the **Availability Digest**

@availabilitydig – Our June Twitter Feed of Outages
June 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.

Why Google Doesn't Outsource Data Center Operations

Human error is the root cause of most data center outages. It is the data center industry's maxim backed by data, collected and published by companies that study it. At Google data centers, however, it simply doesn't apply. Why? Because Google data centers are operated by the 1%.

https://t.co/yNrtqx2qge

From the Availability Digest: "Pathway – "HPE NonStop's Application Environment"

At a recent fault-tolerant symposium, Digest Mng. Ed. Dr. Bill Highleyman presented an overview of HPE NonStop systems. He stressed the immense scalability of these systems as well as their ability to survive any single fault (and in some cases, multiple faults). Bill was struck by the interest shown by the audience in the NonStop process monitor, NonStop Pathway. In this Digest article, we review the architecture of NonStop systems and explain how Pathway provides applications with fault tolerance, scalability, and load balancing with no effort on the part of the application programmer.

https://t.co/gaUmLFffbb

LinkedIn finally comes clean about mass data breach

Better late than never. Four years after hackers plundered millions of LinkedIn usernames and passwords, the company at last decided to tell us what is going on. On Wednesday 25 May, users received an email titled "Important information about your LinkedIn account," describing the massive 2012 hack and what the company is doing about it.

https://t.co/aI1YArQQCY

How Would Your City Cope Without Electricity?

Storm Desmond hit northwest England in early December 2015. Following a month of exceptionally heavy rainfall that left soil waterlogged, Desmond's arrival brought with it an unprecedented level of flooding across Cumbria and North Lancashire. At the peak of the flood, 1,742 cubic meters of water (equivalent to 460,000 US gallons, or two-thirds of the volume of an Olympic-sized swimming pool) flowed down the River Lune every second. Sitting behind a new flood barrier along the banks of the river, was the city of Lancaster's main electricity substation, which connected 61,000 properties to the National Grid. You can probably guess what happened.

https://t.co/OdGC00GSZV

5 Major Hospital Hacks: Horror Stories from the Cybersecurity

In real-world war, combatants typically don't attack hospitals. In the cyber realm, hackers have no such scruples. "We're attacked about every 7 seconds, 24 hours a day," says John Halamka, CIO of the Boston hospital Beth Israel Deaconess. And the strikes come from everywhere: "It's hacktivists, organized crime, cyberterrorists, MIT students," he says.

https://t.co/YZaDz37Ial

IBM's Chief Innovation Officer Looks Back On Nearly 40 Years Of Breakthrough

American industry has a rich heritage of top-notch corporate labs. Bell Labs created not only the transistor but also other fundamental breakthroughs. PARC developed much of the technology we associate with modern computers, such as the mouse and the graphical user interface. Both labs have attained mythical status and rightly so. Yet IBM Research has been no less consequential, developing early breakthroughs such as the first computer language and the relational database. And unlike Bell Labs and PARC, it's still going strong. To get a better sense of what makes IBM Research tick, I talked to Bernie Meyerson, IBM's Chief Innovation Officer, about what he remembers most about his 35 years there.

https://t.co/ydnv47gh2s

A Second Box for Schrödinger's Cat

Using a setup with multiple optical cavities tied together with a superconducting artificial atom, physicists at Yale University, USA, have extended one of the most celebrated paradoxes of quantum physics—Schrödinger's cat, the famous hypothetical feline that, under the framework of quantum superposition, can be both "alive" and "dead" at the same time. It turns out, according to the Yale team, that under the right conditions, the cat can be both alive and dead in two places at once. And the result, the researchers suggest, could help pave the way toward redundant encoding for more reliable, fault-tolerant quantum communication and computation.

https://t.co/cnb7GWTYTw

10 Common Mistakes CIOs Make With Hybrid Cloud

The hybrid cloud market is estimated to grow from USD 33.28 billion in 2016 to USD 91.74 billion by 2021, at a compound annual growth rate (CAGR) of 22.5 percent. While the combination of both cloud platforms offers many business benefits, the deployment of a hybrid cloud presents some pitfalls of which organizations need to be aware.

https://t.co/zGPuljaD8E

Computer failure causes delays at JFK Airport

Computer problems caused massive delays Sunday 29 May at one of the U.S.'s largest airports during one of the busiest travel holidays of the year. A server crash at New York's John F. Kennedy Airport stalled operations at Terminal Seven. The crash happened at about 4 p.m. ET and wasn't resolved for hours.

https://t.co/0PWVoFCnp0

HPE Hunkers Down On Datacenter Hardware

In conjunction with the posting of its financial results for the first quarter of its fiscal 206, the trimmed down Hewlett Packard Enterprise, which has not included the PC and printer businesses since last year, announced that it was going to get a little bit slimmer. It plans to sell off its Enterprise Services business to CSC, which coincidentally (or perhaps not) is run by an ex-IBMer who is more than familiar with Big Blue's Global Services behemoth.

https://t.co/omTbkW2rca

CSC and HP Enterprise ink deal for technology services goliath

Tysons Corner-based Computer Sciences Corp. announced it is merging with the services business of Hewlett Packard Enterprise Co. out of Plano, Tex., in what executives for the companies said will create the world's largest pure IT services company with $26 billion of revenue. The deal will make both companies' shareholders 50-50 partners in the new goliath, which has yet to be named, and will install CSC's chief executive Mike Lawrie as chairman, president and CEO. Meg Whitman, the head of HP Enterprise, will take a seat on the board.

http://wapo.st/28QqHjZ

From the May Availability Digest: Migrating IBM Power Systems to HPE Open Systems

Hewlett Packard has several decades of experience in migrating mission-critical applications from IBM Power Systems to HP (and now HP Enterprise) open systems. HPE has demonstrated that the majority of such migrations result in a significantly less expensive operating environment – often by a factor exceeding 50%. At the same time, the new HPE open environments match or exceed the performance and availability attributes of the original Power Systems.

https://t.co/pF0NcDcsMn

Could Bay of Fundy tides generate enough power for all of Atlantic Canada?

They flank the bay that is home to the highest and strongest tides in the world; but for hundreds of years, Nova Scotia and New Brunswick have struggled to channel the awesome might of the Bay of Fundy into tidal power. Aspiring entrepreneurs have tried everything from mill wheels in the 1600s to turbines in the 2000s, only to have their hopes dashed and devices casually battered to smithereens by the water's crushing force. However, the next generation of projects is set to launch; and onlookers say it's time for the tide to turn.

http://bit.ly/1qZeGAx

Upgrading the US power grid for the 21st century

The US Department of Energy has announced $220m in funding for projects from a host of national laboratories to help upgrade the country's power grid over the next three years. What work needs to be done to make the grid 'cleaner, more productive and more secure,' and what are the implications for the integration of more grid-connected renewable energy projects in the future?

http://bit.ly/28Qosxg

Rat chewing through Aberdeen rail station power cable caused six-hour blackout

Train passengers were left in the dark after a rat chewed through a power cable and caused a six-hour station blackout. Engineers found the dead rodent beside the damaged cable at Aberdeen (Scotland) railway station shortly after the power went out around 9.30 am on 29 May. Although train services were not affected, power was not restored until later in the afternoon, leaving the electronic departures board in the black.

https://t.co/ZpqoiFVVoG

Why Is This Fed Official Worried About Solar Storms?

The Federal Reserve Bank of Atlanta eyed up an extreme but perhaps not unlikely hypothetical scenario this week: What would happen to the U.S. economy if a "massive geomagnetic solar storm" crippled the domestic power grid, potentially for a "long, long time"? The answer: nothing good. Electronic payment systems in general – including those involving credit and debit cards – would be compromised in the event of a solar storm. No electronic money transfers, no online banking – possibly no "online," period.

http://bit.ly/28Or13T

The 123-Reg Apocalypse: What Can We Learn From The Impact?

It's a news story that no one in the industry could possible miss – the huge script error run by 123-reg. The error accidentally deleted a number of customer sites and cloud servers, with a majority not able to recover their data. It's an absolutely monumental mistake that just came from a few erroneous lines of code. So what's the impact actually been, and what can the industry learn from the situation?

https://t.co/tvf7LGV0UO

HPE Superdome X FAQs

The HPE Superdome X was originally released in December 2014 and is intended to run resource-intensive mission critical workloads like SQL Server 2016. The HPE Superdome offers several unique features that are examined in this article.

https://t.co/sNg3BTb6nZ

Ransomware Attack Downs Michigan Electric Utility

A water and electricity authority in the U.S. State of Michigan needed a week to recover from a ransomware attack that hit its enterprise systems. Although the authority said that no customer data had been stolen, the successful phishing attack forced the lockdown of all corporate systems.

https://t.co/R2ytAaKGMx

ASIC fines Credit Suisse for 'fat finger' error

Financial institution Credit Suisse has been fined $74,000 for a 15 February 2015 "fat-finger"-type error that led to the price of two little-traded stocks soaring. Fat-finger trades are usually associated with a keyboard error by a trader, but increasingly the term is being used to refer to inadvertent mis-trades or "out trades" executed by algorithmic systems as the result of a quirk in the system. The trades were part of a larger order by Credit Suisse across 167 securities through its automated order-processing system.

https://t.co/WEGXhDFT8S

Human error prompts power outage, delays on BART Wednesday morning

A computer technician inadvertently typed in an emergency scenario code into the Bay Area Rapid Transit (BART) system's operations control center, causing the system to shut down on 18 May. The technician accidentally typed in the code, which shut down the system's automated control system and forced train operators to drive the trains in manual mode. The outage lasted roughly 20 minutes but contributed to residual delays that rippled throughout the system. BART has put a new safeguard in place to ensure a similar error can't occur in the future. The emergency scenario code will need to be typed in by two people at the operations control center now, ensuring that one person can't trigger a system-wide shutdown.

https://t.co/ixQf3OajLJ

Has BART's cutting-edge 1972 technology design come back to haunt it?

The Bay Area Rapid Transit (BART) is a public transportation system serving San Francisco, California, and the surrounding region. Back in 1972, BART's technology was considered cutting-edge. Designed to move 100,000 people per week, BART now carries 430,000 people per day. Numerous issues recently have created havoc for riders, and it has become apparent that what was once "space-age innovation" now is in need of a serious overhaul.

https://t.co/BXc4wqp8bd

Green Dot's Walmart outage should scare all retailers

When shoppers at Walmart ran into a wide range of problems using their GreenDot/Walmart MoneyCard cards at Walmart in May – including checking balancing and accessing funds, it was a grim reminder of how interconnected the payments world is these days and how retailers will be blamed no matter whose fault it is.

https://t.co/E2aD1vyygJ

Why Chip Credit Cards Have Been Such a Flop

It's been seven months since Visa and MasterCard's Oct. 1 chip-card transition deadline and…no one cares. That includes retailers, only a third of which have upgraded at least 90 percent of their stores' terminals for the new cards. Worse yet, 42 percent of retailers haven't upgraded the terminals in any of their stores, according to a recent survey of 55 major retailers and 1,000 individuals. As for consumers, 56 percent of people don't care if a retailer is chip-card compliant; and 41 percent say they either don't have or don't know if they have a chip-based card.

http://bit.ly/28RFksv

US Federal CIO has a plan to modernize government IT. He just needs $3.1bn

The CIO of the US federal government, Tony Scott, is a man with a plan to rid government agencies of their aging, insecure, unstable, but critical applications and infrastructure estate. All he needs is Congress to approve a $3.1 billion IT Modernization Fund. Interestingly (or worryingly, depending on how you view things), Scott made no mention of the use of cloud computing during a recent speech. This is despite the fact that a lot of the problems he mentioned could be directly eliminated through the use of 'as-a-service' technologies.

https://t.co/p6qV0xHt7e

An oldie but still goodie: "Performance Analysis of Transaction Processing Systems" by Digest Managing Editor Bill Highleyman

http://amzn.to/28PF0t1
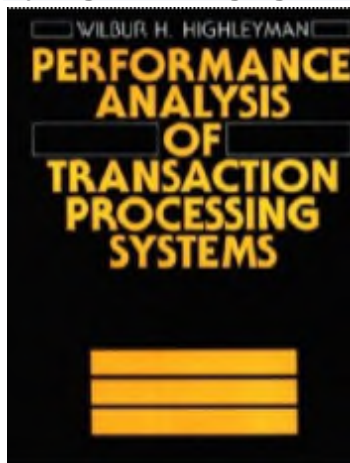
Circuit breaker failure was initial cause of Salesforce service outage

Salesforce said it has traced the cause of a database failure that disrupted services across the U.S. The initial cause of the disruption was a circuit breaker failure at the company's Washington D.C. datacenter. That failure then combined with a firmware bug. The outage left some Salesforce's USA clients unable to access services for over a day.

https://t.co/gMS9NUQm1q

Salesforce Outage: Can Customers Trust the Cloud?

Salesforce recently experienced an outage and service disruption to the NA14 instance, sending customers to Twitter to complain and organizations to evaluate the best way to work with cloud software providers.

https://t.co/aE3pyDheG2

Failed switch plunges DMV, agencies into network darkness over weekend

The computer network that serves almost all executive branch agencies in the U.S. state of Virginia, went dark Saturday morning, May 21st. By noon, five hours later, service had been restored to affected agencies, thanks to a repair using a part from a test system by Northrop Grumman, which owns and operates the data center serving the vast state bureaucracy. But the state overseer, the Virginia Information Technologies Agency, is still looking for answers about why the part failed and why the backup system "did not operate as designed."

https://t.co/YtCejJ8nOA

Telstra customers forced to reset modems after NBN, ADSL outage

The effects from Telstra's outage of National Broadband Network (NBN) and ADSL services on Friday, May 21st, continued to be experienced the following Monday, with some customers complaining over social media that they still couldn't connect. The incident was prevalent throughout New South Wales, Queensland, Western Australia, the Northern Territory, and South Australia. Telstra officials explained, "The issue we identified is extremely complex; but in simple terms, there was a fault with the device that manages the interaction between our network and all of the different types of customer modems."

https://t.co/2C0sCzPq5n

All Post Offices in UK shut due to major technical glitch

Thousands of people were unable to pay their bills, post letters or collect benefits on May 9th due to a major glitch said to be affecting every post office in the U.K. The system was down for hours.

http://bit.ly/1OjYArc

Big TWC outage: Fiber cuts take out service for 750,000 in NYC area

Accidental fiber cuts caused by construction workers took out telecommunications service for more than 750,000 customers in the New York City area on 9 May. The fiber cuts hit the network of Level 3, an Internet backbone provider, and lasted for hours before being fixed. The outages primarily affected Time Warner Cable (TWC) in New York and Cox Communications in large parts of Connecticut and Rhode Island and small parts of Massachusetts. Level 3's network serves both TWC and Cox. The most specific outage numbers came from New York.

http://bit.ly/21aTeVW

IBM allows free access to quantum processor online

Quantum computing is widely seen as an evolution of computer technology that may allow for much faster calculations than today's machines. IBM's quantum processor is located in its TJ Watson Research Centre in the U.S. state of New York. Quantum processors are notoriously sensitive, so it is being kept at supercooled temperatures in a cryogenic refrigerator. People wishing to access the processors must request an invitation. A spokesman for IBM said the invite system was to prevent bots from swarming the system.

http://bbc.in/1W9dhp9

Data Managers Need to be on Cleanup Duty

As business success becomes more dependent on the software house that IT builds, giving systems a regular "Cleanup" will remain ever important. Today's systems are a 'volume driven' world, and the code is just one more big data piece that needs to be scrubbed in addition to being monitored and analyzed.

http://bloom.bg/24tjn2X

Fixing the plane in midair: 3 keys to energy transformation

Power utilities should be optimistic about their future despite market forces and a seemingly endless stream of media regarding "death spirals," utility business models and customer disintermediation. That said, it is becoming increasingly challenging for utilities to balance reliability and infrastructure replacement needs through large, capital intensive assets.

https://t.co/45Yvc9H2GC

Telstra invests AU$50m in network following outages

Telstra has announced the conclusion of its network review following its three major outages earlier this year. The provider is committing an additional AU$50 million to improving the monitoring and recovery times of its network. Of this AU$50 million, AU$25 million will be spent on installing monitoring equipment and tools for improved real-time traffic monitoring. The other half will go towards improving network recovery time.

https://t.co/befeljzChK

Extreme space weather could cripple our infrastructure. This bill aims to prevent that.

Legislation recently introduced in the U.S. Senate is the best effort yet put forward to improve forecasts of an invisible yet potent threat: space weather. The legislation tackles the threats and challenges that space weather poses to the U.S. critical infrastructure, enumerating aspects that begin with the sun and end with the failure of critical systems.

http://wapo.st/1T7qrvP

From the Availability Digest: "Bank Chooses "Sizzling-Hot-Takeover" Data Replication"

For the past eight years, a tier 1 regional bank serving a major resort island was using an ACI BASE24 Classic financial transaction switch to manage its network ATMs and POS terminals. For business continuity, its BASE24 system was running in an active/passive mode on a pair of HPE NonStop S-Series servers. Early in 2015, the bank found that it needed to upgrade these servers, which along with the operating system and application software, were nearing their end-of-support life. The bank made the decision to migrate its BASE24 system to a pair of NonStop NS-Series servers, again running as an active/passive pair. The bank also decided to replace its current data replication product with HPE Shadowbase solutions due to cost issues and to optimize its business continuity failover time for system outages, whether scheduled or unscheduled. Furthermore, this replacement positioned the bank to take advantage of the Shadowbase sizzling-hot-takeover (SZT) facility, which can typically reduce failover time to a few seconds.

https://t.co/poKzODA2J1

Venezuela Declares a 2-Day Workweek Because Of Dire Energy Shortages

In a desperate attempt to save electricity, drought-stricken Venezuela has introduced a new concept to the workplace calendar: the five-day weekend. President Nicolas Maduro has decided to furlough the country's public employees - who account for a third of the labor force - for the bulk of the week, so they can sit through rolling blackouts at home rather than in the office.

https://t.co/tHySM9Hu8H