How to Create a Virtual Machine Instance and Start Karabo in it

For the Workshop we will run Karabo in a virtual machine (VM) hosted by VISA. Follow these instructions on how to start a VM instance:

1. Open <u>https://visa.xfel.eu/</u> and use your EuXFEL credentials to login

This will create an account on VISA.

2. Click on "Create a new Instance"

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What is VISA?
VISA (Virtual Infrastructure for Scientific Analysis) is a data analysis portal that allows you to create compute instances to analyse your experimental data. Once you have
created a new instance, you can then access it remotely using only a web browser from anywhere in the world.
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The first time you try, you will see this:



GO BACK TO THE HOMEPAGE

An admin has to enable your account. That might take some time, so please be patient and try again after a while until you see the screen as in the next step.

3. Select the "Instance not associated to any specific experiments" option:

Experiments Select the experiments you wish to associate with your compute resource. Instance not associated to any specific experiments **Computing Environment** Choose an environment Guli Cult VISA_Crystfel VISA_SINGULARITY VISA_Apptainer VISA_HERCULES Main image for HERCULES school base image plus crystfel base image plus singularity users base image with singularity preinstalled Cult VISA_KARABO_WORKSHOP Image for Karabo Developer Workshop Cult EXtra-Xwiz_Crystals2023

EXtra-Xwiz_Crystals2023 EXtra-Xwiz Tutorial Choose hardware requirements 4 Cores 8GB memory

VISA XFEL

- 4. Select the "VISA_KARABO_WORKSHOP" computing environment.
- 5. Choose the hardware requirements (only one option is available).
- 6. Check the settings, e.g. the screen resolution, but normally defaults are OK.
- 7. Scroll down and accept the terms and conditions.
- 8. Click "create".
- Terms and conditions

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I accept that I will only use this instance for data analysis purposes and will not engage in any illegal activities. Any user that I share my instance with will have complete access and
permissions to my files. I agree to supervise any shared access and remove users once sharing is no longer required.

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9. Wait for the instance to be built – that may take a few minutes. Rarely it can even happen that the built fails. Then "ERROR" is displayed were you saw "building" before. Then please delete the machine via "Settings => Delete instance" and try again.

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	VISA_KARABO_WORKSHOP (0.2) 8 GB - 4 VCPUs Instance 330 created on 16 Feb 2024 and due to expire on 1 Mar 2024 No experiments are associated to this instance.	Settings	Connect

10. Connect to the instance.

scandalous_lungfish





The virtual machine has a maximum lifetime of two weeks, after that it will be deleted. You are allowed to create more than one virtual machine, and you can delete the ones you don't need any more.

- 11. Please familiarize yourself with the virtual machine.
 - 1. A few editors are pre-installed; during the workshop we will use visual studio code (via "Applications => Development => Visual Studio Code" or via command line: code).
 - 2. Start firefox with the workshop agenda via the "start_firefox.sh" script on the desktop.
- 12. Start Karabo in the VISA virtual machine.

Open a terminal (single click on the terminal symbol on the bottom), then execute the commands:







13. Open a Karabo GUI:

Either double-click on the "start_karabo_gui.sh" file on the Desktop or use the command line ~/Desktop/start_karabo_gui.sh. Connect to localhost, port 44444.

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