Implementation of Smart home using Cisco packet tracer and verify the configuration

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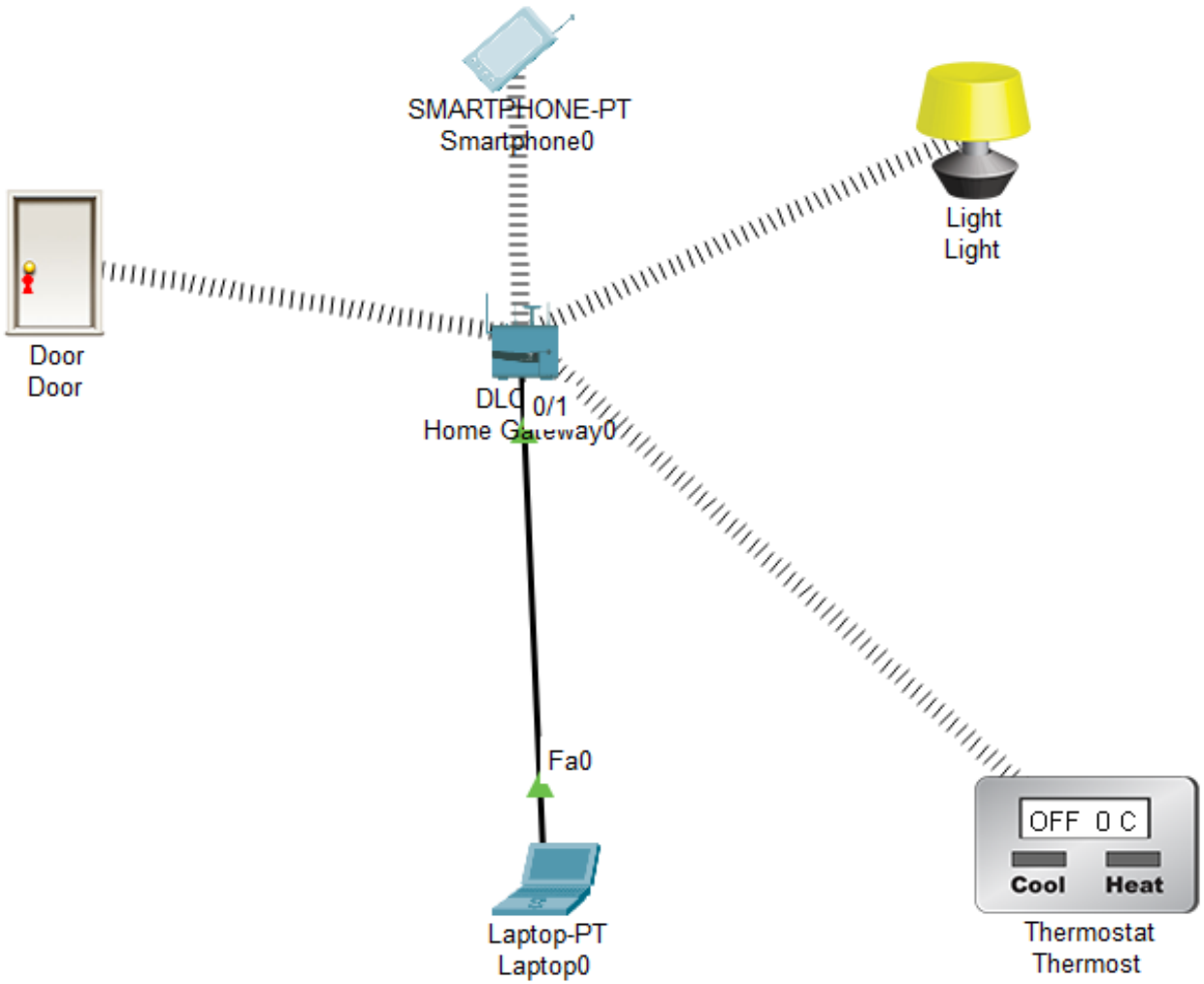

SMARTPHONE-PT
Smartphone0
Light
Light
Door
Door
0/1
Fa0
OFF 0 C
Cool
Heat
Laptop-PT
Laptop0
Thermostat
Thermost

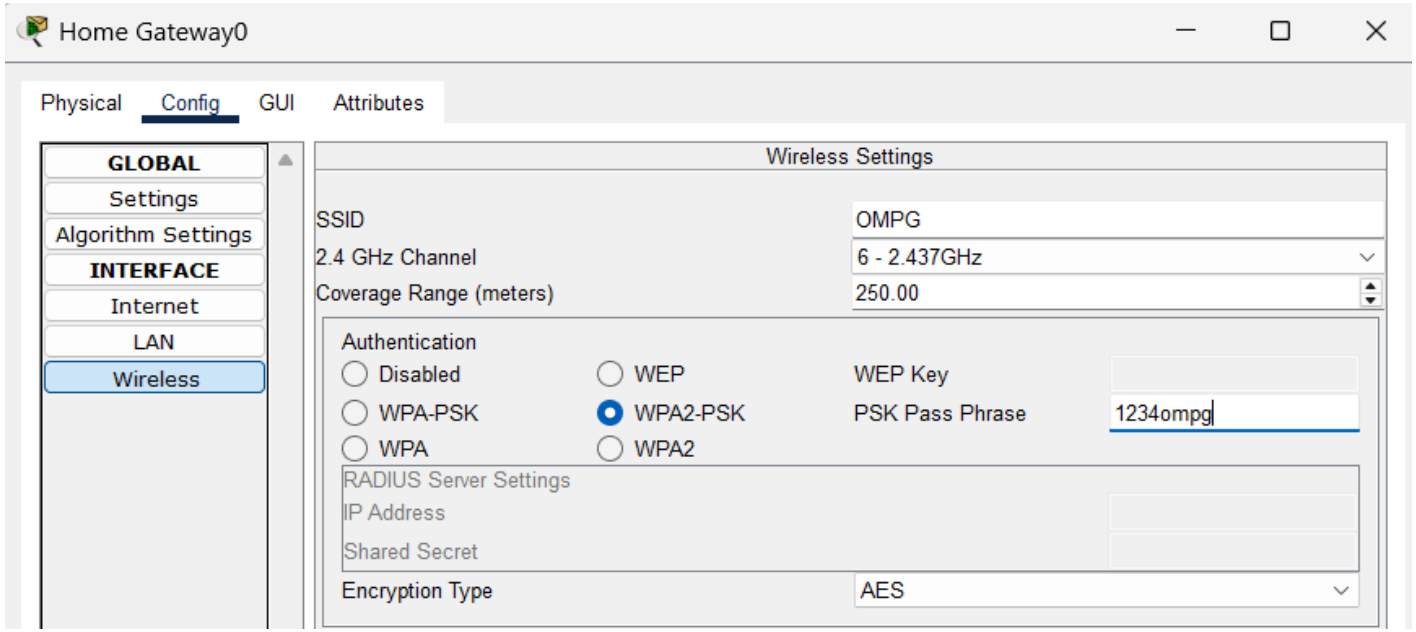
Set Up the Network Infrastructure

- **Add a Home Gateway**
  - Go to "Network Devices" $\Longrightarrow$ "Wireless Devices" $\Longrightarrow$ "Home Gateway" (DLC100)
  - Place it on the workspace.
- **Add a Laptop**
  - Go to the "End Devices" section and select a laptop.
  - Place it on the workspace.
  - In "IP Configuration" Select "DHCP"
- **Connect the Laptop to the Home Gateway**:
  - Select the "Connections" tab and choose a straight-through cable.
  - Connect the laptop to one of the Ethernet ports on the Home Gateway

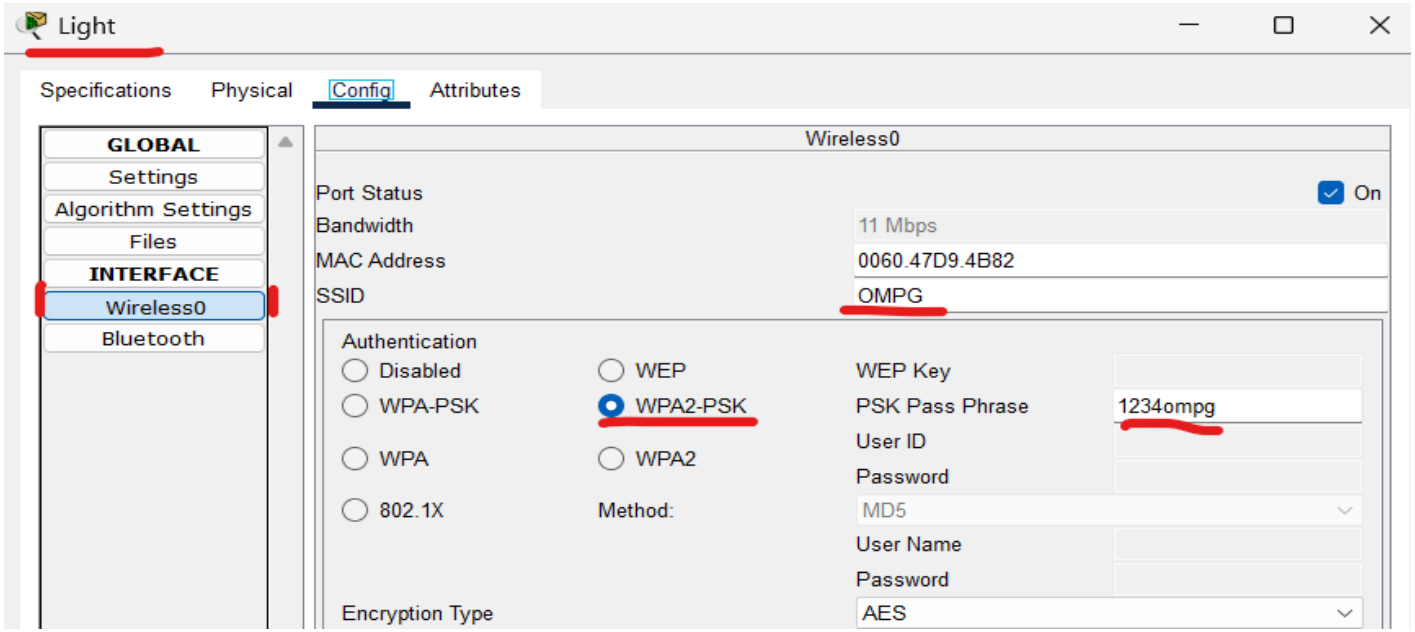
Add IOT Devices and Configure the Home Gateway

- **Add Smart Devices**:
  - Go to the "Home" section under "End Devices."
  - Add various smart devices like a smart light, smart thermostat, smart door lock to the workspace.
- **Add Smartphone**
  - Select Smartphone under "End Devices."
- **Configure Home Gateway**:
  - Click on the Home Gateway.
  - Go to the "Config" tab $\Longrightarrow$ "Wireless" setting.
  - Set up the SSID (e.g., "YourName") and configure security settings (e.g., WPA2-PSK, "YourPassword").

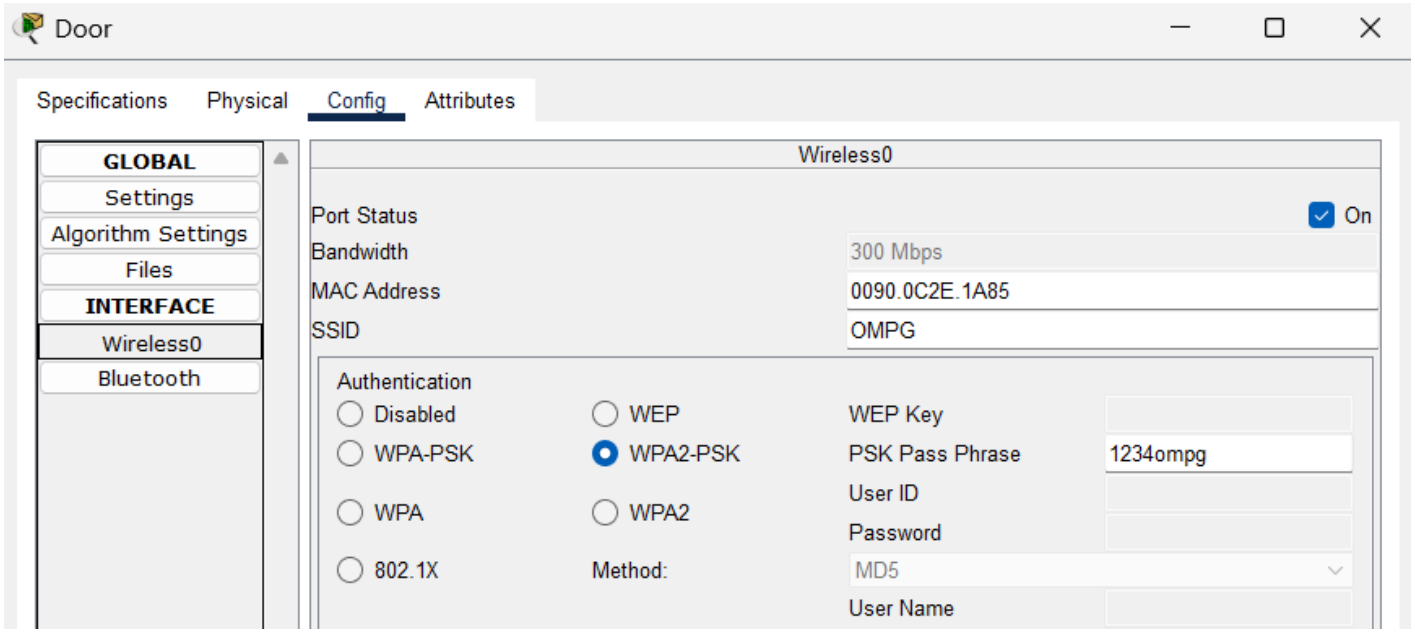
Configuring the Gateway



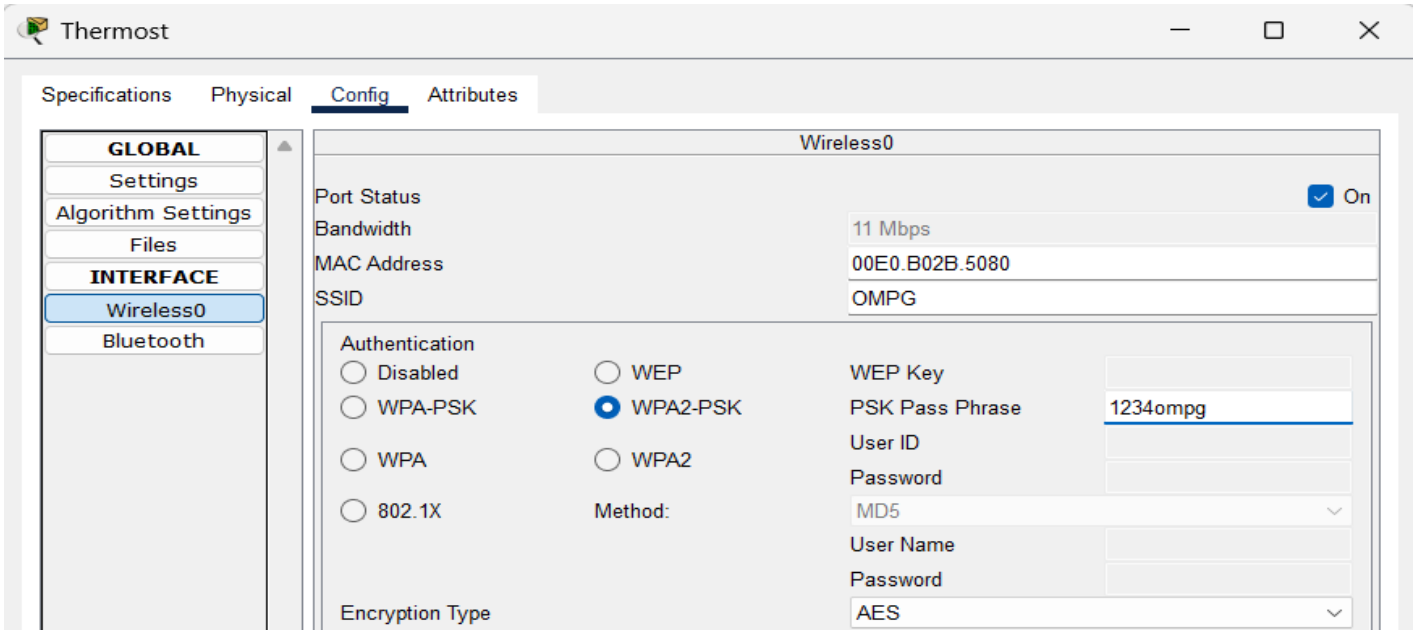
Enter SSID and Password to configure Light



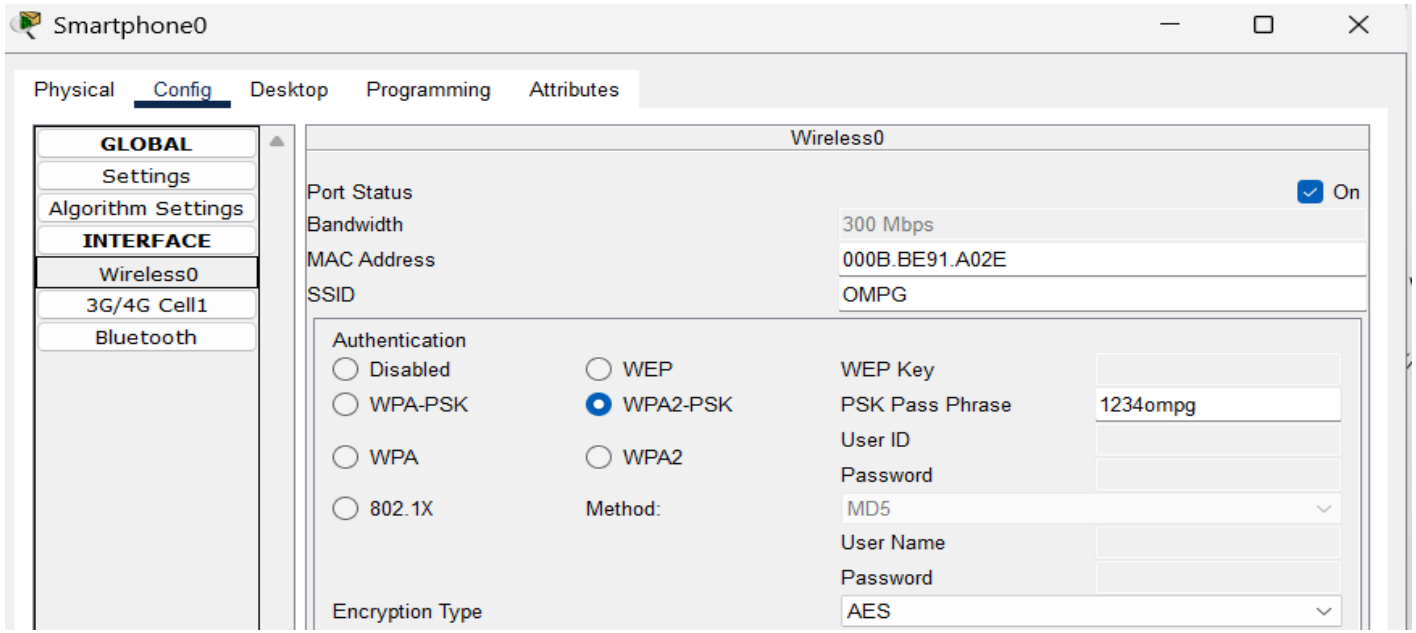
Enter SSID and Password to configure Door



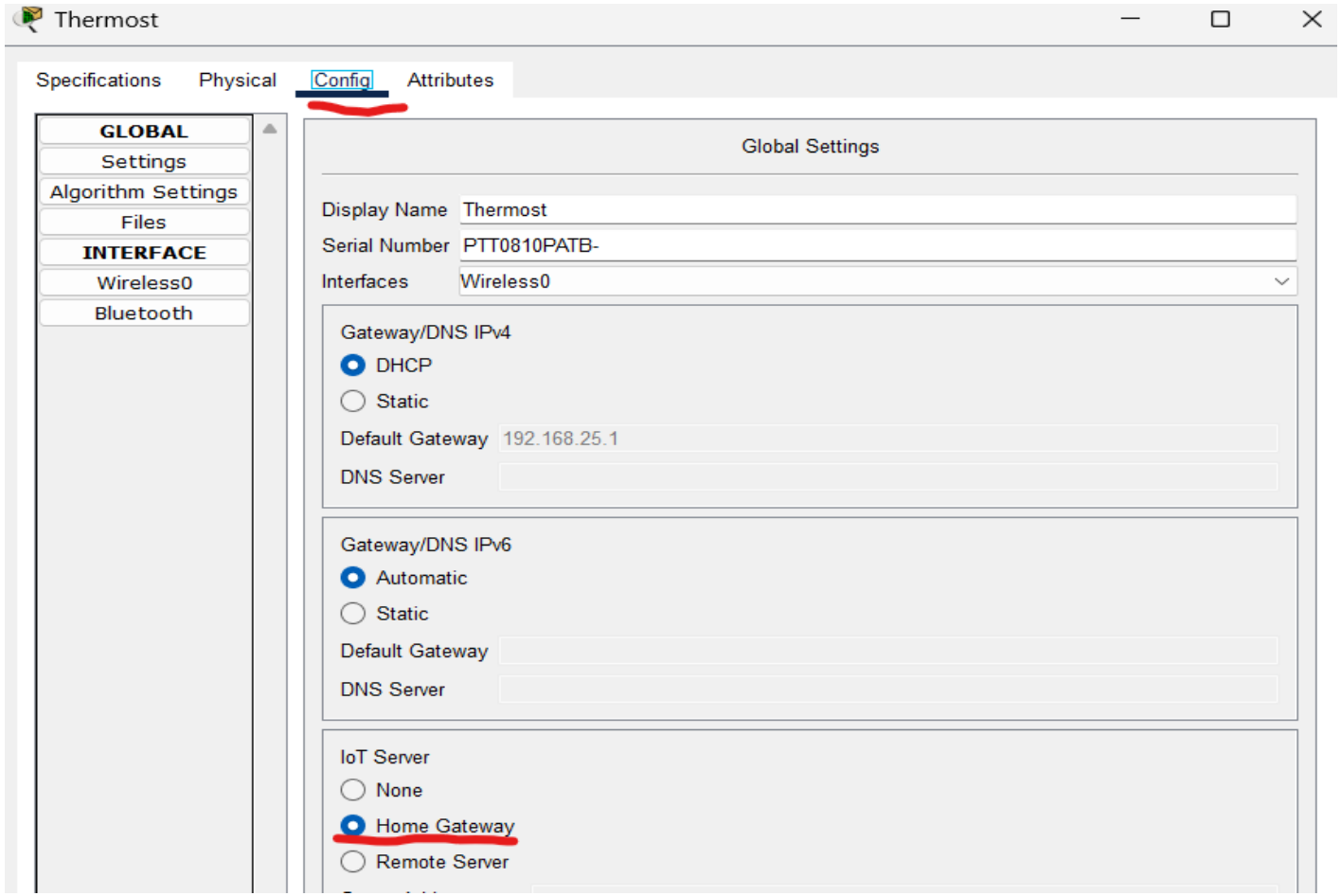
Enter SSID and Password to configure Thermostat



Enter SSID and Password to configure Smartphone



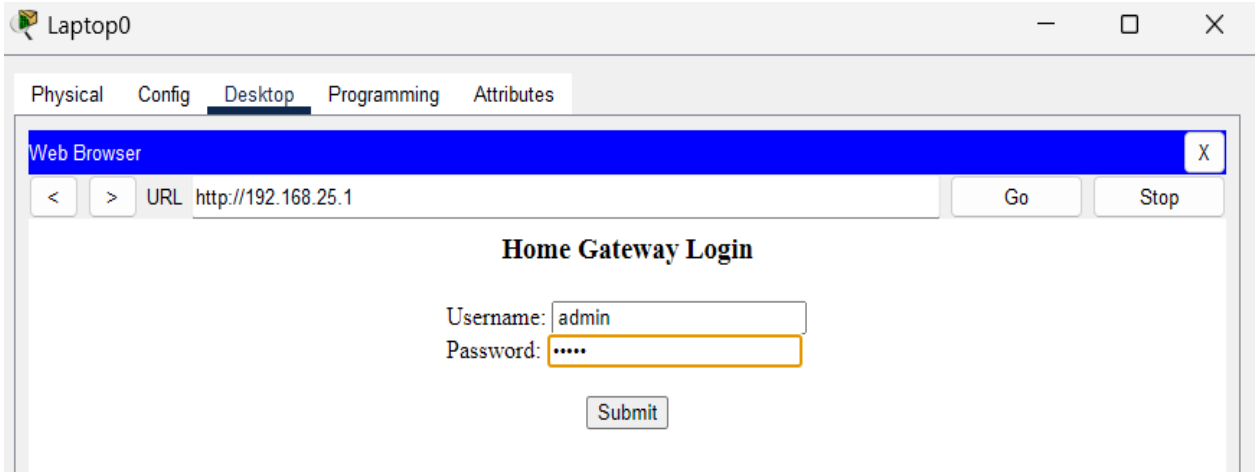
Selecting IoT Server as Home Gateway



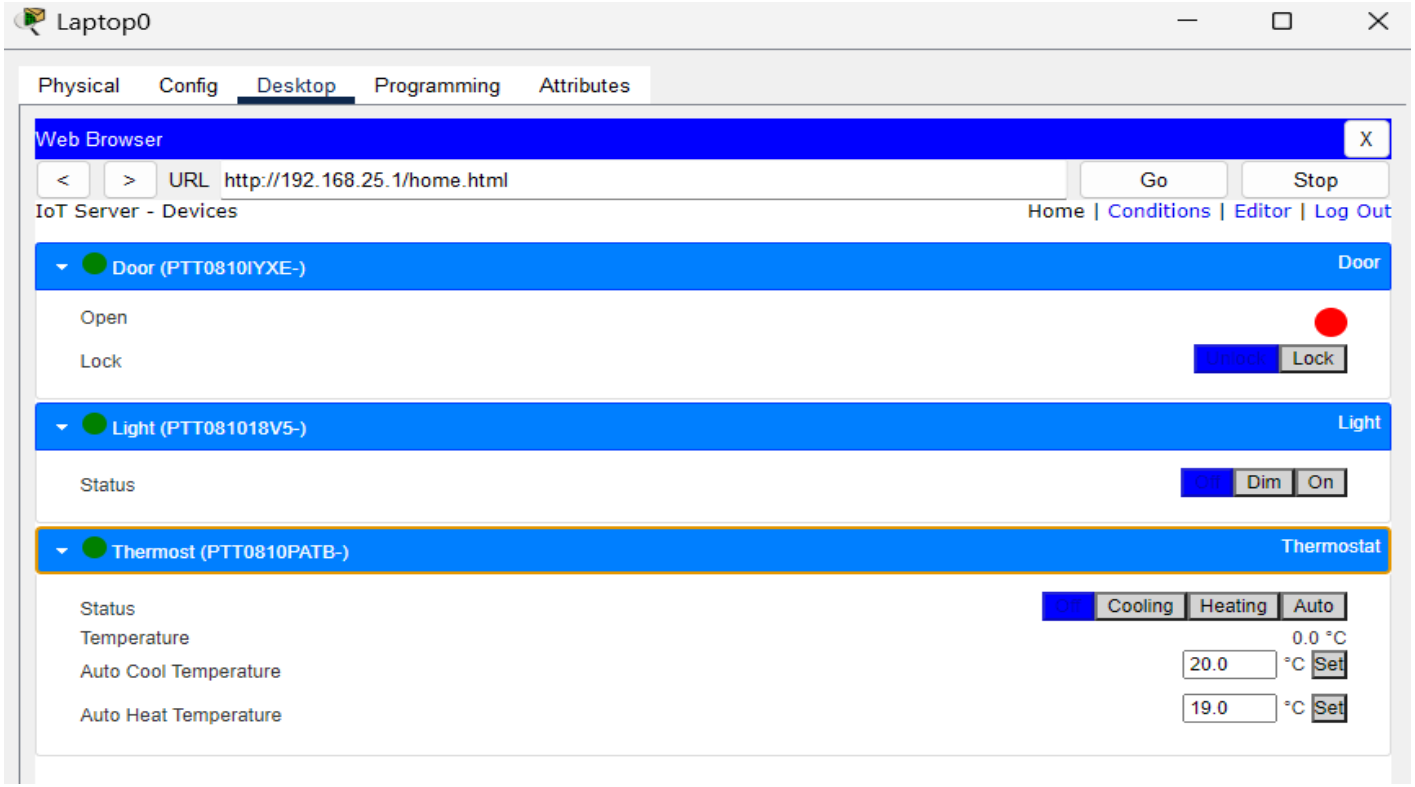
Repeat this step for every smart device (Door, Thermostat, Light)

Control Devices

- **Use the Laptop to Control IoT Devices**:
  - Open the web browser on the laptop.
    - Enter the IP address of the Home Gateway (192.168.25.1) to access the control interface.
    - username: admin password:admin
    - Use the control interface to turn on/off devices, adjust settings

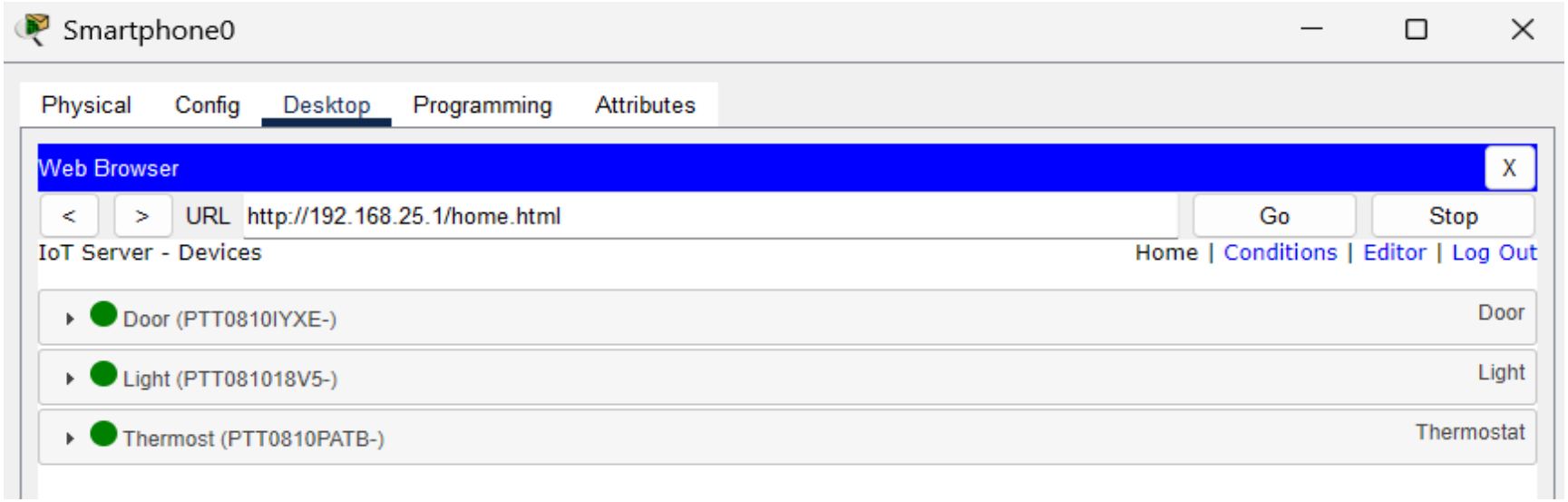


Control Interface on Laptop Browser(1)

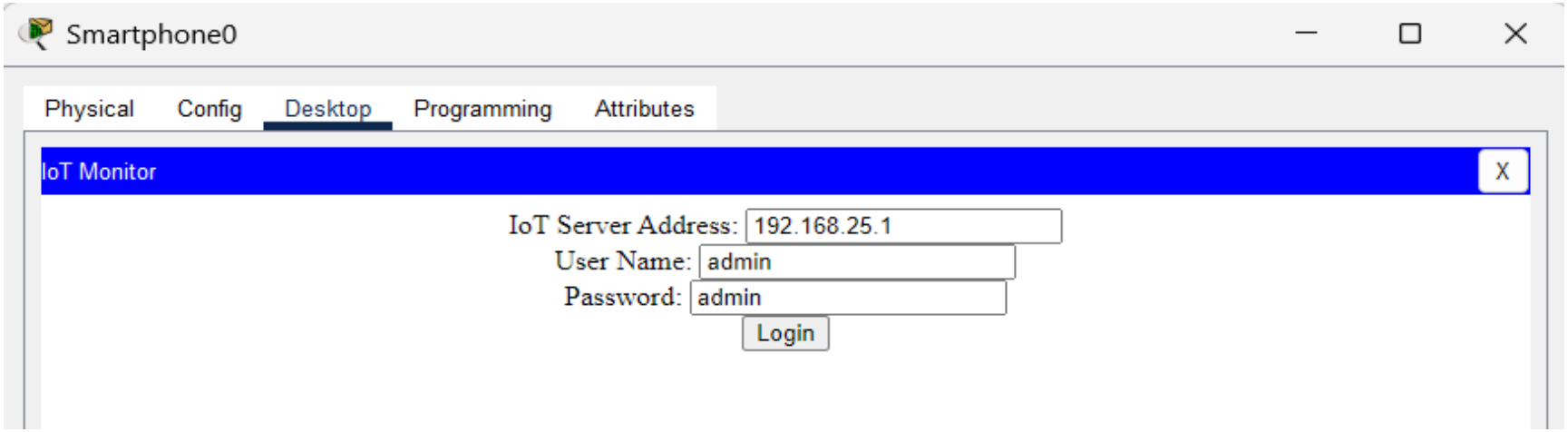


Note: If the devices are not visible on the browser, SwitchOFF and SwitchON the devices

Control Interface on Smartphone Browser(2)



Control Interface on IOT Monitor(3)



Conclusion

This setup allows you to simulate a smart home environment in Cisco Packet Tracer. By adding and configuring various IoT devices, you can create a realistic smart home network where devices are interconnected and controllable via a central hub.