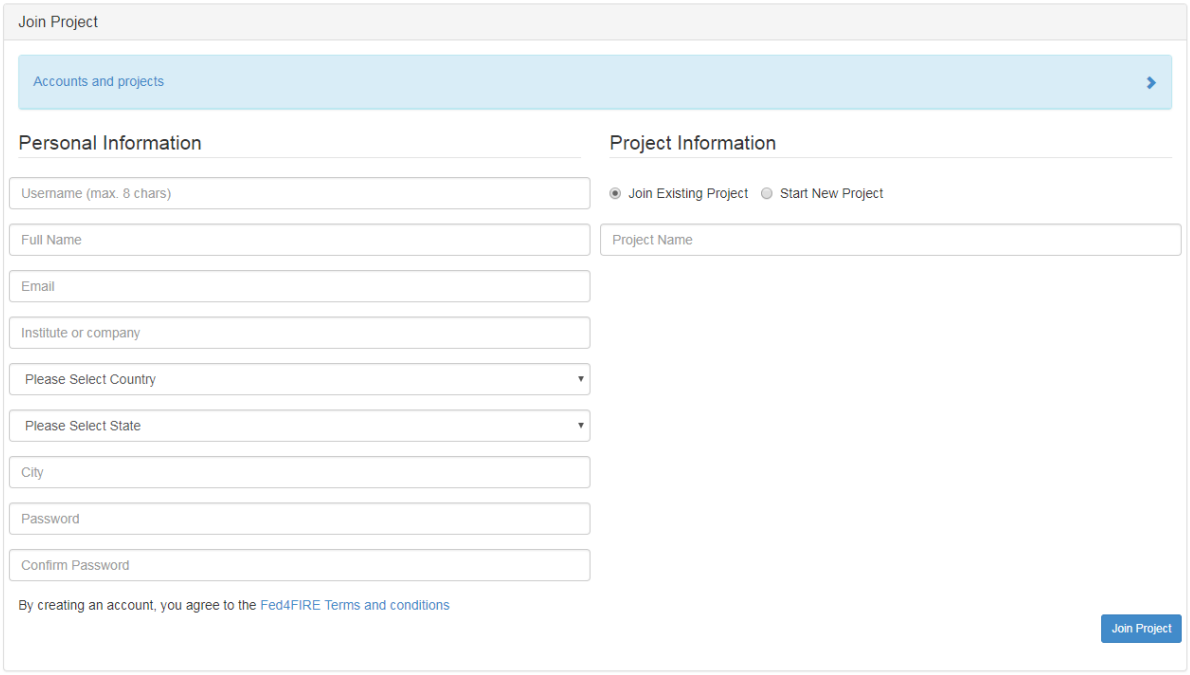
# Connect to the WiSHFUL Full Duplex Testbed

## 1. Get account

1. To use the testbed, you first need to get an account for FED4FIRE by registering on https://authority.ilabt.iminds.be/signup.php. If you want to run an experiment for the WISHFUL project, select **Join Existing Project** and fill in **Wishful** for the project name:




Once you registered, you will get a confirmation email with a verification code which you have to fill in on the registration website to complete your account.

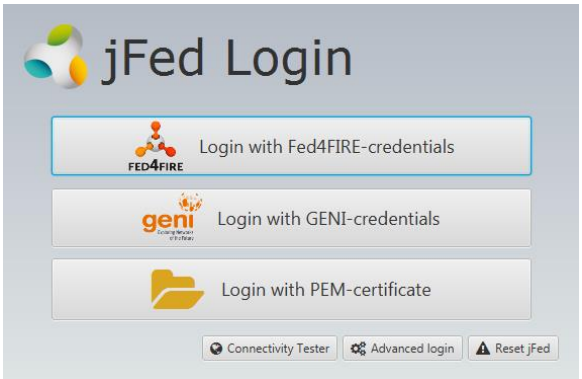
2. You also need an account to locally login on the Windows testbed. To get such an account, please contact the reservation manager via telemicreservations@esat.kuleuven.be. Mention the purpose of the experiment, as well as the duration you will need for your experiment.

## 2. Install the latest version of jFed

Go to http://jfed.iminds.be/ and download the latest version of jFed. You don't need to install all the software, only the **jFed Experimenter GUI and CLI** is required.

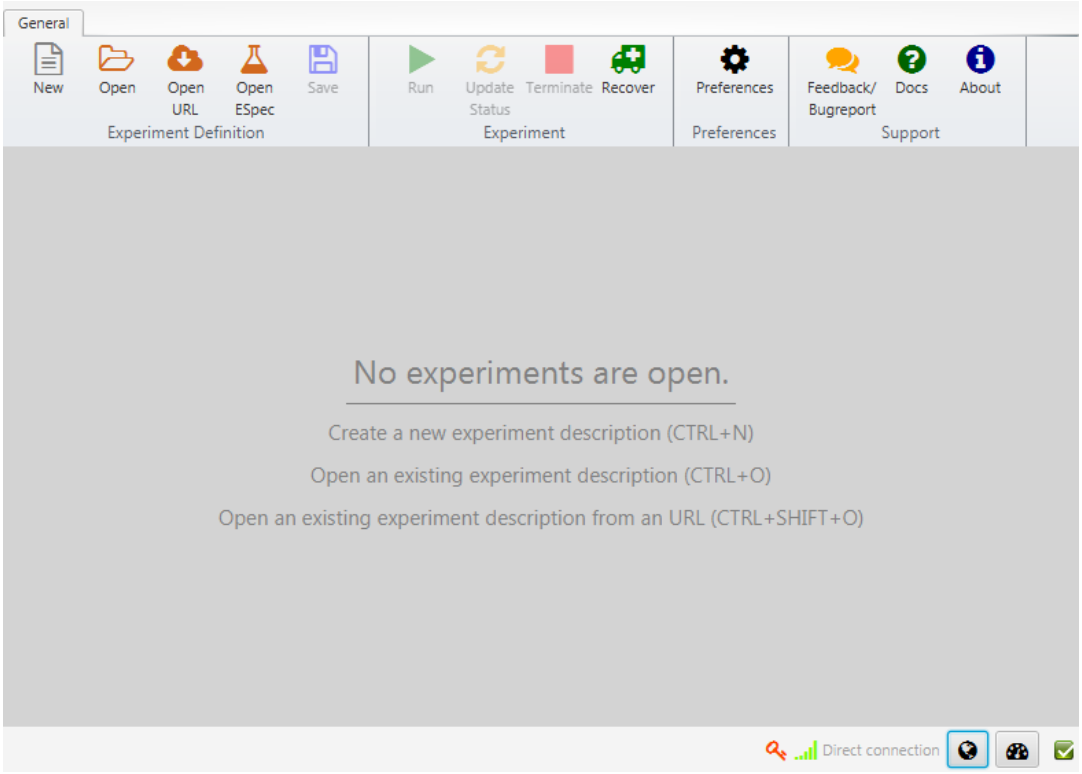
## 3. Login in jFed

Open the **jFed Experimenter Toolkit** and login with your credentials:

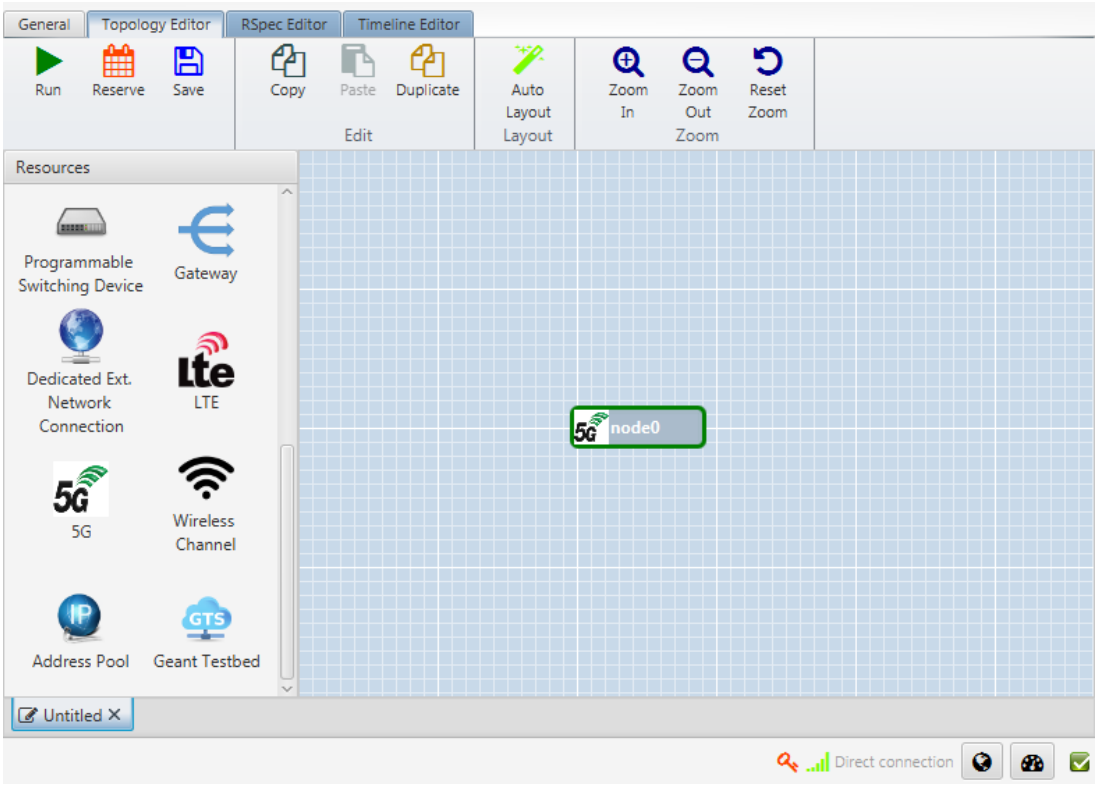



# 4. Create a new experiment

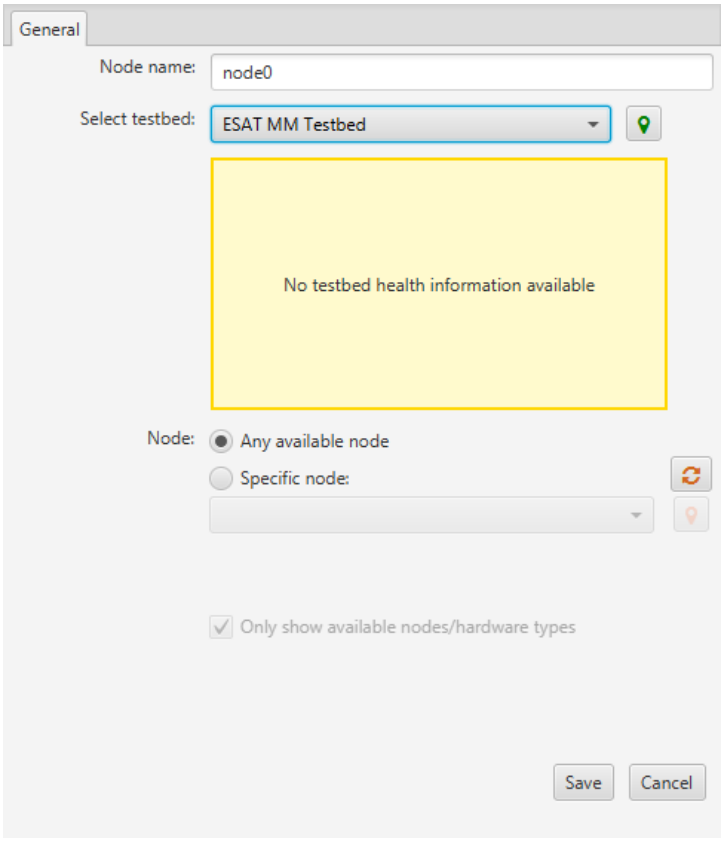
After login, you can create a new experiment by clicking on the button **New**:



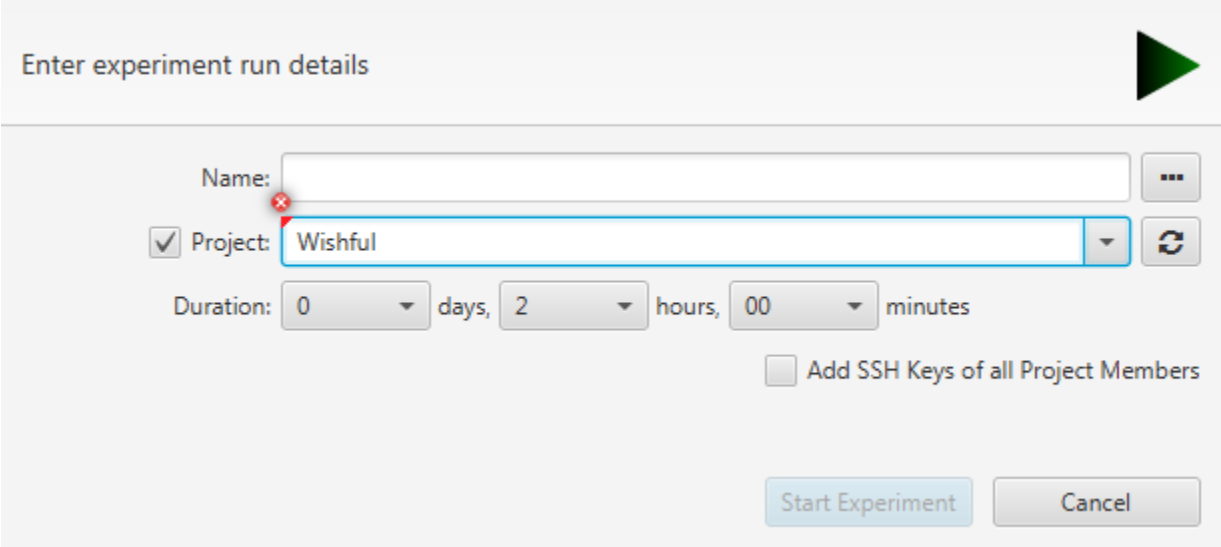

Select the **5G icon** in the list of resources and drag it from the left side to the canvas:



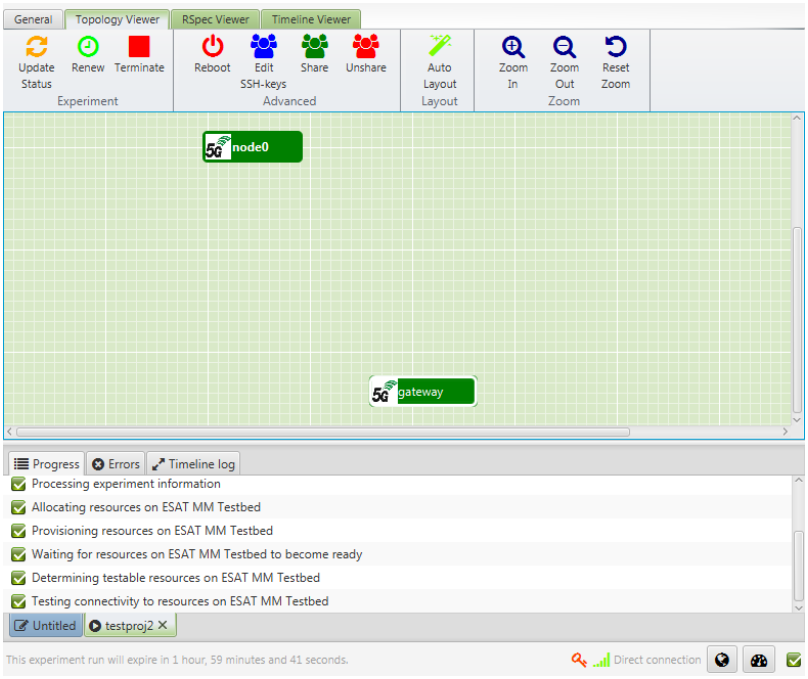

Right click on the node and click on **configure node**. Select the ESAT MM Testbed in the list of testbeds. If you want to connect to a specific testbed (ESATMM00 representing testbed00 or ESATMM01 representing testbed01), choose one of them in the **specific node** box and click on save:



Click on the **run** button to start the experiment. Give your experiment a name and choose the **Wishful** project. Specify a maximum **duration** of the experiment. This determines how long the resource (testbed) will be reserved for you. Click on start experiment.




Wait until **Testing connectivity to resource on ESAT MM Testbed** is completed. If there are errors, they will be visible in the error section. If there are no errors, you can double click in the node in the canvas to connect to the testbed. If you are running Windows, it will start **Remote Desktop**. If you are using Linux, it will start **rdesktop** in the background. Login with the credentials you received from the reservation manager (cfr. get account). You now have remote access to our testbed!




If you want to use the IBFD UPI to control the testbed in Python, double click on the gateway node. A terminal will open with which you have access to the testbed. On the gateway, the folder usrp_wishful is linked to the WiSHFUL repository and contains the necessary files to control the testbed. More information about the WiSHFUL repository can be found on [https://github.com/wishful-](https://github.com/wishful-)

project/module-FullDuplex-usrp

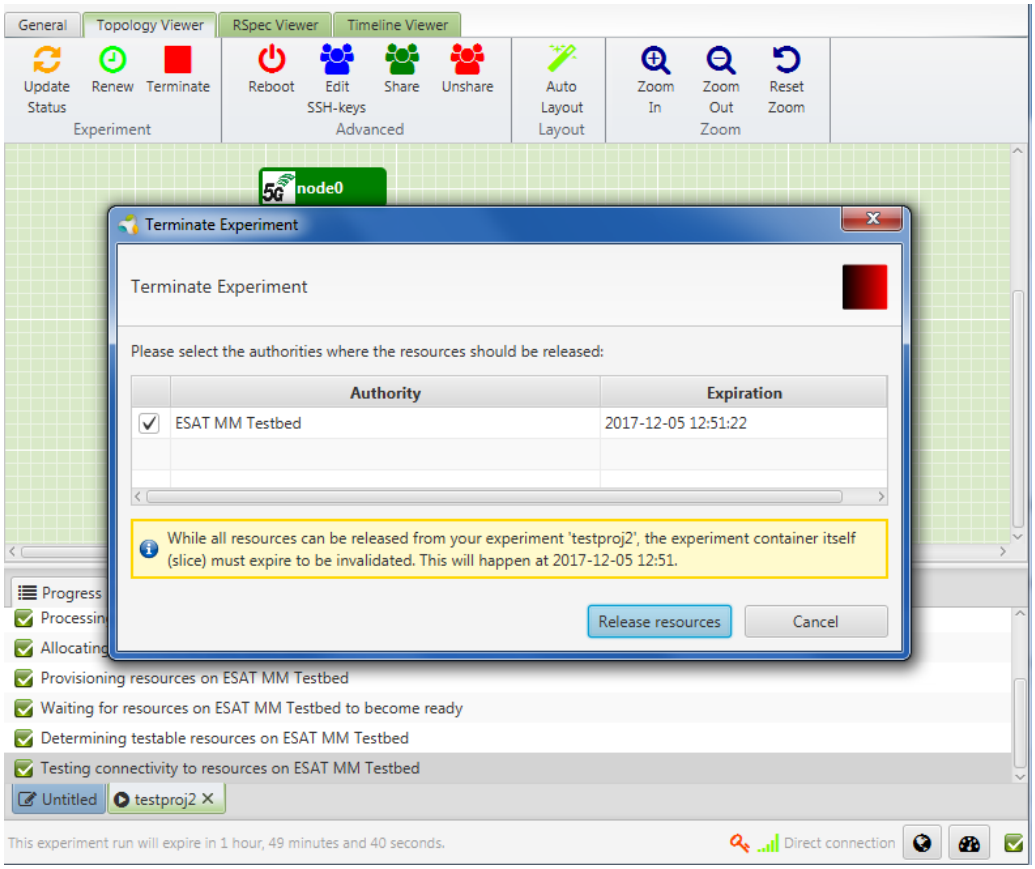
```
Using username "[redacted]".
Authenticating with public key "[redacted]" from agent

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

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Mon Dec 11 13:27:46 2017 from 10.33.136.155
[redacted]@d026e6a4cd06:~$ ls usrp_wishful/
IBFD_agent.py  Tutorial.docx           usrp_agent
README.md      agent_config.yaml       usrp_controller
Test.py        controller_config.yaml  usrp_module.py
[redacted]@d026e6a4cd06:~$
```

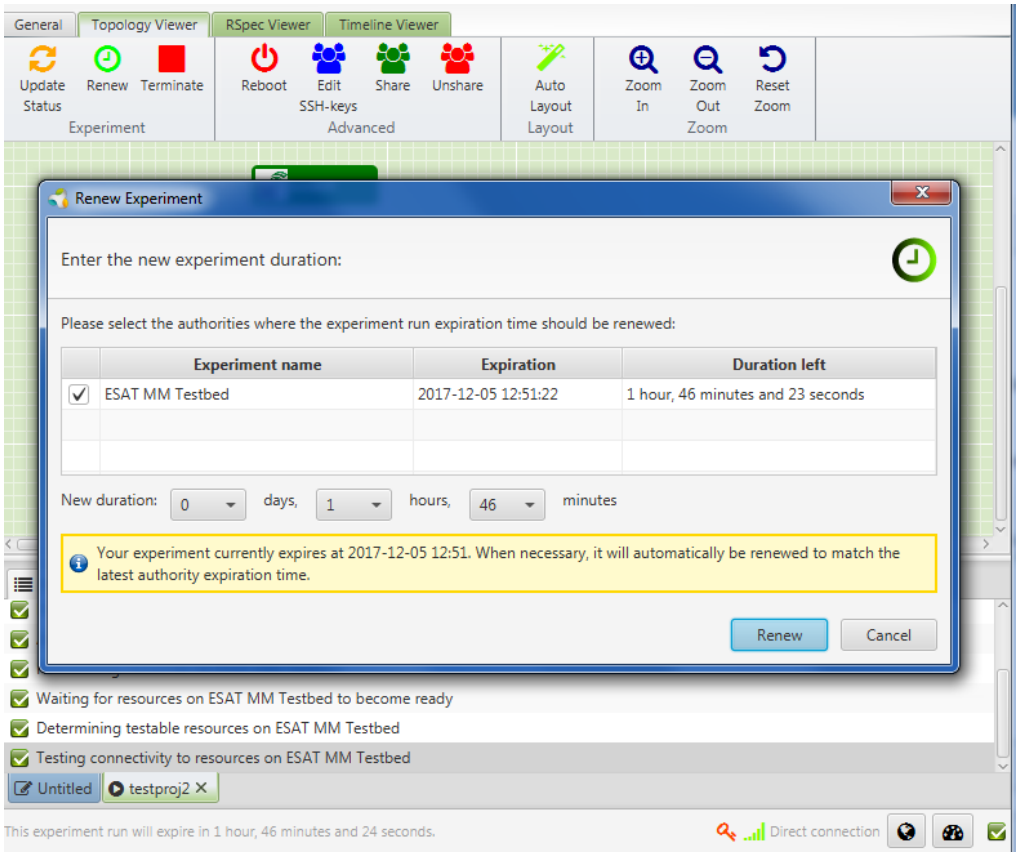
# 5. Stop the experiment

To stop the experiment, click on the button **Terminate** and select **Release resources**.



# 6. Renew the experiment

If the duration specified when creating the experiment is not enough, you can renew the experiment by click on the button **Renew** and you can specify the extra time you need for the experiment.

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If you encounter problems, please contact telemicreservations@esat.kuleuven.be.