



TRIBHUVAN UNIVERSITY  
INSTITUTE OF SCIENCE AND TECHNOLOGY  
AMRIT SCIENCE CAMPUS

## NETWORK DIAGNOSTIC TOOL

A PROJECT SUBMITTED TO THE DEPARTMENT OF COMPUTER SCIENCE  
AND INFORMATION TECHNOLOGY IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE BACHELOR'S DEGREE IN COMPUTER SCIENCE  
AND INFORMATION TECHNOLOGY

By  
Mr. Gokul Dhakal [532/066]  
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Under the Supervision Of:  
Lecturer Mr. Uttam Shrestha Rana

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY  
AMRIT SCIENCE CAMPUS  
LAUNCHOUR, KATHMANDU, NEPAL

December, 2013

**AMRIT SCIENCE CAMPUS  
TRIBHUVAN UNIVERSITY**

Date: \_\_\_\_\_

**SUPERVISOR'S RECOMMENDATION**

I hereby recommend that this report prepared under my supervision by **Mr. Ravi Chhetri, Mr. Gokul Dhakal, Mr. Uddhav Prasad Gautam and Mr. Pratap Adhikari** entitled "**Network Diagnostic Tool**" for partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Information Technology be processed for evaluation.

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Lecturer **Mr. Uttam Shrestha Rana**  
Amrit Science Campus

**AMRIT SCIENCE CAMPUS  
TRIBHUVAN UNIVERSITY**

Date: \_\_\_\_\_

**LETTER OF APPROVAL**

This is to certify that this project report prepared by **Mr. Ravi Chhetri, Mr. Gokul Dhakal, Mr. Uddhav Prasad Gautam and Mr. Pratap Adhikari** in partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Information Technology has been well studied. In our opinion it is satisfactory in the scope and quality for the required degree.

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Lecturer **Mr. Uttam Shrestha Rana**  
Project Supervisor  
Amrit Science Campus

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Ass. Professor **Mr. Dipak Pudassaini**  
Head of the Department  
Amrit Science Campus, TU

\_\_\_\_\_  
External Examiner

Date of Approval: \_\_\_\_\_

## **ABSTRACT**

With the advancement of networking technology and better improvement of the network infrastructure has solved many of the problems that are faced by normal user as well as network administrator. However, it is tedious job for administrator to switch among different programs to handle simple administrative tasks. So if the common application programs are integrated into single application module it will reduce the time of execution of different programs and reduces the overload due to execution of different individual programs. Network Diagnostic Tool is the better solution for normal non-technical users as well as system/network administrator as this application program is user friendly, memory efficient and operates effectively.

Network Diagnostic Tool is platform independent i.e. it runs on commonly used operating systems. Therefore users of different platform can utilize the facility provided by our program. In our project, we have called the corresponding operating system's CLI commands so that it is much more flexible and accurate. The user input and the necessary conditions to be satisfied are mapped according to respective operating system command and are executed and result is displayed in highly interactive graphical form.

In particular we have simplified the tedious job of executing sequential command in command prompt or terminal with high remembrance. This program is the mirror replica of command line interface to graphical form where there is no need to remember the commands and type thoroughly.

This project is the outcome of our hardworking. Therefore in future we propose to extend this project by huge integration of individual programs into single module and adding new modules related to routing and network security.

## ACKNOWLEDGEMENT

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