NETDOG - CONFIGURATION MANAGEMENT AND MONITORING SYSTEM

Mini Project 2018

Done By

ASWIN BABU K

Guided By

Prof. Baby Syla

Assisstant Professor

Department of Computer Applications
College of Engineering
Trivandrum-695016

ABSTRACT

The NetDog Project started with the aim to develop a software system that can bring up and down computers on the network. It has now added a number of abilities to its feature list, including the ability to execute scripts or commands across machines on the network and the ability to copy files to machines on the network without relying on third party protocol. The system is developed to be fully extensible so that developers can extend the system as per their requirements through plugins.

ACKNOWLEDGEMENT

If words are considered as symbols of approval and tokens of acknowledgment, then let words play the heralding role of expressing our gratitude.

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ASWIN BABU K

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Introduction

The netdog project started with the aim of designing a program which can easily bring computers up and down remotely. The idea came from the realization that, quite a few computers were left powered up when the college lab closes for the day. Thus the initial name "Project Green".

A number of features were added to the feature list, most importantly tracking computers even if their IP addresses changed, the ability to execute commands or scripts on a specified range of machines with a single command, and the ability to copy files to a range of machines without requiring protocols such as SFTP or FTP.

The abilities does not end there and netdog provides many notable features such as early warning of HDD failure on the machines on the network. The exhaustive list of features is listed in later section. Once completed, netdog will be a completely extensible system to which features an be easily added through plugins.

The proposed real time traffic analyzer for road safety includes, tracking, and counting the vehicles using Blob Detection methods. In this project, first, we differentiate the foreground from background in frames by learning the background. Here, foreground detector detects the object and a binary computation is done to define rectangular regions around every detected object. To detect the moving object correctly and to remove the noise some morphological operations have been applied. Then the final counting is done by tracking the detected objects and their regions. Finally, vehicles in a predefined virtual detection zone are recorded and counted. The traffic details and counts are continuously updated in the server using a timer and users can register in an Android app to get notified about traffic in real time. Thus, the proposed system consists of three main modules. The first module constitutes the Android application for user registration and to retrieve notifications regarding traffic in real time. The second module deals with the vehicle detecting and counting and the count is updated to the server with the help of a timer. The third module is the server, which stores user details, traffic details, routes and traffic updates.

Bibliography