NDG-logo-new-50pxHigh.png

**NDG ONLINE**

**NDG LINUX ESSENTIALS**

**Challenge A: User Management**

**Document Version:** **2015-07-07**

This challenge lab is designed as an extension of the course, to be used for instructor-led training. Instructors may distribute this lab to students as a supplemental assignment.

An answer key is included at the end of the lab, to assist the instructor in evaluating student deliverables.

Copyright © 2015 Network Development Group, Inc.

www.netdevgroup.com

**Case Scenario**

As the Linux Administrator for fast-growing company*,* you have been tasked with creating, modifying, and removing user accounts from the Linux server. The company has just hired 9 new employees to fill 3 newly designed departments. The departments that have been created are Engineering, Sales and IS. The server must be setup with the appropriate files, folders, users, groups and permissions to ensure a successful launch of the newly designed departments.

**Objectives**

* Create a directory at the root (/) of the file system for each department. This name should reflect the department name that will use the directory.
* Create a group for each department. This name should reflect the department name that the group will be assigned.
* Create an administrative user for each of the departments.
  + The user will have a Bash login shell
  + The user will belong to the respective group for each department. This will need to be the user’s primary group.
* Create two additional users for each department.
  + The users will have a Bash login shell.
  + The users will belong to their respective group for each department. This will need to be the user’s primary group.
* For security reasons, the following modifications will need to be made to each of the departments' respective directories:
  + Ensure that the owner of each of the directories is the department administrator and the group ownership is the group for each department.
  + The department administrator will have full access to their respective department directories.
  + Ensure that only the owner of a file in the department’s directory can delete the file. The user will also have ownership of their respective department folders.
  + Normal users in each department will have full access (Read, Write and Execute) to their respective department folders.
  + The department folders will ONLY be accessible by users/administrators in each of the respective departments. Ensure that no one else will have permissions to the folders.
* Create a document in each of the department directories.
  + The ownerships on this file will be the same as the directory it is located in.
  + The document should contain only one line of text that states, “This file contains confidential information for the department.”
  + This file can be read by any user in the department, but can only be modified by the department administrator. No one else has permissions to this file.

**Curriculum Resources**

* Module 6 – Working with Files and Directories
* Module 13 – System and User Security
* Module 14 – Create a New User
* Module 15 – Ownership and Permissions
* Module 16 – Securing Permissions, Links, and File Locations

**Deliverables**

* Use the appropriate command to verify each user and group has been created.
* Use the appropriate command to verify each user’s group assignment.
* Use the appropriate command to verify the directory creation and the permission settings.
* Use the appropriate command to verify the files are created in their respective directories.

**Instructor Key**

Below are screenshots of the commands that can be used to accomplish this lab, as well as the commands used to verify the objectives.

Keep in mind that user names, group names, directories and filenames may vary, depending on individual student choices.

Below is an example of creating a directory at the root (/) of the filesystem. Directory names can vary.



Below is an example of creating a group. Group names can vary.



Below is an example of creating an administrative user for the department. Usernames can vary.



Below is an example of creating a normal user for the department. Usernames can vary.



Below is an example of setting the appropriate ownerships for the directory.

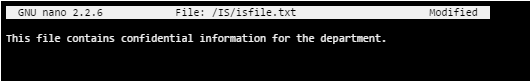


Below is an example of setting the appropriate permissions on the directory. This covers 4 of the bulleted items dealing with permissions.



Below is an example of file creation. Filenames can vary.





Below is an example of setting the appropriate ownerships for the file.



Below is an example of setting the appropriate permissions on the file.

