

Edit the Quota Size of the Staging Folder and Conflict and Deleted Folder

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Applies To: Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2

DFS Replication uses staging folders for each replicated folder to act as caches for new and changed files that are ready to be replicated from sending members to receiving members. These files are stored under the local path of the replicated folder in the DfsrPrivate\Staging folder.

By default, the quota size of each staging folder is 4,096 MB, and the quota size of each Conflict and Deleted folder is 660 MB. The size of each folder on a member is cumulative per volume, so if there are multiple replicated folders on a member, DFS Replication creates multiple staging and Conflict and Deleted folders, each with its own quota.

The following subsections provide information about how to edit the quota of the staging folder and Conflict and Deleted folder and how to optimize the size of staging folders. To edit the quotas by using Windows PowerShell, use the [Set-DfsrMembership](#) cmdlet, which was introduced in Windows Server 2012 R2.

Important

If a staging folder quota is too small, DFS Replication might consume additional CPU and disk resources, and replication might slow down or even stop. For more information, see the [Optimize the size of staging folders](#) section of this topic.

Note

When a file is modified on two or more members before the changes can be replicated, the most recently updated file "wins" the conflict and DFS Replication moves the "losing" file or files to the Conflict and Deleted folder. The losing file or files are stored in the DfsrPrivate\ConflictandDeleted folder under the local path of the replicated folder on the member that resolves the conflict. The Conflict and Deleted folder is also used to store files that are deleted from replicated folders. The files in the Conflict and Deleted folder are renamed and are accessible only by members of the local Administrators group. The access control lists (ACLs) on the conflict files are preserved to help ensure security. You can view a log of conflict files and their original file names by viewing the ConflictandDeletedManifest.xml file in the DfsrPrivate folder.

Edit the quota size or location of the staging folder and Conflict and Deleted folder

You can edit the quota of the staging folder and Conflict and Deleted folder on a per-replicated folder, per-member basis. You can also change the location of the staging folder.

To edit the quota size or location of the staging folder and Conflict and Deleted folder

1. Open DFS Management.
2. In the console tree, under the **Replication** node, click the replication group that contains the replicated folder with the quotas that you want to edit.
3. In the details pane, on the **Memberships** tab, right-click the replicated folder on the member with the quota that you want to edit, and then click **Properties** .
4. On the **Staging** tab, adjust the staging folder quota and path as necessary.
5. On the **Advanced** tab, adjust the Conflict and Deleted folder quota as necessary.

Note

Changes are not applied immediately. The updates must be replicated to all domain controllers, and the member must poll its closest domain controller to obtain the changes. The amount of time this takes depends on AD DS replication latency and the short polling interval (5 minutes) on the member.

Optimize the size of staging folders

Optimizing the size of the staging folder can improve performance and reduce the likelihood of replication failing. When adjusting the size of the staging folder, consider the following factors:

- If a staging folder quota is configured to be too small, DFS Replication might consume additional CPU and disk resources to regenerate the staged files. Replication might also slow down, or even stop, because the lack of staging space can effectively limit the number of concurrent transfers with partners.

Important

For the initial replication of existing data on the primary member, the staging folder quota must be large enough so that replication can continue even if multiple large files remain in the staging folder because partners cannot promptly download the files.

To properly size the staging folder for initial replication, you must take into account the size of the files to be replicated. At a minimum, the staging folder quota should be at least the size of the 32 largest files in the replicated folder, or the 16 largest files for read-only replicated folders. To improve performance, set the size of the staging folder quota as close as possible to the size of the replicated folder.

To determine the size of the largest files in a replicated folder using Windows Explorer, sort by size and add the 32 largest file sizes (16 if it's a read-only replicated folder) to get the minimum staging folder size. To get the recommended minimum staging folder size

(in gigabytes) from a Windows PowerShell® command prompt, use this Windows PowerShell command where *<replicatedfolderpath>* is the path to the replicated folder (change 32 to 16 for read-only replicated folders):

```
(Get-ChildItem <replicatedfolderpath> -recurse -force | Sort-Object length -descending | select-object -first 32 | measure-object -property length -sum) .sum /1gb
```

- Increase the staging folder quota when you must replicate multiple large files that change frequently.
- If possible, increase the staging folder quota on hub members that have many replication partners.
- If free disk space is a concern, you might need to configure the staging quota to be lower than the default quota when several replicated folders share staging space on the same volume.
- During normal operation, if the event that indicates the staging quota (event ID 4208 in the DFS Replication event log) is over its configured size and is logged multiple times in an hour, increase the staging quota by 20 percent.
- To improve input/output (I/O) throughput, locate staging folders and replicated folders on different physical disks. This can be done by editing the path of the staging folder.

Note

The staging quota for DFS Replication is not a hard limit, and it can grow over its configured size, unlike the staging quota for FRS. When the quota is reached, DFS Replication deletes old files from the staging folder to reduce the disk usage under the quota. The staging folder does not reserve hard disk space, and it only consumes as much disk space as is currently needed.

Additional references

- [Managing DFS Replication](#)
- [Delegate the Ability to Manage DFS Replication](#)

Change History

Date	Description	Reason
September 28, 2011	Reworded parts of the topic to highlight the importance of setting a large enough staging folder quota	Customer feedback
	Changed the Windows PowerShell command so that it	

automatically calculates the minimum required staging folder size