

**CHINA**  
*OpenStack Days*

# Topic: OpenStack User Survey & Certified OpenStack Administrator Exam

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Allison Price, Marketing Manager, OpenStack Foundation & User Survey Project Lead  
Lauren Sell, VP of Marketing & Community Services, OpenStack Foundation



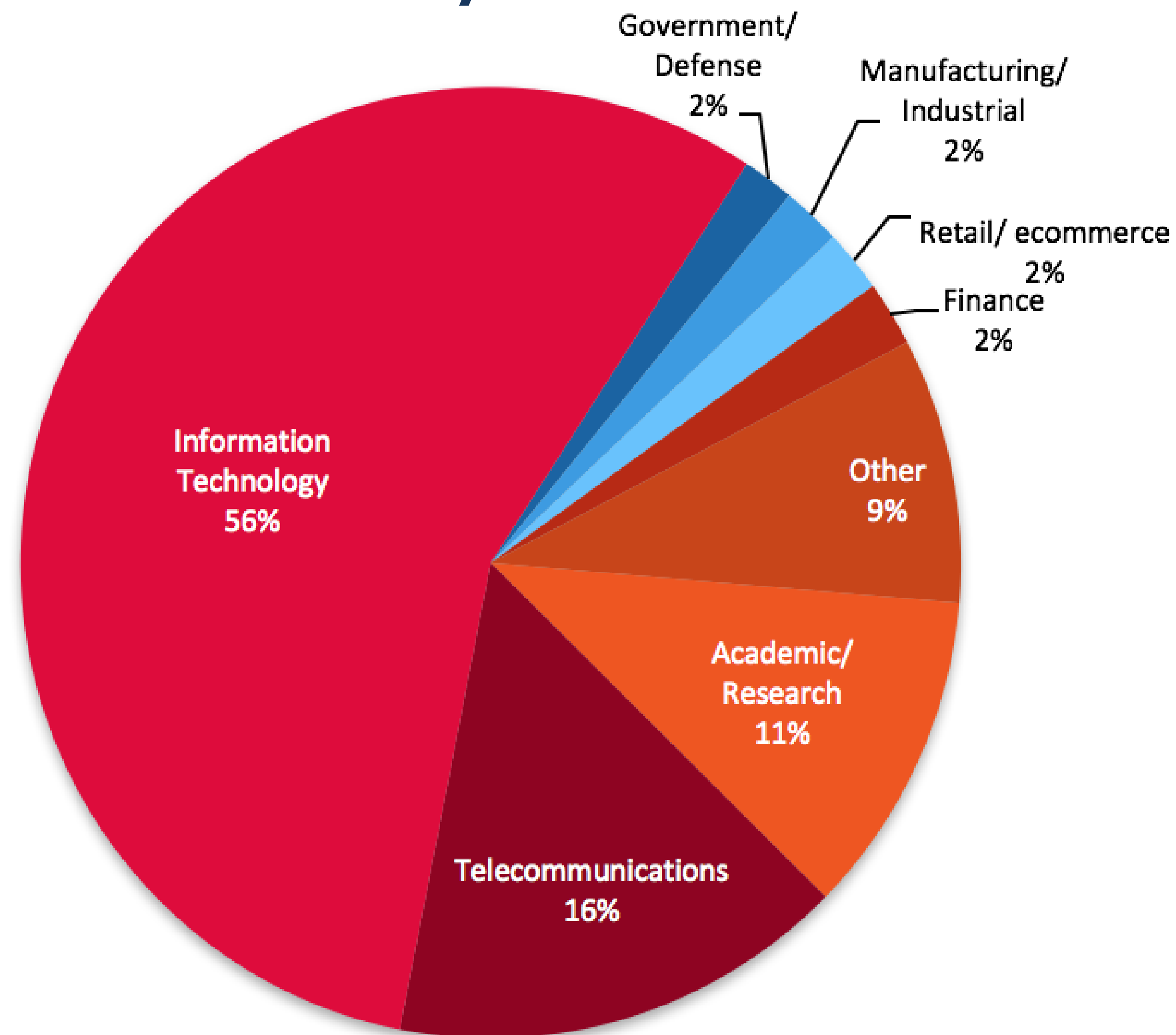


44%

YEAR OVER YEAR

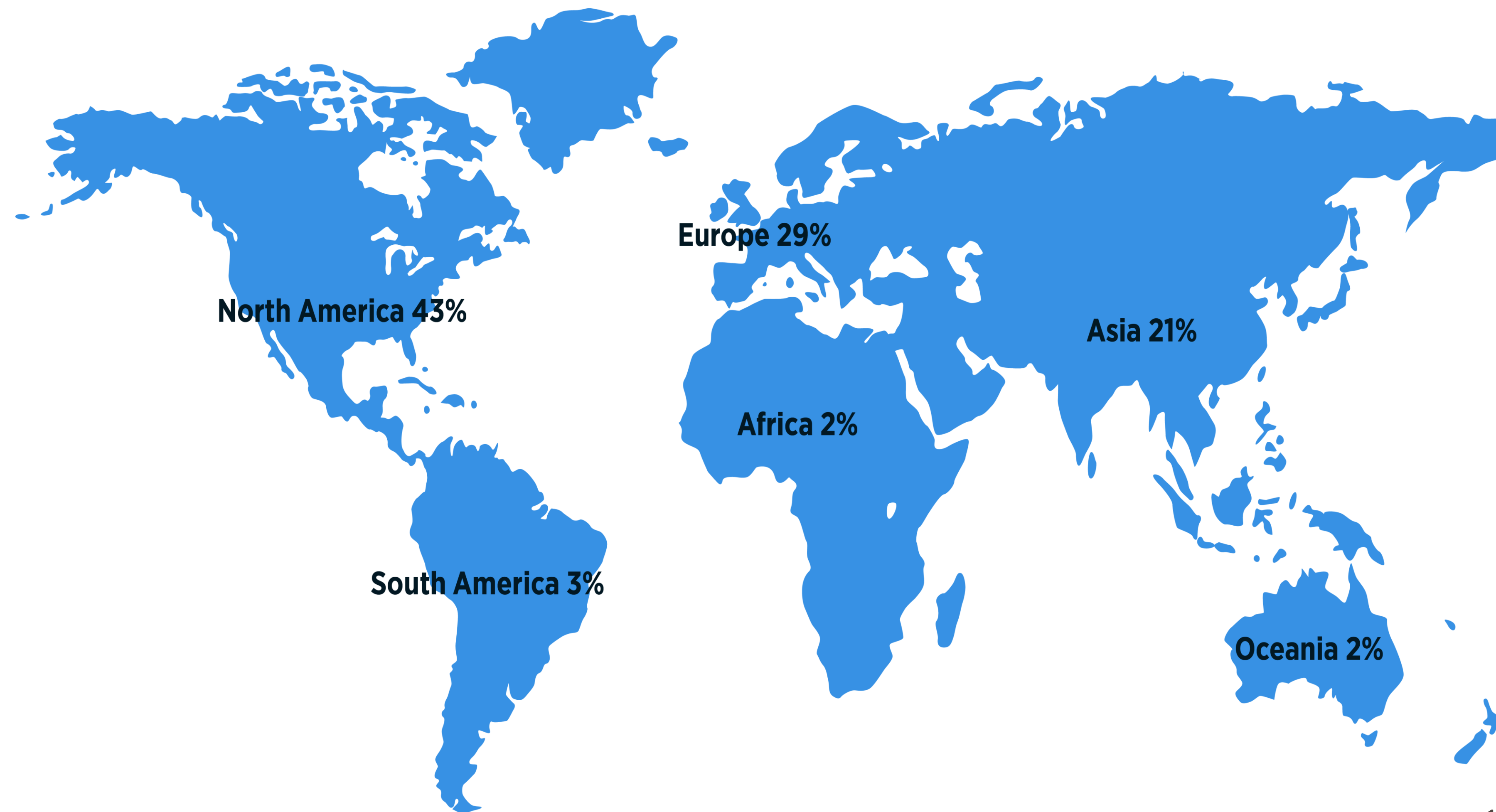


# IT makes up the largest share of users, followed by telecom and academic/research



n=1180

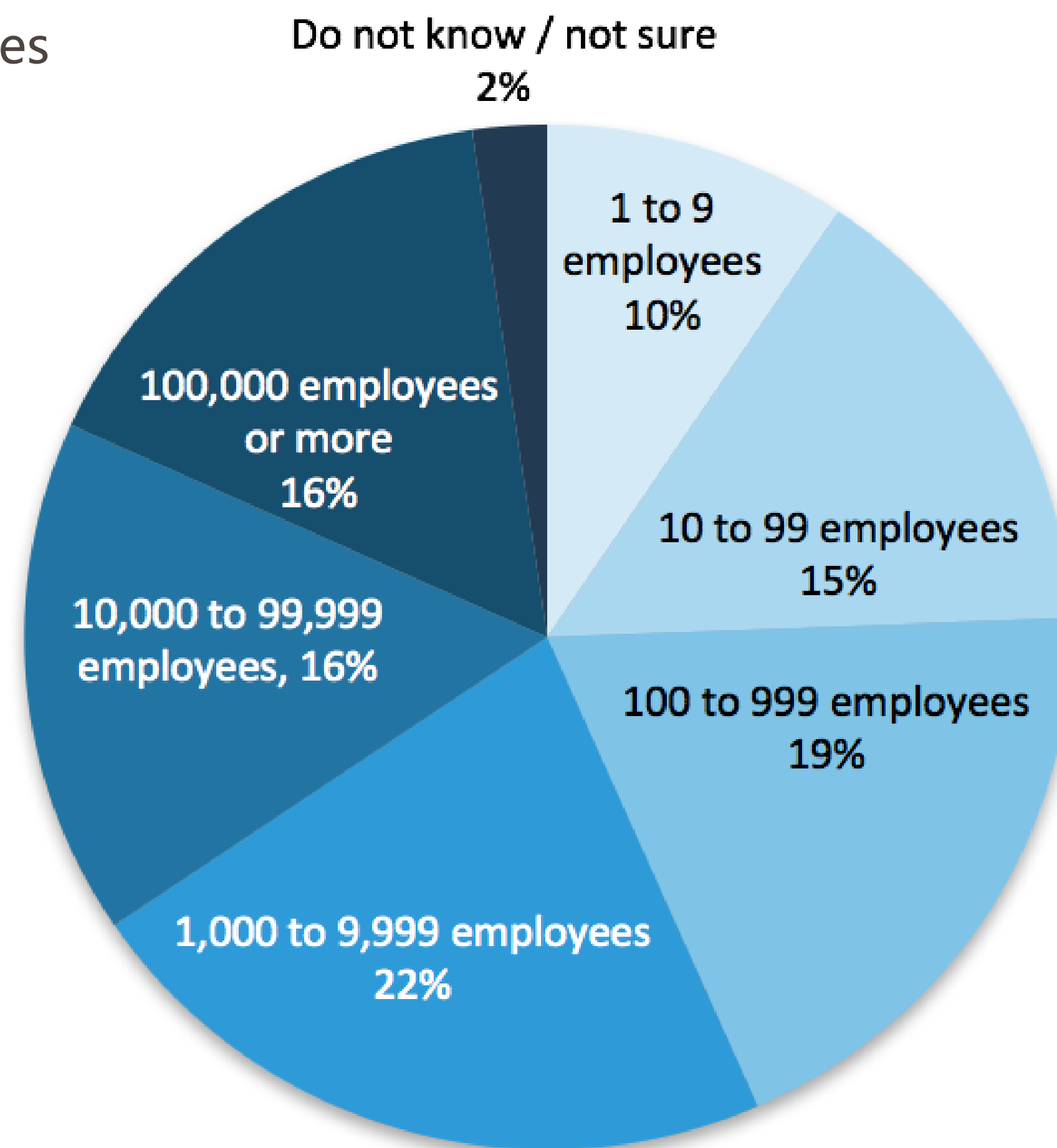
# OpenStack users & deployments are globally distributed



n=1178

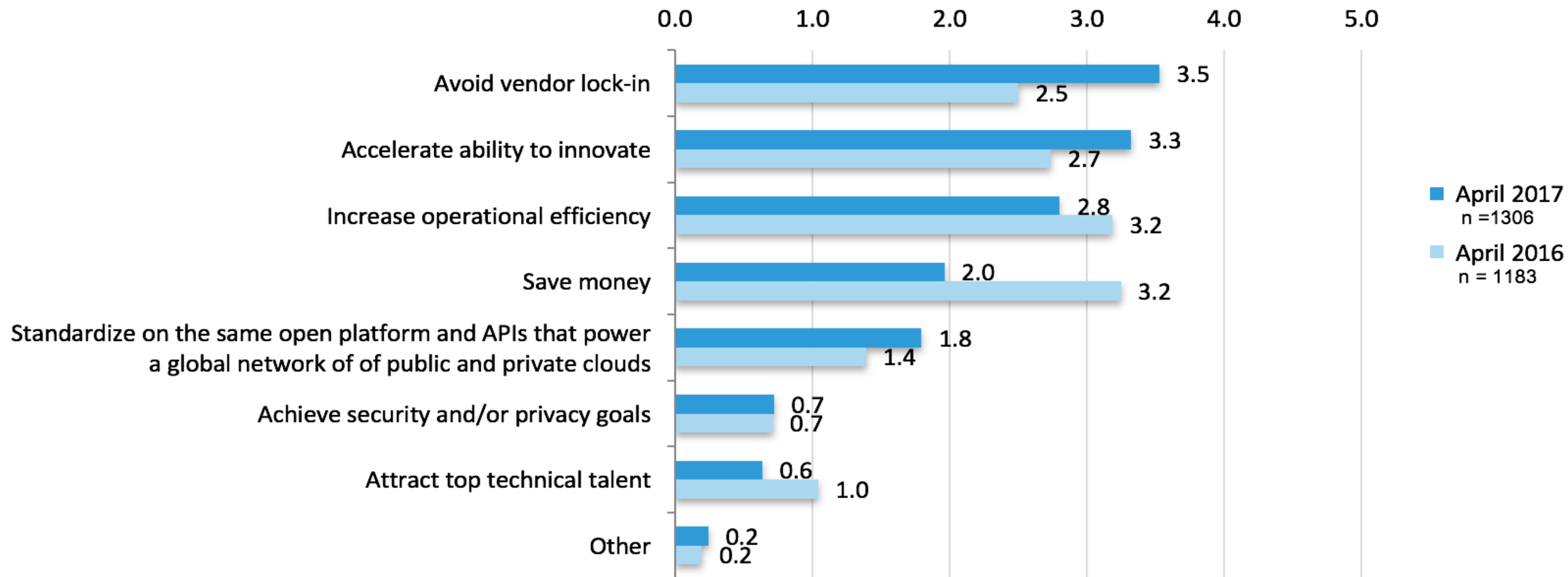
# Organizations of every size use OpenStack

32% have >10,000 employees  
25% have <100 employees



n=1176

# Innovation, efficiency, and avoiding vendor lock-in are top business drivers



n=1183

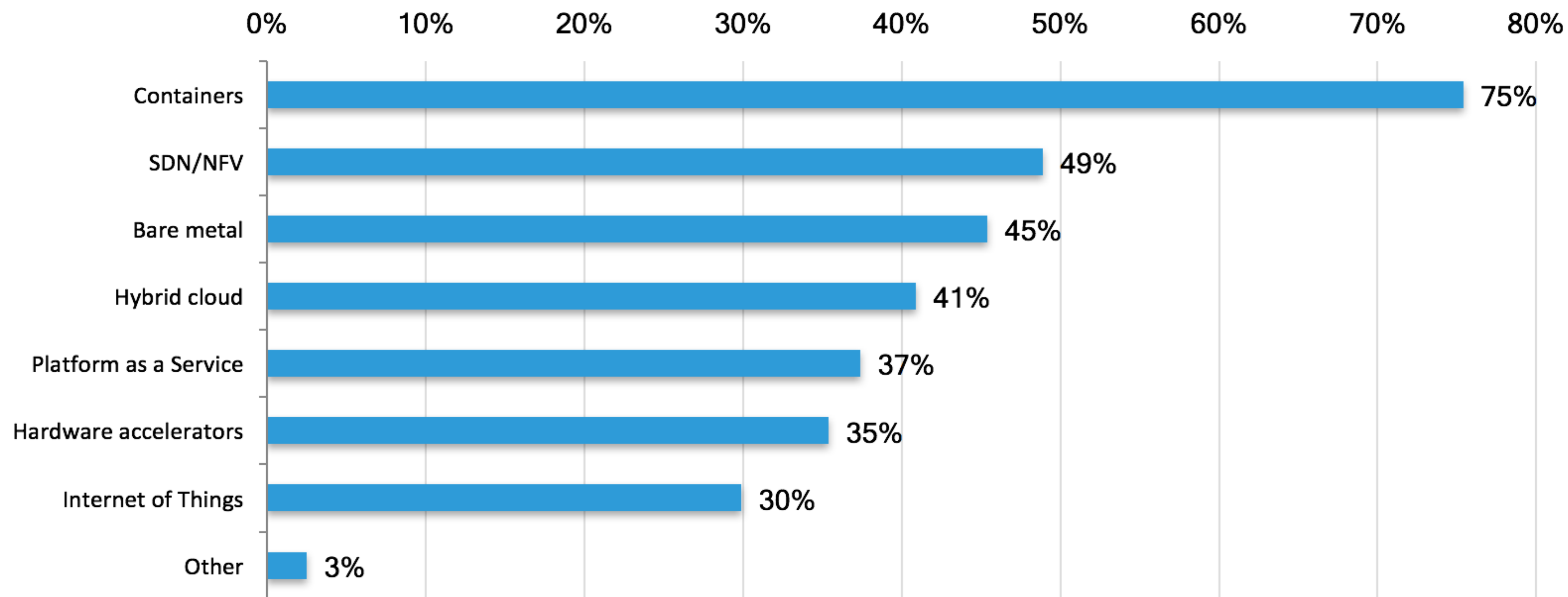


*“OpenStack has ... thousands of developers all over the world working in tandem to develop the strongest, most robust, and most secure product that they can.”*

**-April 2017 OpenStack User Survey**



# Containers top the list of emerging technologies that most interest users



n=981

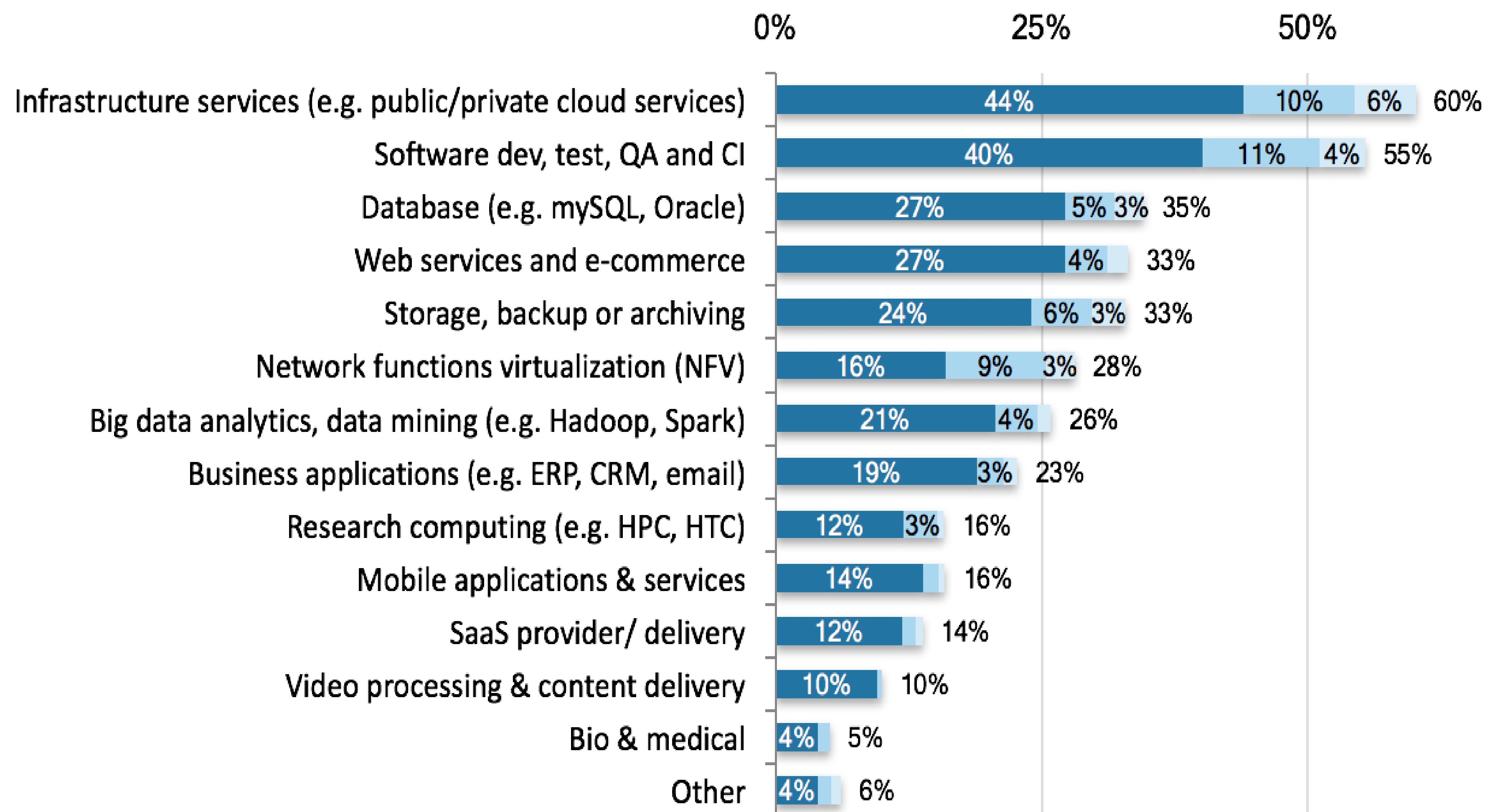


77% OF ORGS

HAVE OPENSTACK IN PRODUCTION

n=482 for April 2017

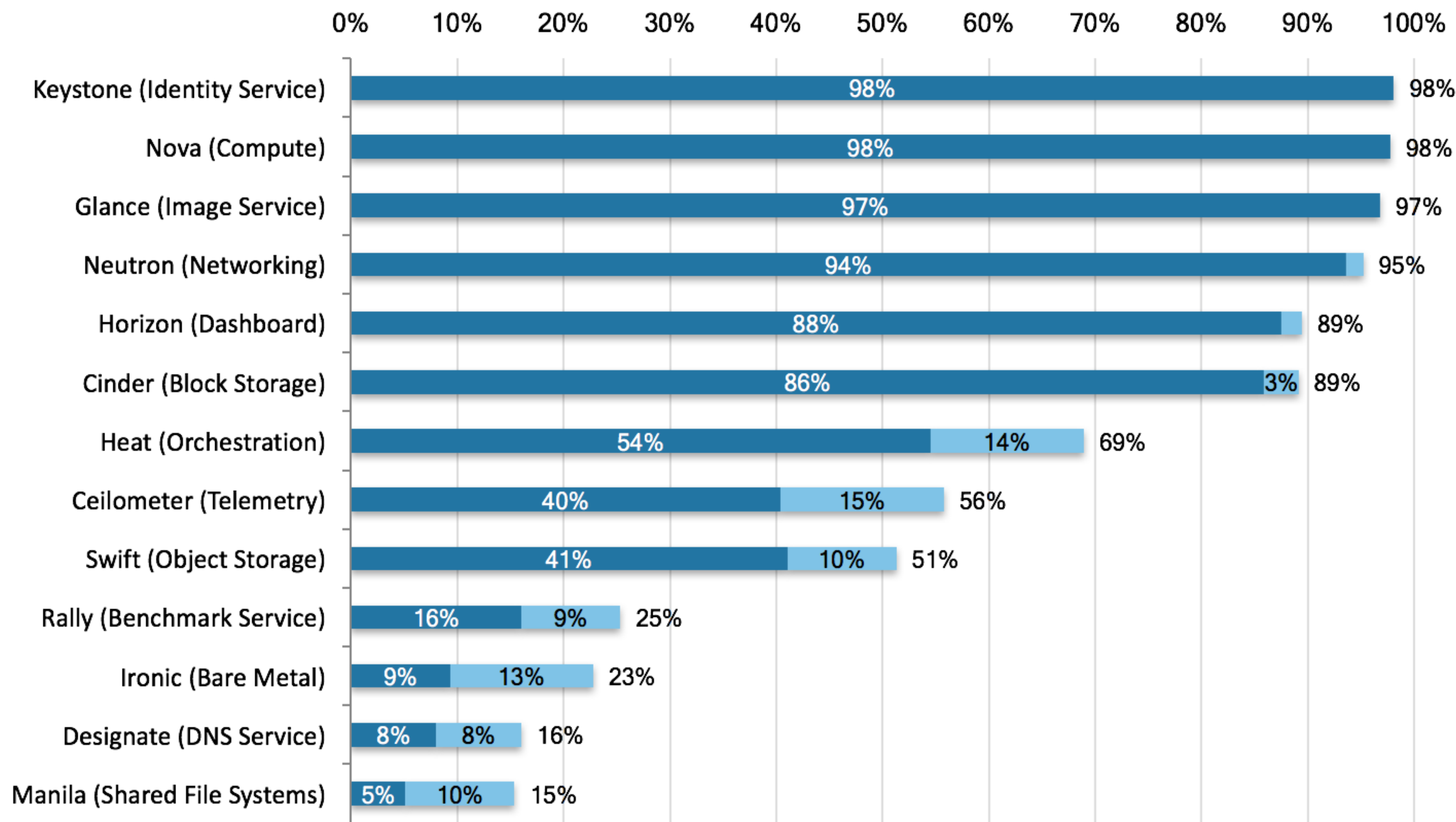
# Diverse workloads run on OpenStack



n=471

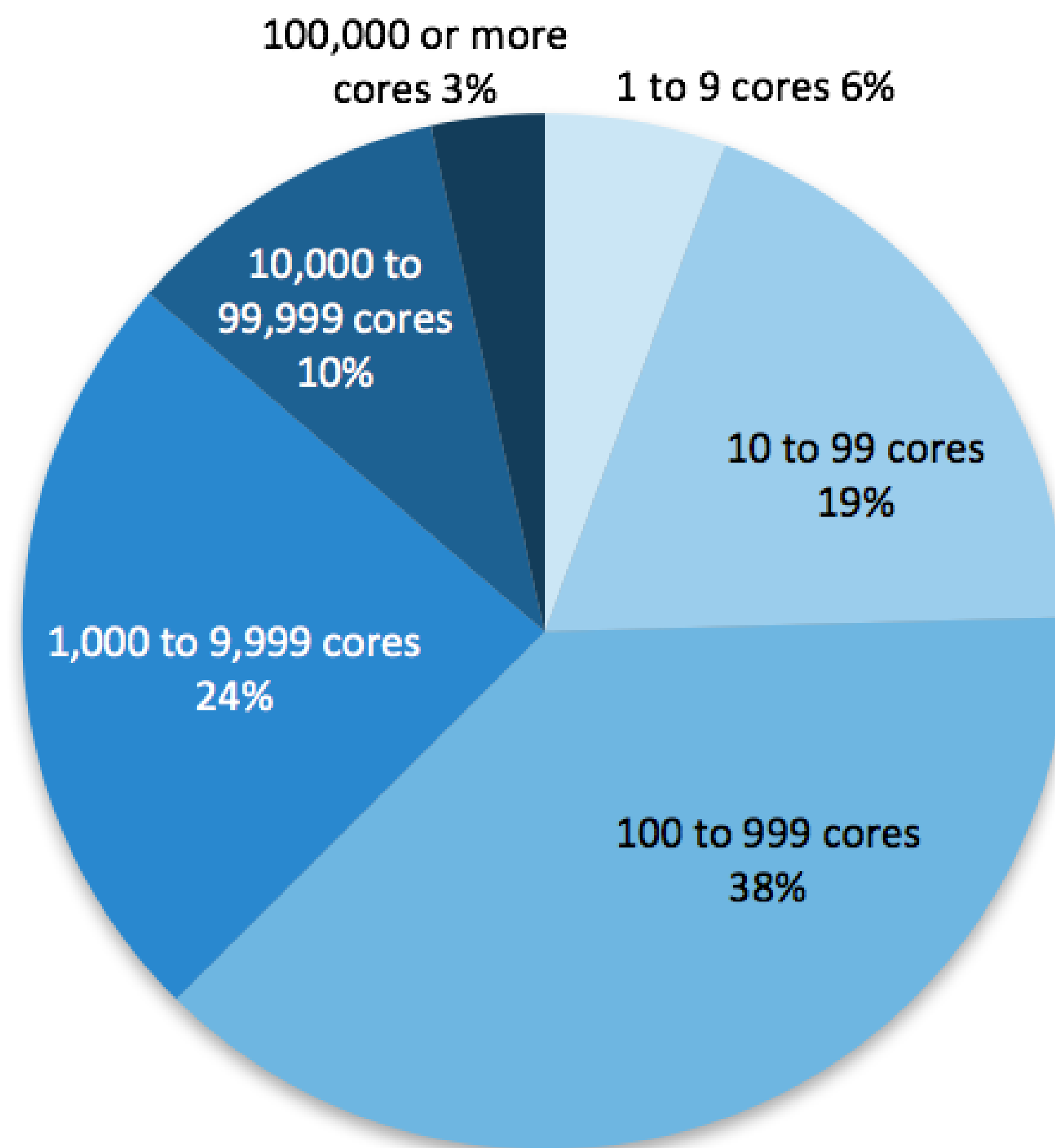


# Core services are used by 89% or more clouds



n=312

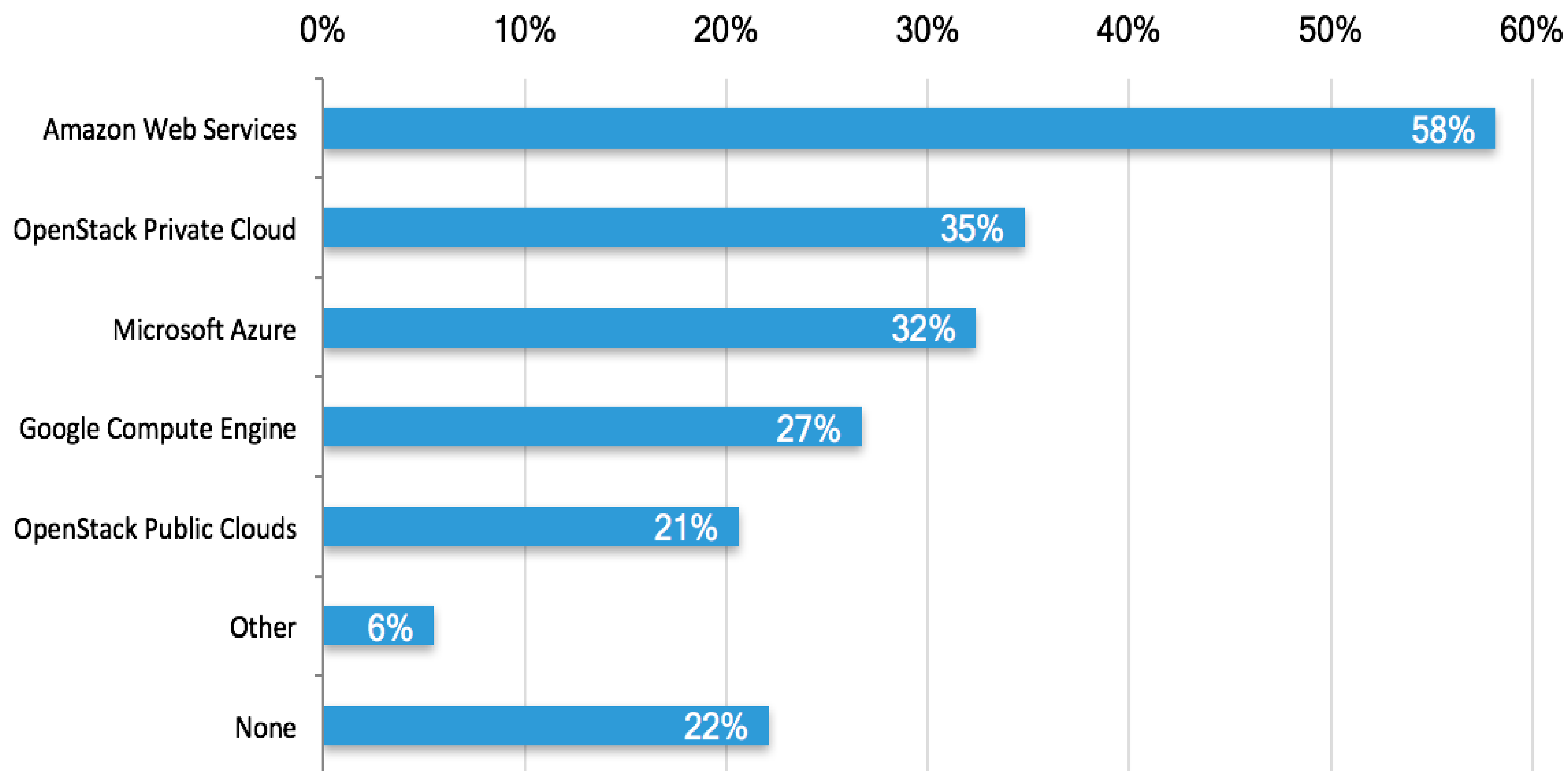
# 37% of clouds have 1,000+ cores, vs. 29% last year



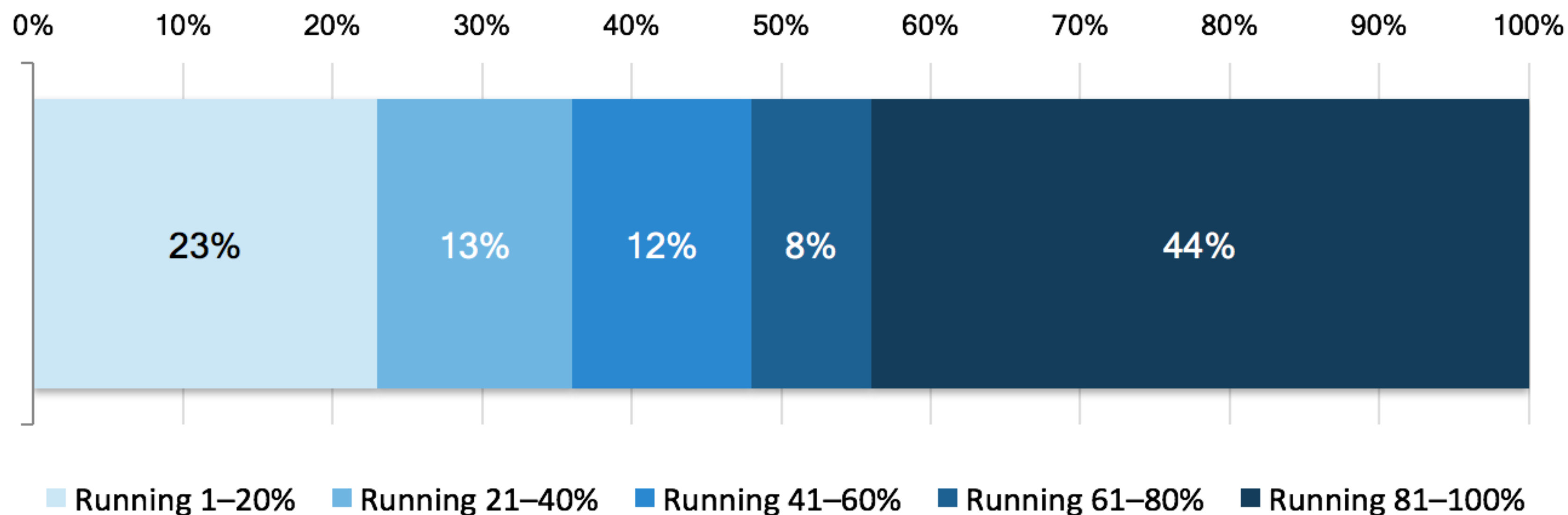
n=285



# 78% of deployments interact with other clouds



# The median OpenStack user runs 61% to 80% of their overall cloud infrastructure on OpenStack.





# Analyze the results yourself

[www.openstack.org/analytics](http://www.openstack.org/analytics)

## OpenStack Survey Report - BETA

OpenStack User Survey - 2017

GLOBAL FILTERS [clear all filters](#)

Type of Industry

Deployment Stage

Country that Deployment is in

Type of Deployment

Current Releases

Number of Cores

### Survey Sections

Demographics

Deployments

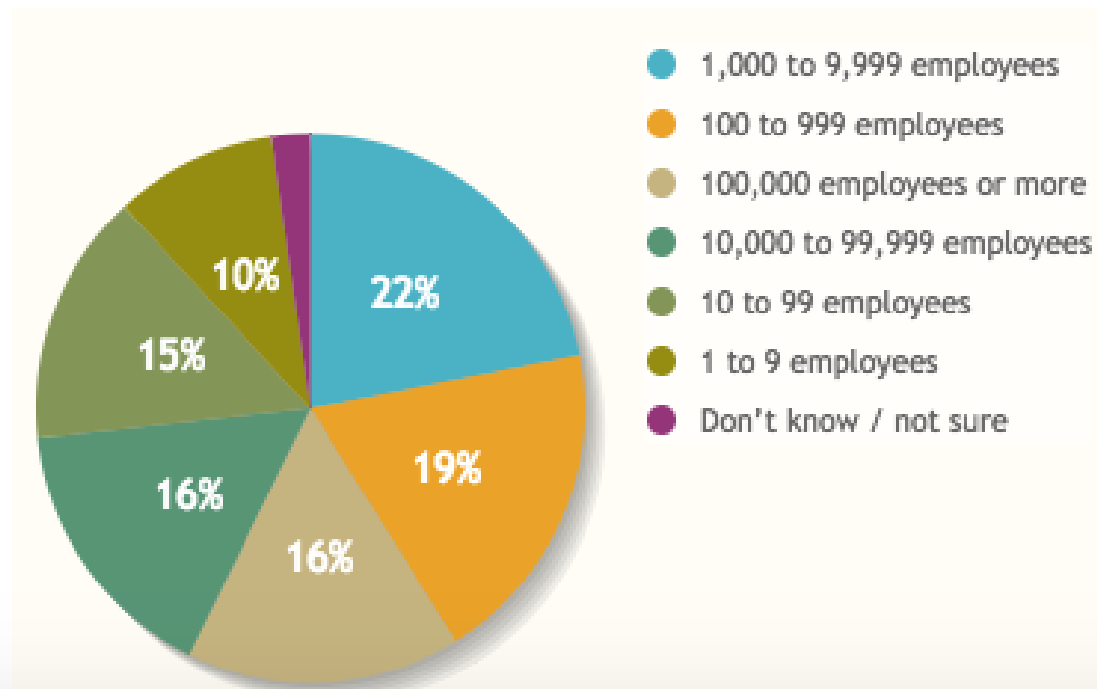
Deployment Decisions

Cloud Size

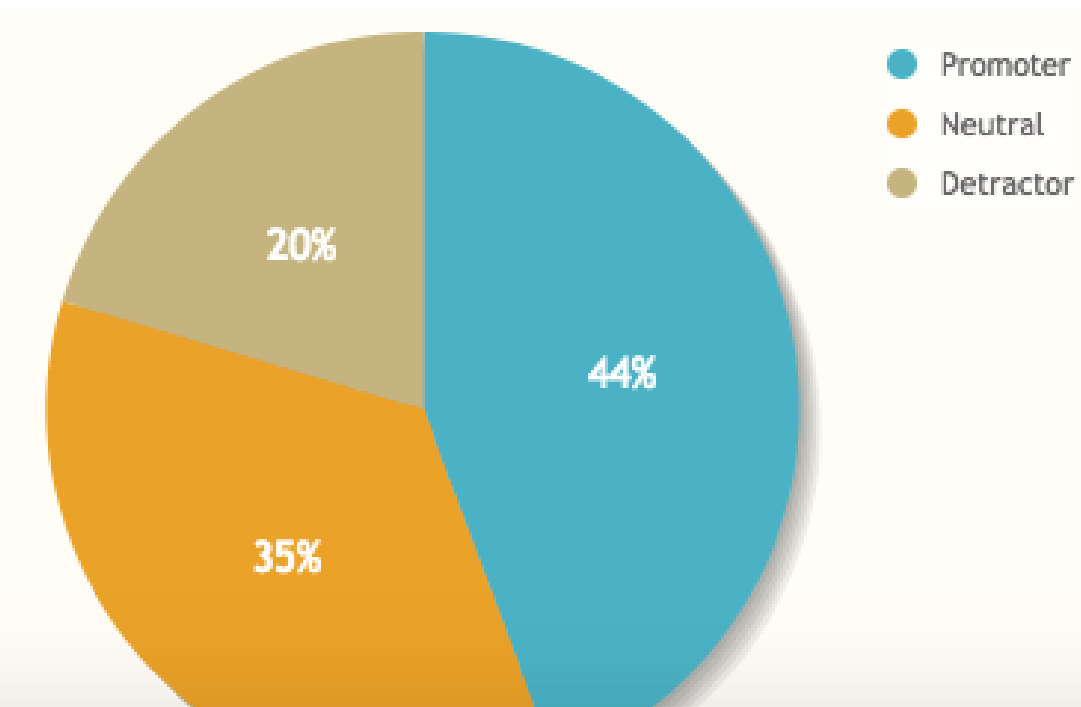
Analytics FAQ

### Demographics

#### Organization Size



#### NPS



# Take the OpenStack User Survey

## Deadline: August 11

[www.openstack.org/user-survey](http://www.openstack.org/user-survey)

English / English

English / English

简体中文 / Simplified Chinese

繁體中文 / Traditional Chinese

한국어 / Korean

日本語 / Japanese

Bahasa Indonesia / Indonesian

Deutsch / German

### OpenStack User Survey - 2017 (Jun-Dec)

Step 1 of 5 for Allison Price

IDENTIFICATION ✓ YOUR THOUGHTS ✓ YOUR OPENSTACK DEPLOYMENTS ✓ THANK YOU ✓

**First name / Given name\***

Allison

**Last name / Family name\***

We'll never share individual information without your permission, but we will present select user survey results in aggregate.

Price

**What are the ways you work with OpenStack?\***





# Certified OpenStack Administrator

- ❑ Why was the COA created?
- ❑ Why should I take the COA?
- ❑ How do I take the COA?
- ❑ What' s on the exam?
- ❑ How do I prepare for the exam?

# Why was the COA created?

- ❑ Needed a skills-based knowledge standard
- ❑ Needed a vendor-neutral, transferrable standard
- ❑ Companies and employees wanted to show that they know OpenStack

## The Result?

Devs, admins and operators across the community developed the COA test!

# Why take the COA?

- ❑ Badge of distinction
  - ❑ organizations that specialize in OpenStack
  - ❑ be an individual OpenStack specialist
- ❑ Vendor-neutral: Show your knowledge transfers to multiple OpenStack environments
- ❑ Skills-based test: Prove that you can use OpenStack

*“Coming out of college and not having a lot of cloud experience, preparing for the exam and passing it helped me be successful in my job.”*

–OpenStack Developer



# Why take the COA?

## □ What roles?

- Admin and Ops
- Developers: Know the underlying infra
- Sales engineer: Customer confidence, product knowledge

*“A certification like this shows that you are willing to go above and beyond. It shows that the candidate is really driven to figure out what they need to and be self motivated.”*

–Engineering Director

# Exam Fundamentals

- ❑ Offered on SUSE or Ubuntu
- ❑ Virtual exam, take it anywhere in the world!
- ❑ Version: OpenStack Newton
- ❑ Use Horizon or OpenStackClient to complete tasks
- ❑ 2.5 hours

# What's on the exam?

## Getting to know OpenStack - 3%

- Understand the components of the cloud
- Know how to use the OpenStack API/CLI

## Identity management - 12%

- Manage Keystone catalogue services and endpoints
- Manage domains, projects, users and roles
- Manage the identity service

## Dashboard - 3%

- Verify operation of the dashboard

## Compute - 15%

- Manage flavors, instances and Nova user keypairs
- Launch, terminate and shutdown an instance
- Assign and manage security groups
- Verify operation of compute service

## Block Storage - 10%

- Create a storage volume and mount it to a Nova instance
- Manage volumes quotas and backups
- Analyze discrepancies in reported volume sizes

## Networking - 16%

- Create external networks, project networks and project routers
- Manage network interfaces on compute instances
- Troubleshoot network issues for a tenant\network

## Heat/Orchestration - 8%

- Launch a stack using Heat/Orchestration template
- Verify operation and obtain detailed information

## Object Storage - 10%

- Manage access to object storage
- Manage expiring objects
- Manage permissions on a container in object storage

## Image management - 10%

- Deploy a new image to an instance
- Manage image types and backends

## Troubleshooting - 13%

- Analyze log files, database servers, messaging servers, meta data servers, network status and storage status
- Backup and restore an instance

[openstack.org/coa/requirements](https://openstack.org/coa/requirements)



The screenshot shows a web browser window with two tabs: "Web Delivery - Candidate" and "OpenStack Docs: Ocata". The address bar shows a secure URL from "www.examslocal.com". The page header includes a "psi" logo and navigation links for "Online", "Camera", "Desktop", "View Webcam & Desktop", "Live Chat", "Exam Controls", and "Exam Information".

The main content area is split into two panels. The left panel, titled "COA", displays the date "2017-06-20", "Exam timer: 148 minutes remaining", and "User: AnneBertucio". Below this, it says "BEFORE YOU BEGIN (Q1 follows below):" and lists two instructions: 1. Open the OpenStack Docs page in a new browser tab. 2. Login to the Horizon Dashboard as user "admin" with password "admin".

The right panel, titled "Terminal", shows a list of exam instructions: 1. Root privileges can be obtained by running 'sudo -l'. 2. Rebooting of your server IS permitted at anytime. 3. Do not stop or tamper with the gateone process as this will END YOUR EXAM SESSION. 4. Do not block incoming ports 8080/tcp, 4505/tcp and 4506/tcp. This includes firewall rules that are found within the distribution's default firewall configuration files as well as interactive firewall commands. 5. Use Ctrl+Alt+W instead of Ctrl+W. - Ctrl+W is a keyboard shortcut that will close the current tab in Google Chrome. 6. Ctrl+C & and Ctrl+V are not supported in your exam terminal, nor is copy and pasting large amounts of text. To copy and paste limited amounts of text (1-2 lines) please use: - For Linux: select text for copy and middle button for paste (or both left and right simultaneously if you have no middle button). - For Mac: ⌘+C to copy and ⌘+V to paste. - For Windows: Ctrl+Insert to copy and Shift+Insert to paste. 7. Installation of services and applications included in this exam may require modification of system security policies to successfully complete. 8. Only a single terminal console is available during the exam. Terminal multiplexers such as GNU Screen and tmux can be used to create virtual consoles.

At the bottom of the terminal window, the prompt "[student@node-1 ~]\$" is visible with a mouse cursor pointing to it.

The screenshot shows a web browser window with two tabs: "Web Delivery - Candidate" and "OpenStack Docs: Ocata". The address bar shows a secure URL: <https://www.examslocal.com/WebDelivery/Home/Candidate?reservationId=7c4db521-fd3e-4ba4-a4ca-81dc1121968c&preLaunch...>. The page header includes the "psi" logo and navigation options: Online, Camera, Desktop, View Webcam & Desktop, Live Chat, Exam Controls, and Exam Information.

The main content area is divided into two panels. The left panel, titled "COA", displays the date "2017-06-20", the exam timer "Exam timer: 144 minutes remaining", and the user "User: AnneBertucio". Below this, it shows "Question: 3/32" and navigation buttons. A dropdown menu is open, listing "Question 1" through "Question 10", with "Question 3" selected. A "Question 3" button is also visible, with the text "Navigate All Questions" below it.

The right panel, titled "Terminal", shows a terminal window with the prompt "[student@node-1 openrc]\$".

At the bottom of the browser window, the URL [hkg-content.exams.linuxtrainingservices.org/exam/.../10?locale=en](http://hkg-content.exams.linuxtrainingservices.org/exam/.../10?locale=en) is visible.



# How do I prepare?

- ❑ Practice, practice, practice!
- ❑ 6 months professional experience
- ❑ Practice options:
  - ❑ DevStack
  - ❑ TryStack (not all tasks can be completed here)
  - ❑ “Getting Started With OpenStack” using Vagrant
- ❑ Training courses:
  - [openstack.org/marketplace/training](https://openstack.org/marketplace/training)
  - ❑ Look for the COA badge



# What' s next?

- ❑ Visit [openstack.org/coa](https://openstack.org/coa)
- ❑ Visit [openstack.org/marketplace/training](https://openstack.org/marketplace/training) and look for the COA badge



**THANK YOU**