# Run Docker / Docker compose

Uso e sviluppo di applicazioni su INFN Cloud

Emidio Giorgio

# Overview

- Run Docker
- Docker compose

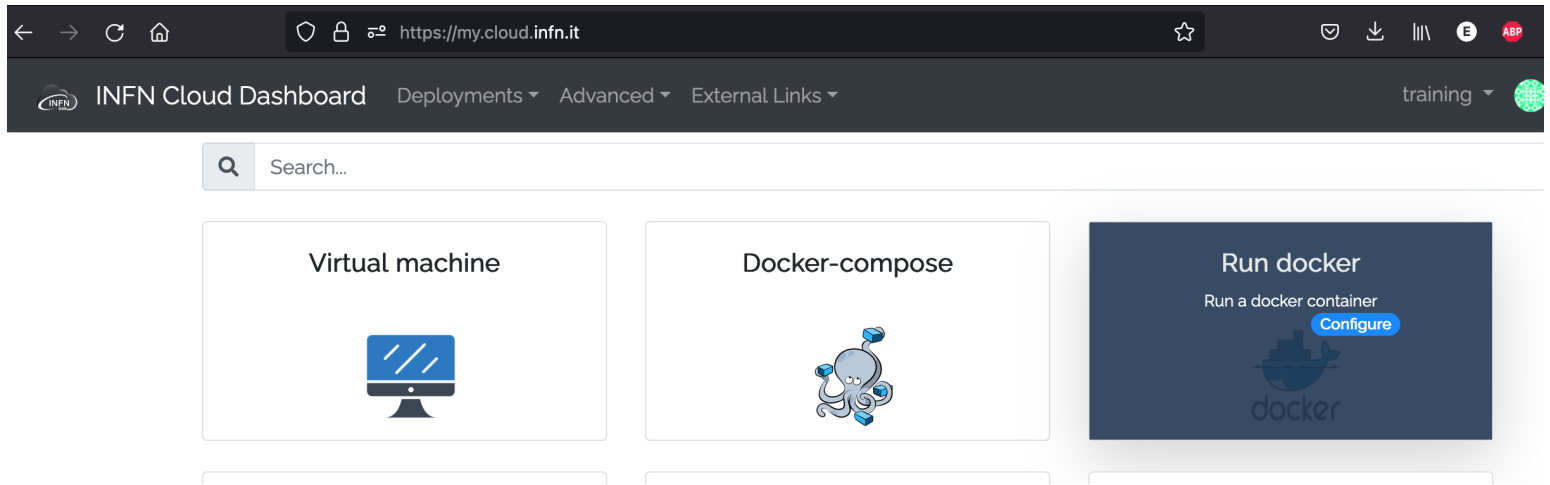
# Run Docker

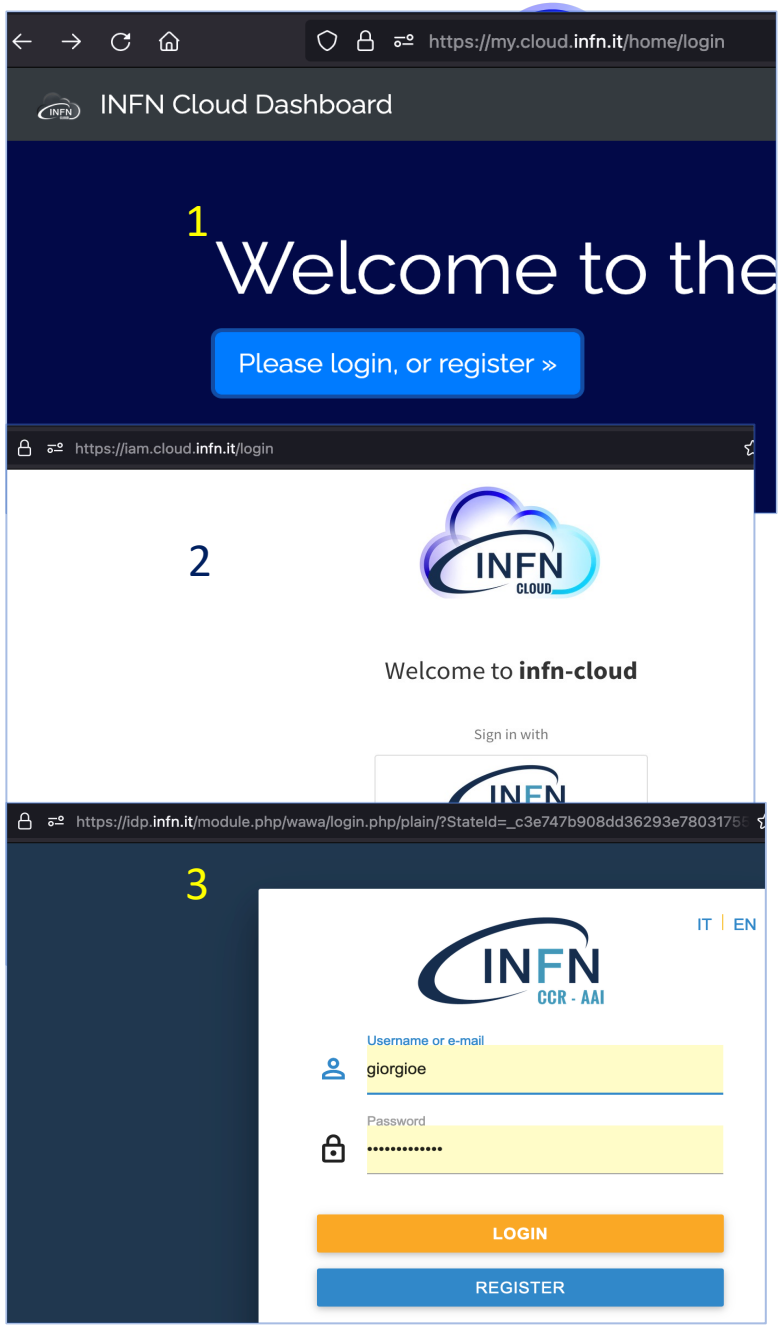
- Istanzia un container attraverso la dashboard di INFN Cloud
- L'utente che istanzia è pienamente responsabile del contenuto del container
- Si può scegliere qualunque container da docker hub o dal registry di INFN Cloud

- **Prerequisiti: oltre alla registrazione su IAM/INFN Cloud, è necessaria la nomina di amministratore di sistema**

# Deploy di un container /1

- Login to https://my.cloud.infn.it
- Seleziona Run Docker

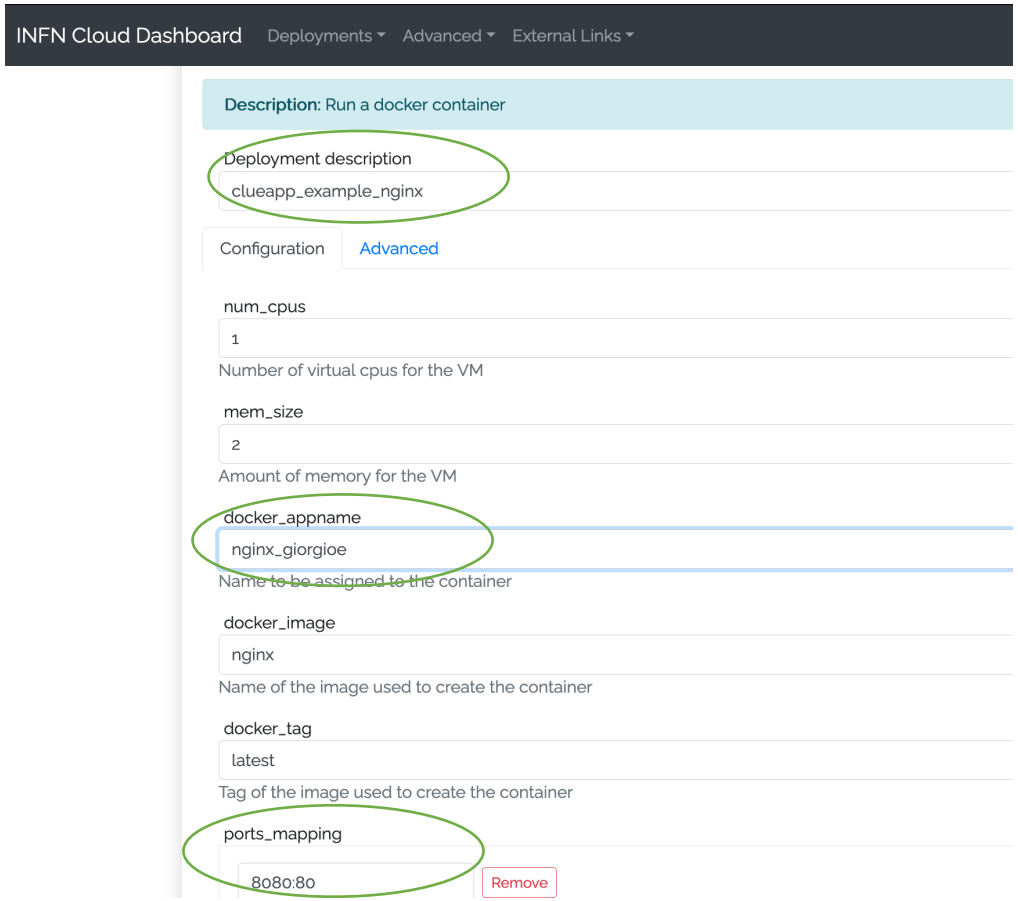



- **Video tutorial: https://www.youtube.com/watch?v=MW8_xGzT154**

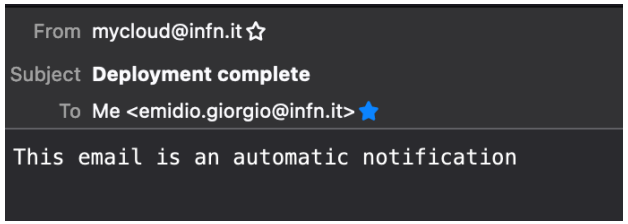
# Deploy di un container /2

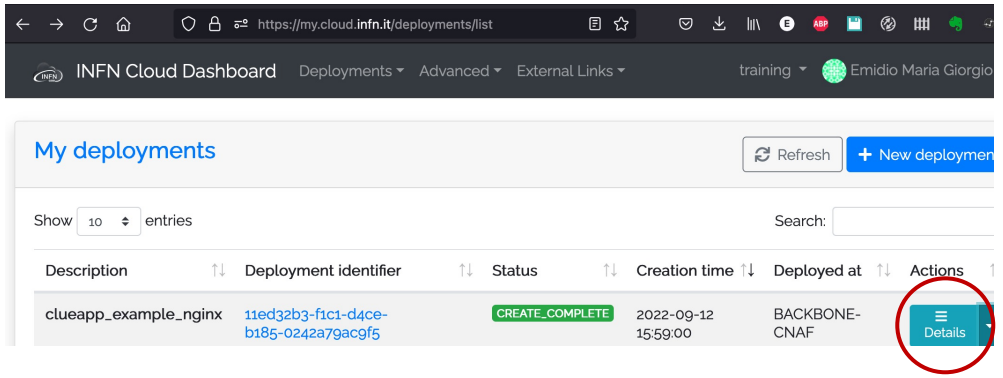
- Parametri fondamentali
  - **Deployment description**
  - **Docker image** : può essere qualunque cosa pubblicata su docker hub
  - **Ports mapping** (l'apertura delle porte diversa dal default va richiesta esplicitamente, vedi qui)

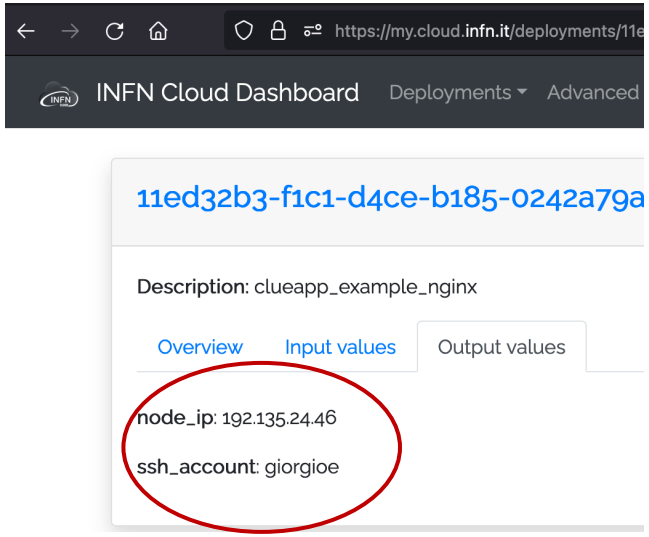



- **Controllare la documentazione per maggiori dettagli sui parametri e la lista di porte aperte**
- **https://guides.cloud.infn.it/docs/users-guides/en/latest/users_guides/howto8.html**

# Access deployment



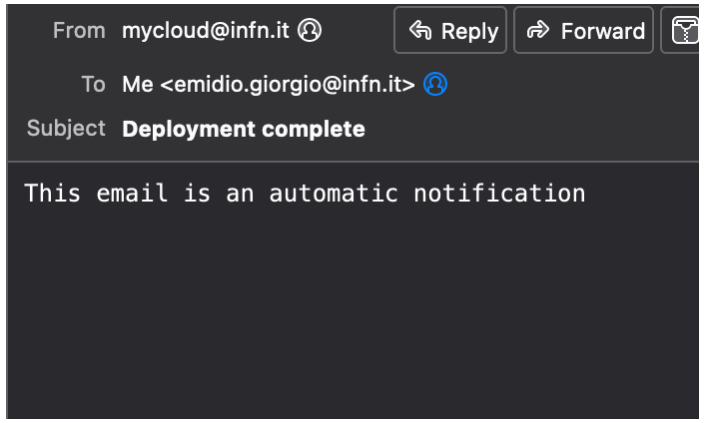



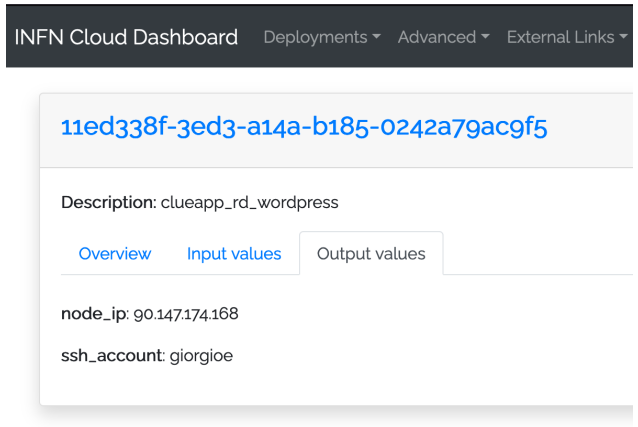

```
emidio@stoner: ~ $ ssh -i .ssh/id_rsaAnsible giorgioe@192.135.24.46
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-122-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Mon Sep 12 16:24:06 UTC 2022

  System load:  0.0               Processes:               114
  Usage of /:   24.5% of 9.51GB   Users logged in:         0
  Memory usage: 18%               IPv4 address for docker0: 172.17.0.1
  Swap usage:   0%                IPv4 address for ens3:    192.168.245.235


37 updates can be applied immediately.
27 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

New release '22.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.


Last login: Mon Sep 12 16:24:01 2022 from 192.84.151.58
giorgioe@vnode-0:~$ sudo su -
root@vnode-0:~# docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED          STATUS          PORTS                  NAMES
12ab933062aa   nginx:latest   "/docker-entrypoint.…"   18 minutes ago   Up 18 minutes   0.0.0.0:8080->80/tcp   nginx_giorgioe
root@vnode-0:~#
```

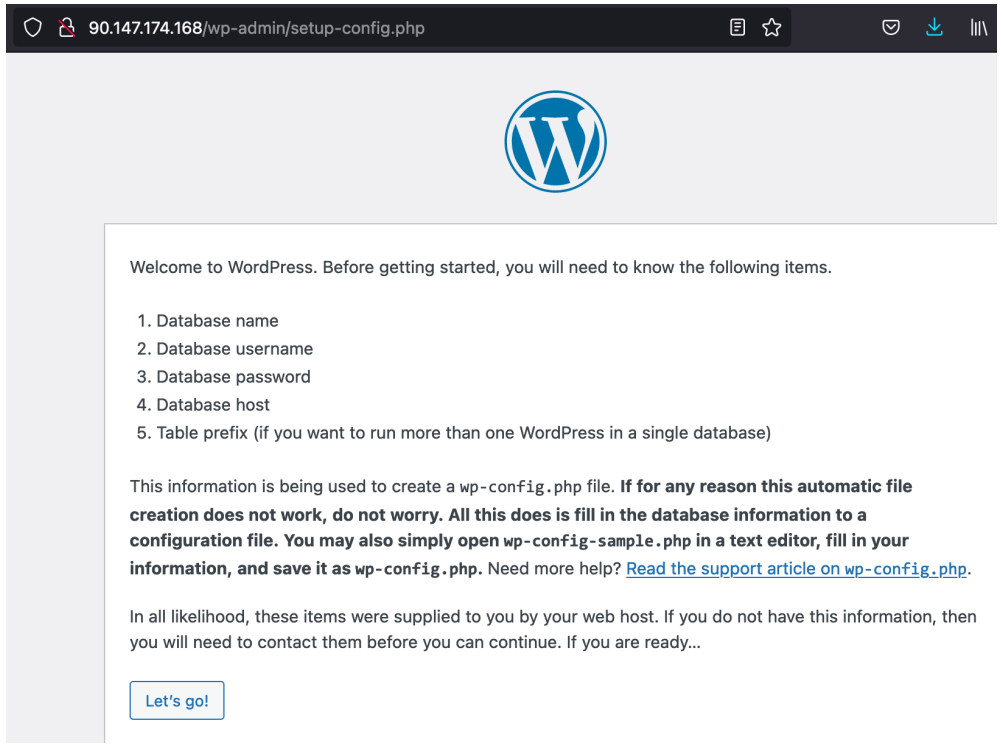
# Tutorial

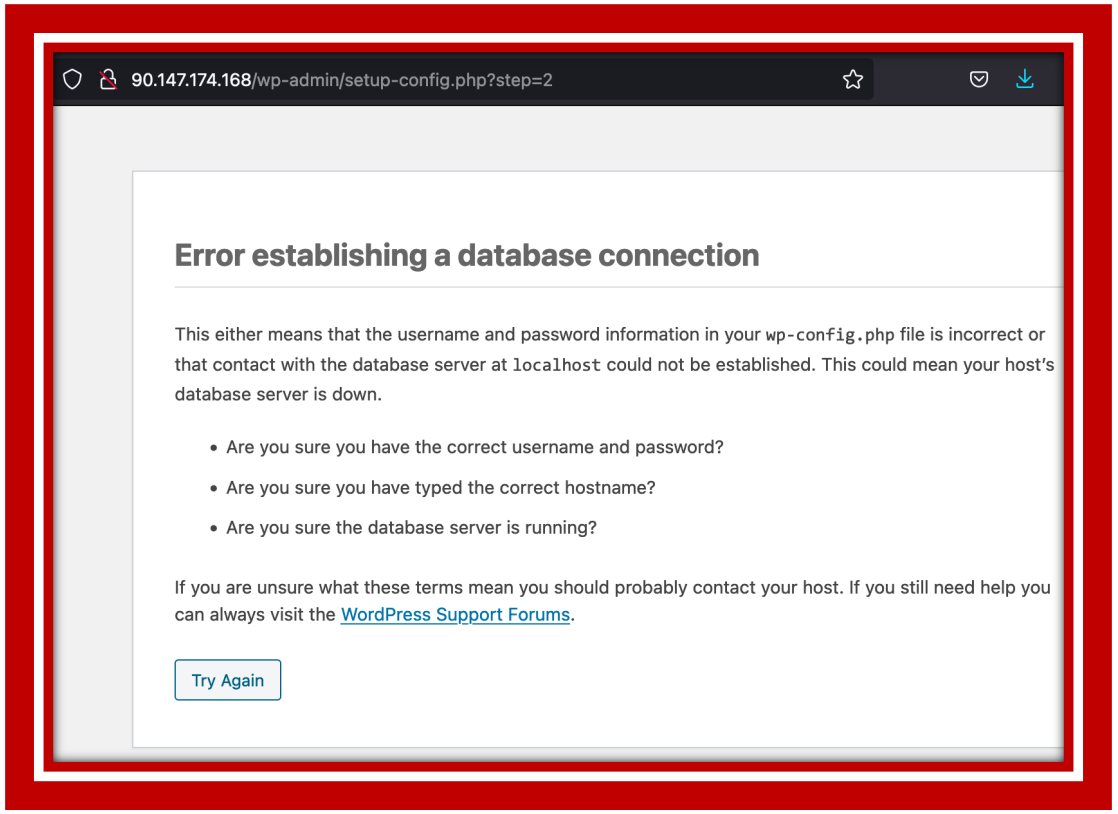
- Deployment description: clueapp_rd_wordpress
- Docker_image: wordpress
- Ports_mapping : 80:80
- Service_ports: Protocol TCP Port Range 80, Source 0.0.0.0/0

# Tutorial /2


From mycloud@infn.it
Reply
Forward
To Me <emidio.giorgio@infn.it>
Subject Deployment complete
This email is an automatic notification


INFN Cloud Dashboard
Deployments
Advanced
External Links
11ed338f-3ed3-a14a-b185-0242a79ac9f5
Description: clueapp_rd_wordpress
Overview
Input values
Output values
node_ip: 90.147.174.168
ssh_account: giorgioe


90.147.174.168/wp-admin/setup-config.php
Welcome to WordPress. Before getting started, you will need to know the following items.
1. Database name
2. Database username
3. Database password
4. Database host
5. Table prefix (if you want to run more than one WordPress in a single database)
This information is being used to create a wp-config.php file. If for any reason this automatic file creation does not work, do not worry. All this does is fill in the database information to a configuration file. You may also simply open wp-config-sample.php in a text editor, fill in your information, and save it as wp-config.php. Need more help? Read the support article on wp-config.php.
In all likelihood, these items were supplied to you by your web host. If you do not have this information, then you will need to contact them before you can continue. If you are ready...
Let's go!

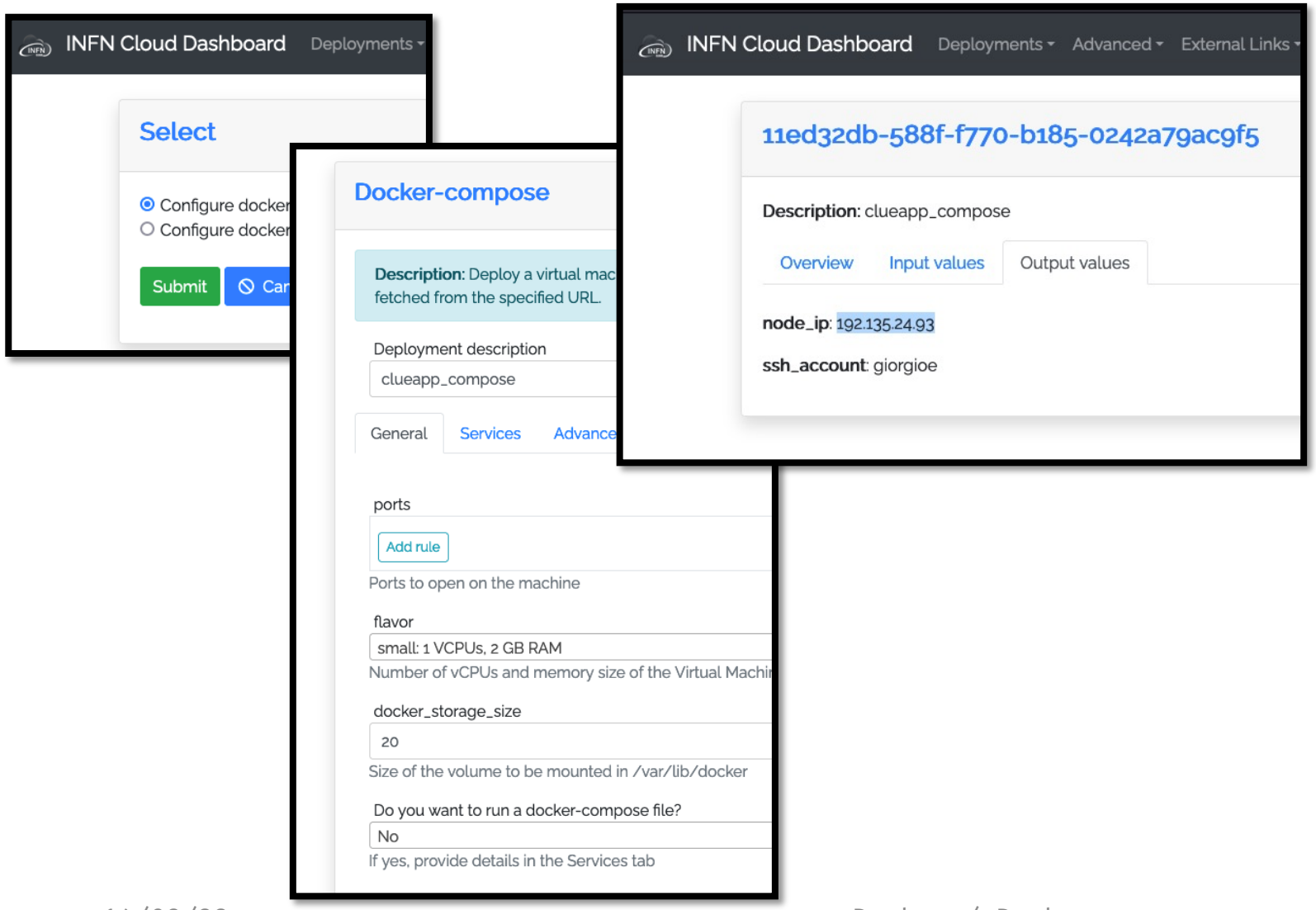

90.147.174.168/wp-admin/setup-config.php?step=2
Error establishing a database connection
This either means that the username and password information in your wp-config.php file is incorrect or that contact with the database server at localhost could not be established. This could mean your host's database server is down.
• Are you sure you have the correct username and password?
• Are you sure you have typed the correct hostname?
• Are you sure the database server is running?
If you are unsure what these terms mean you should probably contact your host. If you still need help you can always visit the WordPress Support Forums.
Try Again

# Docker compose

- Istanzia un insieme di containers
- L'utente è pienamente responsabile del comportamento dei container
- Si può specificare un url (pubblico) da dove scaricare il docker-compose file oppure farne l'upload dopo il deployment
  - Nel compose si possono scegliere qualunque container da docker hub o dal registry di INFN Cloud

- **Prerequisiti: oltre alla registrazione su IAM/INFN Cloud, è necessaria la nomina di amministratore di sistema**

# Docker compose/2




```
emidio@stoner: ~ $ ssh -i .ssh/id_rsaAnsible giorgioe@192.135.24.93
The authenticity of host '192.135.24.93 (192.135.24.93)' can't be established.
ED25519 key fingerprint is SHA256:/128HAZERlyiZ2AgZXKTkq2Jaiy5S8vUSQlElryDaFU.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.135.24.93' (ED25519) to the list of known hosts.
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-122-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Mon Sep 12 20:51:54 UTC 2022

  System load:  0.02              Processes:               114
  Usage of /:   22.9% of 9.51GB   Users logged in:         0
  Memory usage: 18%               IPv4 address for docker0: 172.0.17.1
  Swap usage:   0%                IPv4 address for ens3:    192.168.245.53


37 updates can be applied immediately.
27 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

New release '22.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.



The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

giorgioe@vnode-0:~$ sudo su -
root@vnode-0:~# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
root@vnode-0:~#
```

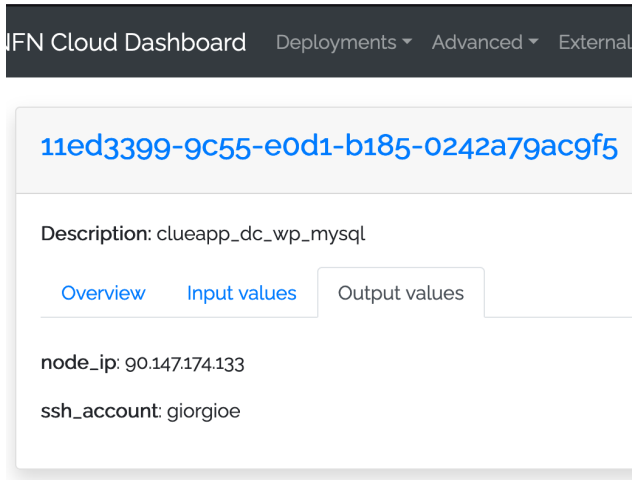
# Tutorial

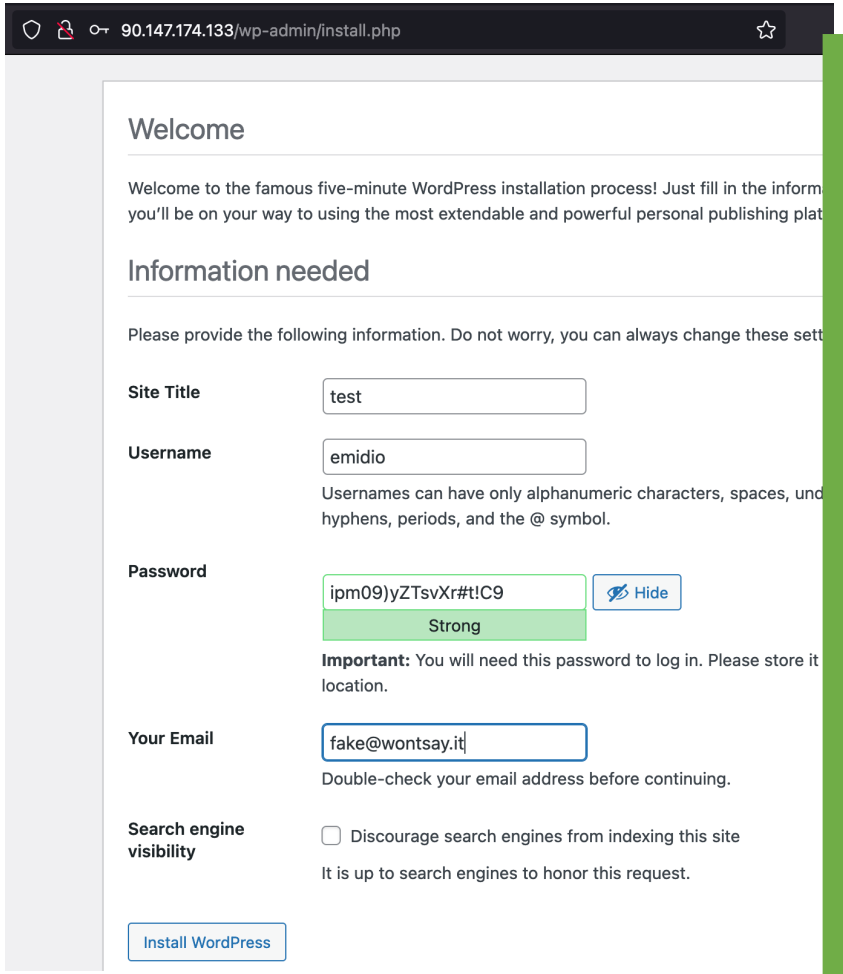
- Configure docker storage on a external volume

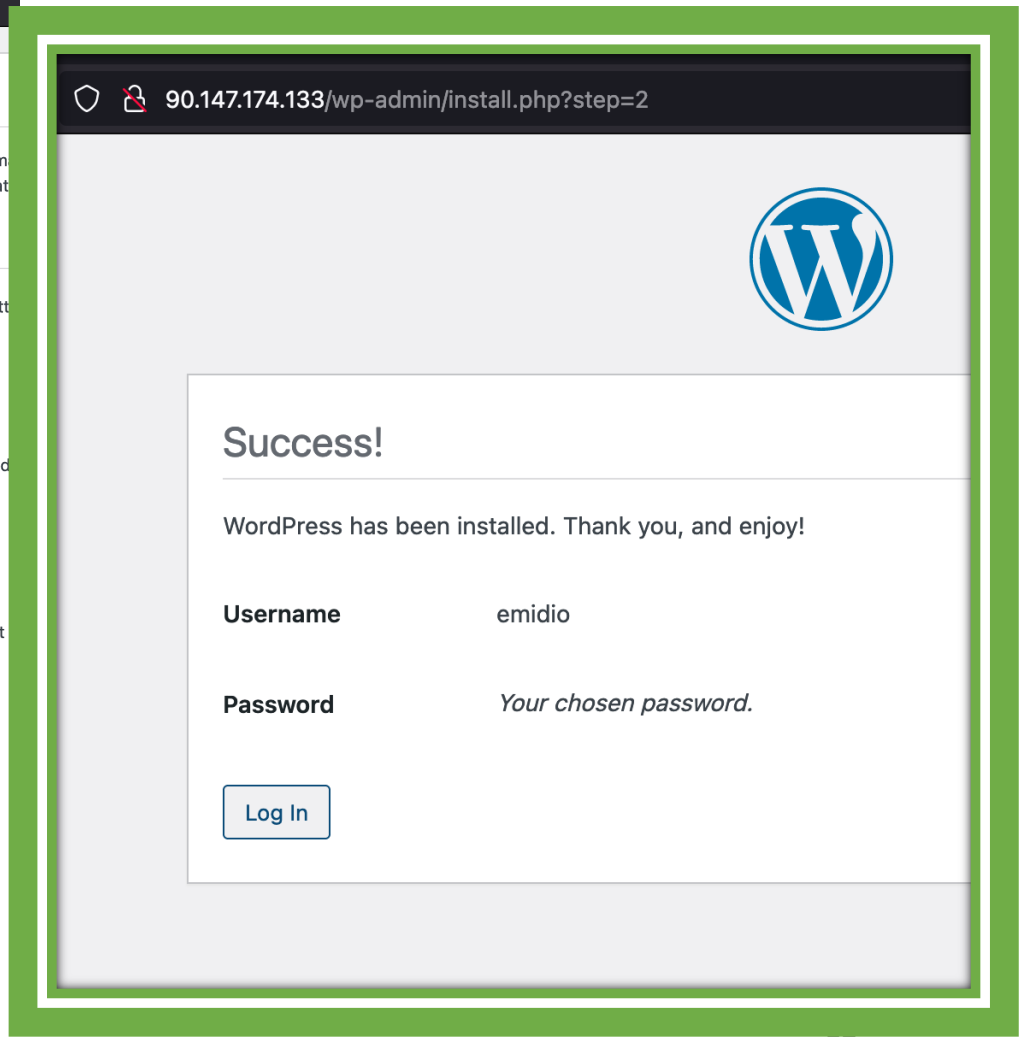
- Deployment description: clueapp_dc_wp_mysql
- Ports: Protocol TCP Port Range 80, Source 0.0.0.0/0
- Do you want to run a docker-compose file ? Yes

Sul tab services
- Docker_compose_file_url: https://l.infn.it/clueapp-dc

# Tutorial /2


FN Cloud Dashboard
Deployments
Advanced
External
11ed3399-9c55-e0d1-b185-0242a79ac9f5
Description: clueapp_dc_wp_mysql
Overview
Input values
Output values
node_ip: 90.147.174.133
ssh_account: giorgioe


90.147.174.133/wp-admin/install.php
Welcome
Welcome to the famous five-minute WordPress installation process! Just fill in the inform
you'll be on your way to using the most extendable and powerful personal publishing plat
Information needed
Please provide the following information. Do not worry, you can always change these sett
Site Title
test
Username
emidio
Usernames can have only alphanumeric characters, spaces, und
hyphens, periods, and the @ symbol.
Password
ipm09)yZTsvXr#t!C9
Hide
Strong
Important: You will need this password to log in. Please store it
location.
Your Email
fake@wontsay.it
Double-check your email address before continuing.
Search engine visibility
Discourage search engines from indexing this site
It is up to search engines to honor this request.
Install WordPress


90.147.174.133/wp-admin/install.php?step=2
Success!
WordPress has been installed. Thank you, and enjoy!
Username
emidio
Password
Your chosen password.
Log In