**Write a Script to Install DHCP Server on Remote Machines:**

Python Script Using Paramiko for SSH Automation:

import paramiko

# Define your remote machine's details

remote\_machines = [

{"hostname": "192.168.1.10", "username": "user", "password": "password"},

{"hostname": "192.168.1.11", "username": "user", "password": "password"}

]

# Command to install DHCP server (adjust this depending on the Linux distro)

install\_command = 'sudo apt update && sudo apt install isc-dhcp-server -y'

# Command to configure the DHCP server

configure\_command = '''

sudo bash -c 'echo "

subnet 192.168.1.0 netmask 255.255.255.0 {

range 192.168.1.100 192.168.1.200;

option routers 192.168.1.1;

option domain-name-servers 8.8.8.8, 8.8.4.4;

option domain-name \\"yourdomain.local\\";

}

" > /etc/dhcp/dhcpd.conf'

'''

# Command to restart the DHCP server

restart\_command = 'sudo systemctl restart isc-dhcp-server && sudo systemctl enable isc-dhcp-server'

# Function to execute commands on the remote machine

def install\_dhcp\_on\_remote\_machine(remote\_machine):

hostname = remote\_machine['hostname']

username = remote\_machine['username']

password = remote\_machine['password']

print(f"Connecting to {hostname}...")

try:

# Create an SSH client

ssh = paramiko.SSHClient()

ssh.set\_missing\_host\_key\_policy(paramiko.AutoAddPolicy())

ssh.connect(hostname, username=username, password=password)

# Install DHCP server

stdin, stdout, stderr = ssh.exec\_command(install\_command)

stdout.channel.recv\_exit\_status() # Wait for command to finish

# Configure DHCP server

stdin, stdout, stderr = ssh.exec\_command(configure\_command)

stdout.channel.recv\_exit\_status()

# Restart and enable DHCP server

stdin, stdout, stderr = ssh.exec\_command(restart\_command)

stdout.channel.recv\_exit\_status()

print(f"DHCP server installed and configured on {hostname}")

except Exception as e:

print(f"Error on {hostname}: {e}")

finally:

ssh.close()

# Loop through all remote machines and install DHCP server

for machine in remote\_machines:

install\_dhcp\_on\_remote\_machine(machine)

* **Execute the Script:**

pip install paramiko

Then run the Python script:

python3 dhcp\_install\_remote.py

This script will connect to each machine in the remote\_machines list, install the DHCP server, configure it, and restart the service.

**5. Verify Installation:**

After running the script, you can check if the DHCP server is working properly by using the following command on the remote machines:

sudo systemctl status isc-dhcp-server

This should confirm that the DHCP server is running and enabled on boot.