User Management Automation for Dunder Mifflin Employees Description

Monday, November 18, 2024   1:01 PM

This project automates the process of creating and managing user accounts for Dunder Mifflin employees across a network of Linux (Machines A-F) and FreeBSD (Machine X) systems. The script ensures consistency and compliance with strict user and group requirements, establishing a seamless environment for employees while adhering to organizational policies. By leveraging SSH and SCP, the script is designed to be deployed efficiently across multiple machines, simplifying the administrative workload.

Key functionalities include:

1. **User Account Creation**: Automatically creates user accounts for all employees using a specific username format (first initial and last name). Each account includes a user-private group, unique UID and GID, a valid login shell, and a properly structured home directory initialized from /etc/skel/.
2. **Password Synchronization**: Ensures all user accounts have the same password across all machines for uniform access.
3. **Home Directory Management**: Creates home directories for each user with the appropriate permissions (700), ensuring only the user has access. Ownership is set to the corresponding user and group.
4. **Secondary Groups**: Sets up additional groups (managers, sales, accounting) and assigns users to these groups based on their roles in the company org chart.
5. **Shared Directories**: Establishes shared directories under /home/ on Machine E for each secondary group. Permissions are configured so only group members can access these directories. Group ID inheritance is enforced to ensure consistency in permissions for newly created files and directories.
6. **Integration of Existing Data**: On Machine E, existing user directories and files are incorporated into the system with proper ownership and permissions.
7. **Administrator Privileges**: Adds the system administrator to the wheel or sudo groups, granting sudo access for executing privileged commands.
8. **Umask Configuration**: Adjusts the umask setting across all machines so newly created files and directories automatically have the desired permissions: full access for the owner, full access for the group, and no access for others.

This project ensures streamlined user management and policy enforcement across the Dunder Mifflin network while addressing security, consistency, and usability requirements. The script is designed to work seamlessly with automated grading tools and adheres to strict guidelines for username, group, and permission configurations.