OpenStack
Looking to the Future

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SUSE

We adapt. You succeed.

C.L. Bence, 12 Noyes Court, Mattoon, Ill.

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The Old Store

- **Seller controlled**
  - **Information**
  - **Price**
  - **Location**
  - **Choice**

Today's Consumers want

- Instant

  - Information

  - Choice

  - Options

  - Price

  - Location

  - Buy!

  - Delivered

Today's Vendors

- Serve consumers in their moment of need

  - Translating into support for a more complex IT infrastructure

    - Improved asset utilization (Server, Storage)

    - Automation – Software driven infrastructure

    - Upgraded and expanded facilities

  - Creating the opportunity for Cloud

    - Transforming IT into a service provider

      - Rapid response

      - Process alignment across the business

OpenStack

Mission:

"To produce the ubiquitous **open source cloud** computing platform that will meet the needs of **public and private cloud** providers regardless of size, by being **simple to implement** and **massively scalable**."

- 20M+ lines of code
- 31,898 individual members
- 555 companies / Organizations
- 176 countries
- 2,600 contributors
- 69,105 commits/year
- Over 1000 tracked clouds
- 94 products and services

Meeting The Need With OpenStack

Technology: "One platform for bare metal, virtual machines, and containers & an integration engine for every cloud technology that matters for the next decade and beyond"

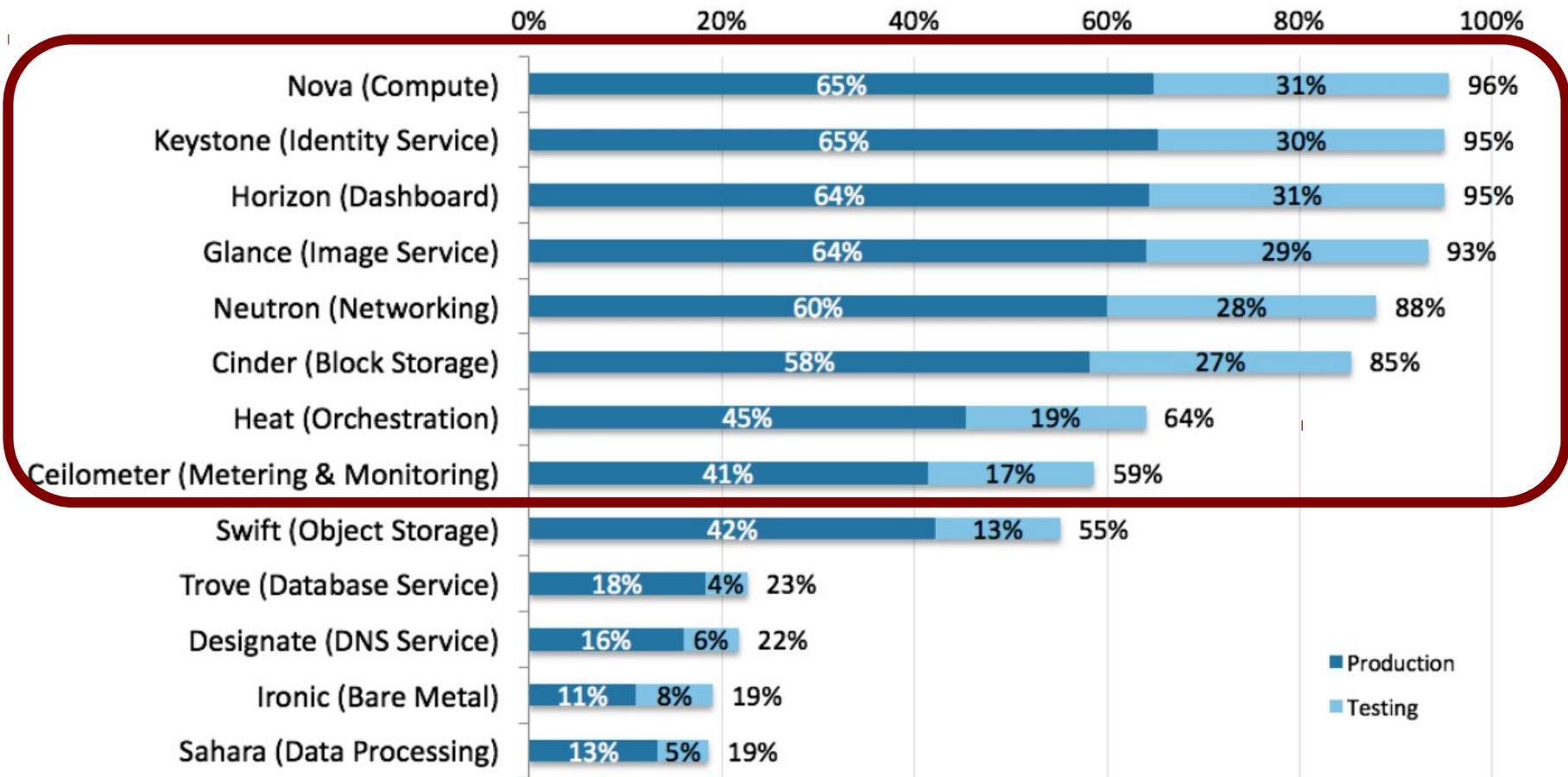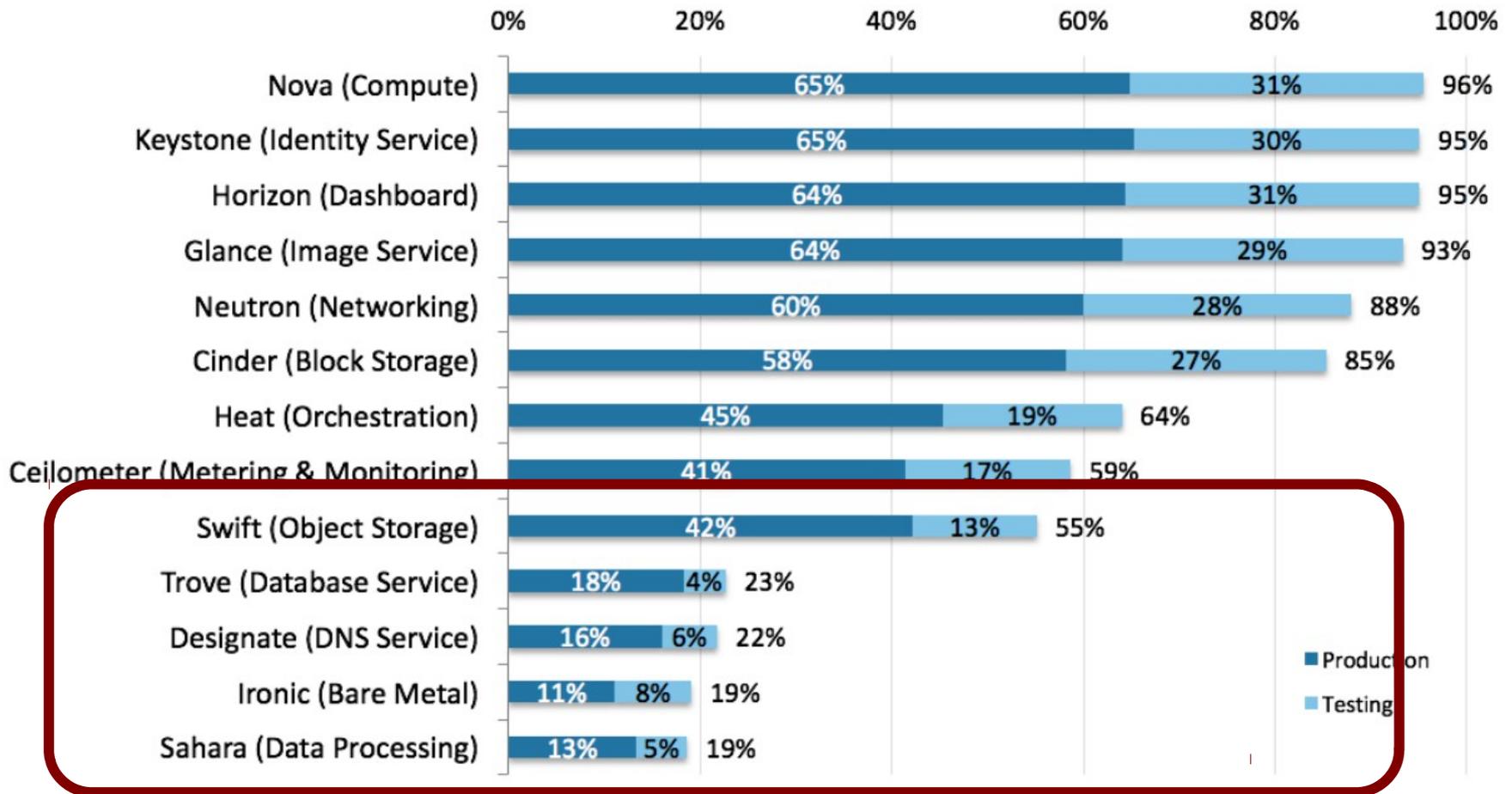# OpenStack Powers Demanding Workloads Worldwide

- Delivering:
  - Technical agility, efficiency and velocity
  - Rapid and cost-effective service deployment
  - Elasticity
  - Flexibility
    - Design a full software environment
  - Transforming IT
    - High-quality services
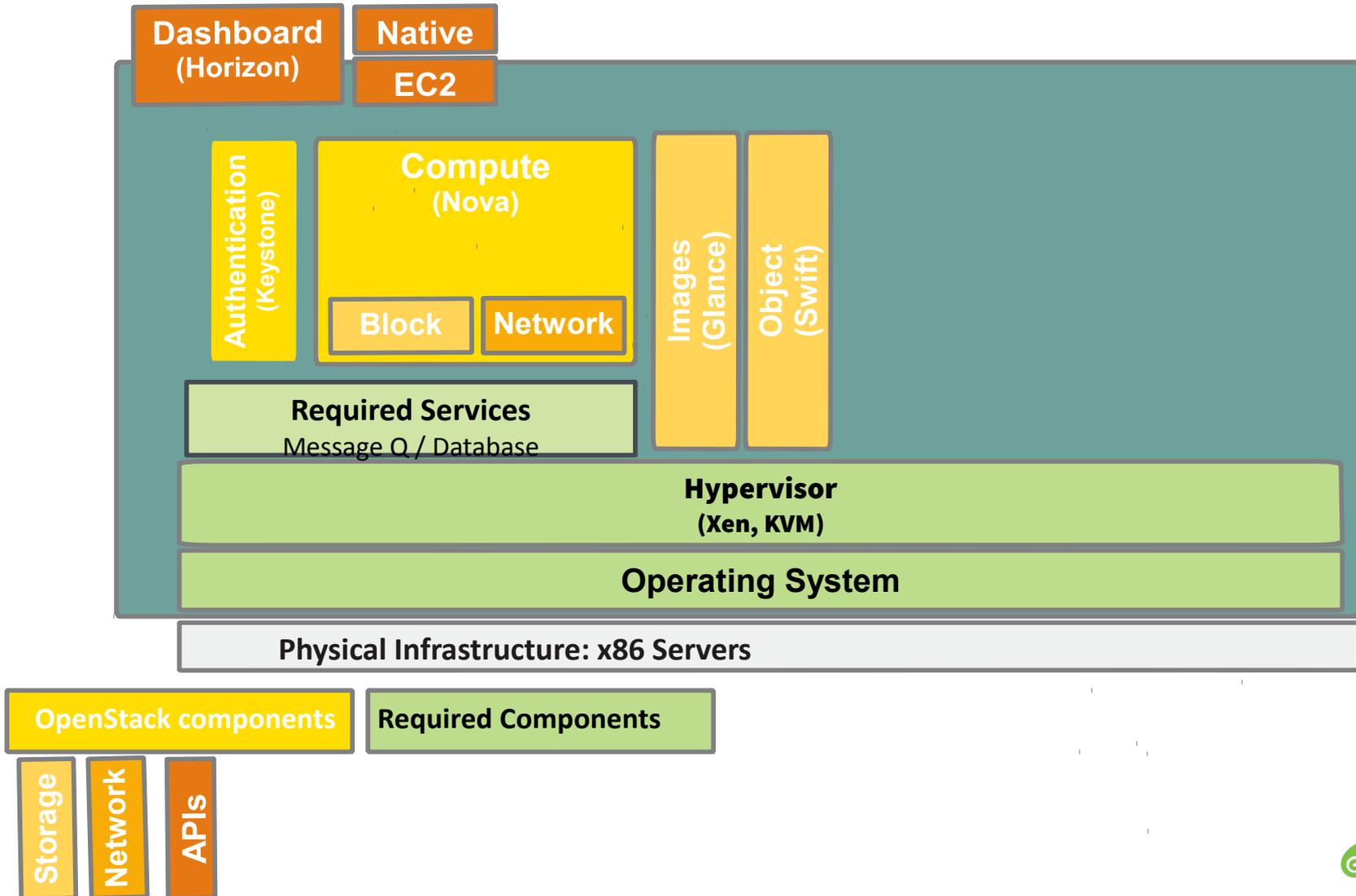   - Business need alignment
    - Foster collaboration
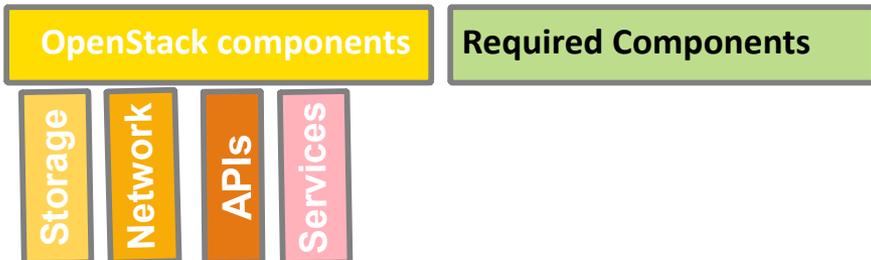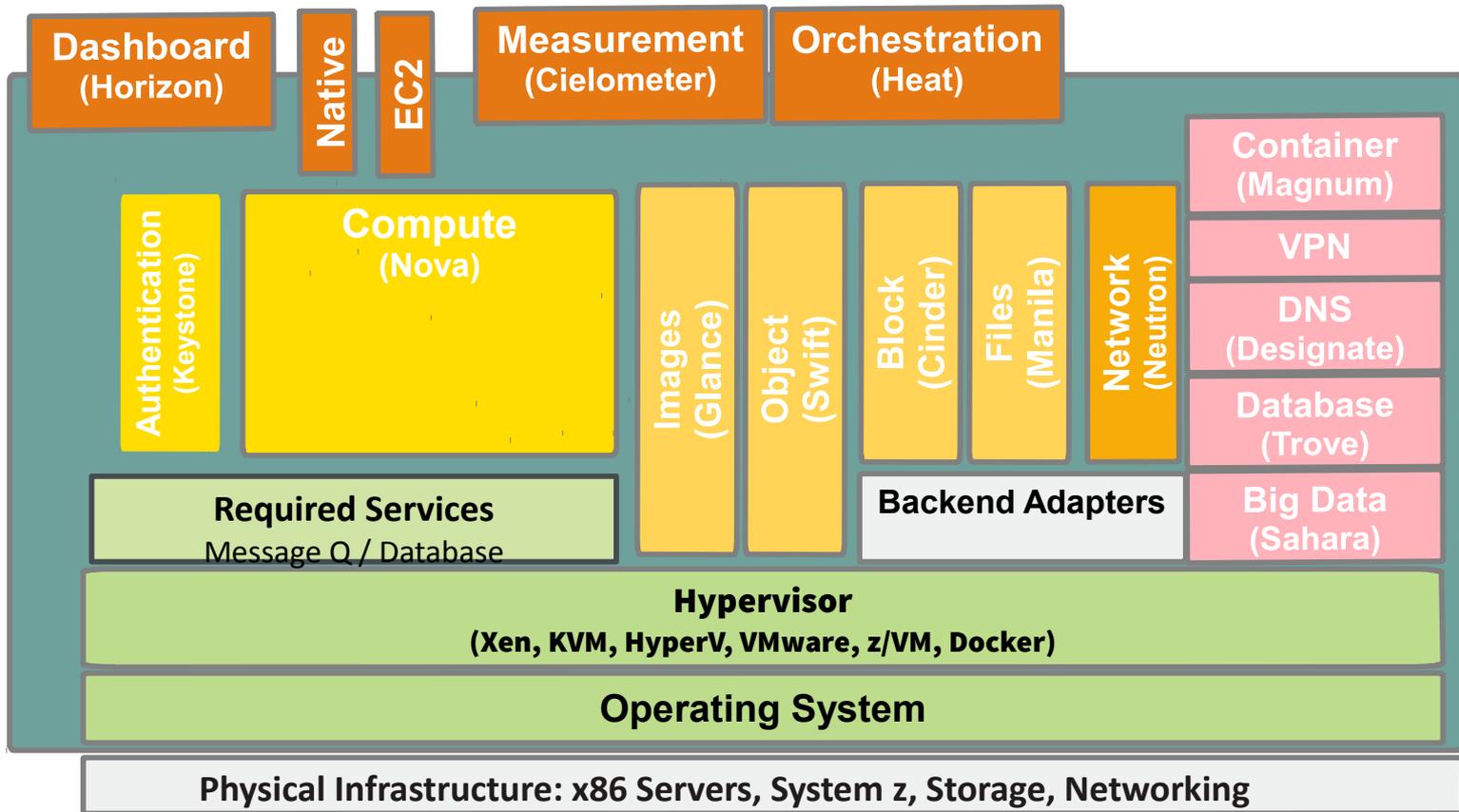
User Survey Shows...
OpenStack meets today's needs

User Survey Shows...
OpenStack is on target for the future

OpenStack Then … 2012

Dashboard (Horizon)

Native

EC2

Authentication (Keystone)

Compute (Nova)

Block

Network

Images (Glance)

Object (Swift)

Required Services
Message Q / Database

Hypervisor
(Xen, KVM)

Operating System

Physical Infrastructure: x86 Servers

OpenStack components

Required Components

Storage

Network

APIs

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OpenStack Now

Dashboard (Horizon) | **Native** | **EC2** | **Measurement (Cielometer)** | **Orchestration (Heat)**

Authentication (Keystone) | **Compute (Nova)** | **Images (Glance)** | **Object (Swift)** | **Block (Cinder)** | **Files (Manila)** | **Network (Neutron)**

Container (Magnum)
VPN
DNS (Designate)
Database (Trove)
Big Data (Sahara)

Required Services
Message Q / Database

Backend Adapters

Hypervisor
(Xen, KVM, HyperV, VMware, z/VM, Docker)

Operating System

Physical Infrastructure: x86 Servers, System z, Storage, Networking

OpenStack components | **Required Components**

Storage | **Network** | **APIs** | **Services**

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Theme Definitions

Scalability

Items that will impact the scale at which the service can operate

Resiliency

Items that will impact the high availability or ability to recover from failures for the service

Manageability

Items that improve the User Experience (UX), promote operational ease-of-use, or enhance the capabilities of the service

Modularity

Changes that enhance the modularity of the service architecture and usually result in a more manageable code-base and/or remove duplicity of efforts

Interoperability

Items that enable the service to operate across multiple OpenStack clouds [federation], promote a common experience across separate OpenStack-Powered clouds [interop], or add dependency on another OpenStack service [service dependency], and/or backwards compatibility [compatibility]
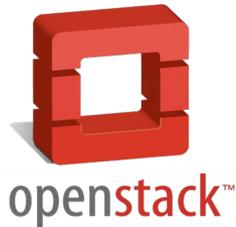
openstack
CLOUD SOFTWARE

	Scalability Increase scale			Resiliency Availability or Durability			Manageability Operations and UX			Modularity Service/Component Modularity			Interoperability Interop, Federation, Compatibility		
	L	M	N	L	M	N	L	M	N	L	M	N	L	M	N
Ceilometer															
Cinder															
Designate															
Glance															
Heat															
Horizon															
Ironic															
Keystone															
Kolla															
Kuryr															
Magnum															
Manila															
Neutron															
Nova															
Oslo															
Sahara															
Swift															
Triple O															
Trove															

Legend:
- ■ Planned Work
- □ No Information Provided

SUSE and OpenStack

2011	2012	2013	2014	2015

SUSE OpenStack Cloud 5
- Juno + SUSE Linux Enterprise 12
- SUSE Enterprise Storage

SUSE OpenStack Cloud 3 + 4
- Havana, Icehouse
- HA Control Cluster

SUSE OpenStack Cloud 2
- Grizzly
- Mixed hypervisor clouds

SUSE participates in creation of OpenStack Foundation
- Platinum Member
- Alan Clark elected Board Chairman

SUSE OpenStack Cloud 1
- 1st Enterprise supported OpenStack distribution
- OpenStack Essex release
- Focus on: Security and Improved Xen supports
- Deployment framework

SUSE Joins OpenStack community
- Diablo based cloud appliance

SUSE OpenStack Cloud Priorities

- Enable the Dynamic Data Center with Enterprise Stability

  - Fewer upgrades with Longer support cycle

  - HA guests

  - Rolling release upgrades

  - Platform as a Service

- Annual releases

  - Meet new DefCore standards

  - High demand project support and contribution

  - Partner solution integration

2016 For OpenStack

- Strengthen OpenStack Application Developer and Application Deployer Ecosystem (SDKs, containers, enterprise apps, app catalog)

- Improve the user experience for OpenStack (cross project coordination, UX team and product working group, interop and general testing, documentation)

- Community building including diversity (build additional community tools, increase travel support, global rollout of ambassador and user group programs, marketing and advertising)

Time To Go Play

Photo by Ryan Johnson

- More technology options than ever before

    – Users can experiment with new technologies both up and down the stack, without "islands" of technologies in their IT practices

- OpenStack already integrates with many emerging technologies as well as many existing systems

- Solid core of compute (bare metal, hypervisor, container), storage (block, object, file) and networking required in every scenario

- OpenStack positioned to be the foundation for the next decade of technology choices