USER GUIDE: HOW TO USE AND OPERATE THE NETWORK DEVICES

Adding Devices to the Network

A. Using Static IP Address

1. Select the device (e.g. PC or Printer) in Packet Tracer.
2. Go to the Desktop tab → IP Configuration.
3. Select Static.
4. Enter the following:
   - IP Address: Example 192.168.25.149
   - Subnet Mask: Automatically fills as 255.255.255.0
   - Default Gateway: 192.168.25.254 (Router IP)
   - DNS Server: 192.168.25.1
5. Close the window — your device now has a fixed IP address.

B. Using Dynamic IP (DHCP)

1. Go to the device Desktop tab → IP Configuration.
2. Select DHCP.
3. The device will automatically request an IP address from the DHCP-enabled wireless router.
4. The assigned IP and gateway will appear automatically.

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Connecting a Device to the Network

A. Wired Connection (Using a Cable)
1. Use a Copper Straight-Through cable.
2. Connect one end to the PC/Laptop Ethernet port and the other to the Switch or Router.
3. The link light should turn green, showing a successful connection.

B. Wireless Connection
1. Make sure the Wireless Router is powered on.
2. Select a Laptop, Smartphone, or Wireless Printer.
3. Go to the Desktop tab → PC Wireless / Config → Connect.
4. Choose the SSID: **SmartOffice**
5. Enter the passphrase: **Office123**
6. Click Connect — the device will now join the wireless network.

Setting Up Wireless SSID and Passphrase

1. Click the Wireless Router.
2. Go to the GUI tab → Wireless Settings.
3. Set:
   - SSID: **SmartOffice**
   - Security Mode: WPA2-PSK
   - Passphrase: **Office123**

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Adding and Configuring IoT Devices

1. Go to End Devices → Home or IoT category.
2. Drag an IoT device (e.g. Smart Lamp, Motion Detector, or Fan) into the workspace.
3. Connect it:

- **Wired IoT Device:** Use a Copper Straight-Through cable to connect to the switch or router.
- **Wireless IoT Device:** Go to the device's Config → Wireless Settings, and join:
  - SSID: **SmartOffice**
  - Passphrase: **Office123**

4. Assign an **IP address** (either via DHCP or static).
5. Go to the IoT Server → Services tab → IoT and ensure Registration Server service is **ON**.
6. Add the IoT device to the server by:

- Opening the IoT device's Config → IoT Server Settings.
- Enter:
  - IoT Server Address: **192.168.25.1**
  - User Name: **Homeoffice**
  - Password: **Homeoffice**
- Click Connect.

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Operating IoT Devices via IoT Management App

1. Open the IoT Server → Desktop → IoT Monitor App.
2. Log in:
   - IoT Server Address: **192.168.25.1**
   - User Name: **Homeoffice**
   - Password: **Homeoffice**
3. You'll see a list of registered IoT devices.
4. To operate a device:
   - Select the device; e.g: Light.
   - Can click any of the buttons available: Off/Dim/On
5. You can also control IoT devices from a smartphone or tablet by accessing the IoT Monitor App on those devices and connecting to the same IoT Server IP.