

Cloud Computing und SaaS

Exercise – OpenStack

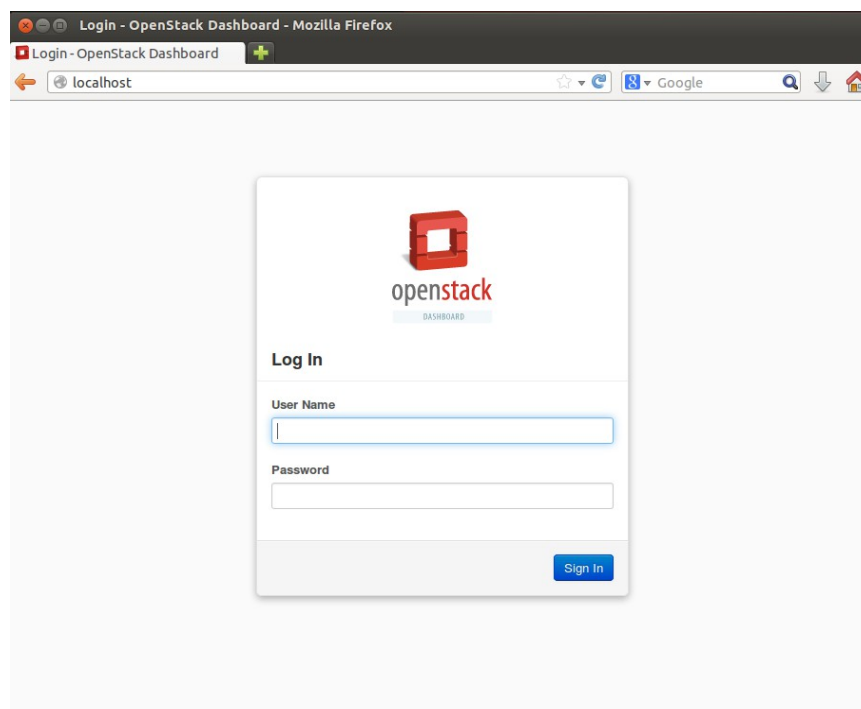
Hannes Knopf

Installationsanleitung:

```
sudo apt-get install git  
cd Downloads  
git clone git://github.com/openstack-dev/devstack.git  
cd devstack  
./stack.sh
```

Während der Installation sind einige Eingaben erforderlich. Diese Eingaben beziehen sich auf das Erstellen von Passwörtern einiger Dienste, wie zum Beispiel der MySQL Datenbank.

Nach der Installation im Browser den *localhost* ansurfen und es erscheint das Login zum *OpenStack Dashboard* bzw. *Management GUI* (folgende Abbildung). Also die Antwort auf die Frage, ob eine Management GUI verfügbar ist, kann ich mit JA beantworten.



Login mit 'admin' und dem Password, welches während der Installation festgelegt wurde.

Management Views

- Admin View
 - Verwalten und Überwachen von OpenStack Umgebung (Instanzen, Images, Benutzer, usw)
- Project View
 - Verwalten von Projekten mit deren Instanzen, Datenträgern, Images, usw

The screenshot shows the OpenStack Admin interface in a Firefox Web Browser. The page title is "Users". The top right corner indicates the user is logged in as "admin" with links for "Settings", "Help", and "Sign Out". The left sidebar contains a "System Panel" with links for Overview, Hypervisors, Instances, Volumes, Flavors, Images, Defaults, and System Info, and an "Identity Panel" with links for Projects and Users. The main content area displays a table of users with columns for checkboxes, User Name, Email, User ID, Enabled status, and Actions. There are buttons for "Filter", "Create User", and "Delete Users".

<input type="checkbox"/>	User Name	Email	User ID	Enabled	Actions
<input type="checkbox"/>	demo	demo@example.com	22663a13226b408c9ca2857b4534fffa	True	Edit More ▾
<input type="checkbox"/>	cinder	cinder@example.com	2e9083c5778c443786178f8ef21b70e6	True	Edit More ▾
<input type="checkbox"/>	nova	nova@example.com	3911af372ae34041a2cb7b262d9ac68c	True	Edit More ▾
<input type="checkbox"/>	hannes		4bb658981f584feca5a655ad5cedfaf9	True	Edit More ▾
<input type="checkbox"/>	glance	glance@example.com	87ad0672c1634828b3c77dc101bad2cf	True	Edit More ▾
<input type="checkbox"/>	alt_demo	alt_demo@example.com	a86560667ccc4197882b4920edefd99a	True	Edit More ▾
<input type="checkbox"/>	admin	admin@example.com	efeac06a84ce46629596bc9701760148	True	Edit More ▾

Displaying 7 items

User Erstellen

Admin -> Users -> Create User

Create User

✕

User Name *

Email

Password *

Confirm Password *

Primary Project *

▼

+

Role *

▼

Description:

From here you can create a new user and assign them to a project.

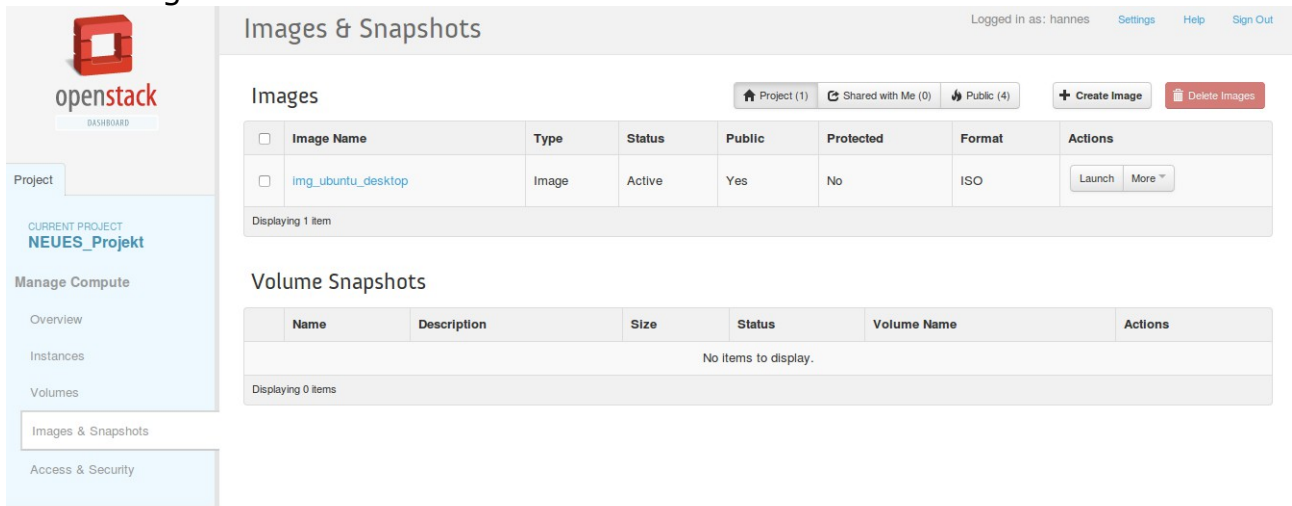
Cancel

Create User

Image anlegen

Project -> Images & Snapshots -> Create Image

Name vergeben und ISO File auswählen



The screenshot shows the OpenStack Dashboard interface. The left sidebar contains the OpenStack logo and navigation links: Project, Manage Compute (Overview, Instances, Volumes), Images & Snapshots (selected), and Access & Security. The main content area is titled 'Images & Snapshots' and shows the user is logged in as 'hannes'. Below the title, there are tabs for 'Project (1)', 'Shared with Me (0)', and 'Public (4)'. A '+ Create Image' button and a 'Delete Images' button are visible. A table lists the images:

<input type="checkbox"/>	Image Name	Type	Status	Public	Protected	Format	Actions
<input type="checkbox"/>	img_ubuntu_desktop	Image	Active	Yes	No	ISO	Launch More ▾

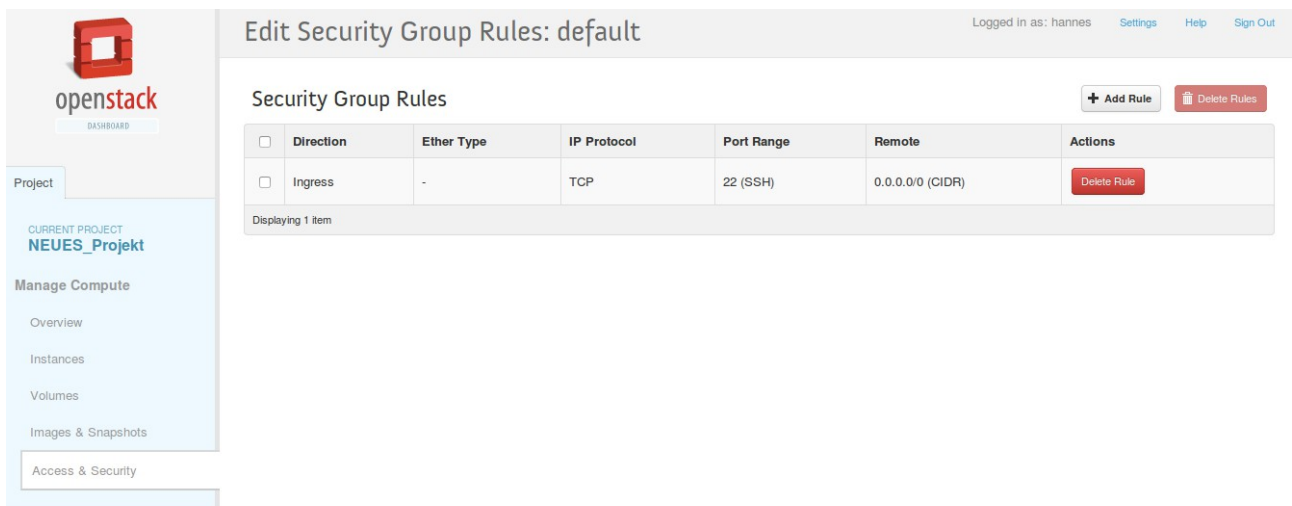
Displaying 1 item

Below the images table, there is a section for 'Volume Snapshots' with a table that currently shows 'No items to display'.

Port Freigabe für ssh

Project -> Access & Security -> Edit Rules -> Add Rule

Port 22 freigeben für ssh



The screenshot shows the 'Edit Security Group Rules: default' page in the OpenStack Dashboard. The left sidebar is the same as the previous screenshot. The main content area shows the user is logged in as 'hannes'. Below the title, there are '+ Add Rule' and 'Delete Rules' buttons. A table lists the security group rules:

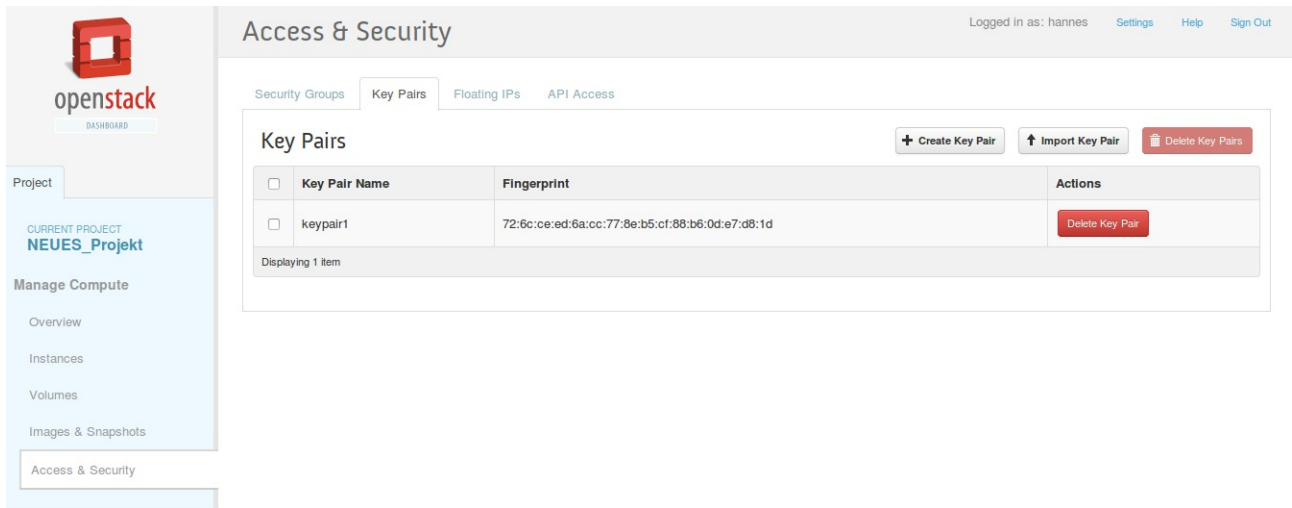
<input type="checkbox"/>	Direction	Ether Type	IP Protocol	Port Range	Remote	Actions
<input type="checkbox"/>	Ingress	-	TCP	22 (SSH)	0.0.0.0/0 (CIDR)	Delete Rule

Displaying 1 item

Keypair generieren für Authentication

Project -> Access & Security -> Keypairs -> Create Keypair

Downloaden des Keypairs



The screenshot shows the OpenStack dashboard interface. On the left is a sidebar with the OpenStack logo and navigation links. The main content area is titled 'Access & Security' and contains a tabbed interface with 'Key Pairs' selected. Below the tabs is a table of key pairs.

Access & Security

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

Security Groups **Key Pairs** Floating IPs API Access

Key Pairs [+ Create Key Pair](#) [↑ Import Key Pair](#) [Delete Key Pairs](#)

<input type="checkbox"/>	Key Pair Name	Fingerprint	Actions
<input type="checkbox"/>	keypair1	72:6c:ce:ed:6a:cc:77:8e:b5:cf:88:b6:0d:e7:d8:1d	Delete Key Pair

Displaying 1 item

Launch Instance

In Project View -> Instances -> Launch Instance

Launch Instance

Details *

Access & Security *

Post-Creation

Availability Zone

nova

Instance Name *

inst1_ubuntu_desktop

Flavor *

m1.small

Some flavors not meeting minimum image requirements have been disabled.

Instance Count *

1

Instance Boot Source *

Boot from image

Image Name

img_ubuntu_desktop (708.0 MB)

Specify the details for launching an instance.

The chart below shows the resources used by this project in relation to the project's quotas.

Flavor Details

Name	m1.small
VCPUs	1
Root Disk	20 GB
Ephemeral Disk	0 GB
Total Disk	20 GB
RAM	2,048 MB

Project Limits

Number of Instances 0 of 10 Used

Number of VCPUs 0 of 20 Used

Total RAM 0 of 51,200 MB Used

Launch

Beim Herumprobieren kam manchmal eine Fehlermeldung. Da ist das Flavour zu groß und die Harddisc zu klein. Änderbar in der Flavour Konfiguration im Admin Panel.

Danach in der Übersicht der Instanzen:

More -> Associate Floating IP

Somit gibt es eine Public und Private IP

SSH Connect

```
chmod 0600 keypair1.pem
```

```
ssh-add keypair1.pem
```

```
ssh -i keypair1.pem ubuntu@10.0.0.2
```

http://docs.openstack.org/grizzly/openstack-compute/admin/content/Launching_Instances_using_Dashboard.html