Web-Scale Converged Infrastructure
For The Enterprise

Roberto La Verde – Technical Manager BigTec Division Exclusive Networks Italia
## Company Facts

- Over 10,000 systems in last 5 years
- Headquartered in San Jose, CA
- >900 employees, valued $2B+
- >1200 customers in 60 countries (mid to large enterprises, gov’t, SPs)
- 52% market share in Hyperconverged

## Company Mission

**Deliver**

*Uncompromisingly Simple Converged*

Datacenter Infrastructure Solutions Leveraging *Web-Scale* Technologies
Business imperatives driving IT

- Enhance agility
- Shift focus from keeping lights on to Innovation
- Increase productivity and control costs
What slows down IT

1. Inherent Complexity
2. Forklift scale-up to grow
3. Battle Bottlenecks
Nutanix Web-scale Converged Infrastructure
Simple, Scale-out, Hi-Speed

Traditional Infrastructure

Web-scale Converged Infrastructure

- Compute
- Storage
- Virtualization
Web-Scale Converged IT Infrastructure

Web-Scale Design Goals

- Hyperconvergence on x86 server nodes
- All intelligence in software
- Distributed Everything
- Self Healing
- Automated with API’s and Data Analysis

Microsoft Azure

facebook

amazon web services

Google

Nutanix
Nutanix Virtual Computing Platform
Any app, any size, any hypervisor

Enterprise Storage
Snapshots, clones, replication, compression, thin provisioning, deduplication

Data Management
Data locality, tiering, balancing, tunable resilience

Hypervisor Agnostic
vSphere, KVM, Hyper-V
Any SLA - Nutanix has You Covered

RPO
- Minutes
- Hours
- Near-zero

RTO
- Minutes
- Hours
- Minutes

Nutanix
- Time Stream
- Cloud Connect
- Remote Replication
- Metro Availability

Minor incidents
Major incidents
Nutanix Web-Scale Converged Infrastructure

Converged infrastructure with all of the benefits of the cloud

Uncompromising Simplicity
Speed of Business
Unmatched TCO

Legacy Infrastructure
- SLAs
- Privacy and control
- Better long-term TCO

Public Cloud
- Simplicity
- Agility
- Rapid scale
Any Workload at Any Scale = No Silos
Nutanix delivers lower TCO than legacy infrastructure

TCO: Nutanix vs. Legacy

- Nutanix vs. Legacy: >60% savings
- Number of Virtual Machines: 50 to 4000
- 3 Year TCO: $- to $12

OpEx Savings vs. Legacy

- Nutanix vs. Legacy: >80% savings
- 3 Year TCO: $- to $3

Nutanix

5-10x less time | 5-10x times less space | 5-10x times less power & cooling

Notes: 3-Year TCO for medium type, server VM. Legacy includes: EMC VNX and Cisco UCS
Opex Savings @ 1000 VMs
Why virtualize with Nutanix?

- **Uncompromisingly simple**
  30 to 60 minute deployment. No storage expertise required.

- **Rapid and seamless scalability**
  Scale datacenters one server at a time with zero downtime

- **Predictable performance**
  Fast and linear performance at any scale

- **Lower TCO**
  No more IT silos → 40-60% management savings
  5 to 10 times less space, power and cooling

- **Better Business agility**
  Fastest time to value. Pre-validated solutions.
Worldwide Recognition and Validation

- VMworld 2011 Gold Award
  "This is exactly what the VDI industry has been waiting for."
  - Brian Madden and Gabe Knuth, Best of VMworld Judges

- Best of ServerVirtualization.com
  Best of VMworld 2012
  Exclusive Media Partner
  Finalist Award
  Hardware for Virtualization

- VMworld 2013 Gold Award
  Private cloud computing technologies

- virtualization review
  Best New Product of 2012
  Company: Nutanix
  Product: Nutanix Complete Cluster

- VMworld Winner 2012

Nutanix Awarded ‘Editor’s Choice’ by InfoWorld Test Center

- InfoWorld.com Test Center
  Editor’s Choice
  Scoring 9.3/10

Nutanix NX-3000
Recognized complete global support server – storage – network - virtualization

- 7 Support Centers
- 51 Countries
- 10 Languages
- 96% Customer Satisfaction
- 88 Net Promoter Score
- 24x7x365
- “Follow the Sun” support
- 12K+ Servers Supported
- 1K Annual Part Shipments
- 25+ Spare Parts Depots

TAC Centers
NBD Depots

APAC Depots
- Japan
- Korea
- China
- Hong Kong
- Thailand
- Malaysia
- Singapore
- Indonesia
- Australia
- New Zealand
Join the Webscale Hyperconverged movement

- Manufacturing
- Financial Services
- Education
- Healthcare
- Technology
- Retail
- Manufacturing
- Energy
- Public Sector
Choice of platforms and software editions
# Full Platform Portfolio

Meeting Different Price/Performance Requirements

<table>
<thead>
<tr>
<th>NX-1000</th>
<th>NX-3000</th>
<th>NX-6000</th>
<th>NX-7000</th>
<th>NX-8000 / NX-9000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balanced resources for branch office, retail stores, &amp; remote offices</td>
<td>Fastest performance for compute-intensive workloads (e.g. VDI)</td>
<td>Ideal for data-intensive applications</td>
<td>GPU and PCoIP offload seamlessly integrates graphics intensive users in VDI deployments</td>
<td>Tailored for Tier 1 business critical workloads such as Microsoft SQL Server, Exchange, SharePoint, SAP, and Oracle</td>
</tr>
<tr>
<td>Power and space savings up to 80%</td>
<td>Expanded flash capacity for large working sets</td>
<td>3x more storage and 2x server flash capacity than general purpose offering</td>
<td>Ideal for any user currently running workstations with GPU cards installed</td>
<td>Flexible configs including CPU, SSD, Memory &amp; 10GbE connectivity</td>
</tr>
<tr>
<td>Single management interface</td>
<td>Highest supported VM density</td>
<td>Full range of CPU offerings to accommodate multiple workloads</td>
<td>4x more SSD accommodates a much larger active data set</td>
<td>NX-9000 for All-Flash</td>
</tr>
</tbody>
</table>

"Our System was up and running in 30 minutes!" – Ken Farley, Gunner IT
## Portfolio of Nutanix Appliances

<table>
<thead>
<tr>
<th>NX-1000 Series</th>
<th>NX-3000 Series</th>
<th>NX-6000 Series</th>
<th>NX-7000 Series</th>
<th>NX-8000 Series</th>
<th>NX-9000 Series</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Per Node (4 per appliance)</strong></td>
<td><strong>Per Node (4 per appliance)</strong></td>
<td><strong>Per Node (2 per appliance)</strong></td>
<td><strong>Per Node (1 per appliance)</strong></td>
<td><strong>Per Node (1 per appliance)</strong></td>
<td><strong>Per Node (2 per appliance)</strong></td>
</tr>
<tr>
<td>Compute</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dual 6 core Sandy Bridge E5-2620 2.0GHz</td>
<td>Dual 8 - 10 core 2.6 - 2.8 GHz</td>
<td>Dual 6, 8 or 10 core 2.6 – 3.0 GHz</td>
<td>Dual 10 core Ivy Bridge E5-2680v2 2.8GHz</td>
<td>Dual 10 core Ivy Bridge E5-2680v2 2.8GHz</td>
<td>Dual 10 core Ivy Bridge E5-2690v2 3.0 GHz</td>
</tr>
<tr>
<td>Cold</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 - 4 x 1 TB</td>
<td>4 x 1 TB</td>
<td>4 - 5 x 4TB</td>
<td>6 x 1 TB</td>
<td>Up to 20 x 1 TB</td>
<td>n/a</td>
</tr>
<tr>
<td>Hot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 x 240 - 400GB SSD</td>
<td>2 x 400GB SSD (800GB)</td>
<td>2 x 800GB SSD (1.6TB)</td>
<td>1 – 2 x 400 or 800 GB SSD</td>
<td>2 x 400GB SSD (800 GB)</td>
<td>4 x 400 – 1600 GB SSD</td>
</tr>
<tr>
<td>1 x 240 - 400GB SSD</td>
<td>2 x 400GB SSD (800GB)</td>
<td>2 x 800GB SSD (1.6TB)</td>
<td>1 – 2 x 400 or 800 GB SSD</td>
<td>2 x 400GB SSD (800 GB)</td>
<td>4 x 400 – 1600 GB SSD</td>
</tr>
<tr>
<td>Memory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23, 64 or 128GB</td>
<td>128, 256 or 512GB</td>
<td>32, 64, 128, 256 or 512GB</td>
<td>128 or 256GB</td>
<td>128, 256 or 512GB</td>
<td>256 or 512GB</td>
</tr>
<tr>
<td>Network</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dual 10GbE, 2 x 1GbE 1 x IPMI (10/100 Mb/s)</td>
<td>Dual 10GbE, 2 x 1GbE, 1 x IPMI (10/100 Mb/s)</td>
<td>Dual 10GbE, 2 x 1GbE, 1 x IPMI (10/100 Mb/s)</td>
<td>Dual 10GbE, 2 x 1GbE 1 x IPMI (10/100 Mb/s)</td>
<td>Dual 10GbE, 2 x 1GbE 1 x IPMI (10/100 Mb/s)</td>
<td>Dual 10GbE, 2 x 1GbE 1 x IPMI (10/100 Mb/s)</td>
</tr>
<tr>
<td>Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Flexible choice of Software Editions

**STARTER**
The Starter edition offers the core set of Nutanix software functionalities. This edition is ideal for small-scale deployments with a limited set of workloads.

**PRO**
The Pro edition offers rich data services and resilience and management features. This edition is ideal for enterprises running multiple applications on a Nutanix cluster or with large-scale single workload deployments.

**ULTIMATE**
The Ultimate edition offers the full suite of Nutanix software capabilities to tackle complex infrastructure challenges. This edition is ideal for multi-site deployments and for advanced security requirements.
“Traditionally Storage OPEX cost is 4 to 6 times higher than CAPEX”

“Nutanix provides an average OPEX reduction of 60%”

“TCO with Nutanix is always lower even at higher CAPEX”
Always have a right sized infrastructure

Figure out what you need quickly. **Right sized** Infrastructure at all times.

Wikibon **estimates that the migration cost to a new array is 54% of the original array cost.**

Support for all popular hypervisors means
- Lower virtualization software license costs
- No lock-in
Predictable Economics and Growth

True Linear Scale-out Performance

Number of Nodes (4 Nodes per Block)

VMS

Block = 4 Nodes
Faster Time to Value

Complete infrastructure, ready for application provisioning in just 30 to 60 minutes

8x Faster Time to Value
Footprint Reduction with Hyper-convergence

Legacy

Up to 90%

Less Power
Less Cooling
Less Space
Any Workload at Any Scale = No Silos
Consumer-grade Design + Web-scale Engineering
Manage Storage at VM Granularity

Provisioning, protection, performance optimization, data services, analytics at VM granularity

No Complex Analytics
Single Pane for Global Cluster Management

No need for specialized resources in remote sites

New York

Singapore

London

Melbourne
Rich and Insightful Analytics

2X faster time to issue resolution than legacy

Configuration  Health  Risk  Efficiency
No disruption or downtime for planned or unplanned events

- Non-disruptive one-click upgrades of Hypervisor, Nutanix OS and Firmware
- Data and data path redundancy
- Continuous data availability with built in backup, DR and failover
Contribute to business outcomes

• Faster time to market
• Better end user experience
• Quicker business insights
Nutanix delivers superior TCO than legacy infrastructure

TCO: Nutanix vs. Legacy

OpEx Savings vs. Legacy

Nutanix
- Pay-as-you-grow economics
- Simplicity thru purchase cycle
- Fine-grained scalability

Notes: 3-Year TCO for medium type, server VM. Legacy includes: EMC VNX and Cisco UCS
Opex Savings @ 1000 VMs
IDC declares Nutanix dominant leader in hyper-converged assessment with 52% market share

Highlights

“Nutanix has been a key player in the emergence of the hyperconverged market and was early to demonstrate demand for the technology.”

“Leading position in mindshare, as well as market share.”

“Nutanix systems have diversified from targeted or specialized workloads like VDI to Tier 1 applications and highly virtualized general business workloads like SAP, Oracle, Microsoft Exchange, SQL Server, SharePoint, Splunk, and Unified Communications.”
Fitness Spotlight: Empire Life

Canadian provider of life and health insurance, named “Best Life Insurance Company in Canada in 2014” by World Finance magazine in its annual insurance awards competition.

BEFORE
- Outdated mainframe environment with SAN backend
- Expensive support
- Needed a more cost-effective solution for mission-critical workloads
- Planning hybrid cloud strategy

AFTER
- 50-60% lower infrastructure TCO
- 16:1 footprint reduction from 192U to 12U
- Initial installation in less than half a day for 13 nodes and 100TB
- Shortened RTO from 48 hours to just minutes, at one third the cost

“The space efficiency of the Nutanix appliances is simply amazing. We are transitioning from four full 48U racks to just one rack using only 12U of space with the Nutanix platform”
County-level government in Arizona serving a population of 132,000 spanning more than 4 million acres. Cover law enforcement, courts, social welfare, housing, highway maintenance, schools and libraries.

**BEFORE**
- 50 aging physical servers
- Needed to virtualize mission-critical applications (Hyper-V)
- Past experience with mediocre performance with iSCSI SANs

**AFTER**
- 6:1 reduction in rack space
- 80% reduction in power and cooling expenses
- Faster application performance
- Easy configuration & maintenance

“Nutanix has turned out to be a great platform to run Hyper-V on and has greatly simplified our datacenter without compromise.”
What’s next

Nutanix Essential (1 day) – Torino, 21 Maggio 2015 free

Nutanix NPP Administration (2 days) – Torino, 9 e 10 Giugno 2015

Nutanix Tour – Shape Up Your Datacenter

27 Maggio 2015 - Padova
17 Giugno 2015 - Milano
30 Giugno 2015 - Roma
02 Luglio 2015 - Bologna
Thank You