Provisioning of Contrail Cloud Clsuter via Contrail Command UI

URL for Contrail Command GUI Access https://192.168.2.10:9091

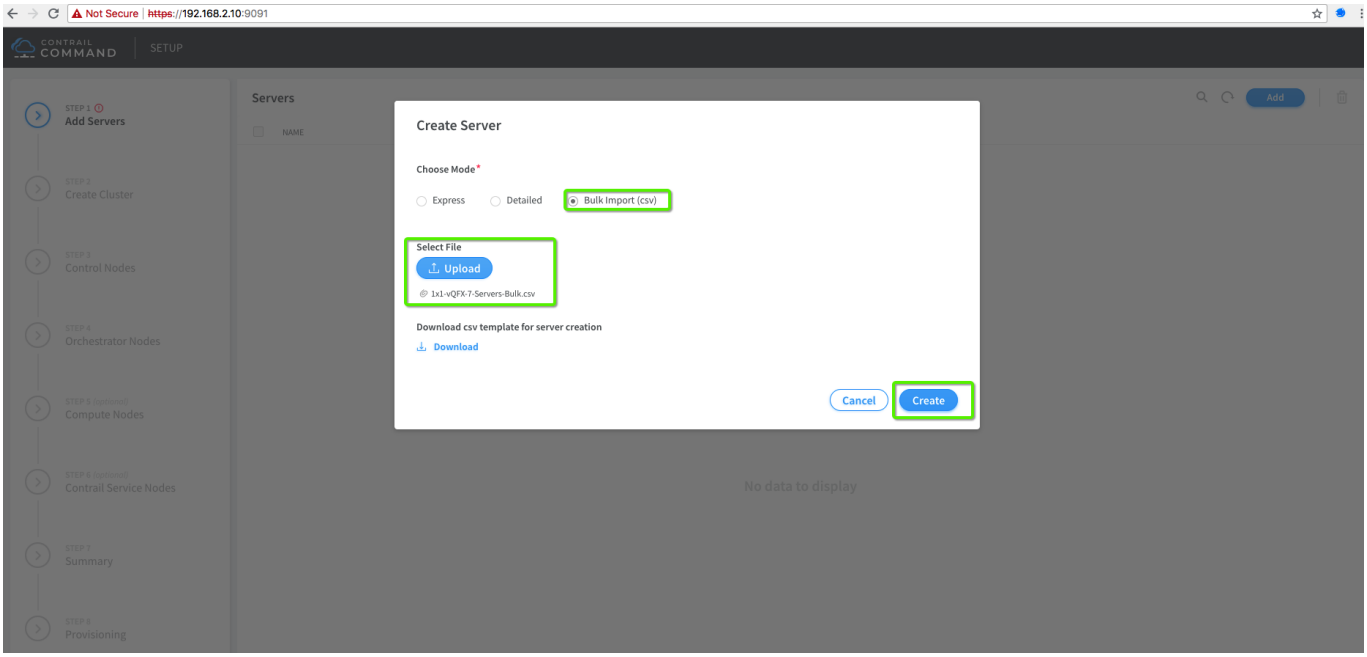
Username/Password: admin/contrail123

Note: Please make sure your Foxyproxy Firefox/Chrome plugin is setup before proceeding.

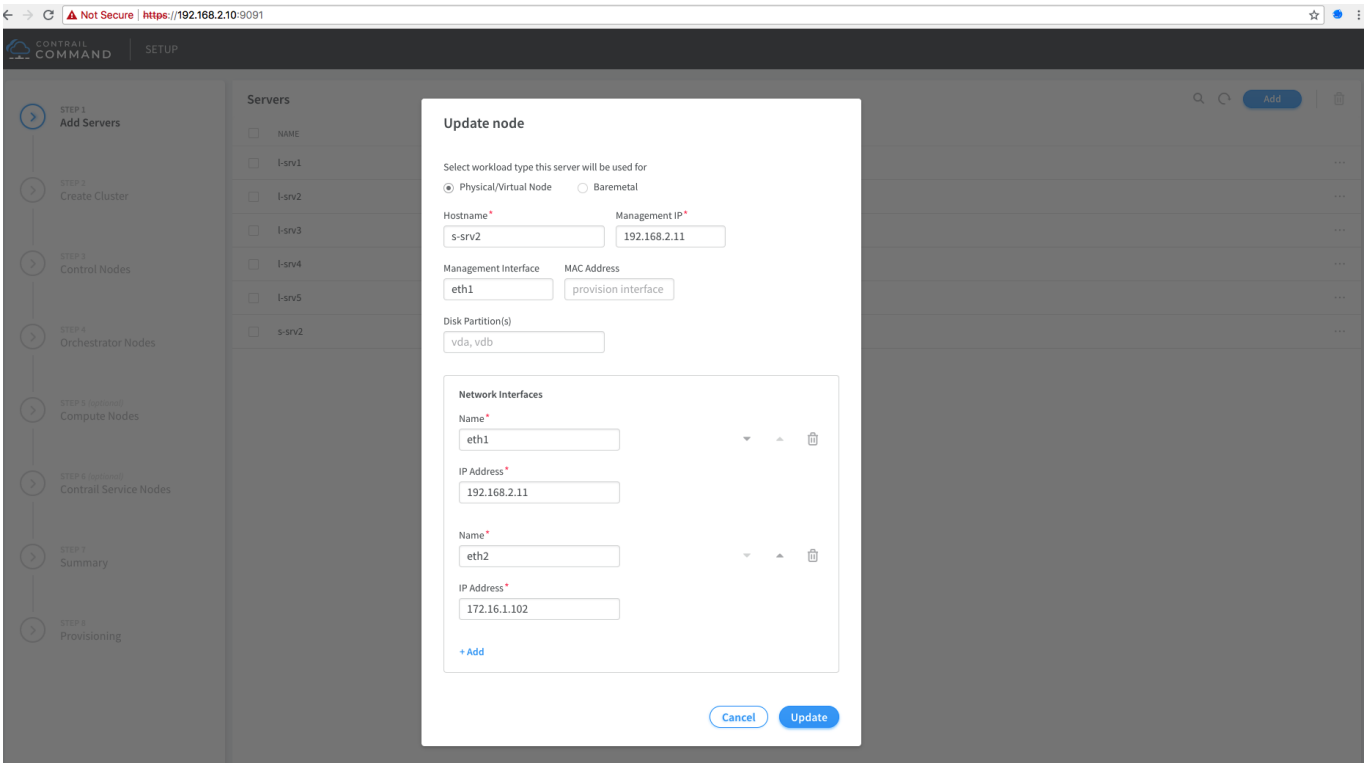
1. Add Servers

You can add servers one by one or in bulk. In case of bulk server add use following file and update the MAC addresses for l-srv4 & l-srv5 BMS nodes.

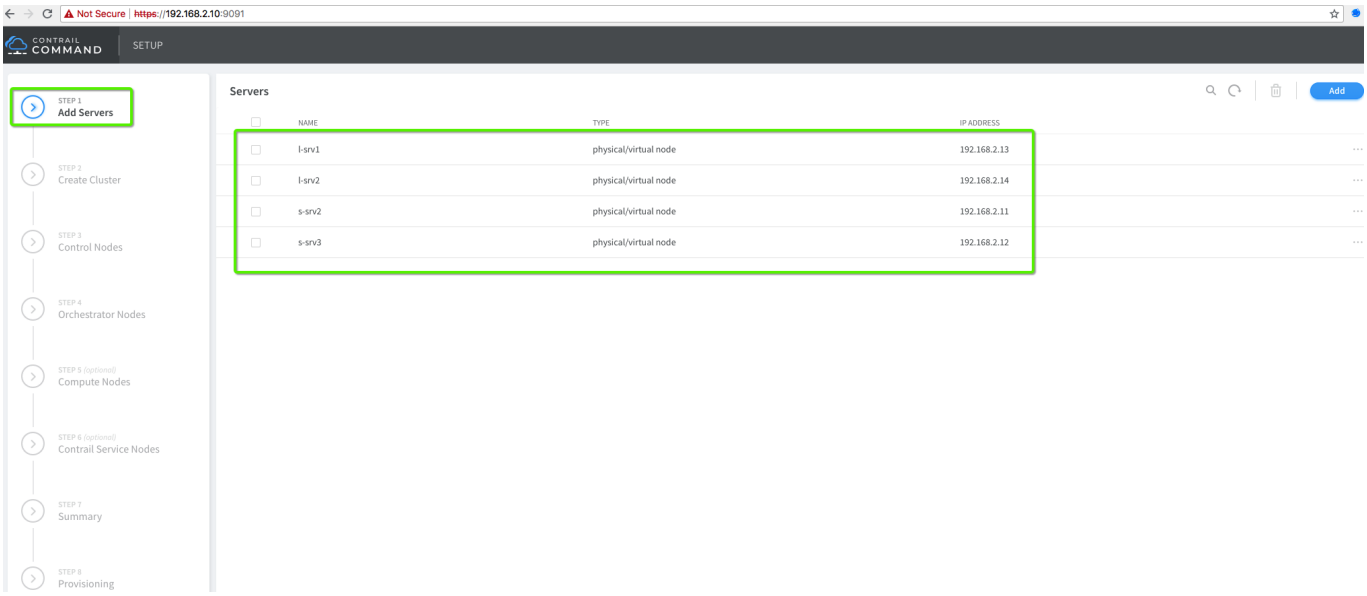
Bulk Server Add csv file



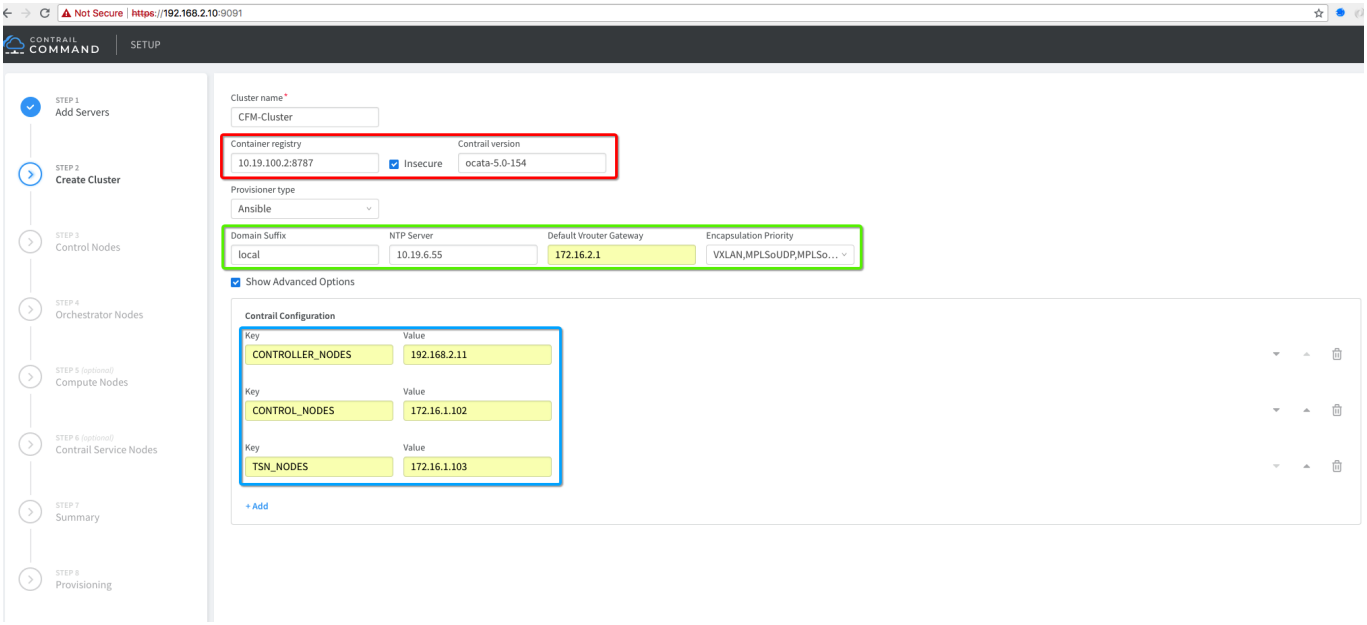
Single Server Add with two interfaces eth1 (MGMT) & eth2 (Ctrl+Data)



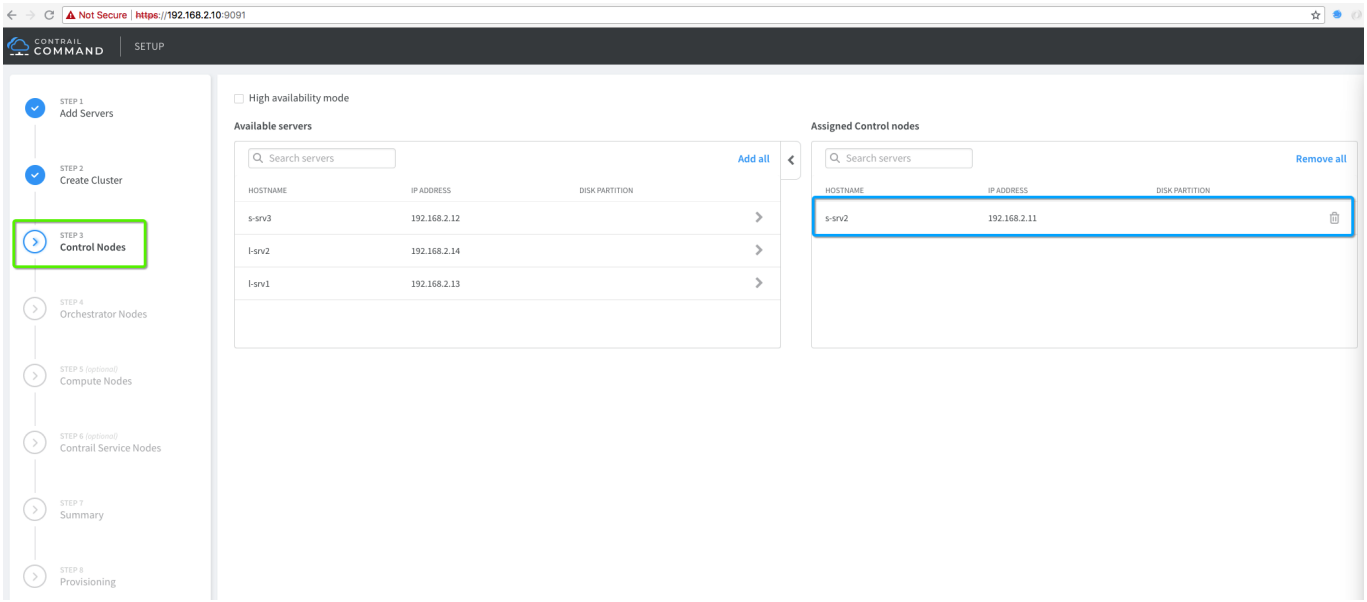
2. Add All Servers



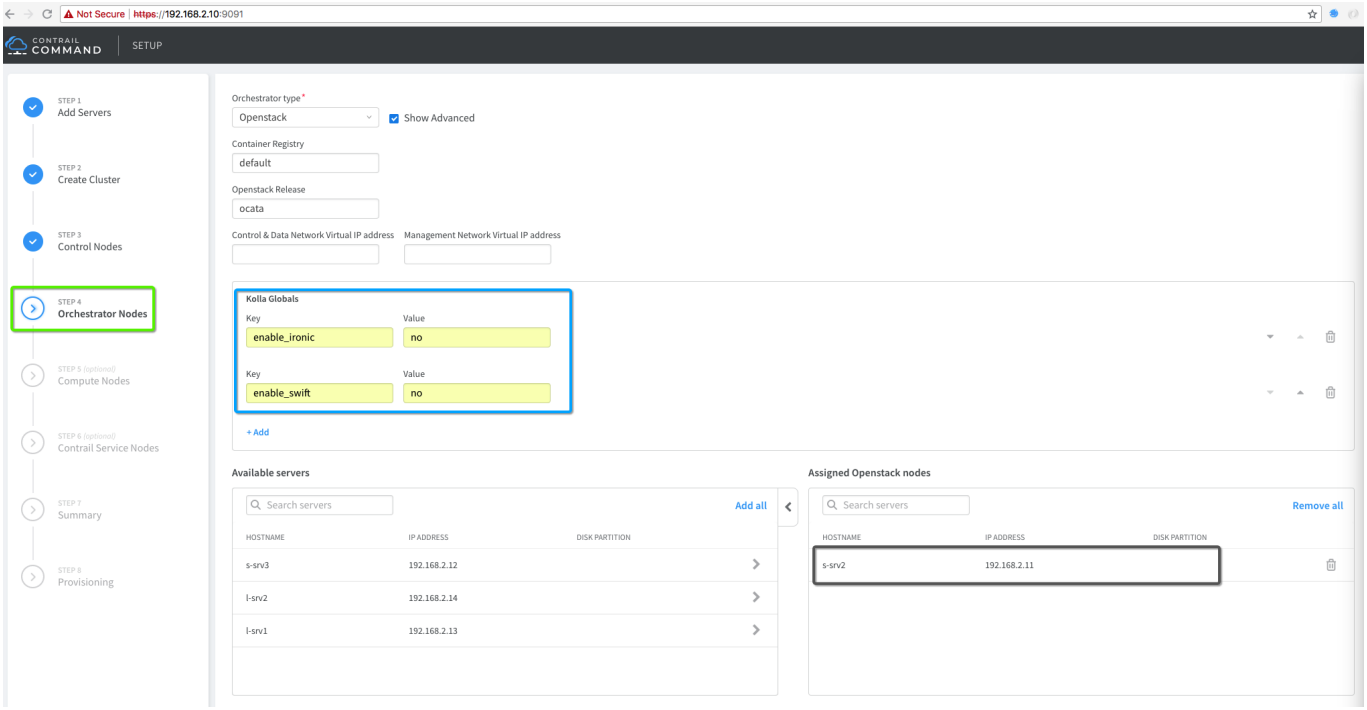
3. Create Cluster



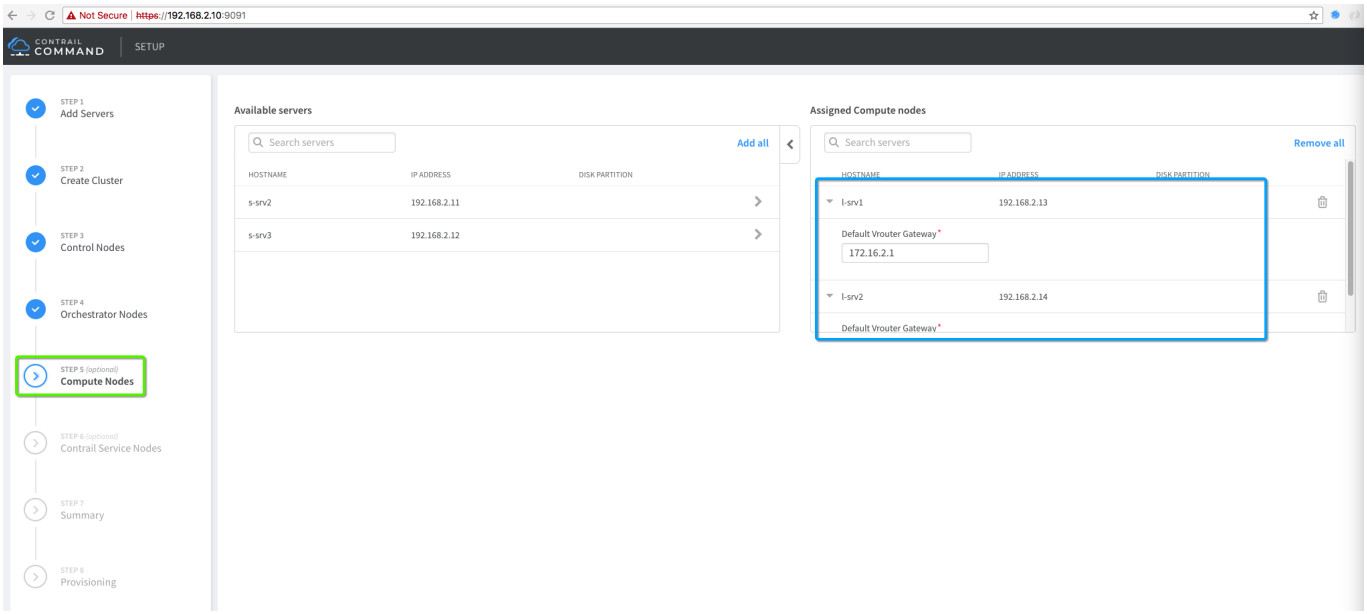
4. Add Contrail Control Node



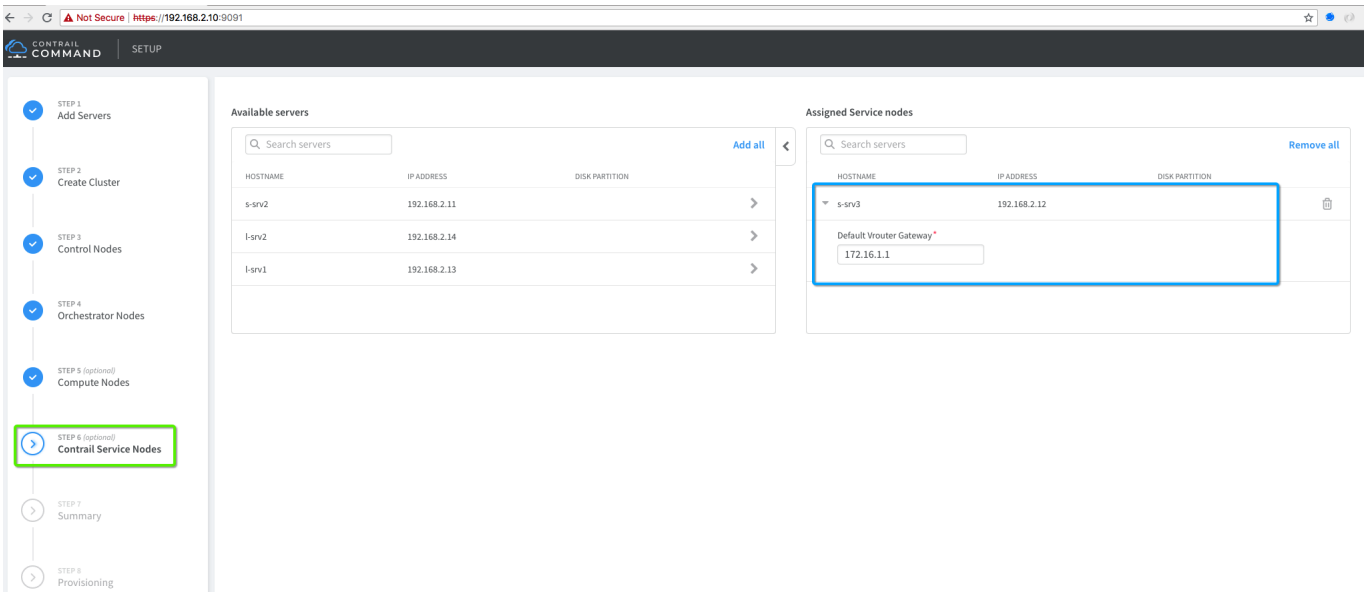
5. Add OpenStack Control Node (Orchestration)



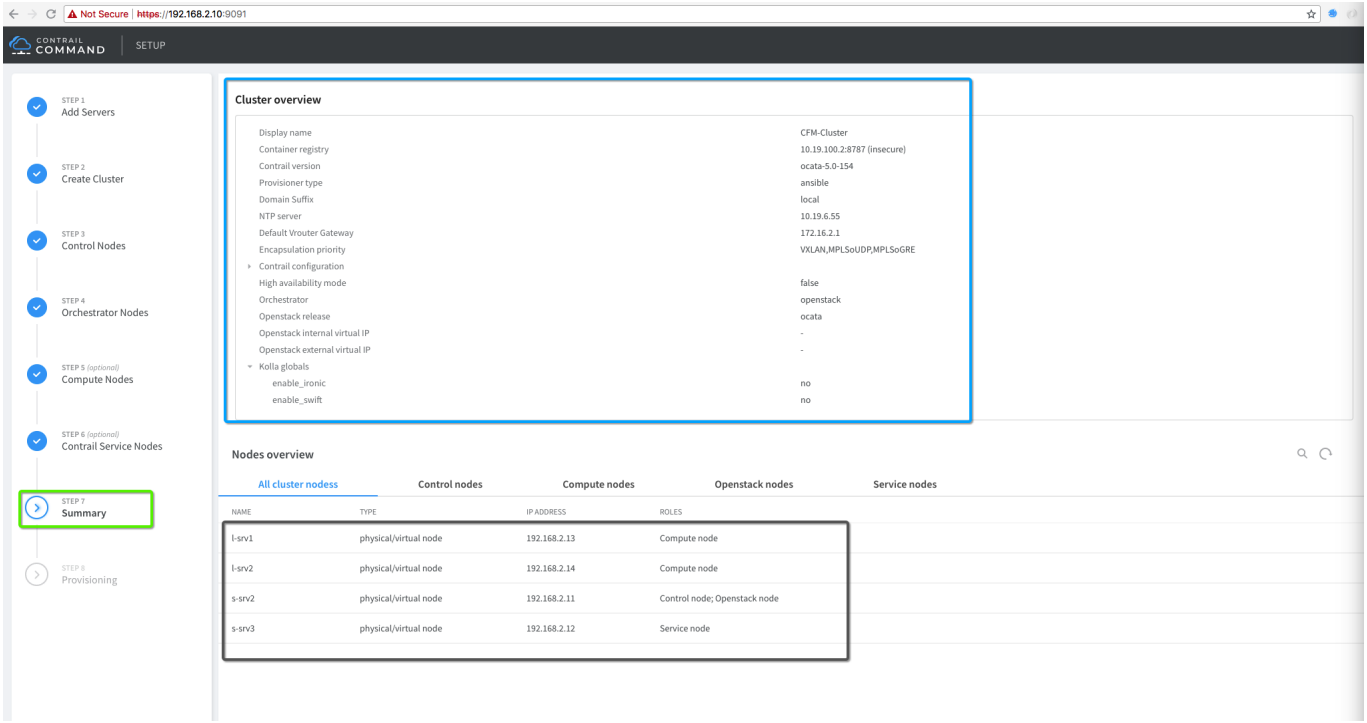
6. Add Compute Node



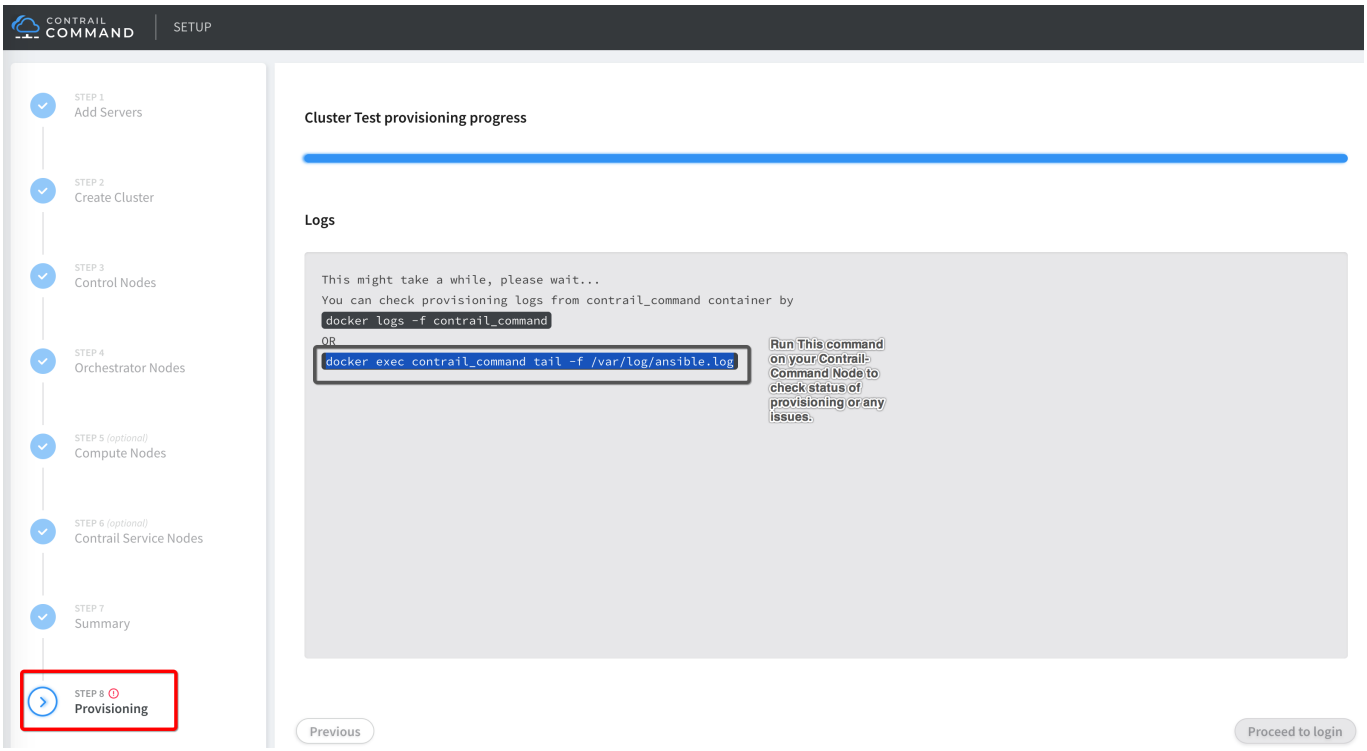
7. Add Contrail Service Node (Old TSN)



8. Cluster Summary



9. Cluster Summary



10. Check instances.yml

Contrail Command GUI creates instances.yml file used for clsuter provisioning at following location "/var/tmp/contrail_cluster/***Cluster-UUID***/". Please check and review.

```
# Login to Contrail Command Container
docker exec -it contrail_command bash

# Autogenerated "instances.yml" file
cat /var/tmp/contrail_cluster/a3d545fa-3fe9-4f5f-b35c-
a605cb30c408/instances.yml
global_configuration:
  CONTAINER_REGISTRY: 10.19.100.2:8787
  REGISTRY_PRIVATE_INSECURE: True
provider_config:
  bms:
    ssh_user: root
    ssh_pwd: c0ntrail123
    ntpserver: 10.19.6.55
    domainsuffix: local
instances:
  s-srv2:
    ip: 192.168.2.11
    provider: bms
    roles:
      config:
      config_database:
      control:
      webui:
      analytics:
      analytics_database:
      openstack_control:
```

```
        openstack_network:
        openstack_storage:
        openstack_monitoring:
    l-srv1:
      ip: 192.168.2.13
      provider: bms
      roles:
        vrouter:
          VROUTER_GATEWAY: 172.16.2.1
        openstack_compute:
    l-srv2:
      ip: 192.168.2.14
      provider: bms
      roles:
        vrouter:
          VROUTER_GATEWAY: 172.16.2.1
        openstack_compute:
    s-srv3:
      ip: 192.168.2.12
      provider: bms
      roles:
        vrouter:
          TSN_EVPN_MODE: true
          VROUTER_GATEWAY: 172.16.1.1
  contrail_configuration:
    CONTRAIL_VERSION: ocata-5.0-154
    CLOUD_ORCHESTRATOR: openstack
    RABBITMQ_NODE_PORT: 5673
    VROUTER_GATEWAY: 172.16.2.1
    ENCAP_PRIORITY: VXLAN,MPLSoUDP,MPLSoGRE
    AUTH_MODE: keystone
    KEYSTONE_AUTH_HOST: 192.168.2.11
    KEYSTONE_AUTH_URL_VERSION: /v3
    CONTROLLER_NODES: 192.168.2.11
    CONTROL_NODES: 172.16.1.102
    TSN_NODES: 172.16.1.103
  kolla_config:
    kolla_globals:
      openstack_release: ocata
      enable_haproxy: no
      enable_ironic: no
      enable_swift: no
    kolla_passwords:
      keystone_admin_password: contrail123
```

11. Compute Node QEMU (hypervisor/emulator) change if your Host does not support KVM HW virtualization (Nested mode)

Note: You usually need that for AWS setup which does not support HW virtualization. Your VM instance creation will fail and you have to make following changes in "nova-compute" before creating the workload.

```
vi /etc/kolla/nova-compute/nova.conf

# Add last two line under [libvirt] section
[libvirt]
connection_uri = qemu+tcp://192.168.2.12/system
virt_type=qemu
cpu_mode=none

# After making changes restart "nova_compute" conatiner on the compute
docker restart nova_compute
```

12. Install OpenStack Client and Images

After OpenStack and Contrail is installed, let's install OpenStack Client on s-srv2, download cirros images, add images and create flavors.

Note: For lab workshop the script is already in "/home/vagrant" folder

```
wget https://raw.githubusercontent.com/qarham/cfm-vagrant/master/cfm-1x1-vqfx-7srv/scripts/install-os-clinet-images.sh
chmod +x install-os-clinet-images.sh

./install-os-clinet-images.sh
```

13. Basic Sanity Check (Not required for workshop)

To make sure Cluster provisioning is successful and no issue let's create some work load using a simple basic sanity script "basic-sanity-test.sh".

This script will perform following actions:

- install OpenStack client
- Download and Add cirros images
- Create VM flavors
- Create TWO VNs VN01: 10.1.1.0/24 & VN02: 20.1.1.0/24
- Instantiate two VMs in each VN (VN01 & VN02)

```
wget https://raw.githubusercontent.com/qarham/cfm-vagrant/master/cfm-1x1-vqfx-7srv/scripts/basic-sanity-test.sh

chmod +x basic-sanity-test.sh

./basic-sanity-test.sh
```

Other Tips

In case provisioning fail for OpenSTack/Contrail install and you would like to run ansible provisioning manually you can use following commands.

```
cd /usr/share/contrail/contrail-ansible-deployer

# For manual OpenStack Installation use following command
ansible-playbook -i inventory/ -e orchestrator=openstack -e
config_file=/var/tmp/contrail_cluster/<Cluseter-UUID>/instances.yml
playbooks/install_openstack.yml

# For manual Contrail Installation use following command
ansible-playbook -i inventory/ -e orchestrator=openstack -e
config_file=/var/tmp/contrail_cluster/<Cluseter-UUID>/instances.yml
playbooks/install_contrail.yml
```

To reset OpenStack Kola use following command:

Login to contrail_command container and follow the steps:

```
docker exec -it contrail_command bash
cd /usr/share/contrail/contrail-kolla-ansible
./tools/kolla-ansible -i ansible/inventory/my_inventory --configdir
etc/kolla --passwords etc/kolla/passwords.yml destroy --yes-i-really-
really-mean-it
```

Contrail Command Provisioning video recorded session (Click the icon)

References

- https://github.com/Juniper/contrail-ansible-deployer/wiki
- https://github.com/Juniper/contrail-command-deployer/wiki/Using-Ansible-to-launch-the-Contrail-Command-Containers