

# Computer systems

Servers Lots of them. Reserved for system.

dorc1-4 and cast1-2 Cast group machines and associated disks

seitz1-2,werc1-2 Stella machines and disks (werc also Jochen)

weller1-2 Jochen's group and disks

gustl,birnst1 Til's group and disks

errc1,ercol1 Barbara's group and disks

ltsp01-3,mpusm01-11 Open to everyone (mpusm01 reserved for Jo, me, Thomas etc)

ltsp04-19 Thin client machines to replace PCs (used for practicals at the moment)

# Users

- Can be used by anyone with a valid USM account with an up to date password.
- BUT machines are reserved for the intended groups. You can use other group machines if and only if given permission by the various group leaders.

This is not enforced at the moment but can be if necessary.

- You can log in to ltsp01-03 from anywhere using ssh  
`ssh -Y -l username ltsp01.usm.uni-muenchen.de` or  
`ssh -Y username@ltsp01.usm.uni-muenchen.de`
- You can log in to group (seitz1 etc) and mpusm machines from within the MWN.  
You need to set up a VPN connection to access the MWN from outside see <https://www.lrz.de/services/netz/mobil/vpn>
- The other machines can only be reached from our local network.

# Problems with log in

- If you mistype your password three times in a row then you will be blocked for 10 minutes so just wait and try again.
- Problems with the servers can mean either your username is not known or, more often, your home directory isn't available.
- When you try to log in to a machine, the machine asks our servers if your username is known and checks your password (using kerberos).
- If the answer to both is yes then you can log in
- BUT ssh and window manager (e.g. KDE, XFCE) try to store/read data on your home directory (look at .ssh, .config, .cache, .local).
- If it's not there or full then you still won't be able to log in.
- The DNS attack last week meant that ltsp01 and so on weren't able to look up your information so you were blocked.
- NB it's a bit more complicated as ltsp01 etc. cache much of the information so some of you might have been lucky.

# E Mail

- Your e-mail and login accounts are completely separate even though the username is the same for both.
- This is for security reasons. Your e-mail password may be passed in clear over the network and read by an intruder
- The passwords should never be the same
- For the same reason your web presence, if present, has no access to your home directories
- E-mail is not meant to transfer large amounts of data. Use a cloud solution instead (e.g.  
<https://doku.lrz.de/display/PUBLIC/Cloud+Storage>)

# E Mail

## e-mail addresses

- Every employee/student of the LMU has a lmu.de e-mail address. These are administered by the LMU IT department.
- Physics students and employees have a physik.uni-muenchen.de e-mail address. These are administered by the Physics faculty IT department.
- If you are working at the USM then you will usually have a usm.lmu.de/usm.uni-muenchen.de e-mail account. These are administered by us.
- They have absolutely nothing to do with each other.
- You can forward mail from one to the other. Do this by logging into horde <https://www.usm.uni-muenchen.de/horde/login.php> and choosing “Mail”, “Filters”

# Queuing, scratch and backup

- In general there is no queuing. On the whole people behave reasonably and a “gentle” hint has usually sufficed.
- The CAST group machines do have queueing. It is a system called torque which is based on the older PBS system. You submit (qsub) a script including comments specifying your requirements.
- All machines have some scratch space which is limited to the machine in question. There are also project disks belonging to the various groups.
- If you need scratch space or access to the project disks then ask me or Tadziu to create a directory for you.
- Backups are made of system relevant disks. In particular, /home/moon/ (your home directories) are backed up incrementally every night.
- scratch disks are not backed up
- Desktop machines are only backed up if a users home directory is on the machine, incrementally every night.

# Scratch and backup

- Your home directories are backed up, so any important software, programs, thesis, etc should be placed there. And for really important stuff you should have your own backups.
- Your home directories are backed up and in addition are made available to the machine you're using via (relatively) slow connections so that's not the place to do calculations creating large amounts of scratch data. Use scratch space local to the machine or the project disks for this.
- /tmp is available and local but has limited space, shared with the system. When the disk is full the machine will not work properly if at all. (another reason why you may not be able to log in on occasion)

# System support

- Generally contact Tadziu or myself if you have system requests or there are problems with the system. If it's something that Rudi needs to deal with we'll pass it on.
- Software/system upgrades: We are obliged to keep the systems up to date as regards security updates. Unfortunately these mostly require a restart so we try to keep these to a minimum.
- All the user machines use the openSUSE distribution and should have the same software installed as far as possible. Anything else would be impossible to maintain.
- Use `zypper se "package"` to find out if SUSE supplies a package of interest. If they do just ask Tadziu or myself to install it.



# Outdated software

- Installing software or updating outdated software is easy if SUSE provides an update. If not then it will depend
- For things like the intel compilers etc, I try to keep them compatible with the situation at the LRZ.
- Other packages of general interest (things on /opt or /usr/local) are maintained by us (me), e.g. idl, iraf. . .
- For programs which interest only 1 person he/she should do it themselves. Note that this isn't generally hard but distributions like SUSE have chosen to separate out header files into packages which aren't installed by default. This is actually idiotic as it stops you from compiling your programs without our help. Get in touch with Tadziu or myself if you can't compile your program due to missing files.
- Otherwise you can ask. It will help your case if other people are interested.

# Outdated software

- Note that things like python and ruby are used by the system itself. They can't be changed system-wide without there being a system-upgrade. The same goes for glibc.
- I have tried to install more up to date versions of software in the past but this has caused more problems than are solved. Other things had a nasty habit of not working any more and when SUSE catches up/overtakes there are inconsistencies with libraries/header files etc.
- The same is true to some extent for packages from “packman”
- This means that it's better for some packages to be installed by the user.
- Bear in mind: we have of order 100 registered users, of order 100 machines (including PCs) and SUSE has 30000-40000 packages in all. There's no way that 3 people can cater for every need.

# Module command

The module command works by modifying your environment. There's a description at <https://doku.lrz.de/display/PUBLIC/Environment+Modules>

- `module avail`  
tells you what modules are available
- `module list`  
tells you which modules you are actually using
- `module load intel`  
loads the default version of the intel module
- `module load intel/17.0`  
loads version 17.0 of the intel compiler suite
- `module unload intel`  
unloads the intel version in use

# Guests

## Guests

- Short term guests who want to make light use of the Internet should just use Bayern-WLAN which only requires agreeing to the terms and conditions. It is also available throughout the City.
- Longer term guests can have a LRZ guest WLAN account. Just get in touch with me. I need to know who it's for and how long their stay is (a week is the maximum but this can be extended).
- For a meeting or workshop the LRZ will create an account for all participants. You need to do this reasonably well in advance. See <https://doku.lrz.de/display/PUBLIC/Konferenz-WLAN+beantragen>

# Guests

- The other alternative is that they use a cable but this should only be used if larger amounts of data are being transferred. For this we need (Tadziu or me) the hardware address of the ethernet card. It can be found: Under windows `ipconfig\all`; under linux `ifconfig -a`. The latter will also work for a mac or look at the internet connection in settings.
- If they have an ultra thin laptop with an internet adapter then plug it in and give us its hardware address (it's the one that appears after the device is plugged in).

# Jottings

- If you need more computing power it is possible to use the Linux system at the LRZ. Get in touch with your LRZ master user (me).
- Rudi and I are also responsible for the network so that any misuse gets reported to us which we'll then pass on to you
- Physics has licensed software which may be of interest. This includes Mathematica and various Microsoft programs including Office. See <https://www.it.physik.uni-muenchen.de/dienste/software/index.html>
- You can subscribe to the “alle” list in your mail client. Look for “subscribe” and choose usm-bulletin-board (right at the bottom).