/LMqZU0PxeX

Some Go Daddy servers are down...

...and Availability Digest is one of the unlucky domains impacted. 24 hours & counting.

https://t.co/a1eCjORnNr

Eddie Bauer says malware used to access payment card data

Retailer Eddie Bauer LLC said on 18 August that customers' payment card information used at its stores may have been accessed by unauthorized parties. A malware was used to access the data at its retail stores on various dates between January 2 and July 17. However, payment card information used for online purchases on the company's website was not affected. Eddie Bauer said its investigation determined that the malware attack was part of a larger attack directed at multiple restaurants, hotels and retailers.

https://t.co/0Eucrp1uBN

Bank Says 'HA' to System i Hardware Failure

When the New Zealand bank Westpac experienced a rare backplane failure in its System i server last year, it took a critical wholesale trading application completely offline. IBM immediately put a replacement on a plane, but the best case scenario called for three days of downtime. But thanks to its use of a high availability solution from Maxava, not a single transaction was lost.

https://t.co/H91D05LOnT

Digest Oldie but Goodie: With 100% Uptime, Do I Need a Business Continuity Plan?

In our article entitled "All About Continuous Processing Architectures," we pointed out that active/active application networks are capable of incredible availabilities – uptimes measured in centuries. One might well question the need for a Business Continuity Plan if the system is never going to go down. No assumption could be more fallacious. Extreme availability does not mean an absolute 100% uptime.

https://t.co/9JpvidmNXA

Amazon's Cloud Arm Makes Its First Big Submarine Cable Investment

Amazon Web Services has made its first investment in a submarine cable project, looking to improve capacity on the global network connecting the data centers that host its cloud services. When the Hawaiki Submarine Cable comes online – target live date is in June 2018 – it will provide considerably more bandwidth between the US, Australia, and New Zealand than what is available today. The cable is expected to reduce latency for AWS users operating between these three countries.

https://t.co/lJOm6fN55Q

Reddit explains outage

Last Thursday, office productivity soared when popular online forum Reddit went down for over an hour. Now the site has explained why.

https://t.co/r9zHpdbFuO

Transforming telcos fly high as procrastinating airlines get grounded

If you ever had second thoughts why so much fuss has been made of transformation in the telecoms world, you only have to look at the airline industry to understand. Biting the bullet early in updating, streamlining and simplifying everything from the network to the back-office has gone a long way in saving telcos by reducing costs and making them more efficient. But for airlines it could mean the difference between life and death.

https://t.co/KDMa1ogQvu

The True Meaning of Availability

High availability is the ultimate goal of all cloud-service providers (CSPs). It's a testament to their reliability and standard of service, providing a measurement of their ability to remain continuously operational. But in their quest to attain the highest number of "nines" in their service-level agreements, players in the cloud industry may have been neglecting the true meaning of availability all this time.

https://t.co/HIT3WIMlpZ

The Power Grid Is a Mess, and It's Costing Us Billions

Using data from the United States Department of Energy, the International Business Times reported in 2014 that the United States suffers more blackouts than any other developed country in the world. Unfortunately, not much has been done since then to alleviate the system's critical vulnerabilities.

https://t.co/cIfVIIkZYB

Implementing RPO and RTO through Vibrant... Looking back into the history of storage

The increasing amount of data has increased the need for stringent backup storage tools. And with the increasing number of data storage platforms comes an imperative need for having recovery standards to retrieve lost or misplaced data.

https://t.co/rYEZo9uGAd

Delay Design Redundancy at Your Peril

Network redundancy is a bit like getting an insurance policy. You might not ever need it, but it's incredibly nice to have in case something goes bump in the night.

https://t.co/VCgKLJty2l

How an IP mapping glitch turned a farm into federal hell

Everyone from federal agents to ambulance staff and IRS collectors all ended up on the same doorstep for years due to one lazy IP setting.

https://t.co/DddQsWsSgM

Disaster Recovery in a Virtual World

Business is in the process of going digital. While that has profound implications for the entire organization, it is particularly relevant to data protection and disaster recovery. Most data protection and data recovery (DP/DR) tools currently in use were created before optimization for virtualized server environments, integration with new storage technologies, and cloud services were widely considered. And because backup is seen as a cost and an insurance policy rather than as a business enabler, many organizations have underinvested in it for many years. This will impair IT managers' ability to meet availability requirements for data and applications.

https://t.co/XSL7Vu3tuH

Thx to G. Warnken for this link: "Tech glitches keep plaguing US airlines. This dashboard keeps track of them all.'

Tech glitches keep plaguing US airlines. This dashboard keeps track of them all.

https://t.co/xLVu3wD3rk

It happened on August 14, 2003. The Great 2003 Northeast Blackout and the $6 Billion Software Bug

All this disaster took was a hot day, a tall tree, and a balky monitoring system. If any one of these fault links had not occurred, the failure chain would have been broken; and the Northeast Blackout of 2003 would not have occurred (at least, not on August 14).

https://t.co/EqunV0K6qe

Reader Forum: Wireless network failover to keep the gears of an enterprise turning

No matter how good a business is, it cannot operate while its network is down. We live in a connected world with expectations of 100% uptime. Thus, reliable network connectivity is essential to business continuity. Having a safeguard for a primary connection in place, such as an LTE wireless failover solution, is essential.

https://t.co/1SsV1SQ4gw

Amazon One lands first flight in Wilmington

The first "Prime Air" flight Atlas Air Worldwide flew for the e-commerce giant Amazon landed at Wilmington Air Park (Ohio) on 10 August, cementing what appears to be a growing relationship between the e-commerce giant and Southwest Ohio. It was the inaugural flight of the first of 20 B767-300 converted freighters provided to Amazon to support the expansion of Amazon's e-commerce air cargo network.

https://t.co/ImF9mbILzf

How predictive maintenance can eliminate downtime

While companies may believe that data center downtime is inevitable, the truth is that data center failure is preventable with the right technology and mindset. More specifically, brands should embrace the financial and reputational benefits of a predictive maintenance strategy.

https://t.co/gAF1iI5Tfg

Using Predictive Maintenance to Approach Zero Downtime

With the Internet of Things, machine-to-machine communication, and connected systems, now available are large volumes of high-velocity data streams that capture the behavior of machines in real time. Companies can employ powerful new predictive analytics to perform modeling that enables predictive maintenance for these assets, with the goal of achieving zero downtime.

https://t.co/Hvwnf02Ji1

Wind Generates 100% of Scotland's Electricity Needs for Entire Day

On 7 August, turbines in Scotland provided 39,545 megawatt-hours (MWh) of electricity to the National Grid while the country's total power consumption for homes, business and industry was 37,202 MWh—meaning wind power generated 106% of Scotland's electricity needs.

https://t.co/fIInuo7nkp

Australian PM blames IBM for national census website crash

After a major embarrassment for the Australian government when its widely touted online census website stopped working and left 3 million citizens in the lurch, Australian Prime Minister Malcolm Turnbull blamed the incident on American multinational computer hardware company IBM.

IBM had been given charge of managing the Australian Bureau of Statistics website that abruptly stopped working due to denial of service attacks and hardware problems as citizens were filling out the online census forms.

https://t.co/viJyPxE8IZ

Syria goes to extremes to foil cheaters

Early in the morning on 11 August in Syria, the Internet was almost entirely down for four hours. It was the ninth such outage since 31 July 2016 — each one lasting from approximately 4am to 8am local time. According to sources inside Syria, the objective of these outages was to prevent cheating on national High School exams. The motivation for today's national outage: a Chemistry final.

https://t.co/Bdp8mVuJ37

Why the Airline Industry Could Keep Suffering System Failures Like Delta's

Delta canceled about 530 flights on Tuesday, August 9th in addition to about 1,000 canceled a day earlier after a power outage in Atlanta brought down the company's computers and ground the airline's operation virtually to a halt. Seth Kaplan, who follows the airline industry, asks the question on everyone's mind: "If every small business on the corner can manage to keep its website running through a cloud-based server and all those sorts of things, why can't Delta Air Lines with all its resources manage to do that?"

https://t.co/EHD8pTfVGi

Reddit Site Down On Thursday for 'Emergency Maintenance'

Reddit, aka the front page of the Internet, went mysteriously dark Thursday evening, August 11th. According to one of Reddit's Twitter accounts, the issue was caused by a software upgrade. But its promise to return "momentarily" grew into over an hour and beyond.

https://t.co/tT5A9SN0tF

Delta Datacenter Crash: Do the Math on Disaster Recovery ROI

How on earth could a company the size and scope of Delta—a company whose very business relies on its ability to process, store, and manage fast-changing data—fall prey to a systems-wide outage that brought its business to a grinding halt? We can look to the official answer, which boils down to a cascading power outage and its far-reaching impacts. But the point here is not about this particular outage. It's not about Delta either since other major airlines have suffered equally horrendous interruptions to their operations. The real question here is how companies' mission-critical data can be frozen following an outage and how no disaster recovery or failover plan is stepped up to tackle the problem in real-time.

https://t.co/NWdTqFD2ff

Delta Air Lines mess shows 'we've painted ourselves into a corner' with computers

The system outage that recently left thousands of Delta Air Lines passengers around the world facing flight cancellations and delays shows how computer-dependent society has become — and airlines have to decide if their backup technologies are good enough to deal with that reality. "The key," says Professor Srinivasan Keshav, "is to adopt the model that technology leaders like Google have — known as 'system fault tolerance', which assumes any single component in a computer network can fail at any time, but it doesn't matter because there are multiple backup measures in place at every level of the system." "Failures are not exceptions. Failures are kind of normal," Keshav says. He notes that companies like Google or Amazon have dozens of servers "dying every day;" but with upward of 100,000 servers on hand, the systems don't crash.

https://t.co/Gtll2KU0IF

Hack Brief: Hackers May Have Breached Oracle's Cash Register System

Oracle's MICROS systems handle credit card payments at some 330,000 cash registers worldwide. And they've fallen victim to a major breach, possibly spearheaded by a group of Russian cybercriminals. That could put a whole lot of personal information at risk.

https://t.co/j0u8aeTH4W

What CIOs can learn from the Delta Outage

Delta is not the first airline to face widespread computer system failures, and it likely won't be the last. In 2015, Quartz began tracking the tech glitches plaguing airlines and preventing them from operating normally. Since then, it has tracked 24 significant airline system failures. Delta's recent outage affected Delta's entire network because the company's control points are centralized. Though running route scheduling, ticketing and check-ins over a single network is cost-effective, the system only runs smoothly while the central control points are available. What can CIOs learn from Delta's issues?

https://t.co/qEaEeCQriX

Power outage on Aran Islands leads to fresh demands for renewables

The prolonged electricity blackout affecting two of the Aran Islands (Ireland) has given renewed impetus to making the islands carbon-neutral. All three islands lost power after a sub-sea cable at the mouth of Gregory's Sound was ruptured in early August. The island of Inis Mór regained supply several hours later that same day. But its two neighbouring islands faced significant hardship for days afterwards.

https://t.co/ae0LejLDUa

GPS Under Attack as Crooks, Rogue Workers Wage Electronic War

Once the province of hostile nations, electronic warfare has arrived with little fanfare on U.S. highways and byways. Criminals, rogue employees and even otherwise law-abiding citizens are using illegal "jamming" devices to overpower GPS, cellphone and other electronic signals over localized areas. The devices are small and mobile — a common variety plugs into a vehicle's cigarette lighter — making it difficult for law enforcement to identify the culprits.

https://t.co/NgD8ZUq7hW

Data center disaster disrupts Delta Air Lines

Chaos hit Delta Air Lines early on Monday morning, 8 August, as a loss of power at its Atlanta, Georgia (USA) data center resulted in the airline grounding all its flights worldwide for several hours. Although the company's planes are now taking to the air, Delta informed customers flying today to expect delays and cancellations. The problem completely crippled the airline, knocking out flight operations and bookings.

https://t.co/muIde0Dbex

Reliable backups are your last line of defence against cryptolocker ransomware

Hackers can't hold your business data to ransom if you have backup copies tucked away safe and sound. Rather than stealing your business data, some hackers find it easier and more lucrative to sneak malware onto your computer to encrypt your business data. They then demand money in return for the password so you can unlock your precious business files. If you can't afford for this to happen to your business, then spend the time, effort and money to put safeguards in place.

https://t.co/k5Ge4n3vyB

A Thirst For Petabyte Scale All-Flash Arrays

Some technology trends get their start among enterprises, some from hyperscalers or HPC organizations. With flash storage, it was small businesses and hyperscalers who got the market growing, drawing in engineering talent and venture capital to give us the plethora of options available on the market today. Now the big customers are ready to take the plunge.

https://t.co/Ct7EweWdbZ

Moving from IT-deficient to IT-driven healthcare: A CIO's perspective on how to get there

What should health care look like in 2016? Since stories often speak louder than statistics, this article's author shares two personal anecdotes that highlight how far we've come as a health care ecosystem of patients, physicians, pharmacists, and families – and how far we still have to go.

https://t.co/Gqp48LwEMM

This is what would happen in a cyber war between nations

Imagine you woke up to discover a massive cyber attack on your country. All government data has been destroyed, taking out health care records, birth certificates, social care records and so much more. The transport system isn't working, traffic lights are blank, immigration is in chaos and all tax records have disappeared. The Internet has been reduced to an error message, and daily life as you know it has halted.

https://t.co/mlTe24Oi45

Delta Computer System Failure Grounds Flights Worldwide

Tens of thousands of Delta passengers around the world were stranded Monday 8 August after a power outage at its Atlanta, Georgia (USA) headquarters caused a global computer failure that halted all flights. Check-in systems, airport screens and even the airline's website and smartphone apps were affected by the meltdown, which began at 2:38 a.m. ET and lasted six hours.
The airline suspended departures, with airport agents writing out boarding passes by hand. "Our systems are down everywhere," Delta told customers on Twitter.

https://t.co/X4psyhqbRx

Join Our Continuous Availability Forum on LinkedIn

This forum provides a venue for discussion of continuously available topics, including active/active architectures, case studies, and implementation issues. We're at 771 members and counting.

www.linkedin.com/groups/2586333

Latest thread on LinkedIn's "Continuous Availability Forum": Does Hadoop Provide The Availability Required by the IoT? We have 768 members.

I sometimes feel that I am a lone voice promoting the concept of continuous availability (four or five 9s, or five minutes of downtime per year) for mission-critical systems. I encounter serious pushback from colleagues who feel that the norm of three 9s achieved by most systems (eight hours of downtime per year) is sufficient, and indeed many mission-critical systems achieve no better availability than this. Now we have the emergence of the Internet of Things. Gleaning useful insight from such a large mass of data in the brief time during which the data is most useful requires continuous availability. Hadoop has become the preferred big-data processor to perform this function. Does Hadoop provide the availability that is needed to maximize the benefit of the IoT?

http://bit.ly/2bYO2q7

How predictive analytics discovers a data breach before it happens

Predictive analytics is the science that is gaining momentum in virtually every industry and is enabling organizations to modernize and reinvent the way they do business by looking into the future and obtaining foresight they lacked previously. This rising trend is now finding its way into the domain of cybersecurity, helping to determine the probability of attacks against organizations and agencies and to set up defenses before cybercriminals reach their perimeters.

https://t.co/MUfzxqj6Fb

Moon Express becomes first private company to receive permission to go to the Moon

Moon Express has officially become the first private company in the world to receive permission to travel beyond Earth's orbit. After months of conversations with government officials, the company received the green light from the FAA to venture to the moon in 2017. The announcement marks an important milestone for private companies in the space industry because, so far, all commercial space activities have been limited to operations within Earth's orbit.

https://t.co/vfsL8fLZW1

Vermont's 911 system crashes

The U.S. state of Vermont's 911 system crashed this summer – twice. The first time was 22 June, and the 911 system provider blamed a software coding issue. The second outage shut down the state's emergency call system for about 45 minutes. Starting around 2:30 p.m., call centers were unable to answer 911 calls. Officials say they were able to restore the system, but approximately 14 callers did not get through. Officials believe the second event was also caused by a coding issue.

https://t.co/MGy6mh3TGs

Southwest Airlines Software Testing Glitch that Left Thousands Stranded

This summer, Southwest Airlines grounded upward of 1,000 flights in one day. Why? A software problem. Technology, and software in particular, is something that businesses across all industries have come to rely on. But when these resources malfunction, it can lead to a slew of problems and cause significant backlash as a result. Southwest Airlines recently experienced this at the end of July when the company was impacted by a glitch that crippled its systems. Looking at this case, there are some key QA management takeaways that businesses can learn from in order to prevent similar situations from happening to them.

https://t.co/YHZQ2php1q

Rockville Patch: 911 Outage Can Never Happen Again: County Council

Two people died during a two-hour span when Montgomery County's 911 system (U.S. state of Maryland) was down last month. Montgomery County Police say the outage lasted from 11:10 p.m. on July 9 to 1:09 a.m. on July 10 after an air conditioning unit failed, and the system shut down to prevent overheating. Local politicians quizzed officials responsible for the 911 system about the mishap and demanded solutions that will prevent such an incident from ever happening again.

https://t.co/NlWW5bDpGW