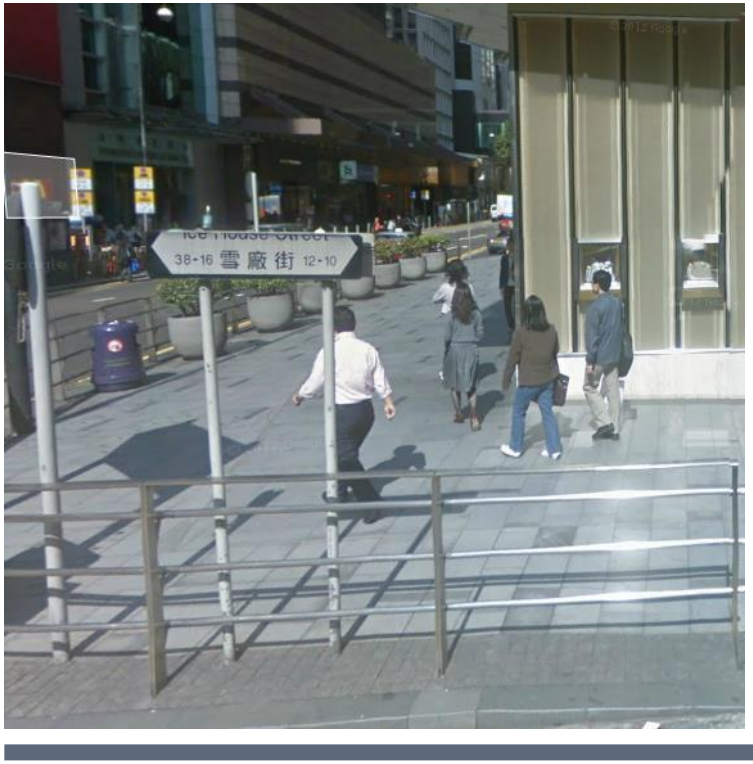
Theme: Open Source Cloud Computing



"The implications of a DYI approach are profound, organizations won't see the impact of their choice for months, or years. There are a growing number of IT organizations that embrace risk in a new way and reject the established approach to enterprise software."

Alessandro Perilli
Gartner

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Agenda

- What is OpenStack?
  - A brief history
  - The OpenStack Foundation
- The OpenStack projects
  - Compute: Nova, Glance
  - Storage – Swift, Cinder
  - Networks: Neutron
  - Tools: Horizon, Ceilometer, Heat, Oslo
  - Security: Keystone

OpenStack looks more attractive than most commercial solutions due to its inherent capability to mix and match different modules and deeply tweak the resulting cloud infrastructure stack.

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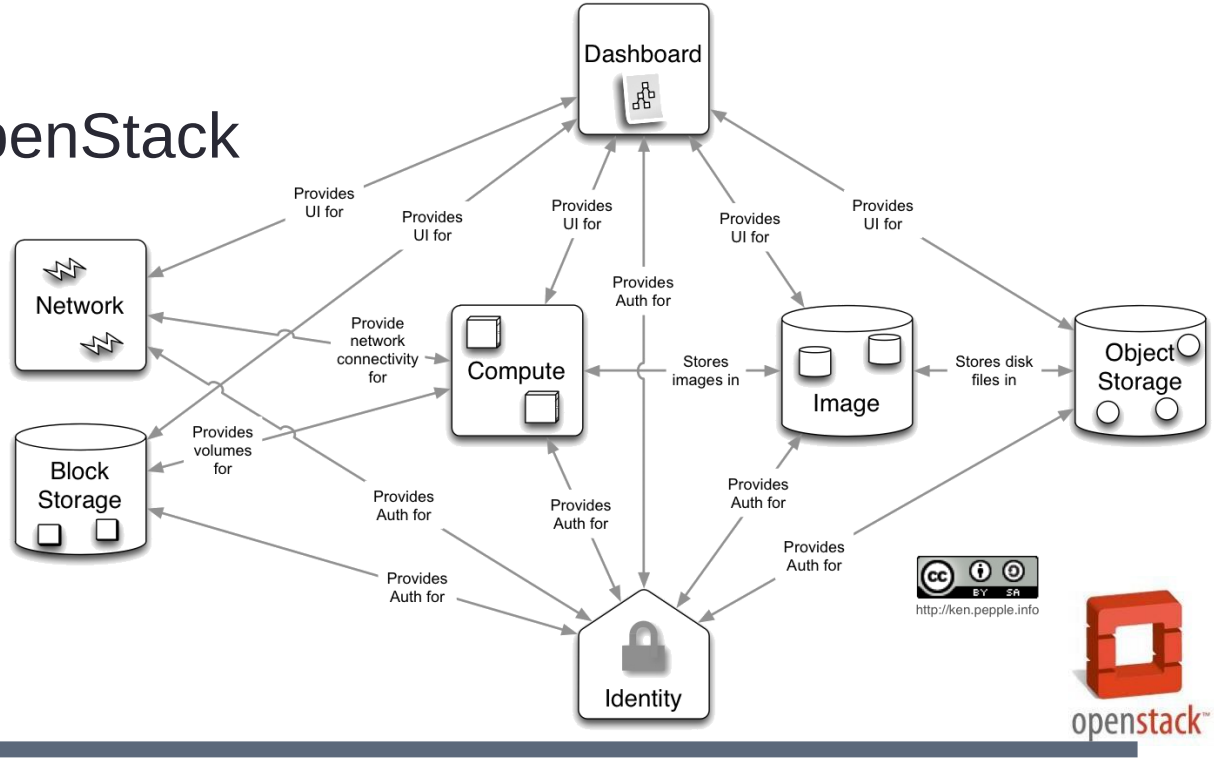
What is OpenStack?

Quick Start for the Terminally Busy…

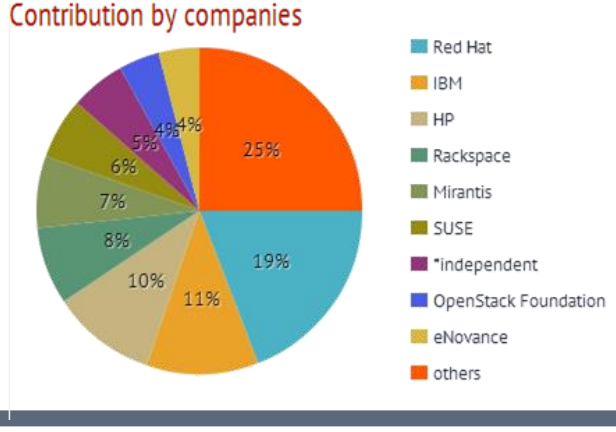
- Open Source Cloud software
- Launched by NASA and Rackspace in 2010
- Massively scalable
- Managed by the OpenStack Foundation
- Rapidly taking over the Cloud world!

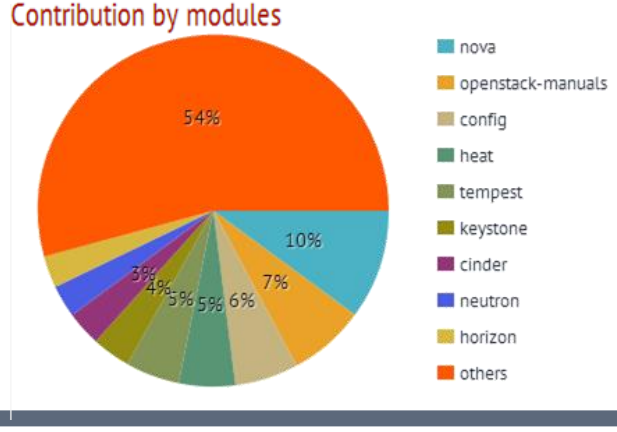


What is OpenStack?

A Brief History

- Jointly founded in July 2010 by Rackspace and NASA with merger of two projects:
  - Swift object storage based on Rackspace's Cloud Files platform
  - Nova based on Nebula compute platform
- Fastest growing Open Source project to date!
- Strong Community Support





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OpenStack Project Release History

Six Month Cycle – Currently working on Icehouse

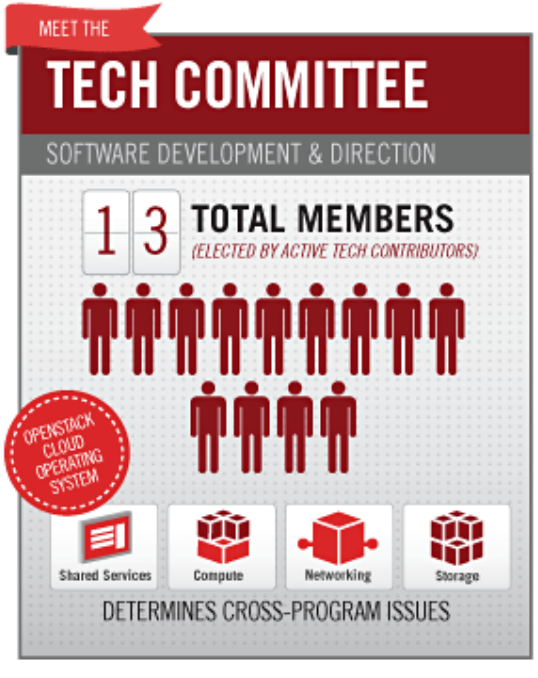
- Releases are timed to correspond with the developer Summit meeting
- Still no reliable upgrade paths between releases
- Expect large deltas between releases for the next year or so as new features and core functionality are added

Series	Status	Releases	Date
Icehouse	Under development	Due	Apr 17, 2014
Havana	Current stable release, security-supported	2013.2	Oct 17, 2013
		2013.2.1	Dec 16, 2013
Grizzly	Security-supported	2013.1	Apr 4, 2013
		2013.1.1	May 9, 2013
		2013.1.2	Jun 6, 2013
		2013.1.3	Aug 8, 2013
		2013.1.4	Oct 17, 2013
Folsom	EOL	2012.2	Sep 27, 2012
		2012.2.1	Nov 29, 2012
		2012.2.2	Dec 13, 2012
		2012.2.3	Jan 31, 2013
		2012.2.4	Apr 11, 2013
Essex	EOL	2012.1	Apr 5, 2012
		2012.1.1	Jun 22, 2012
		2012.1.2	Aug 10, 2012
		2012.1.3	Oct 12, 2012
Diablo	EOL	2011.3	Sep 22, 2011
		2011.3.1	Jan 19, 2012
Cactus	Deprecated	2011.2	Apr 15, 2011
Bexar	Deprecated	2011.1	Feb 3, 2011
Austin	Deprecated	2010.1	Oct 21, 2010

What is OpenStack?

An Open Source Foundation

Technical Committee



OpenStack Technical Committee members define and steward the technical direction of OpenStack software, including cross-program issues. The committee of 13 is fully elected by the project's Active Technical Contributors.

Board of Directors

The Board of Directors provides strategic and financial oversight of Foundation resources and staff. Alan Clark, Director of Industry Initiatives, Emerging Standards and Open Source at SUSE, was elected Chairman of the Board, and Lew Tucker, Vice President and CTO of Cloud Computing at Cisco, was elected Vice Chairman of the Board.

User Committee

Tim Bell, Operating Systems and Infrastructure Services Group Leader at CERN, was appointed by the Board of Directors to help establish a new User Committee, created to represent a broad set of enterprise, academic and service provider users with the Technical Committee and Board of Directors.

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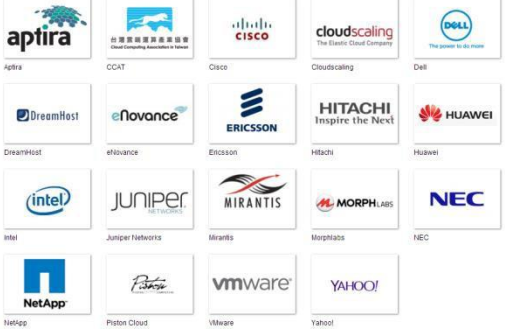
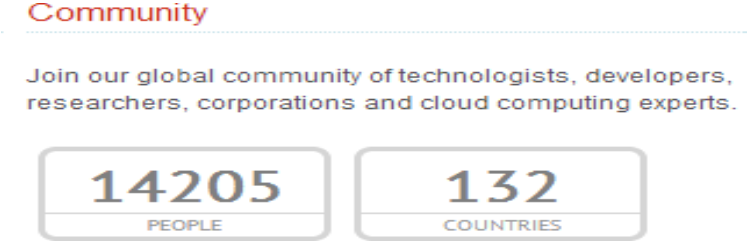
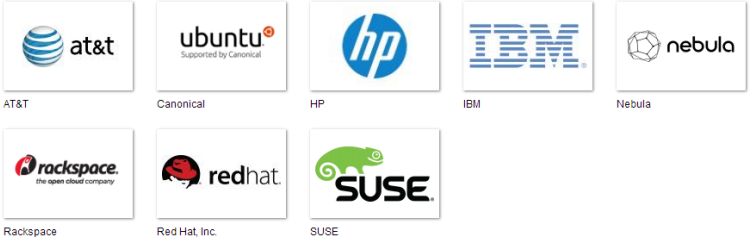
What is OpenStack?

An Open Source Foundation

- Independent home for the OpenStack project
- Uses the Apache licensing model
- Serves developers, users, and the entire ecosystem by providing:
  - Shared resources
  - Enable technology vendors targeting the platform
- Individual membership is free and accessible to anyone







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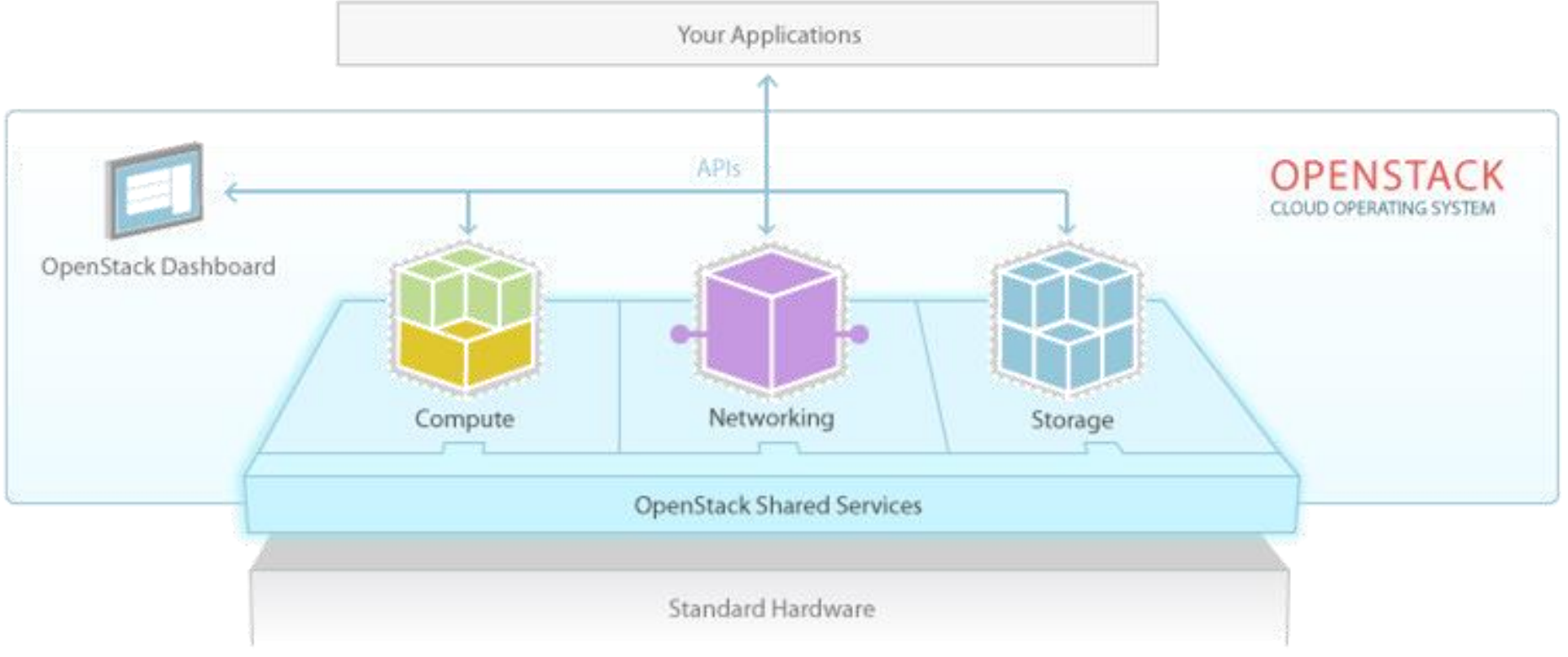
What is OpenStack?

Open Source Cloud Platform

- Open source software for building private and public clouds
  - Designed for flexibility and many different use cases
  - Mix and match components
  - Kit of administrative tools
- Enables multi-tenancy
  - Quota for different users
  - Users can be associated with multiple tenants
- Provides virtual machines (VM) on demand
  - Self service provisioning
  - Snapshotting capability
- Storage volumes
  - Block storage for VM images
  - Object storage for VM images and arbitrary files

OpenStack: The Open Source Cloud Operating System



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