

## Centralized User Data Management (CUM)

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**Abstract:** *This is a Centralized User Data Management System. This application is cloud data management system. The basic idea of this project is creating an opens source User Data Management System that allows use to access data from anywhere in the home directory in the LAN without the use of Internet Connection. Cloud computing is a cost-effective model. Self-service capabilities eliminate the traditional processes associated with IT resource provisioning. Users can access a public or private cloud, review current cloud computing instances or create new ones, monitor utilization and costs, and adjust resource allocations. With reporting, users can track cloud budgets and reduce or delete unused instances to cut operating expenses.*

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### I. Introduction

It is a Centralized User Data Management System. In this proposed software user can access data using pre-authorized user authentication. Each user as per user type is allocated a dedicated space on the NAS. It is an open source software. All the similar software used for user data authentication are mainly made for Windows OS, this software is open source, and which makes it centralized on Open Source. Also, as this is made in Open Source, changes can be easily made. Cloud computing mainly consists of three distinct types of Computing services delivered remotely to clients via the Internet. The most important benefit of using Cloud computing is that the cost of infrastructure is reduced. We can break down Cloud computing in three models- 1. IaaS (Infrastructure as a Service) 2. SaaS (Software as a Service) 3. PaaS (Platform as a Service). In this project the model used is IaaS (Infrastructure as a Service). Infrastructure platforms are highly scalable. This model is very much cost effective.

### II. Material and Methods

NAS Server- Network-attached storage (NAS) is a file-level computer data storage server connected to a computer network providing data access to a heterogeneous group of clients.

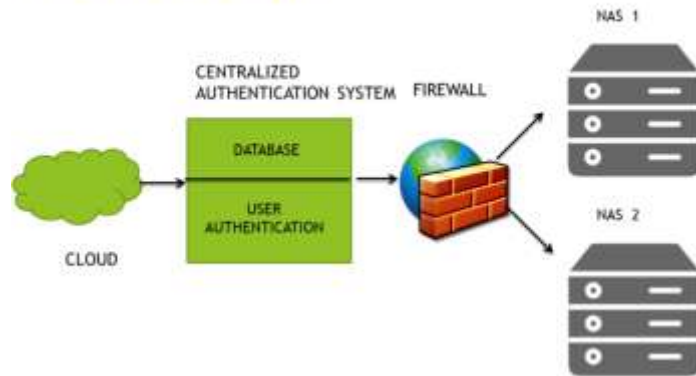
LDAP – Lightweight Directory Access Protocol is an open, vendor-neutral, industry standard application protocol for accessing and maintaining distributed directory informationservices over an Internet Protocol (IP) network

### III. Proposed Work

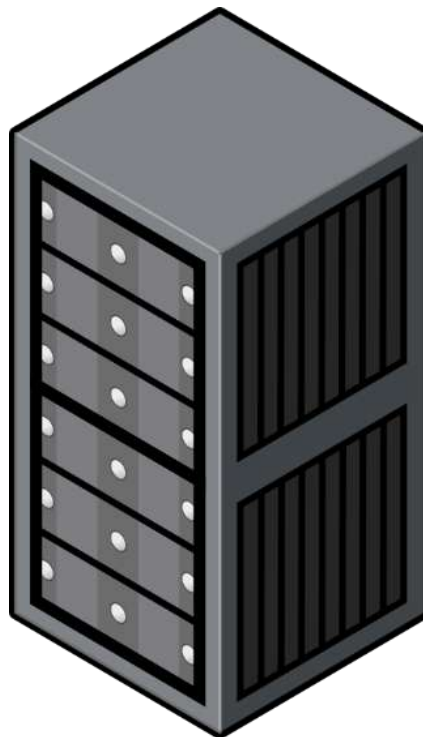
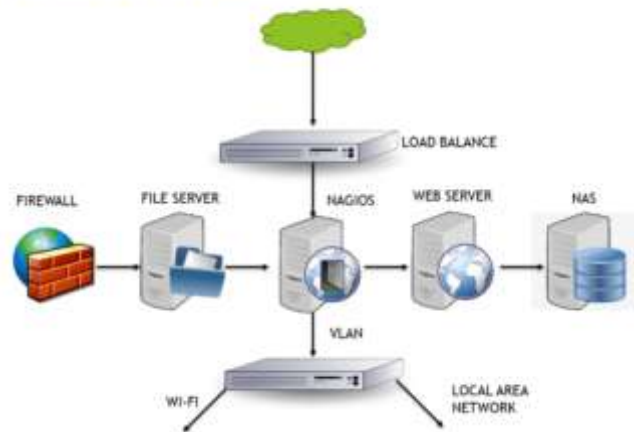
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This Proposed System consists of a main component that is NAS Server which is a Network attached Storage. This system is a central system which has a Network attached storage to save the user data. LDAP is the protocol used for data allocation. There will be a separate database for user authentication to log in into the system to save and retrieve data. And there is added security firewall between authentication and Server. Using the proposed system, we can provide added layer of security for data and ease of accessing data from anywhere in the home directory. As this software is based on open source, so changes can be done easily. The previous version works like if the user is authenticated then will retrieve data or won't have any access to system.

### PROPOSED SYSTEM



### COMPONENT DIAGRAM



### **NAS SERVER:**

Network-attached storage (NAS) is dedicated file storage that enables multiple users and heterogeneous client devices to retrieve data from centralized disk capacity.

Users on a local area network (LAN) access the shared storage via a standard Ethernet connection. NAS devices typically do not have a keyboard or display and are configured and managed with a browser-based utility.

Each NAS resides on the LAN as an independent network node, defined by its own unique Internet Protocol (IP) address.

Here NAS Server will do main thing that's store the user data, and when authenticated user need it back then NAS Server will provide it.

NAS server can also have various storage capacity for read and write comprehensive operation. Mostly NAS server's are strongly build and have capacity to add different storage drives or add complete new storage unit.

Basically as we know NAS server is one of kind storage server where it gives NAS based storage environment in between IT enterprise.



### **LDAP:**

**LDAP** stands for Lightweight Directory Access Protocol. As it named, it is a lightweight client-server protocol for accessing directory services, specifically X.500-based directory services. **LDAP** runs through TCP/IP or other connection-oriented transfer services.

As we know Directory is like database, but also have detailed attribute (quality) based data. The data in directory is basically interpret much more than written. Directories are available to get fast response for large amount of data.

Directories may have capacity to reflect information broadly to gain availability and reliability, but to decrease response time.

When directory information reflected, temporary inconsistencies between reflected data may be OK but as much time as they get in sync eventually.

There are many other ways to give a directory service. Different mechanism allow different type of data to be saved in a directory. Some directory services are basic and give service to limited situation.

In network, a directory gives information to us where is anything located.

DNS is basically directory system which is used to describe the domain name to individual network address. As we know LDAP is less number of code.

## **IV. Conclusion**

The major use of this application will be that it is made on Linux, basically open source which makes it robust. Secondly as we are using NAS, it becomes easy to access data from home directory. The major advantage of the application is security and as it is open source it can be updated easily for future scope. Not only will this project create a cloud network for home network, but also adds extra security level by adding firewall.

### **References**

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