



# Site Administrator Software Requirements

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# Overview

- Authentication
- Authorisation
- Auditing
- Grid Middleware
- Application Software
- Storage Mangement
- Quality of Service



# Authentication and Authorisation

- CAs must be trustworthy. 
- CAs must publish a CPS to establish that trust. 
- Access completely at the discretion of a site. 
- Individual users can be accepted and banned from a site. 
- Centrally managed VO servers. 
- VOs must be trustworthy. 
- VOs should publish equivalent of a CPS, a VOPS? 
- Reliable maintained information, secure machine, .... 
- Users or VOs must sign a site's acceptable user guidelines, possibly a boolean, e.g. both Datagrid and UK guidelines.  



# Auditing

- Data stored must be owned by someone. 🖨️
- The police may want to know who owns data.
- Processes running must be owned by someone. 🖨️
- A site may want to know who is 'breaking' the site.
- The site needs to have reliable contact information for a person. 🖨️
- Contact information maintained by the VO. 🖨️












# Grid Middleware

- Middleware software to be installed must be supplied with:
- Documentation, installation instructions. 📄
- List of port numbers, both inbound and outbound. 🖨️
- Port numbers both within a site (iptables) and to the internet (site firewall). 🖨️
- Which user the software runs as, root or a non privileged user. If root why root. 🖨️
- What data should be backed up with methods for recovery. 🖨️
- Tools and methods to check the installation. 🖨️ 📄



# Grid Middleware

- Middleware to interfere with a site to the minimum. The ideal:
- Dedicated nodes run middleware.  
- Production nodes are untouched.  
- Middleware interfaces the grid to the existing production system. 
- Software should not impose local uid, gids, usernames and groupnames. 
- Software should adhere to the File Hierarchy Standard and the Linux Standard Base.  
- ~~Log files should be rotated.~~ 



# Application Software

- Installed application software is agreed between a VO and site. 🖨️
- A single directory will be allocated to a VO's software. 📄
- The directory's location will be made available to the VO but may be dynamic. 📄
- Installation method could be a package (eg rpm) to be installed by the site or managed manually by a VO software manager. 🖨️ 📄
- Sites are not experts on VO software. 📄
- A VO should certify its own software and publish the software's status. 🖨️



# Application Software

- Application software must be 'safe'. 📄
- No user writeable space and under strict control of a known software manager. 📄
- No root cron jobs. 📄
- No services or open ports. 📄
- No suid scripts. 📄
- If not 'safe' then the software is considered middleware.






# Storage Management

- The internal storage is managed by a site. 📄
- A site can offer a user a maximum space available and a maximum file size. 🖨️
- The eventual location of the data will then be assigned by the site. The LFN is the only reference a user has to data. 📄
- A site may need to transfer data from one location to another location to reorganise or for disaster recovery.
- Methods and tools should be provided for a site to reorganise its data while maintaining those pointers. 🖨️
- Tools provided to verify any catalogues. 🖨️



# Quality of Service

- Different sites may offer different quality of service.
- Data may be archived to tape, on raid or scratch.
- A machine room may be covered 24/7 but a machine could just be someones desktop.
- Sites need methods and tools to advertise this information.  

- Sites need to be able to inform people or middleware of expected breaks in services. 