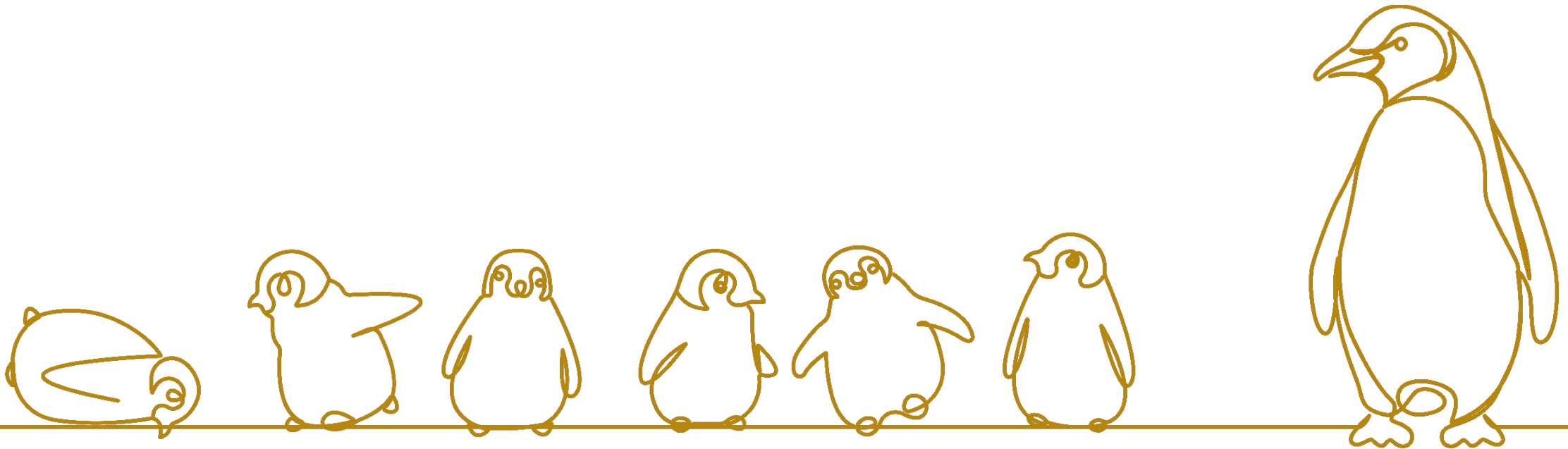


Linux Command Line

9:00 Welcome & Login



ASC – Austrian Scientific Computing

ASC is a joint high-performance computing (HPC) facility of **Austrian universities**.

- asc.ac.at
- asc.ac.at/access
- asc.ac.at/training

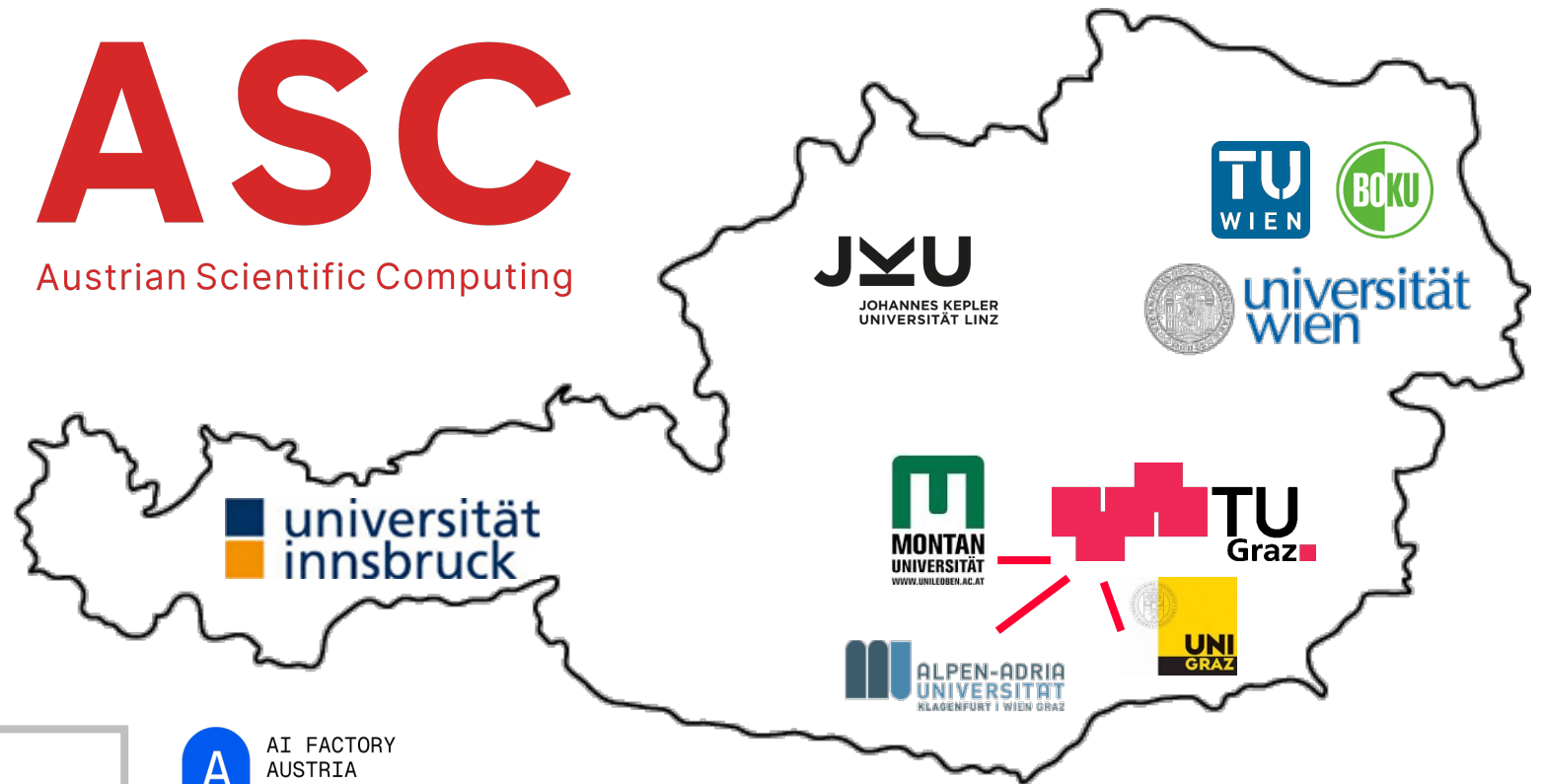
ASC is primarily
devoted to research.



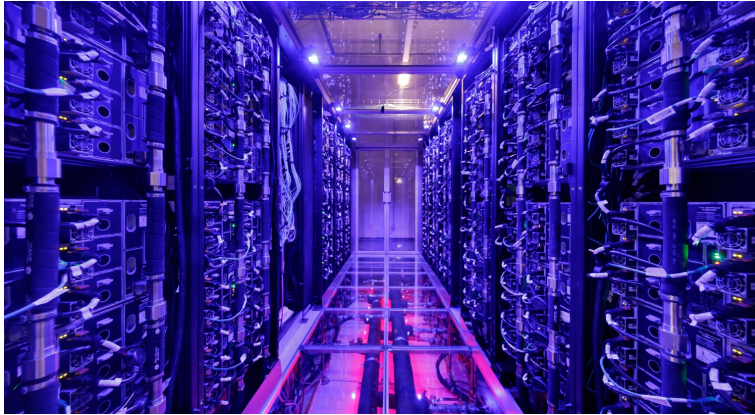
+ VSC
+ INiTS (business incubator)
+ ACA (Advanced Computing Austria)



ASC
Austrian Scientific Computing



ASC – systems



VSC-4 (2019 → ...)

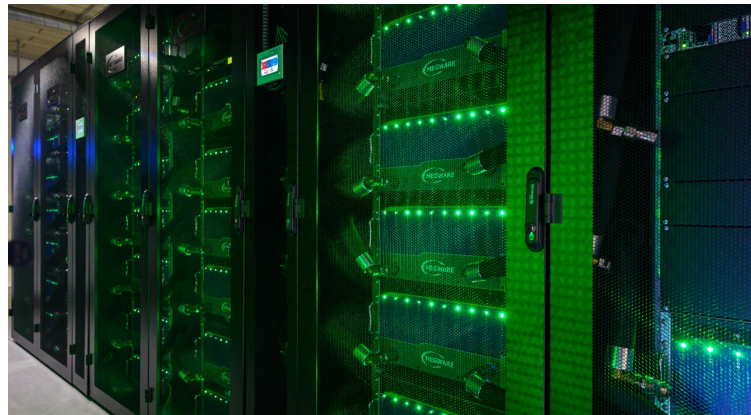
790 nodes

2 x Intel **Skylake** Platinum CPUs
2 x 24 cores/CPU
96 GB/node (384 GB / 768 GB)

--

48 nodes (2022 @VSC-5)

2 x Intel **Cascadelake** CPUs
2 x 48 cores/CPU
384 GB/node



VSC-5 (2022 → ...)

770 nodes

2 x AMD EPYC Milan (**Zen3**)
2 x 64 cores/CPU
512 GB/node (1 TB / 2 TB)

60 GPU nodes 2 x NVIDIA **A100** (Zen3)

--

40 GPU nodes 2 x NVIDIA **A40** (Zen2)



MUSICA (2025 → ...)

Vienna – 112 GPU + 72 CPU nodes
Innsbruck – 80 GPU + 48 CPU nodes
Linz – 80 GPU + 48 CPU nodes

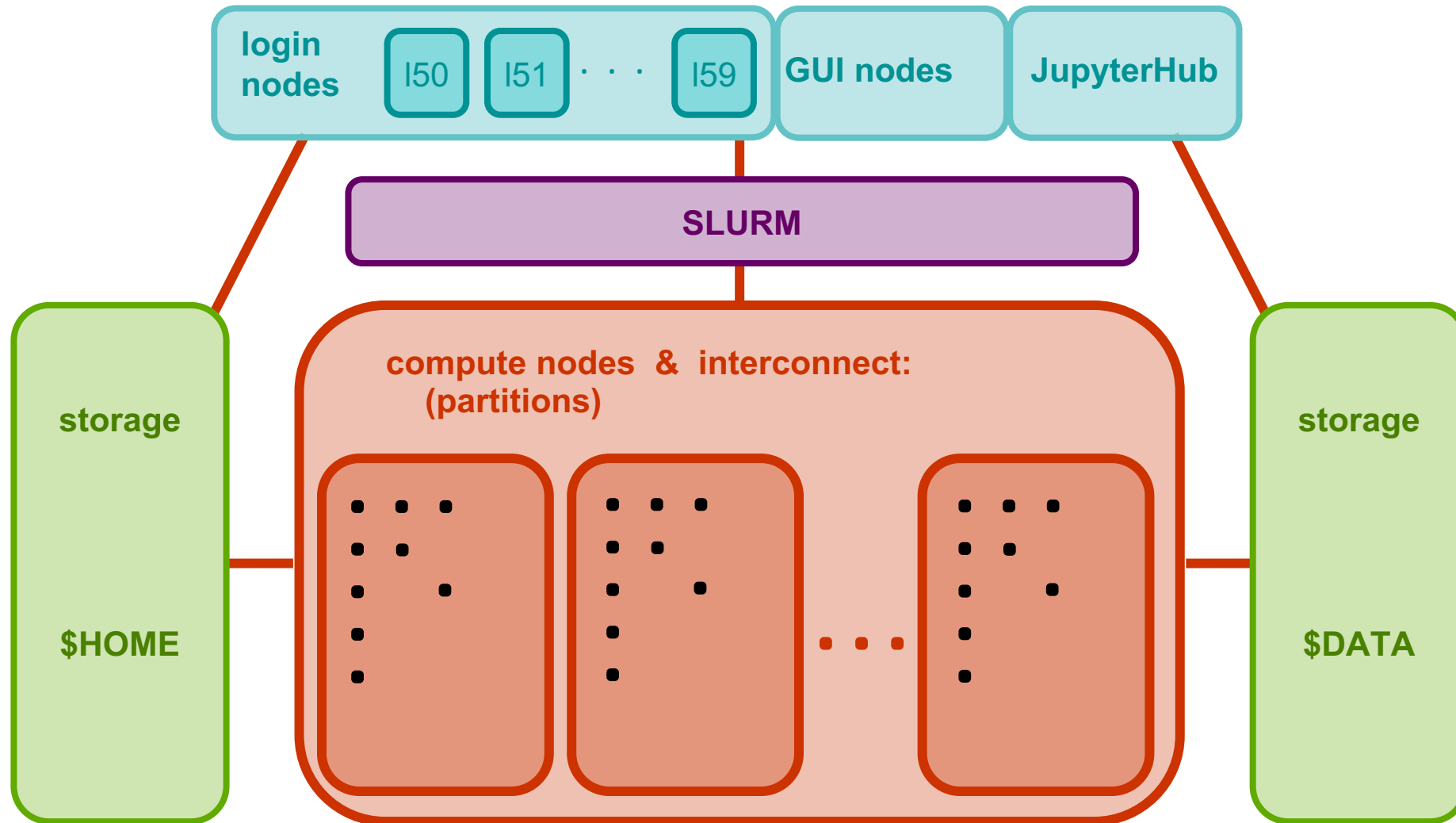
GPU

4 x Nvidia **H100** 94 GB + NVLINK

CPU

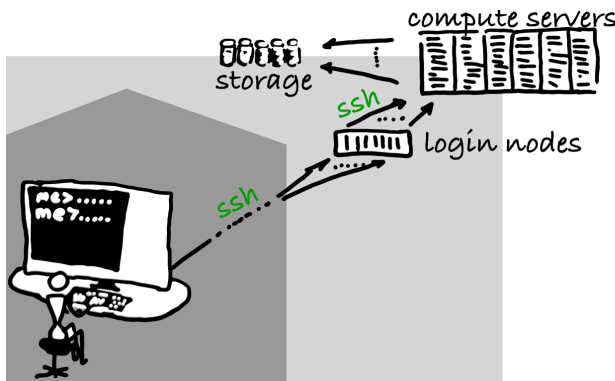
2 x AMD EPYC 9654
2 x 96 cores/CPU
768 GB/node

VSC-5 – components of a supercomputer



VSC-5 – login

- username & [password](#)
 - ➡ mobile phone number
- two-factor authentication
 - ➡ OTP sent as SMS ➡ every 12 hours
- restricted IPs (firewall)
 - ➡ at a ASC partner uni / jump host / VPN
- terminal
 - ➡ xterm, terminal, PuTTY



- [docs](#), [PuTTY screenshots](#), ssh-keys (ssh -p 27)

training → everyone logged in ?

```
username: trainee## ( ➡ ## ➡ ID )  
password: .....## ( ➡ see email )
```

standard ssh (inside IP range of a ASC partner university):

```
ssh trainee##@vsc5.vsc.ac.at
```

trainee users only (no IP range restrictions):

```
ssh -t trainee##@vmos.vsc.ac.at vsc5
```

login via VSC JupyterHub

```
https://jupyterhub.vsc.ac.at  
(just hit "Start" & open a terminal)
```