

# How to force an authoritative and non-authoritative synchronization for DFSR-replicated SYSVOL (like "D4/D2" for FRS)

**\*\*\*\*Important to note: This should only be done by a competent tech that understands the steps they are performing. If done wrong these steps can have critical irreversible effects on a domain. AKA: Don't do this if you do not understand it because it can really jack stuff up!!!\*\*\*\***

\*\*\*\*\*

```
#DomainBackup
```

```
#Backup Domain Level files
```

```
SET FILEROOTA="C:\Windows\SYSVOL\domain"
```

```
SET FILEENDA="C:\Accent\DomainBackup"
```

```
ROBOCOPY %FILEROOTA% %FILEENDA% /MIR /R:2 /W:2 /MT:6
```

\*\*\*\*\*

```
Update-DfsrConfigurationFromAD
```

```
repadmin /syncall FS3 /APeD
```

```
Pause
```

```
Invoke-Command -ComputerName DC1, DC2 -ScriptBlock {Restart-Service DFSR}
```

or

```
Invoke-Command -ComputerName DC1, DC2 -ScriptBlock {Stop-Service DFSR}
```

```
Invoke-Command -ComputerName DC1, DC2 -ScriptBlock {Start-Service DFSR}
```

- Non-authoritative restore is useful when a NON-PDC domain controller is not replicating the sysvol folder. This is done on the NON-PDC domain controller. It marks its data as non-authoritative and pulls in new sysvol data from the PDC.
- An authoritative restore is useful when the non-authoritative does not work. This is done primarily on the PDC but you also have to complete steps on the NON-PDC domain controllers. This marks the data on the PDC as authoritative and pushes it to all other DCs. I believe this can be done on a non PDC domain controller if the non-PDC holds the good sysvol data but this needs to be verified.
- Important to note: this is for servers that use DFSR to replicate SYSVOL, so Server 2008 and newer. Older servers have a different process. On older servers look at [D2 and D4](#).
- Below is three links. One is the Microsoft link with a step-by-step for both processes and the other two are step-by-step that include a more non-formal and understandable format.
- In the Microsoft steps below (and in the first link) there is a More Info section that provides some scenario based information that is helpful.
- Also the Microsoft steps are pasted below.

[Microsoft links to both authoritative and non-authoritative steps.](#)

[Authoritative step-by-step that is easier to understand.](#)

[Non-authoritative step-by-step that is easier to understand.](#)

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Microsoft steps:

Consider the following scenario:

You want to force the non-authoritative synchronization of SYSVOL on a domain controller. In the File Replication Service (FRS), this was controlled through the D2 and D4 data values for the Burflags registry values, but these values do not exist for the Distributed File System Replication (DFSR) service. You cannot use the DFS Management snap-in (Dfsmgmt.msc) or the Dfsradmin.exe command-line tool to achieve this. Unlike custom DFSR replicated folders, SYSVOL is intentionally protected from any editing through its management interfaces to prevent accidents.

How to perform a non-authoritative synchronization of DFSR-replicated SYSVOL (like "D2" for FRS)

1. In the ADSIEDIT.MSC tool modify the following distinguished name (DN) value and attribute on each of the domain controllers that you want to make non-authoritative:

```
CN=SYSVOL Subscription,CN=Domain System Volume,CN=DFSR-LocalSettings,CN=<the server name>,OU=Domain Controllers,DC=<domain>
```

```
msDFSR-Enabled=FALSE
```

2. Force Active Directory replication throughout the domain.
3. Run the following command from an elevated command prompt on the same servers that you set as non-authoritative:

```
DFSRDIAG POLLAD
```

4. You will see Event ID 4114 in the DFSR event log indicating SYSVOL is no longer being replicated.
5. On the same DN from Step 1, set:

```
msDFSR-Enabled=TRUE
```

6. Force Active Directory replication throughout the domain.
7. Run the following command from an elevated command prompt on the same servers that you set as non-authoritative:

```
DFSRDIAG POLLAD
```

8. You will see Event ID 4614 and 4604 in the DFSR event log indicating SYSVOL has been initialized. That domain controller has now done a "D2" of SYSVOL.

How to perform an authoritative synchronization of DFSR-replicated SYSVOL (like "D4" for FRS)

9. Stop DFSR Service
- 10.

11. In the ADSIEDIT.MSC tool, modify the following DN and two attributes on the domain controller you want to make authoritative (preferably the PDC Emulator, which is usually the most up to date for SYSVOL contents):

CN=SYSVOL Subscription,CN=Domain System Volume,CN=DFSR-LocalSettings,CN=<the server name>,OU=Domain Controllers,DC=<domain>

msDFSR-Enabled=FALSE

msDFSR-options=1

12. Modify the following DN and single attribute on all other domain controllers in that domain:

CN=SYSVOL Subscription,CN=Domain System Volume,CN=DFSR-LocalSettings,CN=<each other server name>,OU=Domain Controllers,DC=<domain>

msDFSR-Enabled=FALSE

13. Force Active Directory replication throughout the domain and validate its success on all DCs.

14. Start the DFSR service set as authoritative:

15. You will see Event ID 4114 in the DFSR event log indicating SYSVOL is no longer being replicated.

16. On the same DN from Step 1, set:

msDFSR-Enabled=TRUE

17. Force Active Directory replication throughout the domain and validate its success on all DCs.

18. Run the following command from an elevated command prompt on the same server that you set as authoritative:

DFSRDIAG POLLAD

19. You will see Event ID 4602 in the DFSR event log indicating SYSVOL has been initialized. That domain controller has now done a "D4" of SYSVOL.

20. Start the DFSR service on the other non-authoritative DCs. You will see Event ID 4114 in the DFSR event log indicating SYSVOL is no longer being replicated on each of them.

21. Modify the following DN and single attribute on all other domain controllers in that domain:

CN=SYSVOL Subscription,CN=Domain System Volume,CN=DFSR-LocalSettings,CN=<each other server name>,OU=Domain Controllers,DC=<domain>

msDFSR-Enabled=TRUE

22. Run the following command from an elevated command prompt on all non-authoritative DCs (i.e. all but the formerly authoritative one):

DFSRDIAG POLLAD

## More Information

If setting the authoritative flag on one DC, you must non-authoritatively synchronize all other DCs in the domain. Otherwise you will see conflicts on DCs, originating from any DCs where you did not set auth/non-auth and restarted the DFSR service. For example, if all logon scripts were accidentally deleted and a manual copy of them was placed back on the PDC Emulator role holder, making that server authoritative and all other servers non-authoritative would guarantee success and prevent conflicts.

If making any DC authoritative, the PDC Emulator as authoritative is preferable, since its SYSVOL contents are usually most up to date.

The use of the authoritative flag is only necessary if you need to force synchronization of all DCs. If only repairing one DC, simply make it non-authoritative and do not touch other servers.

This article is designed with a 2-DC environment in mind, for simplicity of description. If you had more than one affected DC, expand the steps to include ALL of those as well. It also assumes you have the ability to restore data that was deleted, overwritten, damaged, etc. previously if this is a disaster recovery scenario on all DCs in the domain.

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From <<https://support.microsoft.com/en-us/kb/2218556>>

If SYSVOL will not replicate, adjust the following registry key from "0" to "1"

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Netlogon\Parameters\SysvolReady
```

```
Net stop netlogon
```

```
Net start netlogon
```

```
Repadmin /syncall /AeDqP
```

```
Dfsrdiag pollad
```

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