

SAGE/IO-SEA User/Developer Guide

System overview

```

--- external network ---+-----+
                        |         |
                        | port 222 | port 22 (ssh)
                        |         |
                        v         |
+-----+-----+       |
| sage.zam.kfa-juelich.de |       |
+-----+-----+       |
                        |       |
                        +-----+
                        |
                        v
+-----+
| sage-loginvm |
+-----+
|
|   +-----+
+---->| sage-client-gc |
|   +-----+
|
|   +-----+
+---->| sage-server-gc |
|   +-----+
|
|   +-----+
+---->| sage-tier2-[1-4] |
|   +-----+
|
|   +-----+
+---->| sage-tier3-[1-2] |
|   +-----+
|
|   +-----+
+---->| sage-tier4-[1-2] |
|   +-----+
|
|   +-----+
+---->| client-[21-28] |
|   +-----+
|
|   +-----+
+---->| datawarp-[01-04] |
|   +-----+
|
|   +-----+
+---->| visnode-[01-04] |
|   +-----+

```

User administration

There are two kind of accounts: normal user accounts (<name><number>, e.g. mustermann1 and admin accounts (<initial><name>, e.g. gmustermann).

Please use the user accounts preferably to do the benchmarking etc. work which do not require privileges. Use the admin accounts only if your privilege doesn't suffice to do the required work. Please be careful, we trust you know what you're doing.

To get a user account, please use [JSC's JUDOOR portal](#) and apply for membership in the iosea project.

To get an admin account, please mail the public part of the (id25519) key to niessen@?. The key is generated e.g. by

```
ssh-keygen -t ed25519 -C "key for SAGE admin" -f ~/.ssh/id_25519_sage
```

Logging in

To log into the system, please use

```
ssh -l <username> sage.zam.kfa-juelich.de
```

This will land you on the sage-loginvm. This is a virtual machine with 4 CPUs and 16 GB of memory. From there, you can use ssh to go to other machines in the cluster.

Nodes in the system

server nodes

Please find out about the current disk configuration by logging into the nodes and running `lsblk`.

The list of server nodes is the following:

- sage-tier2-[1-4]: 128 GB memory, 24 cores (except sage-tier2-3 with only 16 cores).
- sage-tier3-[1-2]: 128 GB memory, 16 cores
- sage-tier4-[1-2]: 128 GB memory, 16 cores on -1, 24 cores on -2

client nodes

All client nodes are booted diskless. Disks found on the systems are not used for the operating system but can be used for other purposes.

The list of client nodes is the following:

- client-[21-28]: 16 GB memory, 8 cores (client-21 is broken)
- datawarp-[01-04]: 128 GB, 28 cores
- visnode-[01-04]: 128 GB, 28 cores

Networks

Ethernet

All nodes are connected via a 1G Ethernet

Infiniband

Server and client nodes are connect by an infiniband fabric

Batch system

The client nodes are configured as batch execution hosts. Slurm is used as batch system.