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.