

# INNOVATION

A black and white photograph of two men in a server room. One man is holding a laptop and pointing at the server racks, while the other man looks on. The word 'INNOVATION' is overlaid in large, bold, green, 3D-style letters across the center of the image.

In the Cloud and at the Edge  
Pedro Domínguez – CIO Schneider Electric  
@pdominguezpolo

Life Is On

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Electric

# A rapid progression

2006-2007

Part of the debate is who should get credit for inventing the idea. The notion of network-based computing dates to the **1960s**, but many believe the first use of "cloud computing" in its modern context occurred on **August 9, 2006**, when then Google CEO Eric Schmidt introduced the term to an industry conference. Oct 31, 2011



[Who Coined 'Cloud Computing'? - MIT Technology Review](#)

## PRESS RELEASE

### Amazon Web Services Launches

SEATTLE--(BUSINESS WIRE)--March 14, 2006-- S3 Provides Application Programming Interface for Highly Scalable, Reliable, Low-Latency Storage at Very Low Costs

Amazon Web Services today announced "Amazon S3(TM)," a simple storage service that offers software developers a highly scalable, reliable, and low-latency data storage infrastructure at very low costs. Amazon S3 is available today at <http://aws.amazon.com/s3>.

2016-2018

## INDUSTRY PERSPECTIVES

### The Era of the Smart Data Center

BY INDUSTRY PERSPECTIVES ON  
OCTOBER 26, 2016

[ADD YOUR COMMENTS](#)

## INDUSTRY PERSPECTIVES

### Cloud Computing Moves to the Edge

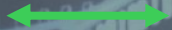
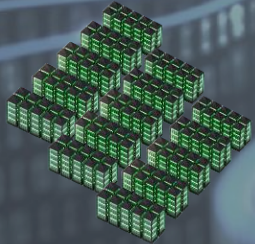
BY INDUSTRY PERSPECTIVES ON APRIL 5, 2017

[ADD YOUR COMMENTS](#)



# A rapid progression

2006-2007



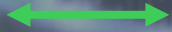
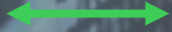
E-mails



Payroll



Social media



2016-2018



**CENTRALIZED CLOUD**

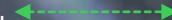
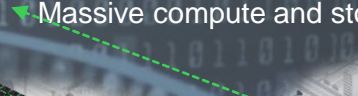
Massive compute and storage



**REGIONAL EDGE**  
Large compute and storage



**LOCAL EDGE**  
Compute and storage near user



# The Present is Digital



Artificial  
Intelligence



Augmented  
Reality



Internet of  
Things





And new generations are more  
**dependent** on the network

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# IoT data processing moving compute to the edge

Data Aggregation



Content delivery



Local Compute



Latency ·|· Bandwidth ·|· Data Security ·|· Compliance



...but often, we encounter ourselves with this



No redundancy



Unmonitored



Unstaffed



Ad hoc  
deployment



Unsecure







## **British Airways' outage, like most data center outages, was caused by humans**

The technology fails only because the people behind it failed in some capacity

## **Massive British Airways IT outage shows hacking isn't the only enterprise risk**

Sure, cyberattacks are on the rise, but last weekend's British Airways debacle demonstrates that enterprises have lots more to worry about

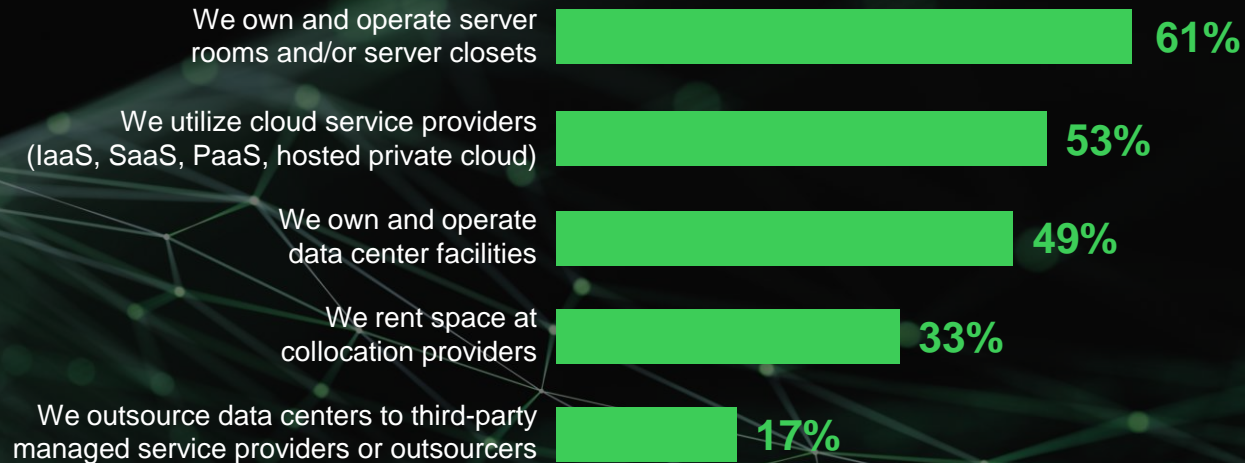
*Source: Networkworld.com*



# Our collective challenge

To provide increasing availability  
at each node while improving efficiency and  
performance in this complex hybrid IT environment.

# Reality is most organizations are challenged by this hybrid IT complexity



Source: 451 Research, *Voice of the Enterprise: Datacenter Transformation*, 2017



# Local Edge sites present opportunities and unique needs



Improved remote  
management

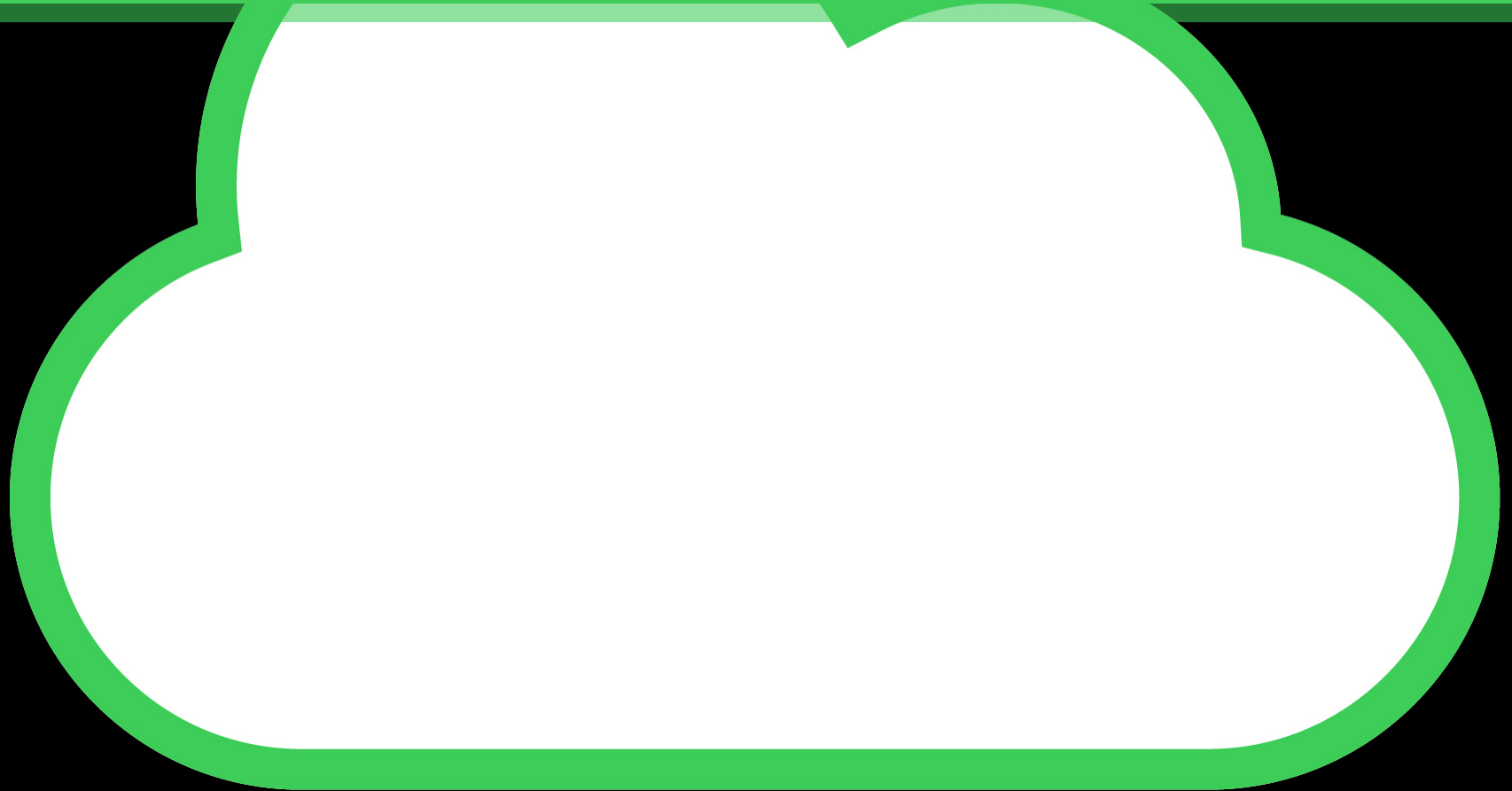


Physical  
security



Standardized  
deployment

**Now, let's look at centralized data centers**





# Centralized data centers have a different set of opportunities and unique needs



Speed of deployment



Operational efficiency



High resiliency



Risk mitigation

# Our Bold Idea: Use cloud-based systems to manage hybrid IT environments



## Collect and analyze

massive amounts of data; the scope and depth of analytics is much larger



## Remotely monitor and manage

all of your sites from a single device, and connect with outside experts to remotely monitor and service



## Scale management systems

easily without limit



## Achieve better performance with predictive capability

by utilizing big “data analytics” to spot trends and forecast failures



# Benefits of cloud-based management at a global retail chain

Improved store stability by

**82%**

Decreased average active UPS faults from

**70 to 10**

The number of labor hours saved

**3,600**

Improved management of global security standards and settings for

**2,300** stores

In conclusion, we believe

a cloud-based architecture, innovative technologies  
and deep expertise increase availability  
efficiency and performance while  
simplifying this complex hybrid IT world



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