



Shared IT Services for Higher Education & Research

Conference 2018

Welcome!



Making Higher Education  
IT Infrastructure Invisible





# — Making Higher Education IT Infrastructure Invisible

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Senior Industry Marketing Manager

Nutanix Higher Education



@nutanix



# — NUTANIX: THE ENTERPRISE CLOUD COMPANY

Make datacenter infrastructure and clouds invisible, elevating IT to focus on applications and services



**8,800+** customers  
**140+** countries  
**3,000+** employees

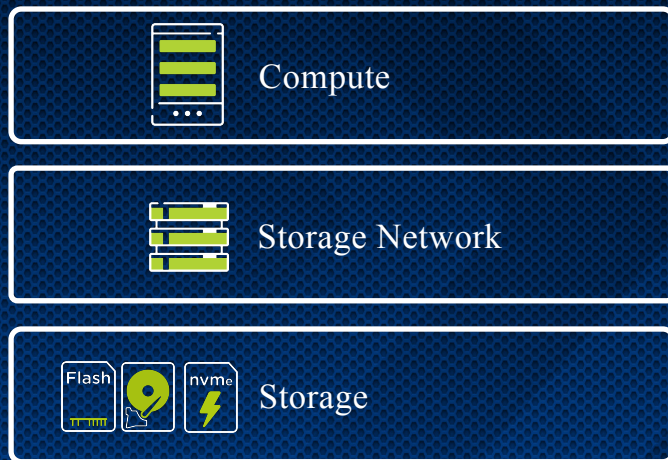
**Goldman  
Sachs**

**Founded** 2009  
**Nasdaq** NTNX 2016  
**Revenue** +\$1Billion

*“NUTANIX IS A ONCE-IN-A-DECADE  
INFRASTRUCTURE STORY”*

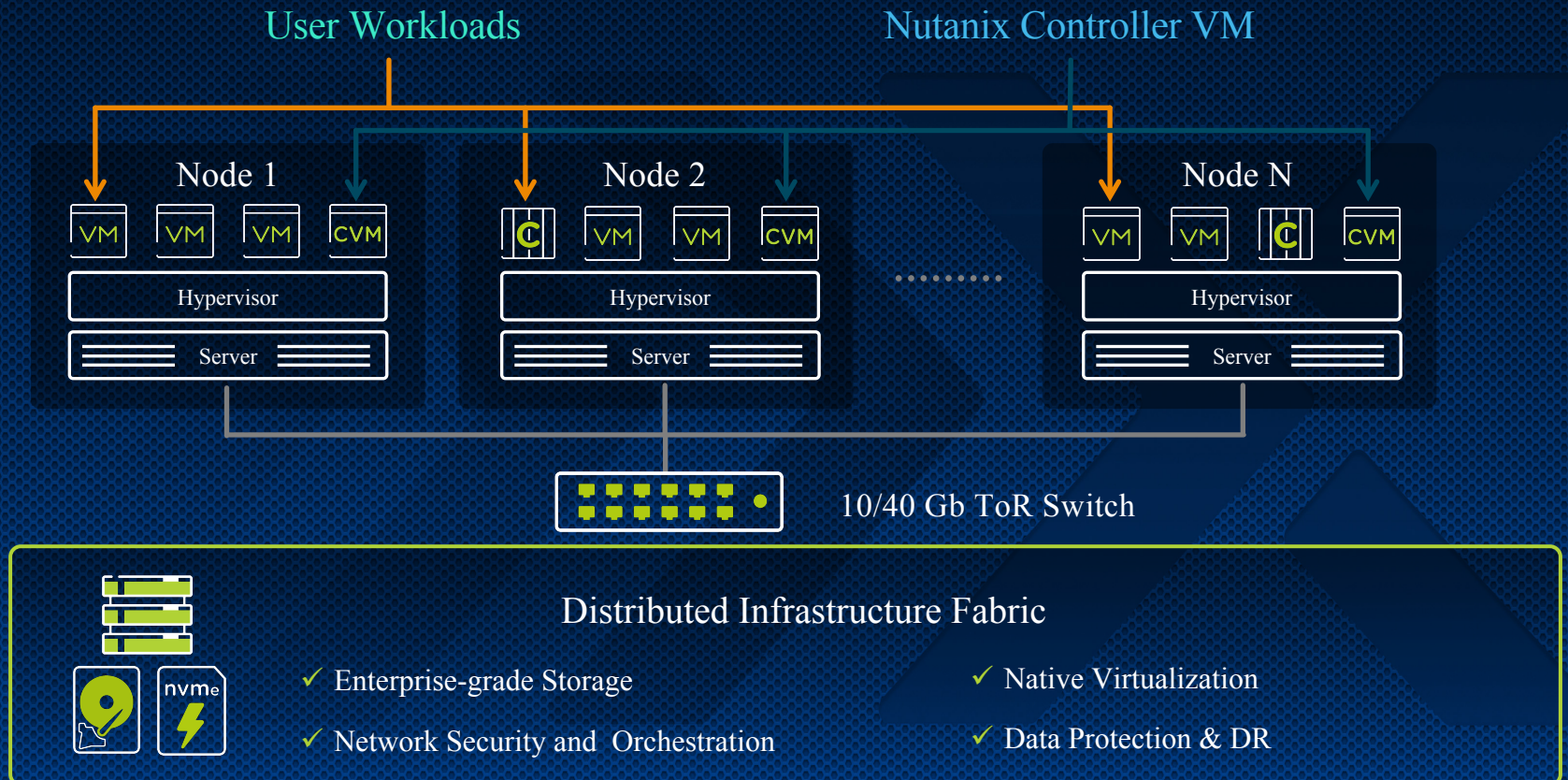


# — Foundation for Enterprise Cloud = Hyperconvergence



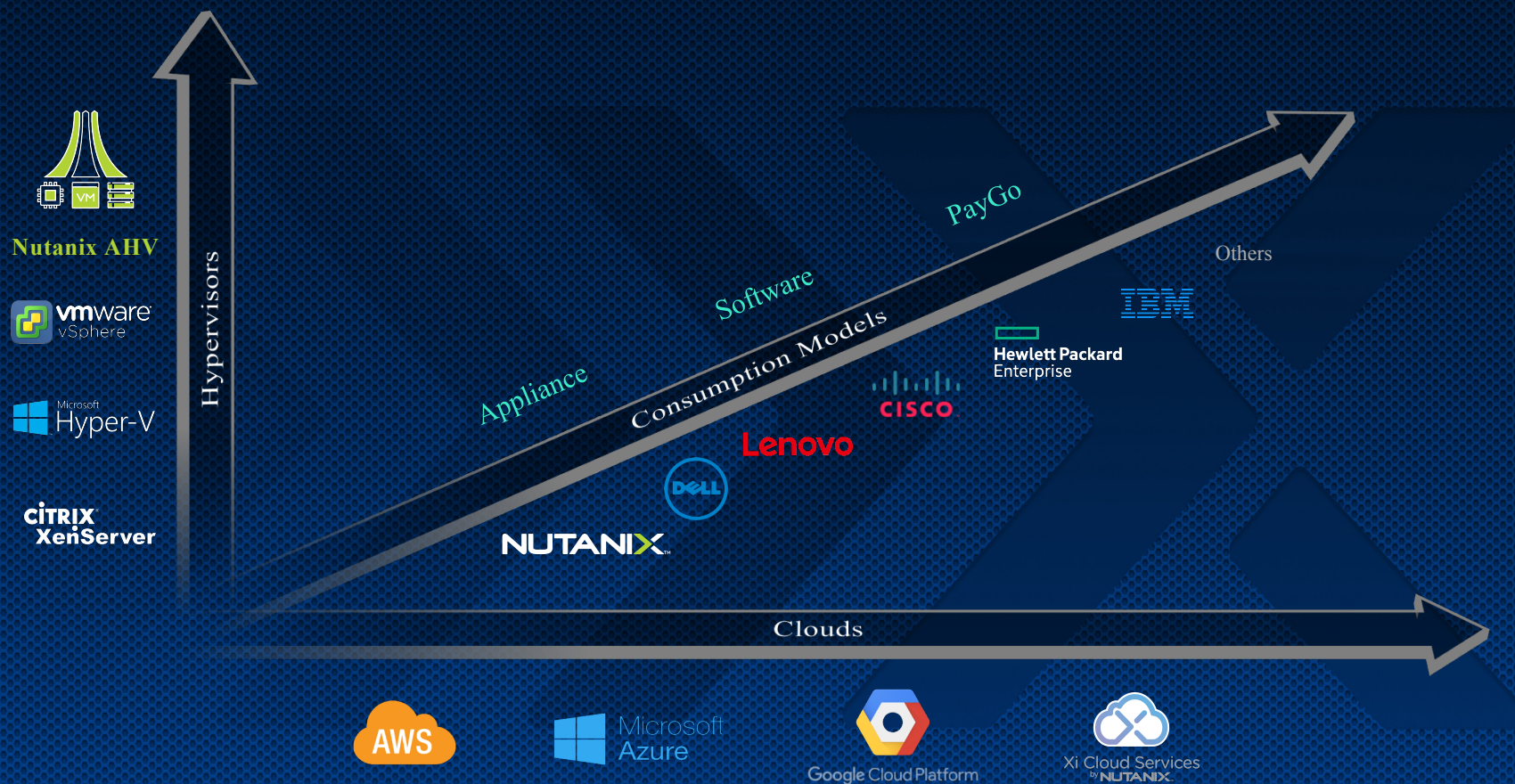


# SCALABLE, DISTRIBUTED SYSTEM DESIGN





# — FLEXIBILITY TO CHOOSE





# — IDC Survey Comparing Nutanix to 3-Tier Architecture



**60%** Lower  
TCO



**97%** Fewer  
Unplanned  
Outages



**534%** Five-  
Year ROI



**7 Months** to  
Payback



**\$10.56M**  
Additional  
Revenue per  
Year







**Mike Gelhar**  
@mikegelhar

Follow

Another 32 nodes of @nutanix deployed today.  
Rack -> Stack -> Deploy -> Lunch #hci  
#webscale



“Before Nutanix,  
3hour installs, 3min lunches

“After Nutanix,  
3min installs, 3hour lunches”



**Chris mccrain**  
@cwmccrain

Follow

Migrated over 200 VM's and 100TB to  
#nutanix this week without downtime. 33%  
performance improvement for Oracle  
apps.Exceeding expectations!

RETWEETS  
87

LIKES  
96



8:47 AM - 17 Mar 2017



10



87

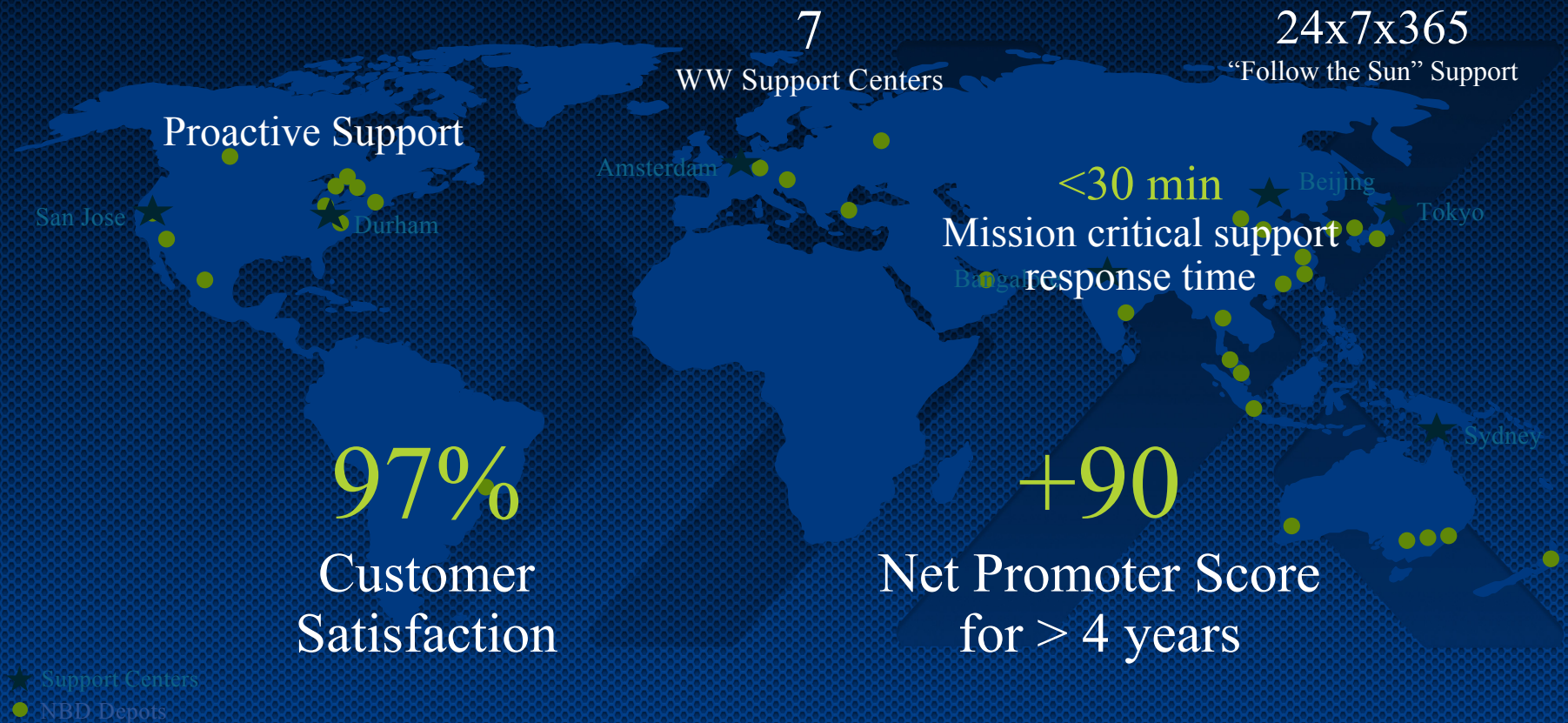


96





# — INDUSTRY LEADING SUPPORT





# Gartner Magic Quadrant for Hyperconverged Infrastructure 2018



## Strengths

Gartner®

“Highly innovative and scalable architecture that is generationally advanced compared with most rivals.”

“Flexibility in hypervisor choice with growing adoption of AHV, based on KVM, as customers seek a lower-cost alternative to VMware ESXi.”

“Proven user acceptance and high customer satisfaction, resulting in repeat sales and high node counts (100+) in large global enterprise accounts.”

NUTANIX™





# The Why of Nutanix



# Personal Computing





# Music





# Entertainment







# Car Industry

- /Autonomous
- /Sensing
- /Communication
- /Battery
- /Navigation
- /Mirrorless
- /Ecology

100m

48  
mph



- /Battery
- /Navigation
- /Mirrorless
- /Ecology





# Increasingly Invisible Infrastructure



Hardware-agnostic  
Operating Systems



Software-  
Defined-  
everything



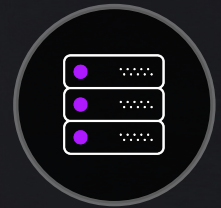
At-the-tip-of-the  
Finger Self-service



Breach-safe  
Culture



Location-  
agnostic  
Clouds



Always-on  
Philosophy



# Digital Transformation

A Hybrid View of Computing







THE ERA OF CLOUD IS UPON US...



Google Cloud Platform



# PUBLIC CLOUD HAS RESET IT EXPECTATIONS

## Rapid Time to Market

*I can deploy my application in five minutes.*

## Fractional IT Consumption

*I use and pay for just what I need, only when I need it.*



## One-click Simplicity

*I don't spend time on low-level infrastructure management.*

## Continuous Innovation

*My infrastructure gets better on a regular basis.*



# — NOT A SINGLE CLOUD ANYMORE



Public Cloud

- Scalable and elastic
- Cloud-native applications

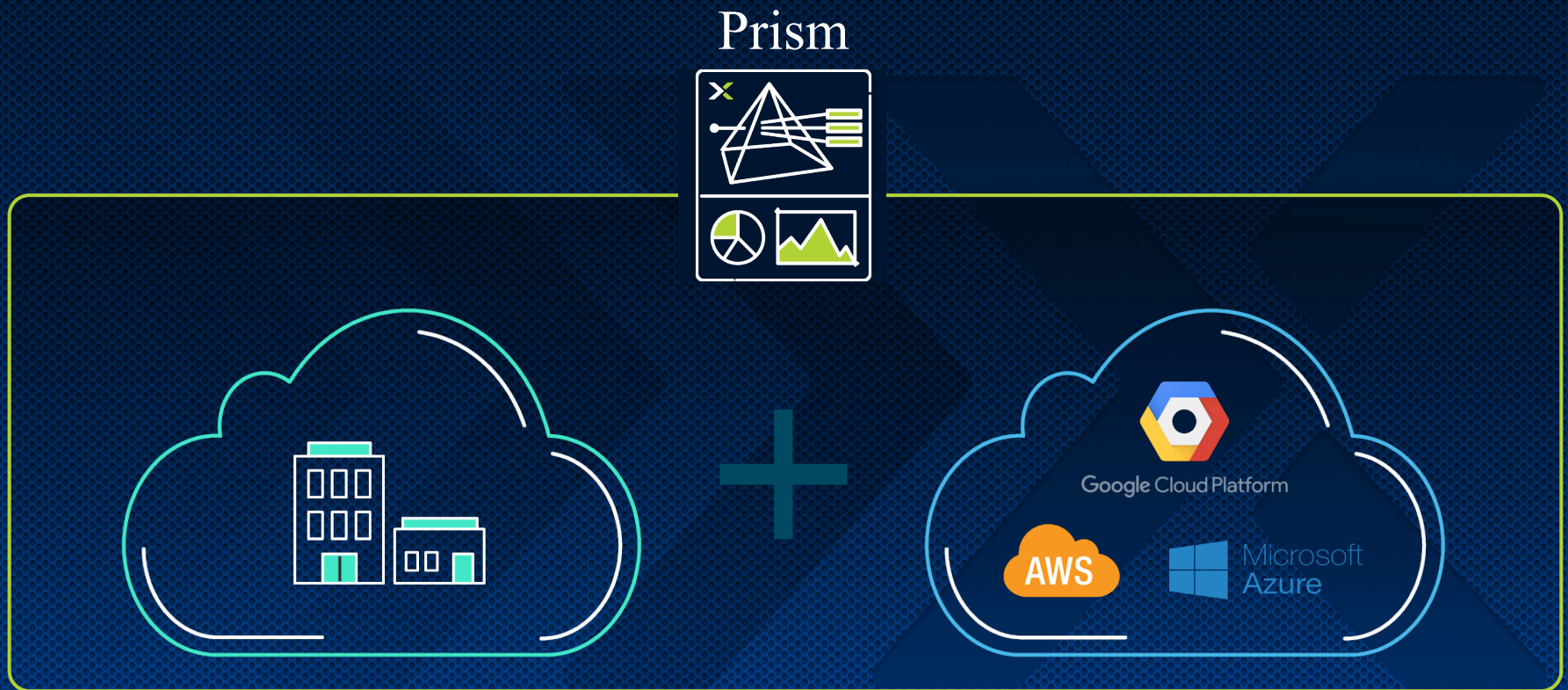


Private Cloud/On-Premises

- Predictable and secure
- Performance sensitive
- Mission-critical applications

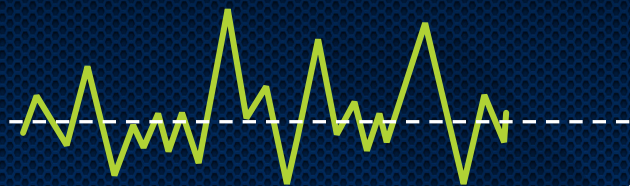


# CONVERGING CLOUDS



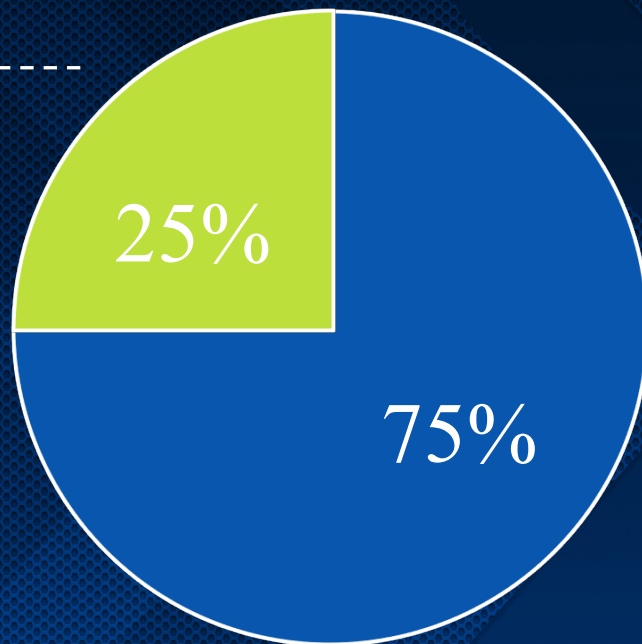


# — RENTING VERSUS OWNING



## Elastic Workloads

Spin up and down resources on the public cloud



## Predictable Workloads

Lower costs with private cloud infrastructure



Balance **Renting** and **Owning** For  
Today's Enterprise Workloads



# — Comparing Private & Public Cloud

- Overall, hybrid cloud is the new norm
- The future of IT is hybrid/multicloud
- One of the biggest challenges facing organizations is deciding where to deploy their application/workloads
- For highly elastic workloads, public cloud is preferred
- For highly predictable workloads with long life span, on-premises private cloud is preferred
- Most of the workloads in enterprise datacenters (e.g., exchange, VDI, databases, and active directory)...are predictable workloads





# Nutanix Higher Education Customers





**Darrell Hicks**  
***IT Manager***  
***Strategic Projects***



**Martin Fedec**  
***Infrastructure***  
***Analyst***



# Selkirk College

## Challenges

- Aging Infrastructure
- Staff Expertise
- Consistency in deployments
- Disaster Recovery and Resiliency

## What we were looking for

- Simplify our core infrastructure platform
- Easy Scalability
- Low overhead – Set it and forget it!
- Short Learning Curve



# What we ended up with

- 2 Nutanix Clusters
- Running Acropolis Hypervisor (AHV)
- Acropolis Ultimate Licensing
- Redundant 10 Gb Tor Switches

## Why we went with AHV

- Common UI for cluster and VM management
- Simple Cluster Expansion
- One Click Upgrades
- Ability to migrate VMs from ESXi or Hyper-V
- Simple Self Service Portal

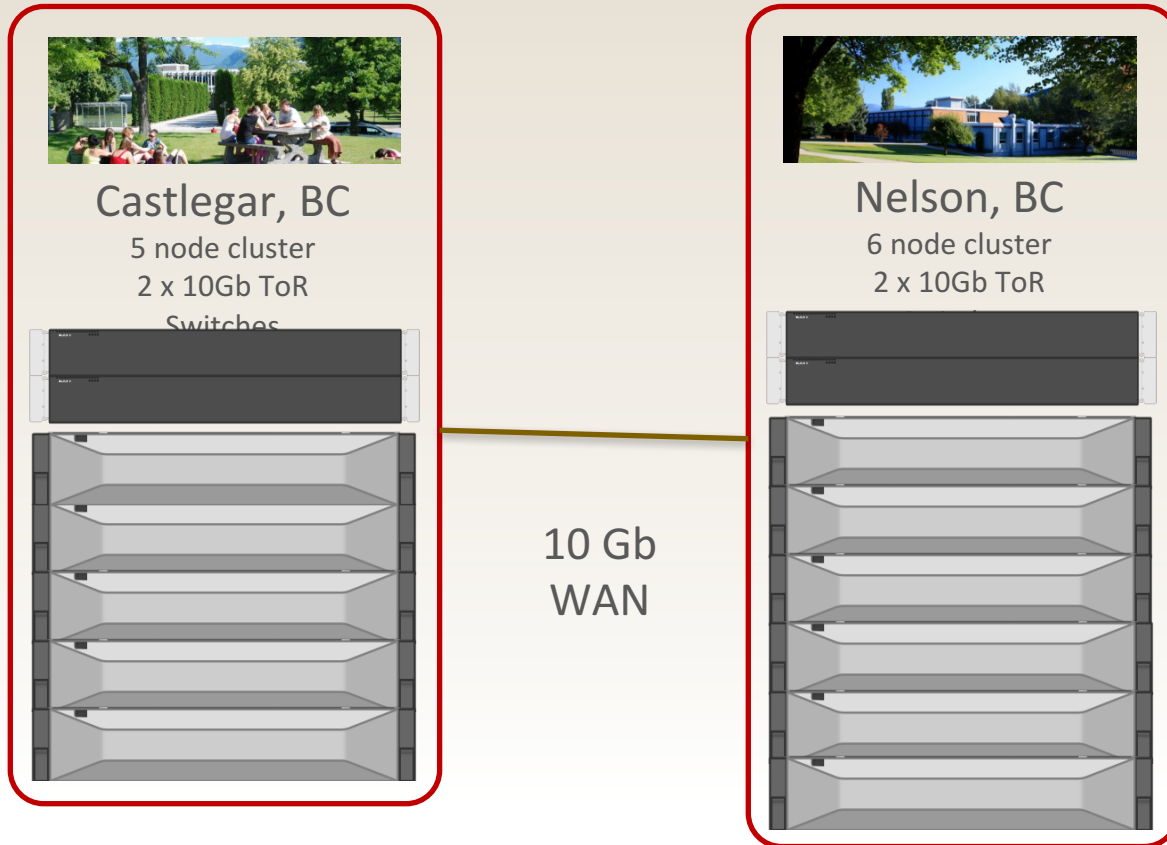


# What's next for us...

- Nutanix CE Lab Environment
  - 3 node cluster
  - Repurposing old hardware
  - Image creation
  - Sandbox for learning
- VDI
  - Power user workloads with GPU
    - ARC GIS, AutoCAD, etc
  - General user workloads without GPU



# Current Nutanix IT Environment





# Audience Questions





— VISIT NUTANIX.COM TO LEARN MORE...

Nutanix Education Web Site  
[nutanix.com/solutions/education/](https://nutanix.com/solutions/education/)

IDC White Paper: Comparing  
Private and Public Cloud  
<https://www.nutanix.com/go/idc-tco-analysis-comparing-private-and-public-cloud-solutions-for-running-enterprise-workloads.php>



#### White Paper

### TCO Analysis Comparing Private and Public Cloud Solutions for Running Enterprise Workloads Using the 5Cs Framework

Sponsored by: Nutanix

Ritu Jyoti  
August 2017

#### IDC OPINION

The world of IT and the datacenter remains in the midst of a massive structural shift built on a foundation of mobile, social, big data, and cloud services. At the highest level, the two types of deployment models for cloud services are public and private:

- Public cloud services are shared among unrelated enterprises and consumers, open to a largely unrestricted universe of potential users, and designed for a market, not a single enterprise.
- Private cloud services are shared within a single enterprise or an extended enterprise, with restrictions on access and level of resource dedication, and defined/controlled by the enterprise (and beyond the control available in public cloud offerings) – they can be onsite or offsite and can be managed by a third party or in-house staff.

IDC's 2016 *CloudView Survey*, covering over 6,000 IT organizations around the world, revealed that 62.7% of the respondents are either already using or planning to use public cloud infrastructure as a service (IaaS) for their infrastructure needs. For organizations undertaking digital transformation at the business level, cloud isn't just about picking a service delivery model such as public or private cloud. They must complete the shift to a predominantly cloud-based IT environment in the next few years, but one of the most important elements in this shift will be to extend the value of mission-critical applications through cloud enablement products and services. Businesses are looking to transform their IT services to a cloud services model to enable rapid time to market for their applications, support continuous product innovation, have simple infrastructure management, and pay for only what they use – all these without losing control over their data.

It's increasingly evident that this shift to cloud-based IT is having a tremendous impact on all areas of IT infrastructure purchasing and usage behavior for compute, storage, and network resources. It is radically altering distribution of IT spending across various deployment segments, including public cloud, off-premises private cloud, on-premises private cloud, and noncloud environments.

As per IDC's *Worldwide Quarterly Cloud Infrastructure Tracker*, April 2017, the portion of total spending on IT infrastructure hardware used to support private and public cloud deployments will increase from 37% in 2016 to 54% in 2021 and will account for all of the overall growth in IT infrastructure spend during that period (see Figure 1).

August 2017, IDC #US42986717