Project Report:

Assembly and Lan Connection Setup of 50 Desktop Computers

Introduction

The purpose of this project was and set up 50 desktop computers, including the installation of the operating system (OS) and the establishment of a local area network (LAN) connection for all 50 machines. This report provides a detailed overview of project, including the equipment used, the assembly process, the installation, and the LAN setup.

Equipment Used

The following equipment was used:

* 50 desktop computer cases
* 50 motherboards
* 50 CPUs
* 50 sets of RAM
* 50 hard drives
* 50 power supplies
* 50 monitors
* 50 keyboards and mice
* Network switches and routers
* Ethernet cables

Assembly Process

The assembly process for each desktop computer involved the following steps:

1. **Case Preparation**: Open the computer case and ensure all necessary screws and standoffs are in place.
2. **Motherboard Installation**: Install the motherboard into the case, aligning it with the mounting holes and securing it with screws.
3. **CPU Installation**: Install the CPU onto the motherboard, making sure to align correctly and secure it in place.
4. **RAM Installation**: Insert the RAM modules into the appropriate slots on the motherboard, ensuring they are fully seated.
5. **Hard Drive Installation**: Mount the hard drive into the designated drive bay and connect the necessary cables.
6. **Power Supply**: Install the power supply unit the case and connect to the motherboard and other components.
7. **Peripheral Installation**: Connect the monitor, keyboard, and mouse to the appropriate ports on motherboard or other devices.
8. **Cable Management**: Organize and secure the cables inside the case to ensure proper airflow and a clean appearance9. **Testing**: Power on the computer and ensure all components are functioning properly.

Operating System Installation

Once the desktop computers were assembled, the next step was to install the operating system on each machine. The following steps were followed for the OS installation:

1. **Boot Device Selection**: Insert the OS installation media (., DVD or) and configure the to from the selected device2. **OS Installation**: Follow the on-screen instructions to install the desired operating system on each computer, making sure options any necessary information3. **Driver Installation**: Install the necessary drivers for the hardware components, such as the motherboard, graphics card, network adapter, to ensure proper functionality.
2. Updates\*\*: Update the operating system and installed software to the latest versions to enhance security and performance.

LAN Connection Setup

To establish a LAN connection among all 50 desktop computers, the following steps taken:

. **Network Infrastructure Setup**: Install and configure the network switches and routers to create a local network, ensuring proper connectivity and IP address assignment.

2. **Cable Connection**: Connect each desktop computer to the network switch/router using Ethernet cables, ensuring proper cable management.

3. **Network Configuration**: the LAN settings on each computer, including IP address, subnet mask, and default gateway, to enable communication within the network.

4. **Network Testing**: Test the network connectivity between all the computers to ensure proper communication and access to shared resources.

Conclusion

In conclusion, this project successfully involved the assembly and setup of 50 desktop computers, including the installation of the operating and establishment of a LAN connection. The project required careful attention to detail during the and thorough configuration of the network infrastructure. With the completion of this project, the 50 desktop computers are now for use in various applications and can efficiently communicate with each other through the connection.