Federating OpenStack:
a CERN and Rackspace Collaboration

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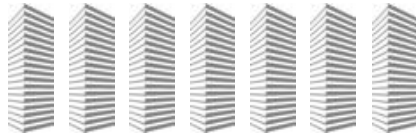
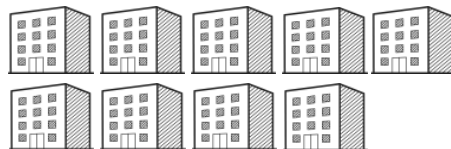# Rackspace in numbers

5,000+ RACKERS

205,000+ CUSTOMERS
98,000+ SERVERS
26,000+ VMs, ≈ 70 PB

120 + COUNTRIES

9 GLOBAL DATA CENTRES

CLOSE TO
40%
OF THE **FTSE® 100**

and nearly 60% of the Fortune 1000

OVER $1.3 BILLION $$$$
Annualised Revenue

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Global Data Centre Reach

Chicago

Washington

Dallas

London

Hong Kong

Sydney

The Rackspace Vision

> " To be recognised as one of the world's greatest service companies. "
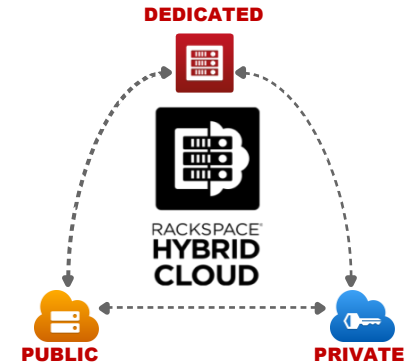
What makes Rackspace Different?

FANATICAL SUPPORT®

OPEN TECHNOLOGIES

HYBRID CLOUD

Trusted, committed experts to help architect and run your application hosting platform
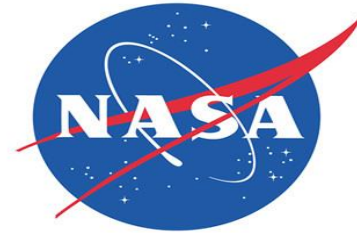
Created **OpenStack** to power the Hybrid Cloud and to give you flexibility to run your apps **where you want**

Best-fit architecture for your application and business needs for today and the future

What is Openstack

To enable *any* organisation, regardless of size, to create and offer cloud computing services running on standardised hardware.
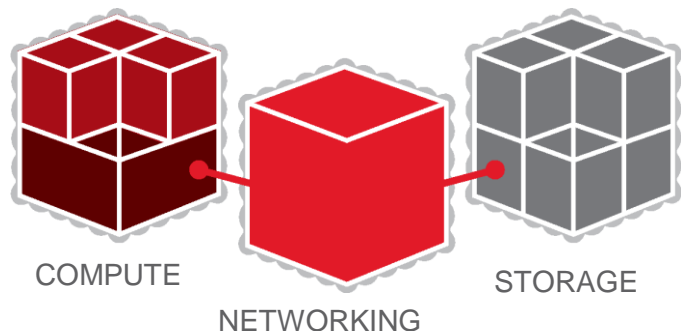
The OpenStack Community

An Overview of Openstack

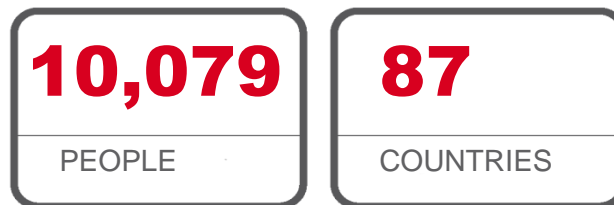**OpenStack is open-source software used to build public, private and hybrid clouds**

SOFTWARE

OpenStack Software delivers a massively scalable cloud operating system.
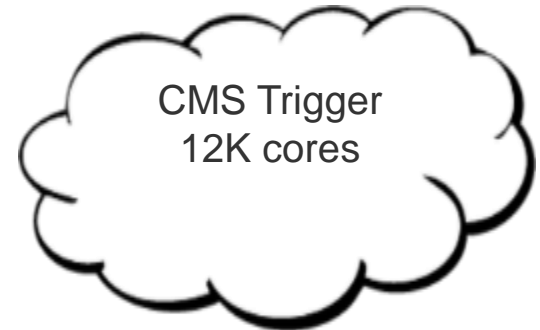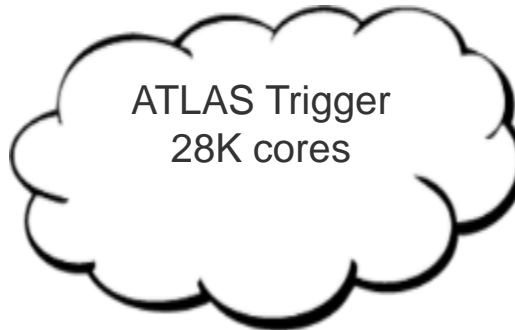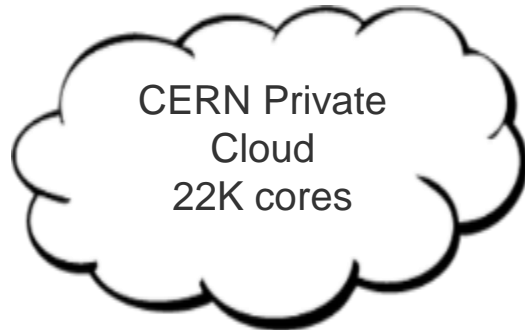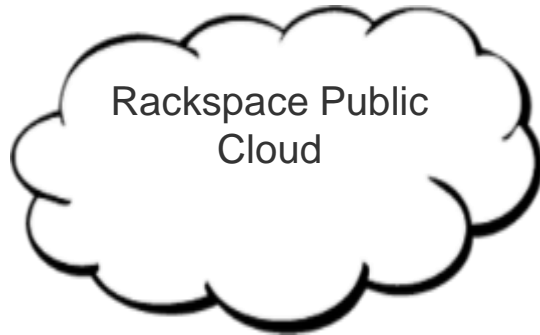
COMPUTE

NETWORKING

STORAGE

COMMUNITY

A global community of technologists, developers, researchers, corporations and cloud computing experts.

10,079

PEOPLE

87

COUNTRIES

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Cloud Resources are Isolated

Many Others on Their Way

Rackspace Public Cloud

CERN Private Cloud 22K cores

ATLAS Trigger 28K cores

CMS Trigger 12K cores
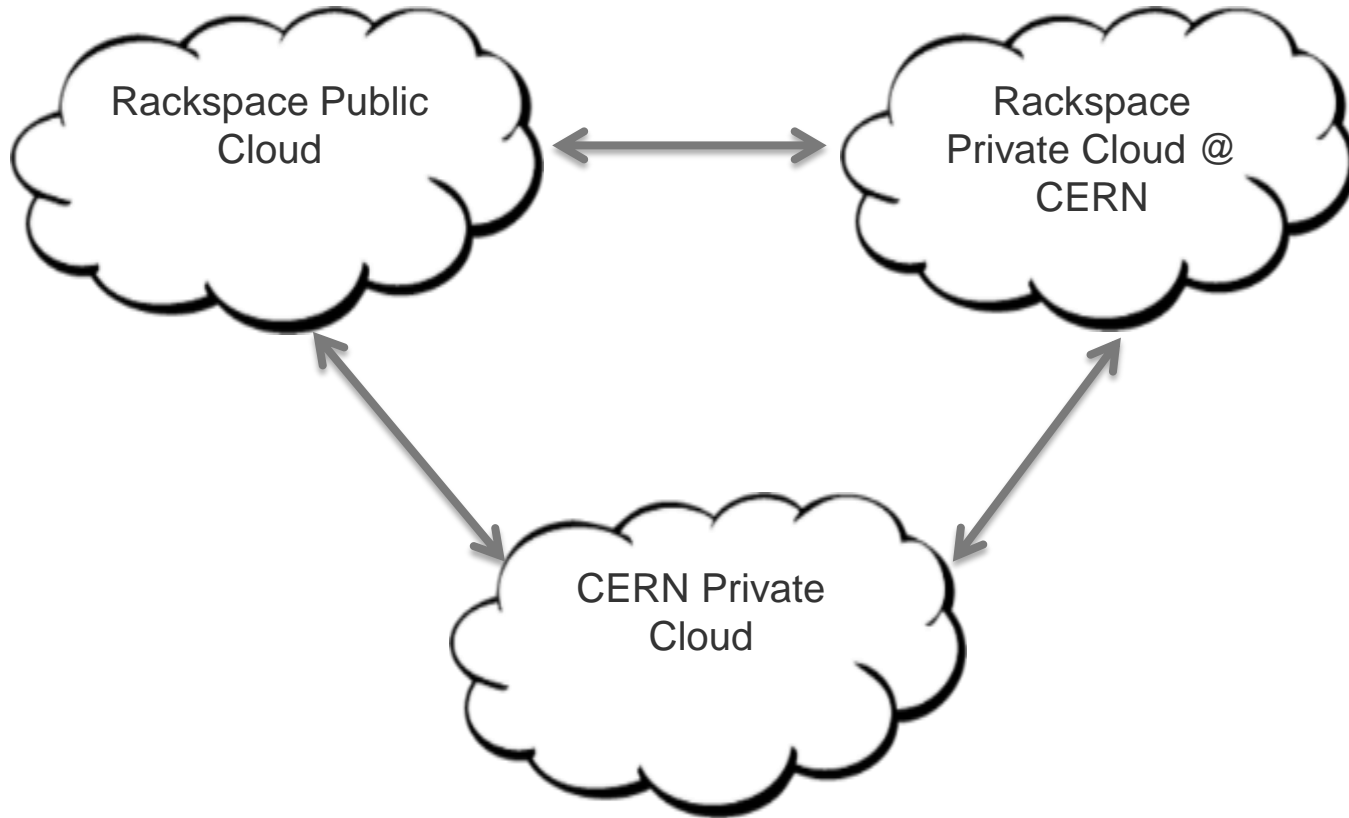
Goals for a year of joint research

- A reference architecture for federation of OpenStack clouds

- Blueprints and code contributions to the open source communities

- Presentations and white papers to allow others to build on our findings

CERN Rackspace Openlab Project

How

- Deploy a Rackspace private cloud at CERN in parallel with the CERN Private cloud

- Investigate OpenStack cloud federation in areas such as Authentication, Images, Networking and Metering
  - Architecture
  - Blueprints
  - Code and Configuration

- Demonstrate burst workload from private clouds to Rackspace public cloud

THANK YOU

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