

openSUSE でおうちクラウド

@openSUSE mini Summit 2018

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<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? (Design, Hardware, Yahoo! auction, Rent a car, LackRack)
- ▶ 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 IaaS 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!!**

Get 1U servers * 3

▶ Yahoo! Auction!!

Dell PowerEdge R410 * 3: 59.58k JPY

☆Dell PowerEdge R410 [2*X L5640-2.27GHz(6C)/32GB/2*250GB] !

落札価格: **18,520 円**

入札件数: **18** (入札履歴)

残り時間: 終了

入札単位: 500円

商品状態: 中古

終了日時: 2017年9月18日 22時59分

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
- ▶ Install from that media
- ▶ Update it to the latest

TODO Add Pictures for openSUSE

Install OpenStack

Use openSUSE rpm packages

- ▶ Read the Doc
- ▶ 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 have??
- ▶ Powerful
- ▶ Low Network Latency
- ▶ Warm (in winter)

Issues

- ▶ Electricity cost (10,000 JPY/month)
- ▶ Noise (xxx db)
- ▶ Space
- ▶ Failures (HDD, Power Unit)
- ▶ Abandonment

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

- ▶ It's high cost and noisy
- ▶ Own physical servers and play with it is super fun!
- ▶ It's more transparent than public Clouds