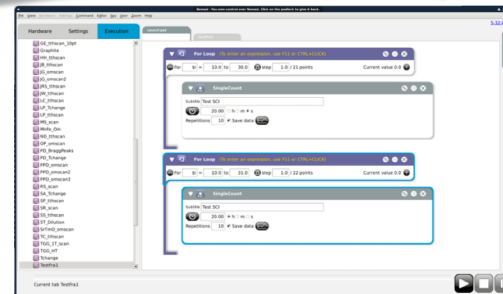
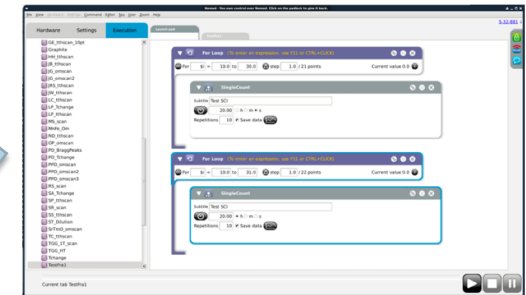
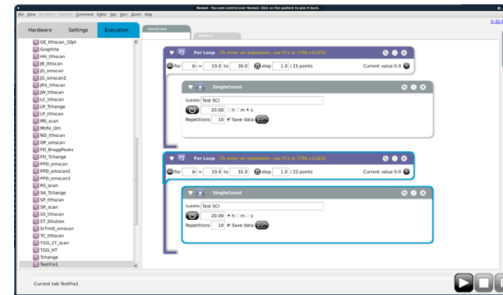
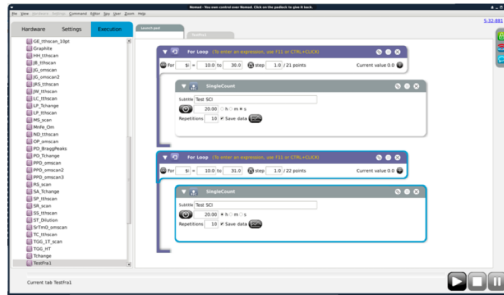


# NOMAD REMOTE



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# The Principle

## One server – different types of clients



Main: client running usually on the same machine as the Nomad server



Remote: client on a real machine located in the dedicated building



Tablet

# Connection Rules

A session is associated with an instrument. The rules depend on the type of client:

- **Main:** the session is accessible as usual with normal instrument login/password. Only a session to the associated instrument can be open
- **Remote:** the user can open a session on any instrument for which he has access. The right is given by the Data Policy:
  - The user enters (username, password, instrument).
  - The user is part of ILL staff: in all cases access is authorized.
  - The user is not part of ILL staff:
    - The user is part of the current proposal: access is authorized.
    - The instrument is in internal use: access is denied.
- **Tablet** has no rule for opening a session

Change of proposal will disconnect all clients

# Change Of Proposal



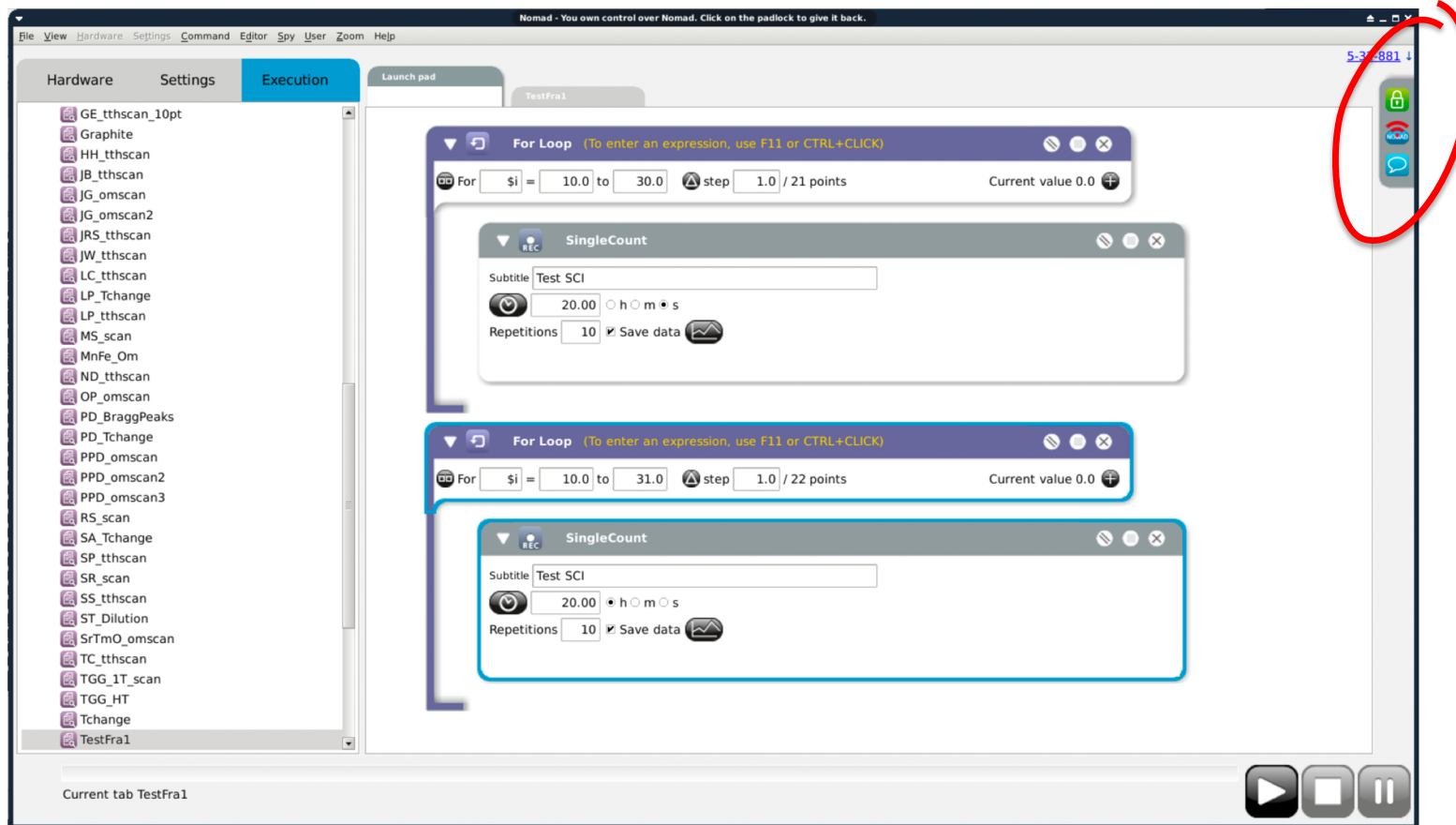
## MAIN

User can change the proposal if he has the token and no command is running.  
When changing the proposal, simulated servers are stopped, etc...  
Remote client is notified and disconnected

## REMOTE

User cannot change the proposal

# New On The Interface



# Read-Only VS Read Write

The screenshot displays the Nomad software interface. On the left, a 'Hardware' list includes components like GE\_tthscan\_10pt, Graphite, HH\_tthscan, JB\_tthscan, JG\_omscan, JG\_omscan2, JRS\_tthscan, JW\_tthscan, LC\_tthscan, LK\_tthscan, LK\_omscan, LK\_omscan2, LK\_omscan3, LK\_omscan4, LK\_omscan5, LK\_omscan6, LK\_omscan7, LK\_omscan8, LK\_omscan9, LK\_omscan10, LK\_omscan11, LK\_omscan12, LK\_omscan13, LK\_omscan14, LK\_omscan15, LK\_omscan16, LK\_omscan17, LK\_omscan18, LK\_omscan19, LK\_omscan20, LK\_omscan21, LK\_omscan22, LK\_omscan23, LK\_omscan24, LK\_omscan25, LK\_omscan26, LK\_omscan27, LK\_omscan28, LK\_omscan29, LK\_omscan30, LK\_omscan31, LK\_omscan32, LK\_omscan33, LK\_omscan34, LK\_omscan35, LK\_omscan36, LK\_omscan37, LK\_omscan38, LK\_omscan39, LK\_omscan40, LK\_omscan41, LK\_omscan42, LK\_omscan43, LK\_omscan44, LK\_omscan45, LK\_omscan46, LK\_omscan47, LK\_omscan48, LK\_omscan49, LK\_omscan50, LK\_omscan51, LK\_omscan52, LK\_omscan53, LK\_omscan54, LK\_omscan55, LK\_omscan56, LK\_omscan57, LK\_omscan58, LK\_omscan59, LK\_omscan60, LK\_omscan61, LK\_omscan62, LK\_omscan63, LK\_omscan64, LK\_omscan65, LK\_omscan66, LK\_omscan67, LK\_omscan68, LK\_omscan69, LK\_omscan70, LK\_omscan71, LK\_omscan72, LK\_omscan73, LK\_omscan74, LK\_omscan75, LK\_omscan76, LK\_omscan77, LK\_omscan78, LK\_omscan79, LK\_omscan80, LK\_omscan81, LK\_omscan82, LK\_omscan83, LK\_omscan84, LK\_omscan85, LK\_omscan86, LK\_omscan87, LK\_omscan88, LK\_omscan89, LK\_omscan90, LK\_omscan91, LK\_omscan92, LK\_omscan93, LK\_omscan94, LK\_omscan95, LK\_omscan96, LK\_omscan97, LK\_omscan98, LK\_omscan99, LK\_omscan100. A large red 'MAIN' watermark is overlaid on this list. The main workspace contains two 'For Loop' blocks and two 'SingleCount' blocks. The top 'For Loop' block is configured with 'For \$i = 10.0 to 30.0 step 1.0 / 21 points' and 'Current value 0.0'. Below it is a 'SingleCount' block with 'Subtitle Test SCI', a timer set to '20.00' with units 'h m s', and 'Repetitions 10' with a 'Save data' checkbox. The bottom 'For Loop' block is configured with 'For \$i = 10.0 to 31.0 step 1.0 / 22 points' and 'Current value 0.0'. Below it is another 'SingleCount' block with the same settings as the one above. A blue arrow points from the right towards the interface. The bottom status bar shows 'Current tab TestFra1' and playback controls.

# Read-Only VS Read Write

The screenshot displays the Nomad software interface. On the left, a 'Hardware' list includes various neutron scattering components like 'GE\_tthscan\_10pt', 'Graphite', 'HH\_tthscan', 'JB\_tthscan', 'JG\_omscan', 'JG\_omscan2', 'JRS\_tthscan', 'JW\_tthscan', 'LC\_tthscan', 'LH\_tthscan', 'LJ\_tthscan', 'LJ\_omscan', 'LJ\_omscan2', 'LJ\_omscan3', 'LJ\_omscan4', 'LJ\_omscan5', 'LJ\_omscan6', 'LJ\_omscan7', 'LJ\_omscan8', 'LJ\_omscan9', 'LJ\_omscan10', 'LJ\_omscan11', 'LJ\_omscan12', 'LJ\_omscan13', 'LJ\_omscan14', 'LJ\_omscan15', 'LJ\_omscan16', 'LJ\_omscan17', 'LJ\_omscan18', 'LJ\_omscan19', 'LJ\_omscan20', 'LJ\_omscan21', 'LJ\_omscan22', 'LJ\_omscan23', 'LJ\_omscan24', 'LJ\_omscan25', 'LJ\_omscan26', 'LJ\_omscan27', 'LJ\_omscan28', 'LJ\_omscan29', 'LJ\_omscan30', 'LJ\_omscan31', 'LJ\_omscan32', 'LJ\_omscan33', 'LJ\_omscan34', 'LJ\_omscan35', 'LJ\_omscan36', 'LJ\_omscan37', 'LJ\_omscan38', 'LJ\_omscan39', 'LJ\_omscan40', 'LJ\_omscan41', 'LJ\_omscan42', 'LJ\_omscan43', 'LJ\_omscan44', 'LJ\_omscan45', 'LJ\_omscan46', 'LJ\_omscan47', 'LJ\_omscan48', 'LJ\_omscan49', 'LJ\_omscan50', 'LJ\_omscan51', 'LJ\_omscan52', 'LJ\_omscan53', 'LJ\_omscan54', 'LJ\_omscan55', 'LJ\_omscan56', 'LJ\_omscan57', 'LJ\_omscan58', 'LJ\_omscan59', 'LJ\_omscan60', 'LJ\_omscan61', 'LJ\_omscan62', 'LJ\_omscan63', 'LJ\_omscan64', 'LJ\_omscan65', 'LJ\_omscan66', 'LJ\_omscan67', 'LJ\_omscan68', 'LJ\_omscan69', 'LJ\_omscan70', 'LJ\_omscan71', 'LJ\_omscan72', 'LJ\_omscan73', 'LJ\_omscan74', 'LJ\_omscan75', 'LJ\_omscan76', 'LJ\_omscan77', 'LJ\_omscan78', 'LJ\_omscan79', 'LJ\_omscan80', 'LJ\_omscan81', 'LJ\_omscan82', 'LJ\_omscan83', 'LJ\_omscan84', 'LJ\_omscan85', 'LJ\_omscan86', 'LJ\_omscan87', 'LJ\_omscan88', 'LJ\_omscan89', 'LJ\_omscan90', 'LJ\_omscan91', 'LJ\_omscan92', 'LJ\_omscan93', 'LJ\_omscan94', 'LJ\_omscan95', 'LJ\_omscan96', 'LJ\_omscan97', 'LJ\_omscan98', 'LJ\_omscan99', 'LJ\_omscan100'. The main workspace shows a sequence of blocks: a 'For Loop' block with 'For \$i = 10.0 to 30.0 step 1.0 / 21 points', followed by a 'SingleCount' block with 'Subtitle Test SCI', '20.00' time, and '10' repetitions. This sequence is repeated for a second 'For Loop' block with 'For \$i = 10.0 to 31.0 step 1.0 / 22 points'. A large red 'MAIN' watermark is overlaid on the left side of the interface. A blue arrow points from the right towards the interface.

# Token Strategy

- Only one client has the right to modify the server at a time
- The token has 3 states: owned, free, taken
- The token can be released:
  - Manually: the user releases the token
  - Automatically: after a timeout
  - When a client is starting, it acquires automatically the token if it is free
- Acquiring the token depends on the type of client:
  - Main: at any time, it will acquire the token even if it is already owned by another client
  - Remote: can acquire the token if it is not already owned





# The Chat

locatelli  
`~~~\*/-+++.]`  
[!:/.,  
19 Jun, 14:30  
666655555  
19 Jun, 14:30  
1234567890  
19 Jun, 14:30  
ortizh  
ccc  
19 Jun, 14:31  
songg  
深度学习  
19 Jun, 14:35  
elaazzouzi  
/r\r  
19 Jun, 14:36

Nomad - No client controls Nomad. Click on the padlock to take Nomad control.

For Loop (To enter an expression, use F11 or CTRL+CLICK)  
For \$i = 10.0 to 30.0 step 1.0 / 21 points Current value 0.0

SingleCount  
Subtitle Test SCI  
20.00 h m s  
Repetitions 10 Save data

For Loop (To enter an expression, use F11 or CTRL+CLICK)  
For \$i = 10.0 to 31.0 step 1.0 / 22 points Current value 0.0

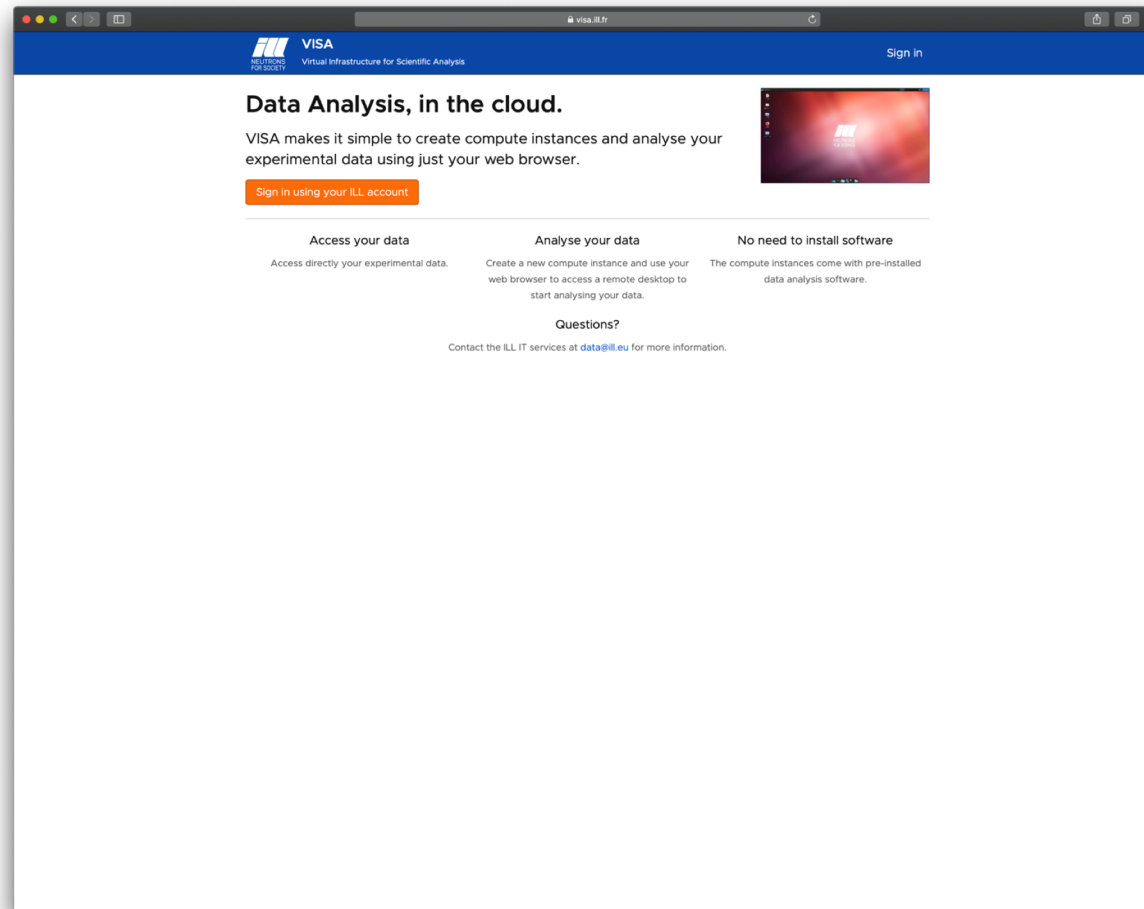
SingleCount  
Subtitle Test SCI  
20.00 h m s  
Repetitions 10 Save data

Online chat  
locatelli  
`~~~\*/-+++.]`  
[!:/.,  
19 Jun, 14:30  
666655555  
19 Jun, 14:30  
1234567890  
19 Jun, 14:30  
ortizh  
ccc  
19 Jun, 14:31  
songg  
深度学习  
19 Jun, 14:35  
elaazzouzi  
/r\r  
19 Jun, 14:36

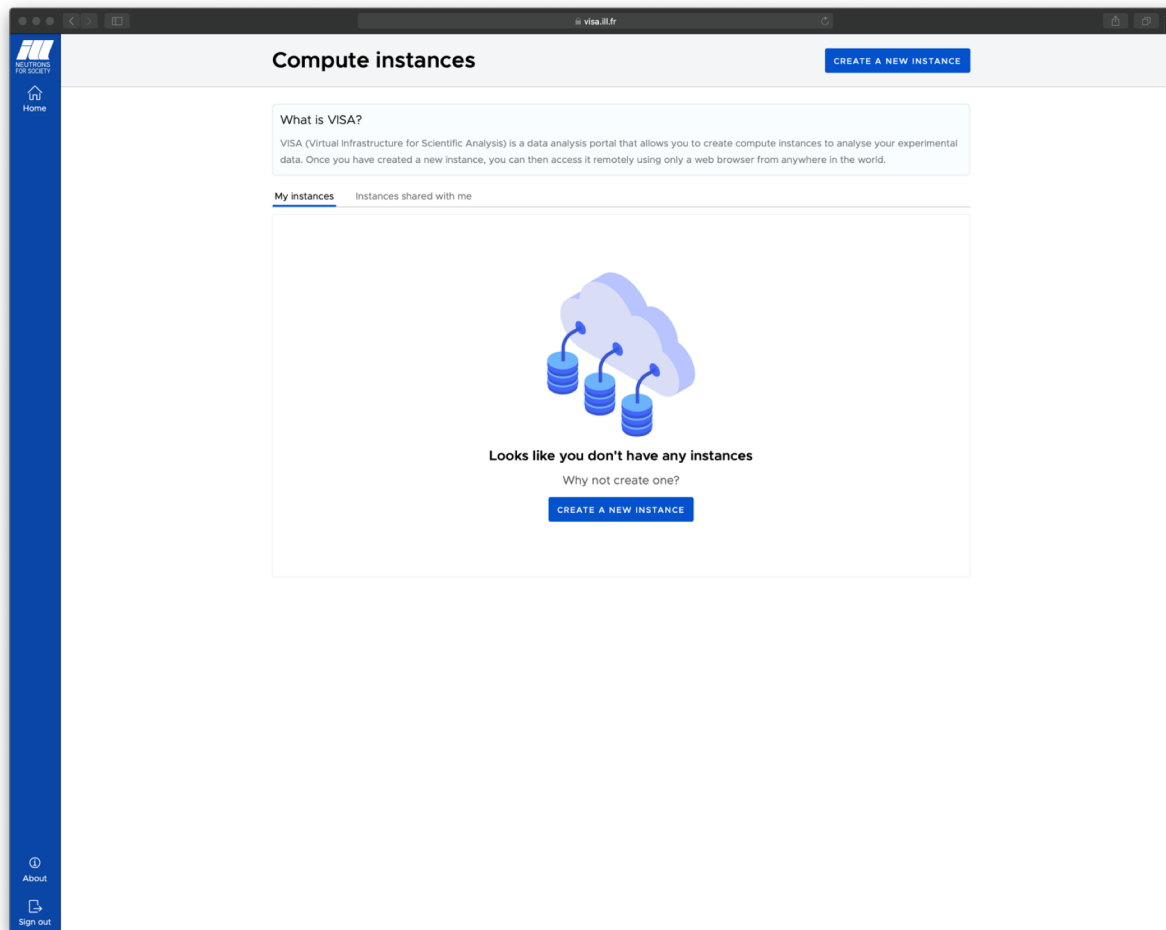
Current tab TestFra1

# Network Infrastructure

visa.ill.fr



# Create Your VM



VM are destroyed after 15 days  
or  
after 4 days of inactivity

# Create Your VM

**Create a new computing resource**

Select your experiments

Select the experiments you wish to associate with your compute resource.

Instance not associated to any specific experiments

Proposal	Cycle	Instrument	
TEST-2743	2017-1	CT1	<a href="#">UNSELECT</a>

**Find experiments** Cycle: All cycles Instrument: All instruments

Proposal	Description	Instrument	Cycle	
TEST-2743	Test of optical components for neutron counting with CMOS cameras	CT1	2017-1	<a href="#">SELECT</a>
3-17-2	Shape coexistence and nature of low-lying states in mid-shell Cd-Te isotopes investigated through neutroncapture reactions	FIPPS	2017-1	<a href="#">SELECT</a>
3-17-4	A gamma-gamma angular correlation measurement of 168Er after (n,gamma) with the FIPPS array	FIPPS	2017-1	<a href="#">SELECT</a>
3-07-301	High precision measurement of multipole-mixing ratios to test the newly proposed candidate for a low-lying octupole isovector state in 144Nd	PFIB	2012-3	<a href="#">SELECT</a>
3-07-296	Search for particle-phonon coupledstates in 49Ca by the reaction 48Ca(n,gamma)49Ca	PFIB	2012-3	<a href="#">SELECT</a>

1 - 5 of 48 experiments

**Define your computing environment**

**Choose an environment**

- Basic System  
Basic data analysis environment
- Standard Analysis**  
Advanced data analysis environment

**Choose hardware requirements**

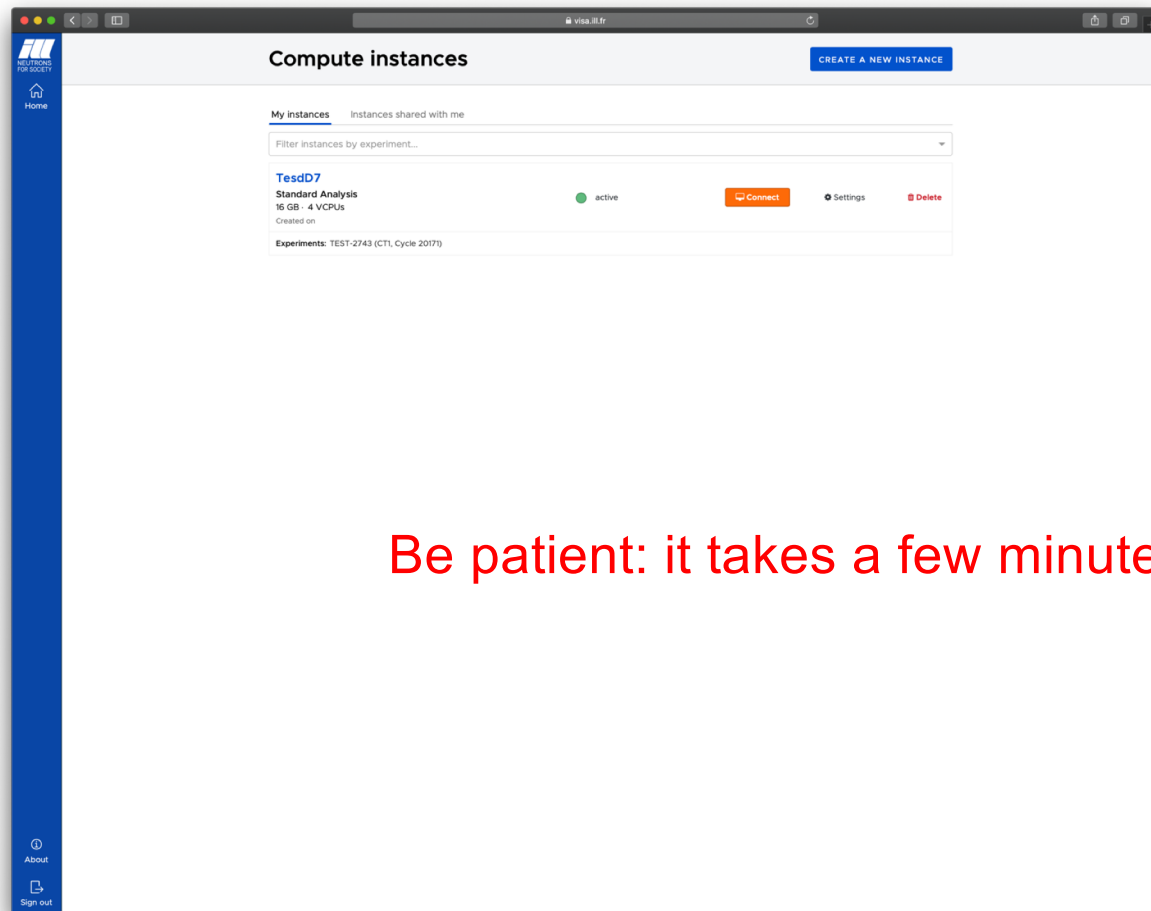
- 2 Cores  
8GB  
Small
- 4 Cores**  
16GB  
Medium

Select a proposal

Chose the type of VM

Allocate resources to the VM

# Create Your VM



Be patient: it takes a few minutes to create your VM!

# Start NOMAD GUI

This machine is to be used for data analysis purposes only  
Do not use this machine for personal use such as internet banking, emails, social networks etc.  
Please contact [data@ill.eu](mailto:data@ill.eu) for technical assistance and feedback

or type "nomad-remote" on a terminal

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NEUTRONS FOR SOCIETY

Connected to: TestD7 (Full control) Connection time: a few seconds Members connected: 1

Applications

- Run Program...
- Terminal Emulator
- File Manager
- Mail Reader
- Web Browser
- Settings
- Accessories
- Development
- Education**
  - GRASP
  - GRASP-barebones
  - hdfview
  - IDL
  - IDLDE
  - LAMP
  - LibreOffice Math
  - Mantid Plot
  - Mantid Workbench
  - MATLAB
  - nomad-remote
  - Qalculate!
- Graphics
- Internet
- Multimedia
- Office
- System
- About Xfce
- Log Out

22Na T...

# LOGIN

Take screenshot | Clipboard | Keyboard | Information | Enter full screen

Home

Applications - Nomad

Trash  
File Sy...  
Home  
trap.ga...  
Eu-152...  
22Na T...  
152Eu...  
MyData  
Downl...

This machine is to be used for data analysis purposes only.  
Do not use this machine for personal use such as internet banking, emails, social networks etc.

Please contact [data@ill.eu](mailto:data@ill.eu) for technical assistance and feedback

Login   
Password   
Instrument

As a remote client, you must login to run Nomad

**LOGIN**

Version 4.0.32 - 2020-06-19 08:20:33Z

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NEUTRONS FOR SOCIETY

Sign out | About | Connected to: **TesdD7** (Full control) | Connection time: 3 minutes | Members connected: 1

[data@ill.eu](mailto:data@ill.eu) for technical assistance and feedback

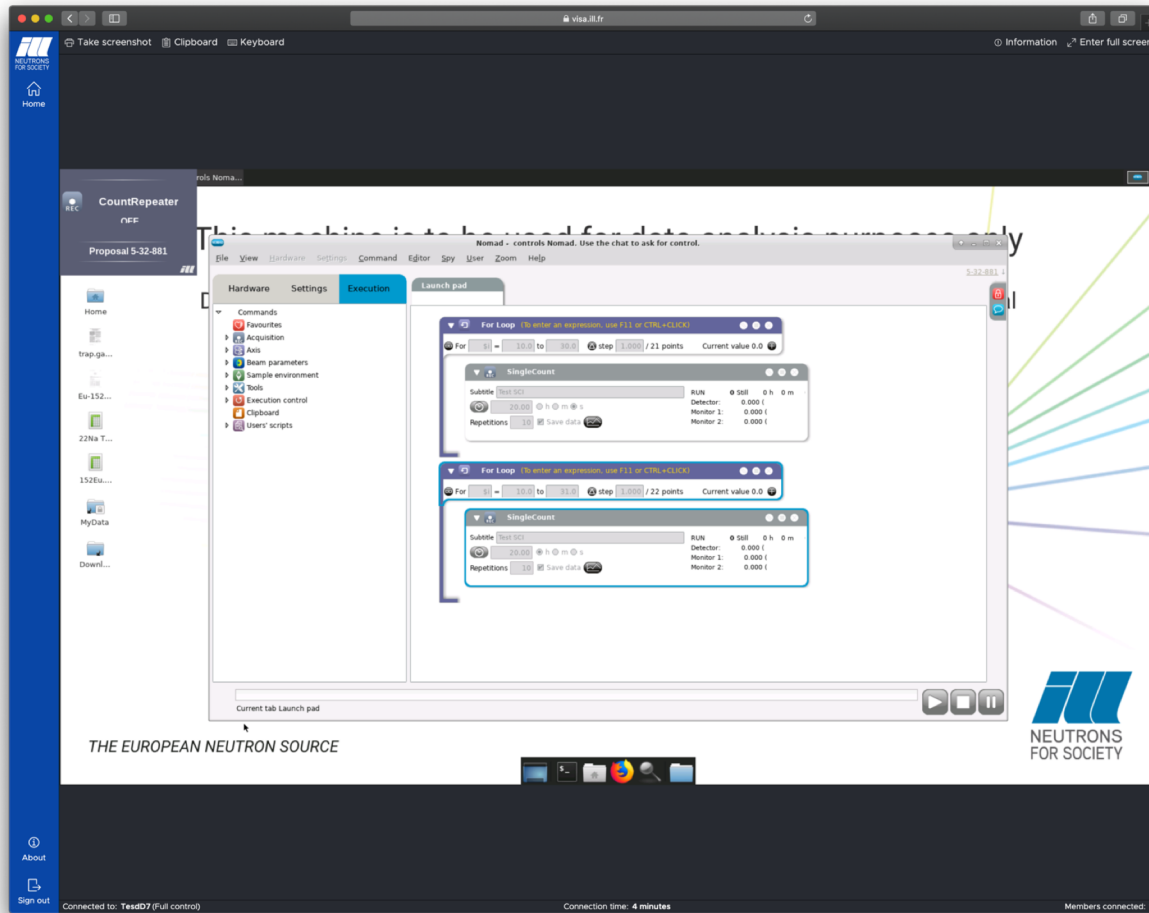
Login   
Password   
Instrument

As a remote client, you must login to run Nomad

**LOGIN**

Version 4.0.32 - 2020-06-19 08:20:33Z

# NOMAD REMOTE



Start driving your experiment remotely...



# NOMAD REMOTE

Clients are fully independent therefore you can:

- Customize your spies
- Open/close any type of plot
- Create user's workflows which are then visible and usable by any other client
- Access the log viewer and the parameter survey
- Run simulations

# NOMAD REMOTE

- **VNC** will disappear:
  - Insecure
  - Untraceable
  - Consumes a lot of resources
- **NomadRAC** will provide the possibility to activate de remote modality
  - Only available for instrument responsible