Research on an universal Openstack upgrade solution

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A universal approach to upgrade Openstack

- **A universal approach to upgrade Openstack acrossing major versions.**
  - OS upgrade from SL6.5 to SL7
  - Openstack between major versions
  - Improving the Cloud infrastucture
- **Migrating virtual machine under multi-users**
  - based on Qcow2 format and backing file mode. Only copy increasing disk to new Cloud, Economizing storage space.
  - Maintain IP/MAC/User relationship/secgroup
- **Account migration**
  - To create user database and NETDB component to maintain local management account, services account
  - perfectly support IHEP-SSO

IHEP Cloud Upgrade

- Upgrade from Icehouse to Kilo
  - Computing node OS from SL6.5 to SL7
  - Additional shared storage, GlusterFS
  - Migrating about 135 virtual machines
  - Import more than 100 users and their information