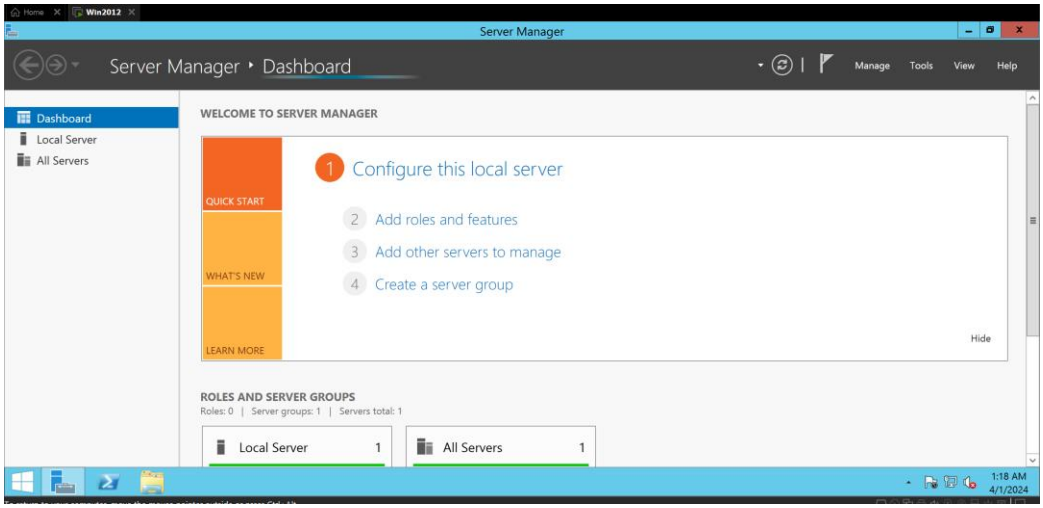
Exercise 1: Installing the DFS Role Service

▶ Task 1: Install the DFS role service on LON-DC1

1. Switch to LON-DC1.

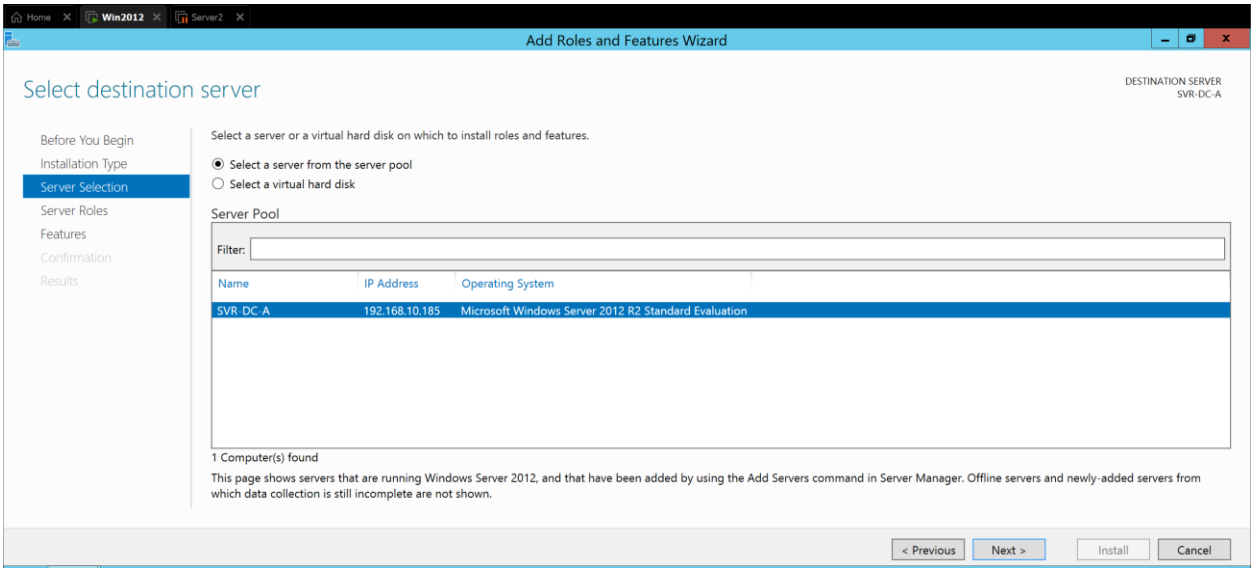
2. On the taskbar, click Server Manager.



3. In Server Manager, click Manage, and then click Add Roles and Features.

4. In the Add Roles and Features Wizard, click Next.

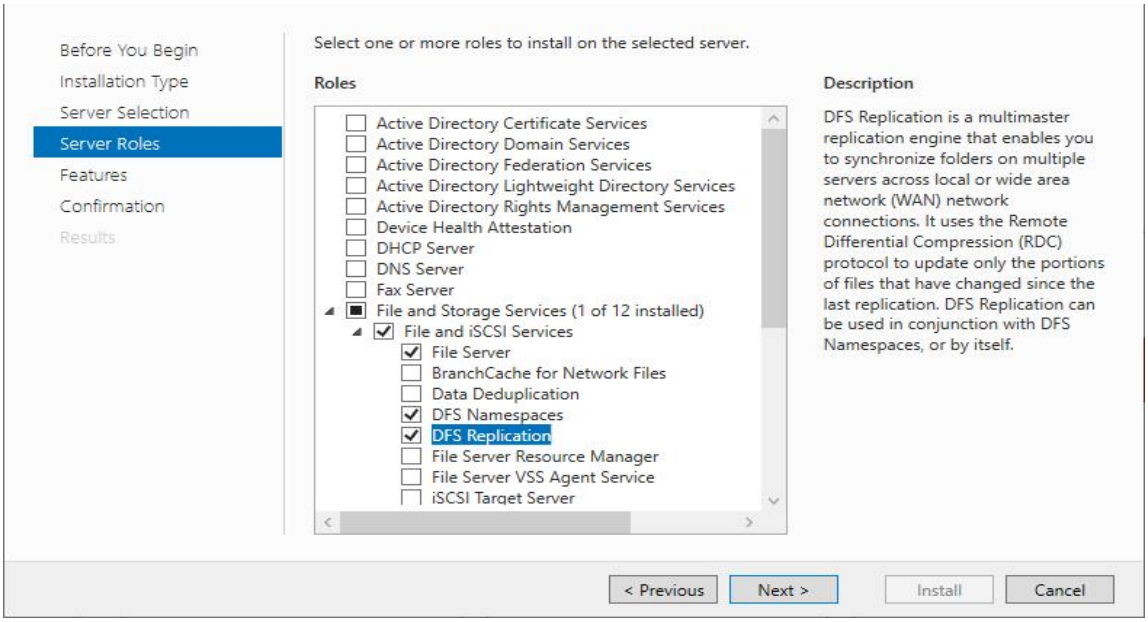
5. 5. On the Select installation type page, click Next.



6. On the Select destination server page, click Next.

7. On the Select server roles page, expand File and Storage Services, expand File and iSCSI Services, and

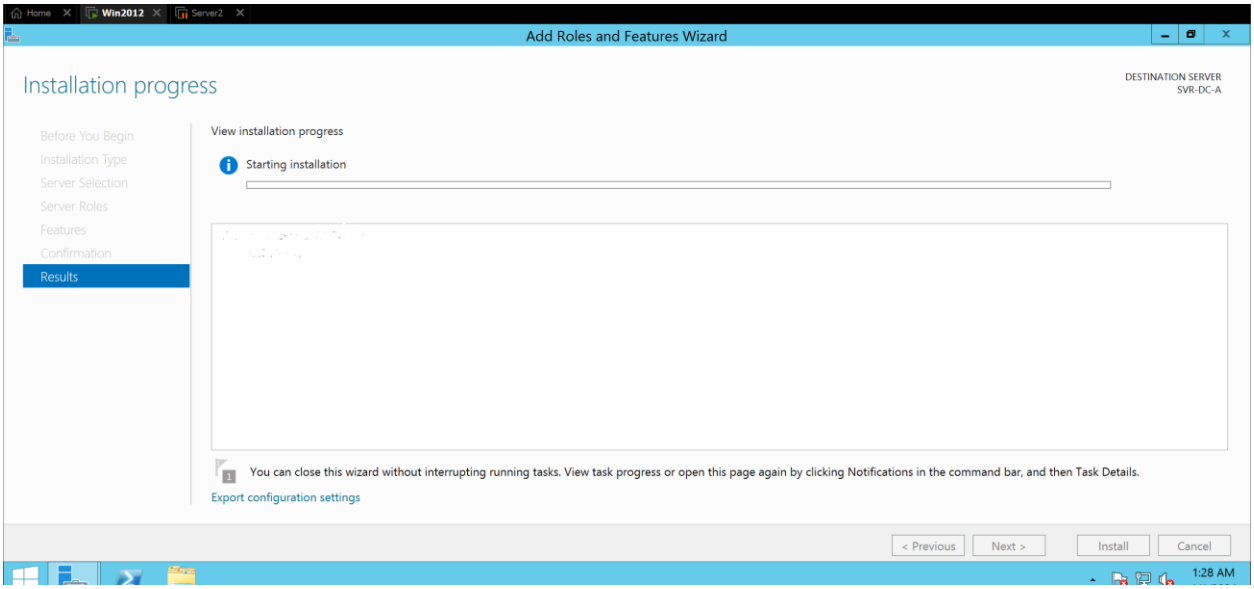
then select the DFS Namespaces check box.



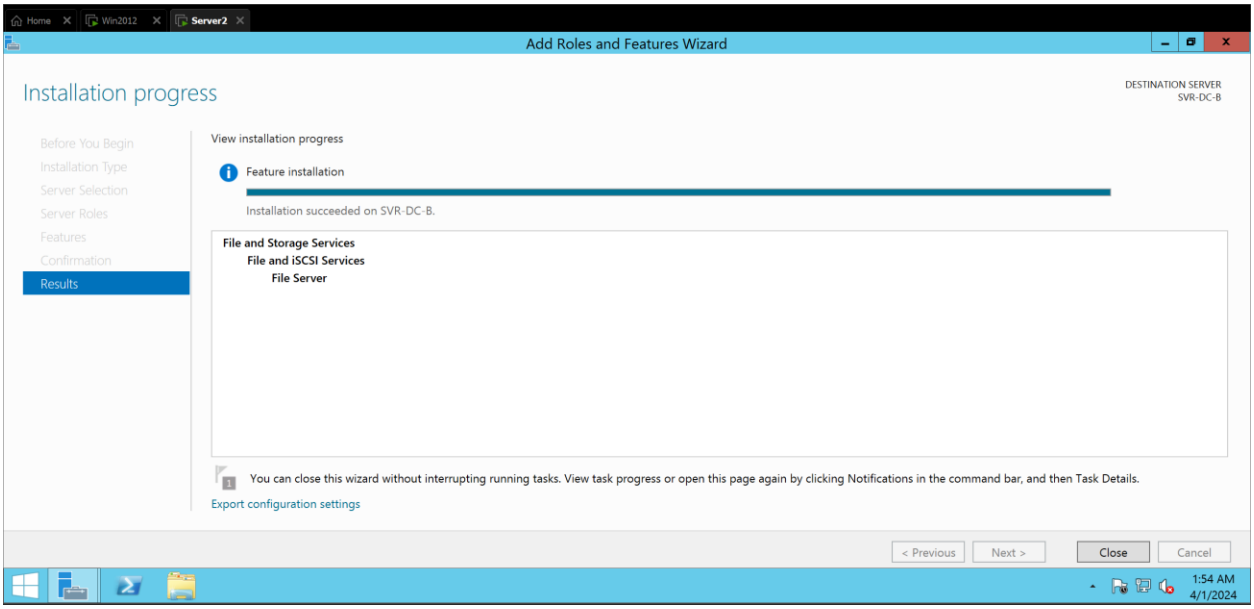
8. Select the DFS Replication check box, and then click Next.

9. On the Select features page, click Next.

10. On the Confirm installation selections page, click Install.



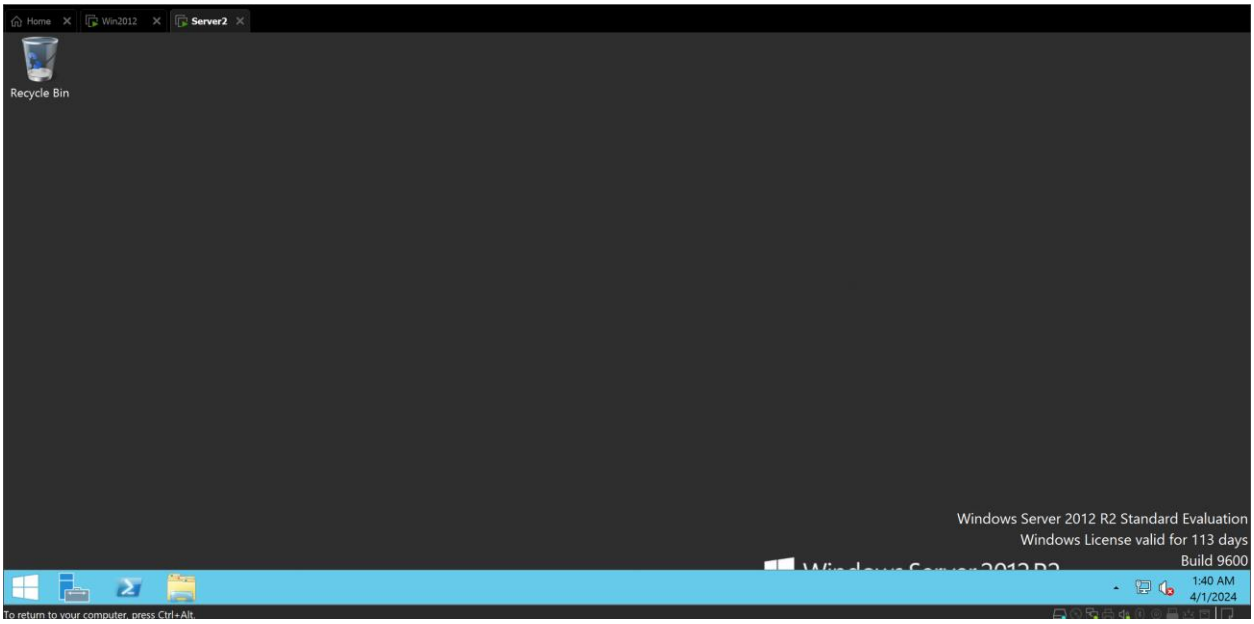
11. When the installation completes, click Close.



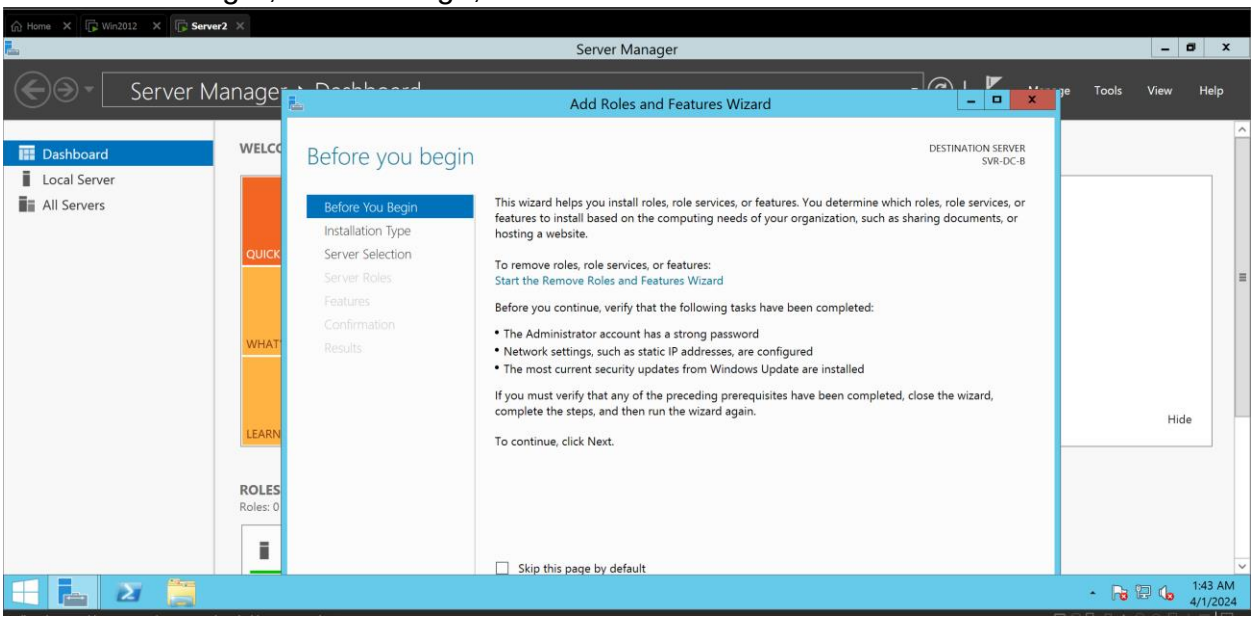
12. Close Server Manager.

Task 2: Install the DFS role service on LON-SVR1

1. Switch to LON-SVR1.



2. In Server Manager, click Manage, and then click Add Roles and Features.

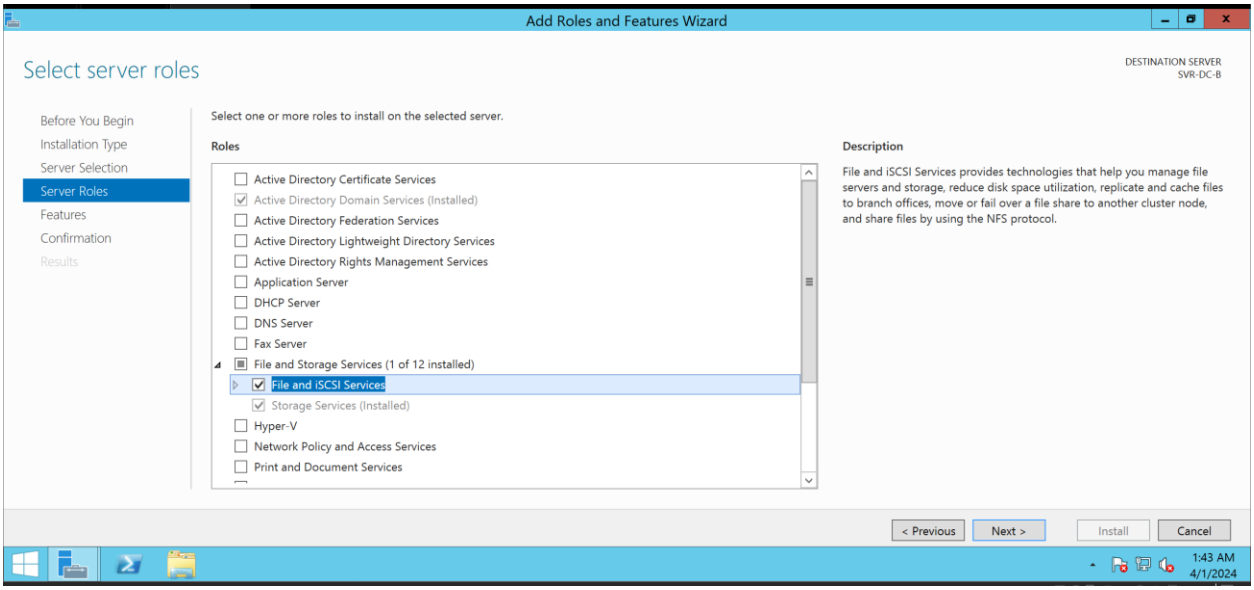


3. In the Add Roles and Features Wizard, click Next.

4. On the Select installation type page, click Next.

5. On the Select destination server page, click Next.

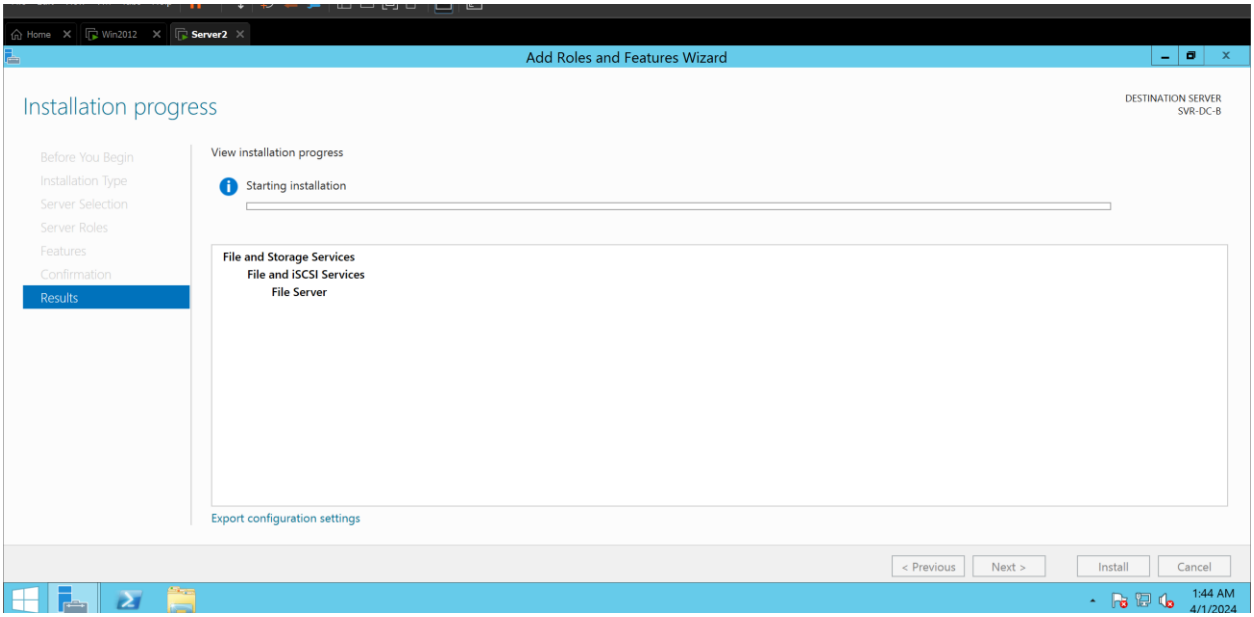
6. On the Select server roles page, expand File and Storage Services, expand File and iSCSI Services, and then select the DFS Namespaces check box.



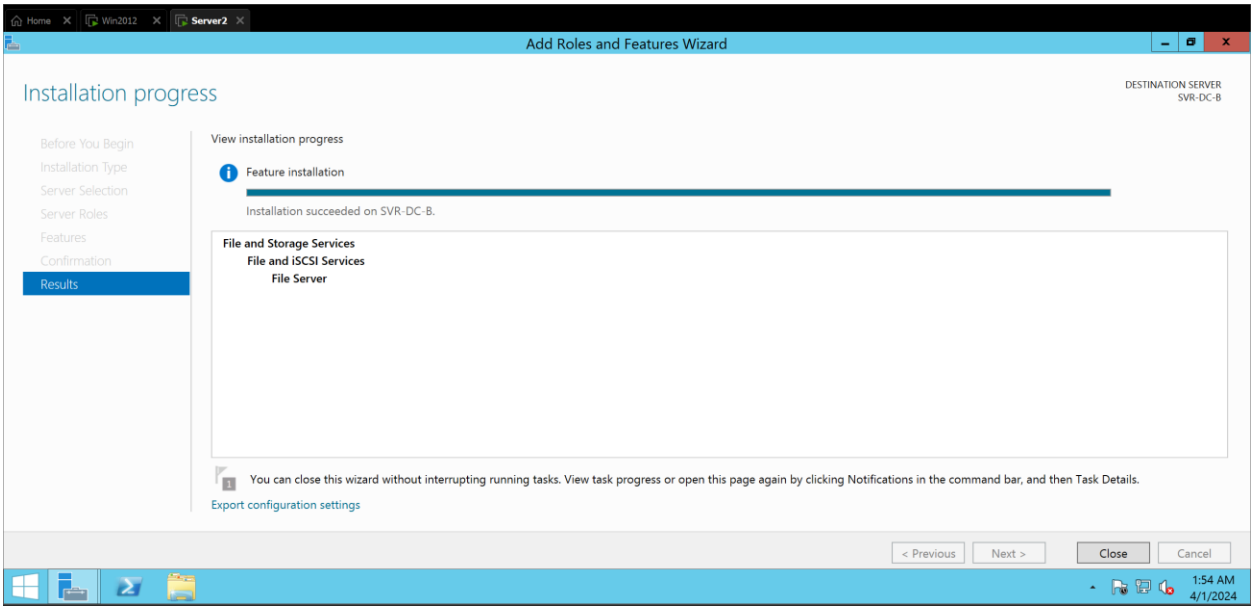
7. Select the DFS Replication check box, and then click Next.

8. On the Select features page, click Next.

9. On the Confirm installation selections page, click Install.



10. When the installation completes, click Close.

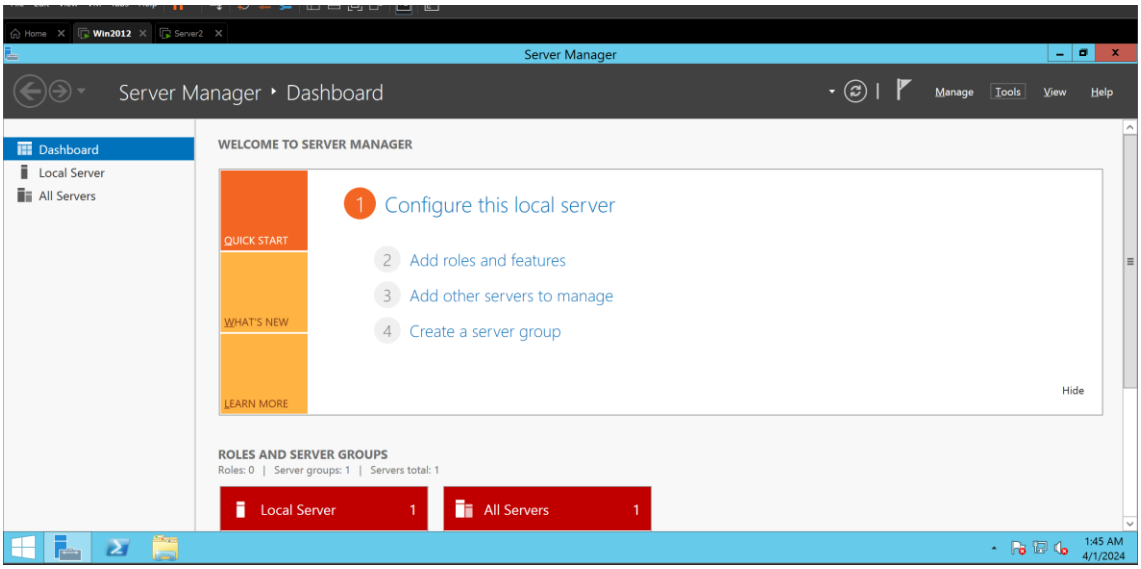


11. Close Server Manager.

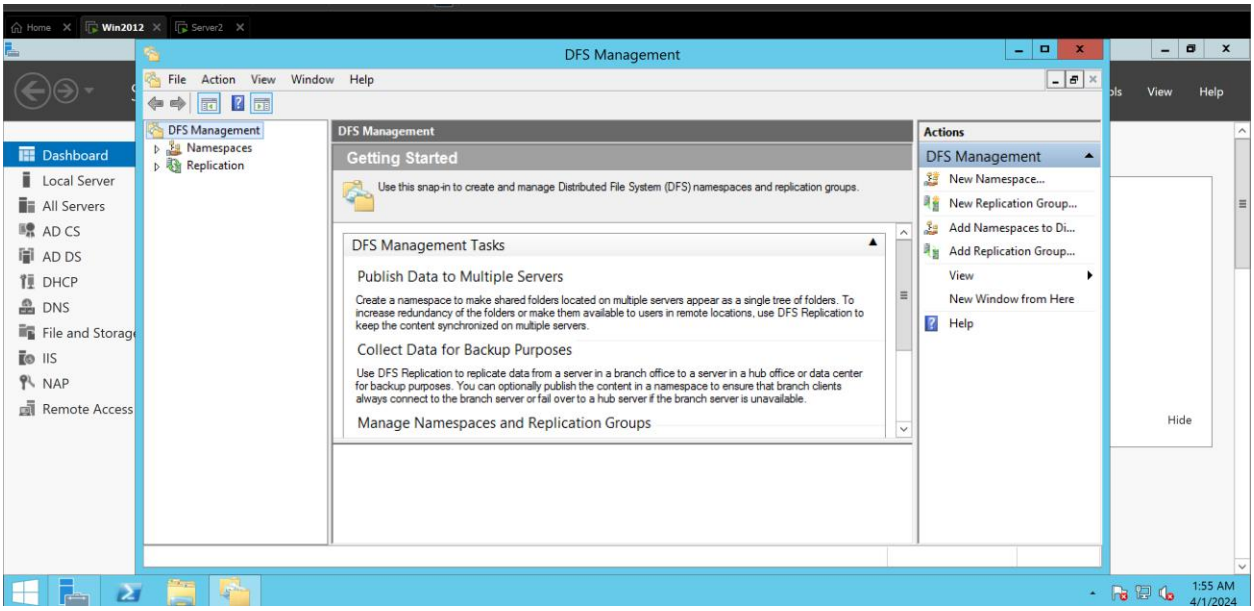
Exercise 2: Configuring a DFS Namespace

▶ Task 1: Create the BranchDocs namespace

1. Switch to LON-DC1 and then open Server Manager.



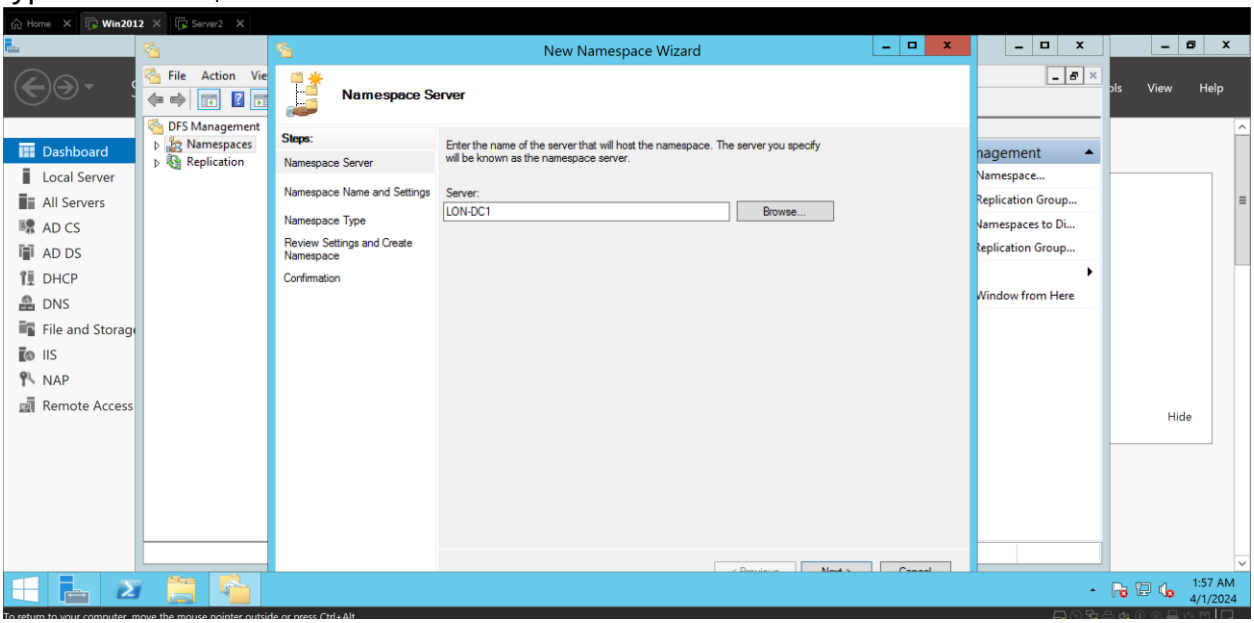
2. In Server Manager, click Tools, and then click DFS Management.



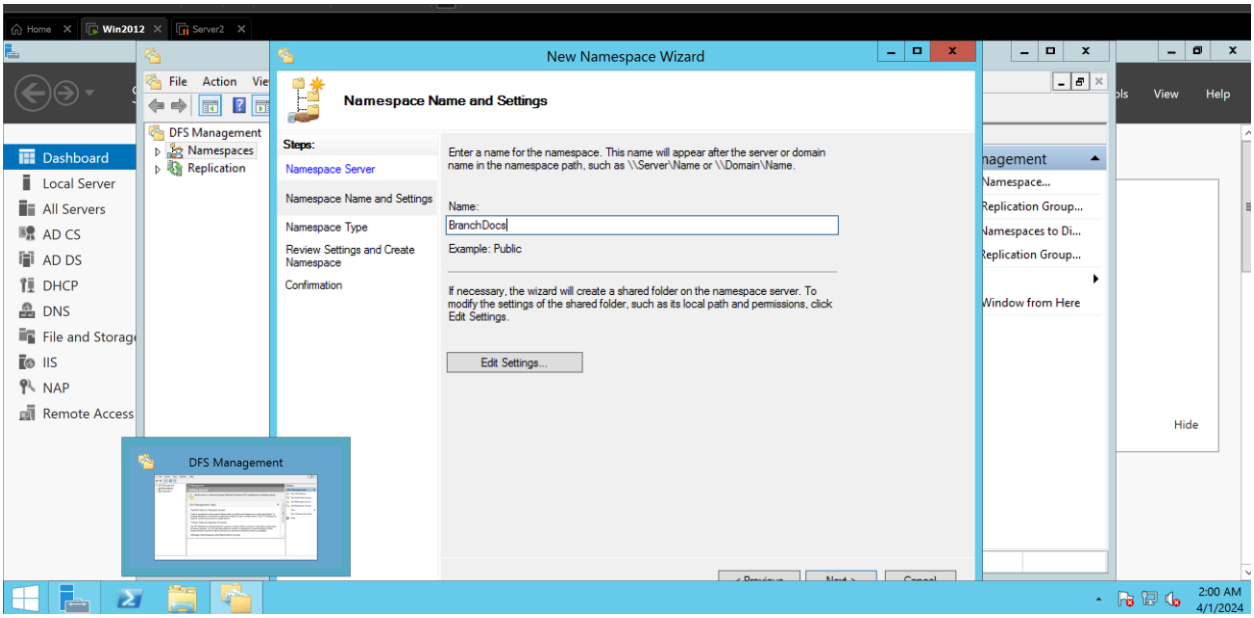
3. In the navigation pane, click Namespaces.

4. Right-click Namespaces, and then click New Namespace.

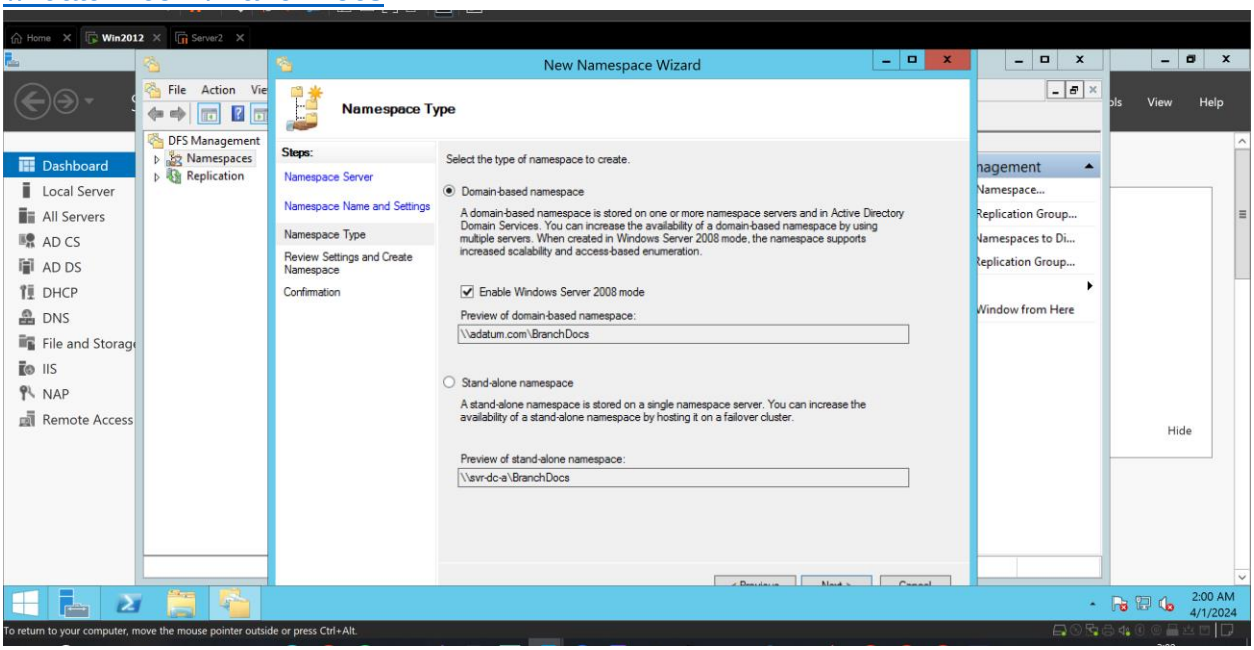
4. In the New Namespace Wizard, on the Namespace Server page, under Server, type LON-DC1, and then click Next.



5. On the Namespace Name and Settings page, under Name, type BranchDocs, and then click Next.



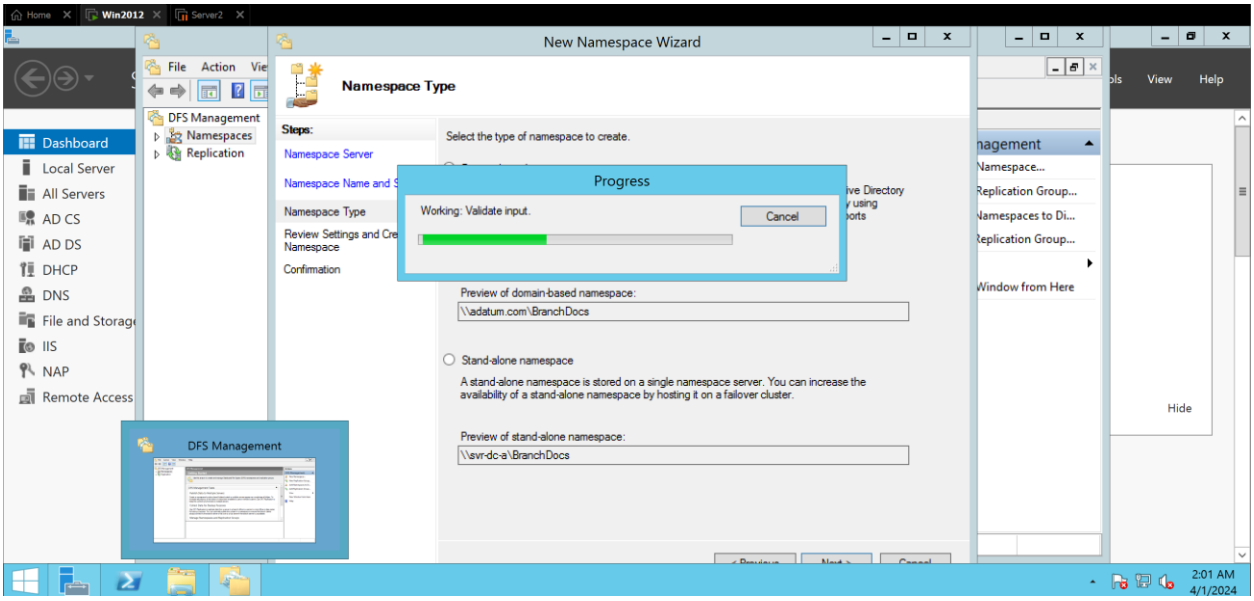
6. On the Namespace Type page, ensure that Domain-based namespace is selected. Take note that the namespace will be accessed by \\Adatum.com\BranchDocs.



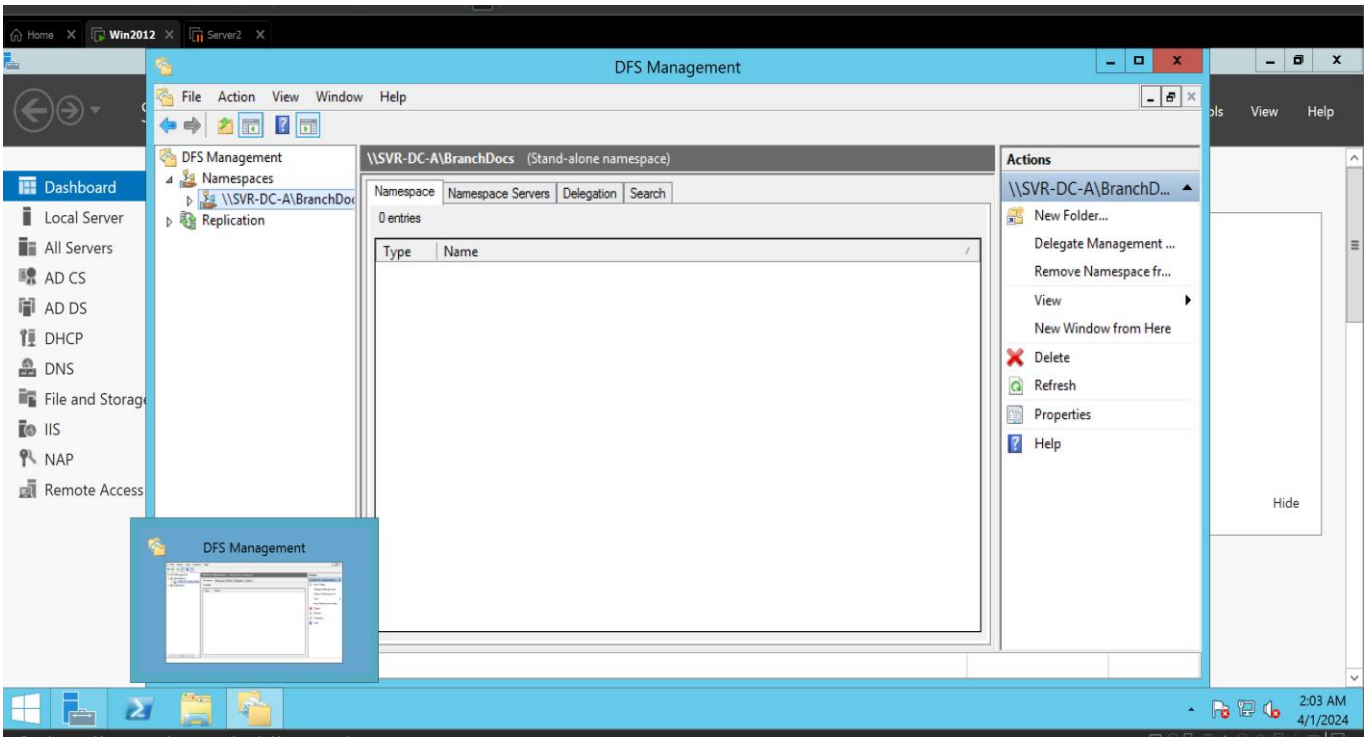
8. Ensure that the Enable Windows Server 2008 mode check box is selected, and then click Next.

9. On the Review Settings and Create Namespace page, click Create.

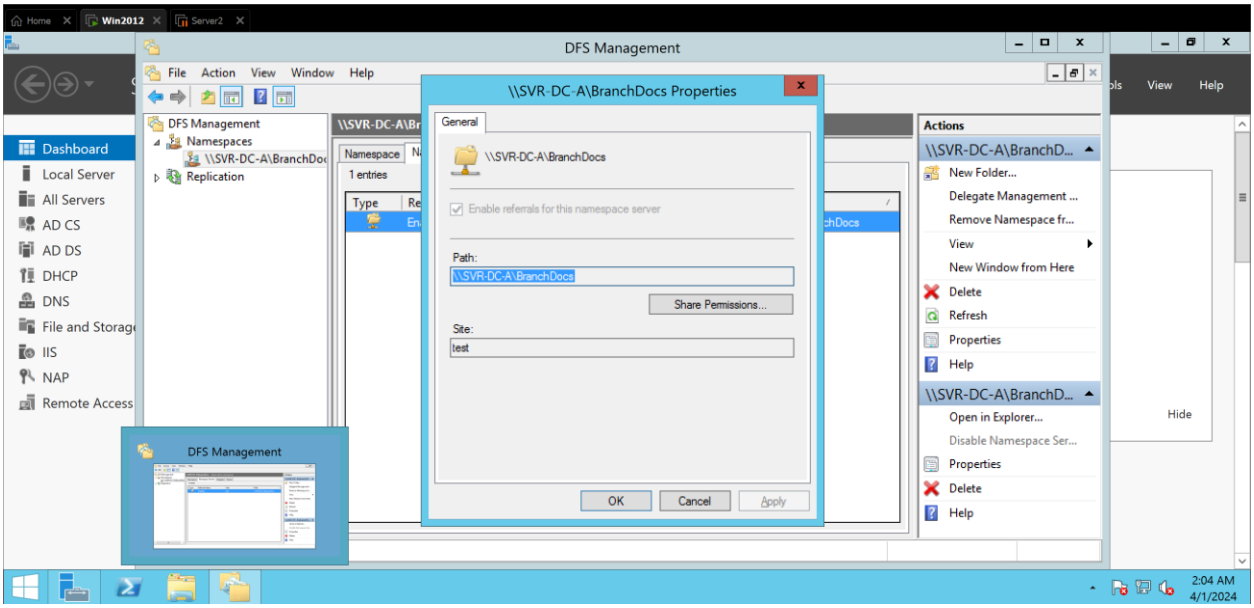
10. On the Confirmation page, ensure that the Create namespace task is successful, and then click Close.



11. In the navigation pane, expand Namespaces, and then click \\Adatum.com\BranchDocs.

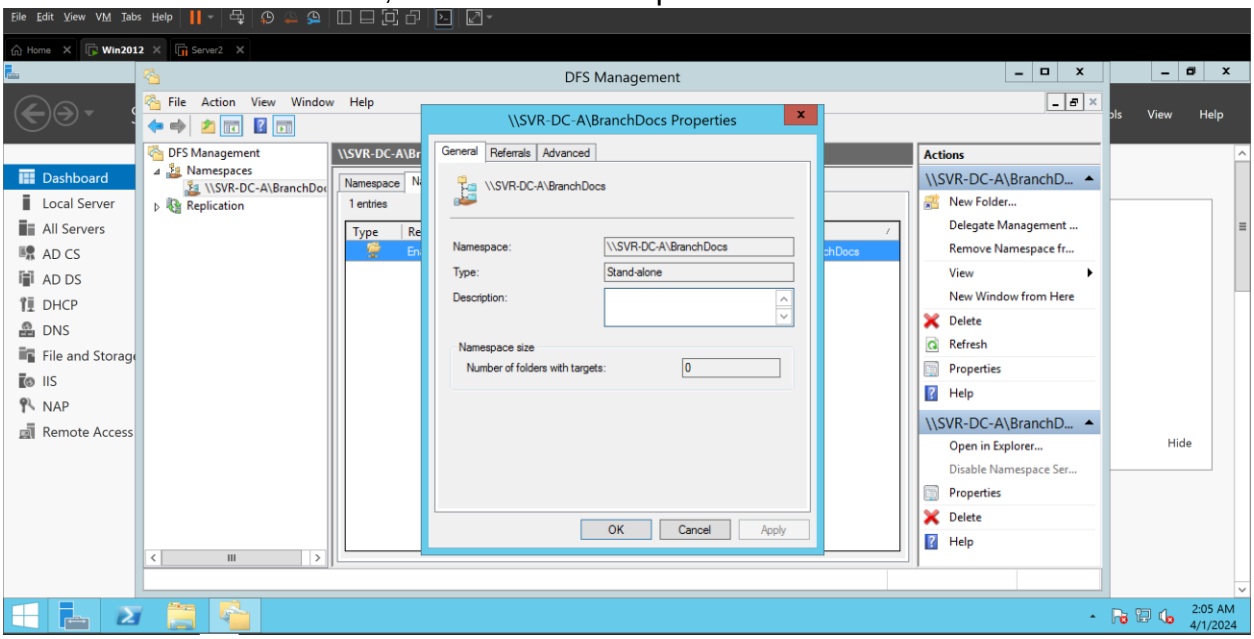


12. In the details pane, click the Namespace Servers tab, and then ensure that there is one entry that is enabled for \\LON-DC1\BranchDocs.



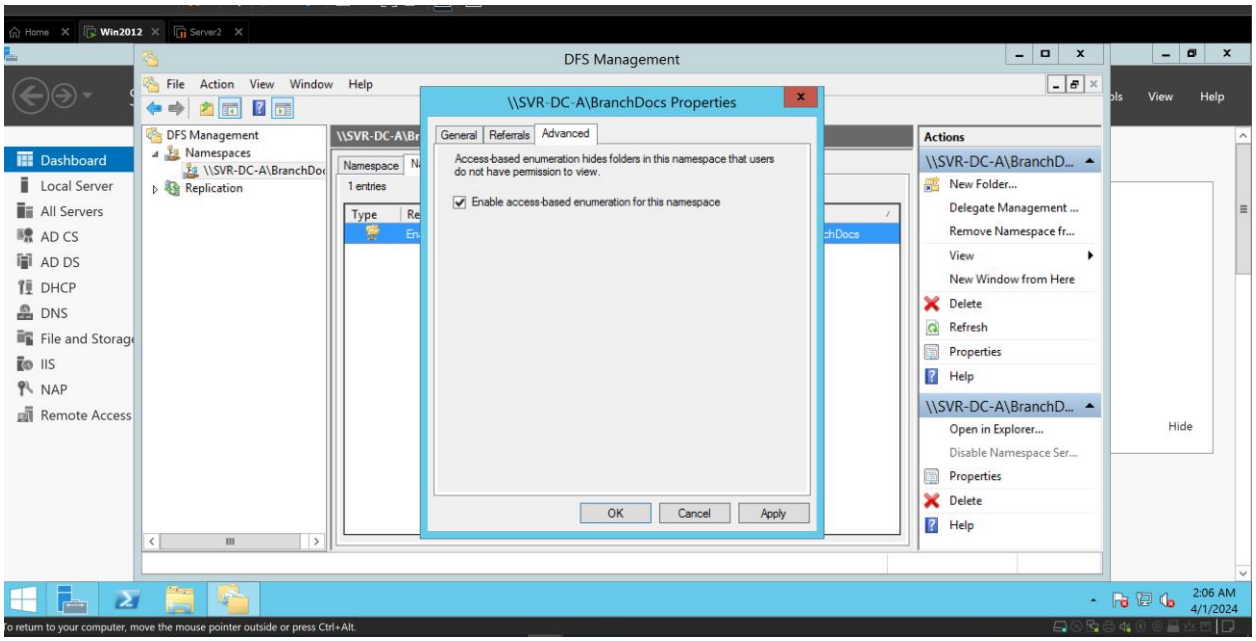
Task 2: Enable access-based enumeration for the BranchDocs namespace

1. In the navigation pane, under Namespaces, right-click \\Adatum.com\BranchDocs, and then click Properties.



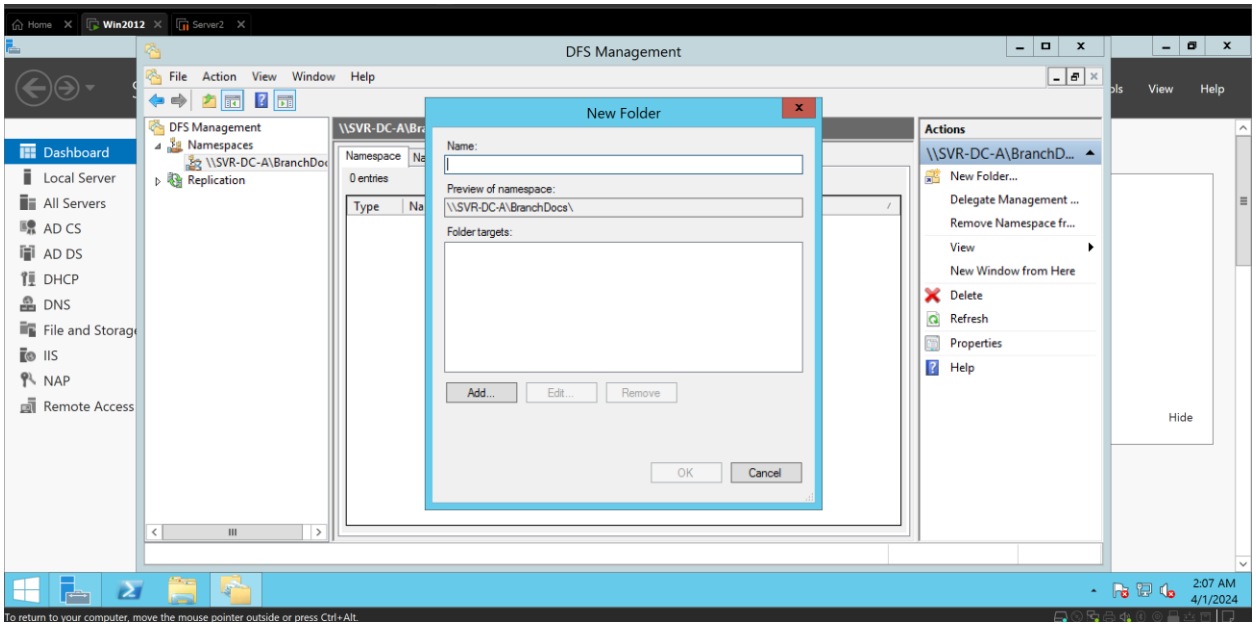
2. In the \\Adatum.com\BranchDocs Properties dialog box, click the Advanced tab.

3. On the Advanced tab, select the Enable access-based enumeration for this namespace check box, and then click OK.

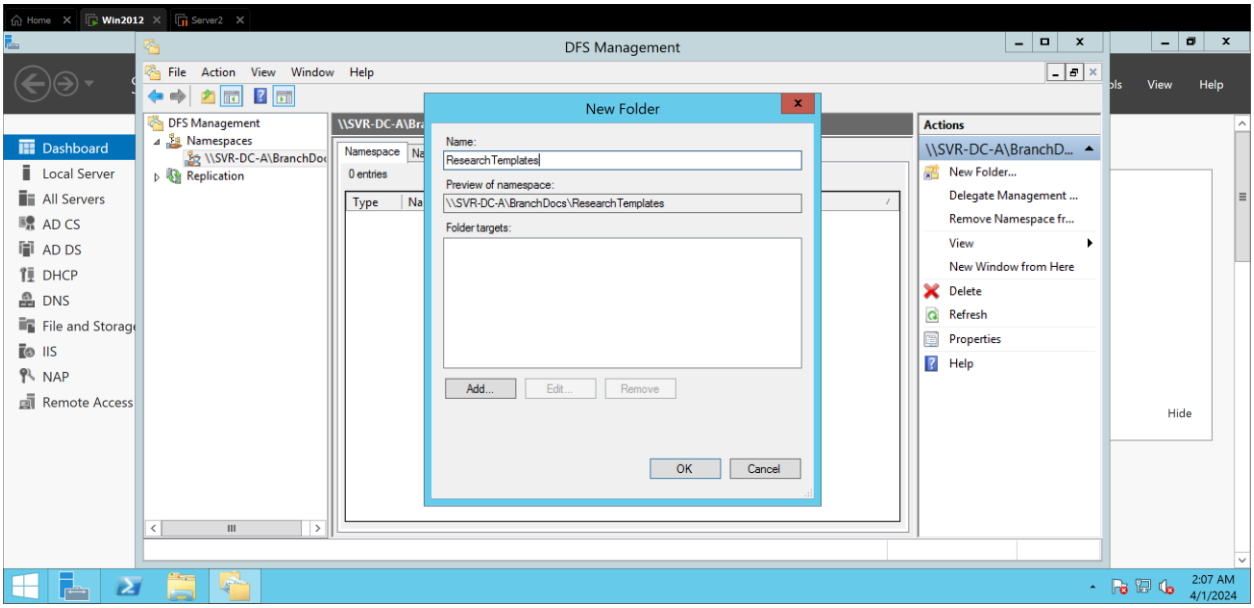


Task 3: Add the ResearchTemplates folder to the BranchDocs namespace

1. In DFSManagement, right-click Adatum.com\BranchDocs, and then click New Folder.

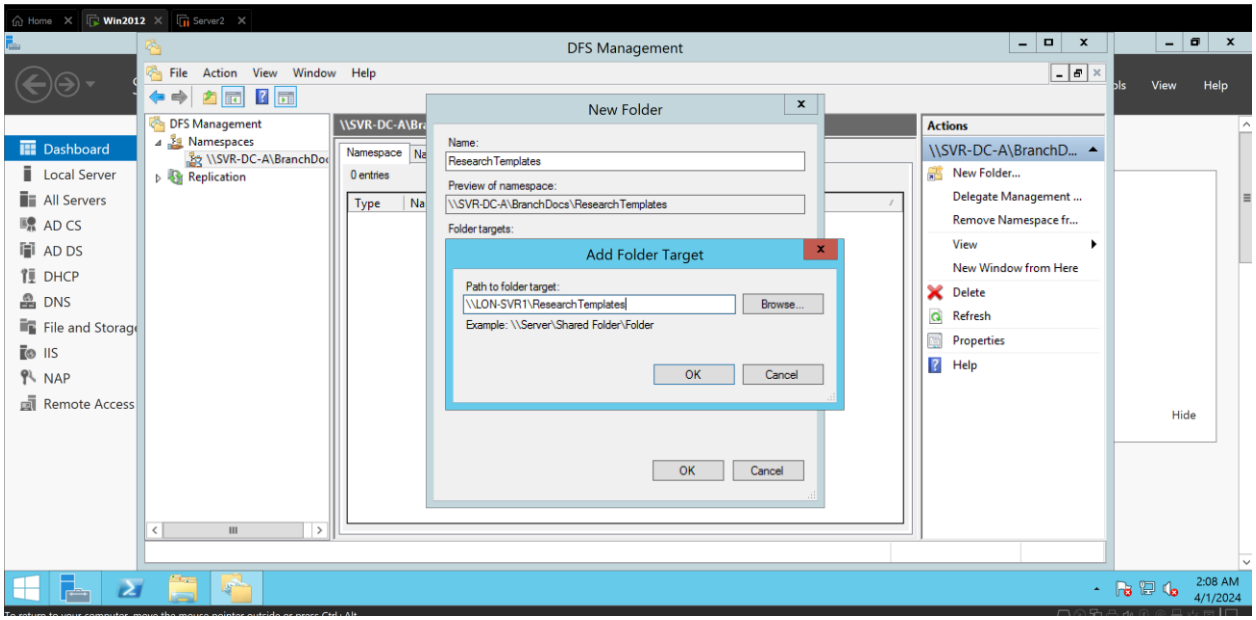


2. In the New Folder dialog box, under Name, type ResearchTemplates.



3. In the New Folder dialog box, click Add.

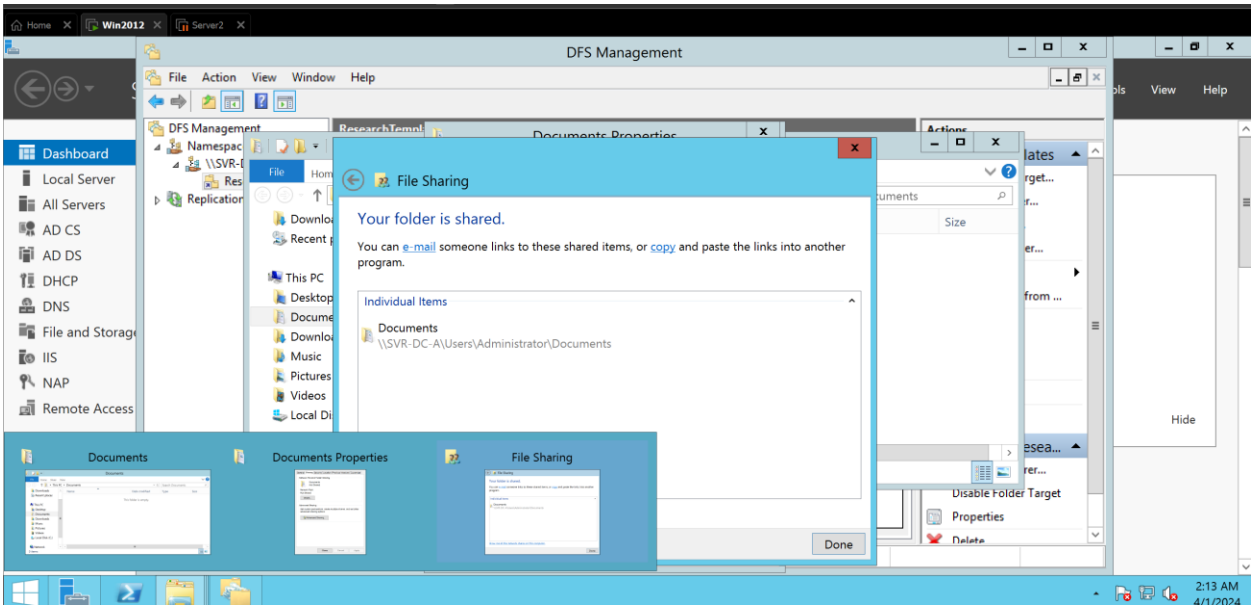
4. In the Add Folder Target dialog box, type \\LON-SVR1\ResearchTemplates, and then click OK.



5. In the Warning dialog box, click Yes to create the shared folder.

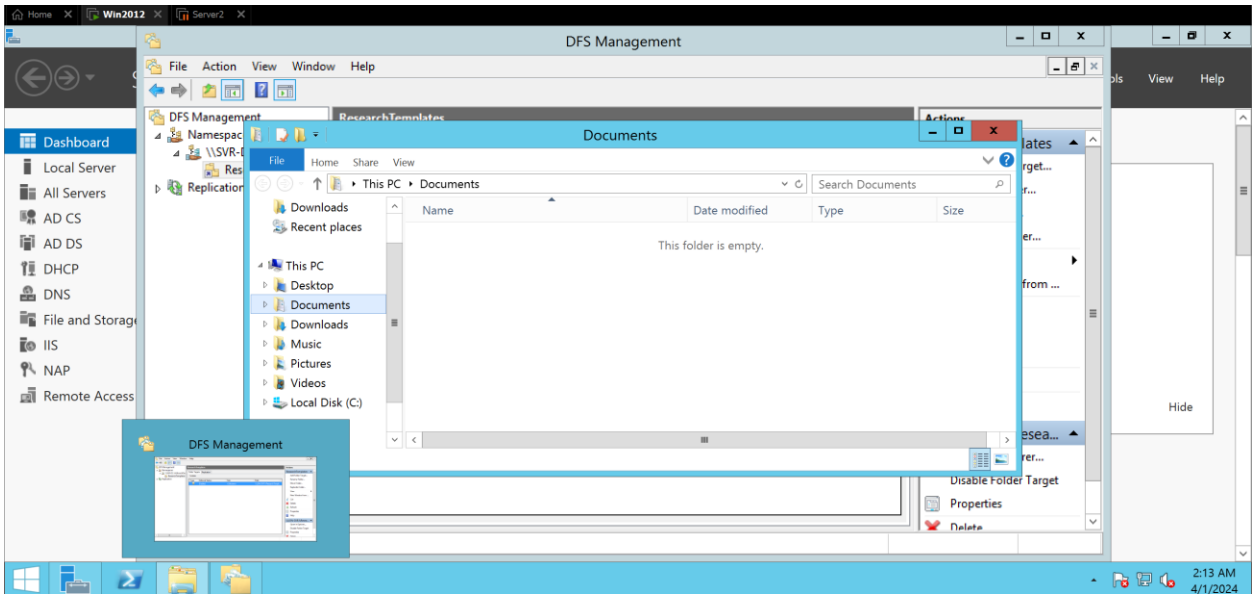
6. In the Create Share dialog box, in the Local path of shared folder box, type C:\BranchDocs\ResearchTemplates.

7. Click All users have read and write permissions, and then click OK.



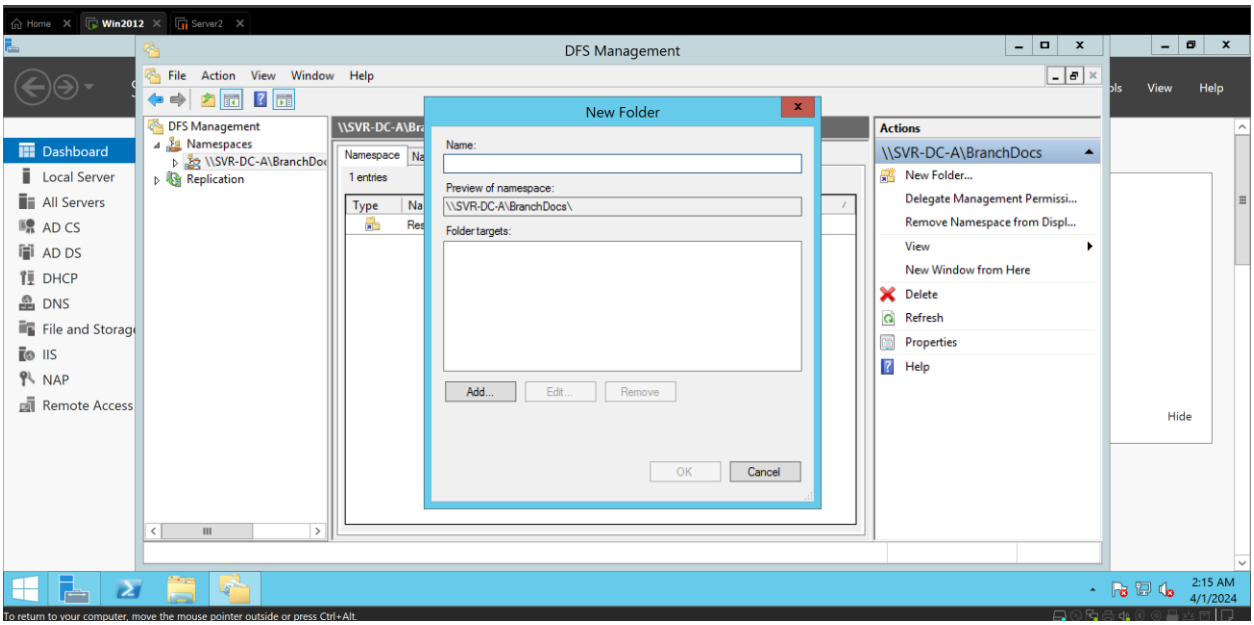
8. In the Warning dialog box, click Yes to create the folder.

9. Click OK again to close the New Folder dialog box.



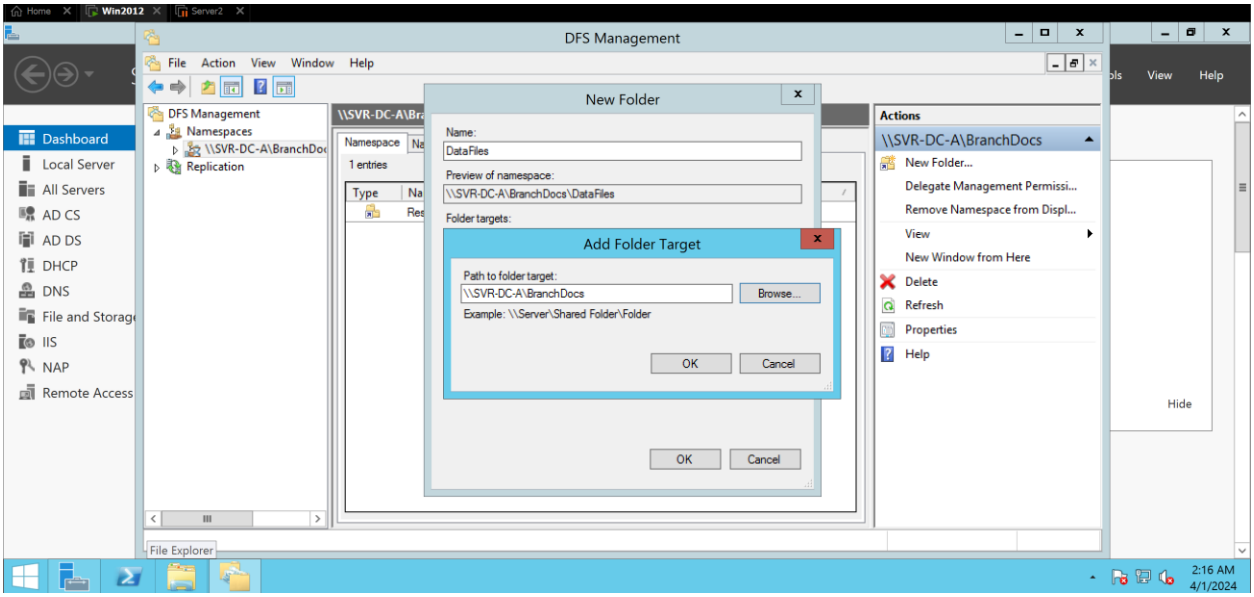
Task 4: Add the DataFiles folder to the BranchDocs namespace

1. In DFS Management, right-click Adatum.com\BranchDocs, and then click New Folder.



2. In the New Folder dialog box, under Name, type DataFiles, and then click Add.

3. In the Add Folder Target dialog box, type \\LON-DC1\DataFiles, and then click OK.

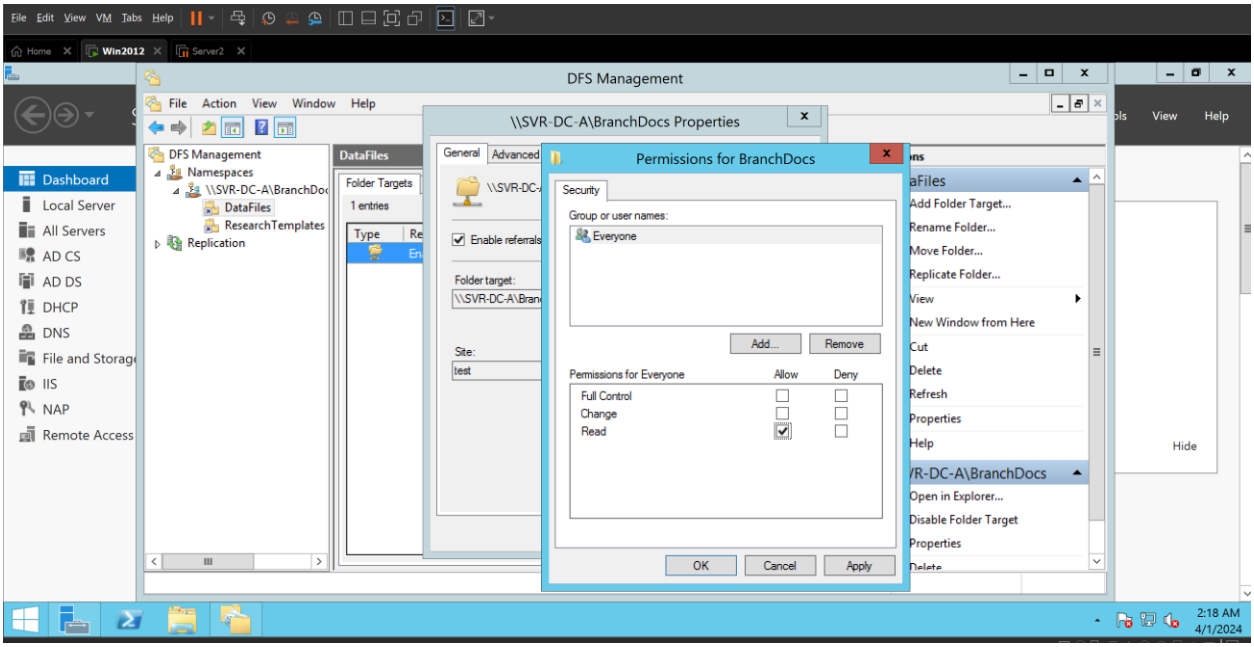


4. In the Warning dialog box, click Yes.

5. In the Create Share dialog box, in the Local path of shared folder box, type C:\BranchDocs\DataFiles.

6. Click All users have read and write permissions, and then click OK. The permissions will be configured later.

7. In the Warning dialog box, click Yes.

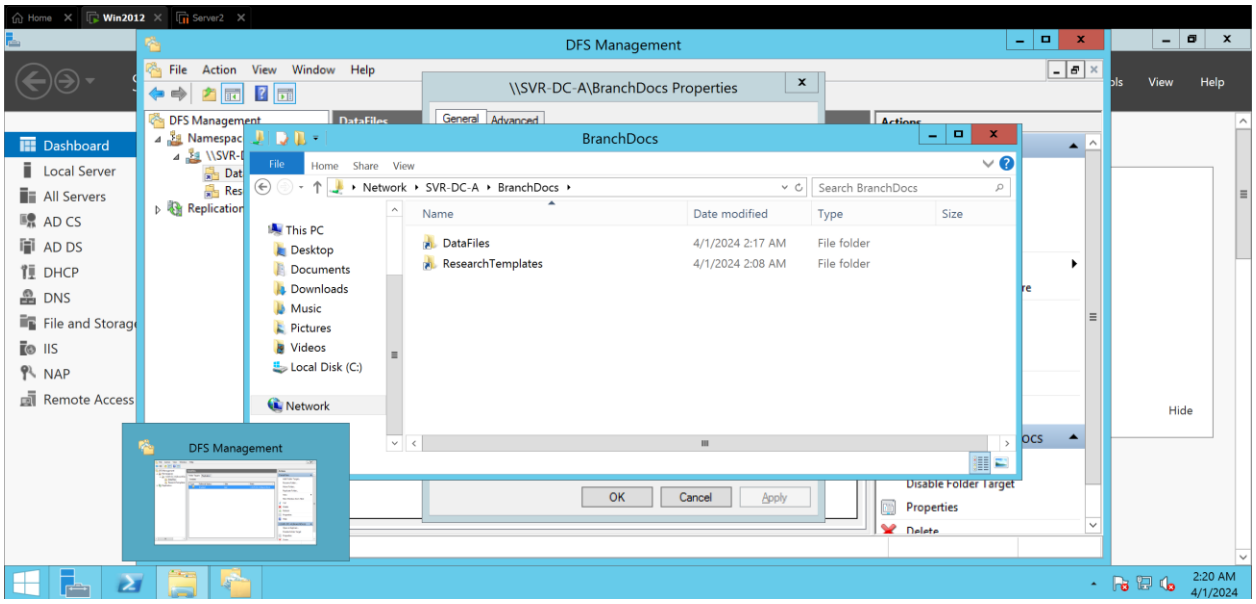


8. Click OK again to close the New Folder dialog box.

Task 5: Verify the BranchDocs namespace

1. On LON-DC1, open File Explorer, in the address bar type \\Adatum.com\BranchDocs\, and then press Enter

2. In the BranchDocs window, verify that both ResearchTemplates and DataFiles display.



4. Close the BranchDocs window.

Conclusions:

The lab successfully configured and managed Distributed File System (DFS) by installing the DFS role service on LON-DC1 and LON-SVR1, and creating a DFS Namespace called BranchDocs with access-based enumeration enabled and folders ResearchTemplates and DataFiles added with appropriate targets. Verification confirmed the correct configuration of the BranchDocs namespace.

References:

1- Levy, E., & Silberschatz, A. (1990). Distributed file systems: Concepts and examples. *ACM Computing Surveys (CSUR)*, *22*(4), 321-374.
2- Satyanarayanan, M., Kistler, J. J., Kumar, P., Okasaki, M. E., Siegel, E. H., & Steere, D. C. (1990). Coda: A highly available file system for a distributed workstation environment. *IEEE Transactions on computers*, *39*(4), 447-459.
3- Shimano, S., Nunome, A., Yokoi, Y., Shibayama, K., & Hirata, H. (2017, June). An autonomous configuration scheme of storage tiers for distributed file system. In *2017 18th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD)* (pp. 453-458). IEEE.