



2012云计算架构师峰会

Cloud Computing Architects Summit China 2012

揭示企业级IT架构转型 分享最新技术的应用落地

主办单位：**51CTO.com**
技术成就梦想

联合主办：**UBM**



openstack™

DevOps in OpenStack Public Cloud

Presented at OpenStack Summit, Fall 2012, San Diego

Hui Cheng

freedomhui@gmail.com | freedomhui.com

Community Manager of COSUG

Technical Manager in Sina Corporation

2012/10/17

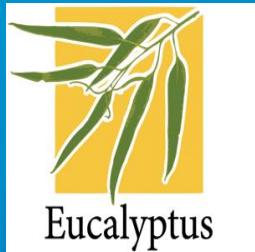


新浪云计算
sinacloud.com

Why OpenStack?

Why OpenStack?

vmware®



Open Source



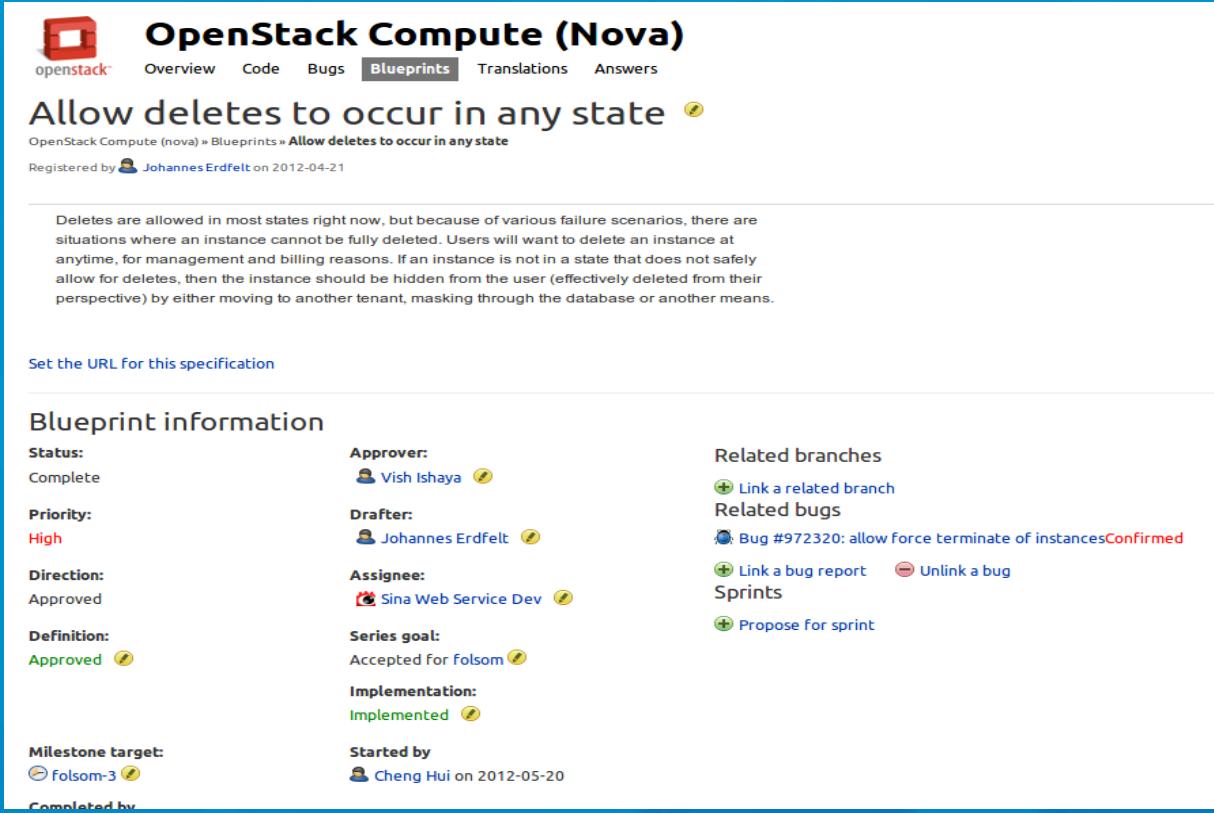
Apache 2 License

Open Design



Grizzly Design Summit

Open Development



The screenshot shows a blueprint titled "Allow deletes to occur in any state" for the OpenStack Compute (Nova) project. The page includes a description of the feature, a URL input field, and detailed information about the blueprint's status, approvers, drafters, assignees, and related branches.

OpenStack Compute (Nova)

Overview Code Bugs Blueprints Translations Answers

Allow deletes to occur in any state

OpenStack Compute (nova) » Blueprints » Allow deletes to occur in any state

Registered by  Johannes Erdfelt on 2012-04-21

Deletes are allowed in most states right now, but because of various failure scenarios, there are situations where an instance cannot be fully deleted. Users will want to delete an instance at anytime, for management and billing reasons. If an instance is not in a state that does not safely allow for deletes, then the instance should be hidden from the user (effectively deleted from their perspective) by either moving to another tenant, masking through the database or another means.

Set the URL for this specification

Blueprint information

Status:	Complete	Approver:	 Vish Ishaya 
Priority:	High	Drafter:	 Johannes Erdfelt 
Direction:	Approved	Assignee:	 Sina Web Service Dev 
Definition:	Approved 	Series goal:	Accepted for Folsom 
Milestone target:	 Folsom-3 	Implementation:	Implemented 
Completed by:		Started by	 Cheng Hui on 2012-05-20

Related branches

 [Link a related branch](#)

Related bugs

 [Bug #972320: allow force terminate of instances](#) Confirmed

 [Link a bug report](#)  [Unlink a bug](#)

 [Propose for sprint](#)

Propose features in launchpad

Open Development

openstack™ Code Review

Cloud Software

All My Admin Documentation

Changes Important Changes Drafts Watched Changes Starred Changes

Change I1038c314: Deletes vm in any state

Change-Id: I1038c3149395a26f35235a91c841fda041e697cc

Owner: wenjianhn
Project: openstack/nova
Branch: master
Topic: bp/delete-in-any-state
Uploaded: Aug 8, 2012 4:48 PM
Updated: Aug 8, 2012 6:05 PM
Status: Review in Progress

Permalink

Deletes vm in any state

As commit 129b87e17d3333aeaaa9e855a70dea51e6581ea63 says now we allow delete to be called no matter what vm_state says.

Add a flag to show that whether tenant wants to delete the instance. If the flag is set we should never bill.

Add a periodic task to make sure the instance which the above flag is set is going to be deleted.

Implements blueprint delete-in-any-state.

Change-Id: I1038c3149395a26f35235a91c841fda041e697cc

Reviewer	Verified	Code-Review	Approved
wenjianhn			
Jenkins	+1		
Vish Ishaya			
Yun Mao			

- Need Verified
- Need Code-Review
- Need Approved

Name or Email or Group Add Reviewer

► Dependencies

Old Version History: Base

▼ Patch Set 2 19c98c0c1ce9f25356f604162647c503baa46155 (gitweb)

Author	Jian Wen <wenjianhn@gmail.com>	Aug 8, 2012 2:19 PM
Committer	Jian Wen <wenjianhn@gmail.com>	Aug 8, 2012 5:43 PM
Parent(s)	a418654b070c63c4bed5e3e5523fb947934626f9	Merge "Cleanup consoles test cases"
Download	checkout pull cherry-pick patch	Anonymous HTTP SSH HTTP
git fetch https://review.openstack.org/openstack/nova refs/changes/14/11014/2 && git checkout FETCH_HEAD		

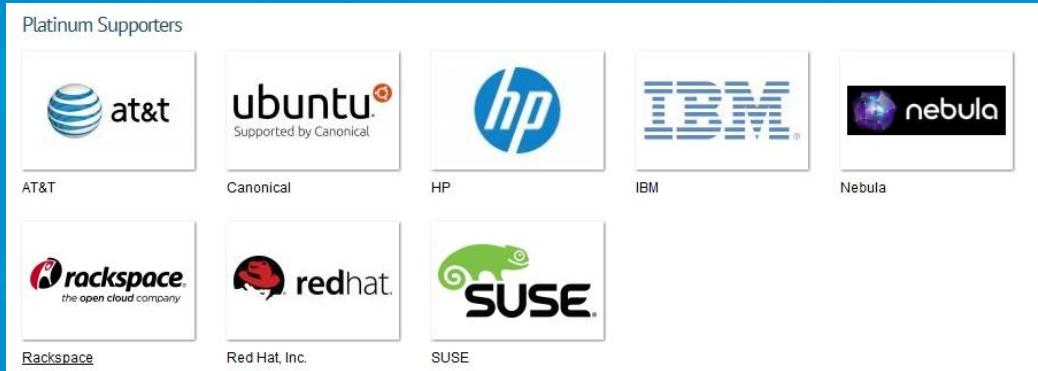
Code Review

OpenStack is the #2 FOSS foundation

1. The Linux Foundation = \$9.6M
2. Openstack = \$6M
3. Mozilla Foundation = \$1.9M
4. The Apache Foundation - \$0.53M

Open Foundation Board

Platinum Members(8)



Gold Members(8)

DreamHost, Cloudscaling, ITRI/CCAT, DELL, Piston, Mirantis, Yahoo!, Cisco



Open Foundation Board

Individual Members(8)

Rank	Candidate	Weighted Votes	%	Voters	Weight per vote	%	Company	Title
1	Rob Hirschfeld	2218	14.52	514	4.315	26.56	Dell	Principal Architect / OpenStack Lead
2	Monty Taylor	1981.25	12.97	375	5.283	19.38	HP	OpenStack Automation Engineering Manager
3	Hui Cheng	1766.12	11.56	350	5.046	18.09	Sina	Technical Manager
4	Joseph George	1373.38	8.99	390	3.521	20.16	Dell	Director of Product Strategy
5	Yujie Du	760.25	4.98	201	3.782	10.39	99Cloud	Community Development Director
6	Troy Toman	677.12	4.43	209	3.240	10.8	Rackspace	Senior Director of Cloud Compute Engineering
7	Anne Gentle	561.12	3.67	268	2.094	13.85	Rackspace	Community Documentation Coordinator
8	Thierry Carrez	435.38	2.85	239	1.822	12.35	Rackspace	Release Manager for OpenStack
9	Tim Bell	434.5	2.84	243	1.788	12.56	CERN	Infrastructure manager
10	Tristan Goode	424	2.78	123	3.447	6.36	Aptira	CEO
11	Jesse Andrews	418.12	2.74	208	2.010	10.75	Nebula	Director of Technology

“No one company may control more than two board seats”

OpenStack Public Cloud



However They never tell you how to operate their public cloud based on OpenStack!

Content

- **SinaCloud Introduction**
- **Challenges to build a OpenStack Public Cloud**
 1. Network topology
 2. Security Enhancement
 3. Storage Solution
 4. Identity Integration
 5. Billing & Monitoring
 6. Dashboard Improvement
- **Operate an production OpenStack**
 7. Platform stack
 8. Automated Deployment
 9. Continuous Integration
 10. Project Management
- **StackLab: A community OpenStack Public Cloud**
- **Summary**

Cloud Requirement



Sina.com

- Largest infotainment web portal in China
- Provides various on-line services, like news, Finance, video, email, blog hosting, etc.
- Needs unified infrastructure & app platform to host heterogeneous services and apps.



Sina Weibo

- twitter-like microblog service
- over **350m** users, #1 SNS in China.
- huge influence on China's society
- Weibo Open Platform to build a social ecosystem through Open API and cloud environmental.

We are building a **reliable**, **scalable** and **secure** cloud platform to support our business and external customers.

SinaCloud Portfolio



新浪云计算
sinacloud.com



Sina App Engine

- First and most popular PaaS cloud in China, launched in 2009
- Support PHP, Python and Java runtime.
- 250,000 developers, 380,000 apps running on SAE.



新浪云商店
(Sina Cloud Market)

- First commercial cloud app market in China.
- SaaS cloud based on SAE tech.
- Design for the common users, 1-Click purchase and install apps.



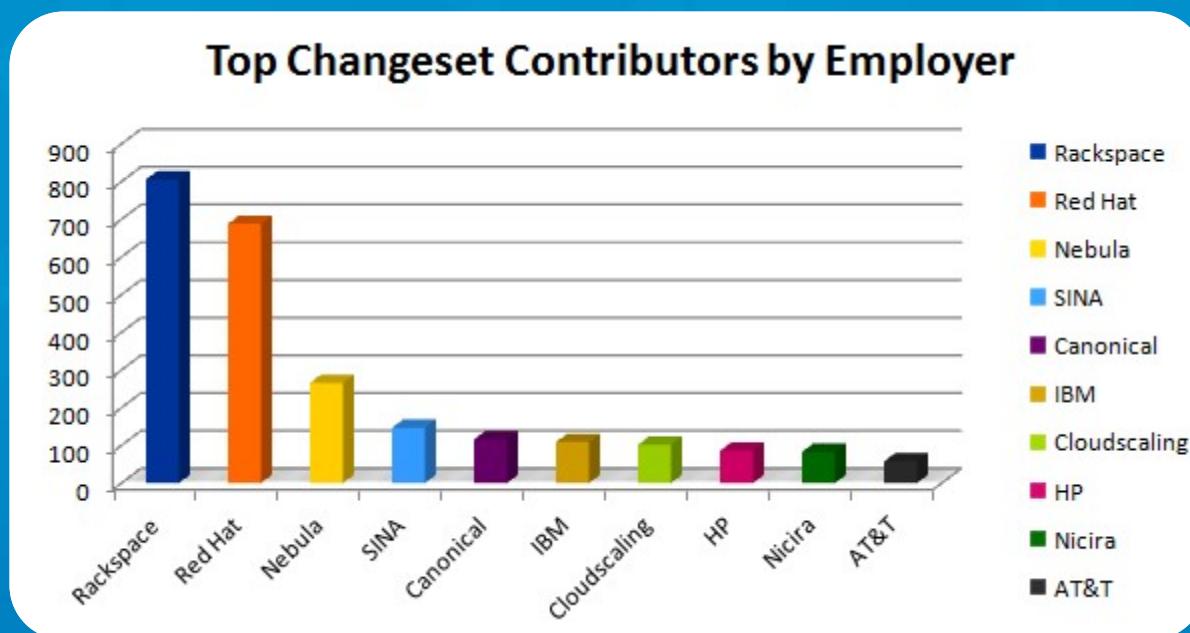
Sina Web Services

- First OpenStack based public IaaS cloud in China

Sina OpenStack dev Team

■ For Community

- Top 9 contributor by bugfix at Essex
- Top 4 contributor either by changeset or bugfix at Folsom
- Contribute community project Dough, Kanyun addressing Monitoring and Billing
- Develop Island as Cinder would-be plugin
- Lead COSUG to be largest OpenStack user group



More info: <http://www.openstack.org/blog/2012/10/how-sina-contributes-to-openstack/>

Content

- **SinaCloud Introduction**
- **Challenges to build a OpenStack Public Cloud**
 1. Network topology
 2. Security Enhancement
 3. Storage Solution
 4. Identity Integration
 5. Billing & Monitoring
 6. Dashboard Improvement
- **Operate an production OpenStack**
 7. Platform stack
 8. Automated Deployment
 9. Continuous Integration
 10. Project Management
- **StackLab: A community OpenStack Public Cloud**
- **Summary**

Network Topology

Nova-network vs Quantum

	Multi host	Multi Tenant	Flat, FlatDHCP	Tunneling	SDN	Sec Group	Dashboard Support
Nova-Network	✓	✓	✓	✗	✗	✓	✗
Quantum	✗	✓	✓	✓	✓	✗	✓

- Nova-Network is simple, robust and reliable, except lack of some advanced features.
- Quantum is not ready for production use, it's OVS plugin has great potential to be open-source NVP solution.
- I would suggestion to continue use nova-network for production deployment until next release.

Nova-Network

- **Flat**
 - Need external DHCP Server, and human intervention, not flexible, hardly use in practical deployment.
- **FlatDHCP**
 - Like Amazon EC2 networking(not VPC, VPC corresponds to Quantum), VM get IP from single network pools.
 - Simple, easy to hack.
 - Widely used in public cloud, also preferred topology in many scenarios.
- **VLAN**
 - A little complex, hardware configuration may be involved.
 - Not suggest to use except strong requirement of tenant isolation,

Network Topology — Real User Case

Nova Network(FlatDHCP+Multi-host)

Capability:

- Accessibility of all VMs in the fixed IP range
- VM is able to access public network
- VM can be accessible from public network

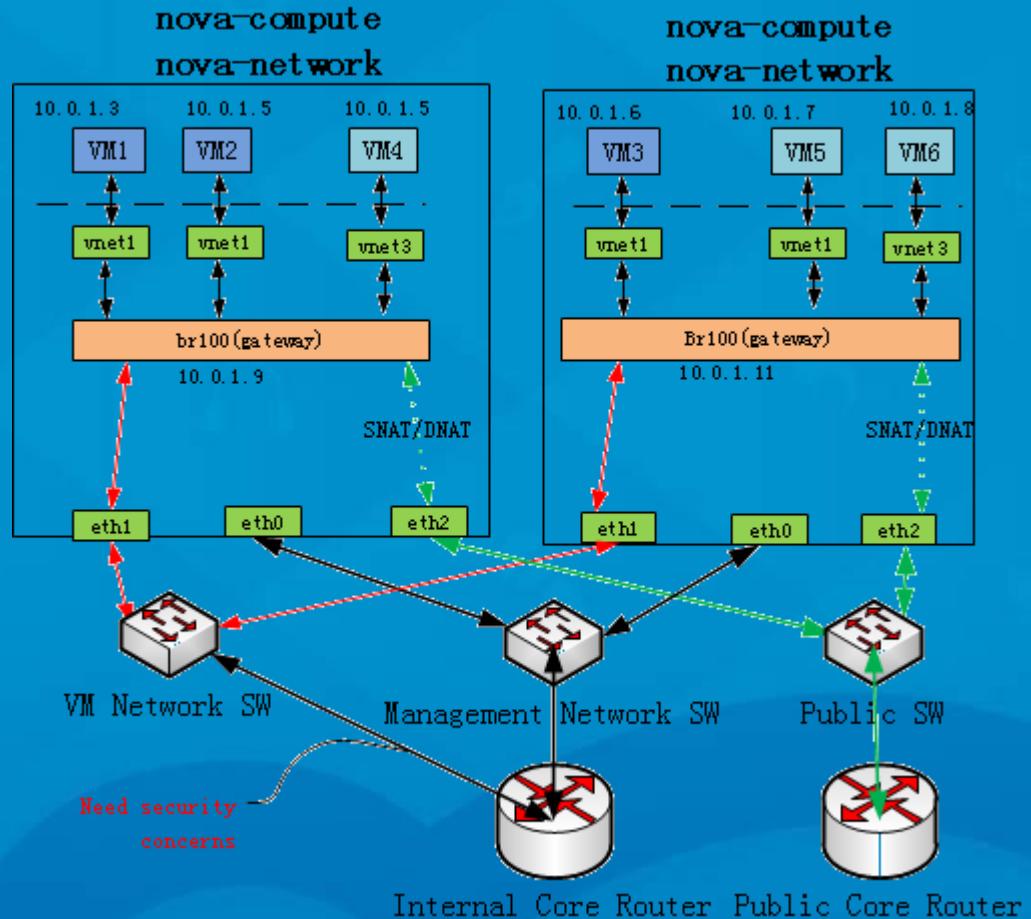
Bonus:

- Totally distributed architecture avoid single-point failure.
- Multiple gateway eliminates NAT bottleneck
- **High speed between OS regions**

Drawback:

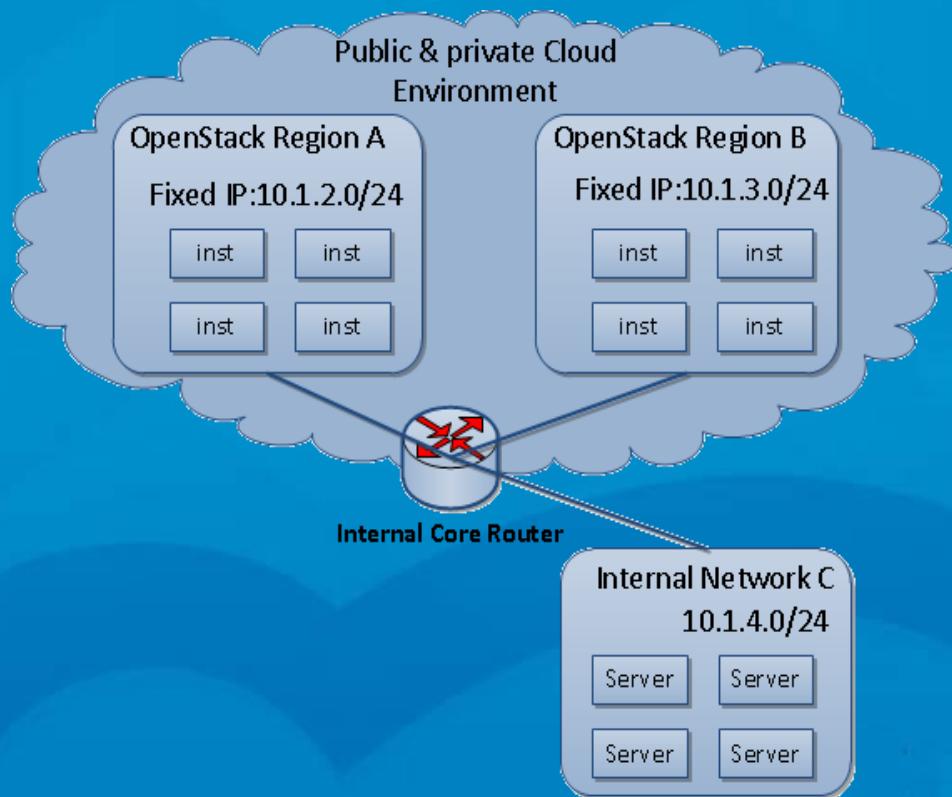
- Tenant isolation lessens
- Need security facility(*SWS-filter*) to protect intranet

Nova Network Topology(Flat & multihost)



Security Enhancement

- SWS Filter: a extension to security group in nova-network
 - Used to filter egress traffic from VM to internal network
 - Define whose traffic could be able to reach which internal network IP/segment.

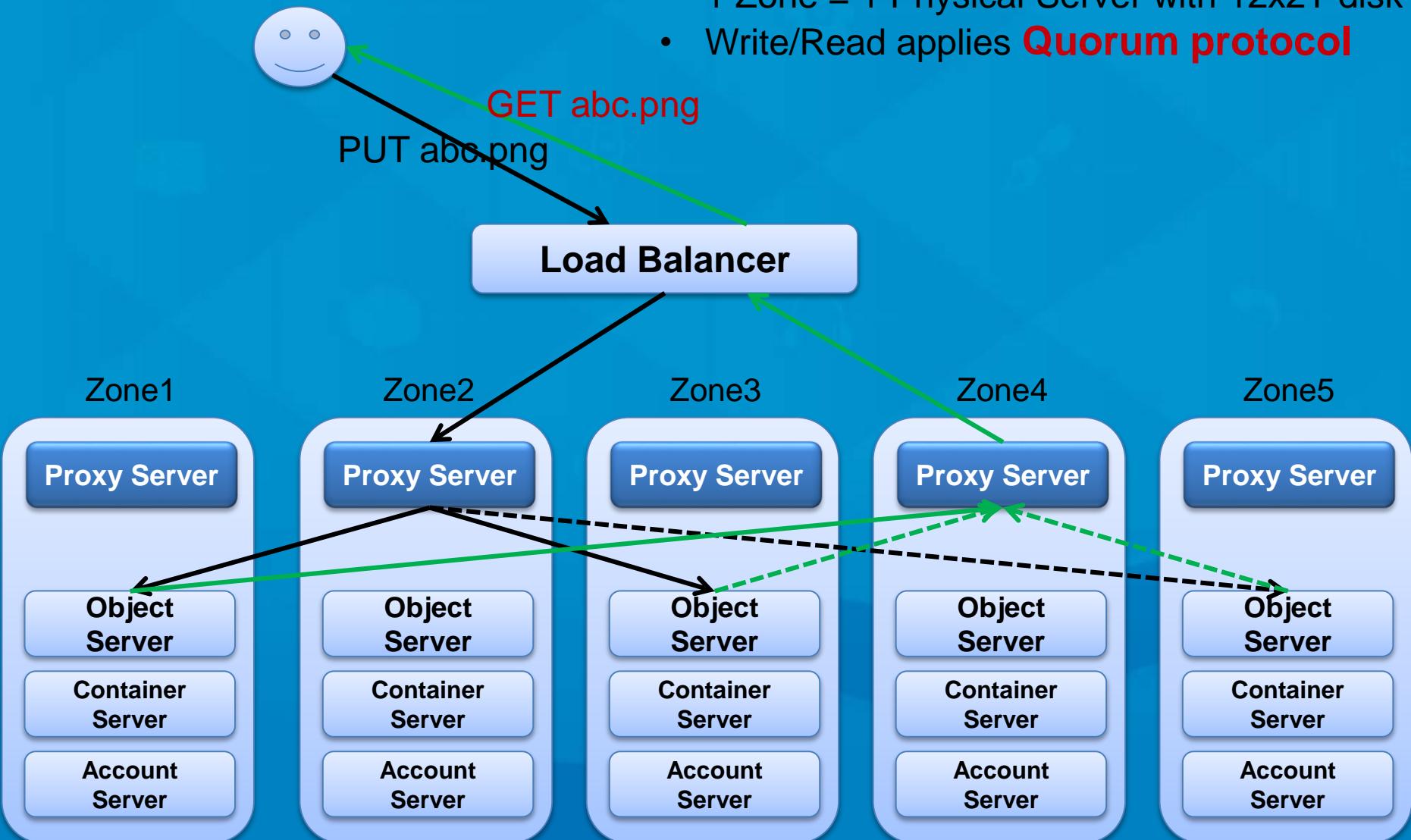


Storage Solution

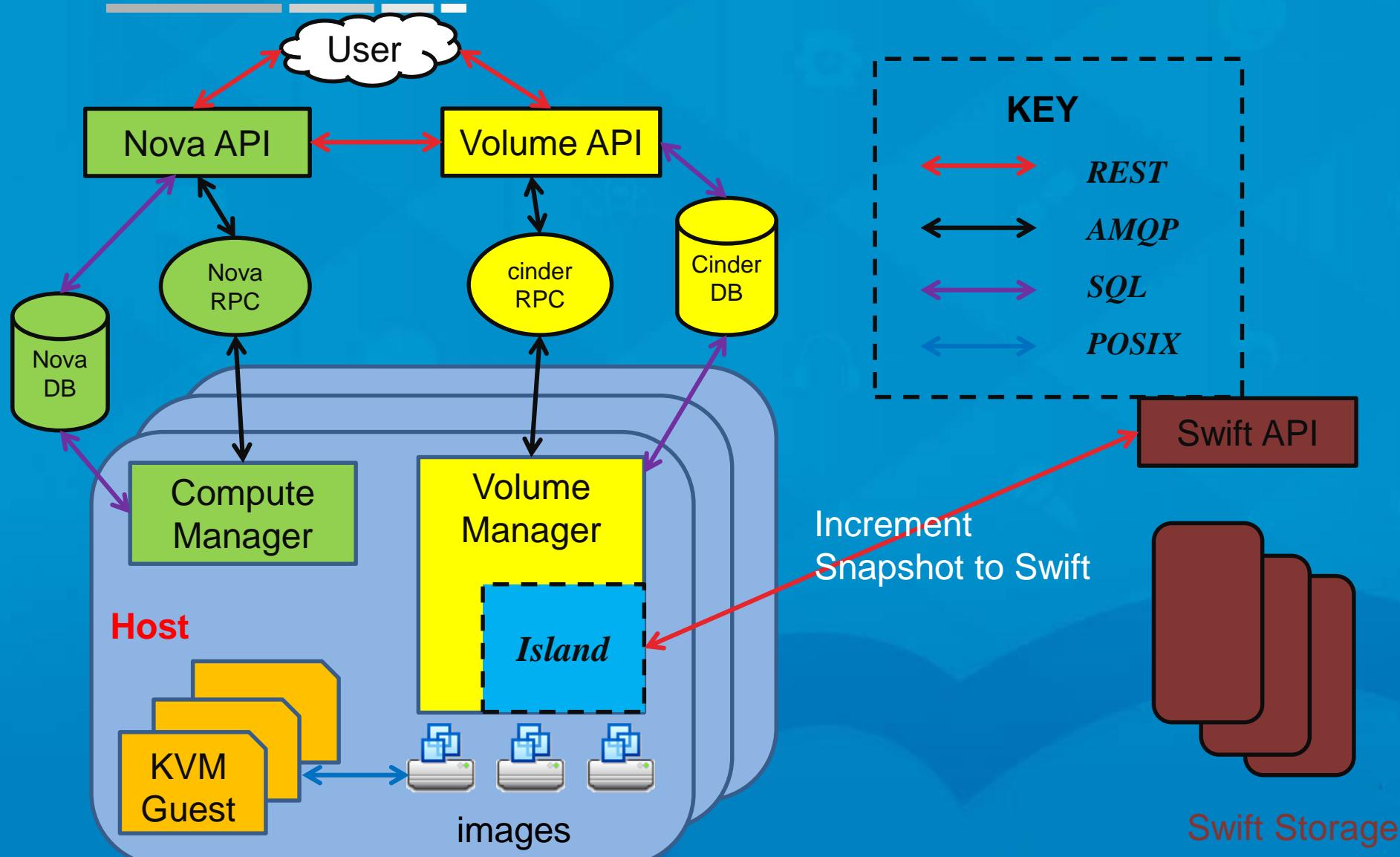
- Object Storage: Definitely we choose **Swift**
- Block Storage
 - Cinder is not Amazon EBS, just a framework to include multiple open-source/commercial storage solution.
 - Nova-volume/Cinder(iSCSI) is not applicable to public cloud.
 - Sheepdog/Gluster/Ceph plugins need time to be stable.
- **Island**: Local Storage Volume plugin for Cinder is coming.
 - High performance local storage
 - Incremental & independent snapshot
 - Snapshot store in swift

Swift Architecture

- 1 Zone = 1 Physical Server with 12x2T disk
- Write/Read applies **Quorum protocol**

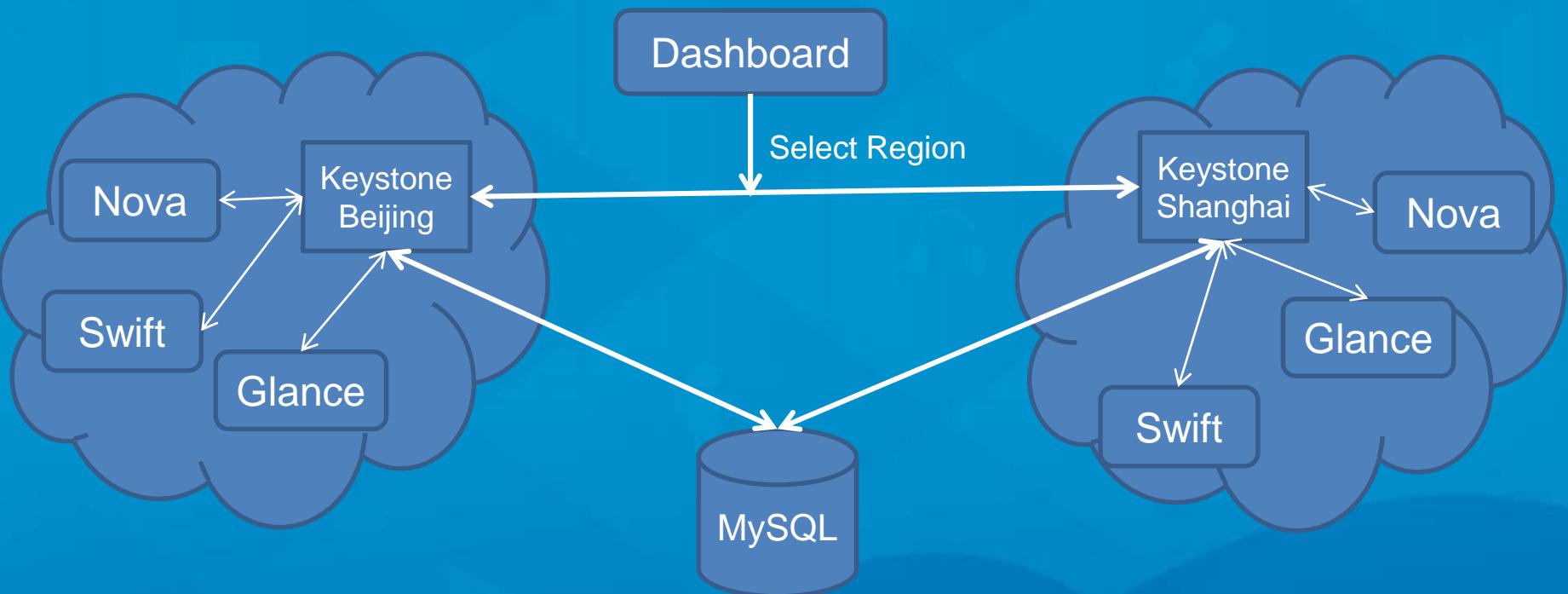


Cinder Island Plugin Architecture

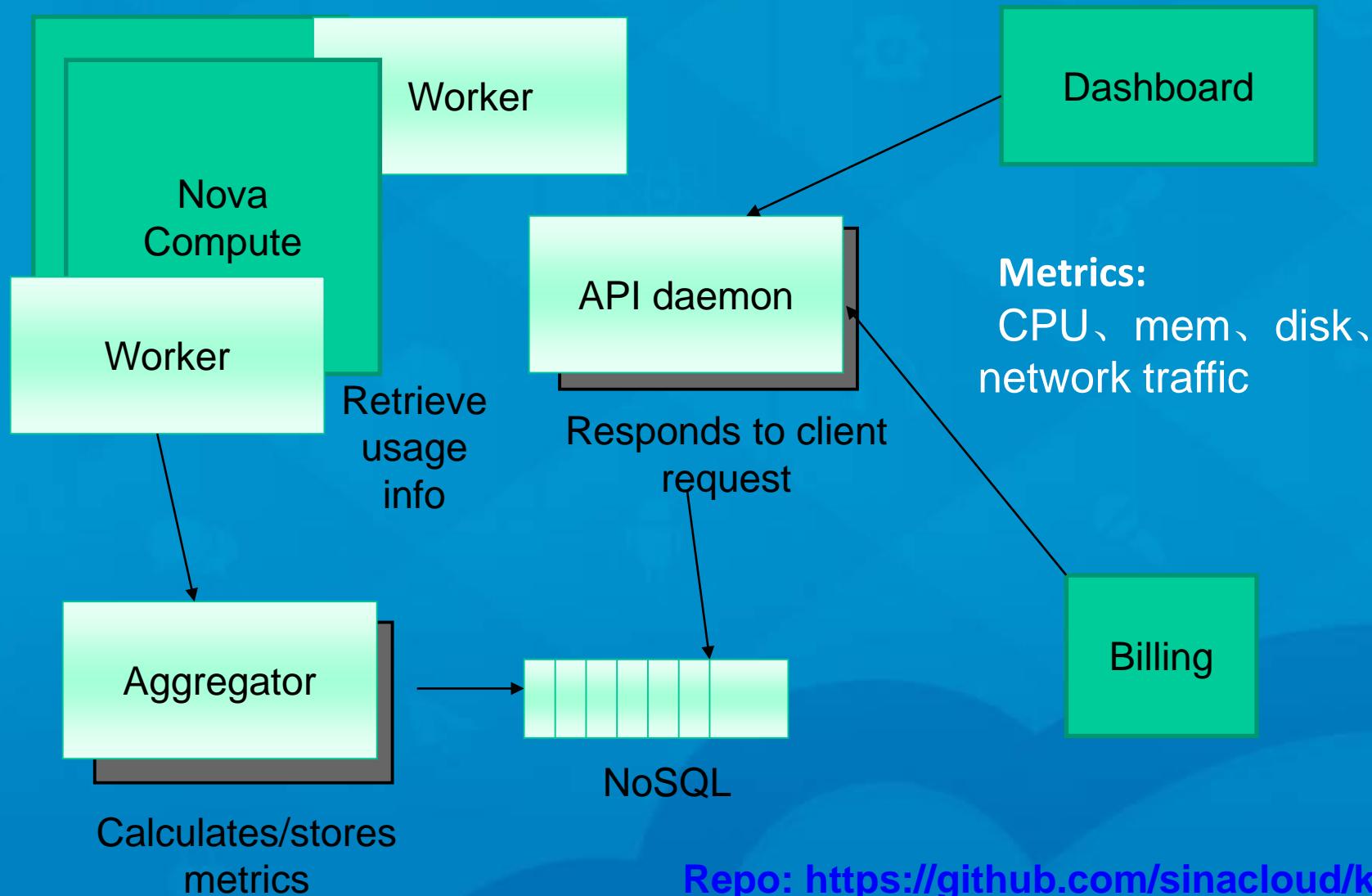


Identify Integration: Keystone

- AWS-like Multi-region support



Kanyun: Monitoring system



Repo: <https://github.com/sinacloud/kanyun>

Kanyun demo

 **Sina Web Services**

0.00元 充值
9389.93元 代金券

程辉 | 帮助 | 面板设置 | 注销

云主机

- 概览
- 虚拟机
- 镜像
- 快照
- 安全组
- 密钥
- 公网IP
- 负载均衡

云存储

- 文件管理
- 存储防火墙

云监控

- 监控
- 报警

CDN

- CDN

帐户

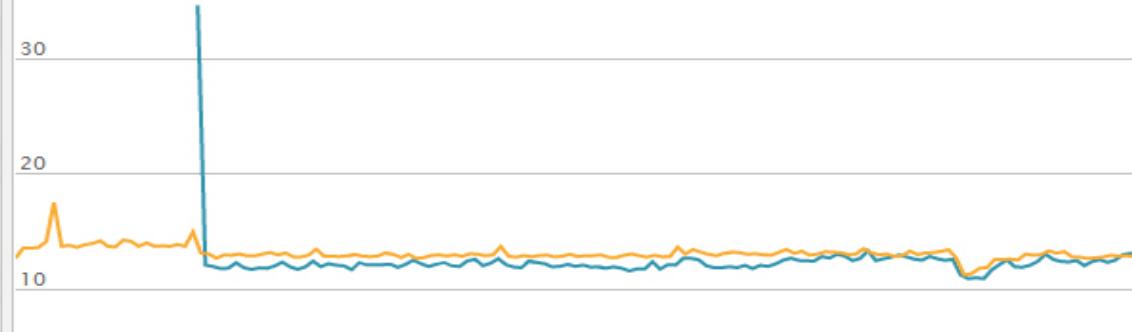
- 余额
- 账单

2012 8 ?

+ 虚拟机实例 peale_0803(10.30.64.8) 统计指标 CPUUtilization 统计方式 Sum

- 虚拟机实例 peale_0802(10.30.64.6) 统计指标 CPUUtilization 统计方式 Sum

统计间隔 1 Hour



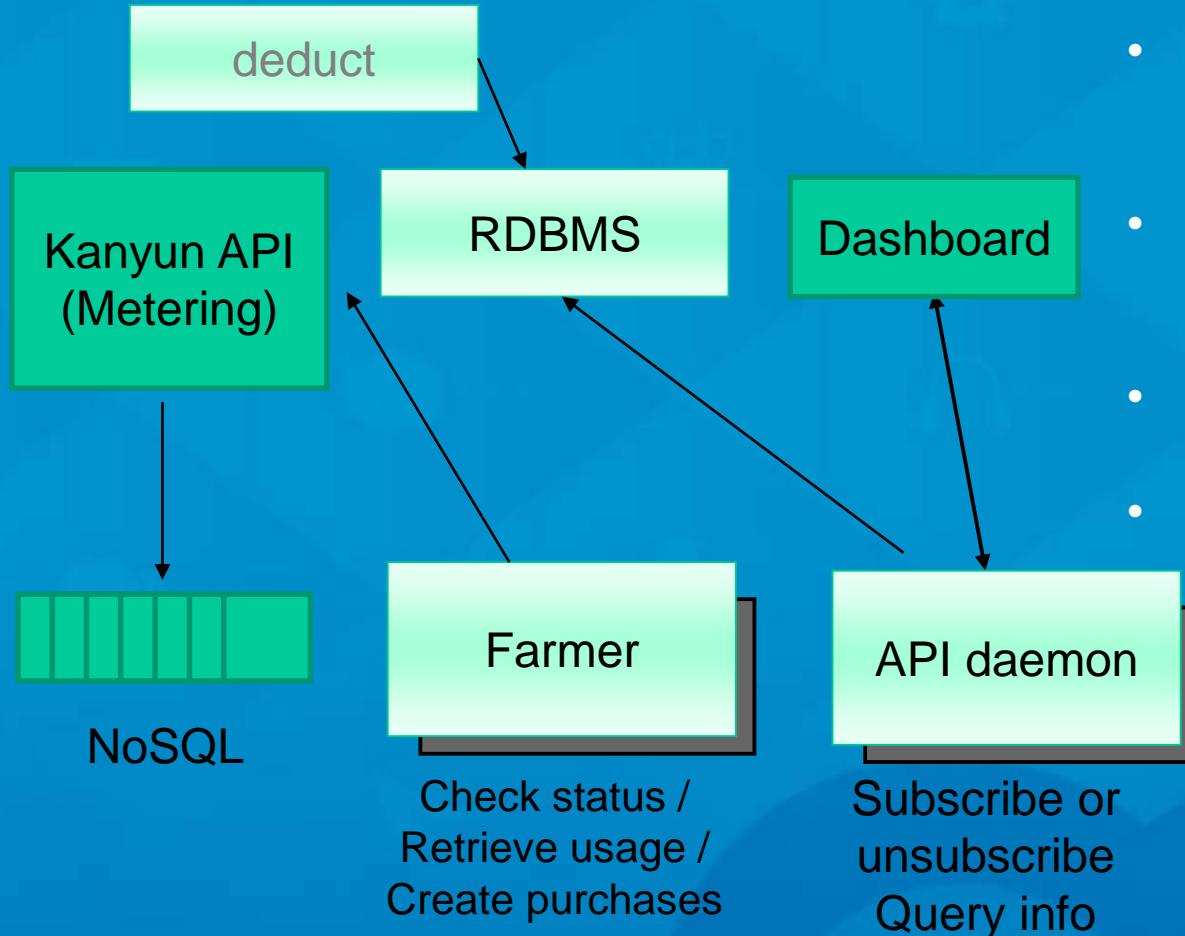
30
20
10
0

2012 2012 2012 2012 2012 2012 2012
08-03 08-04 08-05 08-06 08-07 08-08

Copyright © 2009 - 2012, 新浪网研发中心, All rights reserved.

联系我们 | 新浪云计算 | 微游戏

Dough: Billing system



- Keep track of billing info to charge tenants
- Flexible customization of payment policies
- How much/often to charge for resource unit
- Handles prepaid or pay-as-you-go
- Coupon Support

Dough: Billing info page

Sina Web Services

0.00元 充值
9389.93元 代金券

月度账单 2012

云主机

- 概览
- 虚拟机
- 镜像
- 快照
- 安全组
- 密钥
- 公网IP
- 负载均衡

月份	总计	虚拟机费用	带宽费用	公网IP费用	负载均衡费用
八月	95.71元	95.71元	0.00元	0.00元	0.00元
七月	6920.65元	6832.46元	0.19元	64.00元	24.00元
六月	5691.23元	5459.10元	41.13元	172.00元	19.00元
五月	3578.30元	3564.30元	0.00元	14.00元	0.00元

云存储

- 文件管理
- 存储防火墙

云监控

- 监控
- 报警

CDN

- CDN

帐户

- 余额
- 账单

所有 虚拟机 带宽 公网IP 负载均衡

类型	服务名	价格	开始时间	结束时间	数量	总计
load_balancer	pealetest	1.00 元/天	2012/06/11 09:57	2012/07/14 09:57	14 天	14.00 元
load_balancer	lbhttp2	1.00 元/天	2012/07/04 11:48	2012/07/14 11:48	10 天	10.00 元
instance	ps	0.42 元/小时	2012/05/29 15:27	2012/05/30 14:53	456 小时	191.52 元
instance	ux	3.33 元/小时	2012/05/29 18:39	2012/05/30 10:36	456 小时	1518.48 元
instance	ulcopy	1.67 元/小时	2012/05/29 18:42	2012/05/30 14:58	456 小时	761.52 元
instance	utcop	0.17 元/小时	2012/05/29 18:49	2012/05/30 14:58	456 小时	77.52 元
instance	ps	400.00 元/月	2012/05/30 15:38	2012/05/30 17:14	1 月	400.00 元

Copyright © 2009 - 2012, 新浪网研发中心, All rights reserved.

联系我们 | 新浪云计算 | 微游戏

Dashboard Improvement

- **We did not use Horizon, because:**
 - Horizon's UI is not easy to customize
 - Front end and back end is tightly coupled
 - we need much customization, it's hard to keep pace with Horizon.
- **What we do?**
 - Decouple the frontend design and backend implementation.
 - Make dashboard a lightweight frontend.
 - Separate user console and admin console.

Horizon Dashboard

 **openstack**
DASHBOARD

Project

PROJECT freedomhui

Manage Compute

Overview

Instances & Volumes

Images & Snapshots

Access & Security

Instances & Volumes

Logged in as: freedomhui [Settings](#) [Sign Out](#)

Success: Instance "test" launched. ×

Instances

[Launch Instance](#) [Terminate Instances](#)

<input type="checkbox"/>	Instance Name	IP Address	Size	Public Domain	Status	Task	Power State	Actions
<input type="checkbox"/>	test	10.0.0.25	512MB RAM 1 VCPU 0 Disk	93buegrf30.lb4.stacklab.org:11018	Active	None	Running	Edit Instance ▼

Displaying 1 item

Volumes

[Create Volume](#)

<input type="checkbox"/>	Name	Description	Size	Status	Attachments	Actions
No items to display.						

Displaying 0 items

SWS v1

Hello: swscloud [Settings](#) [Sign Out](#)

swscloud

Overview

Manage Compute

- Overview** (selected)
- [Instances](#)
- [Images](#)
- [Snapshots](#)
- [Keypairs](#)
- [Volumes](#)
- [Floating IPs](#)
- [Security Groups](#)

ID	Instance Name	User	VCPUs	Ram Size	Disk Size	Flavor	Uptime	Status
5	Server 5	283303c0-f025-46ab-83ed-6e61e59092f2	1	2GB	50GB	m1.small	10 months, 1 week	Active
7	Server 7	283303c0-f025-46ab-83ed-6e61e59092f2	1	512MB	0GB	m1.tiny	10 months, 1 week	Active
8	Server 8	283303c0-f025-46ab-83ed-6e61e59092f2	1	512MB	0GB	m1.tiny	10 months, 1 week	Active
10	Server 10	283303c0-f025-46ab-83ed-6e61e59092f2	1	512MB	0GB	m1.tiny	10 months, 1 week	Active
11	Server 11	283303c0-f025-46ab-83ed-6e61e59092f2	1	512MB	0GB	m1.tiny	10 months, 1 week	Active
12	Server 12	283303c0-f025-46ab-83ed-6e61e59092f2	1	512MB	0GB	m1.tiny	10 months, 1 week	Active
13	Server 13	283303c0-f025-46ab-83ed-6e61e59092f2	1	512MB	0GB	m1.tiny	10 months, 1 week	Active
15	Server 15	283303c0-f025-46ab-83ed-6e61e59092f2	1	512MB	0GB	m1.tiny	10 months	Active
48	Server 48	283303c0-f025-46ab-83ed-6e61e59092f2	1	512MB	0GB	m1.tiny	10 months	Active
89	Server 89	283303c0-f025-46ab-83ed-6e61e59092f2	1	512MB	0GB	m1.tiny	9 months, 4 weeks	Active

SWS v2

Sina Web Services

4.58RMB Deposit 1732.78RMB Coupon

Manage Compute

- Overview
- Instances
- Images
- Snapshots
- Security Groups
- Keypairs
- Floating IPs
- Load Balancers

Billing

- Balance
- Billing

Launch Instance | Terminate Instances | Connect | Edit Instance | ?

	Instance Name	Fixed IP	Floating IP	Flavor	Public Domain	Status	Task	Power State
<input checked="" type="checkbox"/>	openstackblog	10.42.1.128		m1.small	aha6wufp0t.elb4.sinasws.com:11165	Active	None	Running
<input type="checkbox"/>	gitorious	10.42.1.97		m1.small	rjiuu6plmj.elb4.sinasws.com:11186	Shutoff	None	Running
<input type="checkbox"/>	puppet	10.42.1.132		ssd.tiny	s0sgp7kmhx.elb4.sinasws.com:11086	Active	None	Running
<input type="checkbox"/>	gerrit	10.42.1.126		ssd.small	9sut1zc8hm.elb4.sinasws.com:11077	Active	None	Running
<input type="checkbox"/>	Jenkins	10.42.1.122		ssd.tiny	7ubdkky84f.elb4.sinasws.com:11052	Active	None	Running
<input type="checkbox"/>	deprecated-dell-backup	10.42.1.160		m1.large	ayeybe5on4.elb4.sinasws.com:11076	Active	None	Running
<input type="checkbox"/>	devstack	10.42.1.154		m1.large	p5hc0araau6.elb4.sinasws.com:11075	Active	None	Running
<input type="checkbox"/>	sws-launchpad	10.42.1.59		m1.small	xay206w0my.elb4.sinasws.com:11078	Active	None	Running

Instance Name: openstackblog

Instance ID: 7cf5e66c-82d5-4dc4-8d25-7159e7308056

Public Domain: aha6wufp0t.elb4.sinasws.com:11165

Status: ACTIVE

Flavor: m1.small (1VCPU, 10GB+40GBDisk, 2GBMemory)

Key name:

Security Group(s): default

Fixed IP: 10.42.1.128

Floating IP: -

SWS v3 – User Dashboard

The screenshot shows the SWS v3 User Dashboard with a blue header bar. The header includes the SWS Console logo, the region (Beijing), and navigation links: Peale, 消息 (Messages), 设置 (Settings), and 帮助 (Help).

The main content area is divided into several sections:

- Compute Overview:** A sidebar with a dropdown menu for Compute, currently set to Overview. Other options include Instances, Images, Snapshots, Security Groups, Key Pairs, Floating IPs, Load Balancers, Storage, Container, Billing, Account, and Bills.
- Getting started with Sina Web Services:** A central box with a "Launch Instance" button.
- Instance Work Load:** A grid of nine boxes representing virtual machines (my vm 1 to my vm 9) with their respective IP addresses (192.168.0.1 to 192.168.0.99). The boxes are colored green, orange, and red.
- Quotas:** A section showing resource quotas with progress bars. The quotas are: Instances (10), vCPU (40), memory (30 GB), disk (1000 GB), Snapshots (10), Security Groups (10), Key Pairs (10), Floating IPs (10), and Load Balancers (10). A "Apply for more" link is located at the top right of this section.

SWS v3 - Monitoring

SWS Console > Beijing > Compute > Instances

Compute Overview Instances Images Snapshots Security Groups Key Pairs Floating IPs Load Balancers Monitoring Instance Monitoring Storage Container Billing Account Bills

Launch Instance Connect System Log Snapshot Start Shut off Reboot Terminate filter1 filter2

Column 1 ↑ Column 2 Column 3

Column 1 Row 1 Column 2 Column 3

Column 1 Row 2 **Rollover here** Column 2 Column 3

Column 1 Row 3 Column 2 Column 3

Column 1 Row 4 Column 2 Column 3

Column 1 Row 5 Column 2 Column 3

Instance Monitoring

Instance name ip Time Range: 1 Hour Alarm: 3 of 3 in OK show alarms

CPU Utilization avg

100
50
0

9/5 00:00 9/5 12:00

Disk Read avg

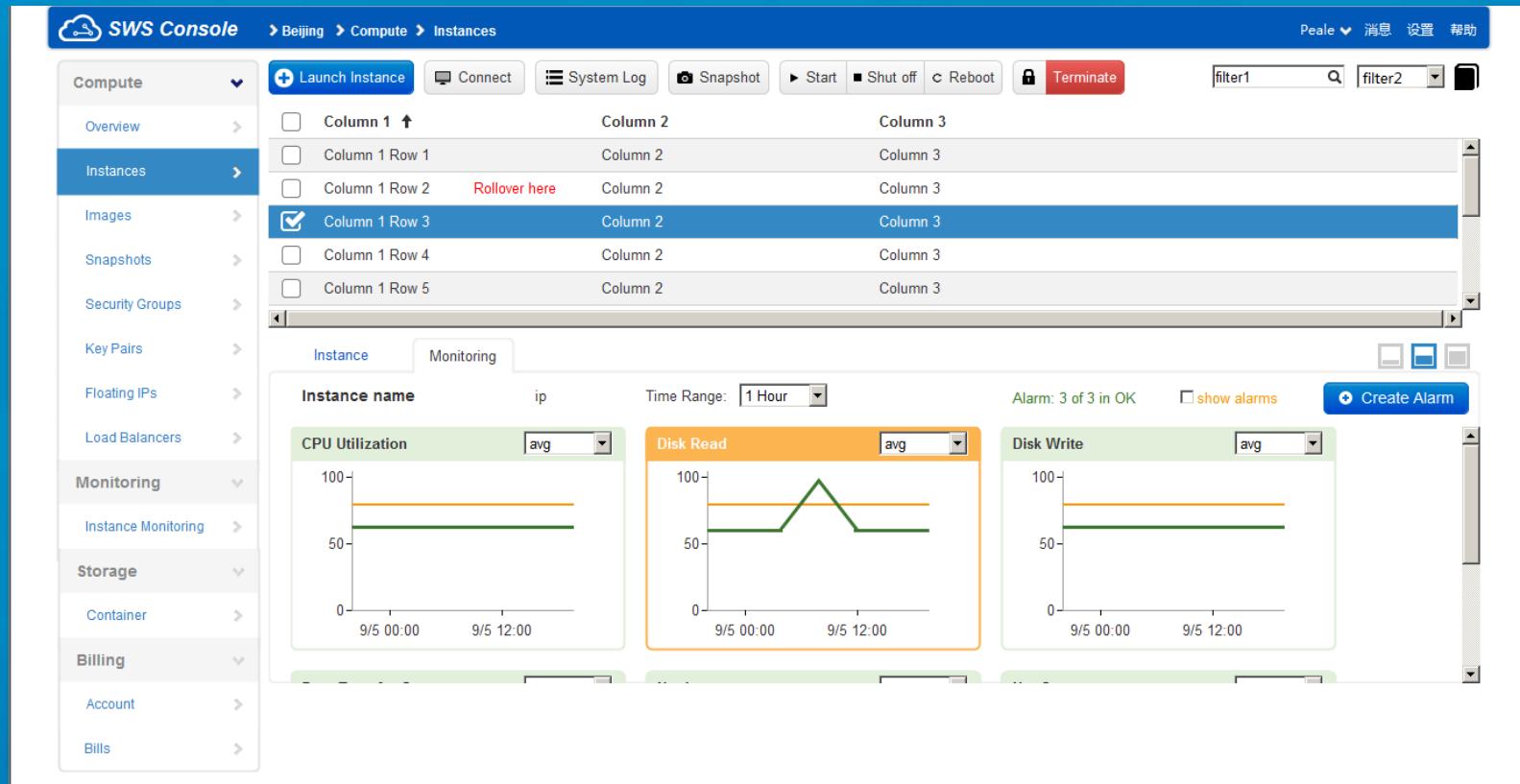
100
50
0

9/5 00:00 9/5 12:00

Disk Write avg

100
50
0

9/5 00:00 9/5 12:00



SWS v3 – Physical Server Mgt

SWS Admin Console > Beijing > Resource > Hosts

Peale 消息 设置 帮助

资源管理

Hosts 服务 网络 存储 系统管理

区域 项目 实例 镜像 类型

用户管理

用户 计费 邀请 角色

概览 列表 Policy Activate Standby Shutdown Auto Balance

low workload medium workload high workload available not available

Hosts	14	15	2	5	41	3	55	111	3	47	90	66	35	67	97	55	66	73	23	26	44	43	12			
服务	178		12	34	33	12	10	30	6	14	15	2	1	99	41	3	8	111	3	47	55	46	22	155	98	56
网络	39	62	31	61	36					8	111	3	47	55	46	22										
存储																										

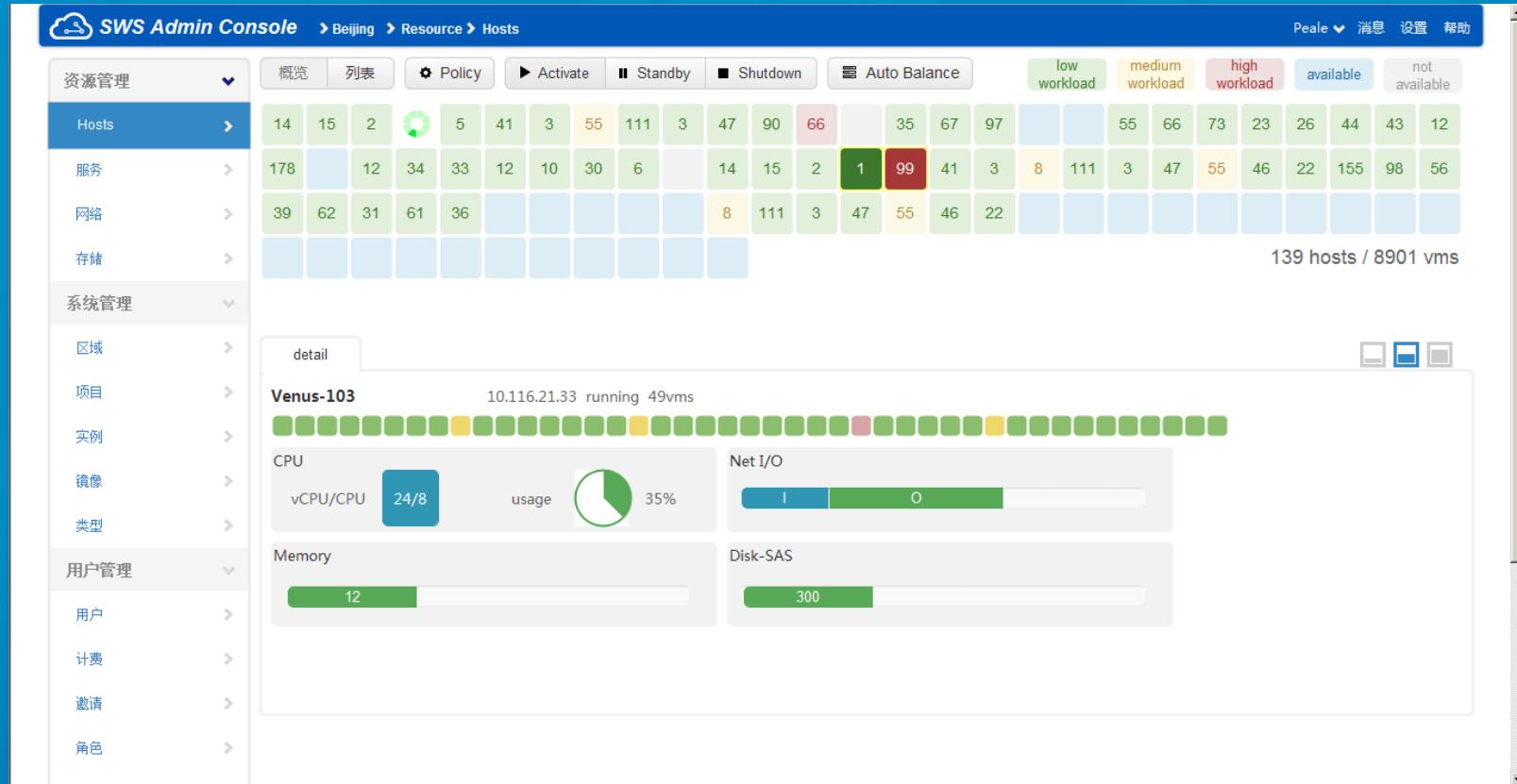
139 hosts / 8901 vms

detail

Venus-103 10.116.21.33 running 49vms

CPU vCPU/CPU 24/8 usage 35% Net I/O

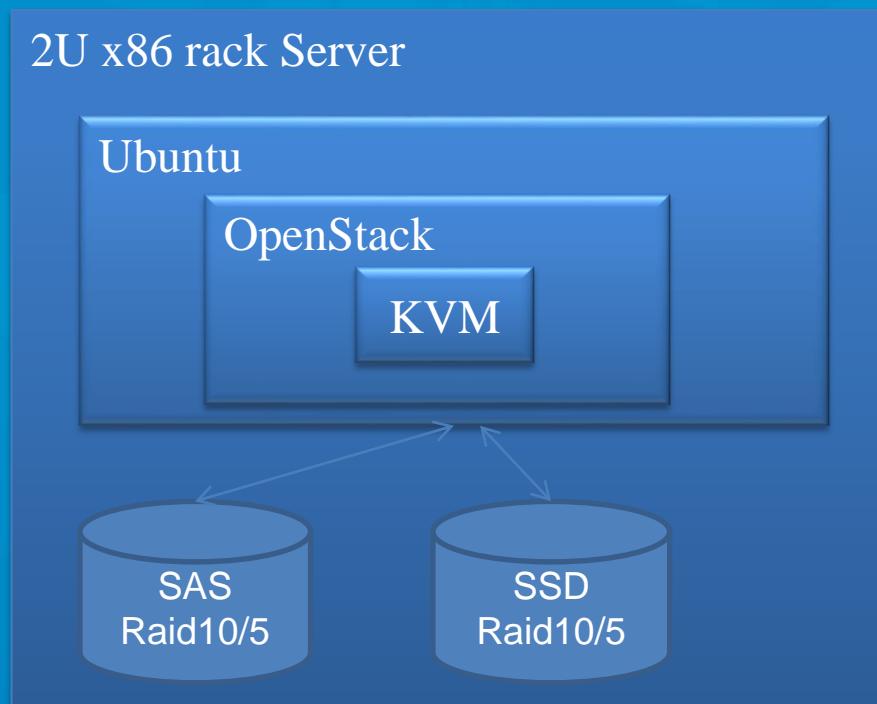
Memory 12 Disk-SAS 300



Content

- **SinaCloud Introduction**
- **Challenges to build a OpenStack Public Cloud**
 1. Network topology
 2. Security Enhancement
 3. Storage Solution
 4. Identity Integration
 5. Billing & Monitoring
 6. Dashboard Improvement
- **Operate an production OpenStack**
 7. Platform stack
 8. Automated Deployment
 9. Continuous Integration
 10. Project Management
- **StackLab: A community OpenStack Public Cloud**
- **Summary**

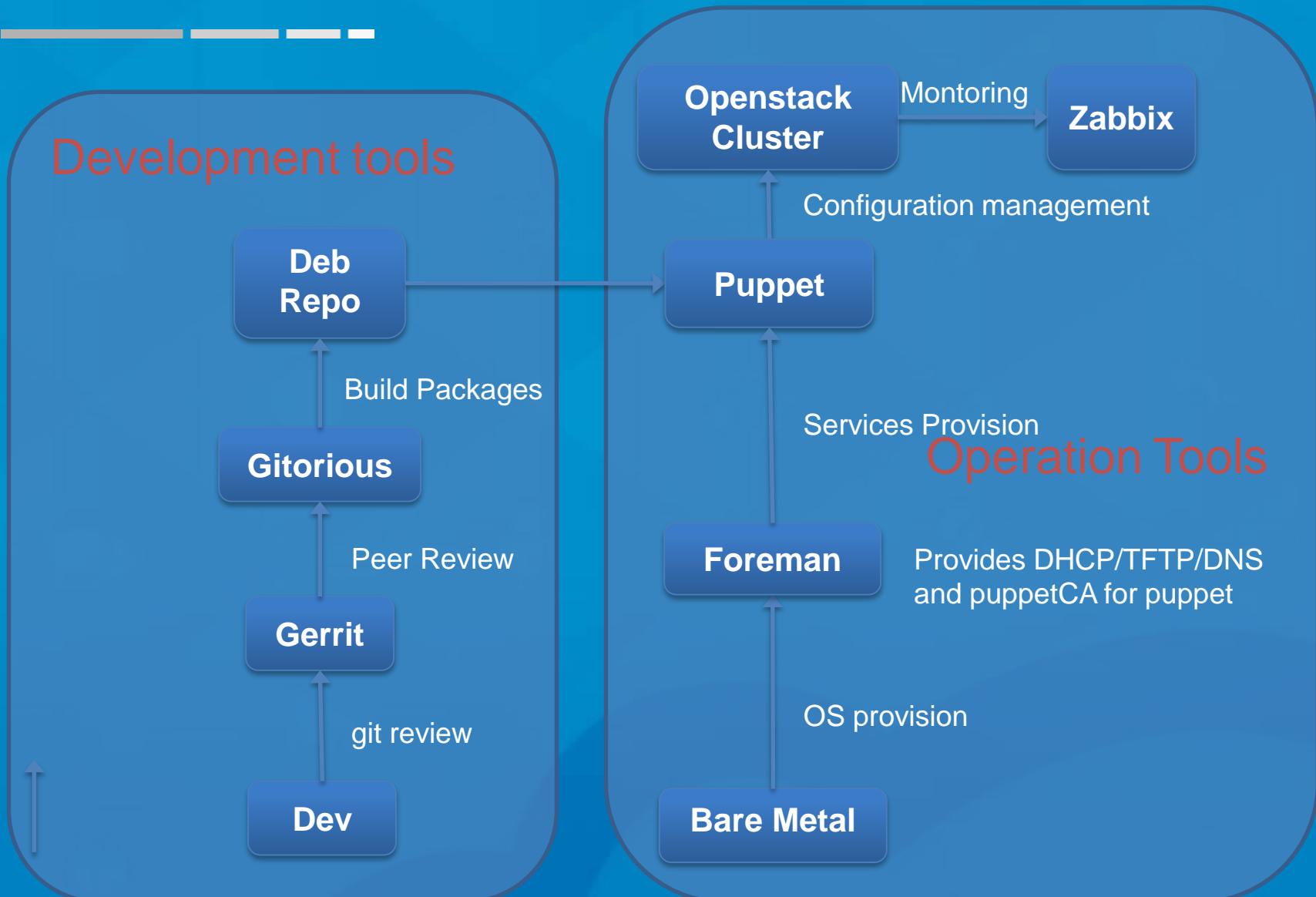
Platform Stack



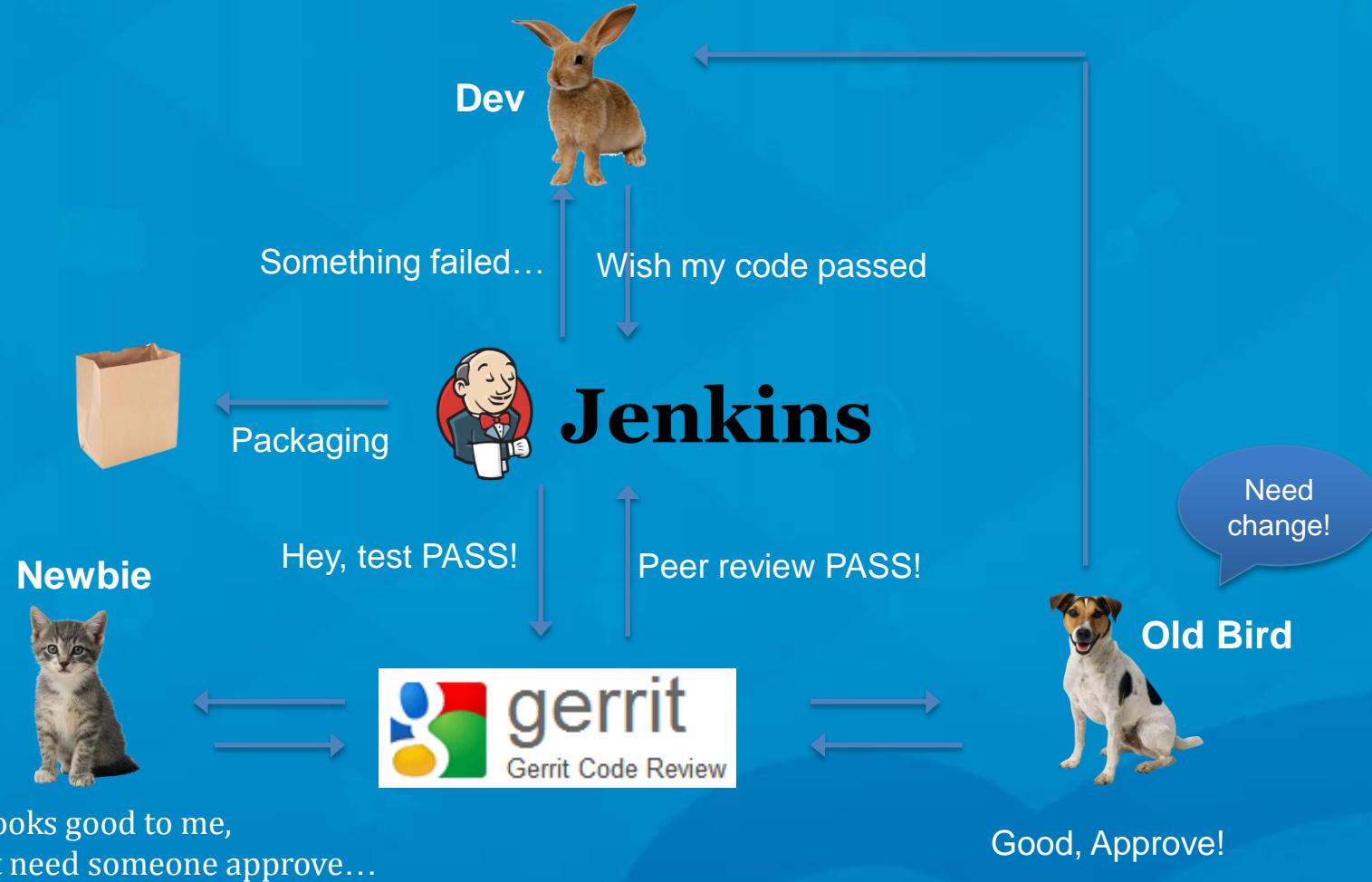
Challenges in Deploying Cloud

- Cloud in essence are big data centers
- Requirement:
 - Provision large scale physical infrastructures
 - Software deployment
 - Orchestrate all the heterogeneous components

SWS automation toolchain.



SWS continuous integration



Project Management

The screenshot shows the Launchpad interface for the project 'kanyun'. The top navigation bar includes links for Overview, Code, Bugs, Blueprints, Translations, and Answers. The user 'newptone (yuxcer)' is logged in, with a 'Log Out' link. The main content area is divided into several sections:

- Project information:** Maintainer: yuguang, Driver: SWS Dev Team, Development Focus: trunk series, Licences: Apache Licence, and a link to RDF metadata.
- Series and milestones:** The 'kanyun trunk series' is the current focus of development, with a link to 'View full history' and 'View milestones'.
- Latest bugs reported:** A list of recent bugs, including:
 - Bug #51: 数据的组装应当放到kanyun-API内部实现 (Reported on 2012-10-08)
 - Bug #35: sws bug test (Reported on 2012-07-04)
 - Bug #34: sws 1 bug test (Reported on 2012-07-04)
 - Bug #33: sws bug test (Reported on 2012-07-04)
 - Bug #32: bug test for sws (Reported on 2012-07-04)
- Latest blueprints:** A list of recent blueprints, including:
 - All bugs (link to 'All bugs')
 - All blueprints (link to 'All blueprints')
- Get Involved:** Links to 'Report a bug', 'Register a blueprint', 'Ask a question', and 'Help translate'.
- Downloads:** A note stating that 'kanyun does not have any download files registered with Launchpad.'

At the bottom, there are links for 'Launchpad', 'Take the tour', 'Read the guide', and a search bar. The footer contains the text: '© 2004-2012 Canonical Ltd. • Terms of use • Contact Launchpad Support • Blog • Careers • System status • r15383 (Get the code!)'

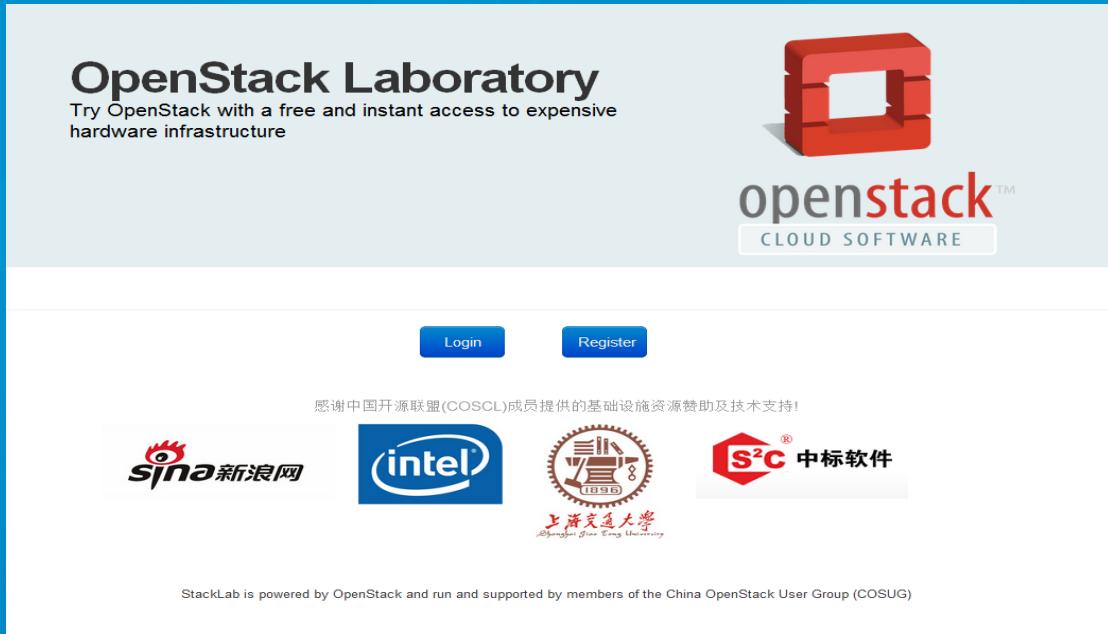
Deploy open-source version Launchpad in-house as project management system.

Content

- **SinaCloud Introduction**
- **Challenges to build a OpenStack Public Cloud**
 1. Network topology
 2. Security Enhancement
 3. Storage Solution
 4. Identity Integration
 5. Billing & Monitoring
 6. Dashboard Improvement
- **Operate an production OpenStack**
 7. Platform stack
 8. Automated Deployment
 9. Continuous Integration
 10. Project Management
- **StackLab: A community OpenStack Public Cloud**
- **Summary**

StackLab.org

A Community free OpenStack Public Cloud, more than just a OpenStack sandbox.



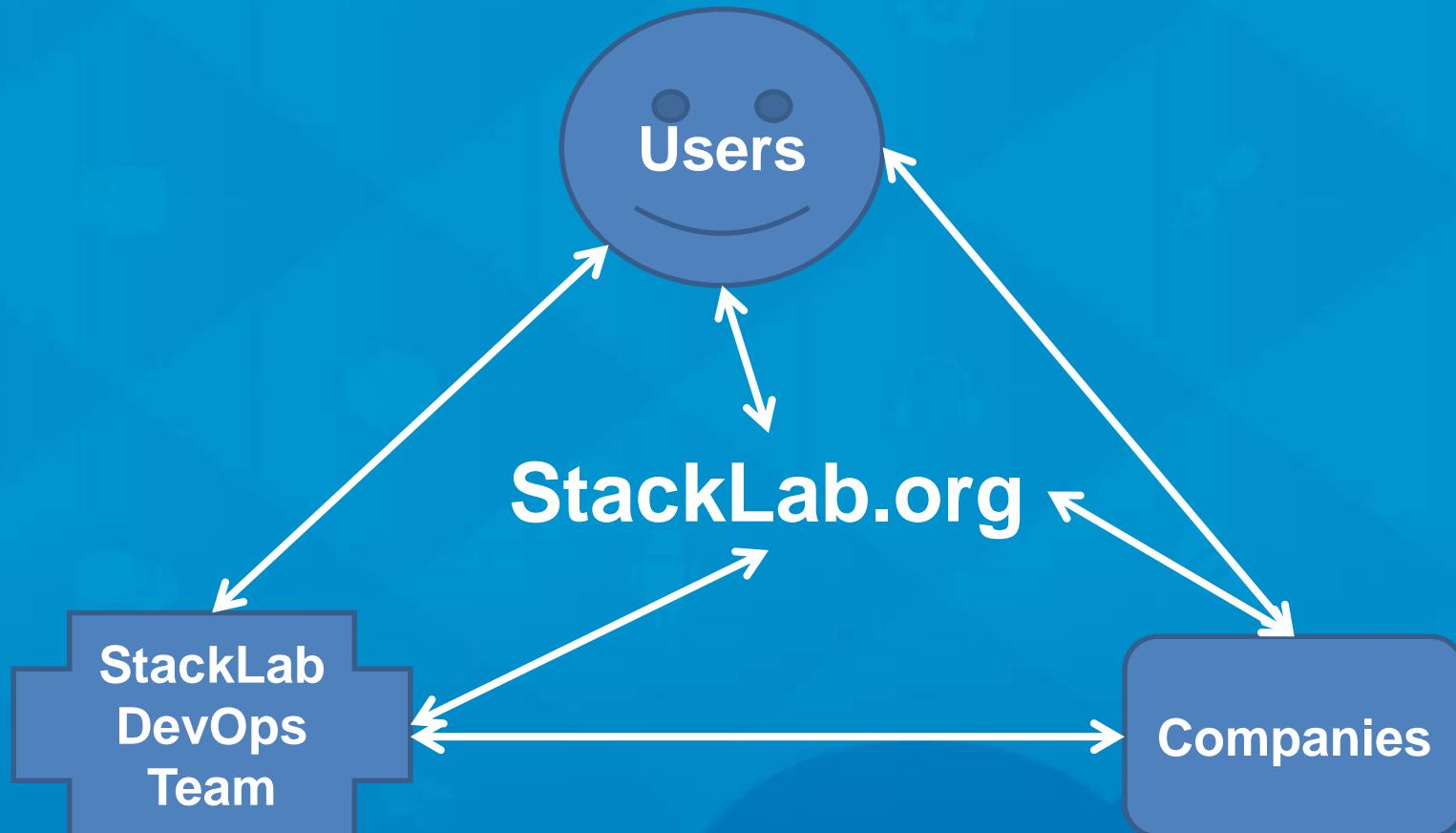
StackLab is initiated and operated by Sina OpenStack team, as well as tech volunteers from community, while resources sponsored by Sina, Intel.

StackLab news report: <http://freedomhui.com/2012/10/coscl-launches-stacklab/>

Why StackLab

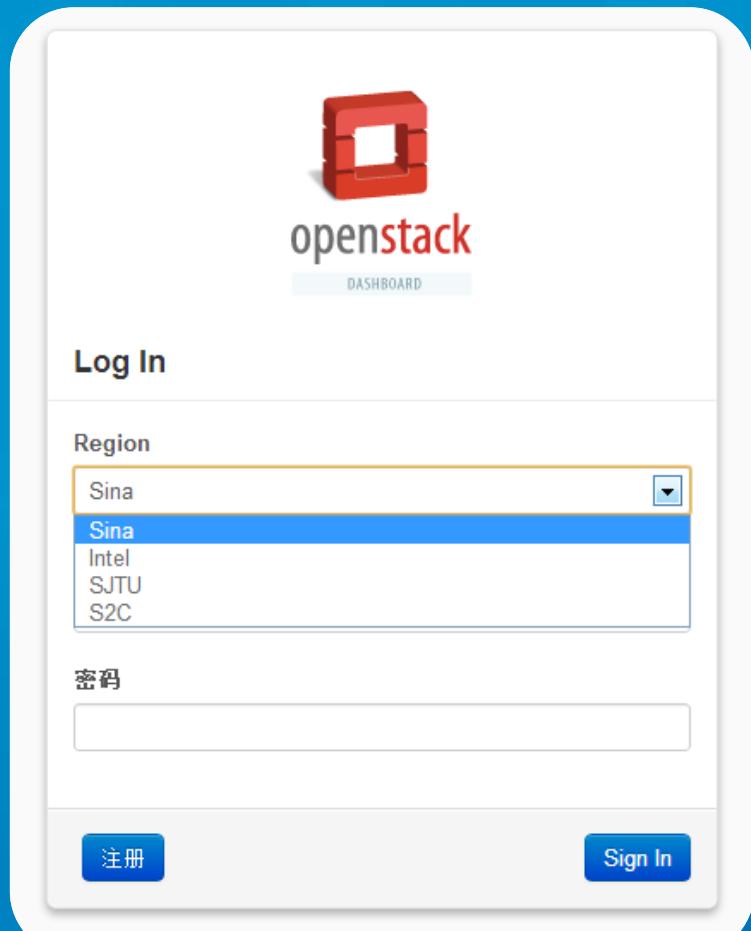
Not everyone has the opportunity to run a OpenStack public cloud when no resources, no users, no market, but StackLab will change this.

Why StackLab



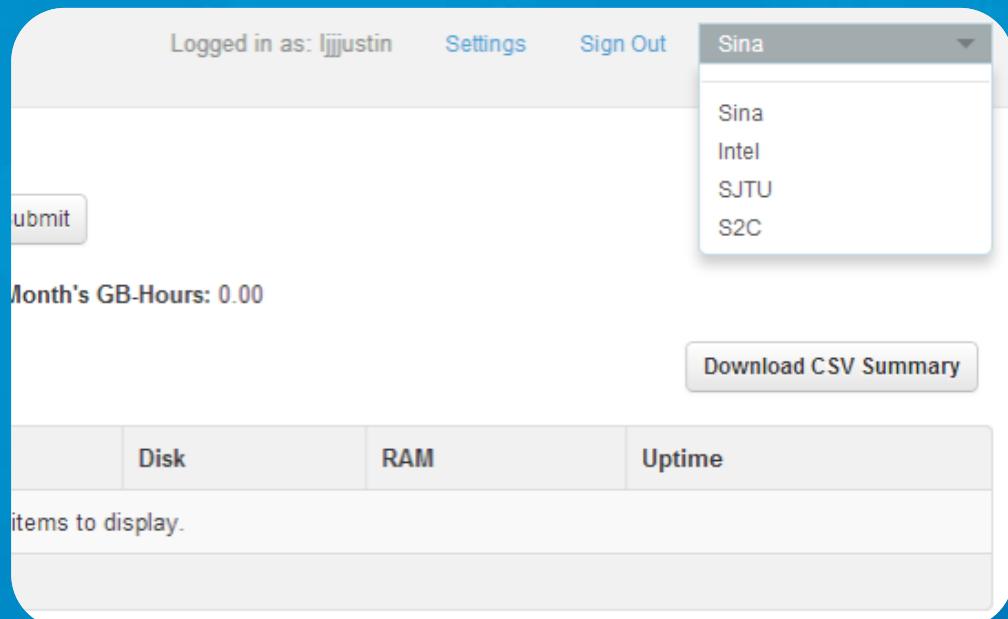
What does StackLab Look Like?

Choose the region before login



The screenshot shows the StackLab login interface. At the top is the OpenStack logo and a "DASHBOARD" button. Below is a "Log In" section. A "Region" dropdown menu is open, showing five options: Sina (selected), Intel, SJTU, and S2C. Below the dropdown is a "密码" (Password) input field. At the bottom are "注册" (Register) and "Sign In" buttons.

Or choose the region after login



The screenshot shows the StackLab dashboard after login. The top navigation bar includes "Logged in as: ljustin", "Settings", and "Sign Out". A dropdown menu for "Sina" is open, showing four options: Sina, Intel, SJTU, and S2C. Below the navigation is a "Month's GB-Hours: 0.00" summary and a "Download CSV Summary" button. A table header with columns "Disk", "RAM", and "Uptime" is visible, along with a note about items to display.

StackLab Goals

A community OpenStack public cloud which benefits users, contributors and sponsors.

For OpenStack Users who experience StackLab

- Understand what exactly OpenStack is and what does it provide
- Develop application on StackLab or using OpenStack API
- Build faith on OpenStack, possibly become real adopters and supporter

For OpenStack contributors involved in StackLab

- Testing patches on real production-like environmental, and get feedback from users, thus facilitate development and QA processes
- Gains experiences through operating StackLab without risk of SLA
- Better understand the requirement of OpenStack users

For StackLab sponsors

- Build band acknowledgement in OpenStack community
- Own one StackLab region in their own data center
- Prior access to free technical support, consultant, of StackLab DevOps team

How to join StackLab

For OpenStack Users who want to experience StackLab

Really Easy! Goto StackLab.org, register a free account instantly without approvement by admin.

For OpenStack contributors to join StackLab DevOps team

1. Persuade your company to become a StackLab sponsor, thus you will have a StackLab region in your own DC, and you are one admin of StackLab.
2. Contact us to join as an individual member.

For StackLab sponsors

1. Send a email to openstacklab@gmail.com, expressing your willing to join StackLab
2. Sign a agreement with StackLab DevOps team
3. StackLab team help you build one StackLab region in your own DC. The minimum requirement is 3 servers with access to public network.
4. List your StackLab region in Stacklab.org portal.

How to join StackLab(cont.)

StackLab: <http://stacklab.org>

StackLab Discussion Group:

<https://groups.google.com/group/stacklab>

stacklab@googlegroups.com

StackLab DevOps Team:

<https://groups.google.com/group/stacklab-devops>

stacklab-devops@googlegroups.com

Content

- **SinaCloud Introduction**
- **Challenges to build a OpenStack Public Cloud**
 1. Network topology
 2. Security Enhancement
 3. Storage Solution
 4. Identity Integration
 5. Billing & Monitoring
 6. Dashboard Improvement
- **Operate an production OpenStack**
 7. Platform stack
 8. Automated Deployment
 9. Continuous Integration
 10. Project Management
- **StackLab: A community OpenStack Public Cloud**
- **Summary**

Summary

- OpenStack definitely the best open-source cloud platform for building public cloud
 - Open, open, open, open
 - Fast growing ecosystem around OpenStack
 - No vendor lock-in
 - Etc.
- OpenStack Public cloud needs much more customization and development to differentiate.
- Require strong technical skills and involvement in community.

**Thank you, OpenStack Community
and Foundation.**

Q & A

freedomhui@gmail.com
Freedomhui.com