

Final Project – Part III (CIS 216 Spring 2026)

Michael Nobles

Part 1: Your supervisor asks you to install FSRM on a new Windows Server 2019 file server. Explain the steps you would take to install FSRM using Server Manager.

1. To install **File Server Resource Manager (FSRM)** on the new Windows Server 2019 file server using Server Manager (as the junior tech on the job):
 - a. Open **Server Manager**.
 - b. Click **Manage** → **Add Roles and Features**.
 - c. Select **Role-based or feature-based installation** → **Next**.
 - d. Choose the destination server from the server pool → **Next**.
 - e. Expand **File and Storage Services** > **File and iSCSI Services**, check **File Server Resource Manager**, add required features if prompted, and complete the installation.

BONUS (PowerShell): Run as administrator:

`Install-WindowsFeature -Name FS-Resource-Manager -IncludeManagementTools`

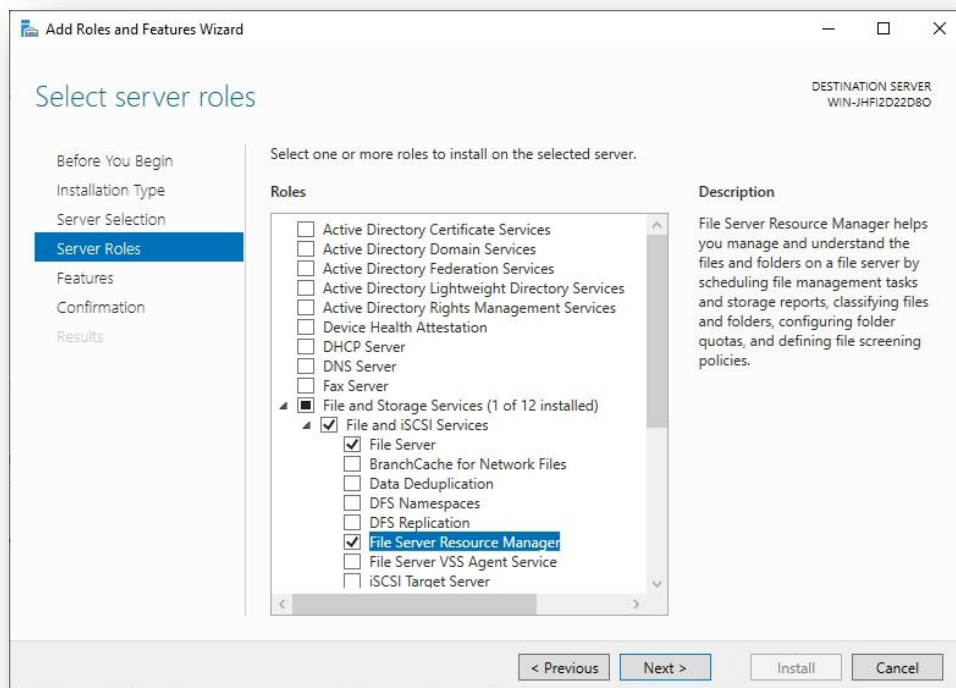


Figure 1 - Add Roles and Features Wizard selecting File Server Resource Manager.

2. After opening FSRM (via Server Manager → Tools → File Server Resource Manager), the three major components are:

Final Project – Part III (CIS 216 Spring 2026)

Michael Nobles

- **Quota Management:** Sets limits on folder/volume space usage to prevent over-consumption.
- **File Screening Management:** Controls which file types can (or cannot) be saved to folders.
- **Storage Reports Management:** Generates reports on storage usage, file types, owners, etc.

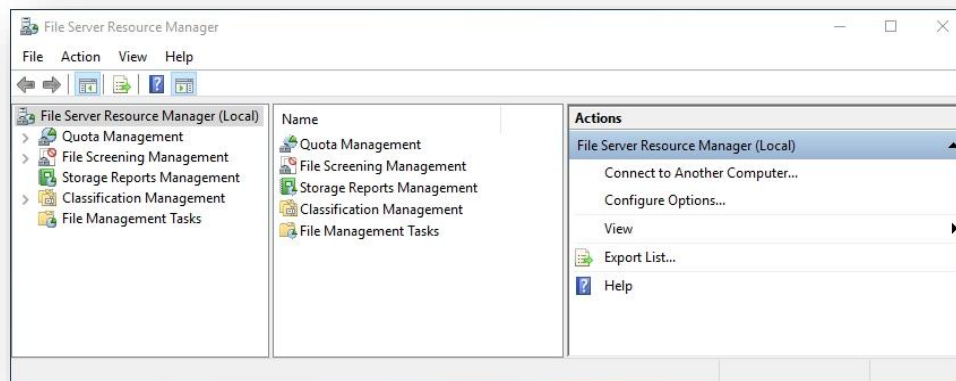


Figure 2 - FSRM console showing main components (Quota Management, File Screening Management, Storage Reports Management).

Part 2 – Quotas: The HR department has a shared folder that must not exceed 500 MB. Explain how you would create a hard quota for this folder using a built-in template.

1. For the HR shared folder (hard quota $\leq$ 500 MB using a built-in template):
 - a. In FSRM, expand **Quota Management** > right-click **Quotas** → **Create Quota**.
 - b. Browse to the HR share path.
 - c. Select the radial for **Define custom quota properties** → **Custom Properties** → In Quota Properties window, enter 500 MB into Space limit → confirm **Hard Quota** radial is selected → Select **OK** → Select **Create** in the Create Quota window. Select **Save the custom quota without creating a template** in the custom properties window → **OK** to finish.

Final Project – Part III (CIS 216 Spring 2026)

Michael Nobles

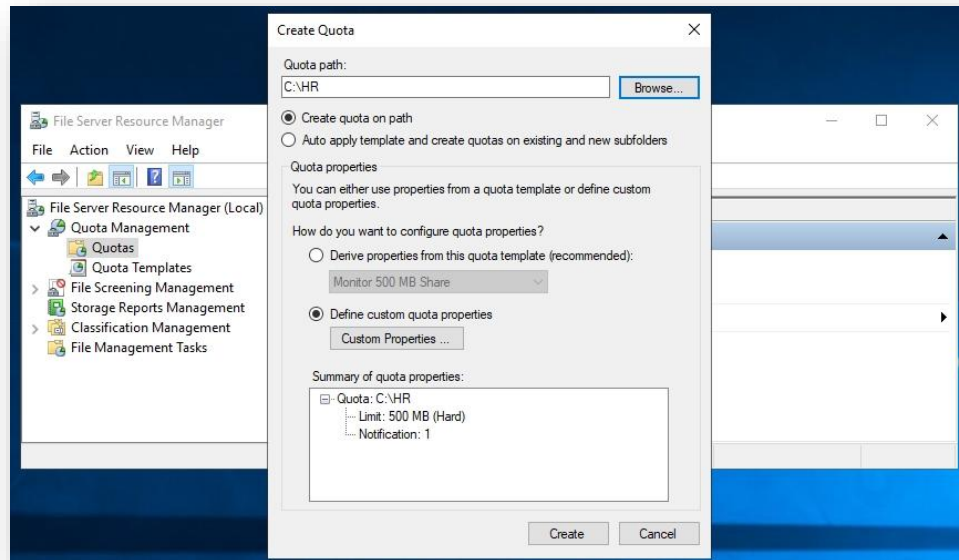


Figure 3 - Creating/editing a hard quota template in FSRM (example shown for limit setup).

2. Explain the difference between a hard quota and a soft quota, and give one example of when each would be used.
 - **Hard quota** strictly blocks saves once the limit is reached (e.g. HR share can't exceed 500 MB total – prevents bloat). **Soft quota** allows exceeding the limit but logs/notifies (e.g. monitoring a department's usage trends without immediate blocks).

Part 3 – File Screening: The company wants to block users from saving video files (.mp4, .avi, .mov) in the HR share. Explain how you would create an active file screen to block these files.

1. To block video files (.mp4, .avi, .mov) in the HR share (active file screen):
 - a. In FSRM, expand **File Screening Management** → right-click **File Screens** → **Create File Screen**.
 - b. Set path to HR share.
 - c. Select the radial for **Define custom file screen properties** → **Custom Properties** → In File Screen Properties window, select **Active Screening** as the screening type.

Final Project – Part III (CIS 216 Spring 2026)

Michael Nobles

- d. Select required file group to block "Audio and Video Files" (or custom group including those extensions) → select **OK** → Select **Create** in the Create Quota window. Select **Save the custom quota without creating a template** in the custom properties window → **OK** to finish.

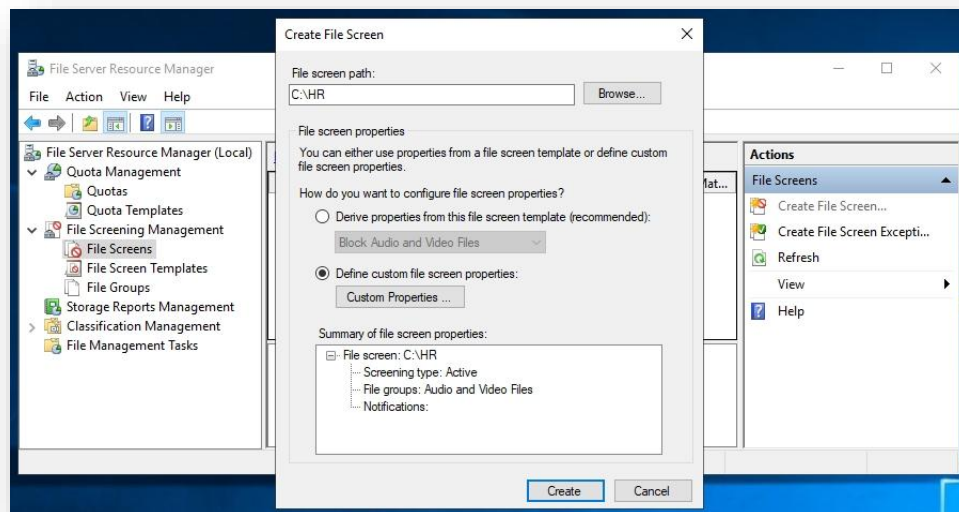


Figure 4 - File Screening Management in FSRM (file groups for blocking videos).

2. Explain the difference between active and passive file screening. Provide one example of when passive screening is useful.
 - **Active** screening blocks the save and notifies (e.g. stops videos in HR). **Passive** allows the save but logs/notifies (useful for monitoring attempts without disrupting users, like auditing personal folders before enforcing policy).

Part 4 – Storage Reports

1. Your manager wants a report showing which users are consuming the most space on the HR share. Name the FSRM report you would run and explain what information it provides.
 - For users consuming the most space on the HR share: Run the **Files by Owner** report (under Storage Reports Management). It shows files grouped by user/owner with details on size, count, and paths.

Final Project – Part III (CIS 216 Spring 2026)

Michael Nobles

2. Explain how storage reports help administrators maintain compliance and security. Provide one example.
 - Storage reports help maintain compliance (e.g. identifying large, unauthorized files) and security (e.g. spotting sensitive data leaks or quota violations). Example: Schedule a weekly "Files by Owner" report emailed to admins to catch one user hoarding videos before it hits policy limits.

Part 5 – Troubleshooting & Policy Behavior

1. A user reports that they cannot save a file to the HR share. The file is only 2 MB, and the quota is 500 MB. List two FSRM-related reasons why the file might still be blocked.
 1. An **active file screen** blocks the file type/extension.
 2. A nested/subfolder quota or derived quota (from parent) has already been hit, or a classification/file management task is interfering.
2. You receive an alert that a user attempted to save a blocked file type. Explain what actions FSRM can take automatically when a file-screen violation occurs.
 - On a file-screen violation alert, FSRM can automatically send email notifications, log an event, run a custom command/script, or generate a storage report.