

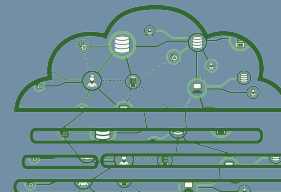


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Strategies for data and computation movements in fog computing

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DITAS
Data-intensive applications
Improvement by moving data
and computation in mixed
cloud/fog environments

Tutorial structure



1. Introduction to fog computing
2. Data and computation movement
 - Hands on section
3. Strategies for movement



Initial steps

Download required files

1. Go to: <http://salnitri.facoultty.polimi.it>
2. Go to “teaching section”
3. Go to RE 19 tutorial
4. Download file and slides

If it is too slow we have USB keys.

For Linux users

Install docker

1. Download and install (Install Docker Engine - Community)
 - -Linux, Ubuntu:
 - <https://docs.docker.com/install/linux/docker-ce/ubuntu/>
 - -Linux, CentOS:
 - <https://docs.docker.com/install/linux/docker-ce/centos/>
 - -Linux, Debian:
 - <https://docs.docker.com/install/linux/docker-ce/debian/>
 - -Linux, Fedora:
 - <https://docs.docker.com/install/linux/docker-ce/fedora/>
2. Add your user to Docker group

```
sudo usermod -aG docker $USER
```

3. Logout and login

Install kubeCTL

- <https://kubernetes.io/docs/tasks/tools/install-kubect/>

For Linux users

Install kind

1. Download Kind

- <https://github.com/kubernetes-sigs/kind/releases>

2. Rename it “kind”

3. Make it executable

```
chmod +x kind
```

4. Export environment variable

```
$ export PATH=$PATH:/path/to/kind
```

- For mac users

1. Install docker for mac:

- <https://docs.docker.com/docker-for-mac/install/>

2. Install kubeCTL from

- <https://kubernetes.io/docs/tasks/tools/install-kubect/>

3. Install kind

- Download here
 - <https://github.com/kubernetes-sigs/kind/releases>
- Make it executable
- Move kind in bin directory
 - `sudo mv kind /usr/local/bin/.`

For windows users

1. Install virtual box
2. Download the virtual machine image
 - https://drive.google.com/open?id=1v57aogeypXreOV6s6sbaq5_9xYK_QTzC
 - Password “secret123”
3. Import it (it can take a while)
 - Add ram (at least 2 GB)
4. Open a shell
5. Export variable in Path:

```
export PATH=$PATH:$(go env GOPATH)/bin
```