

# Sakai Admin Guide - Binary Content and Filesystem Settings

## Binary Content and Filesystem Settings

Binary content (files) uploaded into Sakai can either be stored in the database itself, or on the filesystem. By default, binary content is stored in the database.

### Storing binary content on the filesystem

To use the filesystem to store binary content, add properties like the following to your sakai.properties file:

```
bodyPath@org.sakaiproject.content.api.ContentHostingService=/content/sakai
# Only uncomment the bodyVolumes property if you have multiple content volumes
# (sub directories/ mount points relative to the location specified above)
bodyVolumes@org.sakaiproject.content.api.ContentHostingService=vol1,vol2,vol3
# uncomment the next line if you wish to set a site quota of 1Gb
# siteQuota@org.sakaiproject.content.api.ContentHostingService=1048576
```

Note that Sakai only balances content between active volumes. Sakai doesn't check the availability of disk space on each volume. So, for example, if you have a single volume containing 100Mb of filesystem content and add four additional volumes, when another 400Mb of files are added, the distribution is likely to be something like 180Mb on the first volume and 80Mb on each of the new volumes.

#### Body volumes should not include spaces

**Warning:** If you are using filesystem storage, you should be very careful not to include spaces before or after the commas in your bodyVolumes@org.sakaiproject.content.api.ContentHostingService. This will cause your volume to be created with spaces in their names, which can cause problems. For more information, see:

<http://bugs.sakaiproject.org/jira/browse/SAK-9752>

#### Setting at least one body volume

**Note:** If you are using filesystem storage, you should set at least one volume by adding a bodyVolumes@org.sakaiproject.content.api.ContentHostingService option (see above). This will give you room to expand and relocate your filesystem content as your Sakai installation grows. If you do not set this option, binary content will be stored in the root of the directory specified in bodyPath@org.sakaiproject.content.api.ContentHostingService.

### Storing binary content in the database

To use the database to store binary content, comment out the directives mentioned above in your sakai.properties file. Any content already located on the filesystem will remain on the filesystem.

### Migrating from database storage to filesystem storage

If you have previously stored your binary content in the database and would like to move that content to the filesystem, add the following directive to your sakai.properties file and restart:

```
convertToFile@org.sakaiproject.content.api.ContentHostingService=true
```

There is currently no conversion route to move from storing content on the filesystem to storing content in the database.

### Antivirus Scanning

The Rsmart group has developed a wrapper for content hosting that uses ClamAV to scan incoming binary content before it is stored. Source code can be found at:

<https://source.sakaiproject.org/contrib/rsmart/antivirus/>