

Upgradation of a web portal for management of centralized network resources

Abstract

IP addresses are typically an extremely important part of a network, and managing them can become pretty difficult as the number of IP addresses used on a network is scaling up on a daily basis. Currently, IPR Computer Division has IP Address Management (IPAM) portal which can track and manage the IP address schema on our network. All our network devices are tightly bound to the MAC/Physical Address hence it is required to detect and identify Physical/MAC addresses in a network into a list and appropriate assign VLANs, track device movement and check and notify an administrator of any unseen issue that arises in end-user machines.

Following are the detailed scope of work –

- Manage free IP address space in a subnet from a UI portal.
- Configuring subnets in use and its expandability.
- Static and dynamic IP and name resolution.
- The hostname associated with each IP address.
- Development of realtime notifications to users and admins.
- Management of linux based DHCP and DNS process through UI portal.

Student Pre-requisites - Knowledge of PHP and laravel framework.

Learning Outcomes: An overview of enterprise client-server web application having integration with otherthird party-tools.

Academic Project Requirements:

1) Required No. of student(s) for academic project: 2

2) Name of course with branch/discipline: B.E./B.Tech. Computer Engineering/IT/MCA

3) Academic Project duration:

(a) Total academic project duration: 20 Weeks

(b) Student's presence at IPR for academic project work: 4 Full working Days per week

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