openSUSE でおうちクラウド @openSUSE mini Summit 2018

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@openSUSE mini Summit 2018 https://github.com/masayukig/cheap-cloud



Agenda

- ► Who I am?
- ► What is "the OpenStack"?
- ► What I did
- ► Why do I need it?
- ► How to build it?
- ▶ Benefits
- Issues
- ► Conclusion
- **▶** Demo

Who I am?

- ▶ Company: SUSE/ノベル株式会社
 - ▶ SUSE OpenStack Cloud QE(Quality Engineering) Team (日本にいるのは私だけ) SUSE Acquires OpenStack laaS and Cloud Foundry PaaS Talent and Technology Assets from HPE to Accelerate Growth and Entry into New Markets
- ► Job: Senior Software Engineer/Open Source Programmer
 - OpenStack QA Upstream/Downstream development, Core Reviewer (Tempest, OpenStack-Health, Subunit2SQL, Stackviz)
 - ► stackalytics.com/?user_id=igawa
 - ▶ github.com/masayukig



- ▶ Books
 - ▶ OpenStack クラウドインテグレーション (オープンソースクラウドによるサービス構築入門)
 - ► インフラ CI 実践ガイド (Ansible/GitLabを使ったインフラ改善サイクルの実現) (レビュー参加)

What is "the OpenStack"?

- ► Open Source Cloud OS Software: Apache License Version 2.0
- ▶ Written in Python
- ► There are a lot of 'OpenStack' projects: 65 projects(2018-06-18)
- Released every 6 month: Latest version is called 'Queens'
- ► Users: AT&T, American Airlines, BBVA, Bloomberg, CERN, China, Comcast, Gap, Mobile, Nike, VEXXHOST, Verizon, Volkswagen, WALMART, eBay, etc..

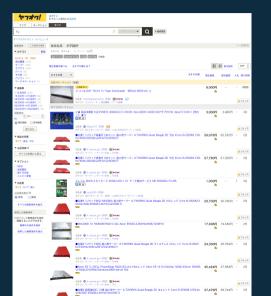
What I did

- ► Got 1U servers * 3
- ► Set up the servers
- ► Installed openSUSE
- ► Installed OpenStack
- ► Using VMs

Why do I need the private Cloud?

- ► Understand architecture of OpenStack
- ▶ Use VMs for sandboxes such as k8s, mesos, etc.
- ► FUN!!

Yahoo! Auction





Get 1U servers * 3

➤ Yahoo! Auction!!

Dell PowerEdge R410 * 3: 59.58k JPY



1U, Xeon L5640(6cores * 2CPU HT), 32GB RAM, 250GB HDD*2 (Cost: 18.52k JPY * 3 servers = 55.56k, 4.02k (for a rental car))

Install the servers

- ► Stack on the floor? -> Hard to move
- ► Rack? -> Too expensive
- ► LackRack

TODO Add Pictures for LackRack

Install openSUSE

No automation such as autoyast, ansible, puppet, etc

- ▶ Download image and burn it to a USB stick (https://software.opensuse.org/distributions/leap)
- ► Install from that media
- ▶ Update it to the latest: \$ sudo zypper dup

TODO Add Pictures for openSUSE

Install OpenStack

Use openSUSE rpm packages

- ► Read the Doc (e.g. https://docs.openstack.org/nova/latest/)
- ► Install from the openSUSE repo
- Configure

TODO Add Pictures for OpenStack dashboard

Update OpenStack

- Install from the openSUSE repo (Just needed to update repo URL)
- ► No Configure

Benefits

- ► Free to use!!!
- ► Low Cost to start
- ► Powerful
- Low Network Latency
- ► Warm (in winter)

Issues

- ► Electricity cost: 10,000 JPY/month (Expensive)
- ► Noise (Imagin a server room)
- ► Space (Expensive in Tokyo)
- ► Failures (HDD, Power Unit... Expensive)
- ► Abandonment (Expensive)

Demo

► TBD: Boot an Instance or Cloud Native something?

TODO Add images for demo just in case(?)

Future work

- ► Replace the broken HDD
- ► Upgrade openSUSE to Leap 15.0

Conclusion

- ► Initial cost could be low but EXPENSIVE to maintain and NOSIY
- ► More transparent than public clouds
- Own physical servers and play with it is super FUN!