# **Get virtual machines**

During the cruise, a number of virtualized/containerized software solutions have been developed to work on data stored in the on-board MCS. For security reasons, we cannot import these solutions directly into the systems on land. Here's how to go on and continue your work. Most possibilities aren't automated, so you will need to talk to AWI's IT people before - please, don't hesitate and contact <a href="mailto:support@mosaic-data.org">support@mosaic-data.org</a>. Please understand that we have to keep an as good as possible balance between usability and security - things might not be perfect at present. Currently you will have to use VPN, but we are working on an easier solution.

#### Virtual machines

- You may deploy standard Linux VMs (Ubuntu) from our <a href="https://marketplace.cloud.awi.de/">https://marketplace.cloud.awi.de/</a>. These provide basic, usual software like shells, python, R, ... and you are free to run any software in userspace.
- If you need other software packages from the Linux repositories, you can request a VM tailored to your needs. Please contact support@mosaic-data.org.
- MCS / raw data (/isibhv/platforms/...) can be accessed read-only from the VMs, MCS / workspace (/isibhv/dmz-mosaic/...) read/write.
- A VM may have up to 16 cpu cores and 32 GB of memory. If this appears to low for your purpose, our HPC system ollie might suit your needs
  better, AWI members can apply for a HPC account via <a href="https://eservices.awi.de/account/extend">https://eservices.awi.de/account/extend</a>. Please contact support@mosaic-data.org.
- A VM will be provided for a period of 90 days. This lease may be extended as often as needed.
- Expired VMs can be restored within two weeks after expiration. After this period, they will be deleted.
- Regular patch days which may require downtimes will be centrally scheduled (and announced, of course) to keep the VMs up to date.

An indroductory is available here: https://spaces.awi.de/x/UeTFEw

# Virtual machines with preinstalled software

... are available from https://marketplace.cloud.awi.de as well and are accessible via http(s)://<hostname>.cloud.awi.de

- JupyterHUB: A multiuser Jupyternotebook server with preinstalled environments for Python and R.
- RStudio: A multiuser RStudio server.
- RShiny: Server to provide interactive web applications written in R.

### Git

You may place your developments on gitlab.awi.de which is accessible with an AWI account and as well via Shibboleth.

#### Provision of data outside AWI

Internal (non-DMZ) machines are not accessible from outside. However, data - either MCS or derived stuff - can be transferred by means of sftp, scp via mosaicsrv1.awi.de which acts as a gateway.

# Requirements

- · You'll need a MOSAiC account for all of this.
- You'll need to use VPN. Instructions can be found here: <a href="https://spaces.awi.de/x/YtnFEw">https://spaces.awi.de/x/YtnFEw</a>

### **Exclusions**

We cannot provide

- root access
- software licences, e. g. for Matlab
- mass rollouts of VMs
- · Windows machines

# **Contact**

support@mosaic-data.org