Mavenspire

DELL PartnerDirect Premier

On-Ramp To OpenStack:

Section 1: Introduction and Overview

Michael Tanenhaus
Mavenspire, CEO
August 2015

redhat.

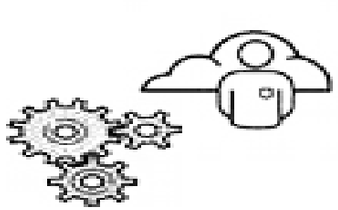
Agenda

OVERVIEW

- Value of Open Hybrid Cloud to IT Infrastructure
- OpenStack Overview & Distributions
- Community & Enterprise OpenStack Distributions
- Red Hat and Intel Contributions

8:00-8:45

15 min BREAK



DEEP DIVE INTO OPENSTACK

- Component OpenStack Projects and Simple Workflow
- Trusted Compute Pools and Trust in the Open Cloud
- Next Steps: Training to Proof-of-Concept to Production
- Call to Action

9:00-10:15

15 min BREAK & Working LUNCH

HANDS-ON: LAUNCHING INSTANCES ON TESTFLIGHT

- Logging in to the Web Dashboard
- Building and Launching Instances
- Configure Instances with Metadata
- (Time Permitting) Command-Line Workflow alternative to Web Dashboard

10:30-1:00

DISCUSSION AND WRAP-UP

Intended Audience

- Enterprise Architects
- Systems Engineers
- Developers
- Systems Administrators
- Network Administrators
- Storage Administrators

- Your role is important to us...

Mavenspire

DELL PartnerDirect Premier

Analysts Agree – Hybrid IT Models

"Especially in larger enterprises, consider the evolution to hybrid cloud computing as part of a broader strategy to position IT as the broker for a broad mix of IT services delivered in many different ways—hybrid IT."

GARTNER

SOURCE:
Gartner "Design Your Private Cloud with Hybrid in Mind," 24 February 2012, updated 2013 #G00230748, Thomas Bittman

redhat.

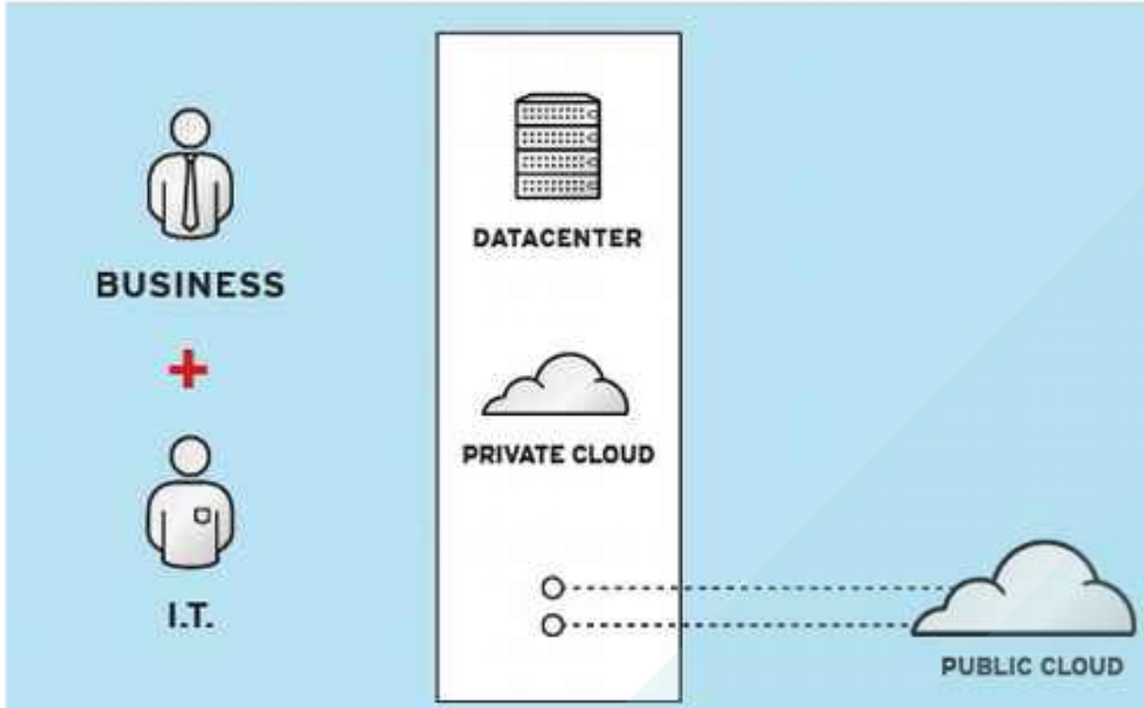
Mavenspire

DELL PartnerDirect Premier

Evolution of Technology Consumption Models

TRADITIONAL I.T.

- Provides services on traditional infrastructure



HYBRID I.T.

- Provides services on traditional infrastructure
- Provides services on private cloud
- Brokers services from public clouds
- Consumes services from public clouds

LEGACY

VIRTUALIZED

CLOUD

HYBRID CLOUD

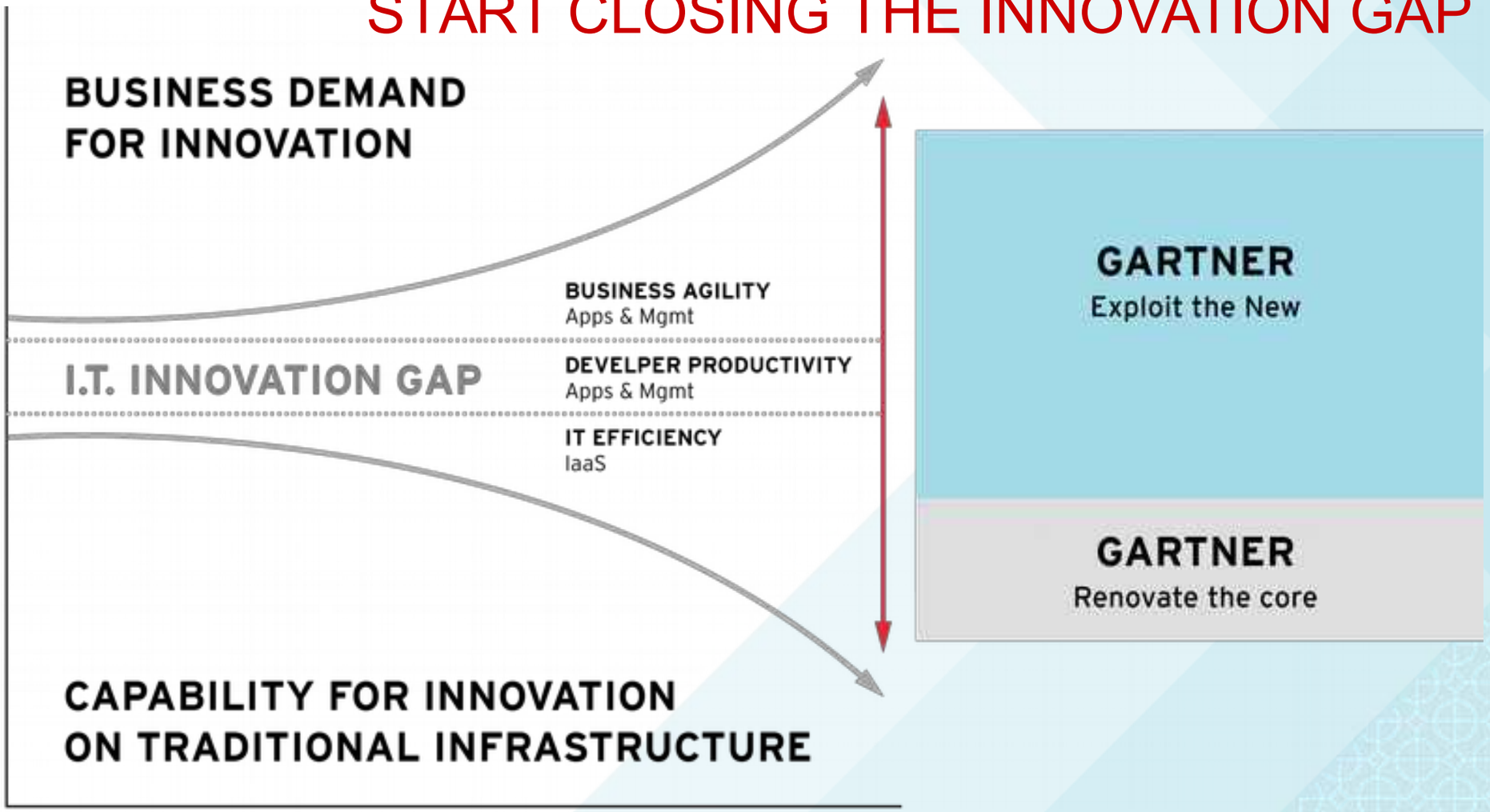
redhat.

Mavenspire

DELL PartnerDirect Premier

Comprehensive Hybrid Cloud Strategy

START CLOSING THE INNOVATION GAP



BUSINESS AGILITY
xPaaS

DEVELOPER PRODUCTIVITY
PaaS

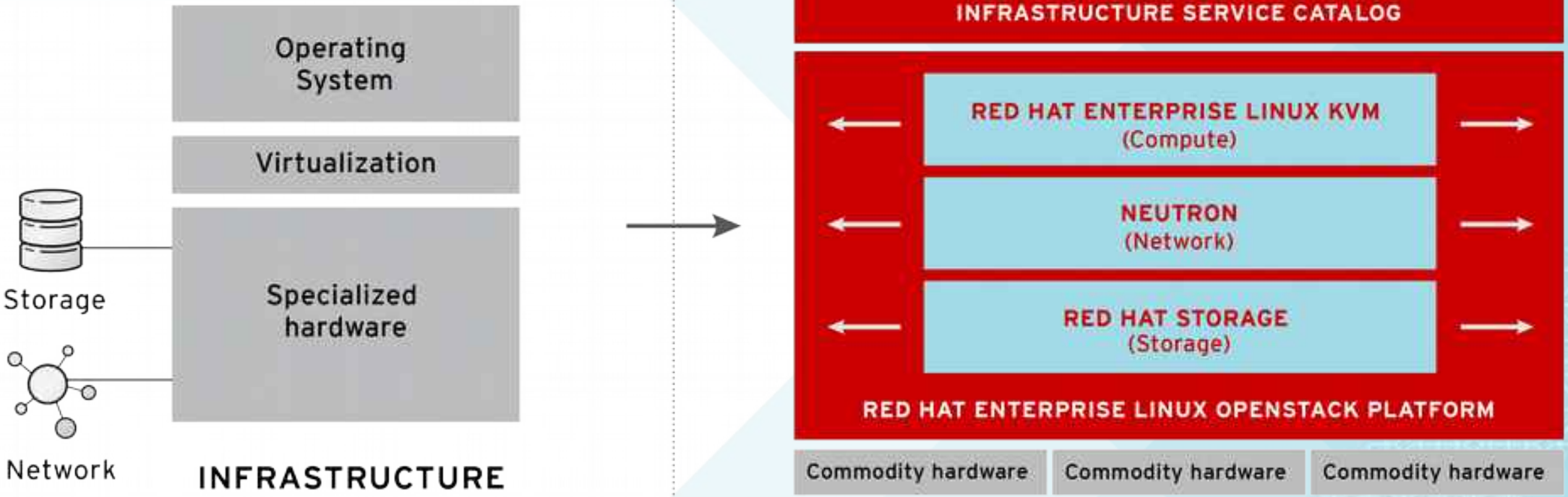
IT EFFICIENCY
IaaS

redhat.

Mavenspire

DELL PartnerDirect Premier

IT Efficiency: IaaS



Manual Workflows

Proprietary silos

Hard to scale

Self-service

Standardized, software-defined resources

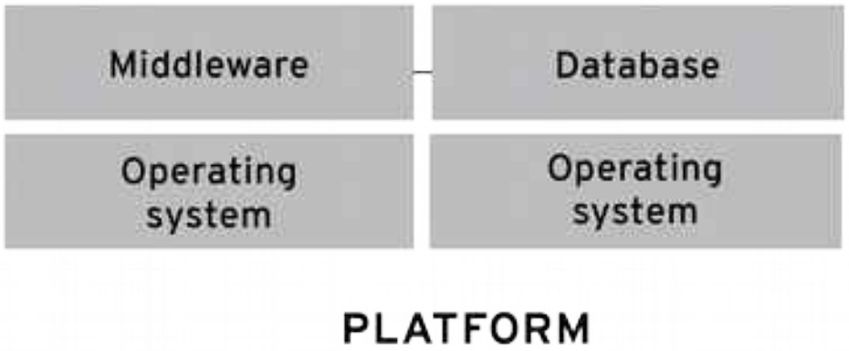
On-demand scalability

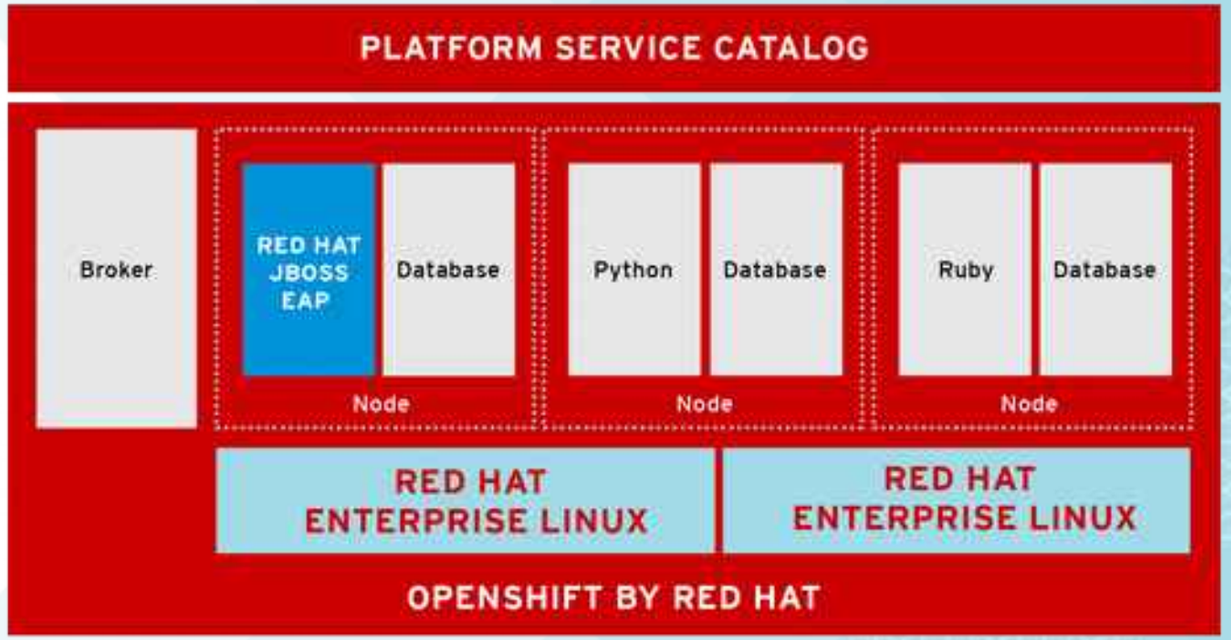
redhat.

Mavenspire

DELL PartnerDirect Premier

Developer Productivity: PaaS





PLATFORM-AS-A-SERVICE
(OpenShift)

Manually crafted environments

Ops and Dev silos

Ad hoc workflows

IT assembly line

DevOps

Streamlined workflows

redhat.

Mavenspire

DELL PartnerDirect Premier

Business Agility – Apps & Management: xPaaS

IT OPERATIONS MANAGEMENT TOOLS
Service catalog | Service management | Chargeback | CMDB

UNIFIED USER INTERACTION

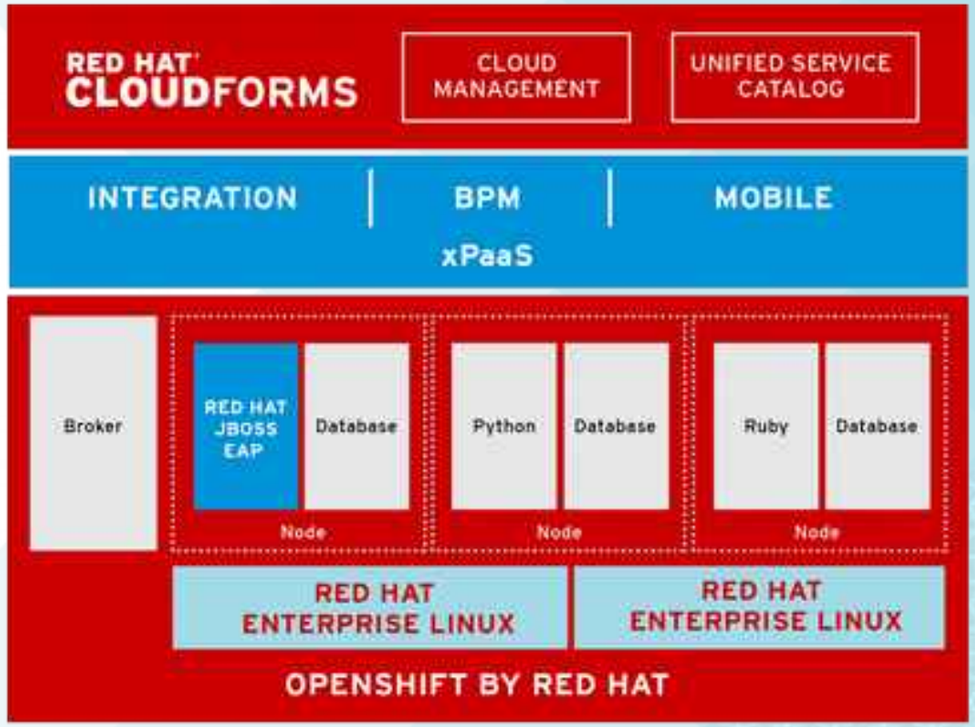
BUSINESS PROCESS MANAGEMENT

APPLICATION INTEGRATION

DATA VIRTUALIZATION

APPLICATION SERVER AND IN-MEMORY COMPUTING

BUSINESS AND MIDDLEWARE SERVICES



xPaaS AND UNIFIED MANAGEMENT

Disjointed tools

Limited scope

Management silos

Unified through PaaS

Business Services Across Enterprise

Policy-based control across enterprise

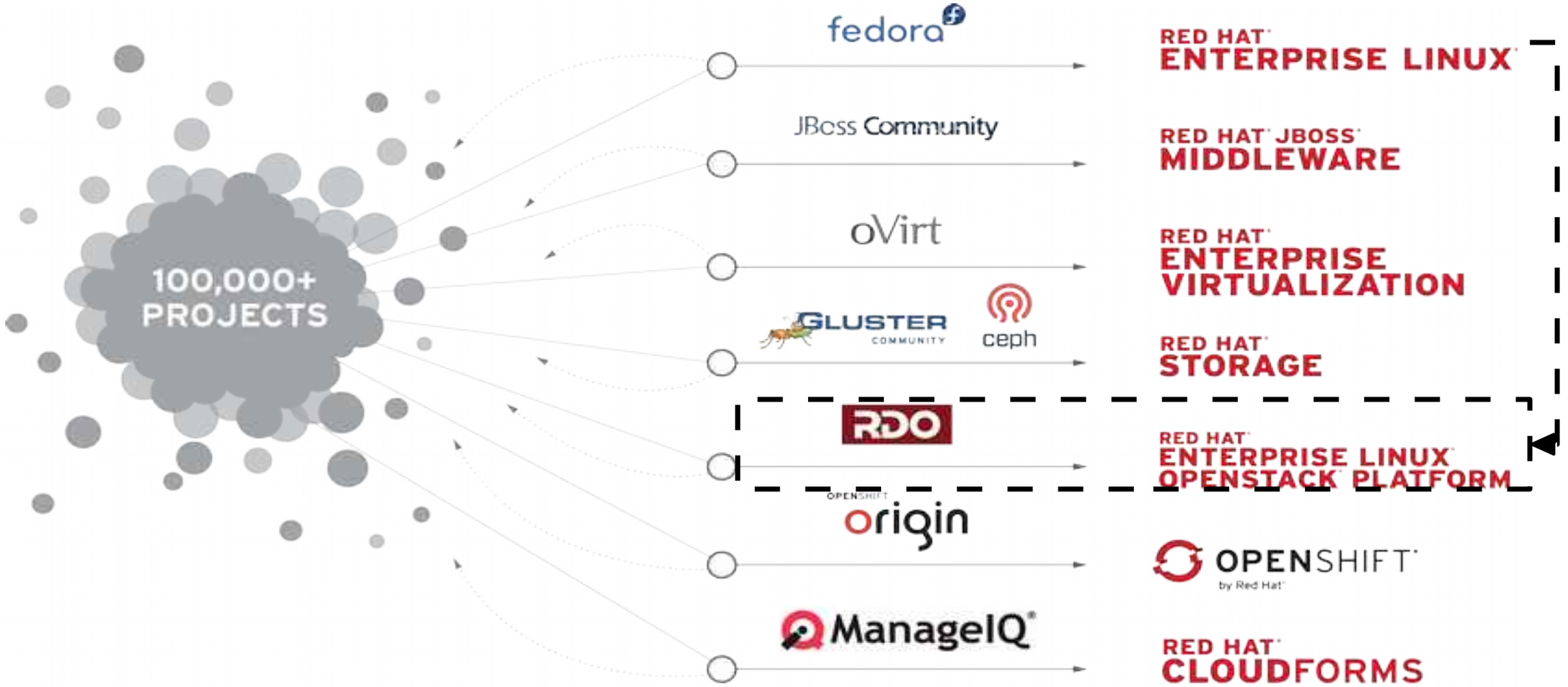
redhat.

Mavenspire

DELL PartnerDirect Premier

Open Source to the Enterprise

RED HAT LEADS THROUGH COMMUNITY INNOVATION



Mavenspire

DELL PartnerDirect Premier

From Upstream Project to Enterprise Product

openstack

RDO

RED HAT ENTERPRISE LINUX OPENSTACK PLATFORM

Cutting edge upstream OpenStack source code	Early adopter upstream OpenStack packaged as RPMs	**ENTERPRISE FOCUSED** **Red Hat OpenStack technology is optimized for and integrated with Red Hat Enterprise Linux**
Unstable community Linux	**Community Stable Platform (RHEL, Fedora, CentOS)**	**RED HAT SUPPORT** **Red Hat ecosystem certifications for 3+ year lifecycle**
No certifications Community support Six month lifecycle	No certifications Community support Six month lifecycle	

redhat.

Mavenspire

DELL PartnerDirect Premier

RED HAT & YOUR BUSINESS: SUBSCRIPTION MODEL

TECHNICAL SUPPORT

- 24 HOURS / 7 DAYS A WEEK
- UNLIMITED INCIDENTS
- MULTI-LINGUAL
- MULTI-VENDOR CASE OWNERSHIP
- MISSION-CRITICAL (OPTIONAL)

ONGOING DELIVERY

- STABILITY WITH A PRODUCT LIFECYCLE OF UP TO 10 YEARS
- PATCHES
- UPDATES
- UPGRADES
- SECURITY RESPONSE TEAM

EXPERTISE

- CUSTOMER PORTAL & FORUMS
- KNOWLEDGEBASE
- ACCESS LABS
- TRAINING CURRICULA (OPTIONAL)

COMMITMENTS

- HARDWARE CERTIFICATION
- SOFTWARE CERTIFICATION
- CLOUD PROVIDER CERTIFICATION
- SOFTWARE ASSURANCE

AWARD-WINNING SUPPORT

HDI Leading IT Service & Support

Award Winner The Year's Ten Best Web Support Sites

YEARS AWARDED:

2011 2013
2012 2014

"If we had used proprietary, licensed products from Red Hat competitors, we would have to shell out up to five times the current subscription costs towards one-time licensing in every deployment."
— VINAY ANAND, chief operating officer, Enhancesys Innovations

Enhancesys™

redhat.

What OpenStack Is and Is Not

OpenStack is Not...

- OpenStack is not a product
- OpenStack is not a single piece of software
- No one “owns” OpenStack

But it is...

- OpenStack is a collection of modular projects
  - Any one of which may be used independently or together with other OpenStack or 3rd-party software/hardware components to deliver a solution
- In general, OpenStack projects are enabling technologies, they are not the end solution, they are the beginning of a bigger solution
  - ***Plugins and modularity are key to OpenStack success***

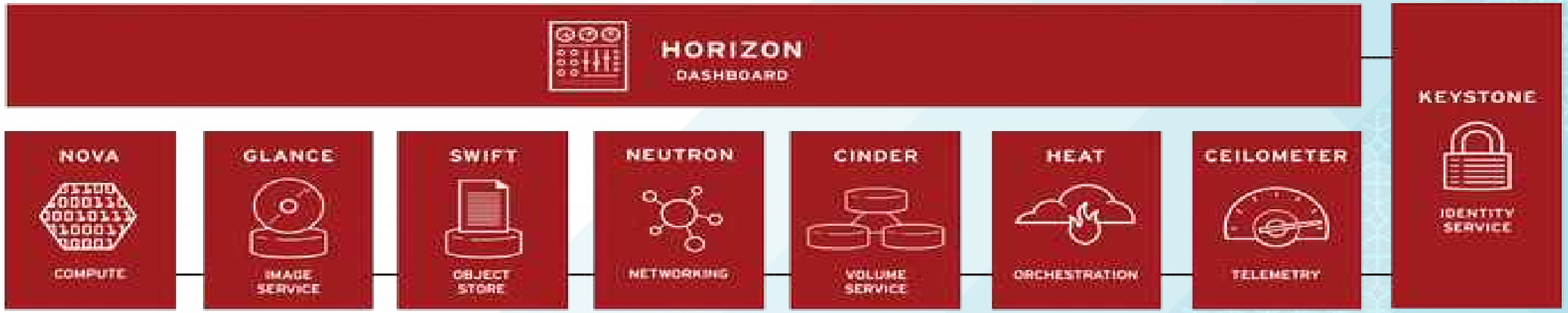
redhat.

Mavenspire

DELL PartnerDirect Premier

Cloud Infrastructure for Cloud Enabled Workloads

- Modular architecture
- Designed to easily scale out
- Based on (growing) set of core services
- Common API used for all communication (no internal ABIs) **CLI, App-to-App, WebUI**
  - Reduces troubleshooting between controller resources, especially in massively scaled-out environments with 100's or 1000's of controlling resource nodes

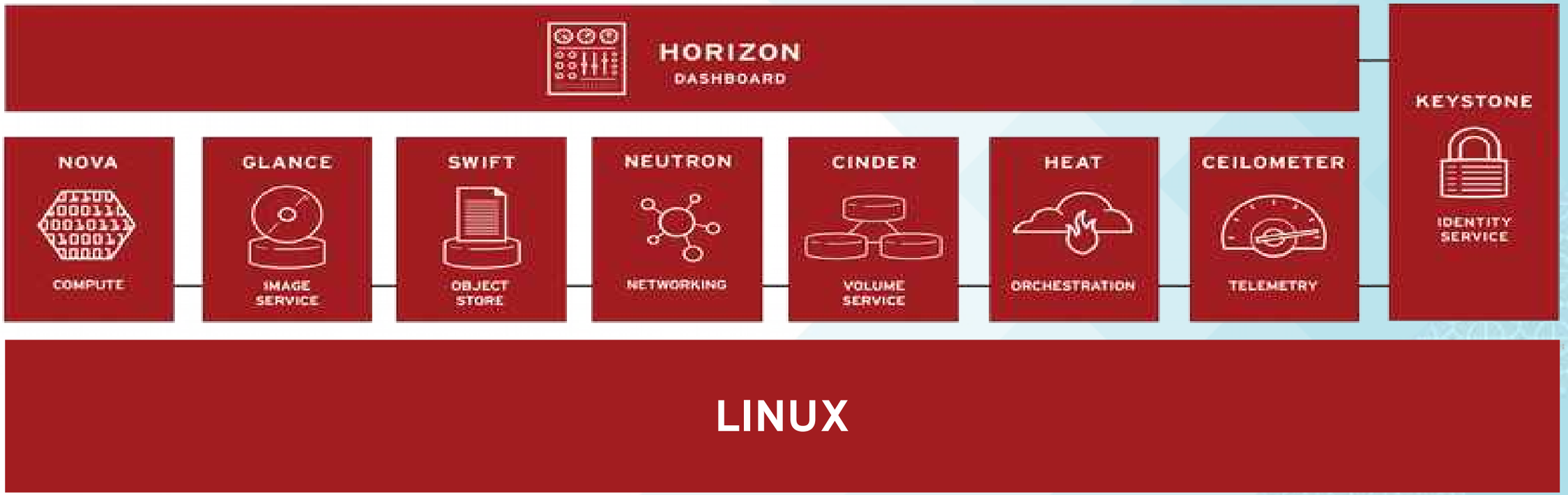


redhat.

Mavenspire

DELL PartnerDirect Premier

OpenStack Runs on Linux



- Needs to access x86 hardware resources
- Needs an operating environment, hypervisor, services
- Leverages existing code libraries for functionality

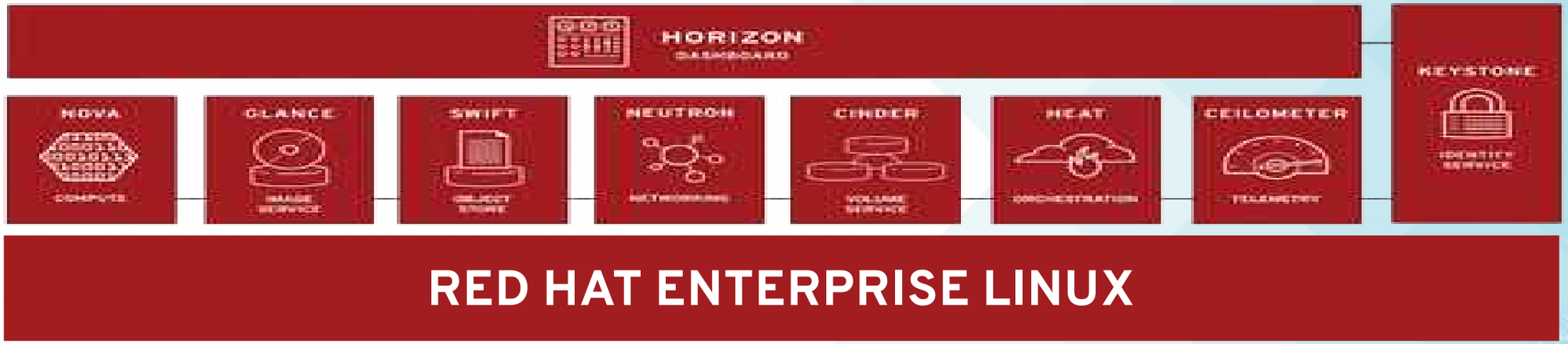
redhat.

Mavenspire

DELL PartnerDirect Premier

Red Hat Enterprise Linux OpenStack Platform

OPTIMIZED FOR AND INTEGRATED WITH RED HAT ENTERPRISE LINUX



- Enterprise support is imperative for an enterprise implementation of OpenStack
  - Unless your company has the development resources of Red Hat or Intel, for example
- OpenStack follows one of the most rapidly-paced development cycles in technology history
  - New code every 6 months, community support only for latest version
  - Enterprise partners like Red Hat and Intel are paramount to maintain a stable, functional, bug-free, secure OpenStack environment

redhat.

Mavenspire

DELL PartnerDirect Premier

OpenStack Community Release Cadence

Kilo (Apr 2015)

Juno (Oct 2014) — Sahara integrated, Designate & Manila incubation

Icehouse (Apr 2014) — Trove integrated, Zaqar incubation

Havana (Oct 2013) — Ceilometer & Heat integrated, Ironic, Sahara & Trove incubated

Grizzly (Apr 2013) — Maturation of Neutron and Cinder

Folsom (Oct 2012) — Neutron and Cinder integrated

Essex (Apr 2012) — Horizon and Keystone integrated

Diablo (Sep 2011) — Quantum incubated, early production deployments

Cactus (Apr 2011) — Scaling enhancements, multi-hypervisor enablement

Bexar (Feb 2011) — Nova enhancements, initial Glance release

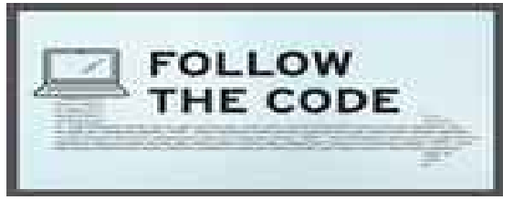
Austin (Oct 2010) — Initial release, Swift, Nova in testing

Red Hat Enterprise Linux OpenStack Platform generally follows community release by about 2 months

RED HAT INVOLVEMENT IN OPENSTACK

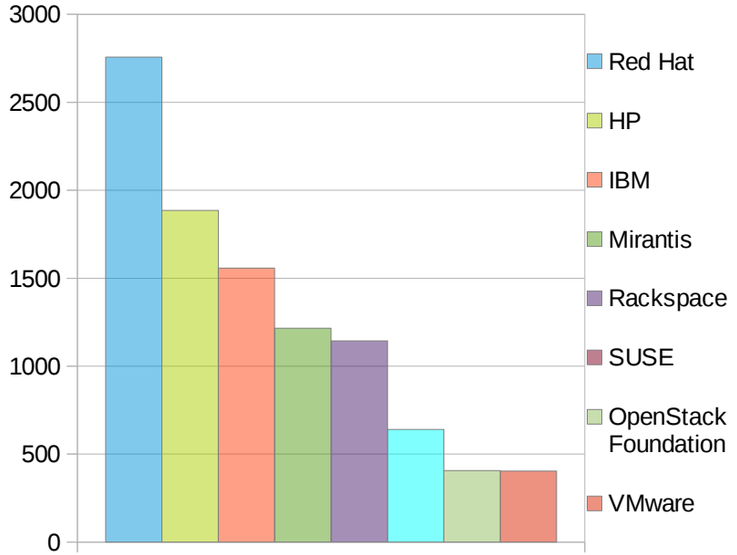
Red Hat Upstream (Development) Focus

- Heavily engaged in community since 2011
- Red Hat has skills & resources to:
  - Support customers
  - Drive new features
  - Influence strategy and direction of project
  - Enable partner collaboration

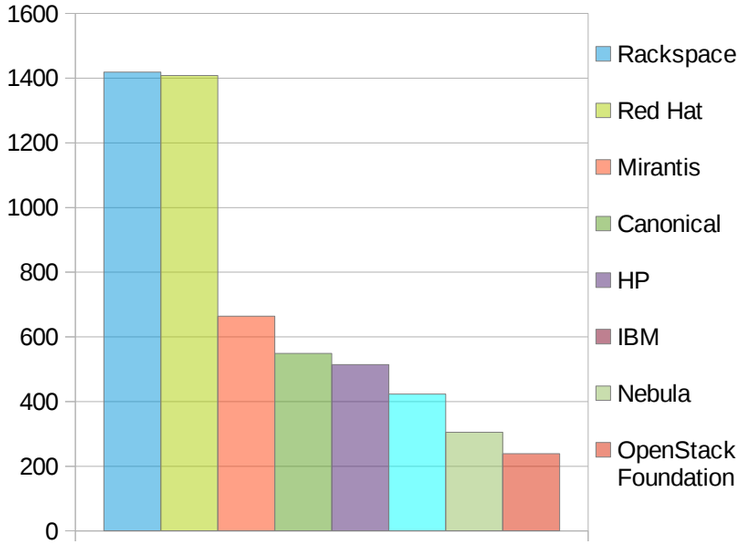


Top Contributors to OpenStack Juno Release

- Overall commits per company (aggregated)



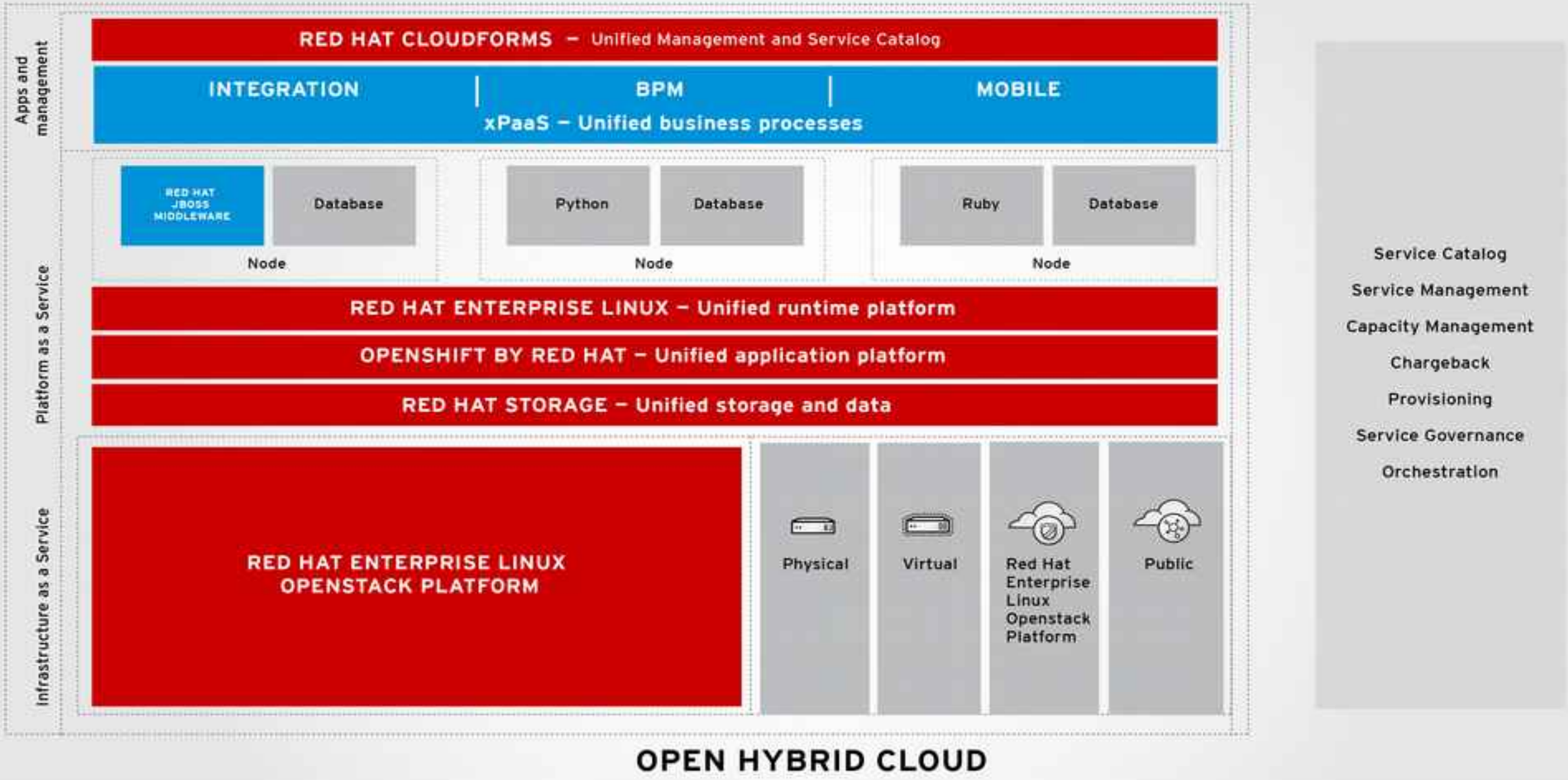
- Closed Tickets per company (aggregated)



Source: Bitergia http://activity.openstack.org/dash/browser/scm-companies.html?release=juno

Note: these statistics do not include external dependencies (e.g. libvirt, KVM, Linux components)

Open Hybrid Cloud Architecture



Comprehensive Solution Offering

RED HAT OFFERS MORE THAN JUST OPENSTACK

- Comprehensive software portfolio
  - Compute Host Hypervisor – Red Hat Enterprise Linux with KVM
  - Guest Instance OS – Red Hat Enterprise Linux & RHEL Atomic Host for Guest Instance Container support
  - Hybrid Cloud Management – Red Hat CloudForms
  - PaaS Enablement and Management – Red Hat OpenShift
- Industry-leading partnerships like here with Intel
- RHEL OpenStack Platform Certification program
  - Ensures comprehensive support through the entire solution stack, from hardware to software
- Reference Architecture
- Implementation Services

redhat.

Mavenspire

DELL PartnerDirect Premier

Considerations

Your enterprise workloads' characteristics, and Cloud pertinence

Current Infrastructure Cap-Ex vs. Op-Ex costs and opportunity for Savings?

Metrics for Return on Investment

redhat.

END OF SECTION 1

TRADEMARK STATEMENTS