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Using the jFed tool to experiment from zero to hero

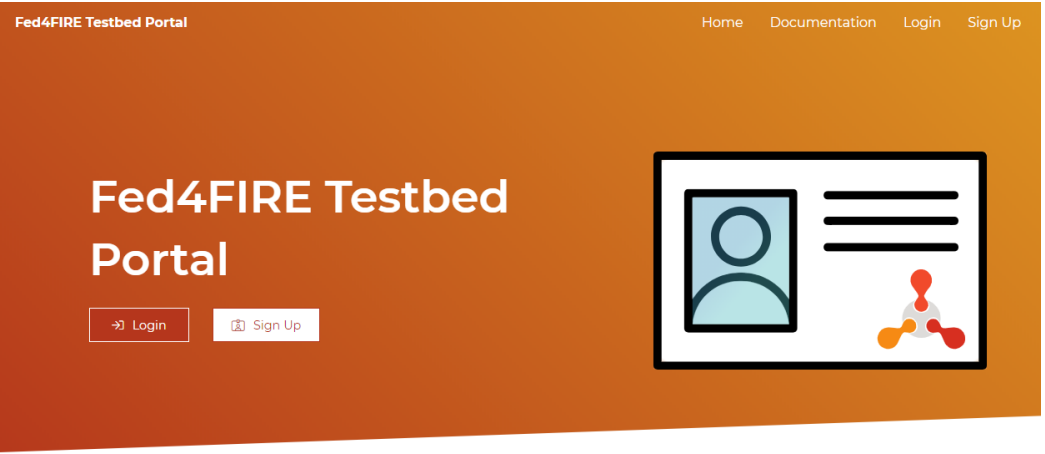
Tutorial

Starting simple

Going to advanced topics but still an easy user interface

Agenda:

- Account/projects
- Simple two-node experiment
- Overview of advanced features


Fed4FIRE Testbed Portal
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Fed4FIRE Testbed Portal
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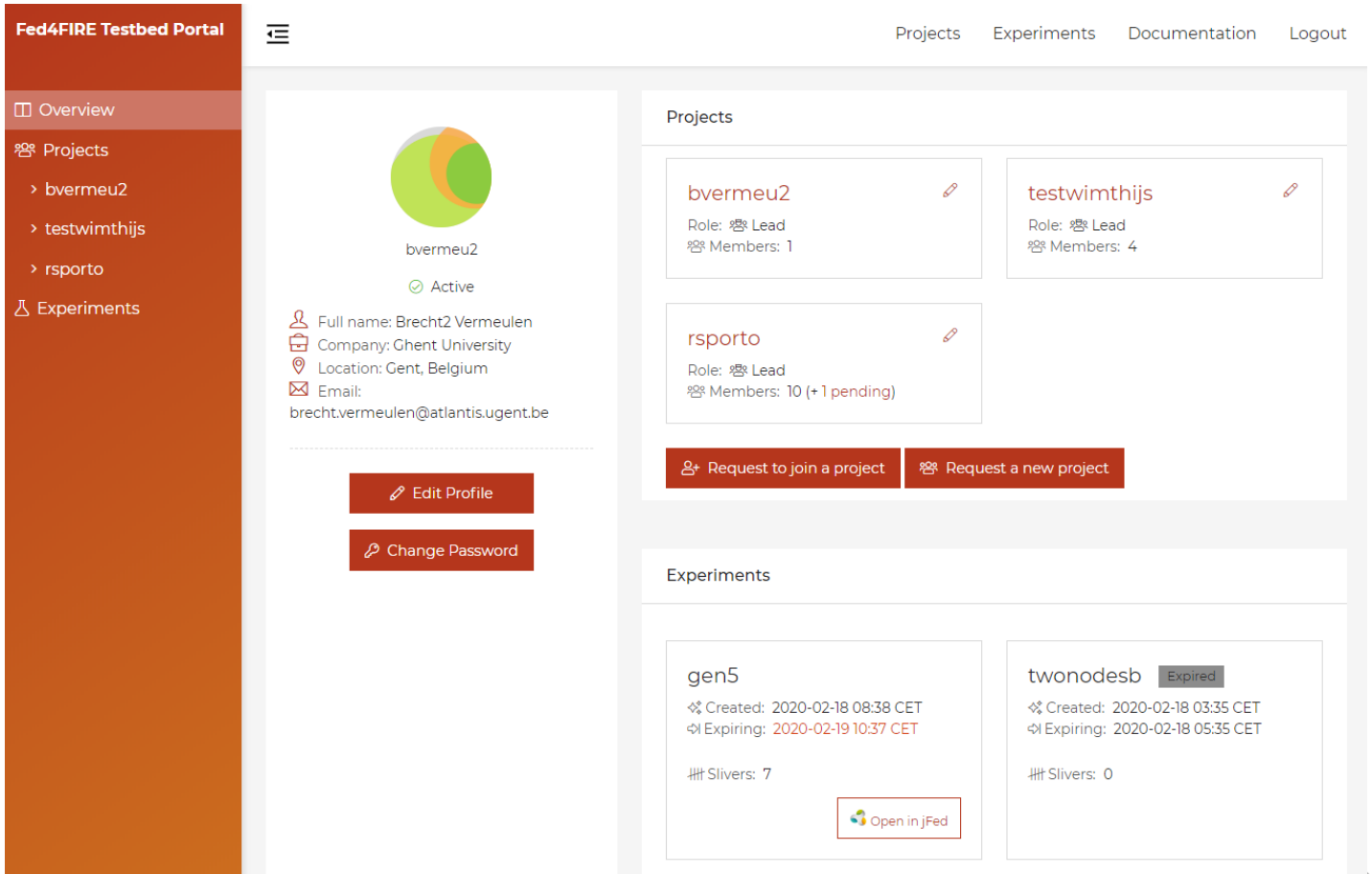
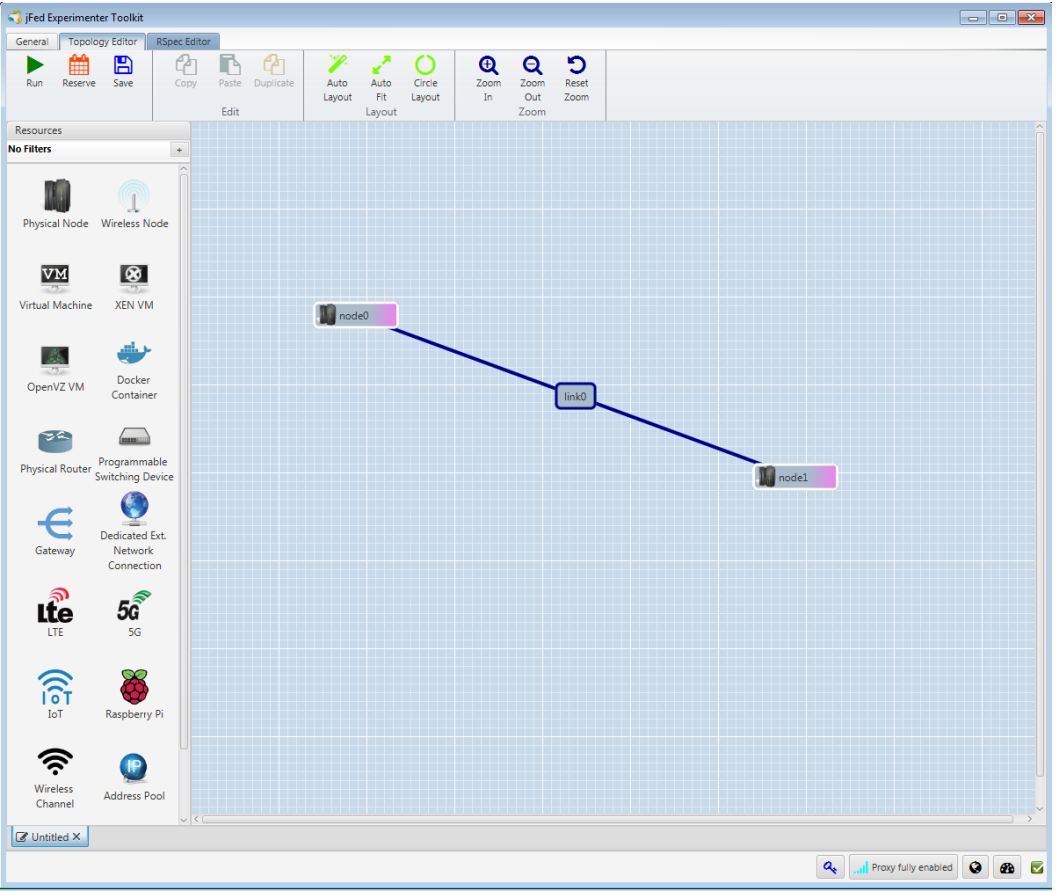
What is this Portal?
This Fed4FIRE Testbed Portal provides accounts for accessing testbed resources. The testbeds can be used to execute experiments. The accounts offer access to a large

Account

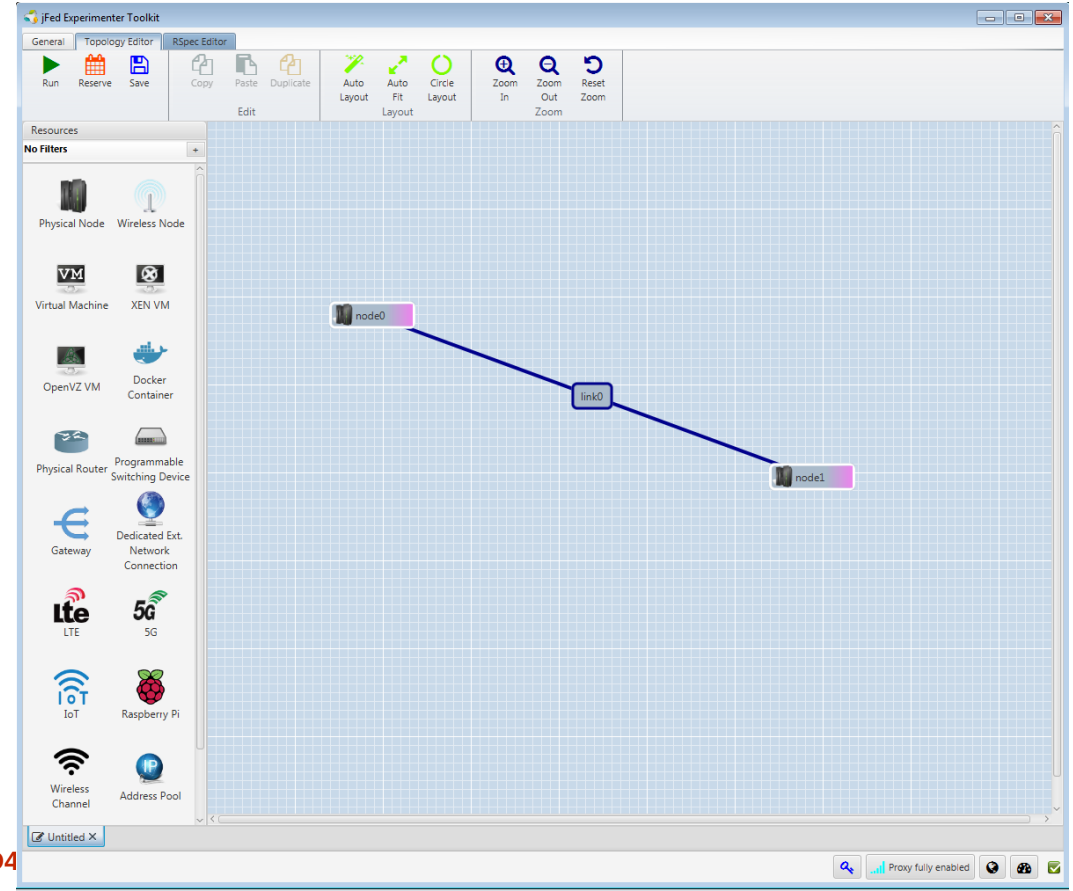
https://portal.fed4fire.eu



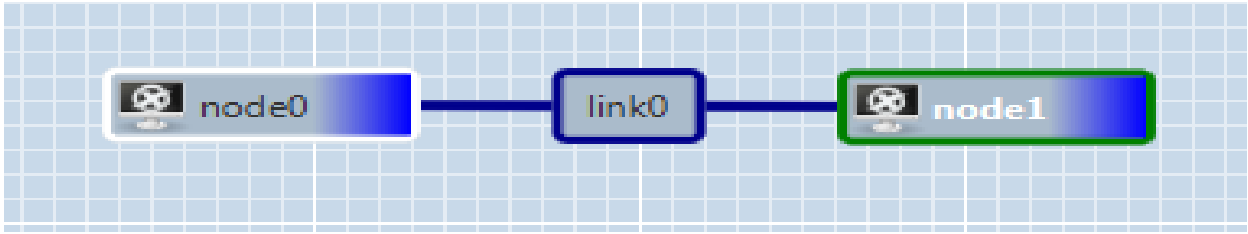


Basic experiment

https://jfed.ilabt.imec.be (download & doc)

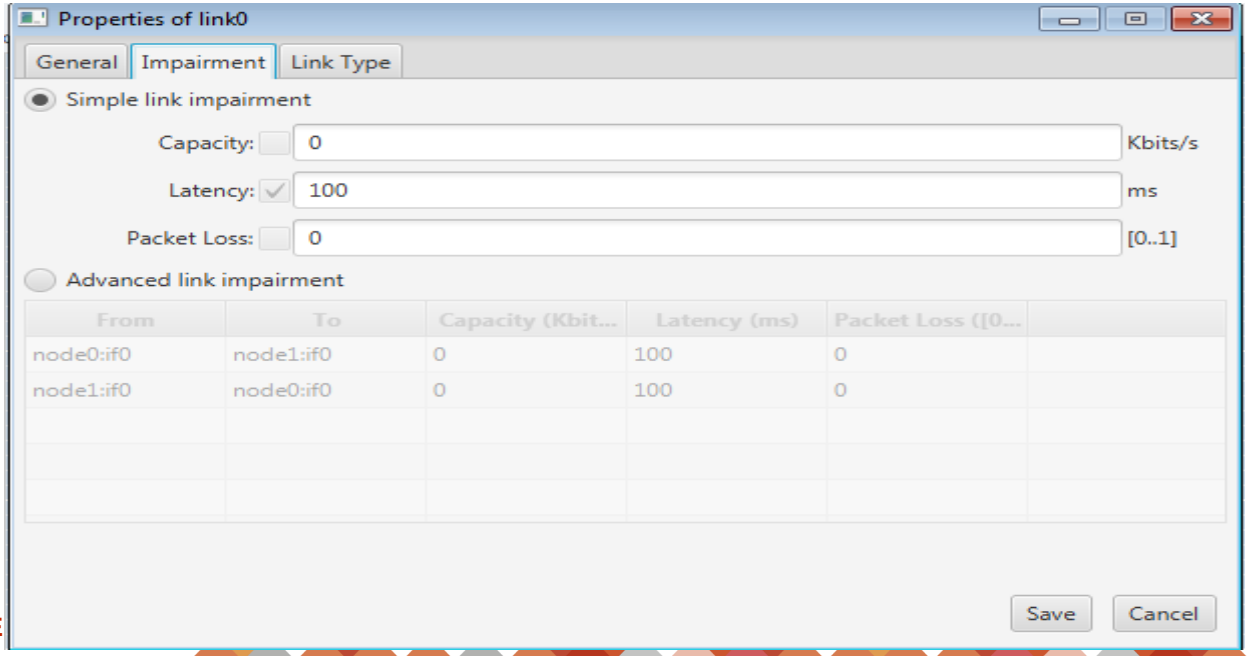


Setup



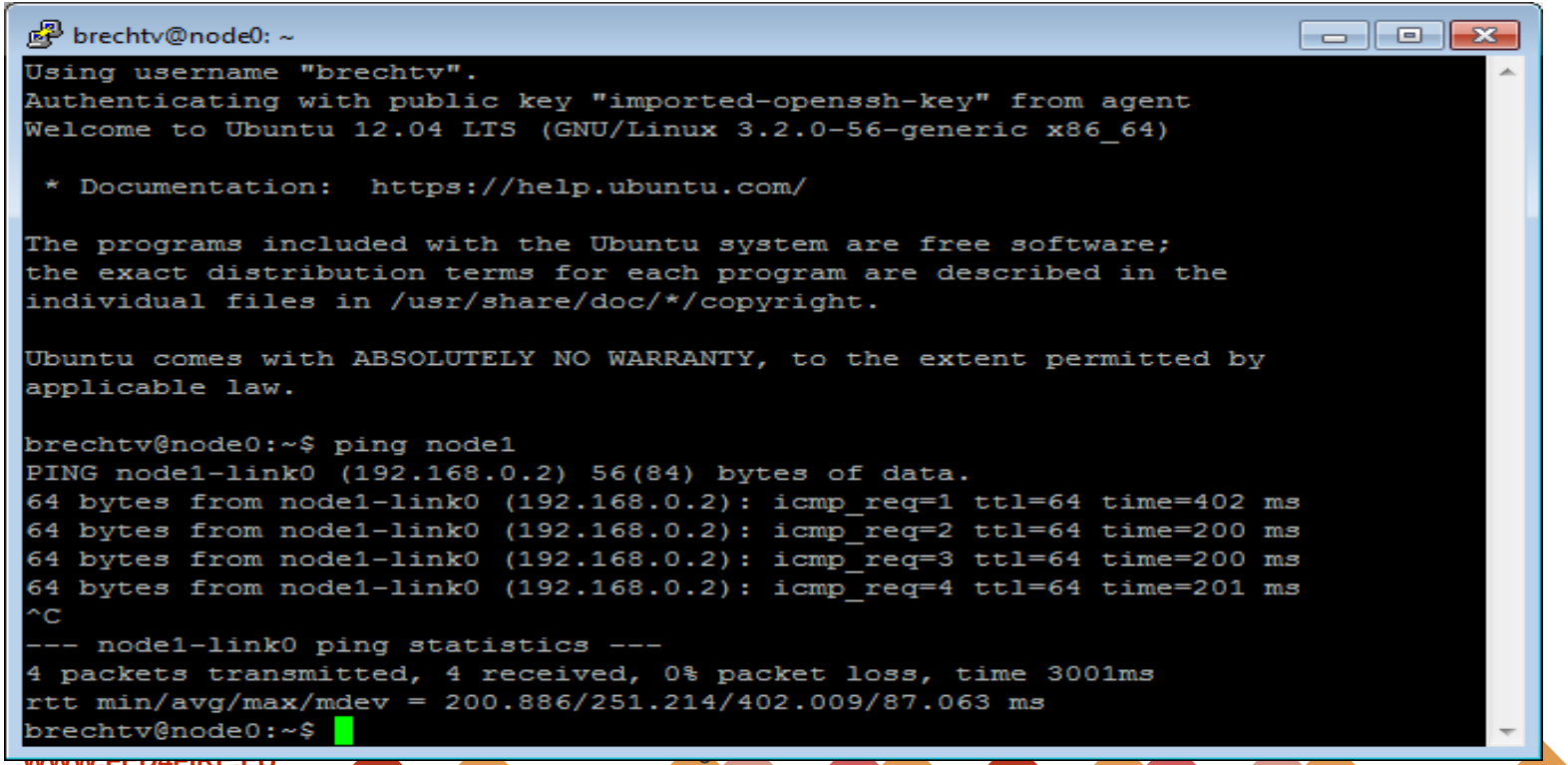
Draw your topology in jFed

Advanced link configuration (double click the link)

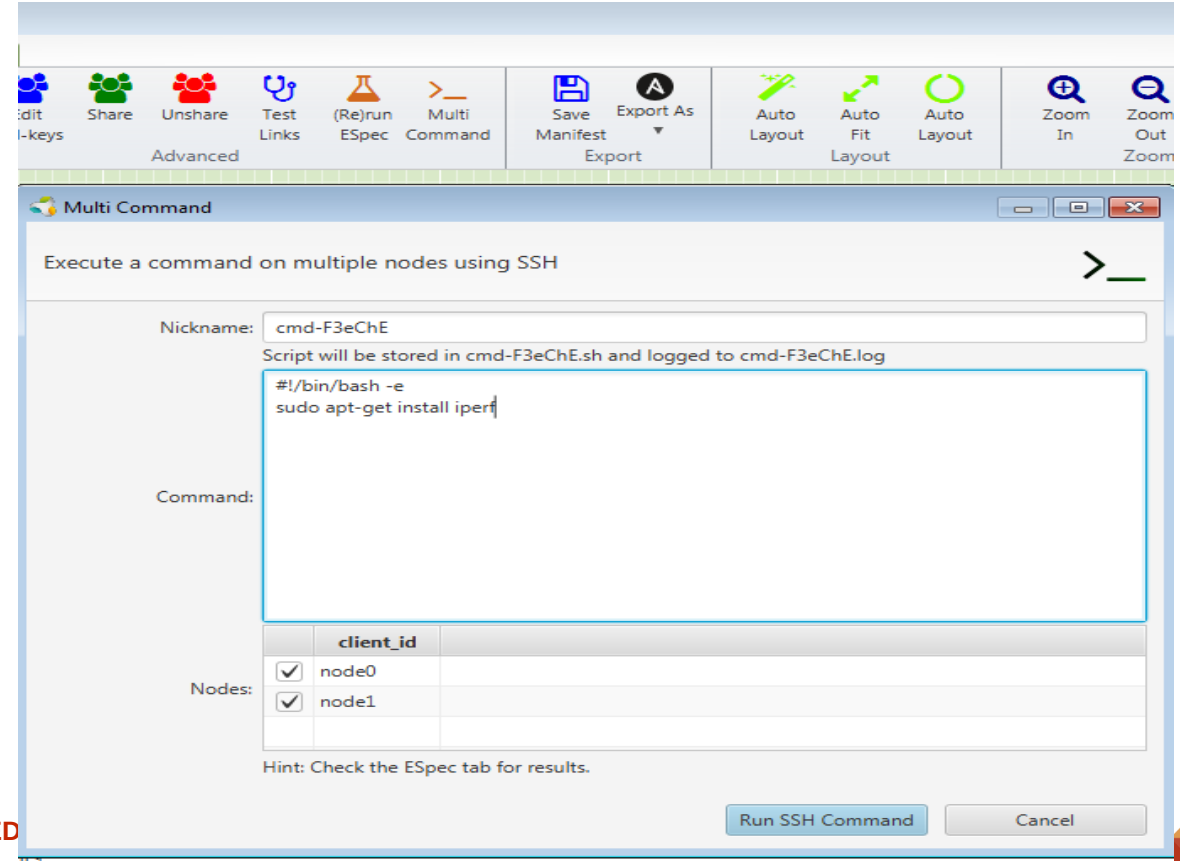


Login and ping

Double click the green (when it's ready) node in jFed



Install iperf on both nodes



Learning more

- Go back to the design mode (blue tab), and go to the rspec editor: you can also manually change things, save the RSpec, etc
- If you right click a node and configure it, you can also select images
- For XEN VMs you can configure RAM, extra disk, routable control IP. Also Exogeni can be selected under virtual machine and configured. (we will not start such an experiment)
- Go to the running experiment (bottom green tab), in RSpec view and verify details on nodes, login, RSpec manifest
- Information on options for a running node:
  - Node reload = reload the image for that node (=reformat the node)
  - Node info = detailed ssh info + interface info
  - Node reboot = simple reboot of the node
  - create image = will take an image of your node that you can use in new experiments (we won't do this now)

Info about the experiment on the node

- Geni-get commands
    - e.g. geni-get client_id
    - Geni-get commands
- wget https://doc.ilabt.imec.be/downloads/geni-get-info.py

  chmod u+x geni-get-info.py

  ./geni-get-info.py

Manage experiments

Renew in jFed can extend this (for all slivers), or you can renew in the portal (near future)

In jFed, you can Edit ssh keys on the nodes if you want to add other users (‘edit ssh keys button’)

If you close jFed, or have created an experiment with another tool, you can ‘recover’ this experiment

In jFed you can share the experiment with other people in your project, to make others member of the slice and be able to recover it in jFed e.g.

Let’s break and reboot

Verify that eth0 is your control interface (where you are logged in)

Turn off: ‘ifconfig eth0 down’, your ssh connection will be lost

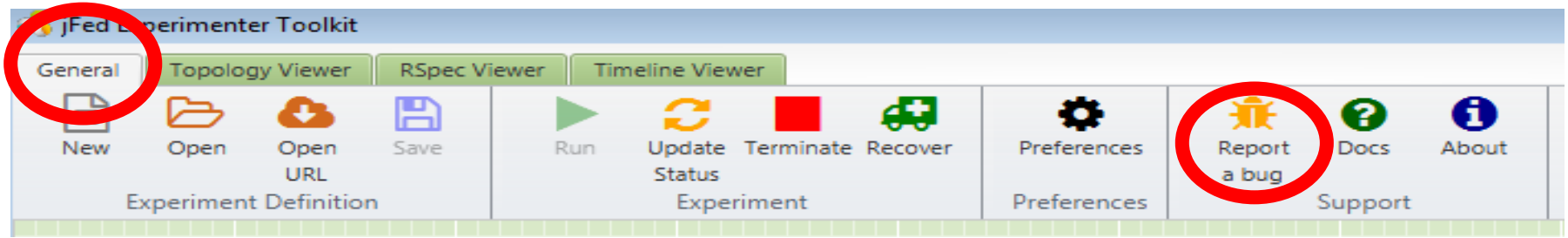
Fix it:

- Now, in jFed right click the node and click reboot
- After that you can access the node again

Terminate your experiment

That was your first experiment

If anything goes wrong, push bugreport button



Upscale further ?

Use the duplicate button in jFed

Use bash scripting to create RSpecs

Preferences overview

Ssh authentication: add your own key

Proxy: in case of firewall problems or to access IPv6 nodes

Ssh agent forwarding to login from node to node automatically: login on a node, and then ssh to another IP address in your topology

QUESTIONS ?

WWW.FED4FIRE.EU

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