

# Creating a Scheduled Backup and Replicating System Folders (3e)

Security Strategies in Windows Platforms and Applications, Third Edition - Lab 07

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Time on Task:

6 hours, 0 minutes

Progress:

100%

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## Section 1: Hands-On Demonstration

### Part 1: Install Windows DFS and Create Network Shares

12. Make a screen capture showing the successful DFS and net share commands on TargetWindows01.

The screenshot shows a Windows PowerShell window titled "Administrator: Windows PowerShell". The session ID is "TargetWindows01" and the date and time are "2025-06-26 11:16:43". The user is Bradley Adams. The command history includes:

```
PS C:\Users\Administrator> Install-WindowsFeature FS-DFS-Namespace -IncludeAllSubFeature
Success Restart Needed Exit Code      Feature Result
----- ----- ----- -----
True   No        Success          {DFS Namespaces}

PS C:\Users\Administrator> Install-WindowsFeature FS-DFS-Replication -IncludeAllSubFeature
Install-WindowsFeature : ArgumentNotValid: The role, role service, or feature name is not valid: 'FS-DFS-Replication'.
The name was not found.
At line:1 char:1
+ Install-WindowsFeature FS-DFS-Replication -IncludeAllSubFeature
+ ~~~~~~CategoryInfo          : InvalidArgument: (FS-DFS-Replication:String) [Install-WindowsFeature], Exception
+ FullyQualifiedErrorId : NameDoesNotExist,Microsoft.Windows.ServerManager.Commands.AddWindowsFeatureCommand

Success Restart Needed Exit Code      Feature Result
----- ----- ----- -----
False  No        InvalidArgs     {}

PS C:\Users\Administrator> Install-WindowsFeature FS-DFS-Replication -IncludeAllSubFeature
Success Restart Needed Exit Code      Feature Result
----- ----- ----- -----
True   No        Success          {DFS Replication}

PS C:\Users\Administrator> Install-WindowsFeature RSAT-DFS-MGMT-Con -IncludeAllSubFeature
Success Restart Needed Exit Code      Feature Result
----- ----- ----- -----
True   No        Success          {DFS Management Tools, File Services Tools}

PS C:\Users\Administrator> cmd
Microsoft Windows [Version 10.0.17763.737]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>md C:\Archive
C:\Users\Administrator>net share archive=C:\Archive /grant:administrators,Full
archive was shared successfully.

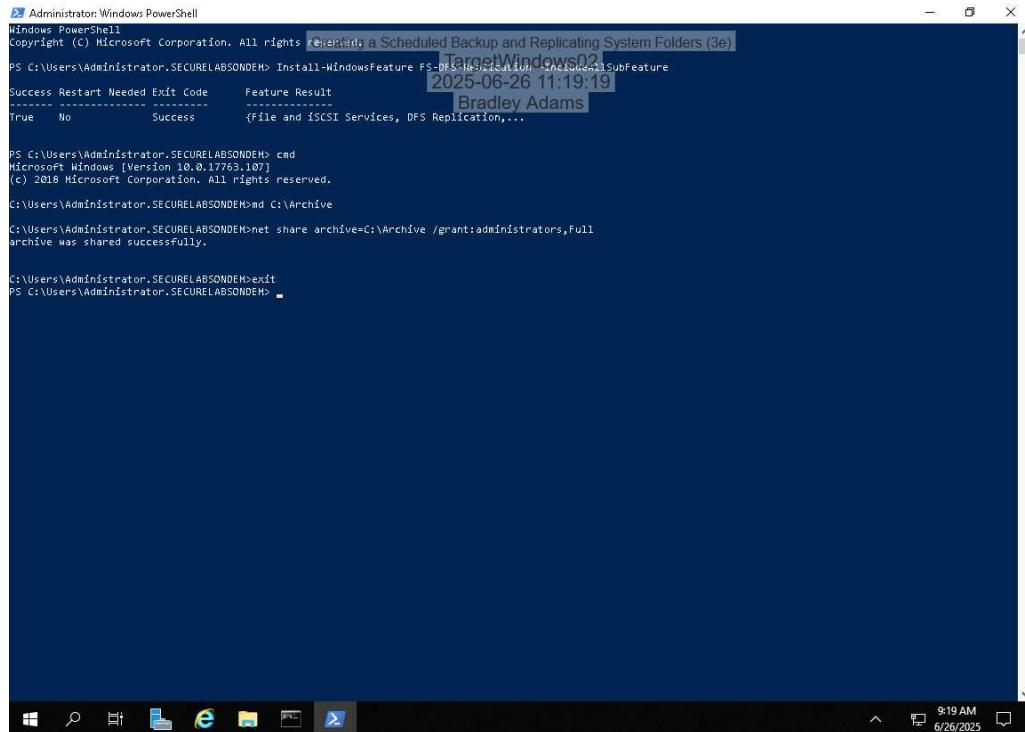
C:\Users\Administrator>exit
PS C:\Users\Administrator>
```

The taskbar at the bottom shows icons for File Explorer, Task View, Start, Edge, File Explorer, Task View, and Task View. The system tray shows the date and time as "9:16 AM 6/26/2025".

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18. Make a screen capture showing the successful DFS and net share commands on TargetWindows02.



```
Administrator: Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Windows PowerShell
PS C:\Users\Administrator.SECURELABSONDEM> Install-WindowsFeature FS-DFS-Namespace, ANSISCSI-SubFeature
Success Restart Needed Exit Code Feature Result
----- ----- -----
True No Success {file and iSCSI Services, DFS Replication, ...}
PS C:\Users\Administrator.SECURELABSONDEM> cmd
Microsoft Windows [Version 10.0.17763.107]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\>C:\>C:\Archive
C:\Users\Administrator.SECURELABSONDEM>net share archive=C:\Archive /grant:administrators,Full
archive was shared successfully.

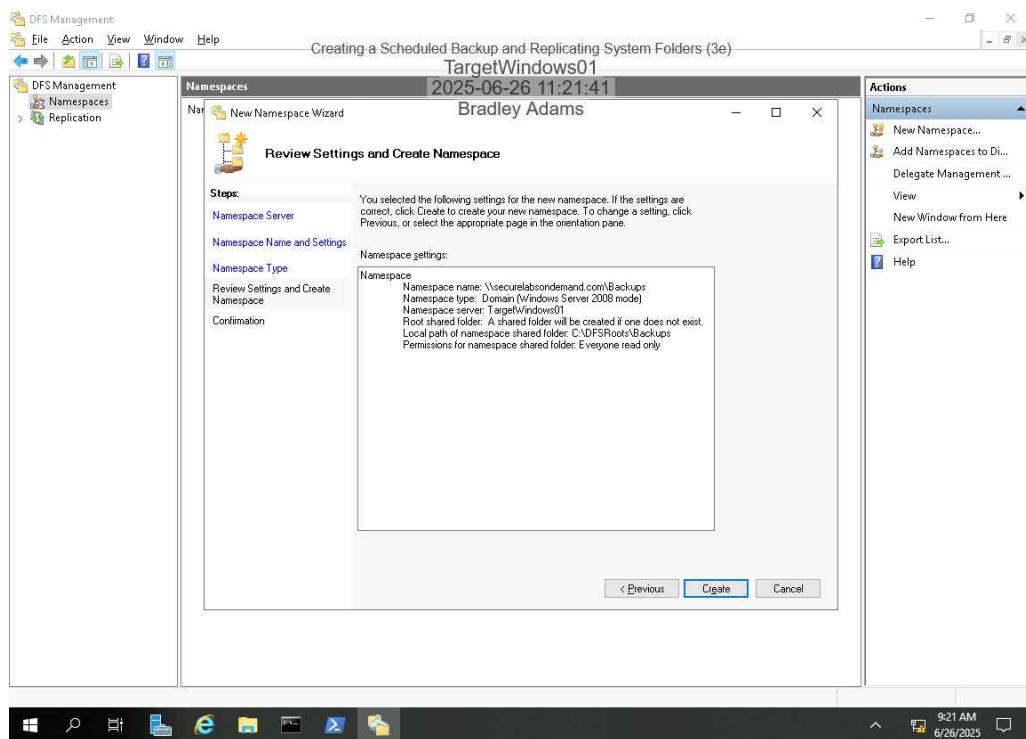
C:\Users\Administrator.SECURELABSONDEM>exit
PS C:\Users\Administrator.SECURELABSONDEM>
```

## Part 2: Configure DFS

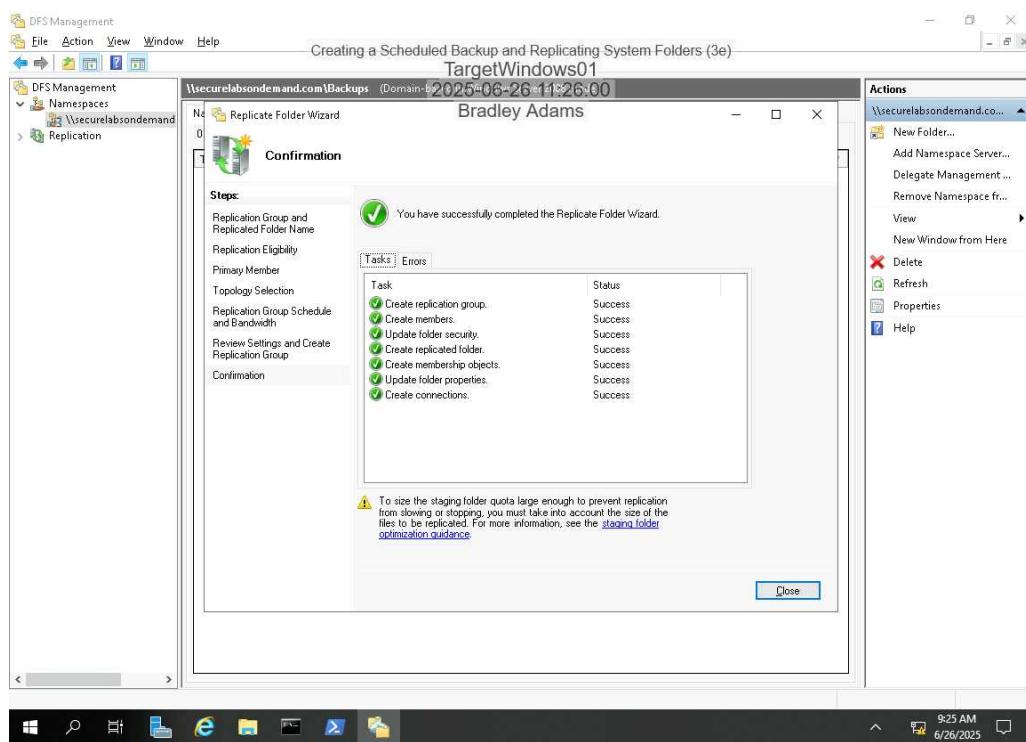
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## 8. Make a screen capture showing the Review Settings and Create Namespace page.



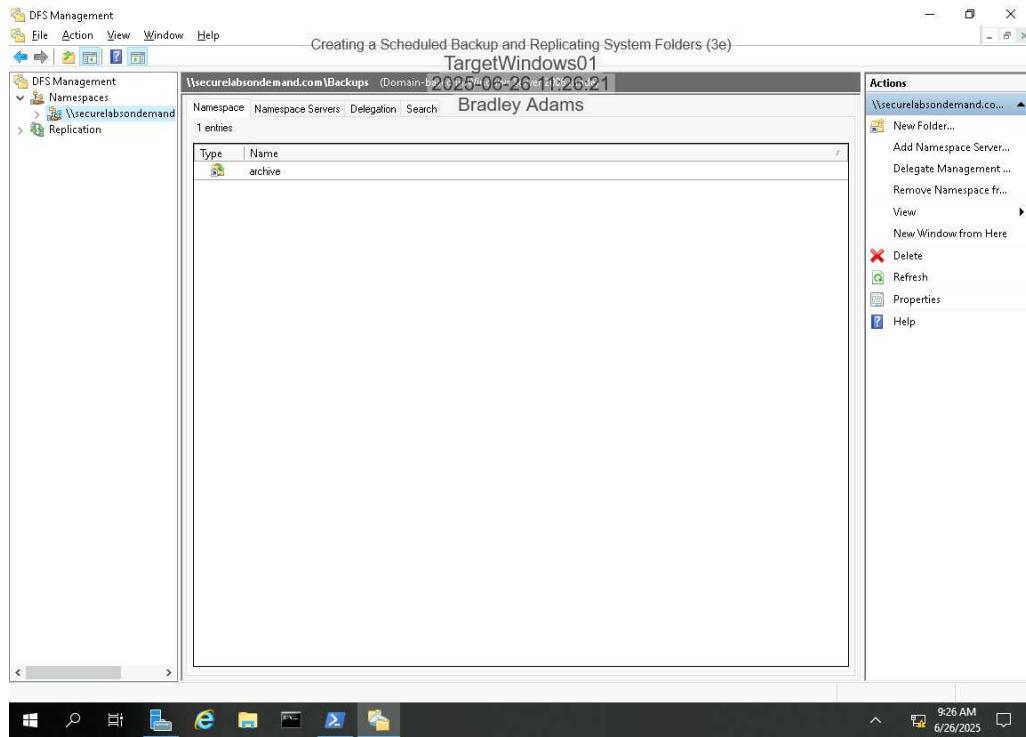
## 26. Make a screen capture showing the Confirmation page.



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## 29. Make a screen capture showing the Namespace entries.

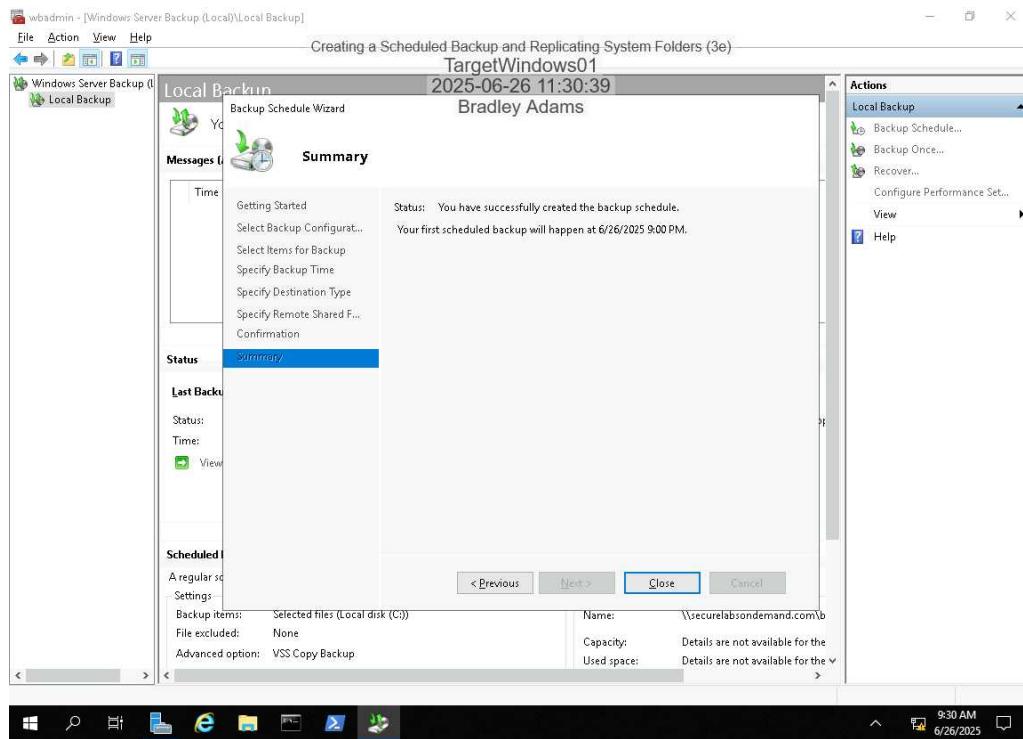


## Part 3: Install and Configure Windows Server Backup

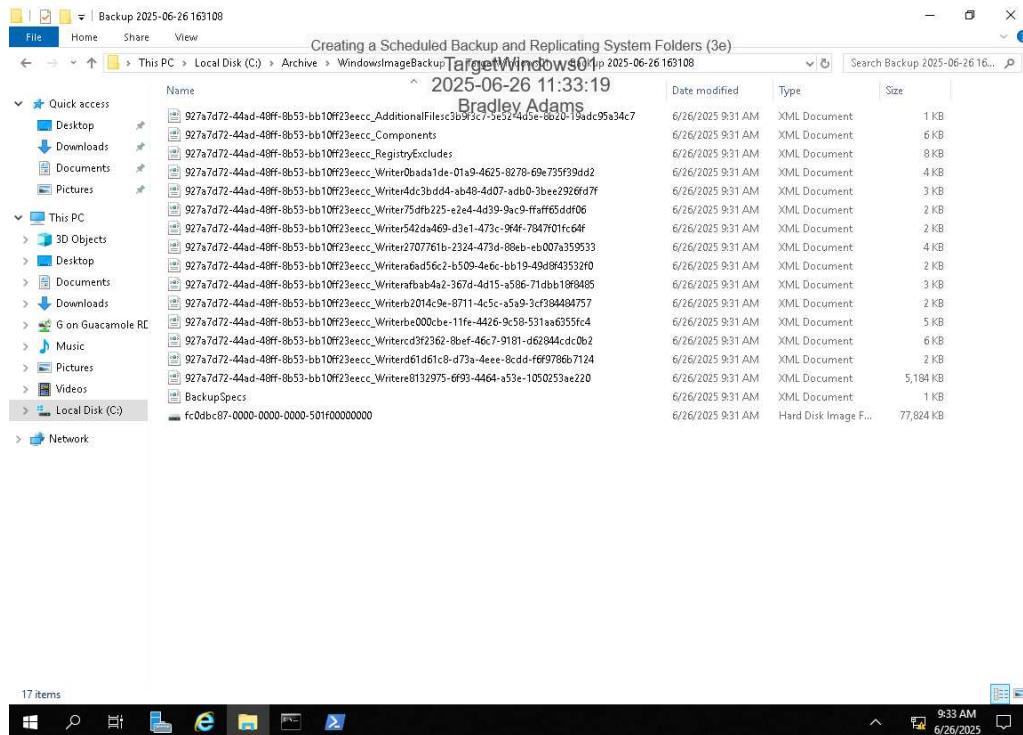
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## 18. Make a screen capture showing the successful backup schedule on the Summary page.



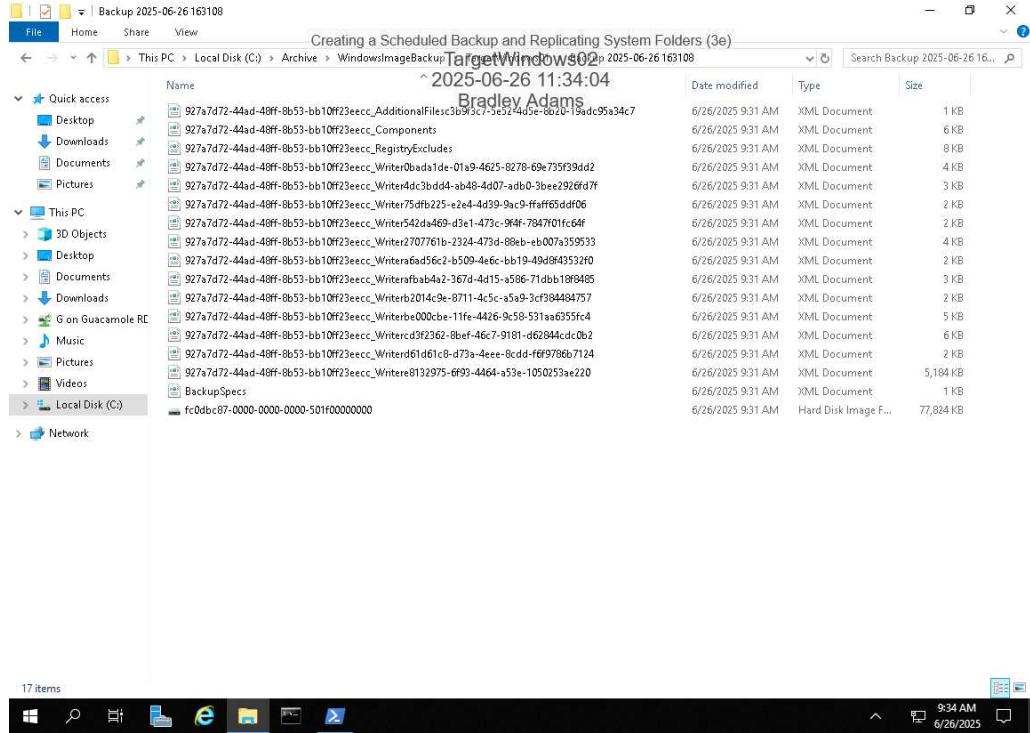
## 28. Make a screen capture showing the contents of the backup folder on TargetWindows01.



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## 33. Make a screen capture showing the contents of the backup folder on TargetWindows02.



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## Section 2: Applied Learning

### Part 1: Install Windows DFS and Create Network Shares

8. Make a screen capture showing the net share results on TargetWindows01.

The screenshot shows a Windows PowerShell window with the title bar 'Administrator: Windows PowerShell'. The window displays the following command output:

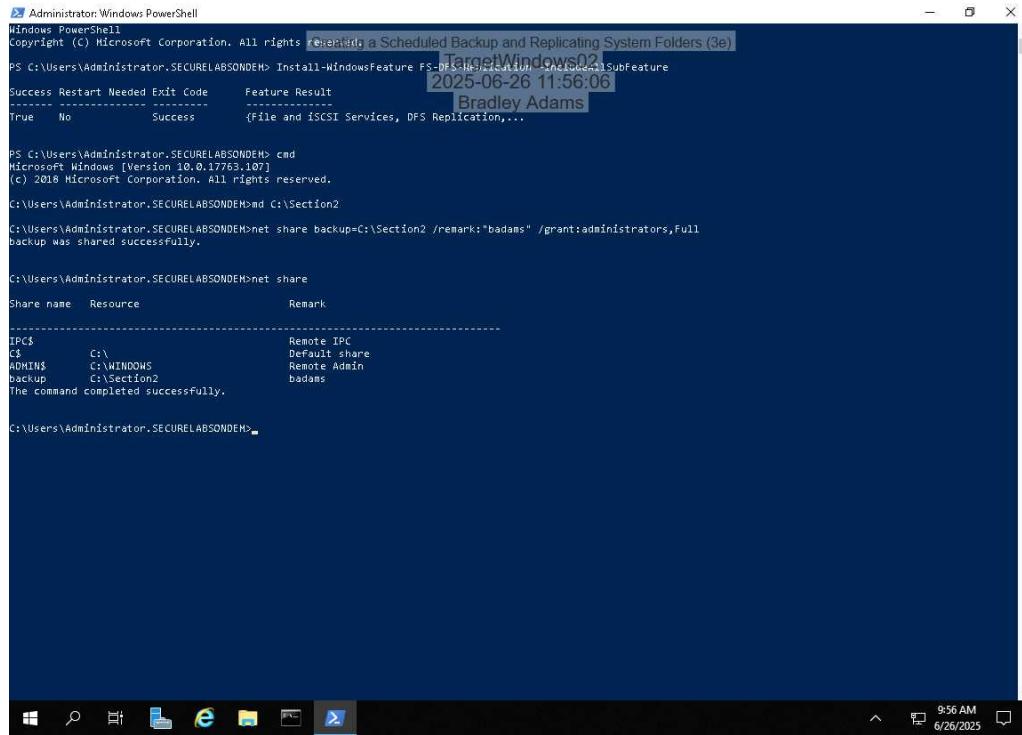
```
PS C:\Users\Administrator> Install-WindowsFeature FS-DFS-Namespace -IncludeAllSubFeature  
Success Restart Needed Exit Code Feature Result  
----- ----- ----- -----  
True No Success {DFS Namespaces}  
  
PS C:\Users\Administrator> Install-WindowsFeature FS-DFS-Replication -IncludeAllSubFeature  
Success Restart Needed Exit Code Feature Result  
----- ----- ----- -----  
True No Success {DFS Replication}  
  
PS C:\Users\Administrator> Install-WindowsFeature RSAT-DFS-MGMT-Con -IncludeAllSubFeature  
Success Restart Needed Exit Code Feature Result  
----- ----- ----- -----  
True No Success {DFS Management Tools, File Services Tools}  
  
PS C:\Users\Administrator> cmd  
Microsoft Windows [Version 10.0.17763.737]  
(c) 2018 Microsoft Corporation. All rights reserved.  
C:\Users\Administrator>md C:\Section2  
C:\Users\Administrator>net share backup=C:\Section2 /remark:"badams" /grant:administrators,FULL  
backup was shared successfully.  
  
C:\Users\Administrator>net share  
Share name Resource Remark  
-----  
IPC$ C:\ Remote IPC  
ADMIN$ C:\WINDOWS Default share  
ADMIN$ C:\WINDOWS Remote Admin  
ADMIN$ C:\Section2 badams  
ERPdocuments C:\ERPdocuments  
NETLOGON C:\Windows\SYSTOL\sysvol\securelabsondemand.com\SCRIPTS  
SYSVOL C:\Windows\SYSVOL\sysvol Logon server share  
SYSVOL C:\Windows\SYSVOL\sysvol Logon server share  
The command completed successfully.  
  
C:\Users\Administrator>
```

The window also shows the system tray with icons for Task View, Start, File Explorer, Task Manager, and a battery icon. The status bar at the bottom right indicates the time as 9:52 AM and the date as 6/26/2025.

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## 13. Make a screen capture showing the net share results on TargetWindows02.



```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved. [Creating a Scheduled Backup and Replicating System Folders (3e)]
PS C:\Users\Administrator.SECURELABSONDEM> Install-WindowsFeature FS-DFS-Replication-Client-SocialSubFeature
Success Restart Needed Exit Code    Feature Result
----- ----- ----- -----
True   No      Success          {File and iSCSI Services, DFS Replication, ...}

PS C:\Users\Administrator.SECURELABSONDEM> cmd
Microsoft Windows [Version 10.0.17763.1071]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator.SECURELABSONDEM>md C:\Section2
C:\Users\Administrator.SECURELABSONDEM>net share backup=C:\Section2 /remark:"badams" /grant:administrators,Full
backup was shared successfully.

C:\Users\Administrator.SECURELABSONDEM>net share
Share name   Resource           Remark
-----       -----
IPC$         Remote IPC
C$           Default share
ADMIN$       C:\WINDOWS        Remote Admin
backup       C:\Section2       badams
The command completed successfully.

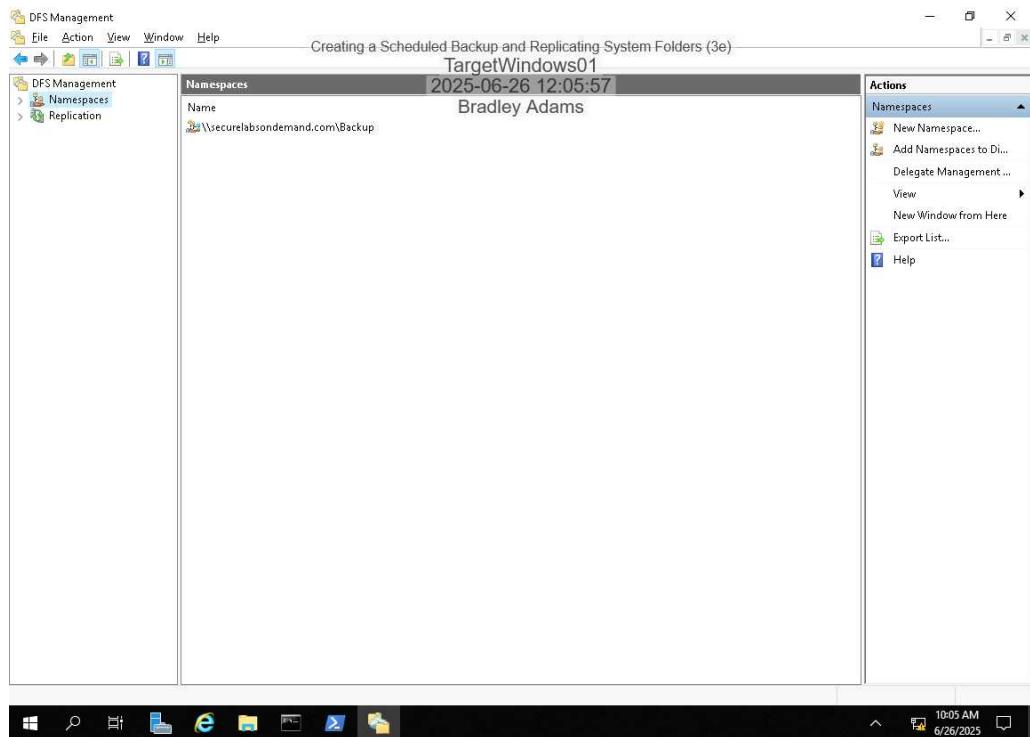
C:\Users\Administrator.SECURELABSONDEM>
```

## Part 2: Configure DFS

# Creating a Scheduled Backup and Replicating System Folders (3e)

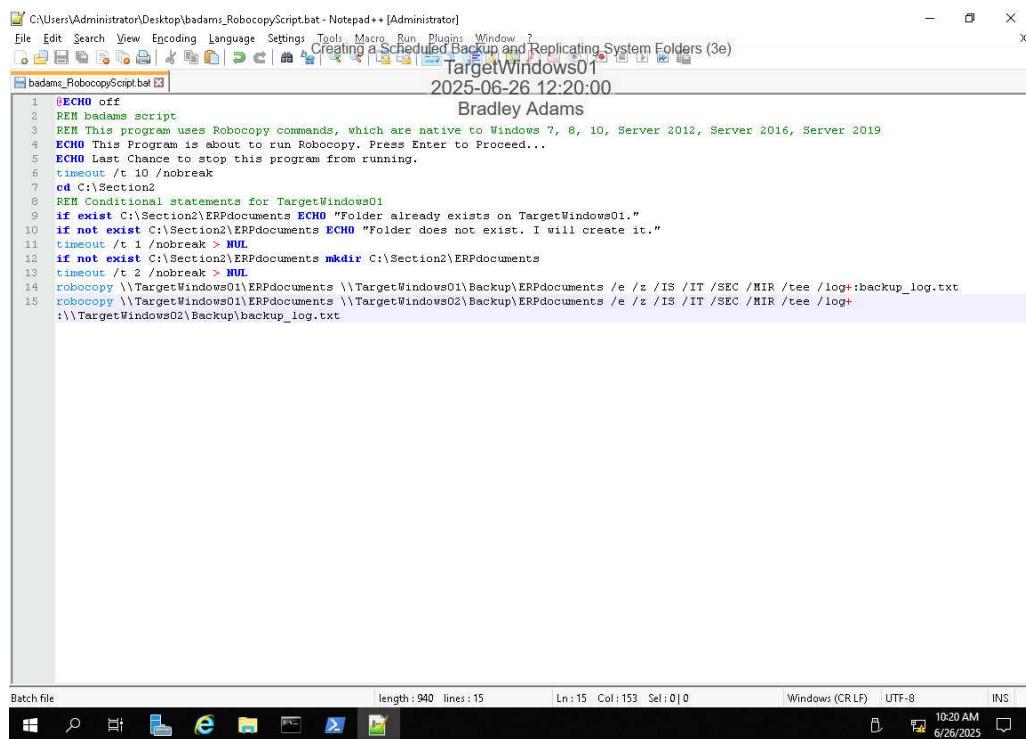
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## 12. Make a screen capture showing the new namespace in the DFS Management console.



## Part 3: Create and Execute a Robocopy Script

## 9. Make a screen capture showing the completed Robocopy script.

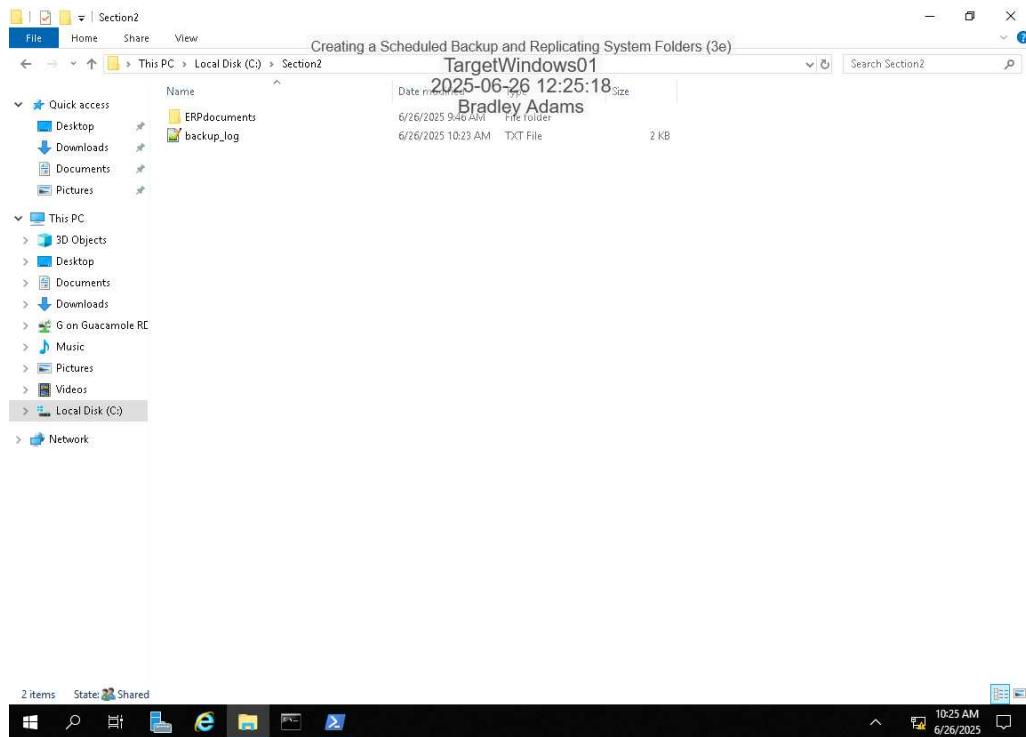


The screenshot shows a Notepad window titled "badams\_RobocopyScript.bat - Notepad+ [Administrator]". The file contains a batch script named "badams\_RobocopyScript.bat". The script performs the following tasks:

```
1 ECHO off
2 REM badams script
3 REM This program uses Robocopy commands, which are native to Windows 7, 8, 10, Server 2012, Server 2016, Server 2019
4 ECHO This Program is about to run Robocopy. Press Enter to Proceed...
5 ECHO Last Chance to stop this program from running.
6 timeout /t 10 /nobreak
7 cd C:\Section2
8 REM Conditional statements for TargetWindows01
9 if exist C:\Section2\ERPdocuments ECHO "Folder already exists on TargetWindows01."
10 if not exist C:\Section2\ERPdocuments ECHO "Folder does not exist. I will create it."
11 timeout /t 1 /nobreak > NUL
12 if not exist C:\Section2\ERPdocuments mkdir C:\Section2\ERPdocuments
13 timeout /t 2 /nobreak > NUL
14 robocopy \\TargetWindows01\ERPdocuments \\TargetWindows01\Backup\ERPdocuments /e /z /IS /IT /SEC /MIR /tee /log+:backup_log.txt
15 robocopy \\TargetWindows01\ERPdocuments \\TargetWindows02\Backup\ERPdocuments /e /z /IS /IT /SEC /MIR /tee /log+:\\TargetWindows02\Backup\backup_log.txt
```

The Notepad window has a status bar at the bottom showing "Batch file", "length : 940 lines : 15", "Ln : 15 Col : 153 Sel : 0 | 0", "Windows (CRLF) | UTF-8", "INS", "10:20 AM 6/26/2025".

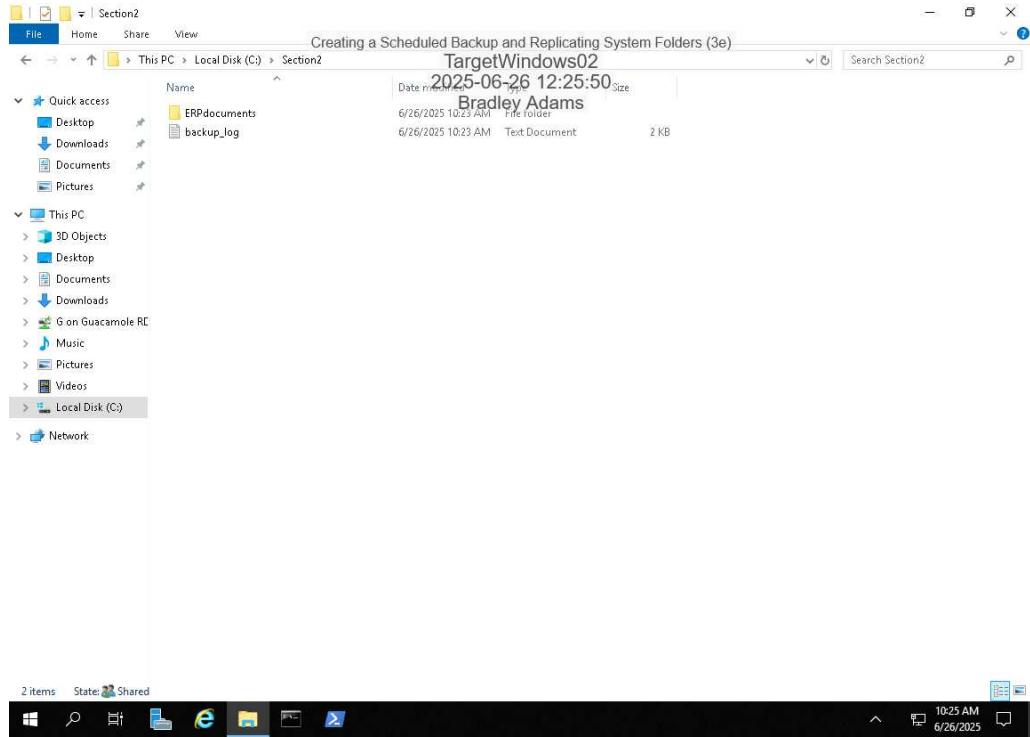
## 16. Make a screen capture showing the contents of the Section2 folder on the TargetWindows01 server.



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19. Make a screen capture showing the contents of the Section2 folder on the TargetWindows02 server.



## Section 3: Challenge and Analysis

### Part 1: Analysis and Discussion

In Section 2 of this lab, you used Robocopy in the script to copy files from one remote machine to another. Robocopy was selected because it is native to Windows and is a robust tool with a variety of switches for customizing the command line. Use the Internet to research an alternative to Robocopy that could be used in the script. Explain your choice.

A recommended alternative to Robocopy is FreeFileSync. It is a free and open-source tool available for Windows, macOS, and Linux. It offers advanced synchronization features, including real-time monitoring, automated backups, versioning, inclusion and exclusion filters, and a visual conflict-resolution GUI. Robocopy reruns full cycles with certain switches, while FreeFileSync detects changed files and only synchronizes deltas, making it both efficient and scriptable for backup workflows.

Source:

<https://alternativeto.net/software/robocopy/>

### Part 2: Tools and Commands

**Document** your Robocopy command.

```
robocopy "C:\Source" "D:\Destination" /MIR /Z /FFT /R:3 /W:5
```

Source:

<https://learn.microsoft.com/en-us/windows-server/administration/windows-commands/robocopy>

### Part 3: Challenge Exercise

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**Document** the command you constructed for the Robocopy alternative.

Create a FreeFileSync batch configuration file, such as .ffs\_batch, that defines the source folder as "\TargetWindows01\ERPdocuments" and the destination folder as "\TargetWindows02\Backup\ERPdocuments". In the configuration file, synchronization rules will be added, including mirroring, preserving file security settings, and enabling logging.

Once the .ffs\_batch file is saved to a location such as C:\Path\To\ERPBackup.ffs\_batch, the Robocopy command in the script can be replaced with a request to execute the FreeFileSync batch:

```
"C:\Program Files\FreeFileSync\FreeFileSync.exe" "C:\Path\To\ERPBackup.ffs_batch"
```

This command will launch the synchronization process. Logging is configured within the FreeFileSync GUI to append to the same log file.

Source:

<https://freefilesync.org/manual.php?topic=command-line>