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JUDUL: **CR CONFIG SYSTEM**

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CR CONFIG SYSTEM

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This report is submitted in partial fulfillment of the requirements for the Bachelor of Information Technology.

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KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
2004

ADMISSION

I admitted that this project title name of

CR CONFIG SYSTEM

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SUPERVISOR: NAZRUL AZHAR BIN BAHAMAN Date: 1st OCKTOBER 2004

DEDICATION

I want to contribute this opportunity to my beloved parents, thank for giving 100% support to me and give me change to further study. You are always in my heart. To my supervisor Mr. Nazrulazhar Bahaman, thank you for your understanding and collaboration. To all my friends that supported and assist me to conclude my project. To my "smile" thank you to become "smile in my smile".

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ABSTRACT

CRConfig System is a standalone project manager is developed with Graphic User Interface (GUI) to configure router easier and systematic without the command line. This system manager is available for Cisco Router 2600 Series configuration. This system must be installed in the computer server or remote computer that connected to the router. To provide more advantage to the user, Router Monitoring is a one of function in this system. This function is use for classify weather the router is connected or not. It can help the user to check the result following the diagram provided. Microsoft Visual Basic is used for develop this CR Config System were HyperTerminal communication is a design using this software. The additional function of the CR Config System include Change Password, Router Configuration, Router Monitoring and About. The function is different following the name of the function. CRConfig System is developing for the network administrator and technician to resolve the problem for remember command line Cisco Router 2600 Series configuration. To facilitate CRConfig System is develop because it very suitable and user friendly. User just interpret and answers the entire question on the popup interface before going through the next question to finished the configuration.

ABSTRAK

CR Config System merupakan pengurusan projek persendirian yang dibangunkan dengan mengunakan konsep Antaramuka Grafik (GUI) to mengawalselia *router* secara mudah dan sistematik tanpa menggunakan *command line*. Pengurusan Sistem ini hanya sesuai untuk perkakasan *Cisco Router 2600 Series sahaja*. Sistem ini juga hendaklah di pasang ke dalam komputer pelayan yang disambungkan dengan *router*. Untuk memberi banyak kelebihan kepada pengguna, *Router Monitoring* merupakan satu fungsi untuk menguji pancaran perkakasan di dalam sistem ini. Fungsi ini digunakan untuk mengenalpasti samada perkakasan tersebut disambungkan atau tidak. Ia akan menolong pengguna untuk mengetahui keputusan berdasarkan gambar yang akan dipaparkan. Perisian *Microsoft Visual Basic 6.0* digunakan untuk membangunkan system ini di mana komunikasi menggunakan *Hyper Terminal* direkabentuk menggunakan perisian ini. Selain itu terdapat juga fungsi-fungsi lain yang dibangunkan seperti tukar kata kunci, *Router Configuration, Router Monitoring* dan sebagainya. Fungi bagi aplikasi ini adalah berbeza-beza. Sistem ini dibangunakan untuk pentadbir rangkaian dan juru teknik untuk menyelesaikan masalah untuk mengingati baris arahan kawalselia *Cisco Router 2600 Series*. Itulah sebabnya mengapa sistem ini dibangunkan kerana ia sangat sesuai dan ramah pengguna. Pengguna cuma perlu membaca dan menjawab setiap soalan pada antaramuka sebelum pergi ke antaramuka yang seterusnya serta menamatkan kawalselia.

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TERMINOLOGY

ITEM	DESCRIPTION
CRCS	Cisco Router Configuration System
CRC System	Cisco Router Configuration System
KUTKM	National Technical University College Of Malaysia
FTMK	Faculty of Information Technology and Communication
AUT	Application Under Test
LAN	Local Area Network

LIST OF APPENDIX

CHAPTER 1

INTRODUCTION

1.1 Preamble/Overview

Router is a network component that operates at the network layer of the OSI model. Routers are primarily concerned with network addressing and allow two or more networks to interconnect with another. Routers create multiple broadcast domains[1].

Basically router uses a Command Line Interface (CLI) to configure and manage it routers. Same features of the CLI include assisting in completing command line syntax, having the ability to execute abbreviated (shortcut) commands, maintaining a history of commands, and providing error messages when a command is typed incorrectly. The commands available at he CLI will vary, depending on which mode the router is in.

To give more advantage and easier to user, CRConfig System is a standalone system manager is developed with Graphic User Interface (GUI) to configure router easier and systematic without command line. This system manager is just available for Cisco Router 2600 Series configuration. The system encircles the requirement need. This system must install at computer server connected with router.

To add more advantages to the user, Router Monitoring is a one of the function in this system. This function is use for define weather the router is connected or not. It can help the user to follow the result diagram.

To develop this project, Microsoft Visual Basic is appropriate to use because this is a standalone project. Microsoft Visual Basic is a high-level, visual-programming version of Basic. Visual Basic was developed by Microsoft for assembly Windows-based applications.

Technique communication HyperTerminal with using Microsoft Visual Basic 6.0 to create connection between Cisco Router 2600 Series and computer using console cable. With this technique, both of the hardware can communicate with each other.

CRConfig System is developing for network administrator and technician to solve the problem to show router configuration. User just read and answers the entire question on the popup interface before go through the next question and finished the configuration.

1.2 Problem statement(s)

Problem the current system for Cisco Router 2600 Series is an administrator must using Hyper Terminal command line to configure the router. Just for the simple configuration, the administrator must use the command line. It hard and with CR Config System, this system can change the administrator problem.

Approximately the administrator is using separate of system to manage the router. Administrator must open one by one program to get such information from the router. Now this CR Config System can settle this problem with combination of the function in single system were in this system it provide the function such as Router Configuration and Router Monitoring in one system.

1.3 Objective

Before develop one system, developer must know what the project objective. To explain that, the project objective is below:

i. Easy to configure router.
Develop CRConfig System using a GUI to configure and manage the router. It makes an easier to configure because admin just follow the interface needed and the same time answer the question.

ii. Easy to manage router.
When using Graphic User Interface, command line is not important to get a successful configuration again. The system can preview the information admin need after click the command button.

iii. Monitor router.
From the router monitoring, admin can monitor whether the router is function or not after the configuration.

iv. Telnet
Telnet is used to connect to the router for full configuration. It is easy for admin to check other router.

1.4 Scopes

The CR Config System is dedicate to network the administrator and technician to easy manage the router quickly. Network administrators have full permission to configure the CRConfig System but technician must get permission from network administrator initially. Network administrator can assign password for technician to access the system. This system function is easy to configuring for illustrating the router configuration, and monitoring the router. At the same time, lecturer and student can use this system in lab session.

CRConfig System develop base on a GUI. The configuration functions are for show the router information. From that admin can monitor the router by router monitoring. Router can be capture base on the router IP Address. IP Address is a 32-bit binary address used on TCP/IP network, consists of a host portion and a network portion. This IP Address is a unique IP address to router on the network. From this application user can know the status of router, down or up. For more easier to see the other router, user can use function telnet.

1.5 Contributions

CRConfig System is a new era configuration for Cisco Router 2600 Series. Development carries out using the GUI and following the user friendly concept. That means user just read and understand the configuration needed and the configuration must be done. Successful configuration can be capture with following the flow of the configuration.

These system managers develop to configure, manage and monitor the router easier using a GUI without command line. Telnet function is just an accessory for this system, it just for configuring the router manually using the command line. To make a suitable with Cisco Router 2600 Series and the project development, a complete research must be done for classifying the port used. This port is used for connect both of system and device. Subsequent to that, the suitable design can be created to balance the system and the device.

1.6 Expected output

On the last stage of the project, some function cannot run with following the documentation, but it will not sever the goal of this system. The features as hopefully this system using 100% GUI interface for configuration. With this technique user just following the instruction and just answer the question at interface.

Basically for user to enter this system; they must have a password to access this system. After that, user can choose the function at the Menu Interface. The function such as Change Password, Router Configuration, Router Monitoring, About and Exit. This is the most important function in the first interface menu. User immediately can clicks on this command button to choose the functions the user need.