Shell Scripting Pre-Project(v2)

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Create a shell script that accomplishes the following:

1. Compresses and backs up all the files in the current user's home directory that are less than 1MB in size to the /backup directory.

The "/backup" directory should be created if it does not already exist and permissions that allow the current user to read, write and execute in the directory should be given.

The compressed documents should use the ".zip" format.

2. Key system metrics (CPU Usage, Mem Usage, Disk Space, and Network Statistics) should be reported to standard output AND to a file called "sysinfo.txt" where the metrics are reported in tabulated form.

3. The sysinfo.txt file should be attached to email which sent to the company manager's email address.

NOTE

a) There should be tests to handle both successful and failed operations.

b) All activity should be reported to the screen as the script runs.

Script Enhancements (Mandatory)

4. As comments before the script begins, write how you would run the script using a crontab at 2:00 AM every day.

5. Regarding the backups, update your script to only backup to the destination directory, those files that have not already been backed up there.

Script Enhancements **(Choose 2)**

6. Automated Cleanup: Implement a mechanism to automatically clean up old backup files or log files after a certain period to prevent the backup directory or system from becoming cluttered with outdated data. This would help maintain system cleanliness and optimize storage usage.

7. Alert Mechanism: Integrate an alert mechanism to alert the system administrator when (a) system metrics exceed predefined thresholds (95% for 5 minutes), (b) the disk space is running low. Send an alert regarding these to the system administrator via email

8. Logging: Implement a logging mechanism to record all activities and errors in a dedicated log file. This would provide a more detailed history of script executions, making it easier to troubleshoot issues and track changes over time.