

**UNIVERSITI TEKNOLOGI MARA**

**STORING INFORMATION OF NETWORK DEVICE :  
LIGHTWEIGHT DIRECTORY ACCESS PROTOCOL  
(LDAP) AS NETWORK INFORMATION SERVICE**

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## **ABSTRACT**

This paper describe about the Lightweight Directory Access Protocol (LDAP) as Network Information Service which is about development of a directory to store information of UITM Cisco devices. Nowadays, directory is having more data that static compare to database which the data can change frequently. The objective is to create LDAP directory to store information of Cisco network device. This project will be developed according to three modules. First the module is to capture and decode the packet. Secondly, this project is about to store the Cisco device information into the LDAP directory and lastly visualize the data through the Cisco Network Device Information webpage. In second module, LDAP directory will be develop to store data of Cisco device information in the UITM. Apache Directory Studio software will be used to develop this directory which is it will be installed in the Microsoft Window to develop the device directory. To develop this directory, schema of the directory need to be designed before it can be developed. There are three basic concepts that must be included when designing the schema which are an entry, object class and attributes. When create an entry its data content are contained in attributes, which are grouped into object class. Next, after the directory has been developed it will receive the data which contain device ID, IP address, port ID, platform and version from the first modules, the information will be extracted and then will it will specify the entry path of the data. Next, the information will be stored into LDAP directory by following the object class. For a conclusion, LDAP is not used only for authentication and store information in the directory but it can be used for many other purposes.

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# CHAPTER ONE

## INTRODUCTION

This section explains the background of the project of LDAP as Network Information Service. This section includes the background of study, problem statement, project's aim and objective, scope, its significance and the outline of the thesis.

### 1.1 Background of Study

According to the Stephen Briggs, & Steve Spence (2008). Lightweight Directory Access Protocol is application protocol letting user to trace individuals, organizations and other resources such as devices and files in a network. In a network, for a standard directory services, LDAP is known as lightweight version of Directory Access Protocol (DAP). Security features is not included in first version of LDAP that makes LDAP as a lighter version. LDAP was developed at the University of Michigan and LDAP has been confirmed by at least 40 companies. Cisco also advocates LDAP in its networking products.

In a network, something is located is tell by a directory. On TCP/IP networks, Domain Name System (DNS) is a system that a directory used to connect a specific network address with the domain name. Next, LDAP enabling user to look up for a data or an individual without knowing where the data has been located..

An LDAP directory can be circulated among many servers. Directory System Agent (DSA) is another name that LDAP server has been called. LDAP server will takes responsibility when it gets a request from a user and need to pass it to other DSAs, but makes sure a single coordinated reaction for the user.