ISSN 2277-4726


Article No 18

Systems Management Server

Punit Singh Rana, R.A. Deshmukh, Anmol Anand, Navin Kumar Nirala
University of Pune
Email: rana_12300@hotmail.com

Abstract: The project idea describing the concept of Network Inventory Maintenance is the basis for tracking the assets for the client machines connected to a server on the network. Firstly, it is necessary to install and configure Active Directory (AD) on the server for the application to run efficiently. To install the Active Directory it is necessary for the server to act as a Domain Controller (DC). Therefore, the server should be configured as a DNS server as well as a domain controller. The active directory installed on the server stores the list of users and computers connected to this server. The application scans for the computers (clients) connected to the server by accessing the active directory. After retrieving the computer names, the program displays a list of parameters such as computer software information, BIOS information, processor information that the application should retrieve from the remote machines. After selecting a particular computer name in the list of connected computers, the application connects to the selected computer and accesses the registry to retrieve the information requested by the user. The user (authorized user) can later on after analyzing the requested information can generate, save and print the report.

Keywords – Active Directory, Windows Management Instrumentation (WMI)

I. INTRODUCTION

System Management Server is a server based project. It is an online system that will reduce manpower requirements to a great extent. The basic idea of the project is that it will reduce manpower and time but increase throughput. It will also lead to the addition of enhanced facilities not available manually. The Systems Management Server is an important tool to combat the loss of time, effort and materials within an organization at the same time generating new opportunities for collaboration and productivity.

a. Inexpensive to implement
b. Easy to use, just point and click
c. Saves time and money
d. Saleable and flexible
e. Puts user in control of their data
f. Facilitates organizational learning
g. Improved Quality of life at work
i. Improved productivity

II. SCOPE AND NEED FOR PROJECT

The Systems Management Server in an automated utility which will replace the manual systems management procedures. A client – server model of networking is used here for communicating between two systems. Hence, the main objective of the Systems Management Server is to provide a good quality of service in maintaining and managing the various client details that will definitely lessen the tedious and clerical manual procedures and in turn will effectively save time, be cost effective and reliable.

As part of the project, the Systems Management Server will manage and maintain the various required details for clients connected to the network, although it functionality can be extended to provide restricted and privileged access to every individual client connected to the network.
Situation in today’s Information Technology environment depends on how quickly and effectively employees in an company and complete transaction more accurately and fast. Productivity increases an organizational knowledge is more accessible and the data is more accurate. Flexibility allows for a place where boundaries are lowered and information exchange is encouraged. This leads to more informed employees with the ability to make better, faster decisions. This in turn leads to better productivity.

III. WORKING OF PROJECT

SMS takes at the input, the packets sent by the client machines on the network. Basically SMS works in two parts : Firstly , it takes in the packets from the client machines analyzes the packet fields , extracts the IP address for the corresponding client from the packet and then using this IP address connects back to the client.

Secondly, after connecting to the client machine SMS scans the Windows registry of the client machine to collect all the hardware details and the software details. After the collection of details is over the SMS stores this information in the database that is active in the background. Whether the details collected are for the new or old clients and the other validation procedures are taken care of by SMS.

A. Advantages

SMS has following advantages:-

- It helps server to keep a track of all the hardware and software components. The server will have complete control over the activities of the client.
- This is a system which will help reduce the manual work. The server will be aware if any hardware component is missing from any of the client computers.
- This is a very simple system which will generate reports if there is any loss incurred.

B. Drawbacks

SMS has following drawbacks:-

- SMS will have a very complex database and the values containing will be also complex.
- It is right now concerned with only a small group of computers.
- The generated output may be in the various forms.

IV. PROJECT IMPLEMENTATION
The main purpose of SMS is to minimize the manual procedures that are usually carried out for managing and maintaining systems information. The system is designed in three major modules those are packet sniffing and IP address separation, validating and updating the database and report generation.

**Packet sniffing** module is responsible for receiving packets and analyzing the packets. The packets are thoroughly analyzed for extraction of the IP address for the machine from which the packet has come. Extraction of IP addresses helps SMS to connect back to the client machine. This return connection is established by SMS to collect the client information.

For **database updation** SMS has to cross check the details it has collected from the client machines with those that are already stored in the database. If the information is one and the same, no upgradations are required else the respective entry for the client machine in the database is updated.

**Reporting** module provides the reporting on assets tracked by the interaction between packet sniffer and the database updating modules. This module also generates customized user reports.

The implementation of the project is demonstrated by the use of the UML diagrams drawn in the phase of analysis.
If the client is using any prohibited software which is declared by the server then that software will automatically get corrupted.
VI. CONCLUSION

The system will produce satisfied reports along with the graphs and the pie-charts, with the help of BI tool. The data mining of the warehouse is to be done. The system is able to successfully convert reviews into target reports.

VII. REFERENCES
