

Introduction to Apache jclouds

ApacheCon

April 7, 2014 @ 11:55 am



Everett Toews
Developer Advocate
@everett_toews

Intro

Developer

PMC and Committer on Apache jclouds



Intro

Advocate

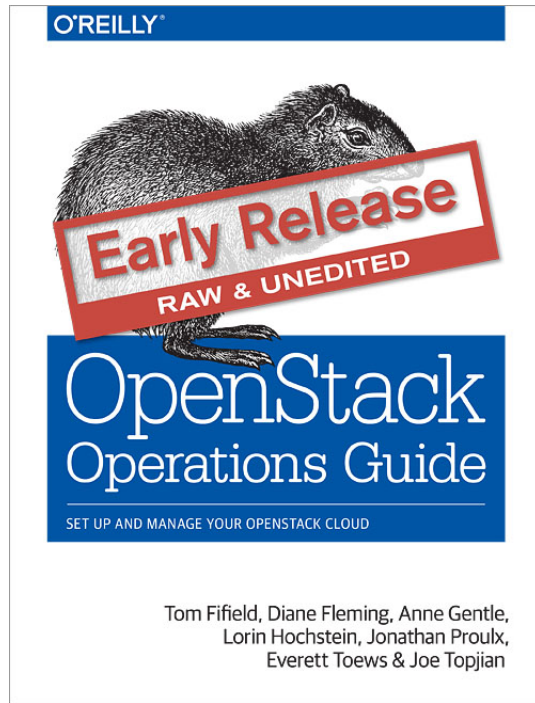
Me



Intro

Operations

Co-author of the OpenStack Operations Guide



docs.openstack.org/ops

Cloud Flavour



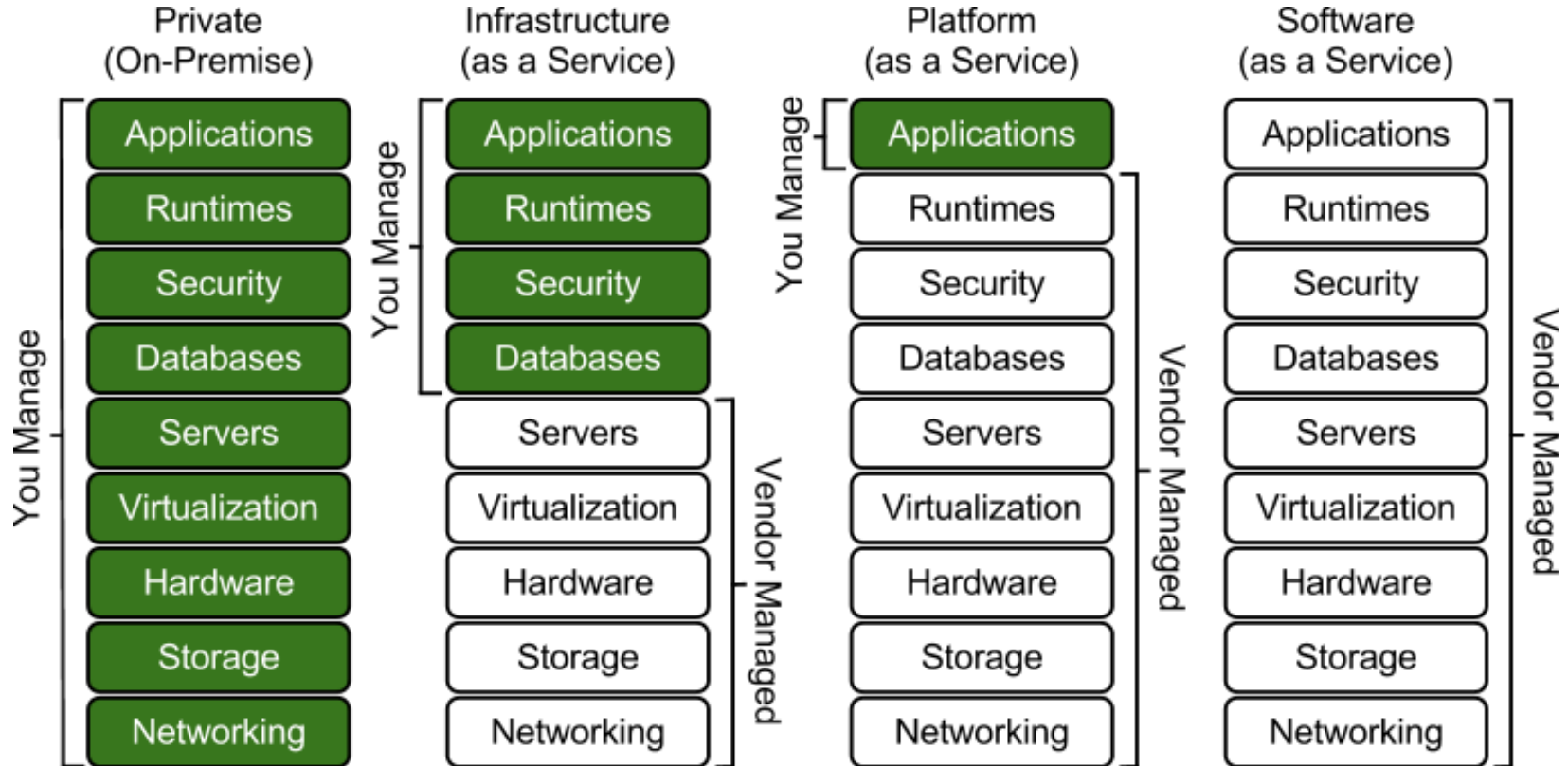
Cloud

IaaS

Cloud

Private

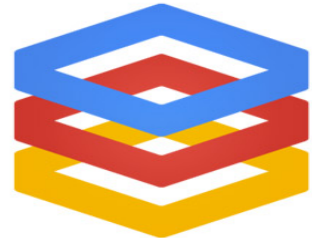
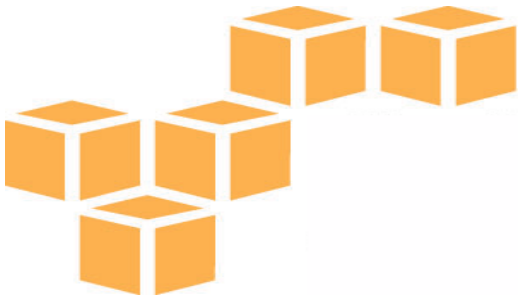
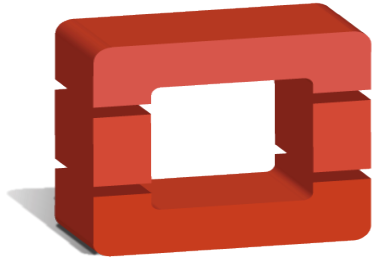
Green == Your Problem



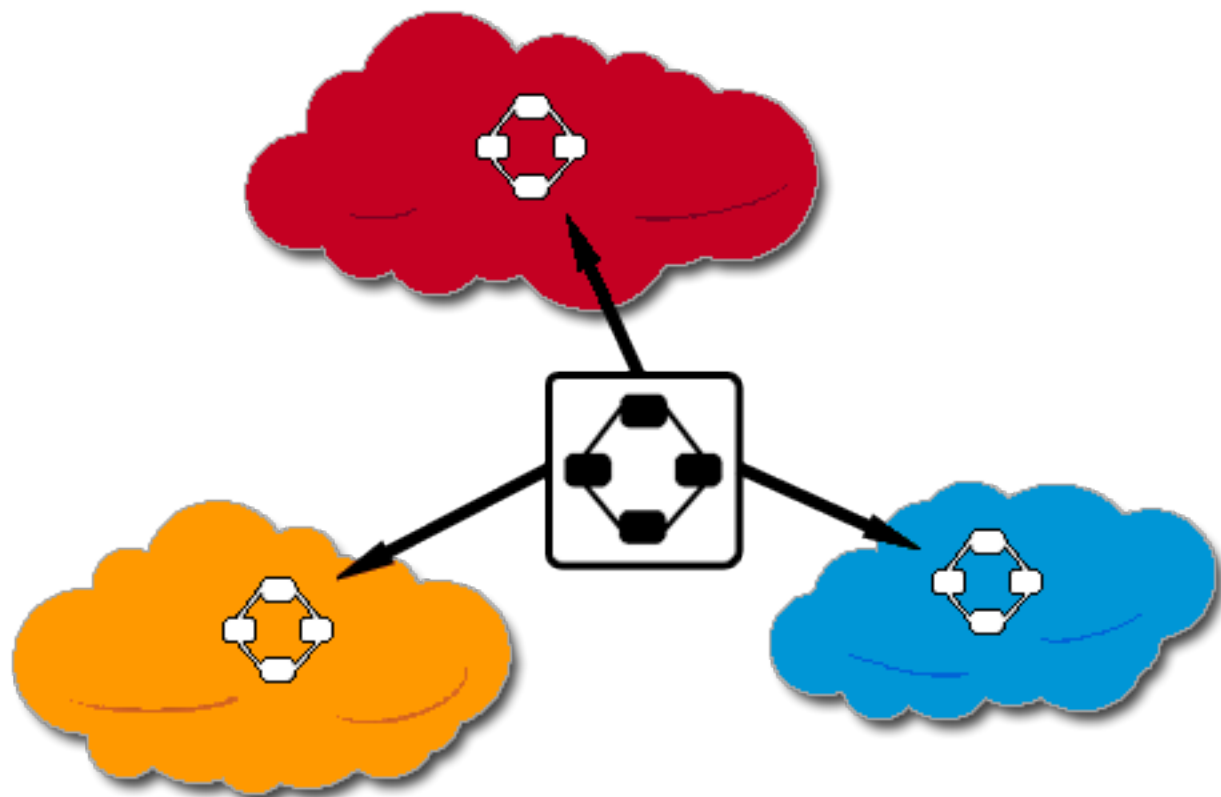
Cloud

Infrastructure with an API

Cloud



Multi-Cloud



Multi-Cloud

**Application
Portability**

Multi-Cloud

Why?

Multi-Cloud

High Availability

Multi-Cloud

Privacy

Multi-Cloud

Cost

Multi-Cloud

Performance

Multi-Cloud

Support

Multi-Cloud

Hybrid

**One Size Does
Not Fit All**

Multi-Cloud

Avoid Lock-in

Multi-Cloud

How?

Introduction to Apache jclouds

jclouds



jclouds

Apache jclouds is an open source multi-cloud toolkit for the Java platform that gives you the freedom to create applications that are portable across clouds while giving you full control to use cloud-specific features.

jclouds

Open Source

jclouds

Java/JVM

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Multi-Cloud

jclouds

APIs

APIs

- **AWS EC2**
- **AWS S3**
- **AWS SQS**
- **CloudStack**
- **OpenStack Compute**
- **OpenStack Object Storage**
- **OpenStack Queues**
- **VMware vCloud**
- ...

jclouds

Providers

Providers

- **AWS/Eucalyptus EC2**
- **AWS/Eucalyptus S3**
- **AWS/Eucalyptus SQS**
- **CloudStack**
- **HP/Rackspace Compute**
- **HP/Rackspace Object Storage**
- **HP/Rackspace Queues**
- **BlueLock vCloud**
- ...

jclouds

Portable APIs

jclouds

ComputeService

Portable APIs for ComputeService

- **AWS EC2**
- **ElasticHosts**
- **CloudStack**
- **Digital Ocean**
- **Google Compute Engine**
- **HP Cloud Compute**
- **Rackspace Cloud Servers**
- **SoftLayer**
- ...

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BlobStore

Portable APIs for BlobStore

- **AWS S3**
- **CloudOne**
- **HP Cloud Storage**
- **Microsoft Azure**
- **Ninefold**
- **Rackspace Cloud Files**
- **...**

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Portable APIs

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No Silver Bullet

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**Really Really
Difficult**

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Common Features

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Common Behaviour

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So

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Portable Applications

jclouds

or

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Ease Application Migration

jclouds

Use Case

Community



Alcatel-Lucent



OVH.COM



jclouds' Top Users

Cloud



YOU?

FU



WISC

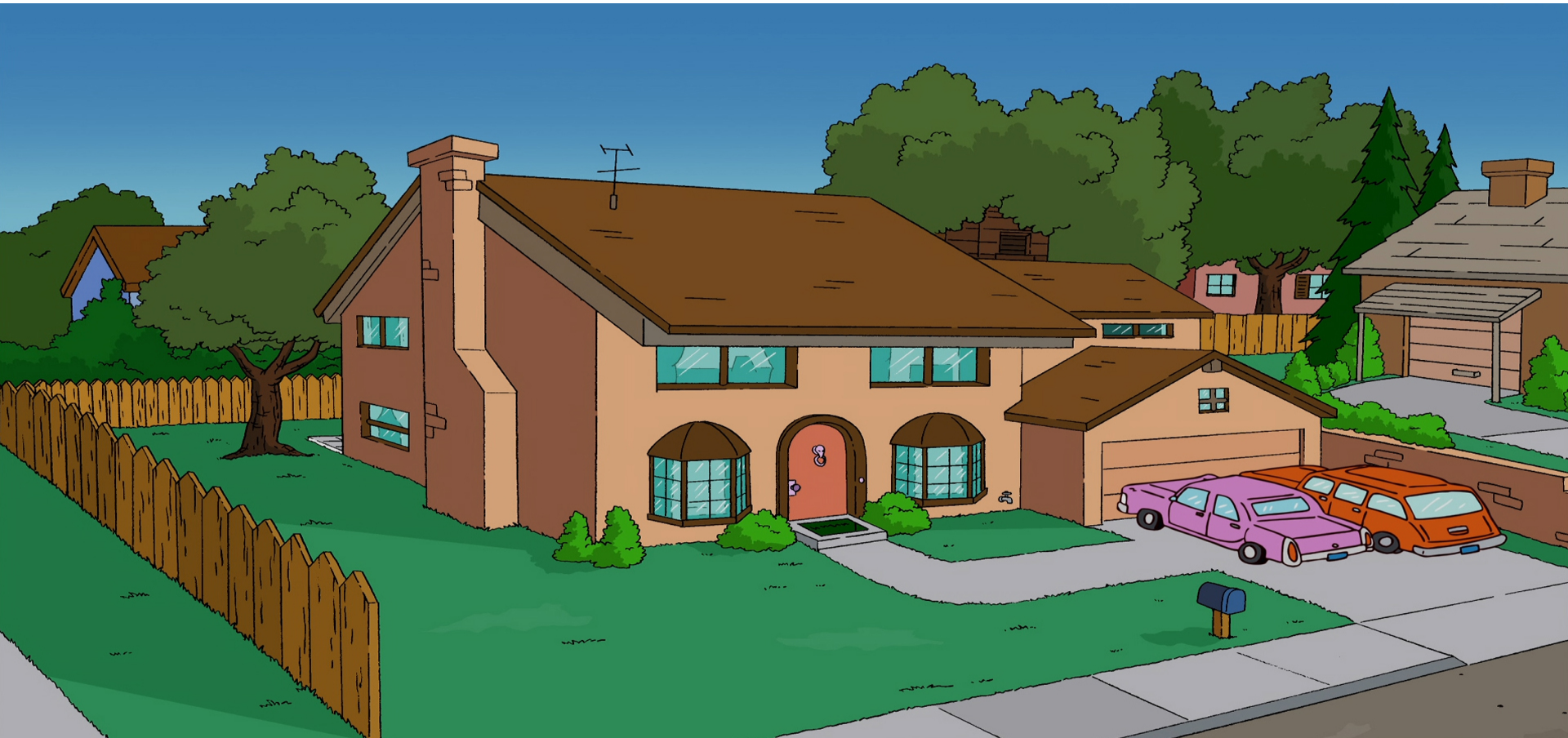
jclouds' Top Contributors

- **Abiquo**
- **Cloudera**
- **CloudSoft**
- **Maginatics**
- **Rackspace**
- **XebiaLabs**

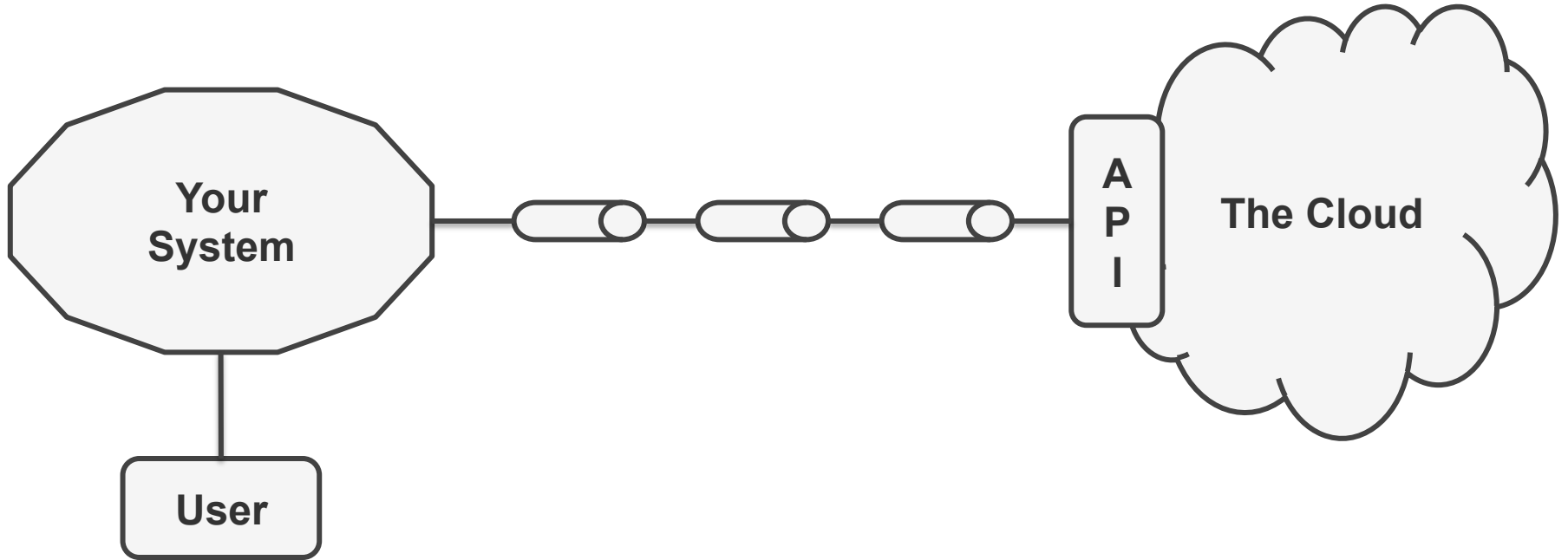
jclouds

jclouds.apache.org/community/

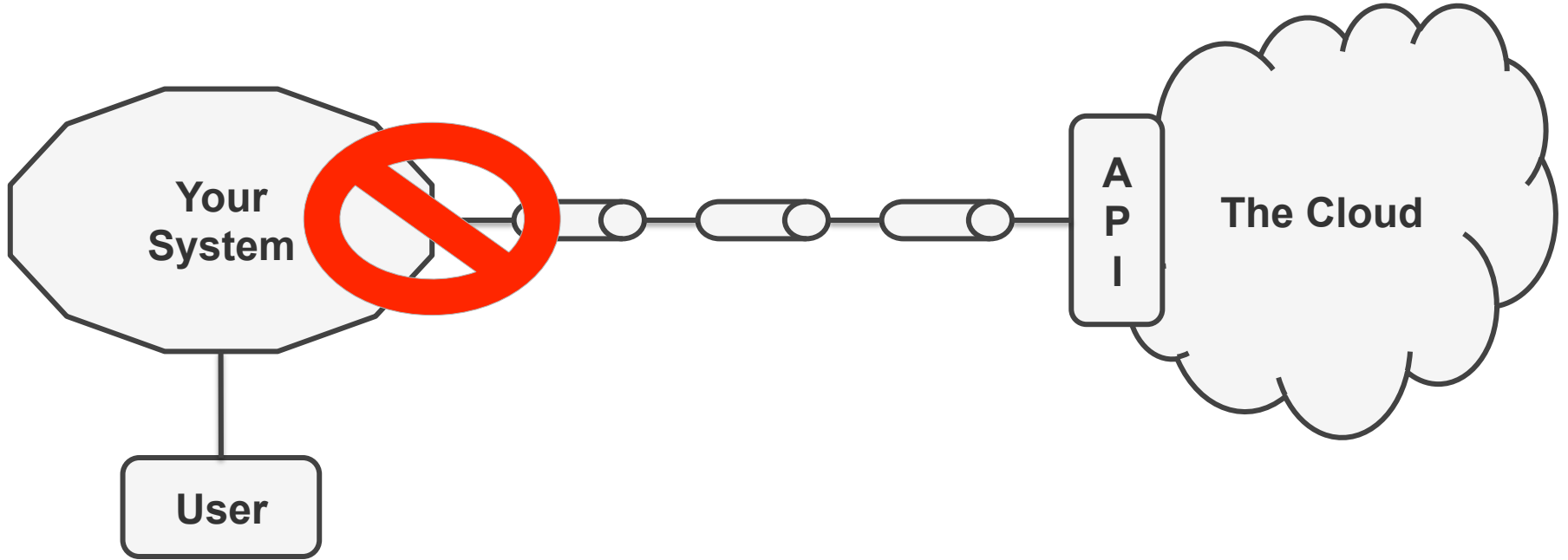
**Where Does
jclouds Live?**



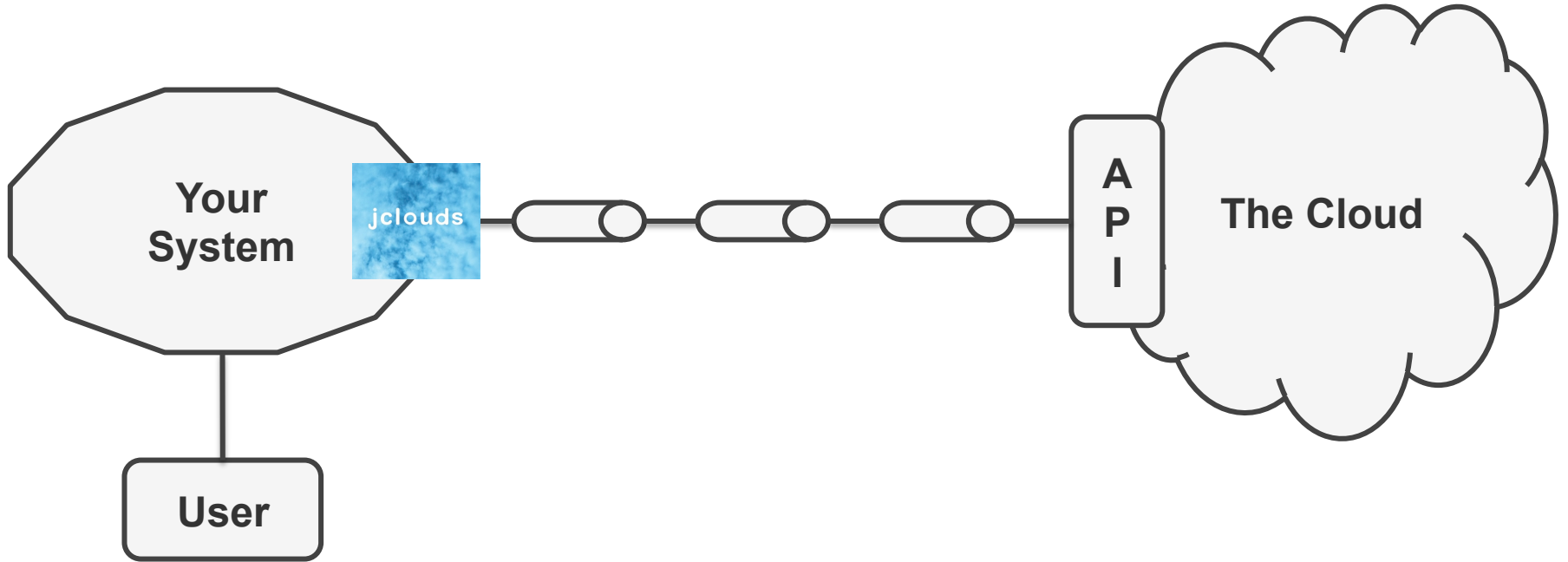
Deployment



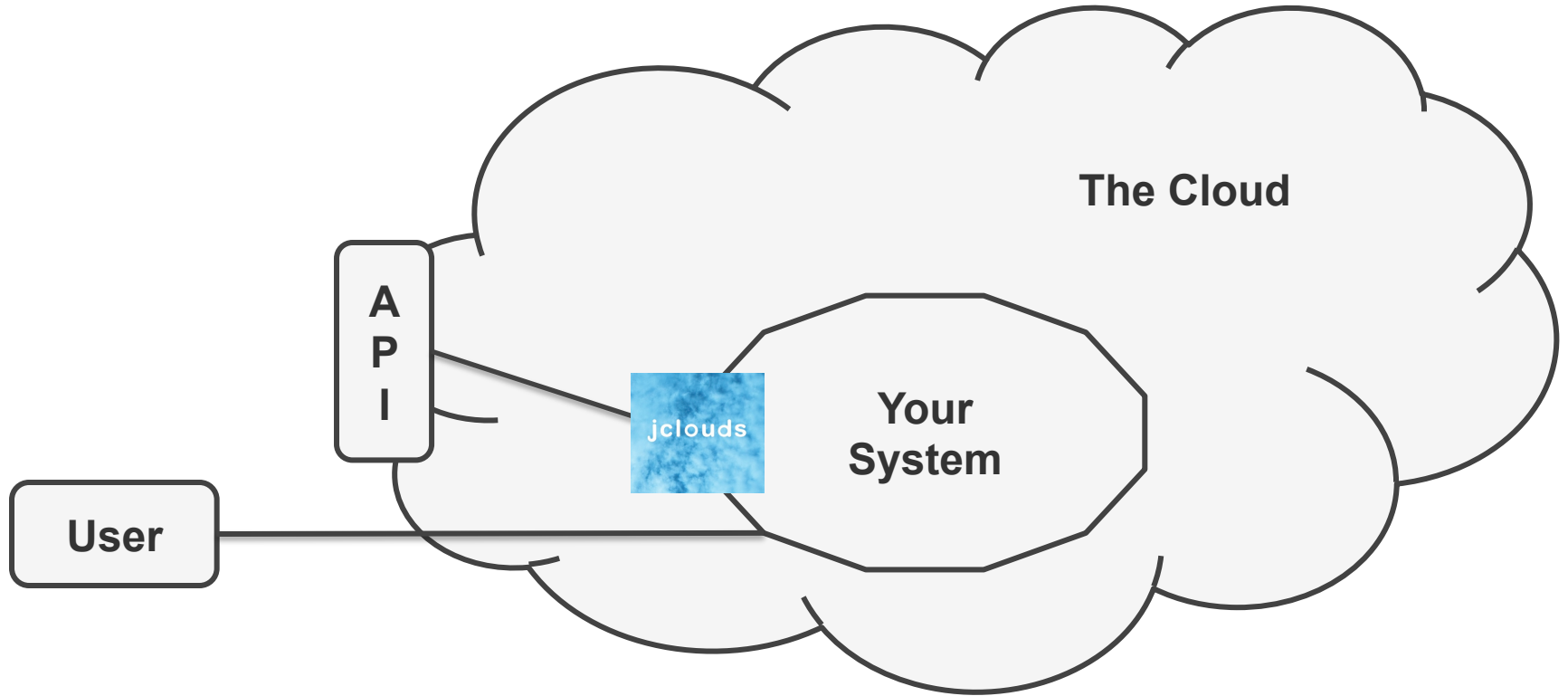
Deployment



Deployment



Deployment



**What Can jclouds
Do For You?**



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Plumbing

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(Re)Authentication

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Pagination

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State Polling

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Rate Limiting

jclouds

Retry

jclouds

Smoothing Rough Edges

jclouds

Packaged

jclouds

All-in-one

jclouds

Production Code

jclouds

Sample Code

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Documentation

Terminology

Terminology

| jclouds | Clouds |
|------------------|----------------------|
| Compute | |
| Node | Instance/Server/VM |
| Location | Region/Zone |
| Hardware | Instance Type/Flavor |
| NodeMetadata | Instance details |
| User Metadata | Metadata |
| BlobStore | |
| Blob | File/Object |

Demo



Demo

jclouds.apache.com

Demo

jclouds.apache.com/start/install

Demo

All the JARs!

Demo

**[jclouds.apache.org/
guides/rackspace/](https://jclouds.apache.org/guides/rackspace/)**

Demo

Subset the JARs!

What's Next?

Potpourri

- Command Line Interface
- Jenkins Plugin
- jclouds-chef
- jclouds-examples

What's Next?

- **Dropping support for Java 1.6**
- **De-async**
- **Docker**
- **1.7.2**
- **Release every 6 weeks**

Thank You

jclouds.apache.org

Taming the Cloud Database with Apache jclouds
Tuesday @ 10:30 am

Enabling Walkup Contributions to Your Project Documentation
Tuesday @ 1:30 pm



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