Congress Data Sources - Design Doc

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Abstract

In this document we outlines what data needs to be extracted from which data source and how it has to be stored in memory (and later in a database)

Details

Base Class for Data Source Sync

```
class DataSourceDriver(object):
     def __init__(self, **creds):
     def get_all(self, type):
      #replace boolean with string as congress
      #does not support boolean
     def boolean_to_congress(self, bool):
     def get_last_updated_time(self):
```

Neutron

Neutron Tuples and Constants representing them in the driver

NEUTRON_NETWORKS = "neutron:networks"
NEUTRON_NETWORKS_SUBNETS = "neutron:networks:subnets"
NEUTRON_PORTS = "neutron:ports"
NEUTRON_PORTS_ADDR_PAIRS = "neutron:ports:address_pairs"
NEUTRON_PORTS_SECURITY_GROUPS = "neutron:ports:security_groups"
NEUTRON_PORTS_BINDING_CAPABILITIES = "neutron:ports:binding_capabilities"
NEUTRON_PORTS_FIXED_IPS = "neutron:ports:fixed_ips"
NEUTRON_PORTS_EXTRA_DHCP_OPTS = "neutron:ports:extra_dhcp_opts"
NEUTRON_ROUTERS = "neutron:routers"
NEUTRON_SECURITY_GROUPS = "neutron:security_groups"
NEUTRON_SUBNETS = "neutron:subnets"

Mappings - JSON to Tuple

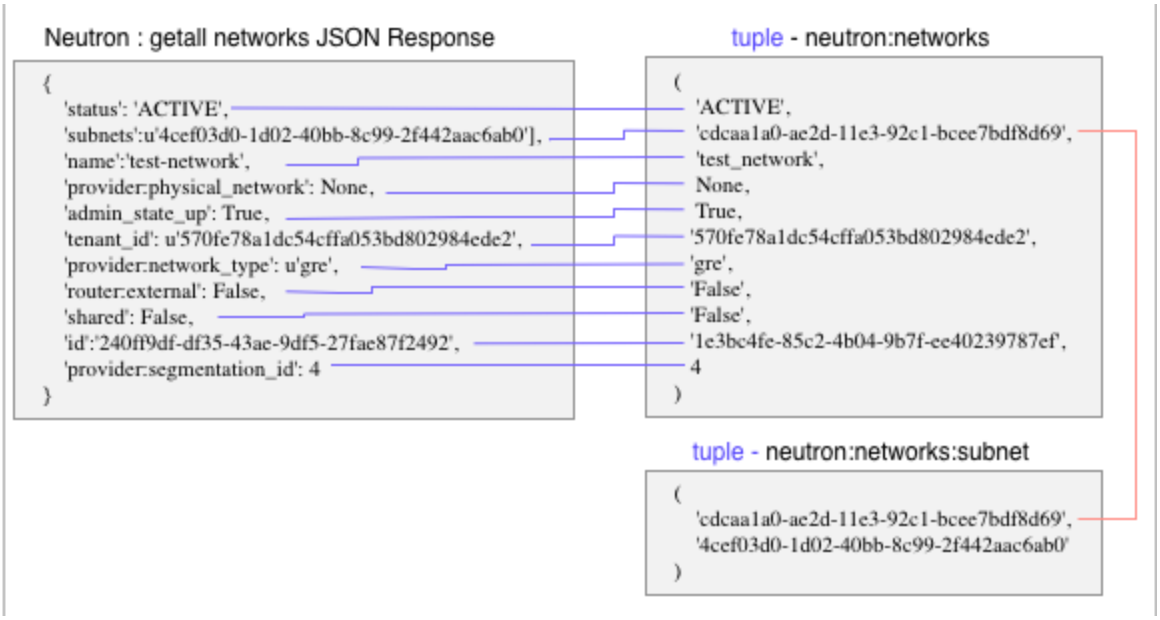


Figure 1 : Networks - JSON to Tuple mapping

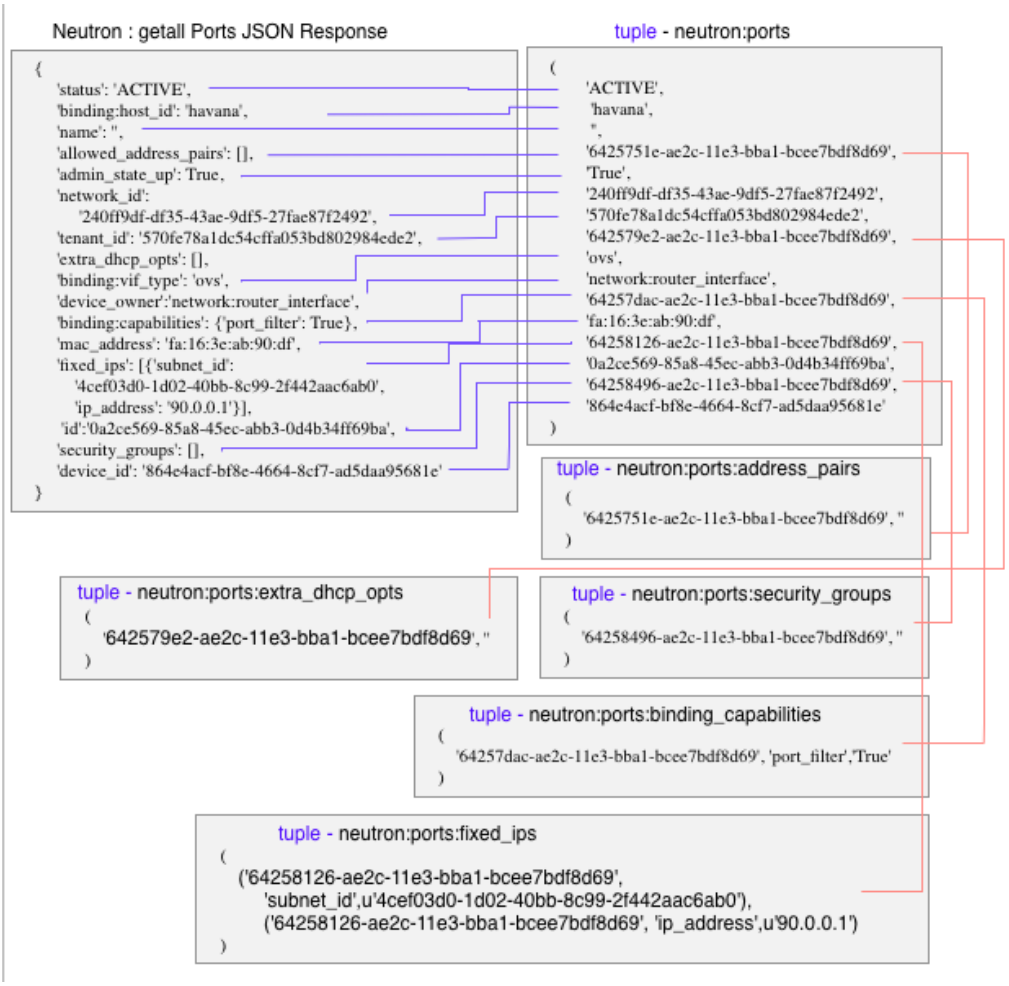


Figure 2 : Ports - JSON to Tuple mapping

Driver Class

```
class NeutronDriver(DataSourceDriver):
    def __init__(self, **creds):
    def get_all(self, type)
```

Nova

Tuple types supported

- Servers
- Flavors
- Hosts
- Floating IPs

Specifying the Type of tuple

Type is one of the following constants

SERVERS
FLAVORS
HOSTS
FLOATING_IPS

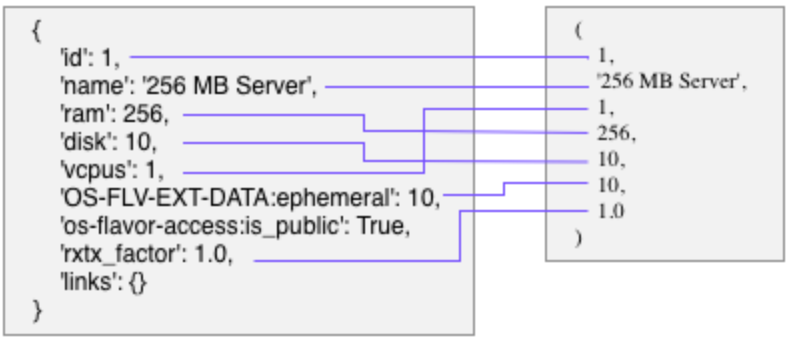
Driver Class

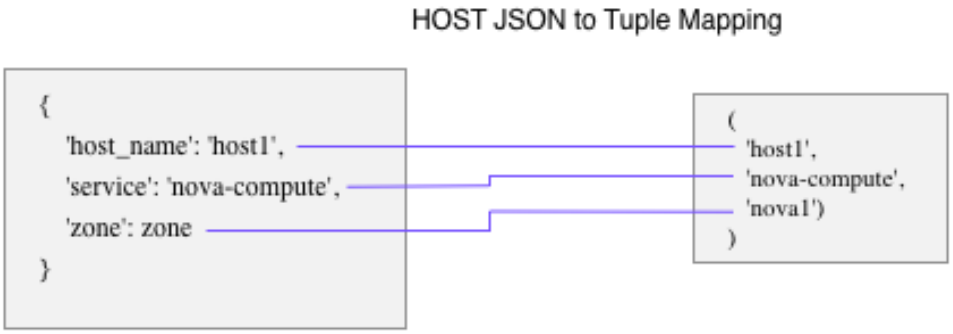
```
class NovaDriver(DataSourceDriver):
    def __init__(self, **creds):
    def get_all(self, type)
```

JSON to Tuple Mapping

Server JSON to Tuple Mapping

Flavor JSON to Tuple Mapping





Keystone

Congress Tables

- keystone:user(id, name)
- keystone:role(id,name)
- keystone:user.role(id,role)

Driver Class

```
class KeystoneDriver(DataSourceDriver):
    def __init__(self, **creds):
    def get_all(self, type)
```

Cinder

Dimensions

Mappings to be stored

Driver Class

```
class CinderDriver(DataSourceDriver):
    def __init__(self, **creds):
    def get_all(self, type)
```

Appendix

NOVA APIs

NEUTRON APIS