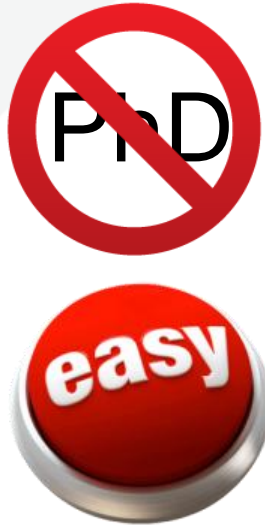


Simplifying the Cloud Journey: al via la nuova era del Data Center progettato per il Futuro

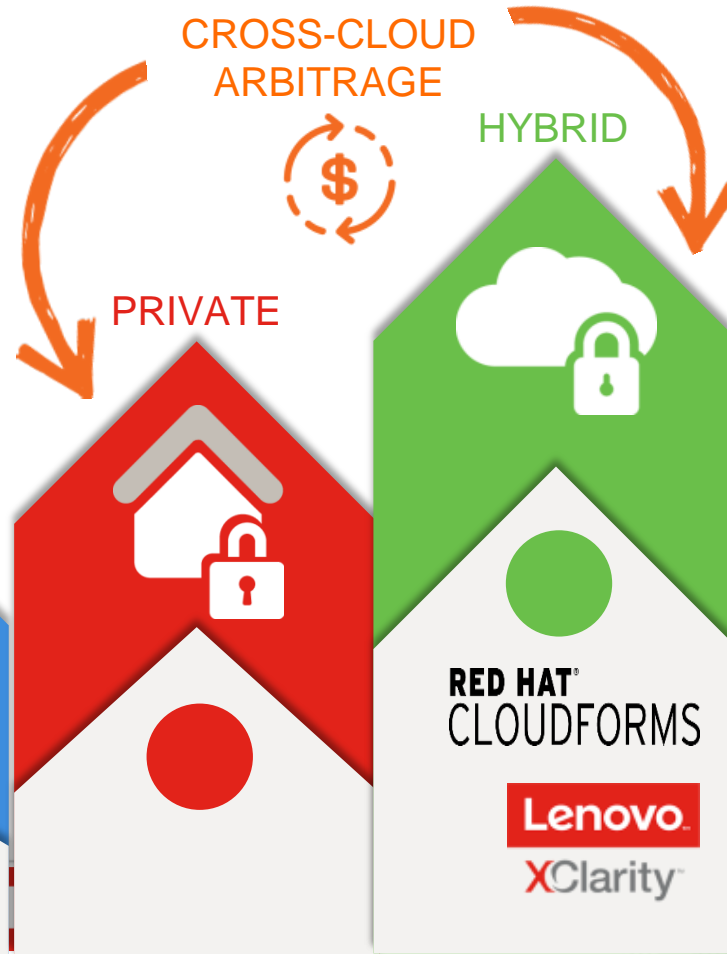
Gianfranco Bauco
Pre Sales Data Center Group

Simplifying the Journey to Cloud

Processore Intel® Xeon®



SILO'D
VIRTUALIZED
WORKLOADS



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Lenovo™



- Jointly engineered solution
- Reduced time to market
- Agility with Lenovo XClarity & Red Hat CloudForms

Lenovo and Red Hat

Processore Intel® Xeon®



Changing the Economics of the Data Center

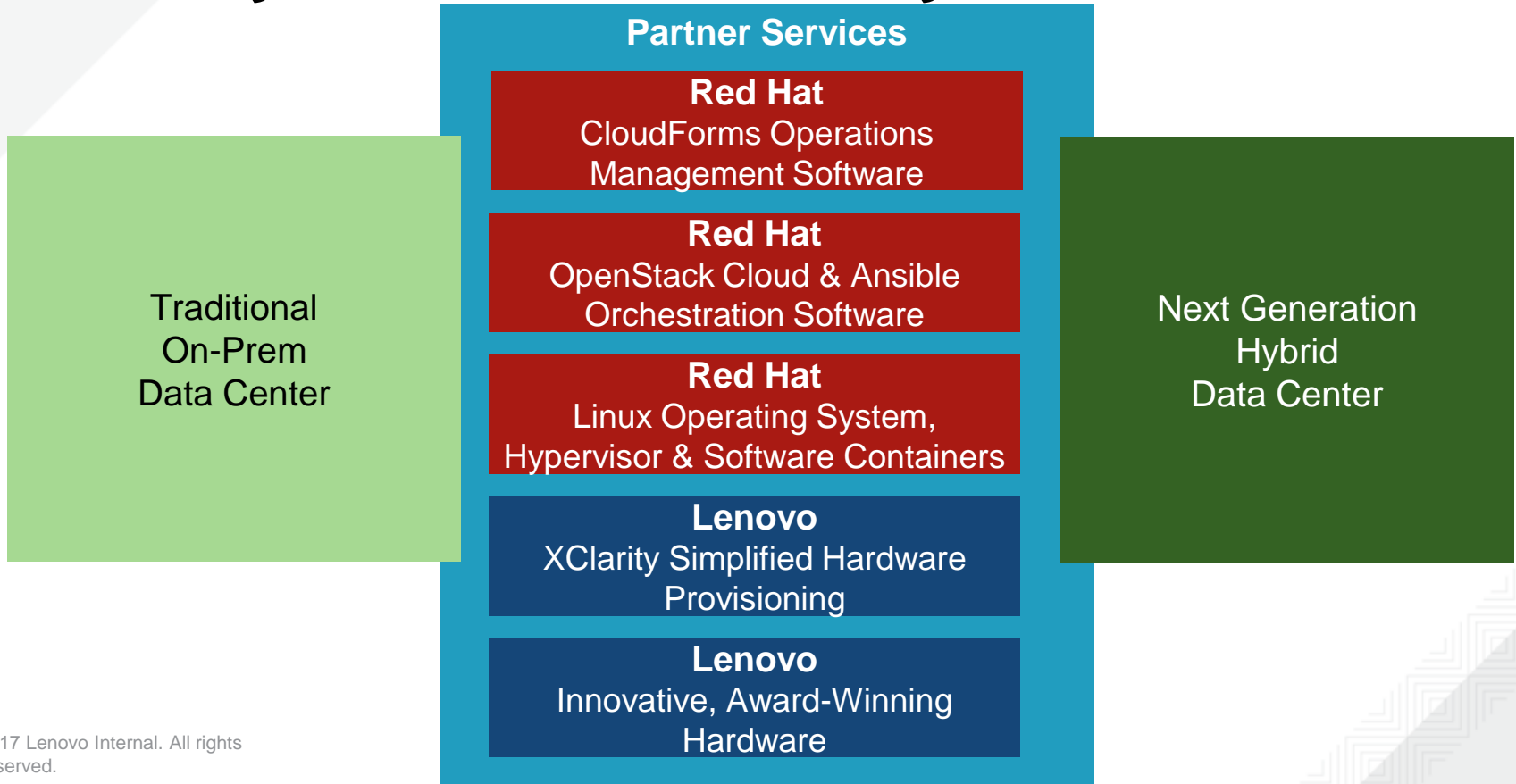
A full open hybrid cloud portfolio of solutions to provide customers with the right platform for every application



Device to Data Center Open Hybrid Cloud Solutions

IT organizations can provide the right technology for the right business problem across the entire infrastructure, from virtualization, to private, to public cloud

Solving Data Center Challenges with Solutions



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Changing the economics of Cloud Computing



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Speed service delivery and increase resiliency



Avoid vendor lock-in and dependencies



Reduce IT capital expenditures and operating expenses



Accelerate deployment of new applications



Rely on end-to-end, open, resilient, and secure platform

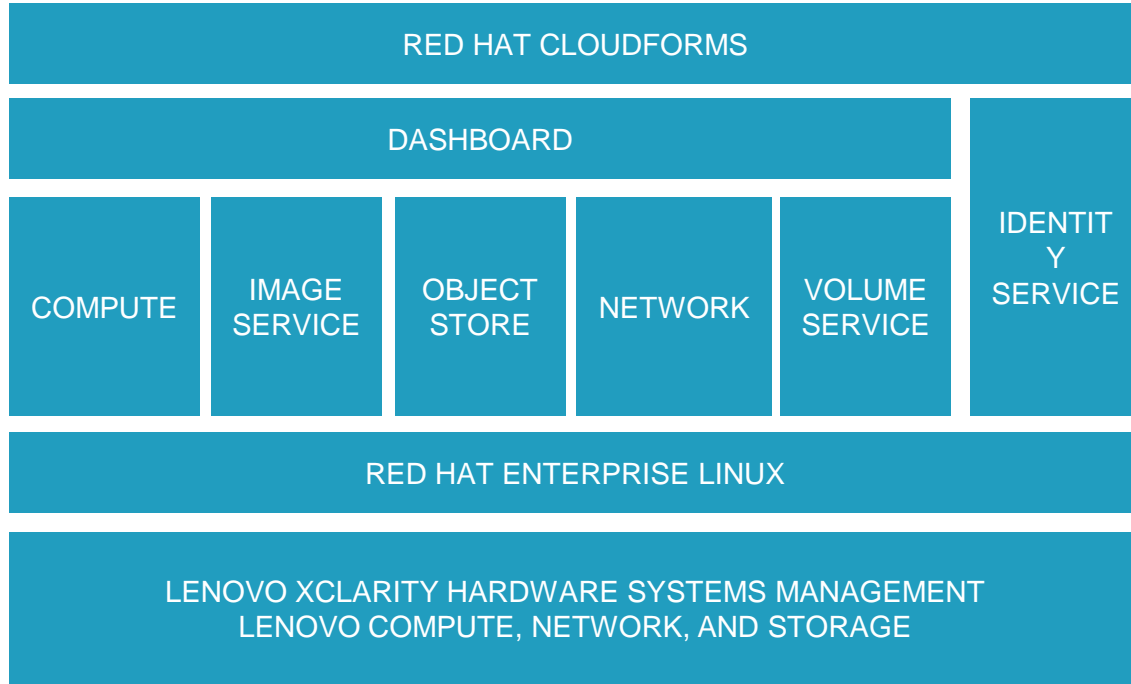


Choose capabilities as needed for your environment and use cases

Integrated, Validated, and Customizable Cloud Reference Architecture



Processore Intel® Xeon®



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6 Steps to Accelerate Time to Value



Processore Intel® Xeon®



Deployment was a straightforward process

1



Install the
Lenovo
hardware

2



Deploy Red Hat
Enterprise Linux
OSP Director

3



Register
nodes

4



Assign
deployment
roles

5



Verify and
deploy the
Overcloud

6



Finalize the
operational
cloud

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Create a Private Cloud Solution with Lenovo & Red Hat

- Reference Architecture includes:
 - Nova, Swift, Glance, Keystone, Horizon, Neutron, Cinder, Ceilometer, Heat, Trove, Ironic Sahara
 - Integration with Ironic for bare metal automated deployment
- Hardware Includes:
 - 2U ThinkSystem SR650
 - Lenovo 10Gbps switches with upto 126 x10Gbps ports
- Lenovo is Single point of support for Hardware and Red Hat Software
- Implementation by Lenovo Professional Services

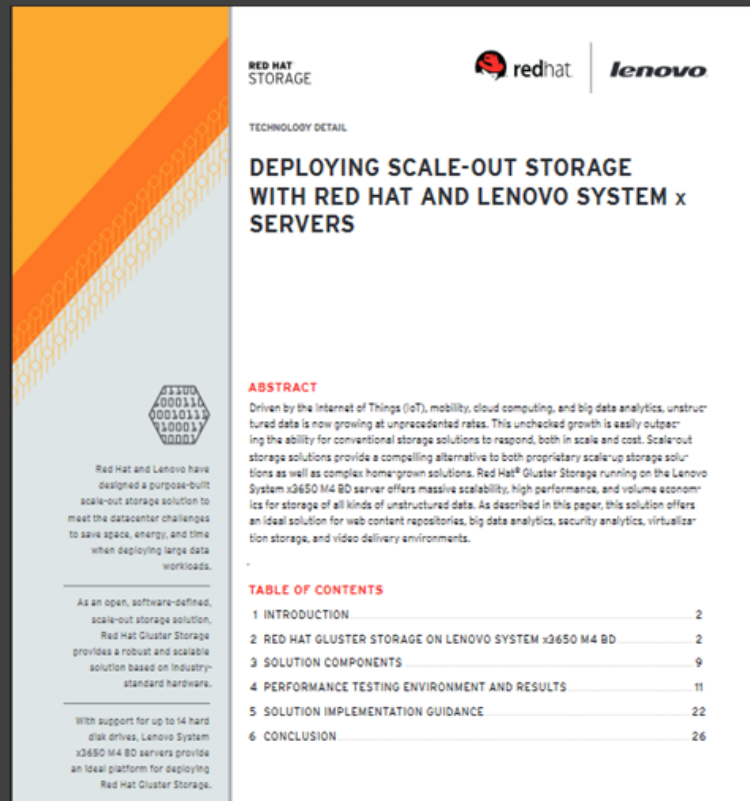


The image shows the cover of a document titled "Reference Architecture: Red Hat OpenStack Platform with ThinkSystem Servers". The cover has a white background with a red border. At the top left is the "Lenovo" logo. The title is in large, bold, black font. Below the title, it says "Last update: 26 September 2017" and "Version 1.0". There are four red horizontal lines, each followed by a short paragraph of text. At the bottom left, there is a list of authors: Jiang Xiaotong, Xu Lin, Mike Perks, Yixuan Huang, and Srihari Angaluri. At the bottom right is the "LENOVO PRESS" logo, which consists of a red and grey abstract shape above the words "LENOVO" and "PRESS" in a bold, sans-serif font. A red button with white text "Click here to check for updates" is located at the bottom center.

<https://lenovopress.com/lp0762.pdf>



Scale out on SDS with Lenovo & Red Hat

- Reference Architecture based on 2U x3650 with up to 112TB per Node
- Open Stack Integration for Hardware Management
- Lenovo is Single point of support for Hardware and Red Hat Software
- Implementation by Lenovo Professional Services



Driving IT Industry Standards

Lenovo participates in 30+ enterprise & data center standards organizations

-  Board of Director
-  New Membership 2016



IoT Summit™



MARCH 2016
SNIA™



Redfish



June 2016



Hardware

Software



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+ Together Driving Data Center Migration

Legacy Data Center

- Silo hardware
- In-flexible usage
- Billed by allocation



Data center evolution

Cloud Data Center

- Pools of resource
- Flexible & easy to use
- Billed by usage
- High time to value
- Low cost

Public

Available to all (often for a fee)

Hybrid

Private

Behind firewall

Data center Architecture

Data center Infrastructure

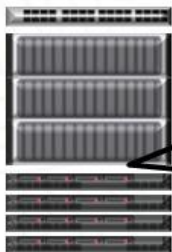
System Software
(OS & Virtualization Hypervisor)

Hardware
Management SW

Network

Storage

Server

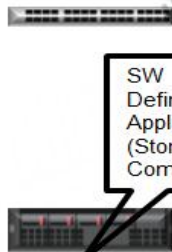


Multi-vendor,
Customer integrated
Management
SW and HW



Factory integrated,
Single part number
ordering of server,
storage, switch, &
Management SW

OS &
Hypervisor
+ SDS



SW
Defined
Appliance
(Storage +
Compute)

Software Defined Data
Center (SDDC)

RED HAT
CLOUDFORMS

Lenovo
XClarity



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Legacy
Infrastructure

Converged
(Integrated Systems)

Hyperconverged

Bringing it all together: Lenovo 360

Processore Intel® Xeon®



Next Gen Innovation

STIC
System Technology Innovation Center

Cloud

ThinkAgile



SDS
Software Defined Data Center

Lenovo Services

Servers, Storage, Networking, Hyperconverged + Ecosystem

Global Scale & Economics

Engineered Solutions

ThinkAgile



Rack Scale Architecture
Compute and Warm Storage
Application Optimized

Hyperscale

HPC

ThinkAgile

Computer Eng.
Oil and Gas
Risk Analysis
Weather
Deep Learning



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