Uno use case di esempio

Corso locale della sezione di Bologna

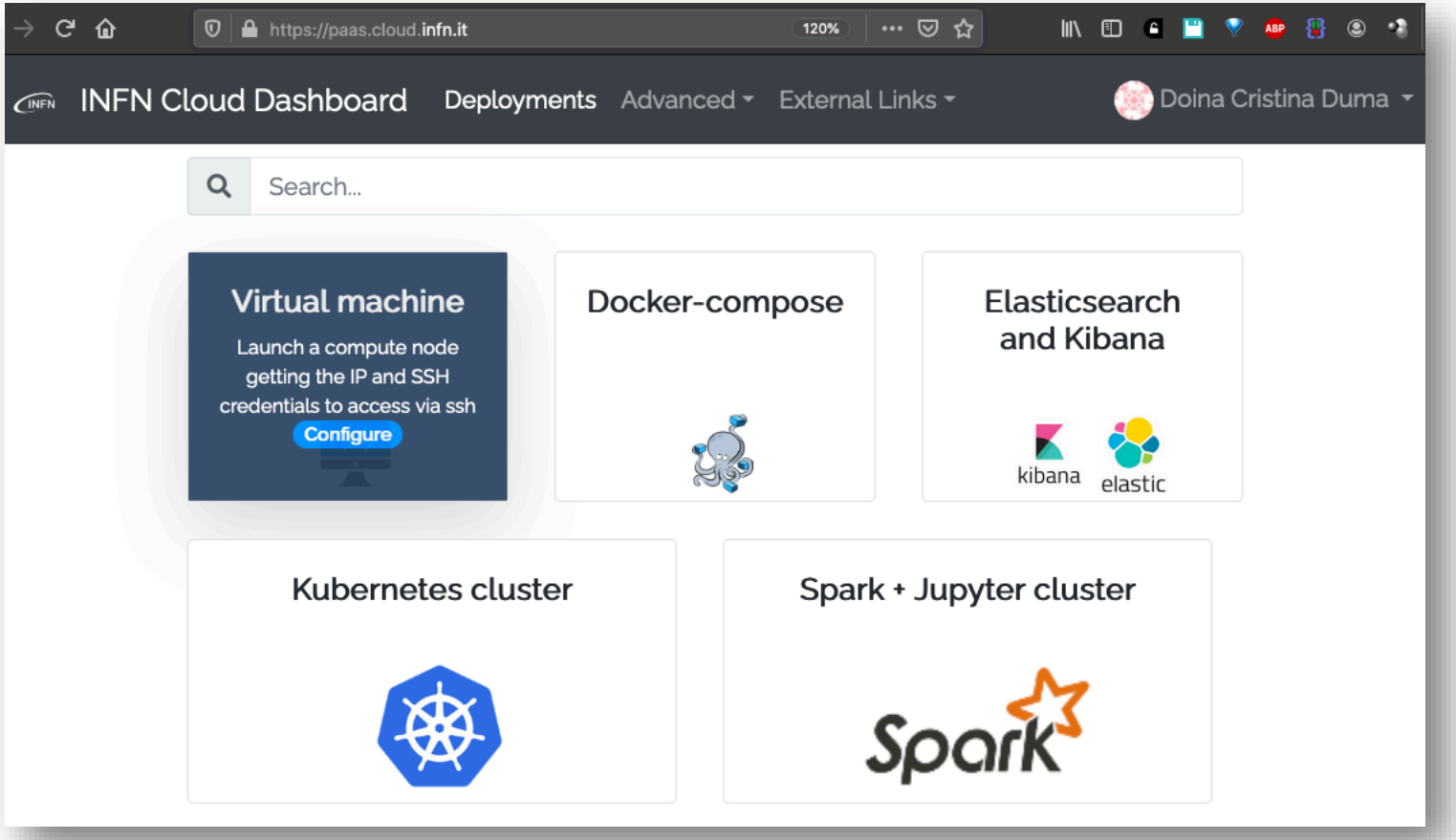
«INFN Cloud : Funzionalita', sicurezza e privacy»

23/06/2021

Gianluca Peco, Paolo Veronesi

Use Case – simple VM con storage «persistente»

- Use case “example” or “support” for other use cases
  - VM with a specified **computing, memory** … and **storage** capacity.



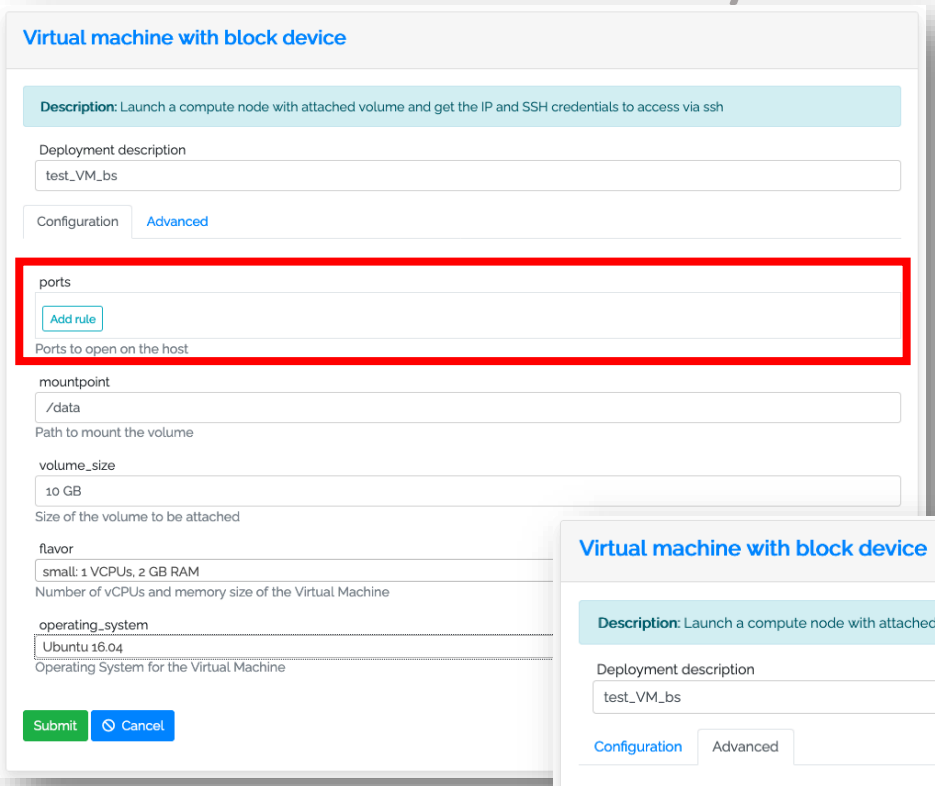
Credits: Doina Cristina Duma (INFN-CNAF)
VM with (persistent) storage

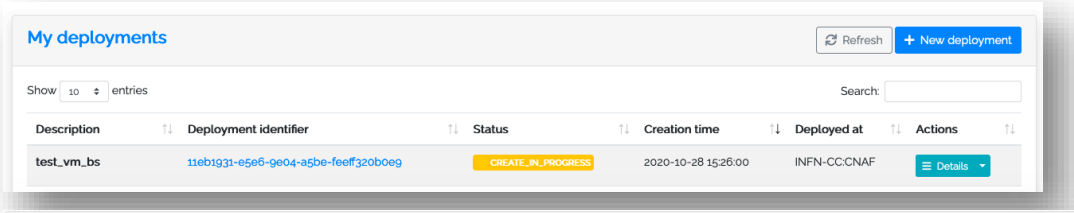
Chiave ssh

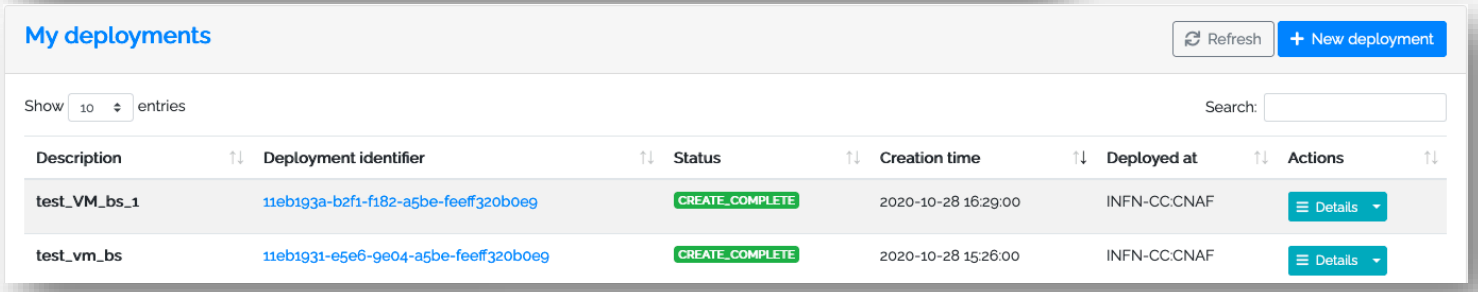
- Documentazione: https://guides.cloud.infn.it/docs/users-guides/en/latest/users_guides/getting_started.html#ssh-keys

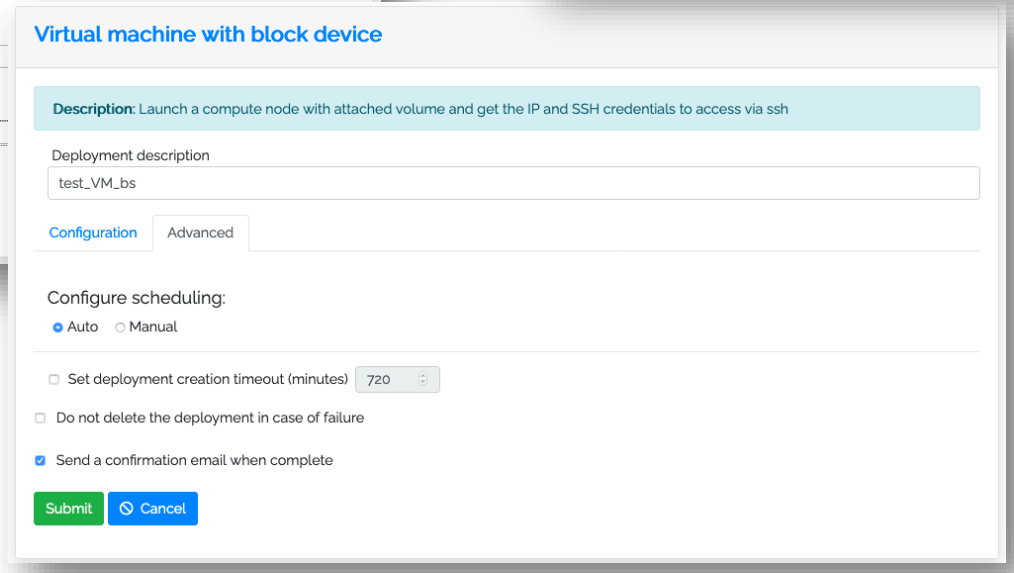
- Quando si instanziano servizi nella PaaS di INFN Cloud, è sempre possibile accedere alla vm che ospita il servizio via ssh
- Come username si usa quello con cui viene visto l'utente
- NON è permessa la password, ma si accede solo via chiave ssh che va precedentemente creata/aggiunta
  - Una volta che si è acceduto alla vm, è possibile eseguire operazioni di system administration via ***sudo***

«Mandatory» & … «default values»









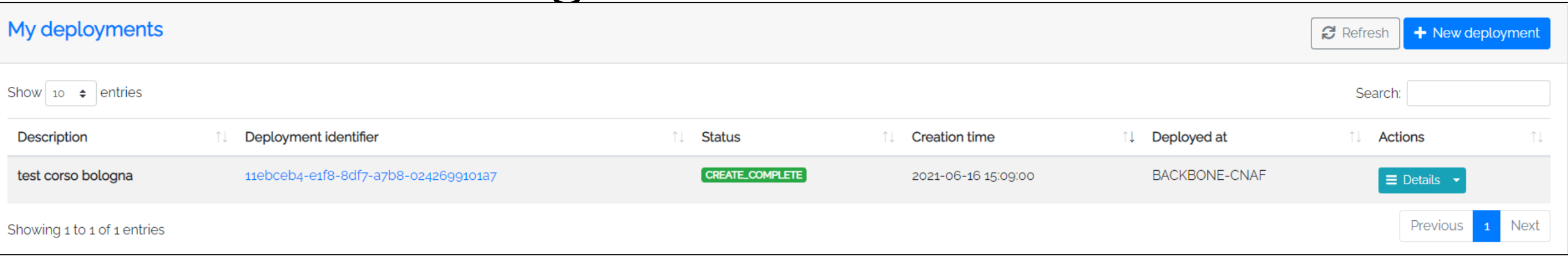
Defaults

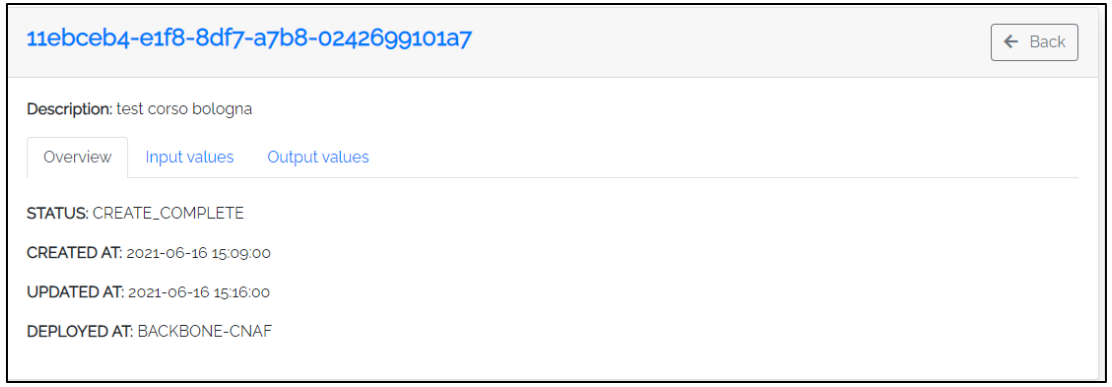
- **Flavor**: 1VCPU, 2GB RAM
- **OS sytem**: Ubuntu 18.04

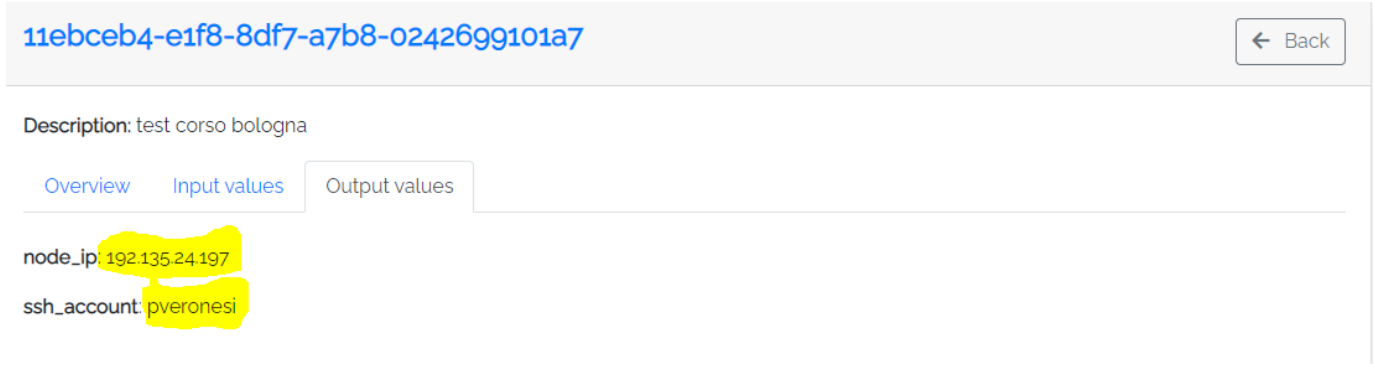
BUT – need to be explicitly selected

Credits: Doina Cristina Duma (INFN-CNAF)
VM with (persistent) storage

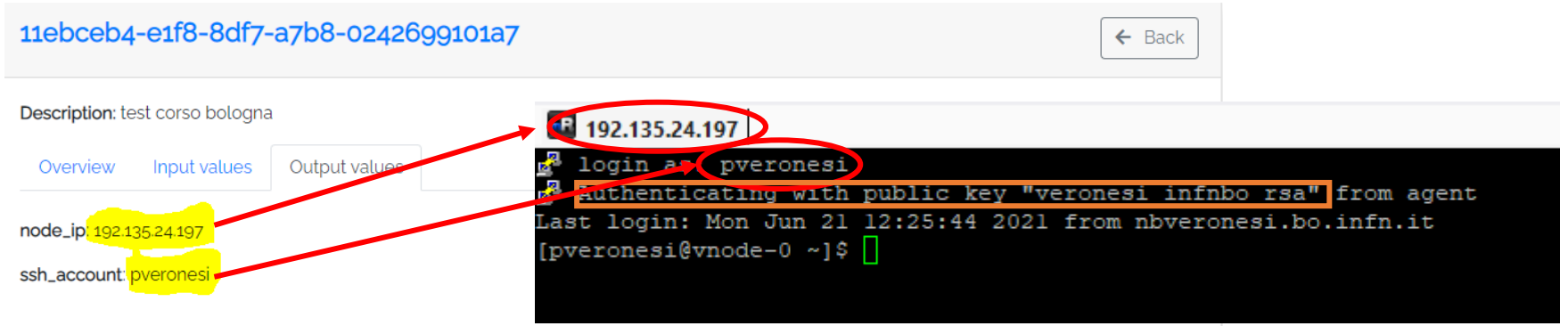
Test corso bologna







Accesso e verifiche




```
[pveronesi@vnode-0 ~]$ df -mh
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        895M     0  895M   0% /dev
tmpfs           919M     0  919M   0% /dev/shm
tmpfs           919M   57M  863M   7% /run
tmpfs           919M     0  919M   0% /sys/fs/cgroup
/dev/vda1        10G  1.8G  8.3G  18% /
/dev/vdb1       8.8G   37M  8.3G   1% /data
tmpfs           184M     0  184M   0% /run/user/1001
[pveronesi@vnode-0 ~]$ cat /etc/redhat-release
CentOS Linux release 7.9.2009 (Core)
```

Aggiornare il S.O.

```
[pveronesi@vnode-0 ~]$ sudo yum check-update
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: mirror.digitalnova.at
 * epel: fedora.mirror.garr.it
 * extras: mirror.digitalnova.at
 * updates: mirror.digitalnova.at

bind-export-libs.x86_64
binutils.x86_64
ca-certificates.noarch
centos-release.x86_64
chkconfig.x86_64
cloud-init.x86_64
coreutils.x86_64
cpio.x86_64
curl.x86_64
hwdata.x86_64
kernel.x86_64
kernel-tools.x86_64
kernel-tools-libs.x86_64
kexec-tools.x86_64
kpartx.x86_64
krb5-libs.x86_64
libblkid.x86_64
libcroco.x86_64
libcurl.x86_64
libgcc.x86_64
libgcrypt.x86_64
libmount.x86_64
libpng.x86_64
libsmartcols.x86_64
libssh2.x86_64
libstdc++.x86_64
libteam.x86_64
libuuid.x86_64
libxml2.x86_64
libxml2-python.x86_64
lshw.x86_64
lz4.x86_64
mariadb-libs.x86_64
microcode_ctl.x86_64
openldap.x86_64
openssl.x86_64
openssl-libs.x86_64
teamd.x86_64
tuned.noarch
tzdata.noarch
util-linux.x86_64
vim-minimal.x86_64
wpa_supplicant.x86_64
xfsprogs.x86_64
zlib.x86_64
```

```
[pveronesi@vnode-0 ~]$ sudo yum update -y kernel openssl
Loaded plugins: fastestmirror
You need to be root to perform this command.
[pveronesi@vnode-0 ~]$ sudo yum update -y kernel openssl
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: centos.mirror.garr.it
 * epel: fedora.mirror.garr.it
 * extras: centos.mirror.garr.it
 * updates: centos.mirror.garr.it
Resolving Dependencies
--> Running transaction check
---> Package kernel.x86_64 0:3.10.0-1160.31.1.el7 will be installed
--> Processing Dependency: linux-firmware >= 20190429-72 for package: kernel-3.10.0-1160.31.1.el7.x86_64
---> Package openssl.x86_64 1:1.0.2k-19.el7 will be updated
---> Package openssl.x86_64 1:1.0.2k-21.el7_9 will be an update
--> Processing Dependency: openssl-libs(x86-64) = 1:1.0.2k-21.el7_9 for package: 1:openssl-1.0.2k-21.el7_9.x86_64
--> Running transaction check
---> Package linux-firmware.noarch 0:20200421-80.git78c0348.el7_9 will be installed
---> Package openssl-libs.x86_64 1:1.0.2k-19.el7 will be updated
---> Package openssl-libs.x86_64 1:1.0.2k-21.el7_9 will be an update
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================
 Package                 Arch          Version                    Repository  Size
================================================================================
Installing:
 kernel                  x86_64        3.10.0-1160.31.1.el7       updates     50 M
Updating:
 openssl                 x86_64        1:1.0.2k-21.el7_9          updates    493 k
Installing for dependencies:
 linux-firmware          noarch        20200421-80.git78c0348.el7_9
                                                                  updates     80 M
Updating for dependencies:
 openssl-libs            x86_64        1:1.0.2k-21.el7_9          updates    1.2 M

Transaction Summary
================================================================================
```

Es. Installazione web server

- Nel seguente esempio si procederà ad installare un web server (apache) e verificare l'accesso a tale servizio

- Installazione servizio

```
[pveronesi@vnode-0 ~]$ sudo yum install httpd mod_ssl -y
```

- Verifico lo stato delle porte http e https

```
[pveronesi@vnode-0 ~]$ sudo netstat -tunpl|egrep '80|443'
[pveronesi@vnode-0 ~]$
```

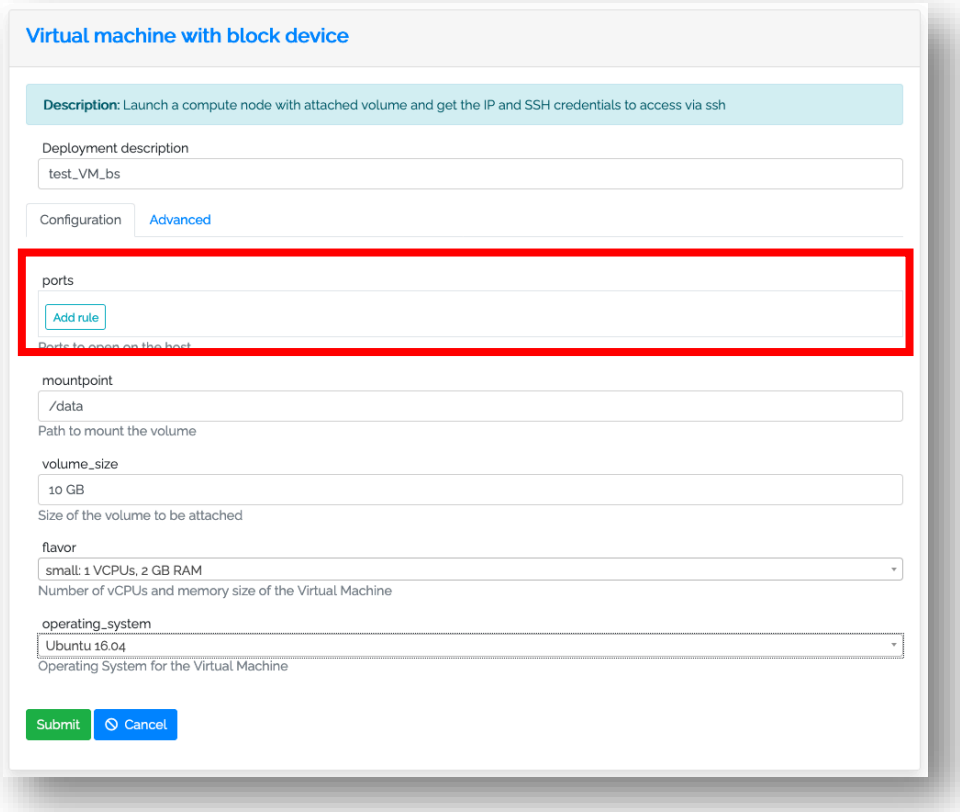
- Faccio partire il servizio e verifico ancora le porte http e https

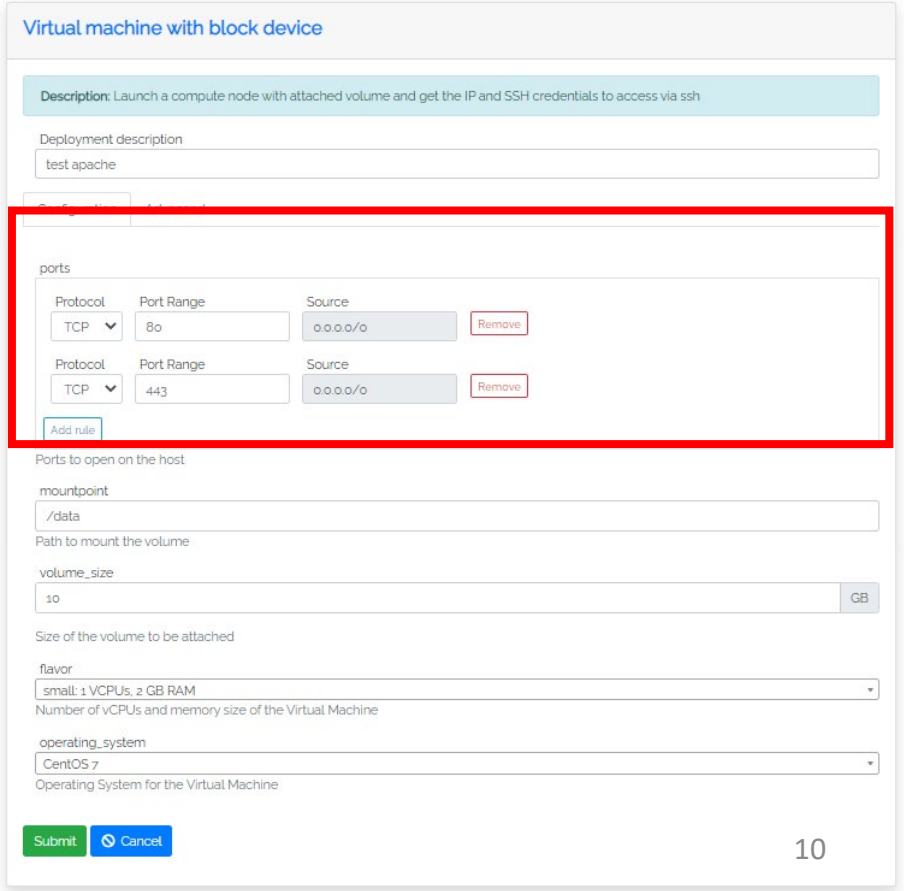
```
[pveronesi@vnode-0 ~]$ sudo systemctl start httpd
[pveronesi@vnode-0 ~]$ sudo netstat -tunpl|egrep '80|443'
tcp6       0      0 :::80                   :::*                    LISTEN      24528/httpd
tcp6       0      0 :::443                  :::*                    LISTEN      24528/httpd
```

Ma posso accedere al servizio????

Gestione apertura porte

- Al momento della creazione della vm, possiamo specificare un elenco di porte aggiuntive (oltre alla 22) che devono essere aperte
- Se la vm è già attiva, possiamo richiedere che venga aperta una porta specifica all'helpdesk https://servicedesk.cloud.infn.it/





Ringraziamenti

- Si ringraziano Davide Salomoni e i **WP leader** [*] di INFN-CLOUD che hanno coordinato i vari aspetti del progetto
- In particolare si ringraziano per le numerose slide fornite:
  - Vincenzo Ciaschini
  - Doina Cristina Duma
  - Giacinto Donvito
  - Emidio Giorgio
  - Davide Salomoni

https://www.cloud.infn.it

[*]: **WP1**: S. Stalio/LNGS, G. Donvito/Bari, **WP2**: C. Duma/CNAF, E. Giorgio/LNS, **WP3**: V. Spinoso/Bari, A. Costantini/CNAF, **WP4**: M. Sgaravatto/Padova, V. Ciaschini/CNAF, **WP5**: M. Antonacci/Bari, D. Spiga/Perugia

Link vari

- Sito web: https://www.cloud.infn.it
- User Supporto: https://servicedesk.cloud.infn.it
- Documentazione: https://guides.cloud.infn.it/docs/users-guides/en/latest/index.html
- Youtube: youtube.com/channel/UCPLl3o9k2Fw96ByCukYWNkg/featured