

Uno use case di esempio

Corso locale della sezione di Bologna

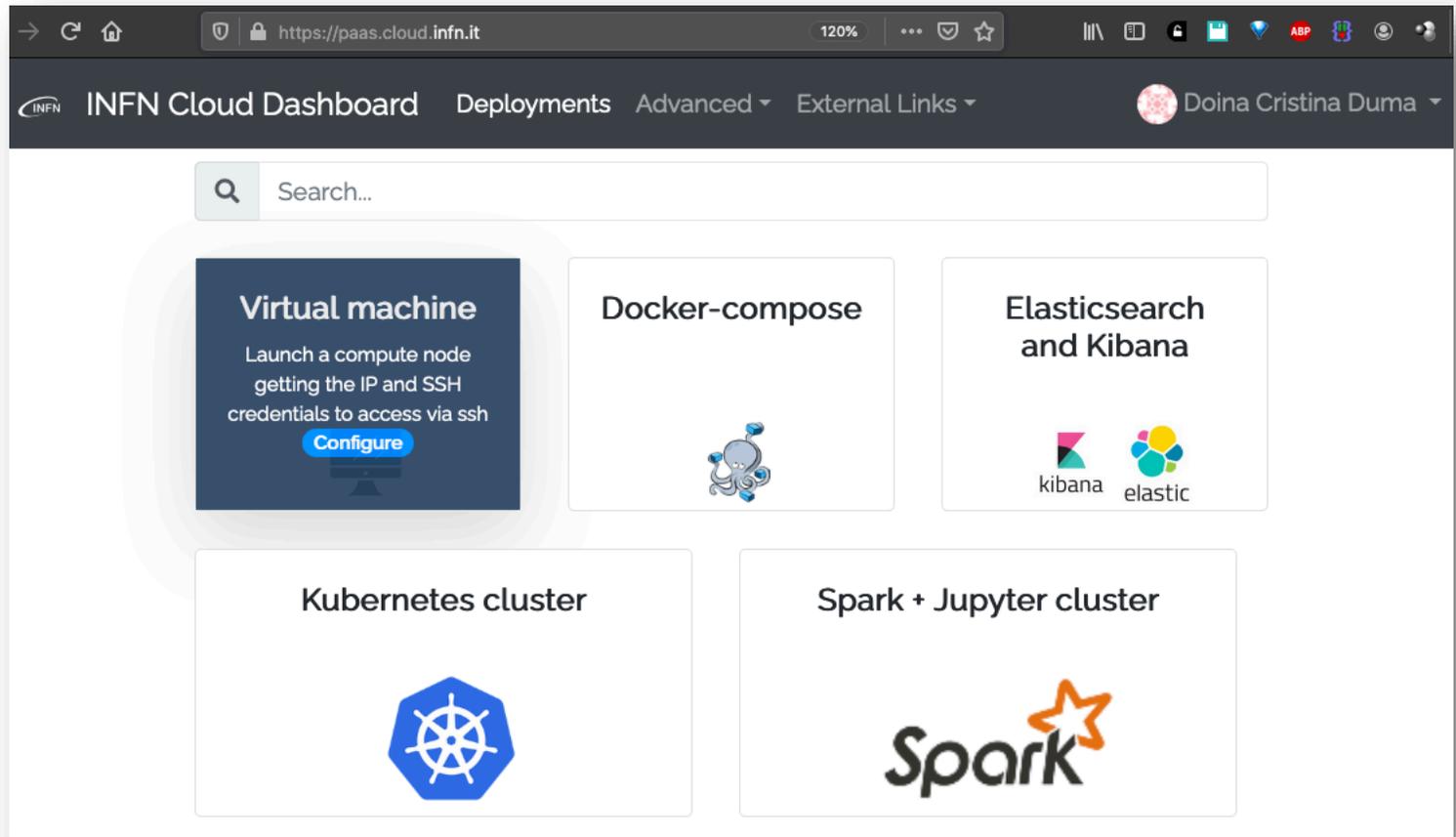
«INFN Cloud : Funzionalita', sicurezza e privacy»

23/06/2021

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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.



Chiave ssh

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

Virtual machine with block device

Description: Launch a compute node with attached volume and get the IP and SSH credentials to access via ssh

Deployment description
test_VM_bs

Configuration **Advanced**

ports

[Add rule](#)

Ports to open on the host

mountpoint
/data
Path to mount the volume

volume_size
10 GB
Size of the volume to be attached

flavor
small: 1 VCPUs, 2 GB RAM
Number of vCPUs and memory size of the Virtual Machine

operating_system
Ubuntu 18.04
Operating System for the Virtual Machine

[Submit](#) [Cancel](#)

My deployments [Refresh](#) [+ New deployment](#)

Show 10 entries Search:

Description	Deployment identifier	Status	Creation time	Deployed at	Actions
test_vm_bs	11eb1931-e5e6-ge04-a5be-feeff320b0e9	CREATE_IN_PROGRESS	2020-10-28 15:26:00	INFN-CC.CNAF	Details

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Show 10 entries Search:

Description	Deployment identifier	Status	Creation time	Deployed at	Actions
test_VM_bs_1	11eb193a-b2f1-f182-a5be-feeff320b0e9	CREATE_COMPLETE	2020-10-28 16:29:00	INFN-CC.CNAF	Details
test_vm_bs	11eb1931-e5e6-ge04-a5be-feeff320b0e9	CREATE_COMPLETE	2020-10-28 15:26:00	INFN-CC.CNAF	Details

Virtual machine with block device

Description: Launch a compute node with attached volume and get the IP and SSH credentials to access via ssh

Deployment description
test_VM_bs

Configuration **Advanced**

Configure scheduling:
 Auto Manual

Set deployment creation timeout (minutes) 720

Do not delete the deployment in case of failure

Send a confirmation email when complete

[Submit](#) [Cancel](#)

Defaults

- **Flavor:** 1VCPU, 2GB RAM
 - **OS system:** Ubuntu 18.04
- BUT** – need to be explicitly selected

Test corso bologna

My deployments

[Refresh](#) [+ New deployment](#)

Show entries

Search:

Description	Deployment identifier	Status	Creation time	Deployed at	Actions
test corso bologna	11ebceb4-e1f8-8df7-a7b8-0242699101a7	CREATE_COMPLETE	2021-06-16 15:09:00	BACKBONE-CNAF	Details

Showing 1 to 1 of 1 entries

[Previous](#) [1](#) [Next](#)

[11ebceb4-e1f8-8df7-a7b8-0242699101a7](#) [← Back](#)

Description: test corso bologna

[Overview](#) [Input values](#) [Output values](#)

STATUS: CREATE_COMPLETE

CREATED AT: 2021-06-16 15:09:00

UPDATED AT: 2021-06-16 15:16:00

DEPLOYED AT: BACKBONE-CNAF

[11ebceb4-e1f8-8df7-a7b8-0242699101a7](#) [← Back](#)

Description: test corso bologna

[Overview](#) [Input values](#) [Output values](#)

node_ip: 192.135.24.197

ssh_account: pveronesi

Accesso e verifiche

11ebceb4-e1f8-8df7-a7b8-0242699101a7

← Back

Description: test corso bologna

Overview Input values Output values

node_ip: 192.135.24.197

ssh_account: pveronesi

```
192.135.24.197 |
login as pveronesi
Authenticating with public key "veronesi infnbo rsa" from agent
Last login: Mon Jun 21 12:25:44 2021 from nbveronesi.bo.infn.it
[pveronesi@vnode-0 ~]$
```

```
[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
libgomp.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 ~]$
```

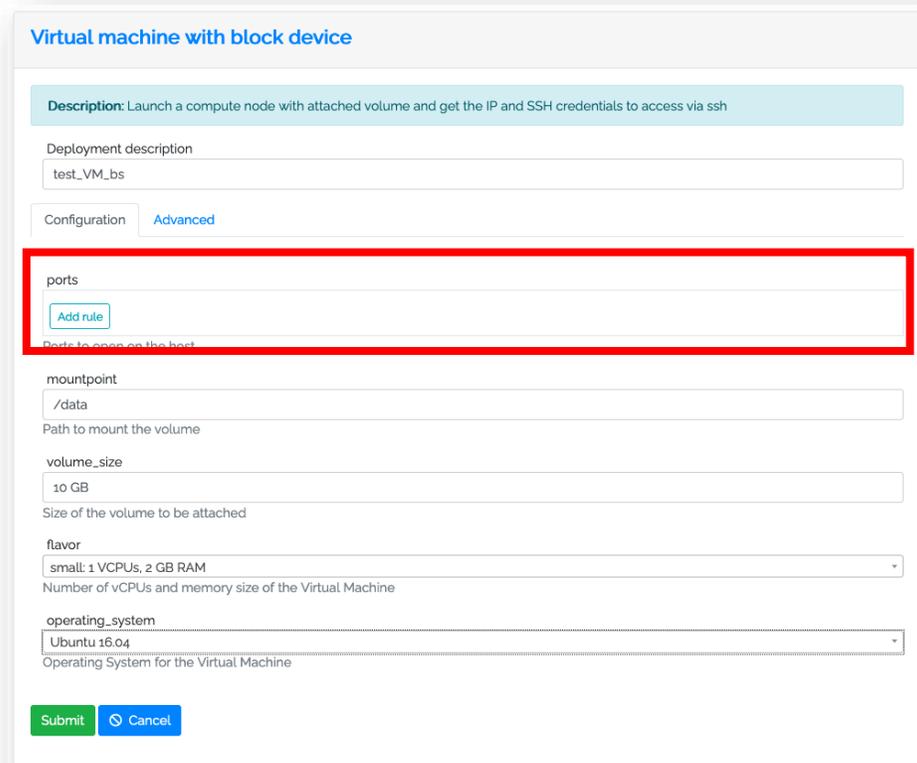
- Faccio partire il servizio e verifico ancora le porte http e https

```
[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/>



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Add rule

Ports to open on the host

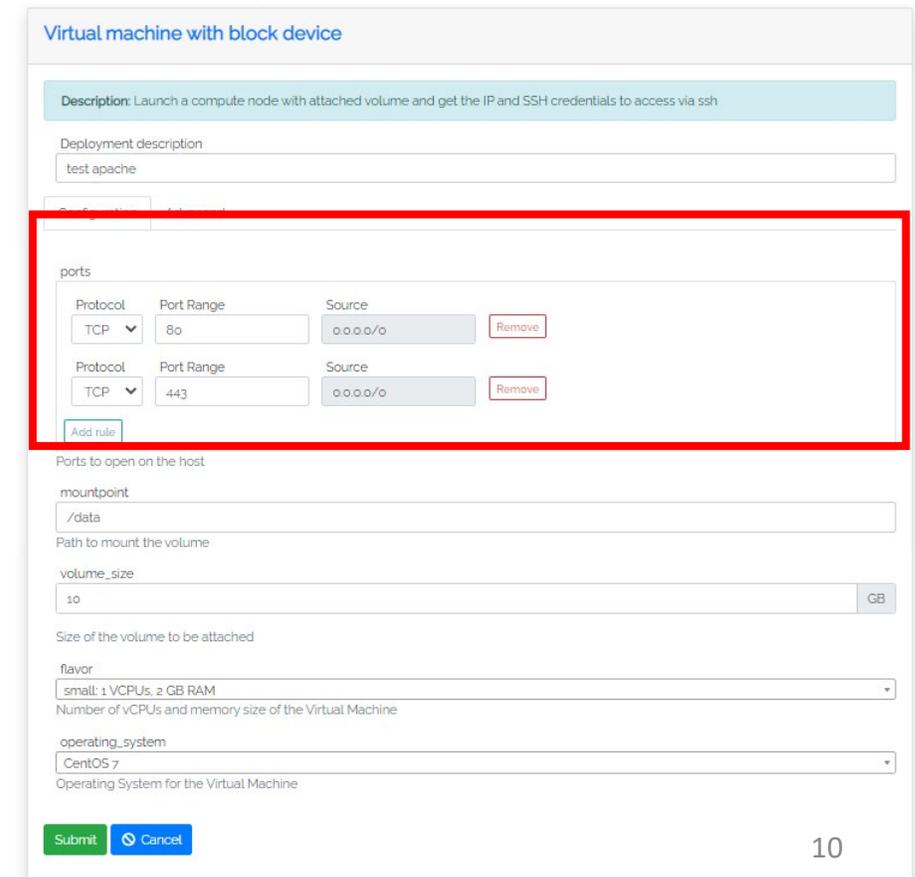
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Number of vCPUs and memory size of the Virtual Machine

operating_system
Ubuntu 16.04
Operating System for the Virtual Machine

Submit Cancel



Virtual machine with block device

Description: Launch a compute node with attached volume and get the IP and SSH credentials to access via ssh

Deployment description
test apache

ports

Protocol	Port Range	Source	
TCP	80	0.0.0.0/0	Remove
TCP	443	0.0.0.0/0	Remove

Add rule

Ports to open on the host

mountpoint
/data
Path to mount the volume

volume_size
10 GB
Size of the volume to be attached

flavor
small: 1 VCPUs, 2 GB RAM
Number of vCPUs and memory size of the Virtual Machine

operating_system
CentOS 7
Operating System for the Virtual Machine

Submit Cancel

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:
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 - 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/UCPLI3o9k2Fw96ByCukYWNkg/featured](https://www.youtube.com/channel/UCPLI3o9k2Fw96ByCukYWNkg/featured)