

LDAP GUI for Academic Institutes

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1 Summary of Work Done

1.1 A Brief Note

LDAP - Lightweight Directory Access Protocol is an application protocol for querying and modifying data of directory services implemented in Internet Protocol(IP) networks. It is a network authentication system. We have worked on it, right from Server Installation to Client Configuration and setup. The whole process is a bit tedious and since it is a complete command line tool, it is sometimes difficult for novice users to understand it.

LDAP GUI for Academic Institutes is an attempt of creating a GUI application for the same, in which novice users/administrators can also use it and learn from it. The GUI application inturn invokes shell scripts and configure the server of the users. It is an Open-Source tool with **GPLv2**¹.

The institution can thus make efficient use of its resources. We know, that there are GUI's existing in the market for the same purpose but there isn't a GUI for academic institutions and that too which understands the format of the Indian Engineering Colleges' System.

Once, this tool is released, it will cater to many academic institutes in India, and will help to promote use of Linux and Free and Open Source terminologies in depth. We consider this as an opportunity to contribute our bit to the world of Free and Open Source Software.

1.2 What have we done?

The Tool: We have developed a web based application that can be accessed from the server machine which simplifies the installation and configuration procedure. Shell scripts are provided to automate the tasks of installations. The shell scripts are invoked as and when they are needed throughout the process. Almost each step is explained with respect to the inputs it takes, and the outputs it will generate. We have taken utmost care of explaining the source codes by means of comments. The user is advised to go through the comments in the shell scripts and other codes before proceeding with the installations.

The Report: We have tried our best to explain the esoteric concepts in a lucid manner and hope this will assist users to gain a clear understanding of the entire installation

¹License file included in source code

procedure. Wherever required, assumptions are mentioned. Footnotes are provided to provide external details of the associated point.

Certain pre-requisite softwares are also required for the execution of this tool. Complete details of such softwares are explained in the initial chapters of the report which is followed by the **User Manual** and Future Enhancements that can be added to this tool.

1.3 Our Tool

The tool is divided in two units *viz* Server - side tool and Client - side tool. The user can opt for any of the section. Initially the user should select one machine in the network as the server and follow the steps of Server side installation on that machine. This machine shall be accessed by all other machines. All the prerequisite softwares mentioned in the report shall be available on the server machine. The user specifies the required configuration settings and the software inturn invokes the backend shell scripts and starts the installation of the server software.² After installation of the server software and specifying the configurations, users of LDAP need to be created. This process is also automated by the use of shell scripts. The shell scripts are well document so as to allow the user to customize them according to his convenience and the environment in which the server is deployed.

After the server is successfully installed, the user (administrator) should run the client side section on each of the machine which should act as the LDAP client. The client side installation is comparatively simple. The user only needs to fetch the appropriate page and click on the installation buttons. The software installs the required softwares and also edits the configuration files that are necessary for configuring a machine as a LDAP client. The software first takes a backup of the original configuration files and then edits them so that in future if the user wants to revoke a LDAP client it can be done easily by simply restoring the original configuration files.³ In this way, our tool attempts to reduce the administrator workload and tries to simplify the tedious and esoteric installation procedure of LDAP on Linux machines.

²Chapter 7 in the Report specifies all the intricacies of installation and the detailed steps for installation with screenshots of both the server and client sections of the software.

³Chapter 7 in the Report describes the configuration files and how they are backed up.