|  |  |
| --- | --- |
|  |  |
| Group 5 – B.J.S. INC.LDAP and NFS Automation with Client Kickstart Services |  |
|  |  |
|  | 4/11/2022CIT-470-001-2022-030Prepared by: |
|  | BRIAN SOLOMONSPENCER KLUMPJOHNNY RIVERAPrepared for:DARCI GURIEL |

**TABLE OF CONTENTS**

SECTION 1 introduction

3

section 2 procedure

4

section 3 design

5

section 4 achievements

6

section 5 conclusion

7

# 

# INTRODUCTION

Our team has developed a product that utilizes multiple scripts, each performing their specific function. Our scripts come as the following, ***install-ldap-server,*** and ***install-nfs-server***. These scripts are implemented on the Server Machine for the future configurations of client machines. Our product is in a git repository that is accessible to System Admins. The ***install-ldap-server*** script is utilized to automate LDAP configuration and authentication processes on the server of your network. The ***install-nfs-server*** script is designed for the automation process of configuring shared network file system for users on client machines.

These programs are designed for automation purposes to allow users to be able to login to any client machines with the same username and password as well as have access to the same home directory no matter which client machine they log into. Through our bash scripts we allow minimal command inputs to simplify the processes both on the Server and Client configurations and installations of the required services and products.

# PROCEDURE

**Installing LDAP and NFS on Server**

1. Power on **Server Machine.**
2. Login as **Root**.
3. Use the following command **wget https://raw.githubusercontent.com/CIT470Group5/Distributed-File-System/install/a2.tar.bz2 (Reference 1.0)**



**Reference 1.0**

1. Unzip file using **tar xvf** **a2.tar.bz2** (**Reference 1.1)**



**Reference 1.1**

1. Change directories to a2 by using the command **cd a2** where the ***install-ldap-server*** and ***install-nfs-server*** are located. (**Reference 1.2)**



**Reference 1.2**

1. Use the **ls** command to confirm that ***install-ldap-server*** and ***install-nfs-server*** they will be highlighted in green. (**Reference 1.3)**

**Reference 1.3**

1. Run the script ***install-ldap-server*** by running the command **./install-ldap-server [HOST IP] (Reference 1.4)**, this should take no more than 1 minute, when finished the command line will reappear.



**Reference 1.4**

1. Run the script ***install-nfs-server*** by running the command **./install-nfs-server [HOST IP] (Reference 1.5)**, this should take no more than 1 minute and when finished the command line will reappear.



**Reference 1.5**

**Client Setup/Configuration**

1. Power on **Client Machine.**
2. Hit the **Escape** key in a 10 second timeframe to access **Boot.**
3. Use the following command **linux ks=http://10.2.6.89/public\_html/client-ks.cfg (Reference 2.0).** The process can take 5-10 minutes for configuration once installation is done, the screen should appear with the login screen.

**Reference 2.0**

1. Login as **Root. (Username:Root, Password: comppass)** #Password can be changed later for Root

# DESIGN ELEMENTS

The purpose of our designed solution was to simplify the creation of the LDAP host, LDAP authentication, and NFS processes. We wanted to create the process to use less input commands from the user to complete all requirements. Our automation completes the simplification of creating these systems through our installation scripts install-ldap-server and install-nfs-server on any CentOS host.

The design of our product keeps our scripts under the line requirements, all while completing the final outcome asked from the customers. Included with our installation scripts is a README file that describes all the necessary information about our products. In addition to the README file, we have also added command line help options to provide syntax information and general use.

The KickStart Configuration file is able to be accessed from the Server after both installation scripts have been issued on the server. The Kickstart can be stored through the Apache Server for client machines to pull that configuration file from it. This is made possible through the addition of a “.htaccess” file on the Apache server after reconfiguration to allow downloads from the webserver. The Configuration of the Kickstart installs the OS on the client machine and establishes a remote connection to LDAP and NFS through the server machine.

# ACHIEVEMENTS

Our solution for this LDAP and NFS installation set of scripts meets or exceeds all requirements in the scope laid out. Each member of B.J.S. Inc. Group 5 had input on all areas of the required deliverables and how the solution was formed into a final product. Nothing was coded, written, or decided upon without full agreement of all members of the team. Any changes to the scope as written were approved by the customer before any changes were made. All members were courteous to each other's time and work put into the entire product and each meeting was orderly.

The kickstart file to load client machines will be placed into the Apache server public\_html through the install-nfs-server file. The two scripts for LDAP and NFS installation will be available for download on our public Git repository. When running, the LDAP and NFS scripts will automatically set up the capability and all required tools necessary to run LDAP and NFS on your server. The admin will see printouts to the console of each section of the install that is accomplished with no need for any input from the installer aside from the Host IP address. The creation of the LDAP and NFS scripts was headed and created by Brian Solomon and Spencer Klump. The kickstart file to load all client machines was modified to work for this product by Johnny Rivera. All the script files were tested and checked for accuracy by Brian, Spencer, and Johnny.

# CONCLUSION

Our LDAP and NFS Automation with Client Kickstart Services product has been developed to give a quick and easy installation setup for your system administrator. This product will save time and in return also save your business money as your admin can focus on other tasks and less time will be spent on errors that are more likely doing manual installs on every client. Using the NFS server installation script will load all tools and services necessary to run your standard NFS server. With the LDAP server installation script, you will have all tools and services needed to run an LDAP server with authentication. Your system administrator can load everything in a few simple steps and this automation will lessen the chances of any user input error. This product has been tested and validated to work with the procedure as written.