

SparkSQL lab

Zoe login

- <https://cloud-platform.eurecom.fr/zoe/login>
- Click on EURECOM gitlab and login with EURECOM creds



Username:

Password:

Login


Or login with:

Eurecom GitLab

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Clouds ZApp


- Click on Zapp Shop option and click on CLOUDS


 [Home](#) [ZApp shop](#) [Executions](#) [Status](#) [Users](#) [Roles](#) [Quotas](#) appuswam (admin) logout


ZApp shop

Data science



Distributed PySpark notebook



R notebook



Data science notebook


Data science notebook GPU

Labs



CLOUDS


MALIS


AML

Spark cluster

- Leave default options and click on “Start”



CLOUDS Lab ZApp

This ZApp must be used during the laboratory activities of the CLOUDS course at Eurecom.

Combine the full power of a distributed Apache Spark cluster with Python Jupyter Notebooks.

Spark is configured in stand-alone, distributed mode. This ZApp contains Spark version 2.2.2.

To start clone the repository at <https://github.com/EURECOM-CLOUDS-COURSE> and open the notebook corresponding to the laboratory session you are in.

ZApp details

This ZApp is composed by the following services:

- 1 spark-master (1 essential)
 - Suggested memory allocation: 1.00 GiB
 - Suggested CPU core allocation limit: 1
- Image: `zapps/spark-master:10396`
- 2 spark-worker (1 essential)
 - Suggested memory allocation: 12.0 GiB
 - Suggested CPU core allocation limit: 3
- Image: `zapps/spark-worker:10396`
- 1 spark-jupyter (1 essential)
 - Suggested memory allocation: 12.0 GiB
 - Suggested CPU core allocation limit: 2
- Image: `zapps/spark-jupyter-notebook:10396`

The following persistent volumes will be available:

- `/mnt/workspace`: User workspace (RW)
- `/mnt/datasets` (RO)

Start-up parameters:

EXECUTION NAME:

spark-master

MEMORY ALLOCATION (GiB)

1.0

MINIMUM CORE ALLOCATION:

1

spark-worker

MEMORY ALLOCATION (GiB)

12.0

MINIMUM CORE ALLOCATION:

3

spark-jupyter

MEMORY ALLOCATION (GiB)

12.0

MINIMUM CORE ALLOCATION:

2

☐ Download JSON with these parameters for command-line execution

[Back to the ZApp shop](#)

Launch Jupyter

- Wait until “status” turns to running from queued
- Click “[Jupyter Notebook interface](#)” (internal link in EURECOM)
 - You can get to Spark master web i/f later from here

Detailed information for execution clouds (86711)

- Application name: clouds
- Owner: appuswam
- Time submitted: 11/13/2019, 9:28:50 PM
- Time started: 11/13/2019, 9:28:54 PM
- Time finished: not yet
- Status: **running**
- Will be killed at: 11/20/2019, 9:28:50 PM
- Actions: [Terminate](#)
- [Resource usage plots](#)

Endpoints

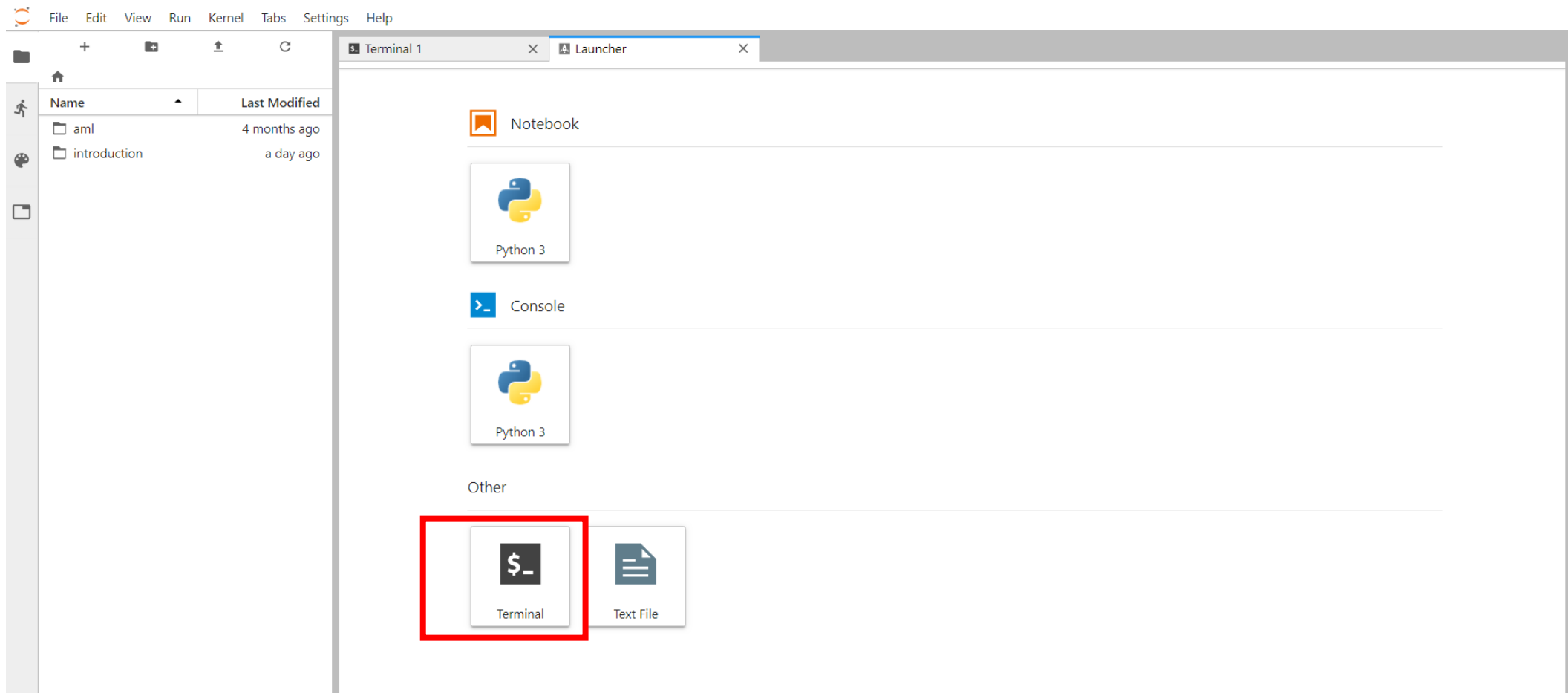
- [Jupyter Notebook interface \(internal link\)](#)
- [Spark master web interface \(http://192.168.47.8:34496/\)](#)

Services:

ID	Name	Zoe status	Backend status	Host	Labels	Output logs	Errors
93953	spark-master0	active	started	bf8	labs	open	None
93956	spark-jupyter0	active	started	bf16	labs	open	None
93954	spark-worker0	active	started	bf20	labs	open	None
93955	spark-worker1	active	started	bf22	labs	open	None

Launch terminal

- Click on “Terminal” in Jupyter launcher



Clone and launch notebook

- Clone git repository that contains first lab
 - “git clone <https://github.com/EURECOM-CLOUDS-COURSE/SparkSQL.git>” in the terminal
- You should see directory “SparkSQL” appear. Double click to enter the directory.
- Double click on file “SPARKSQL.ipynb” within directory to open up the notebook

Admin (same as before)

- For labs based on Zoe
 - Remote work possible: Zoe, notebooks accessible outside EURECOM
 - Its ok if you can't answer some questions due to UI access issues
 - Spark admin UI accessible only in EURECOM network
- **If spark terminates with error “Termination reason: Essential service spark-jupyter0 died”**
 - Email me (raja.appuswamy@eurecom.fr) to inform me and give me your UNIX username
- Submission deadline: **3 weeks (28 December)**
- To submit
 - Download the completed ipython notebook
 - Rename notebook as: “***yourname-spark-lab.ipynb***”
 - Upload the file to moodle