

LHCb requires a dedicated VO node (VO-box) to be set up on each site participating to the SC3. The VO node will run permanent LHCb agents which will provide a reliable mechanism to accomplish various tasks.

VO-box requirements:

- SLC3 OS;
- 2.4 Ghz CPU Pentium 32-bit, 1 GB memory
- Outbound connectivity;
- Inbound connectivity from the local Worker Nodes;
- Local user account available via ssh login ;
- Local disk space to accommodate the Request Data Base, 20 GB minimum, 100 GB normal. Running a MySQL server on the VO node.
- Local disk space shared with the worker nodes to install the application software. The same as the space pointed by the VO_LHCB_SOFT variable.
- LCG UI software including the LFC and FTS client libraries and commands.
- Service certificates will be used for secure operations.

Agents and services running on the VO-box:

- Request DB service. This service is receiving requests for various operations and stores for the use by the corresponding agents.
- Transfer Agent. Accomplishes data transfer and registration requests. Data are transferred from or to the local SE. Successfully transferred file replicas are registered in the central File Catalog (LFC). Transfer Agent uses FTS service if the required channel is available or other mechanisms, like third party GRIDFTP transfers. Each site should provide a local SE with a standard access mechanism, e.g. SRM or GRIDFTP.
- Monitor Agent. Accomplishes monitor information publishing requests set by the jobs running on the site.
- Job Agent. Receives and stores locally requests for various operations (software installation, data transfers, etc). Before the job submission checks and, if necessary, installs locally the required software.
- Other agents.

Agents are run on the Vo node using *runit* service control tools. The agents are running in the user space. However, small addition to the inittab will be necessary to start the agents at boot time automatically.