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## The Importance of Disaster Recovery

Recovering from a disaster is a fundamental need for all organizations. Therefore, a good disaster recovery plan is a must.

In order to be a valid disaster recovery plan, it must be tested. Unfortunately, testing a disaster recovery plan can be a disruptive exercise to the data center, as applications may have to be taken down to simulate an outage. However, if the plan is not tested, there is no guarantee that it will work when it is needed.

It turns out that many organizations do not test their disaster recovery plans. In our article this month, "Testing Disaster Recovery Plans," we look at the disturbing number of companies that depend upon hope rather than upon testing.

This article and our other 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

## Microsoft's Cascading Data Center Outage

A Microsoft data center in Texas overheated earlier this month, causing widespread outages that affected business users of the company's cloud-based Azure services such as Office 365. The outage was caused by a lightning strike, which resulted in a power voltage increase that impacted the cooling systems.

Multiple data centers saw wild voltage swings across the utility feeds. This caused one Azure data center to transfer from utility power to generators and the mechanical cooling systems to shut down.

Critical hardware entered a structured power-down process to protect it from rising temperatures, thus taking the data centers off-line. However, temperatures increased so quickly in parts of the data centers that some hardware was damaged before it could be shut down. This included storage servers, network devices, and power units.

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# Best Practices

## Data Centers Sacrifice Reliability for Efficiency

The eighth annual Data Center Survey by the Uptime Institute has shown that the data center industry is struggling with the complexities of hybrid IT and is failing to maintain historic levels of reliability. The survey included nearly 900 data centers across 50 countries.

Power usage effectiveness (PUE) is a measure of how efficiently a computer data center uses energy. The lower the PUE, the more efficient the data center.

The Uptime Institute's survey found that the average PUE across the data center industry had reached a record low of 1.58. The survey pointed to hybrid IT as the culprit in obtaining better performance as organizations struggled to manage hybrid architectures that combined on-premises infrastructure, co-location, and public clouds.

The survey also found that the typical data center was more likely to suffer an outage than they were during the last year. Severe service degradations were experienced by 31% of data centers over the past year, an increase of 25% over the number reported during the prior year.

According to respondents, 80% of these outages were preventable, being caused by human error, power outages, network failures, and configuration errors.

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# Availability Topics

## Dual Regional Google Cloud Storage

Google recently updated its cloud object storage with new dual regional options and higher accessibility service level agreements.

This alternative gives clients more control over where they store their information while giving geographic access in case of a blackout. Clients can also have a solitary regional bucket for their information.

Dominic Preuss, a Google chief of product management, said that Google plans to add more dual-region pairs based on customer demand.

He said that "If you wanted to do this on another public cloud vendor, you would have to put your data into a region, set up replication, and pay network traffic to replicate that data over. You wouldn't be able to predict what the cost was going to be unless you understood the network."

Google dual region clients pay a single cost since they don't have to set up replication and pay for capacity in two areas in addition to network traffic charges.

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## Testing Disaster Recovery Plans

Spiceworks has conducted a study to determine how companies across North America are preparing for disasters and the financial impact of outages on their organizations. The survey included 762 respondents from organizations across North America and Europe, including businesses from manufacturing, healthcare, nonprofits, education, government, and finance.

The study has determined that, though 95% of organizations have a disaster recovery plan, 23% of these companies never test their plan.

The findings indicate a lack of testing and coverage gaps within disaster recovery plans may be leading to service outages in many organizations. Among those that did not test their plans, 61 percent sited inadequate time, 53 percent sited inadequate resources, and 34 percent said that disaster recovery was not a priority in their organization.

77 percent of organizations reported experiencing an outage (i.e., any interruption to normal levels of IT-related service) in the last twelve months. More specifically, 59 percent of organizations experienced one to three outages, 11 percent experienced four to six outages, and 7 percent experienced seven or more outages in the last twelve months.

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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.

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