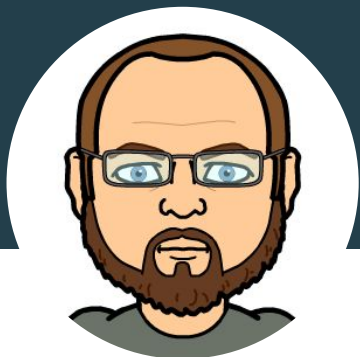


# Workshop Prep / Requirements

- Grab a USB key!
- A computer with:
  - 3+GB RAM
  - VirtualBox and Vagrant - Both included on USB drive
  - Windows users need ssh client (putty, cygwin)
- Copy “DesignateWorkshop” from USB drive
- `cd DesignateWorkshop && vagrant up && vagrant ssh`
- VM also @ <http://bit.ly/1SyJRuf>
- Vagrantfile @ <http://bit.ly/1pCUzrn>



How do I install this thing?



Graham Hayes, HPE

---

Designate PTL  
@grahamhayes  
graham.hayes@hpe.com  
mugsie @ irc.freenode.net



Kiall Mac Innes, HPE

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---

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---

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## Miguel Lavallo, IBM

---

Neutron Developer  
malavall@us.ibm.com  
mlavalle @ irc.freenode.net

# Are you ready?

- Grab a USB key!
- A computer with:
  - 3+GB RAM
  - VirtualBox and Vagrant - Both included on USB drive
  - Windows users need ssh client (putty, cygwin)
- Copy “DesignateWorkshop” from USB drive
- `cd DesignateWorkshop && vagrant up && vagrant ssh`
- VM also @ <http://bit.ly/1SyJRuf>
- Vagrantfile @ <http://bit.ly/1pCUzrn>

Protect your data!

- Anti-Virus detects and removes computer viruses.
- Backup safeguards your files.
- I te security.

MS-DOS  
three

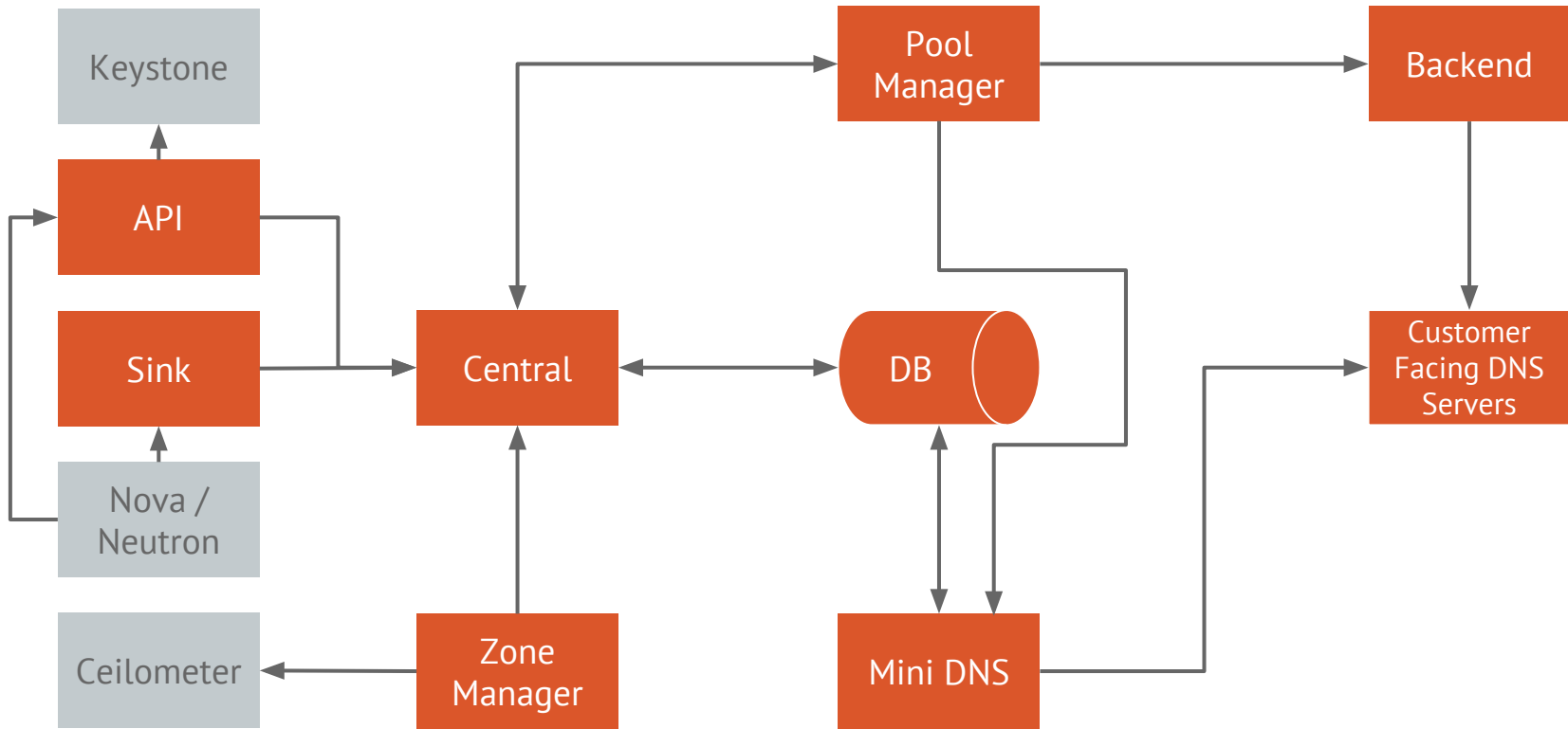
Please insert the following disk in drive A: of these

Setup Disk #3

When you are ready to continue, press ENTER.

# Install Designate





What we are installing



# Time to Follow along

Make sure your Vagrant VM is up,  
and you can SSH into it!

<https://github.com/designate-dns/designate-workshop-packer/tree/austin>

# Installing All the Things!

```
$ vagrant ssh
```

```
$ ./install-designate.sh
```

# Designate Configuration

```
$ less designate.conf
```

# Pools Configuration

```
$ less pools.yml
```

# Questions?

Next up, we'll cover how to use the service!

# Designate Operations

By NASA [Public domain], via Wikimedia Commons



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# OpenStack CLI

```
$ ./client.sh
```

# Python Bindings

```
$ python example.py  
$ python short_url.py ...
```



# Designate Nova and Neutron



By ESO (<http://www.eso.org/public/images/eso0644a/>) [CC BY 4.0 (<http://creativecommons.org/licenses/by/4.0/>)], via Wikimedia Commons



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# Let's create an instance

```
$ source openrc.user1
```

```
$ neutron net-list
```

```
$ nova flavor-list
```

```
$ nova image-list
```

```
$ nova boot my_vm --image <image-uuid>
```

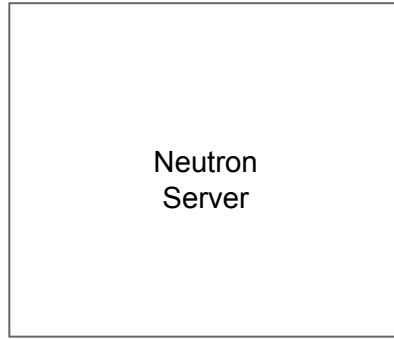
```
  --flavor <flavor-id> --nic net-id=<net-uuid>
```

# Neutron's internal DNS with Nova in Mitaka

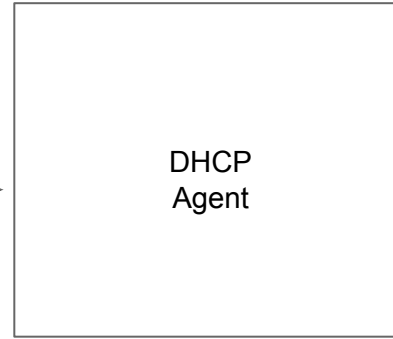
Nova compute manager  
creating instance **my\_vm**



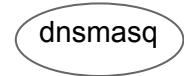
ReST API



RPC



SIGHUP



\$ neutron port-create ...

**--dns-name instance.hostname**

**dns\_domain = my-domain.org.**

neutron.conf

```
{“port”:  
  “fixed_ips”:  
    {“subnet_id”: ...  
      “ip_address”: “172.31.252.4”  
    }  
  ],  
  “mac_address”: “fa:16:3e:c9:cb:f0”,  
  “dns_name”: “my-vm”,  
  “dns_assignment”:  
    {  
      “hostname”: “my-vm”,  
      “ip_address”: “172.31.252.4”,  
      “fqdn”: “my-vm.my-domain.org.”  
    }  
}
```

fa:16:3e:c9:cb:f0  
172.31.252.4  
**my-vm**  
**my-domain.org.**



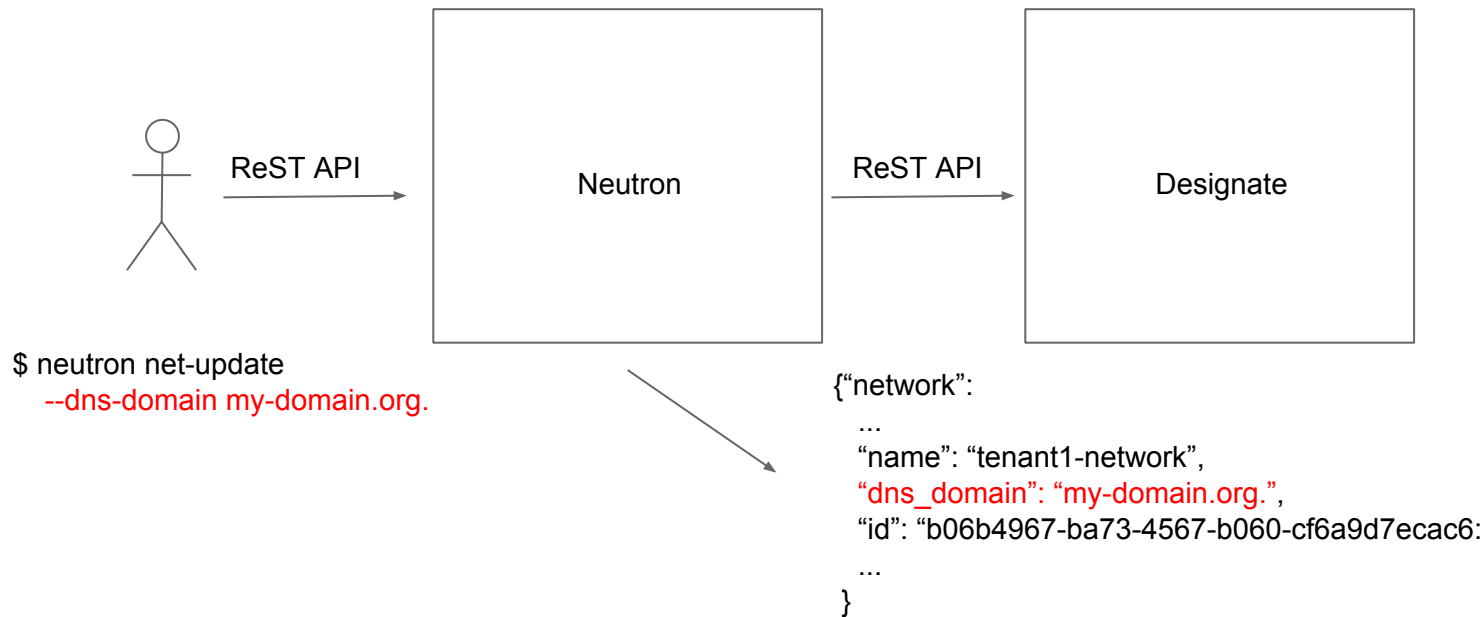
# Let's confirm...

```
$ nova list
```

```
$ neutron port-list --device-id <instance-uuid>
```

```
$ neutron port-show <port-uuid>
```

# Use case 1: Floating IPs are published with associated port DNS attributes



# Let's create a zone and update network

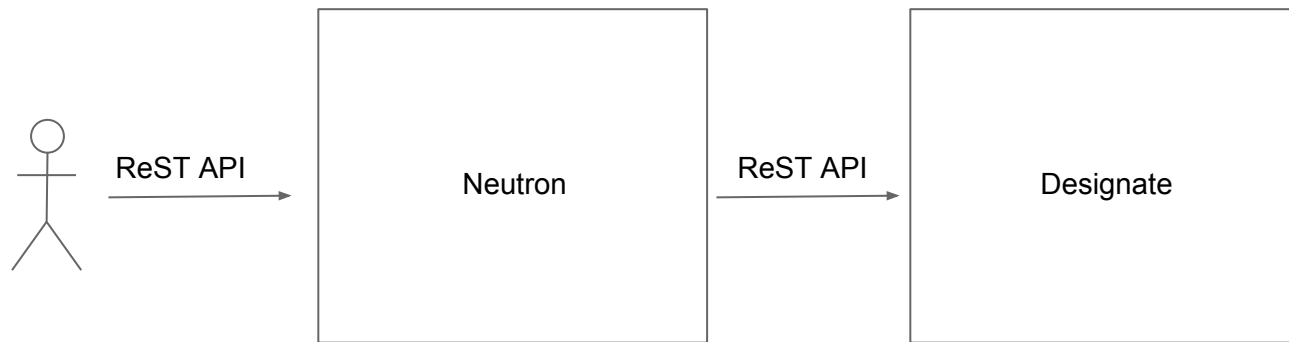
```
$ openstack zone create --email  
malavall@us.ibm.com nova-neutron.org.
```

```
$ neutron net-list
```

```
$ neutron net-update <net-uuid>  
--dns-domain my-domain.org.
```

```
$ neutron net-show <net-uuid>
```

# Use case 1: Floating IPs are published with associated port DNS attributes



```
$ neutron floatingip-create ...
```

```
--port-id b9a82377-a89f-4b02-93ec-3573333f70c6
```

```
{“floatingip”:  
  “dns_domain”: “”,  
  “dns_name”: “”,  
  “fixed_ip_address”: “172.31.252.4”,  
  “floating_ip_address”: “172.31.255.10”,  
  ...  
}
```

```
In zone nova-neutron.org.:  
record type: A  
name: my-vm.my-domain.org.  
data: 172.31.252.4
```

```
In zone 252.31.172.in-addr.arpa.  
record type: PTR  
name: 4.252.31.172.in-addr.arpa.  
data: my-vm.my-domain.org.
```

# Let's confirm...

```
$ neutron floatingip-create <net-uuid>  
  --port-id <port-uuid>
```

```
$ openstack recordset list nova-neutron.org.
```

```
$ source openrc.admin
```

```
$ openstack recordset list  
  252.32.172.in-addr.arpa.
```



# Other two use cases supported

- Floating IPs are published in the external DNS service
- Ports are published directly in the external DNS service
- We will cover them in depth during Thursday's presentation:
  - “Integration of Neutron, Nova and Designate: How to Use It and How to Configure It”
  - Austin Convention Center - Level 4 - Ballroom D
  - 1:30pm - 2:10pm



# Contribute to Designate

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# Useful Links

## General OpenStack Links:

How to Contribute Primer: [https://wiki.openstack.org/wiki/How\\_To\\_Contribute](https://wiki.openstack.org/wiki/How_To_Contribute)

Gerrit Workflow Primer: [https://wiki.openstack.org/wiki/Gerrit\\_Workflow](https://wiki.openstack.org/wiki/Gerrit_Workflow)

Join the OpenStack Foundation: <https://www.openstack.org/join/>

Code Review: <https://review.openstack.org/> Search for “project:openstack/designate”

## Designate Specific Links:

Bug Tracker: <https://bugs.launchpad.net/designate>

Feature Tracker: <https://blueprints.launchpad.net/designate>

Specs: <https://github.com/openstack/designate-specs>

Documentation: <http://docs.openstack.org/developer/designate>

DevStack: <http://docs.openstack.org/developer/designate/devstack.html>

Git (Server): <https://github.com/openstack/designate>

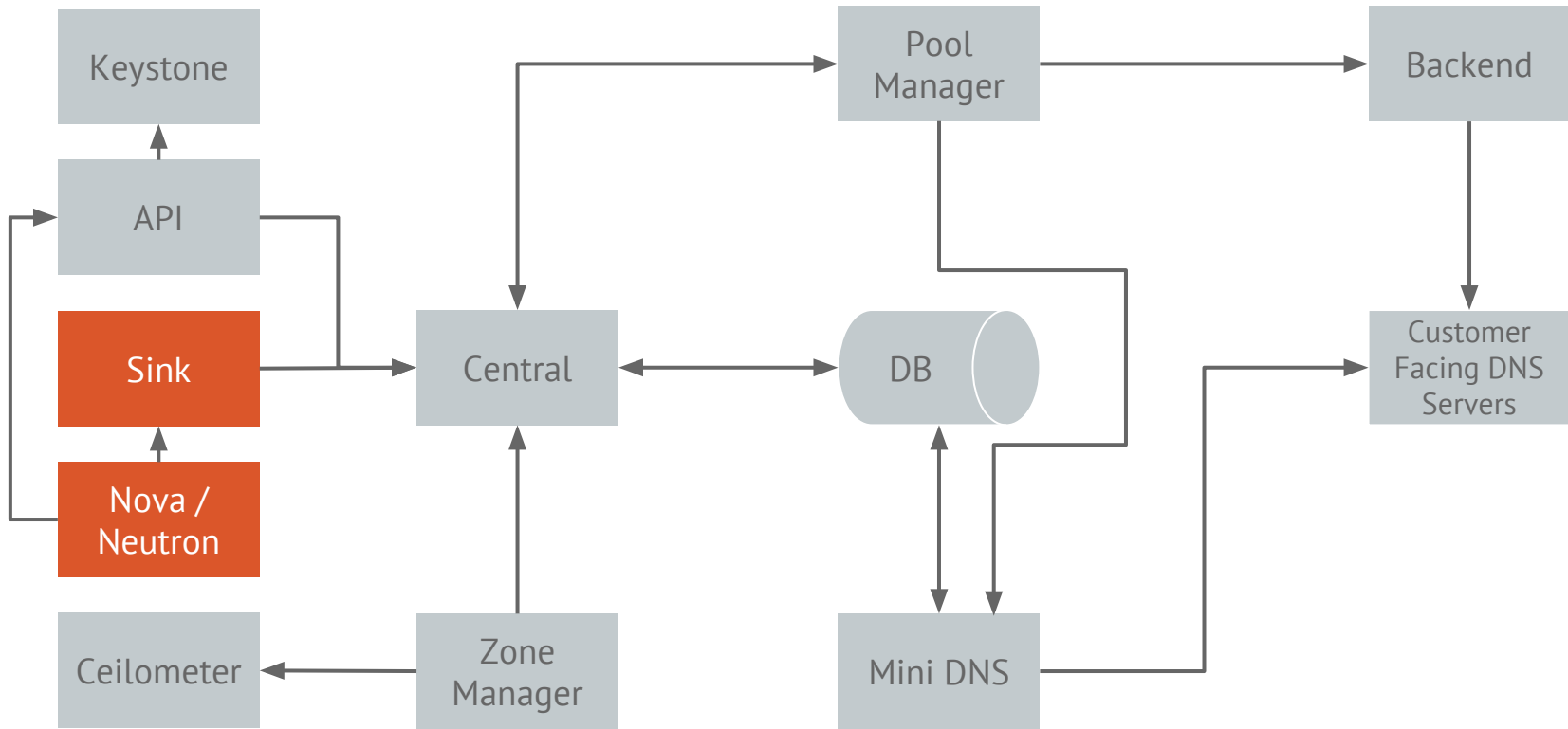
Git (Client): <https://github.com/openstack/python-designateclient>



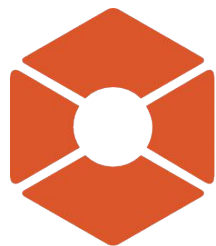
# Getting Involved - Bare Necessities

- Get a good IRC client.. You'll need it.
  - Join #openstack-dns and introduce yourself ;)
- Attend the weekly IRC meetings:
  - Wednesdays @ 17:00 UTC in #openstack-meeting-alt
  - Agenda - <https://wiki.openstack.org/wiki/Meetings/Designate>
- File a bug/blueprint for your idea - Then add it to the agenda...
  - It's OK to only have a rough sketch of the idea - that's usually enough to begin discussions.





What are we configuring?



DESIGNATE

DNS FOR OPENSTACK

# Slides

<http://bit.ly/1T3cRcV>

