Date: 15/06/2024 and 18/06/2024

➤ Debian Server Setup and Configuration

Objective: To provide a step-by-step guide on setting up and configuring a Debian server, including explanations of each step and its relevance to network and server management.
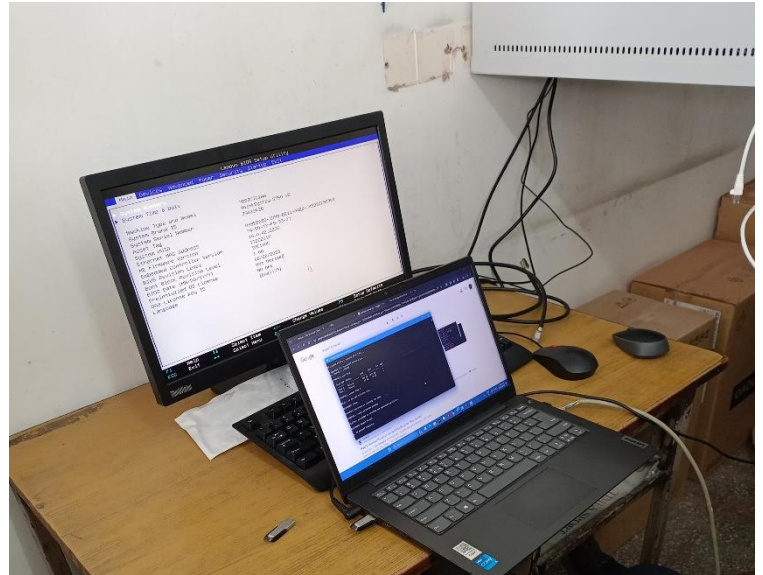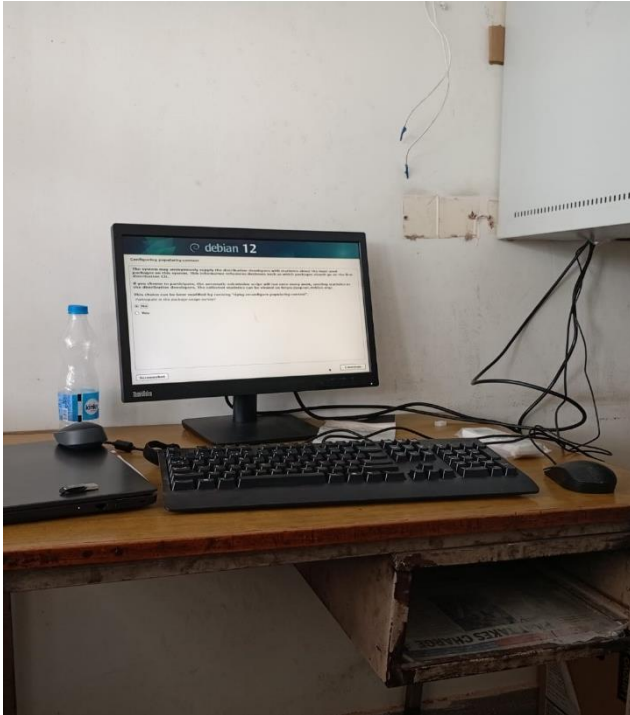

Fig 1: Debain Server Setup Installing

1. Downloading Debian ISO

Step-by-Step Procedure:

1. **Visit the Debian Website:**
    *   Go to Debian's official website.
2. **Download the ISO:**
    *   Navigate to the download section and choose the appropriate ISO image (usually the latest stable release). For server purposes, the "netinst" (network installation) image is recommended.

2. Preparing Installation Media

Step-by-Step Procedure:

1. **Create a Bootable USB:**
    *   Use software like Rufus (Windows) or Etcher (Linux/Mac) to create a bootable USB drive from the downloaded ISO image.

2. **Insert USB Drive:**
   - Insert the bootable USB drive into the server machine.

3. Installing Debian

Step-by-Step Procedure:

1. **Boot from USB:**
   - Restart the server and boot from the USB drive (usually by pressing F12, ESC, or another key during startup to access the boot menu).
2. **Select Install Option:**
   - Choose the "Install" option from the Debian boot menu.
3. **Choose Language and Location:**
   - Select the preferred language, location, and keyboard layout.
4. **Configure Network:**
   - Choose whether to configure the network automatically via DHCP or manually.
5. **Set Hostname and Domain:**
   - Enter a hostname (e.g., "debian-server") and a domain name if applicable.
6. **Set Root Password:**
   - Create a strong root password.
7. **Create User Account:**
   - Create a non-root user with administrative privileges.
8. **Partition Disks:**
   - Choose guided partitioning for simplicity or manual partitioning if custom disk layout is required.
9. **Install Base System:**
   - Proceed with the installation of the base system.
10. **Configure Package Manager:**
    - Configure the package manager with a network mirror to download and install additional packages.
11. **Install GRUB Bootloader:**
    - Install GRUB to the primary disk to manage boot processes.
12. **Finish Installation:**
    - Complete the installation and reboot the server.

Why Use Debian for Server Setup?

1. **Stability and Reliability:**
   - Debian is known for its stability, making it a reliable choice for servers that require consistent performance.
2. **Security:**
   - Debian provides timely security updates and has a robust security framework, essential for protecting sensitive data and services.
3. **Community Support:**
   - Debian has a large and active community, offering extensive documentation, forums, and support resources.
4. **Package Management:**
   - The APT package management system simplifies the installation and management of software packages.
5. **Flexibility:**
   - Debian's minimalistic approach allows administrators to install only the necessary components, optimizing system performance and security.