

Useful Shared File System Hints and Tips for Customers with IBM Backup and Restore Manager for z/VM

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z/VM's Shared File System (SFS) is generally used by IBM Backup and Restore Manager for 3 purposes::

- To store all the catalog data about what has been backed up, where it is located, when it expires, etc. This is required to be in SFS.
- To store the backup job definitions (called TEMPLATES). This is optional – alternatively the job definitions can be stored on BKRBKUP 199 minidisk. Storing them in SFS instead of on minidisk is convenient for customers who will have multiple users creating or modifying backup job definitions.
- As the target data store for backups. For example, instead of writing backups to tape or minidisk, you can write them to SFS.

Useful commands and messages for SFS file pool management

In all of the sample commands below, the SFS file space name is BKRSFS and the SFS server user ID is BKRSVSFS. If your server name or file space name is different, update the commands accordingly.

1. Monitor for these messages on the SFS server to know when the SFS file pool is getting full:
`DMS3202W Storage group /nn/ is short on storage`
`DMS3201E Storage group /nn/ is full`

The threshold for the first one is set via `GROUPTHRESH` parameter in the `DMSPARMS` file on the SFS server's 191 disk.

2. To find the name of a file pool server or a file pool:
`CP QUERY RESOURCE`

Note that the file pool server must be running for the file pool name and file pool server name to be included in the output.

3. To check the amount of SFS space used by each user:
`QUERY LIMITS ALL BKRSFS:`

4. To check the amount of space available and space used on the SFS server:
`QUERY FILEPOOL STORGRP BKRSFS:`

`QUERY FILEPOOL MINIDISK BKRSFS:`

5. To change the amount of space a user is entitled to use in SFS:
`MODIFY USER +<blocks> FOR <userid> BKRSFS:`

6. To add new minidisks to the SFS server for the SFS catalog disks (storage group 1) or one of the other storage groups (because one or more of them is running out of space):

- a. Logon to a user ID that is authorized to issue file pool administrator commands (for example, MAINT, MAINT6x0, BKADMIN).
- b. Using DIRMAINT or other directory management facility, add a new minidisk to the directory entry for the SFS server (BKRSVSFS, for example.) You do not need to format the disk.
- c. Link and access the MAINT 193 minidisk:
`VMLINK MAINT 193`
- d. Create a file called SFSADD MDISK (you can name it anything you like.) Insert one or more of the following statement:
`DDNAME=MDK000xx VDEV=yyy GROUP=2 BLOCKS=0`
 - i. For "BLOCKS", always specify a value of zero. SFS will calculate the correct number for you.
 - ii. For the values of xx and yyy, refer to BKRSFS POOLDEF file on the BKRSVSFS 191 minidisk. Choose the next available numbers for each.
- e. Issue the following command. **Notice** the name of the file "SFSADD MDISK" is part of the command so adjust accordingly if you used a different file name:
`FILEPOOL MINIDISK BKRSVSFS SFSADD MDISK A BKRSFS: (FORMAT`

7. For more information on SFS:

- a. See Bruce Hayden's presentation:
<https://events.share.org/Summer2019/Public/SessionDetails.aspx?SessionID=9135&SessionDateID=51>
- b. Refer to the publication *CMS File Pool Planning, Administration, and Operation*.