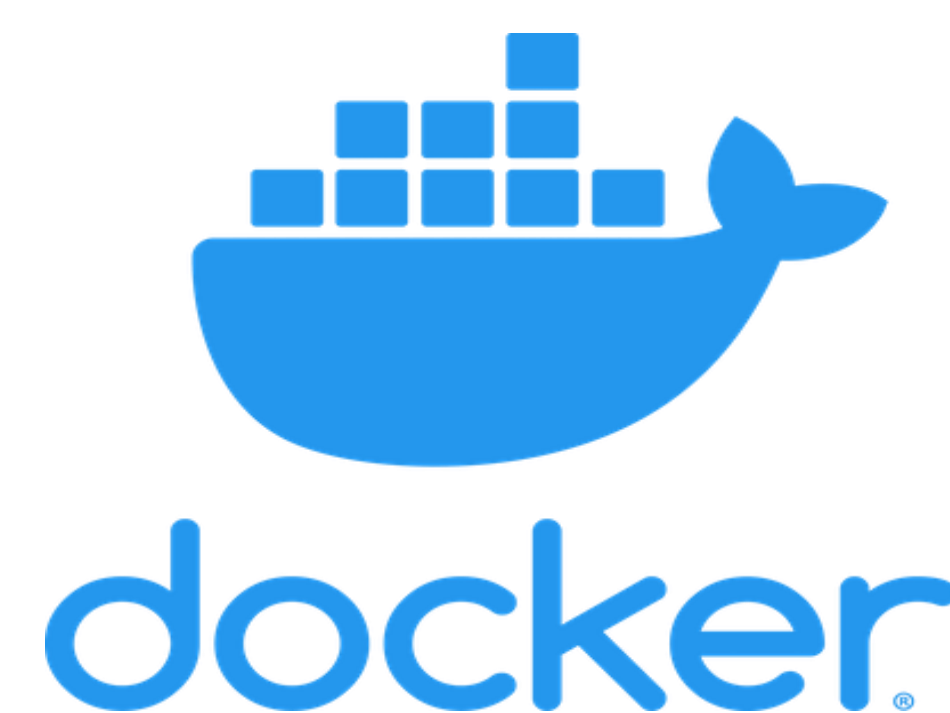
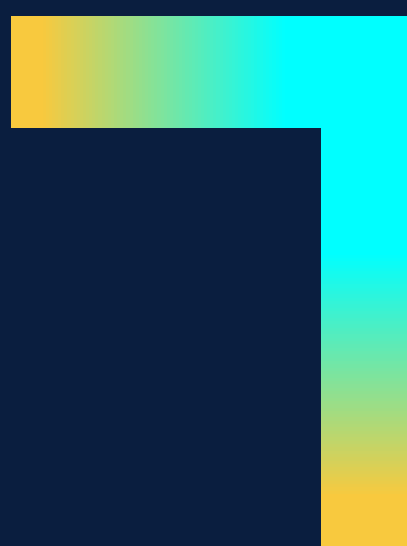




College of Computing & Information Sciences

Fall 2023 Senior Design Project

ProxCloud: A Portal for Proxmox in NextCloud

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PROBLEM

Bridging Nextcloud and Proxmox through API Integration
In modern IT environments, the coexistence of powerful tools such as Nextcloud for file synchronization, sharing, and collaboration, and Proxmox for virtualization, poses a challenge due to the absence of native compatibility. This capstone project aims to address this gap by developing a seamless integration solution using APIs. The successful completion of this capstone project will yield a practical solution that enhances the interoperability between Nextcloud and Proxmox. By creating a user-friendly interface and leveraging the power of APIs, users will be able to seamlessly manage and monitor Proxmox virtual machines within the familiar Nextcloud environment, optimizing the efficiency and user experience of both platforms.

SYSTEM DESIGN

Using integrated API Calls within Proxmox, user authenticates and can manage and allocate resources according to the desire. JavaScript and .php files are handed front-end within a NextCloud site, and are designed for the functionality of the website. By receiving a token from the Proxmox side, the user is authenticated for 24 hours and can use the functionality of the Proxmox Administrator Account.

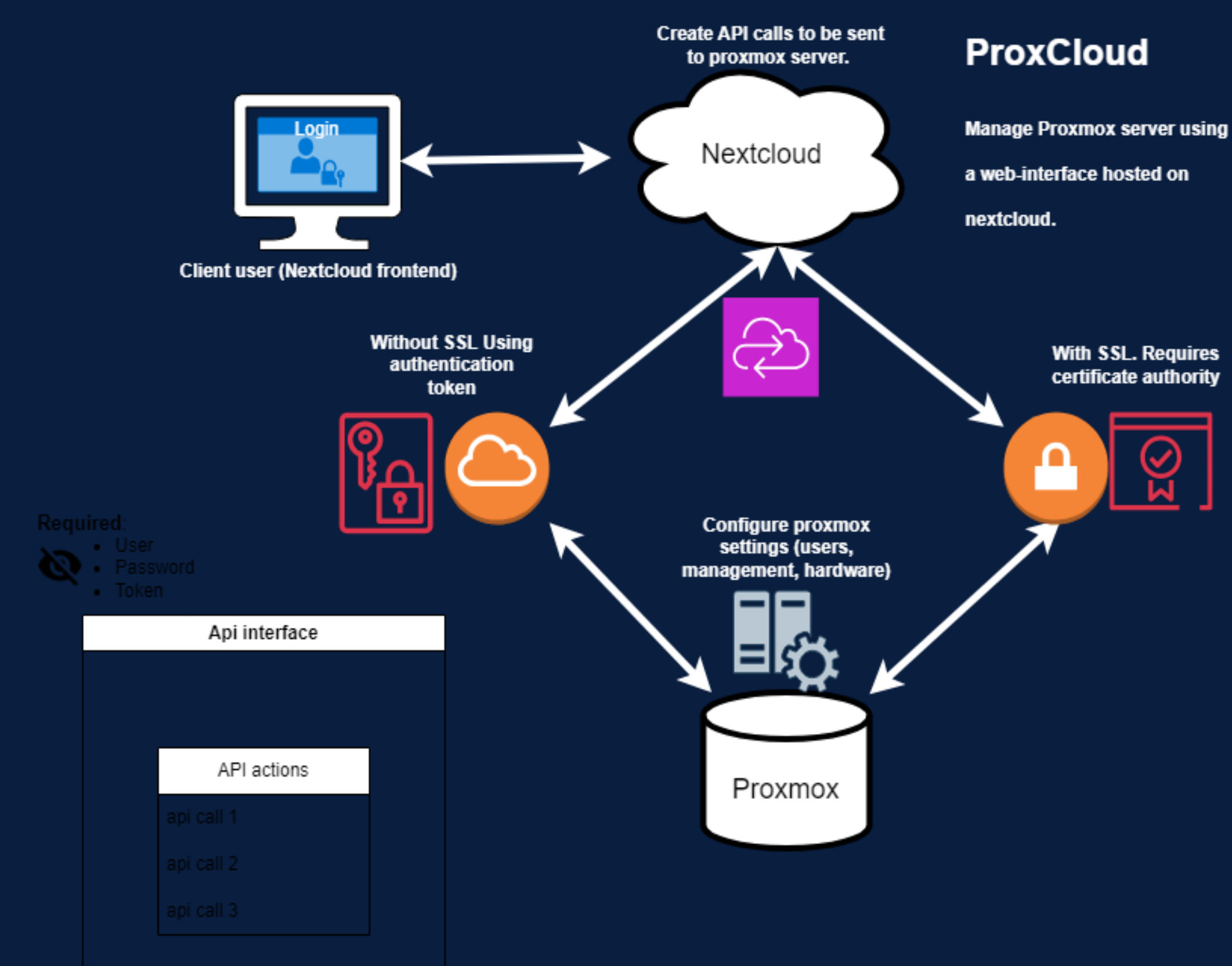
VERIFICATION

Token is received from the Proxmox which valid for 24 hours to ensure safety of authentication process

CURRENT SYSTEM

Due to complexity of the project, it is run on different OS – Win 10 64-bit ver. And Ubuntu 20.04.60. Current project requiring installation of additional libraries for Linux, as well as VM and Docker set up.

OBJECT DESIGN



SUMMARY

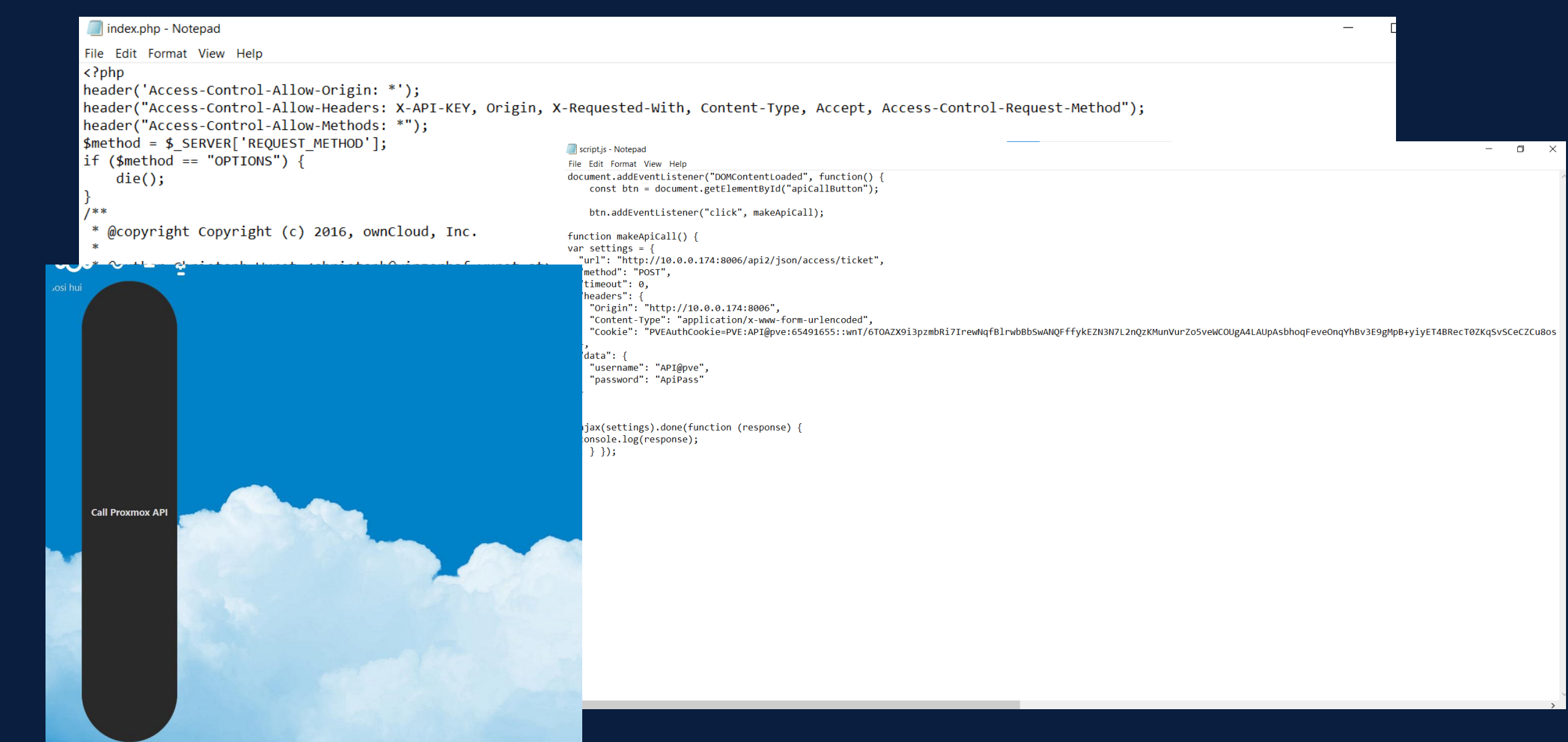
Integrate Proxmox with Nextcloud is a next-level developing skill target, which will improve time management as well as resource.

REQUIREMENTS

Intel EMT64 or AMD64 with Intel VT/AMD-V CPU flag.
Memory, minimum 2 GB for OS and Proxmox VE services.
Fast and redundant storage, best results with SSD disks.
OS storage: Hardware RAID with batteries protected write cache (“BBU”) or non-RAID with ZFS and SSD cache.

IMPLEMENTATION

JavaScript, .php (HTML), Perl, Proxmox, Postman, Ubuntu, NextCloud



REFERENCES

“Proxmox ve API - Proxmox VE.” Pve.proxmox.com, pve.proxmox.com/wiki/Proxmox_VE_API.

ACKNOWLEDGEMENT

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