```
#!/bin/sh


openstack container create povrayContainer
openstack server create --flavor m1.tiny --image centos7 --security-group custom
SecurityGroup --key-name yonida --user-data povray-userdata.sh  povray-instance
```

```
#!/bin/sh

#Proxy config
export http_proxy=http://proxy.clermont-universite.fr:8080

#openstack intall
apt-get -y install python-openstackclient

#openstack config
export OS_AUTH_URL=http://172.20.88.10:5000/v3
export OS_PROJECT_ID=72fe25d80014433f8bc78a734a5be70b
export OS_PROJECT_NAME="yonidabrah"
export OS_USER_DOMAIN_NAME="Default"
export OS_USERNAME="yonidabrah"
export OS_PASSWORD="Ent12345"
export OS_REGION_NAME="RegionOne"
export OS_INTERFACE=public
export OS_IDENTITY_API_VERSION=3

#Test Config
openstack server list

#Getting zzpovray.tar.gz from container
openstack object save povrayContainer zzpovray.tar.gz

#Extracting povray
tar xfv zzpovray.tar.gz
ls -l
cd povray

#Creating images
./povray +A +W800 +H600 +Lshare/povray-3.6/include/ +SF1 +EF80  glsbng.ini

#uploading images to container
openstack object create povrayContainer *.png

#Shutdown instance
shutdown
```

```
#!/bin/sh


openstack server create --flavor m1.tiny --image centos7 --security-group custom
SecurityGroup --key-name yonida --user-data post-userdata.sh post-traitement
```

```
#!/bin/sh

#Proxy config
export http_proxy=http://proxy.clermont-universite.fr:8080

#openstack install
apt-get -y install python-openstackclient

#openstack config
export OS_AUTH_URL=http://172.20.88.10:5000/v3
export OS_PROJECT_ID=72fe25d80014433f8bc78a734a5be70b
export OS_PROJECT_NAME="yonidabrah"
export OS_USER_DOMAIN_NAME="Default"
export OS_USERNAME="yonidabrah"
export OS_PASSWORD="Ent12345"
export OS_REGION_NAME="RegionOne"
export OS_INTERFACE=public
export OS_IDENTITY_API_VERSION=3

#Test Config
openstack server list

#ImageMagick install
apt-get -y install imagemagick

#Get images from container
openstack container save povrayContainer

#Create GIF file
convert *.png -delay 6 -quality 100 glsbng.gif

#Upload GIF file to povrayContainer
openstack object create povrayContainer glsbng.gif

#Shutdown instance
shutdown
```

```
heat_template_version: 2013-05-23

parameters:
  key_name:
    type: string
    description: Name of keypair to assign to server
    default: yonida
  image:
    type: string
    description: Name of image to use for server
    default: centos7
  flavor:
    type: string
    description: Flavor to use for server
    default: m1.tiny
  timeout:
    type: number
    description: Timeout for WaitCondition, depends on your image and environmen
t
    default: 800

resources:
  wait_condition:
    type: OS::Heat::WaitCondition
    properties:
      handle: {get_resource: wait_handle}
      count: 1
      timeout: {get_param: timeout}

  wait_handle:
    type: OS::Heat::WaitConditionHandle

  genImagesInstance:
    type: OS::Nova::Server
    properties:
      image: {get_param: image}
      flavor: {get_param: flavor}
      key_name: {get_param: key_name}
      user_data_format: RAW
      user_data:
        str_replace:
          template: |
            #!/bin/sh
                 #Proxy config
            export http_proxy=http://proxy.clermont-universite.fr:8080
                 #openstack install
            apt-get -y install python-openstackclient
            #openstack config
            export OS_AUTH_URL=http://172.20.88.10:5000/v3
            export OS_PROJECT_ID=72fe25d80014433f8bc78a734a5be70b
            export OS_PROJECT_NAME="yonidabrah"
            export OS_USER_DOMAIN_NAME="Default"
            export OS_USERNAME="yonidabrah"
            export OS_PASSWORD="Ent12345"
            export OS_REGION_NAME="RegionOne"
            export OS_INTERFACE=public
            export OS_IDENTITY_API_VERSION=3
            #Test Config
            openstack server list
            #Get zzpovray.tar.gz from container
            openstack object save povrayContainer zzpovray.tar.gz
            #Extracte povray
```



```
            tar xfv zzpovray.tar.gz
            ls -l
            cd  povray
            #Create images
            ./povray +A +W800 +H600 +Lshare/povray-3.6/include/ +SF1 +EF80  glsb
ng.ini
            #Upload images to container
            openstack object create povrayContainer *.png
            wc_notify --data-binary '{"status": "SUCCESS"}'
            #Shutdown instance
            shutdown
          params:
            wc_notify: { get_attr: ['wait_handle', 'curl_cli'] }

  genGifInstance:
    type: OS::Nova::Server
    depends_on: wait_condition
    properties:
      image: {get_param: image}
      flavor: {get_param: flavor}
      key_name: {get_param: key_name}
      user_data_format: RAW
      user_data:
        str_replace:
          template: |
            #!/bin/sh
                 #Proxy config
            export http_proxy=http://proxy.clermont-universite.fr:8080
                 #openstack install
            apt-get -y install python-openstackclient
            #openstack config
            export OS_AUTH_URL=http://172.20.88.10:5000/v3
            export OS_PROJECT_ID=72fe25d80014433f8bc78a734a5be70b
            export OS_PROJECT_NAME="yonidabrah"
            export OS_USER_DOMAIN_NAME="Default"
            export OS_USERNAME="yonidabrah"
            export OS_PASSWORD="Ent12345"
            export OS_REGION_NAME="RegionOne"
            export OS_INTERFACE=public
            export OS_IDENTITY_API_VERSION=3
            #Test Config
            openstack server list
            #ImageMagick install
            apt-get -y install imagemagick
            #Get images from container
            openstack container save povrayContainer
            #Create GIF file
            convert *.png -delay 6 -quality 100 glsbng.gif
                 #Upload GIF file to povrayContainer
            openstack object create povrayContainer glsbng.gif
                 #Shutdown instance
            shutdown
          params:
            wc_notify: { get_attr: ['wait_handle', 'curl_cli'] }

outputs:
  curl_cli:
    value: { get_attr: ['wait_handle', 'curl_cli'] }
  wc_data:
    value: { get_attr: ['wait_condition', 'data'] }
```

```
heat_template_version: 2013-05-23

parameters:
  key_name:
    type: string
    description: Name of keypair to assign to server
    default: yonida
  image:
    type: string
    description: Name of image to use for server
    default: centos7
  flavor:
    type: string
    description: Flavor to use for server
    default: m1.tiny
  timeout:
    type: number
    description: Timeout for WaitCondition, depends on your image and environmen
t
    default: 800
  numLots:
    type: number
    description: number of images per lot
    default: 60
  indexList:
    type: comma_delimited_list
    label: start index of lots
    default: "1"
  numberLots:
    type: number
    label: number of lots
    default: 1

resources:
  wait_condition:
    type: OS::Heat::WaitCondition
    properties:
      handle: {get_resource: wait_handle}
      # Note, count of 5 vs 6 is due to duplicate signal ID 5 sent below
      count: {get_resource: numberLots}
      timeout: {get_param: timeout}

  wait_handle:
    type: OS::Heat::WaitConditionHandle

  repeat:
    for_each:
      <%index%>: {get_param: indexList}
    template:
      povray<%index%>:
        type: OS::Nova::Server
        properties:
          image: {get_param: image}
          flavor: {get_param: flavor}
          key_name: {get_param: key_name}
          user_data_format: RAW
          user_data:
            str_replace:
              template: |
                #!/bin/sh
                        #Proxy config
                export http_proxy=http://proxy.clermont-universite.fr:8080
```



```
                        #openstack install
                apt-get -y install python-openstackclient
                #openstack config
                export OS_AUTH_URL=http://172.20.88.10:5000/v3
                export OS_PROJECT_ID=72fe25d80014433f8bc78a734a5be70b
                export OS_PROJECT_NAME="yonidabrah"
                export OS_USER_DOMAIN_NAME="Default"
                export OS_USERNAME="yonidabrah"
                export OS_PASSWORD="Ent12345"
                export OS_REGION_NAME="RegionOne"
                export OS_INTERFACE=public
                export OS_IDENTITY_API_VERSION=3
                #Test Config
                openstack server list
                #Get zzpovray.tar.gz from container
                openstack object save povrayContainer zzpovray.tar.gz
                #Extract povray
                tar xfv zzpovray.tar.gz
                ls -l
                cd  povray
                #Creating images
                ./povray +A +W800 +H600 +Lshare/povray-3.6/include/ +SF`ind` +EF
`ind + nmLot`  glsbng.ini
                #Upload images to container
                openstack object create povrayContainer *.png
                wc_notify --data-binary '{"status": "SUCCESS"}'
                #Shutdown instance
                shutdown
              params:
                wc_notify: { get_attr: ['wait_handle', 'curl_cli'] }
                ind: <%index%>
                nmLot: {get_param: numLots}

  genGifInstance:
    type: OS::Nova::Server
    depends_on: wait_condition
    properties:
      image: {get_param: image}
      flavor: {get_param: flavor}
      key_name: {get_param: key_name}
      user_data_format: RAW
      user_data:
        str_replace:
          template: |
            #!/bin/sh
            export http_proxy=http://proxy.clermont-universite.fr:8080
            apt-get -y install python-openstackclient
            #openstack config
            export OS_AUTH_URL=http://172.20.88.10:5000/v3
            export OS_PROJECT_ID=72fe25d80014433f8bc78a734a5be70b
            export OS_PROJECT_NAME="yonidabrah"
            export OS_USER_DOMAIN_NAME="Default"
            export OS_USERNAME="yonidabrah"
            export OS_PASSWORD="Ent12345"
            export OS_REGION_NAME="RegionOne"
            export OS_INTERFACE=public
            export OS_IDENTITY_API_VERSION=3
            #Test Config
            openstack server list
            #install ImageMagick
            apt-get -y install imagemagick
            #Get images from container
```

```
            openstack container save povrayContainer
            #Create GIF file
            convert *.png -delay 6 -quality 100 glsbng.gif
                 #Upload GIF file to povrayContainer
            openstack object create povrayContainer glsbng.gif
                 #Shutdown instance
            shutdown
          params:
            wc_notify: { get_attr: ['wait_handle', 'curl_cli'] }

outputs:
  curl_cli:
    value: { get_attr: ['wait_handle', 'curl_cli'] }
  wc_data:
    value: { get_attr: ['wait_condition', 'data'] }
```