Title Page

Manufacturing plant setup

Executive summary

The project aims at providing the best configuration that assists manufacturing plant to establish effective connections of computers with internet. Wireless router is the best models for offering multiple band connectivity. Linux offers to enhance security that makes hacking difficult and makes more efficient system compared to Windows. This server provides support for different programme languages. The connection is maintained in the order, local area network, dial-up network and pass-through server. TCP/ IP protocols are followed for developing computer-to-computer connections.

The potential success of the project

The possible advantages of the project involve time and cost efficiency. A well-established network will allow the company to share and hardware and software resources efficiently. Computer networks and internet connectivity has transformed the domains of modern workplace that allow users to connect with others across the globe. Installation of computer information systems is cost and time effective because it assists the organization in all operations of manufacturing plant. An important benefit includes the potential for handling more IT projects in future (Marsh, 2017).

Type of individual computers

The types of computers installed include desktop and servers. There are complete systems that constitute of the hard drive, RAM, processors and operating systems. CPU is installed that carries all information of the computer program. Random Access Memory (RAM) will be used for storing large data that could be written and read. CPU will use the RAM for saving organizational data for temporary storage. This will allow the plant to reduce the slowdown process. This improves speed and responsiveness of the data.

Other hardware installed by the company includes a network server, wireless routers, and printers. Wireless router is the best models for offering multiple band connectivity. The common features of these routers include VAN, remote access, security support, WAN redundancy, connectivity options, speed variations and QoS features. Quality printers are also installed that provide the immediate option of printing material. This saves time and money as it offers multiple functions of photocopying, scanning and faxing.

Server information

Linux is free, and everyone can access it through following simple steps. Taking the code to allow users to have access that is the simplest method. The openness of Linux makes it more acceptable among employees. The simple method that allows the user to download code and then use it accordingly. The wide options that Linux offers make the advantages more visible for the users. Linux offers to enhance security that makes hacking difficult and makes more efficient system compared to Windows. This server provides support for different programme languages. It also allows a range of applications that add more to convince the users. Customization and software update are other additional advantages of Linux. It is adaptable to different systems that means the user is not limited (Marsh, 2017). The security and privacy feature that prevents the issues of theft and operational flaws. A feature of customization is more attractive for the users as they can set their themes. In Linux, the distortion is also according to requirements (Choi, Jung, & Noh, 2015).

Connecting server to the network

The server offers various commands for checking the network connections. Appropriate steps are taken for connecting the server to the network. The server searches the path that contains a network port and passes through servers. WAN port connection is established with the destination server. Normal priority of connections document is checked in the Dominio directory. The connection is maintained in the order, local area network, dial-up network and pass-through server. Information in memory about servers is checked for connecting server checks. Sever reads the information received by the server documents passed from local Dominio directory. Connecting server can connect to the destination server directly on LAN by using the common address. The next step involves checking the low-priority connection document by connecting server checks. This is a low selected document in the usage priority field

Connecting network with internet

Establishing connections between network and internet allow computers to connect with each other. Transmission Control Protocol and Internet Protocol (TCP/IP) is used for the transmission of data. Step-by-step guideline rules are followed for implementing TCP/IP. Transmission and reception of data is possible through this established connectivity. Network Interface Card (NIC) is installed for linking internet and computers on the network. The network is plugged into NIC on one end while the DSL modem, cable modem or the router is inserted on the other end. This link allows the computer to access the internet and other systems. Internet Service Providers (ISP) follow the rules for giving internet services and connectivity to the users. It builds a connection of computers with other systems that are all linked through the internet. TCP/ IP protocols are followed again for developing computer-to-computer connections. An IP address is assigned to the computer that makes it easily accessible on the internet.

Project timeline

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| Activities | Sub-tasks | Duration |
| Computer room core switches | Providing access to layer switches, access layer installation. | 2 months |
| Designing cable layout | Building a physical communication path.  Minimizing equipment interference. | 3 months |
| Details of designs | LAN port speeds, node types & identification of hardware. Identifying server and application hosted. | 30 days |
| Network performance | LAN/WAN performance. | 25 days |
| Physical/ logical network diagrams | Network equipment cabinets, LAN bandwidth, IP address designs. Virtual LAN information | 30 days |
| Connecting server to networks | WAN port connection is established, Dominio directory, local area network, dial-up network and pass-through server. | 30 days |
| Connecting network with internet | Implementing TCP/IP, ISP, computer-to-computer connections. | 15 days |
| Test computers/ printers | Assessing performance after installation of network devices and routers. Ensuring appropriate functioning. | 25 days |

References

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