### **Lab 13 – How to SSH into a Server from a Windows Machine Using PuTTY**

In **Lab 13**, Ilearned how to use **PuTTY**, a widely-used terminal emulator, to establish an SSH (Secure Shell) connection from a Windows machine to a server.

### **1. Purpose of SSH and PuTTY**

* **SSH (Secure Shell):** A protocol for securely connecting to remote systems over the internet.
* **PuTTY:** A free, open-source terminal emulator that supports SSH and other protocols like Telnet. It is commonly used on Windows.

### **2. Tools and Requirements**

* **Windows Machine:** Acts as the client.
* **PuTTY:** Terminal emulator downloaded from [putty.org](https://www.putty.org/).
* **SSH-Enabled Server:** An Ubuntu server or other compatible OS running an SSH service (port 22 by default).

### **3. Lab Walkthrough**

#### **Task 1: Setting Up PuTTY**

* **Download and Install PuTTY:** Obtain the software from [putty.org](https://www.putty.org/) and complete the installation.
* **Launch PuTTY:** Upon opening, you’ll see the main interface with options to connect to a server.

#### **Task 2: Configuring the Connection**

* **Input Server Details:**
  + Enter the **IP address** or **hostname** of the server in the "Host Name" field.
  + Ensure the **protocol is set to SSH** (default port 22).
* **Save Sessions:** To avoid re-entering details in the future:
  + Enter a **name for the session** under "Saved Sessions."
  + Click **Save** to store the configuration.

#### **Task 3: Connecting to the Server**

* **Connection Warning:**
  + A warning will appear indicating that the server’s key is not cached in the registry (as this is the first connection).
  + Click **Yes** to proceed if you trust the server.
* **Authentication:**
  + Enter the **username** and **password** for the server when prompted.
  + Once authenticated, you’ll gain access to the server's terminal interface and file system.

### **4. Key Takeaways**

* **PuTTY** is a simple yet powerful tool for Windows users to establish SSH connections.
* **SSH** ensures secure communication over the internet, protecting data in transit.
* Saved sessions in PuTTY streamline future connections by remembering server details.
* Always connect only to trusted servers and verify their authenticity.

By completing this lab, you've acquired a fundamental skill for managing and interacting with remote servers securely from a Windows environment.