

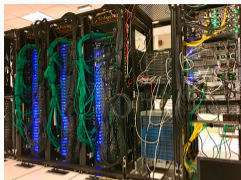
EXPERIMENTS ON FIT/IOT-LAB AND GRID'5000 USING ENOSLIB

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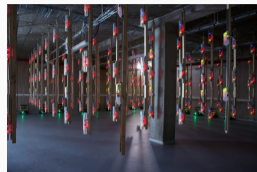
Polaris



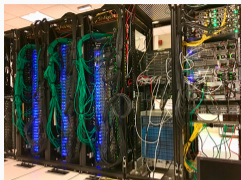
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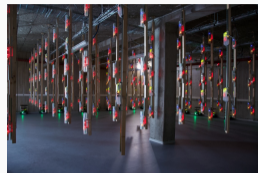
- Parallel and distributed computing
 - *powerful* resources
- Highly **configurable** and controllable
 - from **nodes** to **network**
- Large and old community



- Internet of Things
 - *constrained* resources
- **Multi-platform**: variety of boards
- **Multi-OS**: RIOT, contiki, linux, etc
- **Multi-topology**: fixed, some mobile nodes



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SILECS: the union of both worlds

Experiments: different objectives, same procedure...

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2. **Deploy** images, software
3. **Run** commands/applications
4. **Collect** results/data

Keep **track** of steps and commands made is **essential**

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EnOSlib - main concepts:

- **Provider**: anything that you can connect and run commands (e.g. **ssh**)
 - Vagrant
 - **Grid'5000**
 - Chameleon: US's "Grid'5000"
- **Services**: off-the-shelf tools (e.g. **docker**)
- **Monitoring**: TIG stack

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FIT/IoT-LAB provider:

- **Reserving** resources
- **Deploying** images: contiki, riot, etc.
- **Monitoring** resources
 - Monit. stack: A8 nodes
 - IoT-LAB tools: radio, energy, sniffer
- **Running** commands:
 - linux: ansible
 - sensors: serial interface

An example with Jupyter Lab

Conclusions

- **EnOSlib**: not the holy grail, but a nice step towards proper experimentation plans
- Enable the use of both platforms at the same time: Grid'5000 and FIT/IoT-LAB