



redhat.

BECOME AN OPENSTACK TRIPLEO ATC - EASY AS ABC

Gimme a Cloud, RDO!

K Rain Leander
Developer Evangelist
29 June 2016



@rainleander
@RDOcommunity
#TripleO

AGENDA

Red Hat Summit 2016

What is OpenStack?

The Good, The Bad, The Ugly

What is RDO?

Rain's Dynamic OpenStack, obviously

TryStack and PackStack and TripleO

Oh, My!

Become an OpenStack TripleO ATC

It's More Like ABCDEF

WHO AM I?

Become an OpenStack TripleO ATC - Easy as ABC

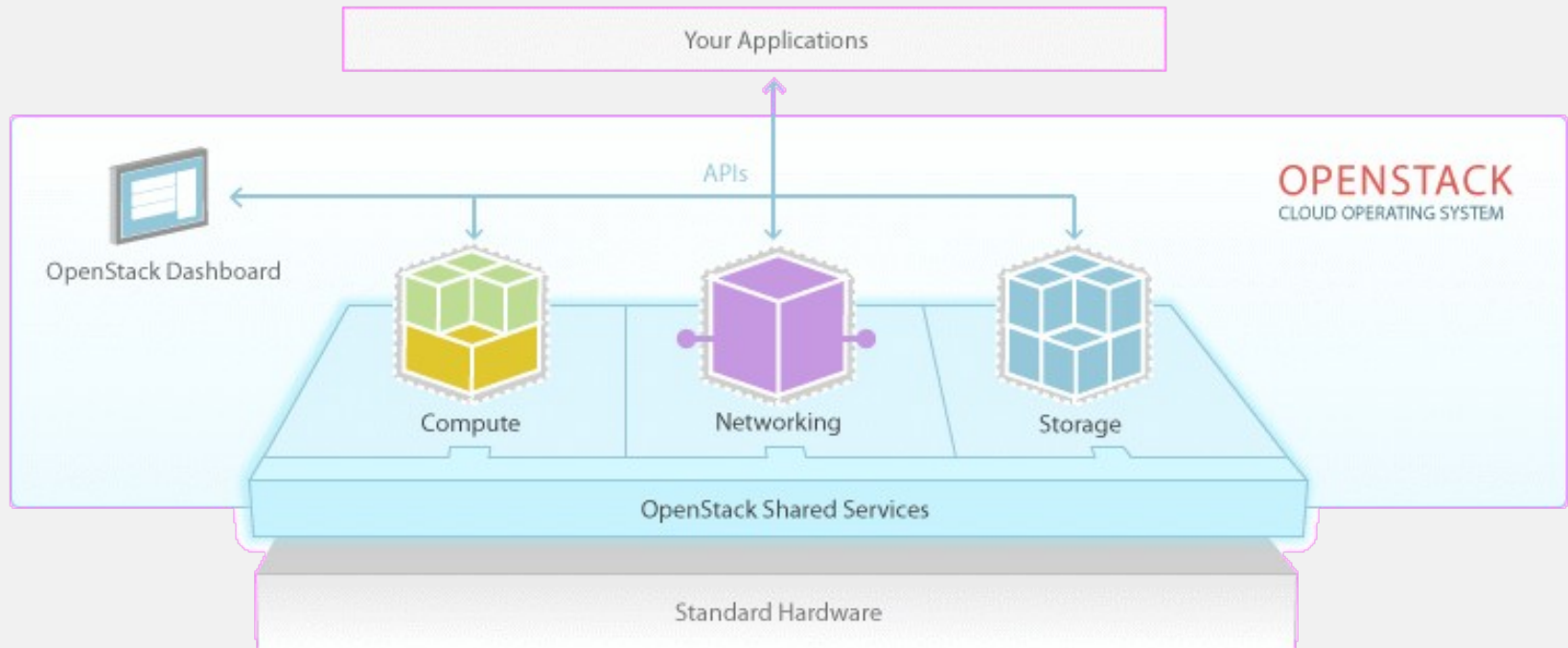
RDO TripleO Developer Evangelist
@Red Hat

- OpenStack ATC since 2015
- @leanderthal on Freenode IRC channels #rdo and #tripleo
- rain at redhat dot com



WHAT IS OPENSTACK?

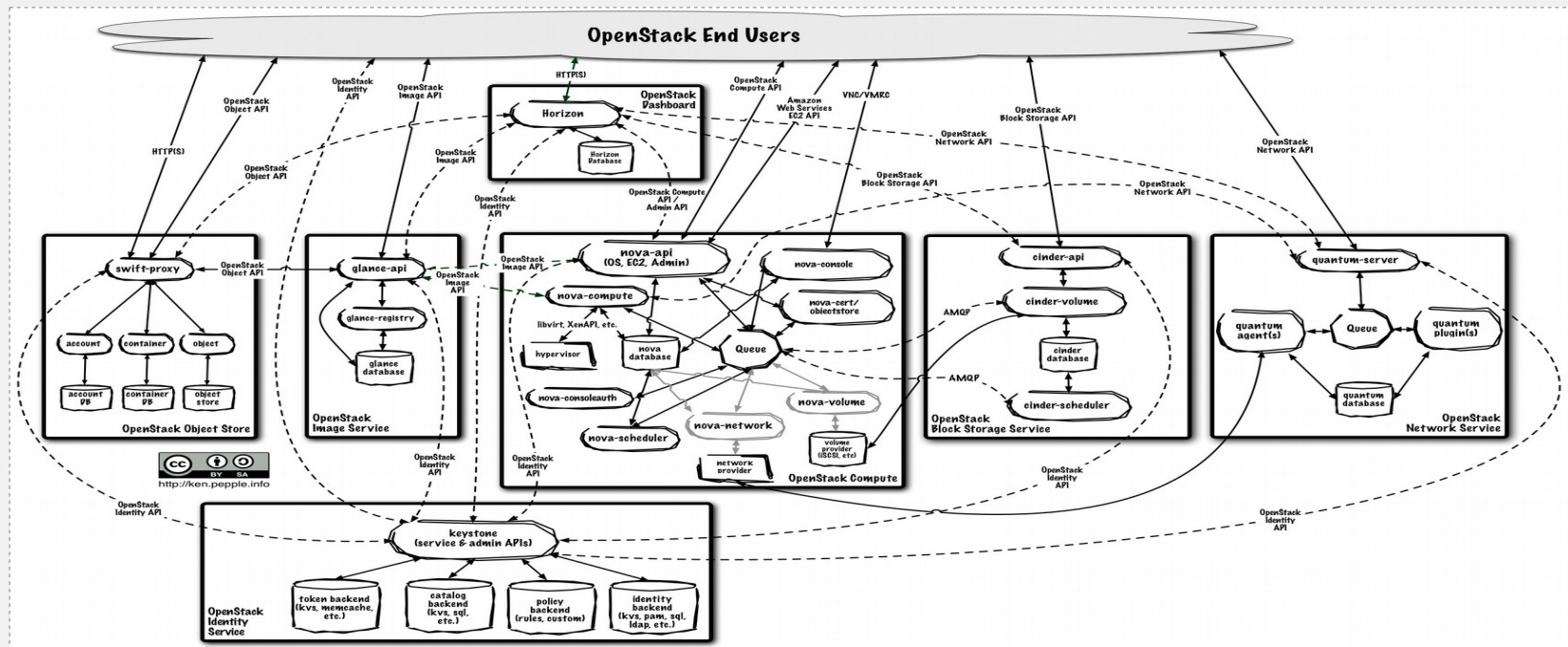
Become an OpenStack TripleO ATC - Easy as ABC



The Marketing Version

WHAT IS OPENSTACK?

Become an OpenStack TripleO ATC - Easy as ABC



The Realistic Version

WHAT IS RDO?

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Exactly the same as OpenStack, but using RPM packages.

- Exactly
- The
- Same
- (but with RPMs)

WAYS TO GET STARTED

Become an OpenStack TripleO ATC - Easy as ABC

TryStack

PackStack

TripleO

TRYSTACK

Become an OpenStack TripleO ATC - Easy as ABC

```
import webbrowser  
  
webbrowser.open('http://trystack.org/')
```

TRYSTACK

Become an OpenStack TripleO ATC - Easy as ABC

TryStack.org OPENSTACK SANDBOX A FREE WAY TO TRY OPENSTACK WITH YOUR APPS

The Easiest Way To Try Out OpenStack. We've set up a large, growing cluster of hardware running OpenStack on x86. The best part? It's totally free for you to try & test your apps—thanks to our generous individual and corporate contributors.

For A Free Account:

[Join Our Facebook Group](#)



Once we approve your account...

Try out OpenStack:

OpenStack RDO Liberty on x86/RHEL [Login](#)

Or Learn About [Using The API](#)

Testing only, please.

Rule No. 1: Remember that TryStack is designed exclusively as a testing sandbox. We wanted a fast, easy way for developers to test code against a real OpenStack environment, without having to stand up hardware themselves. It probably goes without saying that this is not the place for production code - you should host only test code and test servers here. In fact, your account on TryStack will be periodically wiped to help make sure no one account tries to rule tyrannically over our democracy. Play nice in the sandbox!

TryStack is made possible by the equipment, expertise, and generosity of:



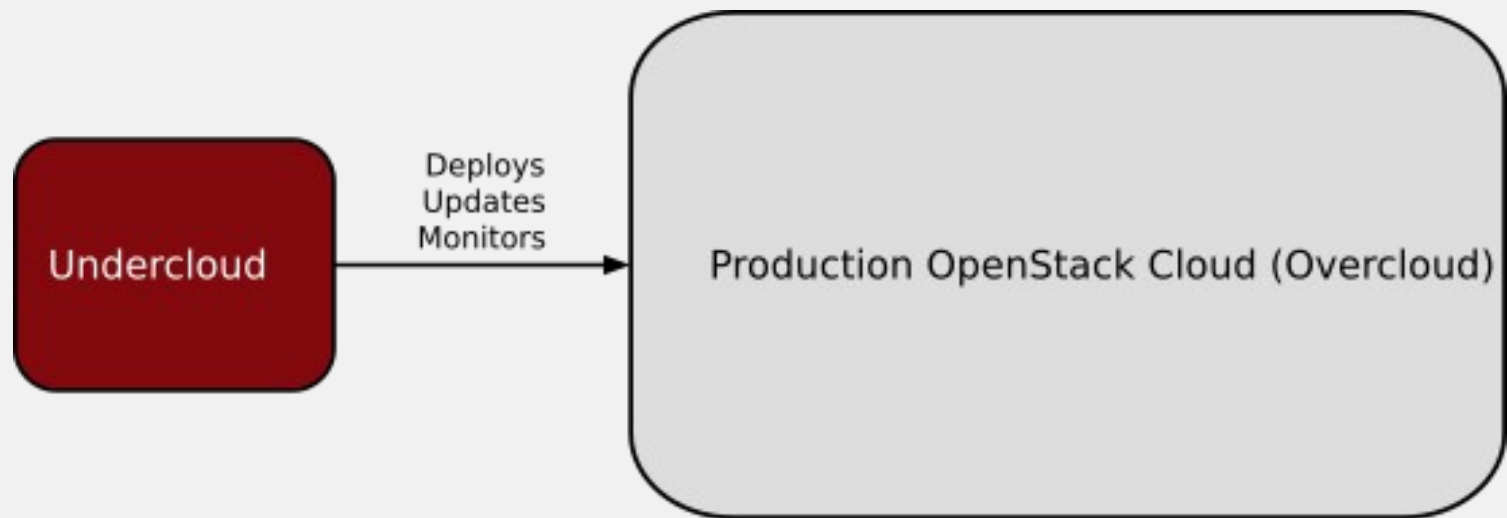
PACKSTACK

Become an OpenStack TripleO ATC - Easy as ABC

```
$ sudo yum install -y centos-release-openstack-mitaka  
$ sudo yum update -y  
$ sudo yum install -y openstack-packstack  
$ packstack --allinone
```

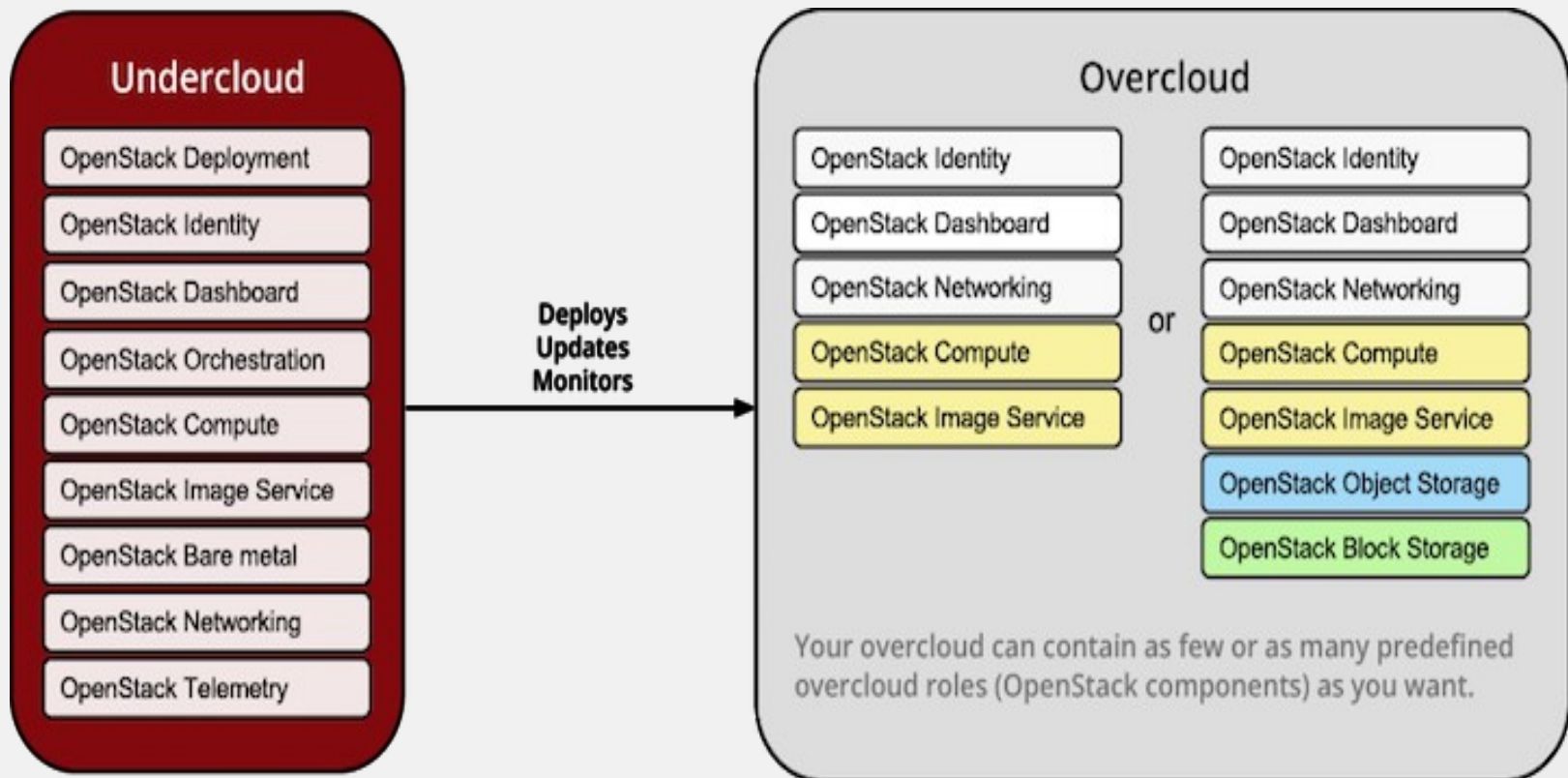
TRIPLEO

Become an OpenStack TripleO ATC - Easy as ABC



TRIPLEO

Become an OpenStack TripleO ATC - Easy as ABC



TRIPLEO QUICKSTART

Become an OpenStack TripleO ATC - Easy as ABC

```
$ sudo bash quickstart.sh -install-deps  
$ export VIRTHOST='my_test_machine.example.com'  
$ curl -O https://raw.githubusercontent.com/openstack/tripleo-quickstart/master/quickstart.sh  
$ bash quickstart.sh $VIRTHOST
```

MORE INFORMATION

Become an OpenStack TripleO ATC - Easy as ABC

In Case It Doesn't Run Perfectly

- TripleO Installation Video :: <https://www.youtube.com/watch?v=4O8KvC66eeU>
- RDO Project :: <https://www.rdoproject.org>
- Upstream TripleO Docs :: <http://docs.openstack.org/developer/tripleo-docs>
- TripleO HA Setup :: <https://remote-lab.net/rdo-manager-ha-openstack-deployment>

THE ACTUAL STEPS

Become an OpenStack TripleO ATC - Easy as ABC

A - OpenStack

B - Github

C - Connect

THE ACTUAL STEPS

Become an OpenStack TripleO ATC - Easy as ABC

D - Documentation

E - Installation

F - Contribute

MORE INFORMATION

Become an OpenStack TripleO ATC - Easy as ABC

Resources for THE ACTUAL STEPS

- OpenStack Membership <https://www.openstack.org/join/>
- GitHub Membership <https://github.com/>
- Freenode IRC <https://en.wikipedia.org/wiki/Freenode>
- RDO List <https://www.redhat.com/mailman/listinfo/rdo-list>
- OpenStack Dev List <http://goo.gl/8DZhXW>
- OpenStack Welcome Guide <http://goo.gl/CWjf7j>
- Gerrit <https://www.gerritcodereview.com/>
- Learn the Gerrit Workflow in the Sandbox <http://goo.gl/NPqrBc>



How YOU Can Contribute

- give feedback / update docs
- submit / update code
- attend conferences / meetups / events
- ask / answer questions on irc / mailing lists / ask.openstack.org
- follow / tweet / tag @rainleander / @RDOcommunity / #TripleO on social media
- blog / vlog / podcast your experiences / tweaks / hacks
- GIVE A TALK AT RED HAT SUMMIT ABOUT HOW TO BE A TRIPLEO ATC



THANK YOU



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linkedin.com/in/rainsdance



twitter.com/rainleander



youtube.com/c/KRainLeander



The goal of today's talk is to invite you to become an RDO / OpenStack / TripleO active technical contributor, but what does that mean?

It means that you are a developer or designer or support engineer or tester or project manager or writer or whatnot and you'd like to become involved in an open source project. It means that you want contribute to TripleO, which is a project within the umbrella space called OpenStack, and that you can join the RDO community for guidance, feedback, and support.

It means that you want to make the world a better place and what better place to start than helping people all over the world create something kickass awesome.

But, first, CONTEXT.



Comments / questions / snide remarks on twitter

I do solemnly swear to respond to each and every one.

This also introduces an element of interactivity that psychologists assure me means you'll find this talk more interesting.

AGENDA

Red Hat Summit 2016

What is OpenStack?

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What is RDO?

Rain's Dynamic OpenStack, obviously

TryStack and PackStack and TripleO

Oh, My!

Become an OpenStack TripleO ATC

It's More Like ABCDEF

Who knows what cloud computing is?

Who knows what OpenStack is?

Who knows what RDO is?

1. What is OpenStack?

2. RDO is Rain's Dynamic OpenStack. Obviously.

3. The three ways to get your own RDO cloud and I'll introduce you to all three.

4. And finally the actual steps to become an OpenStack TripleO active technical contributor.

WHO AM I?

Become an OpenStack TripleO ATC - Easy as ABC

RDO TripleO Developer Evangelist
@Red Hat

- OpenStack ATC since 2015
- @leanderthal on Freenode IRC channels #rdo and #tripleo
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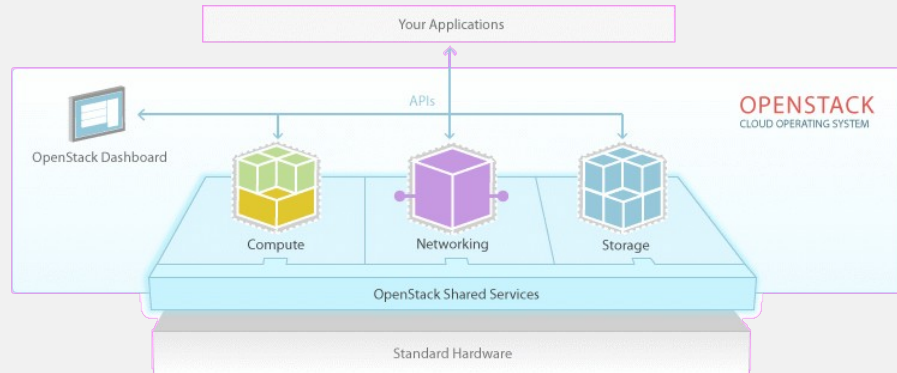
But first, let's talk about ME! I'm Rain, I am a developer evangelist with Red Hat. I have been an OpenStack active technical contributor since July. When I say I'm an ATC, I mean I've worked on the docs and LOTS OF TESTING because when you're first ramping up on a new project, these are great first steps.

I am leanderthal on Freenode IRC, on channels #rdo and #tripleo, if you have any questions when you're becoming an ATC, come find me on Freenode and we can have a chat.

If you can't find me, email me. I want to help YOU join the OpenStack RDO and TripleO projects because the more people within the community, the better.

WHAT IS OPENSTACK?

Become an OpenStack TripleO ATC - Easy as ABC

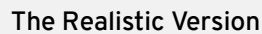


The Marketing Version

What is OpenStack? Here is the marketing version with the compute, networking, and storage (which is actually more than three projects) indicated. And the dashboard, Horizon, is over there. It's very pretty. Very simple.

Very soothing.

Become an OpenStack TripleO ATC - Easy as ABC



HINT HINT.

And most of it is written in python.

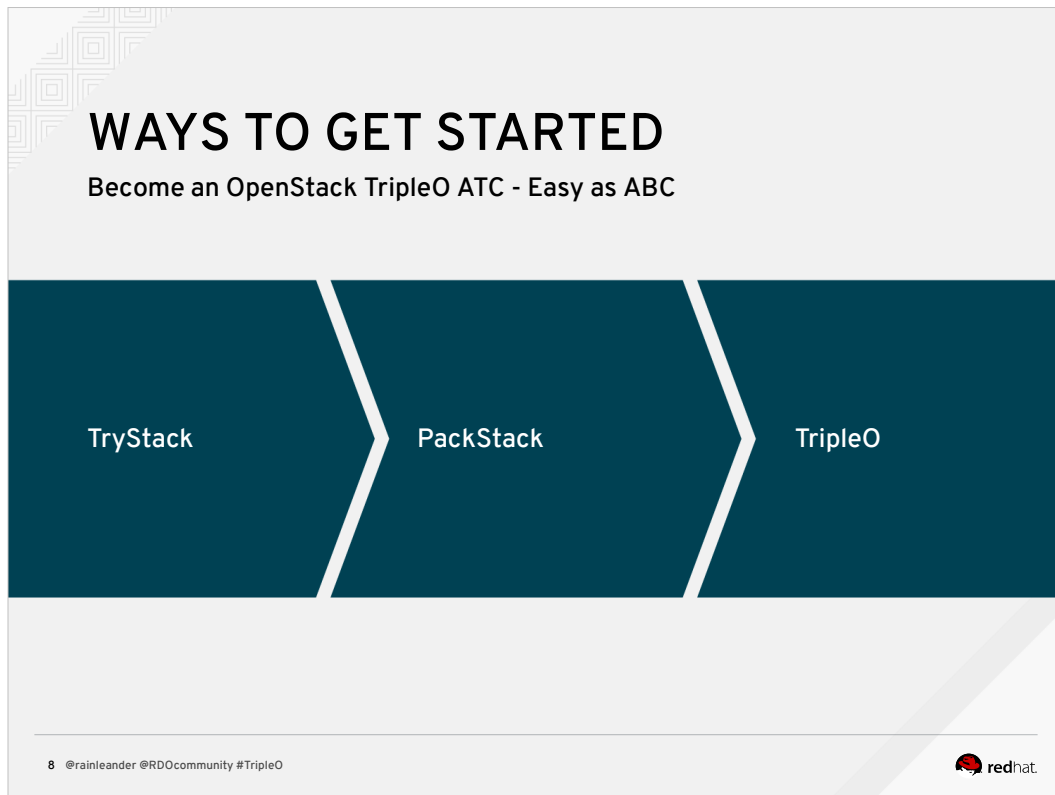
WHAT IS RDO?

Become an OpenStack TripleO ATC - Easy as ABC

Exactly the same as OpenStack, but using RPM packages.

- Exactly
- The
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- (but with RPMs)

Then what is RDO? Think of it as the same as OpenStack, an open source umbrella project over several smaller projects for creating private and public clouds, except it's packaged for Red Hat Enterprise Linux and CentOS and Scientific Linux and any other distribution that uses RPM.



There are three ways to sample RDO, depending on your goals and environment and commitment. TryStack and PackStack and TripleO (OH MY!).

TRYSTACK

Become an OpenStack TripleO ATC - Easy as ABC

```
import webbrowser  
webbrowser.open('http://trystack.org/')
```

To sample TryStack, you just have to write this simple bit of python code or run it from the python console:

```
<code>import webbrowser
```

```
webbrowser.open('http://trystack.org/')</code>
```


TRYSTACK

Become an OpenStack TripleO ATC - Easy as ABC



Or, you could just navigate to trystack.org in your favorite browser. Right now, to use TryStack, you need to join our FaceBook group because this was the original solution for maintaining many users when the project started - it's a project with many many many companies contributing their resources to make it happen, we are migrating away from FaceBook. For now, though, if you want to use TryStack, join the FaceBook group

TryStack is if you don't want to install anything, you don't want to commit hardware or brain time to the installation process, you just want to get developing, to experiment with your application on the cloud, test how it performs, get right to the fun stuff of devops, but, since it's not yours, you are slightly limited to what you can do. You only get one floating IP address per instance. Since many people are sharing this resource at once, it's sometimes slower than you'd expect.

PACKSTACK

Become an OpenStack TripleO ATC - Easy as ABC

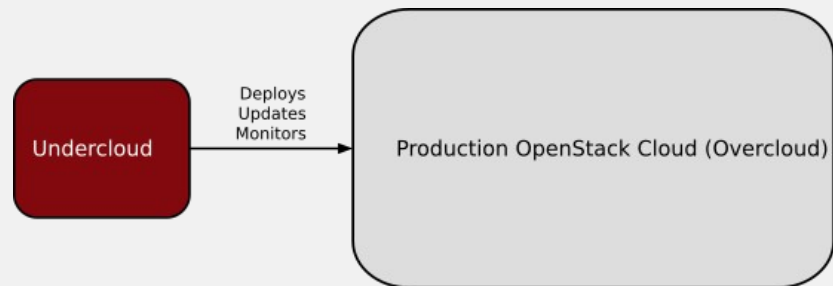
```
$ sudo yum install -y centos-release-openstack-mitaka
$ sudo yum update -y
$ sudo yum install -y openstack-packstack
$ packstack --allinone
```

I highly recommend PackStack IF you'd like a quick proof of concept for an all in one spin up. All virtual systems. No high availability. I highly recommend not using this (or TryStack) in production - it's not necessarily why it was built.

- RHEL 7 or the equivalent of the RHEL-based linux distributions is the minimum recommended version. x86_64 is currently the only supported architecture.
- Name the host with a fully qualified domain name rather than a short-form name to avoid DNS issues.
- The machine must have at least 4GB RAM, preferably 6GB RAM, have processors with hardware virtualization extensions, and at least one network adapter.
- And if you plan on having external network access to the server and instances, this is a good moment to properly configure your network settings. A static IP address to your network card, and disabling NetworkManager are good ideas. If you are planning on something fancier, read the document on advanced networking before proceeding.

TRIPLEO

Become an OpenStack TripleO ATC - Easy as ABC



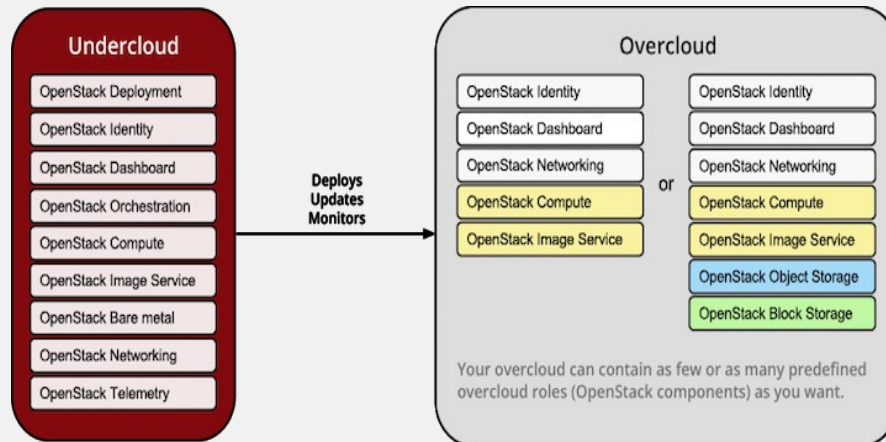
TripleO is OpenStack on OpenStack. This was done for a few reasons - to address cruft, to match resources, and for simplicity.

This could be for someone that wants to maintain several clouds, using a single cloud for any reason or for someone who wants to use a development cloud before pushing applications to a production cloud. Imagine that you are someone who wants to rent out clouds. Some people already do this, but they have written their own scripts and dedicated separate resources to the installation and deployment and maintenance of those separate private clouds. We wanted to make an installer that allowed you to do this without having to learn new skills, without having to dedicate additional resources and brain time to a separate console.

TripleO is for you.

TRIPLEO

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13 @rainleander @RDOcommunity #TripleO



The TripleO UI is a GUI interface that an administrator uses on the main cloud, in the project we call it the undercloud, to deploy, maintain, and monitor other instances of OpenStack.

Have you heard the recursive joke about turtles?

And that's how I think of TripleO, an installer that uses OpenStack to spin up OpenStack.

It's OpenStack all the way down.

For TripleO, you will need a host machine (referred to as \$VIRTHOST) with at least 16GB of RAM, preferably 32GB, and you must be able to ssh to the \$VIRTHOST machine as root without a password from the machine running Ansible. The \$VIRTHOST machine must be running a recent Red Hat-based Linux distribution (such as CentOS 7 or RHEL 7, but only CentOS 7 is currently tested).

TRIPLEO QUICKSTART

Become an OpenStack TripleO ATC - Easy as ABC

```
$ sudo bash quickstart.sh --install-deps
$ export VIRT_HOST='my_test_machine.example.com'
$ curl -O https://raw.githubusercontent.com/openstack/tripleo-quickstart/master/quickstart.sh
$ bash quickstart.sh $VIRT_HOST
```

Right now if you go to the documentation for TripleO, you can set it so that it's hardware specific, but it's still pages and pages of opportunities for typos within bash and this can be intimidating and frustrating for someone new to cloud computing, so we've made it simpler, only four lines of code instead of pages.

And we'd like feedback from people trying it out - someone would like it to be entirely GUI / clicky clicky so you only have to know one line of code in bash or even LESS, just download the package, double click and run the user interface, but we need contributors like you.

Now, if you'd like to send money, I'm happy to give you my bank details, but we really would like testers and writers, designers and DEVELOPERS to help make this project the best project it can be.

MORE INFORMATION

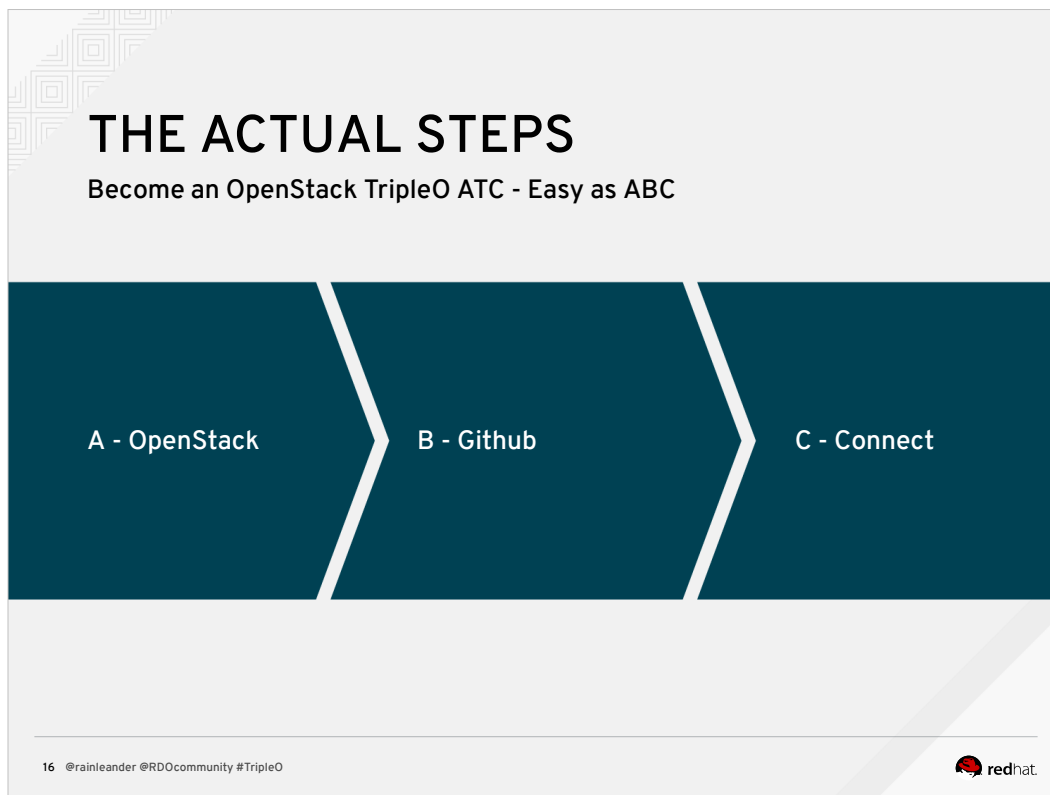
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In Case It Doesn't Run Perfectly

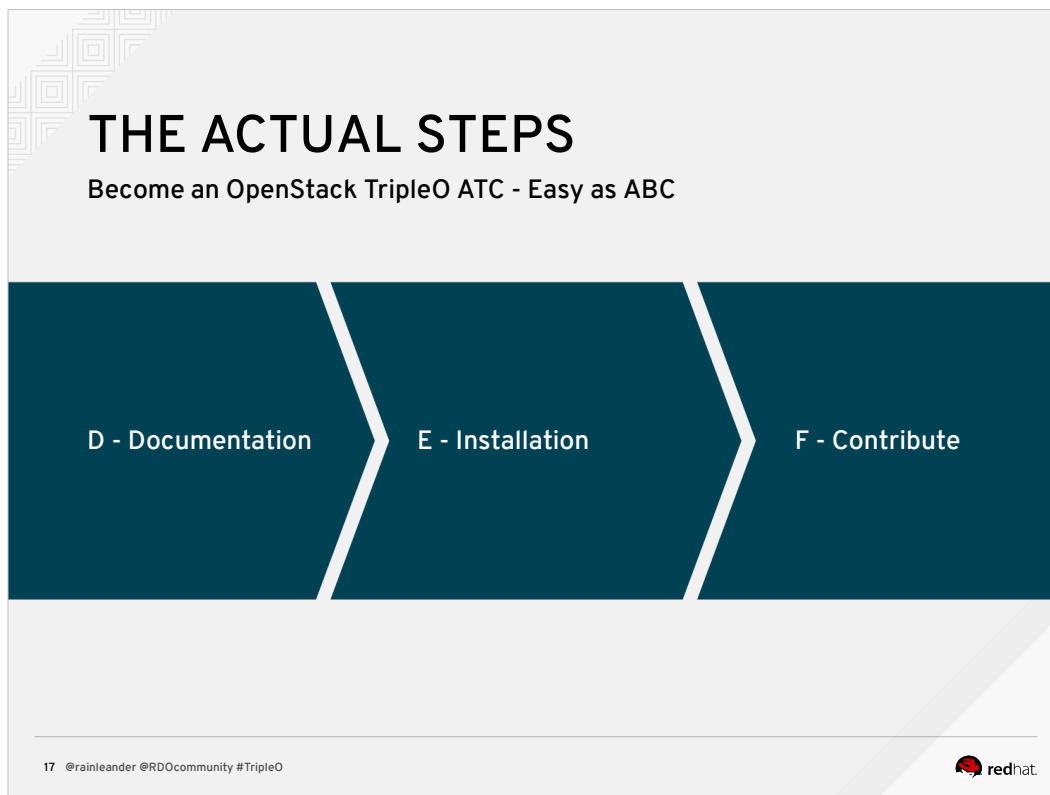
- TripleO Installation Video :: <https://www.youtube.com/watch?v=4O8KvC66eeU>
- RDO Project :: <https://www.rdoproject.org>
- Upstream TripleO Docs :: <http://docs.openstack.org/developer/tripleo-docs>
- TripleO HA Setup :: <https://remote-lab.net/rdo-manager-ha-openstack-deployment>

This is the boring informational slide, yes, because you MIGHT POSSIBLE run into issues. It MIGHT NOT RUN PERFECTLY.

Shocking, I know, but just in case, here are resources for you and, as I said in an earlier slide, you can find me on freenode or email me directly and I am here for you.



- A. Get started by signing up as community or foundation OpenStack member. The difference is slight in that a foundation member commits to voting on the foundation board member elections while the community member does not.
- B. If you don't already one, sign up for a github account. And, if needed, download git
- C. Communicate. Sign up for the RDO and OpenStack Developer mailing lists. Haunt them for a few weeks to get the feel of the environment. Get on Freenode IRC and join channels #rdo and #tripleo. The simplest (more limited) way is via webchat.freenode.net. Say hello to "leanderthal".



D. Access your favorite caffeine laden beverage of choice and dive into the RDO, TripleO, and OpenStack documentation. There's a handy OpenStack welcome guide. While there isn't one for RDO or TripleO YET, it's on my TODO list. You could help.

E. Follow the docs and do your first installation. Keep detailed notes. When something goes wrong, ask questions on irc or email.

F. Submit an edit to the documentation or code using git and Gerrit. Now, I realize that was quite a leap in logic, but OpenStack has an amazing step by step tutorial [1] for the actual contribution process, one that I cannot possibly improve upon unless you want more snark / humor / Rain-ness in which case, you'll need to let me know by commenting / tweeting / carrier pigeoning / et cetera.

[1] <http://docs.openstack.org/infra/manual/sandbox.html>

MORE INFORMATION

Become an OpenStack TripleO ATC - Easy as ABC

Resources for THE ACTUAL STEPS

- OpenStack Membership <https://www.openstack.org/join/>
- GitHub Membership <https://github.com/>
- Freenode IRC <https://en.wikipedia.org/wiki/Freenode>
- RDO List <https://www.redhat.com/mailman/listinfo/rdo-list>
- OpenStack Dev List <http://goo.gl/8DZhXW>
- OpenStack Welcome Guide <http://goo.gl/CWjf7j>
- Gerrit <https://www.gerritcodereview.com/>
- Learn the Gerrit Workflow in the Sandbox <http://goo.gl/NPqrBc>

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There are so so SO many ways to contribute to RDO and OpenStack TripleO, including, but not limited to:

- give feedback / update docs
- submit / update code
- attend conferences, meetups, events
- ask / answer questions on irc / mailing lists / ask.openstack.org
- follow / tweet / tag RDO or myself on social media
- blog / vlog / podcast your experiences / tweaks / hacks
- GIVE A TALK AT RED HAT SUMMIT ABOUT HOW TO BE A TRIPLEO ATC



Thank you very much!