The objective of this project is to design, implement, and demonstrate a backup server solution using Windows Server in a virtualized environment. The project will show the critical role of backups in disaster recovery by simulating a data loss scenario on a client machine and demonstrating the restoration of critical files from the backup server.

1. Set up a Windows Server to act as a dedicated backup server for a client machine running Windows 10/Enterprise.
2. Demonstrate how critical business files can be securely backed up and restored in case of accidental deletion or other disasters.
3. Simulate a disaster scenario where critical files are lost and subsequently restored using the backup server.
4. The demonstration will fit within a 4-minute presentation window while communicating the importance of disaster recovery planning.

Virtualization Platform:

1. VirtualBox: Used for creating and managing the virtual machines (VMs) necessary for the project.

Operating Systems:

1. Windows Server: Configured as the backup server to store and manage backups of critical files.
2. Windows 10/Enterprise: Configured as the client machine where critical files are stored and potentially lost during the simulation.

Backup Solutions:

1. Windows Server Backup: Used for creating, managing, and restoring backups on the Windows Server.

Disaster Simulation Tools:

1. Manual File Deletion: Critical files will be manually deleted from the client machine to simulate a disaster scenario.
2. Restoration Process: Files will be restored from the backup server using the Windows Server Backup utility.

Documentation Tools:

1. Microsoft Word: For documenting the project, including the setup process, backup configurations, disaster scenario, and restoration steps.
2. Screenshot Tools: Not much of a tool, or it could be one, the windows screen shot capability with the windows key.

Monitoring and Validation:

1. Event Viewer: Used to monitor the backup process and ensure successful completion.
2. File Integrity Checks: Simple checks will be performed post-restoration to verify the integrity and functionality of the restored files.

I wasn’t sure of the exact timeline, but I take it we are going throughout the month so I will go by weeks:

Week 1:

Environment Setup:

1. Set up and configure the virtual machines in VirtualBox.
2. Install Windows Server on the backup server VM and Windows 10/Enterprise on the client machine VM.
3. Establish network communication between the two VMs.

Week 2:

Backup Server Configuration:

1. Install and configure the Windows Server Backup feature.
2. Set up and schedule backups for critical files on the client machine.
3. Perform initial manual and automated backups to ensure everything is working as expected.

Week 3:

Disaster Simulation and Recovery:

1. Develop a disaster scenario by deleting critical files from the client machine.
2. Execute the disaster scenario and document the process.
3. Restore the deleted files from the backup server using the Windows Server Backup utility and validate the restoration.

Week 4:

Final Testing and Documentation:

1. Conduct final testing of the backup and restoration process to ensure reliability.
2. Put together a detailed documentation, including setup steps, backup configurations, disaster simulation, and recovery outcomes.
3. Prepare the 5-minute demonstration, focusing on key points.

Week 5:

Presentation Preparation:

1. Finalize the presentation slides and visual aids.
2. Practice the 4-minute demonstration to ensure clarity and timing.
3. Submit all documentation and reports for review.

Deliverables:

Technical Report:

1. A report detailing the project’s objectives, methodologies, and outcomes.
2. This will include: Environment setup, backup server configuration, disaster simulation, restoration process, observations and conclusions

Recording:

1. A video recording of the 4-minute demonstration, showing the backup process, disaster simulation, and file restoration using Windows Server Backup.

Presentation Slides:

1. Slides summarizing the project, including findings, insights, and the importance of disaster recovery in business continuity.

Screenshots and Diagrams:

1. Visual documentation, including screenshots of the backup configuration, disaster simulation, and restoration process. Diagrams illustrating the network setup and backup.

Submission date: 8/25/2024

Adviser approval date: