iXport - an OpenStack backup-service

What is iXport?

The basic idea of iXport is to create a import export service for OpenStack, where an operator should be able to export the dynamic and static information of the following core services in OpenStack:

- ➔ nova
- ➔ neutron
- ➔ swift
- ➔ cinder
- ➔ keystone
- ➔ glance

The dynamic information consists primarily of user related information coming from the dbs via the APIs. The static information consists of config files. Note that we envisage that the static information should in many cases be managed by a config manager, but we also think of scenarios (lab, test deployments) where this is not the case and we also think of larger environments in which there can be some inconsistency between what the config manager thinks and what is actually on the system.

Resources

There is already a small code snippet which was made before, this snippet exports the information of keystone:

Keystone export source

It basically gathers the information of Tenants, Roles, Users and theis connections between each others.

Requirements for the project

- ➔ Python-skills
  - ◆ python openstack libraries
  - ◆ python diff libraries (?)
  - ◆ python s3/other storage backend libs
  - ◆ python fabric libraries
  - ◆ horizon plugin functionality
    - ● this can have a js dimension
- ➔ Knowledge of the OpenStack-architecture

iXport core functionalities:

- ➔ option to choose which service should be backed up
- ➔ option to to revert the OpenStack information to previous backups
- ➔ backup scheduler
- ➔ availability to save backup-data into following distributed filesystem:
  - ◆ swift
  - ◆ glusterfs
  - ◆ ceph
- ➔ WebUI-Interface
- ➔ CLI-Interface
- ➔ reporting

Architecture