

Smart Home Simulator — Build Guide 08

Configure Smart Thermostat and Smart Devices

TYPE	PHASE	CONTROL	USE
Tabletop Simulator Panel	Smart Device Configuration	Apps + Alexa + Echo Show 5	IoT / Smart Home Training

BEFORE: Complete Guide 07 first. The HVAC project box, colored LEDs, 24V AC power supply, smart thermostat wiring, router Wi-Fi, Alexa account, and third-party app accounts should be ready before this configuration phase.

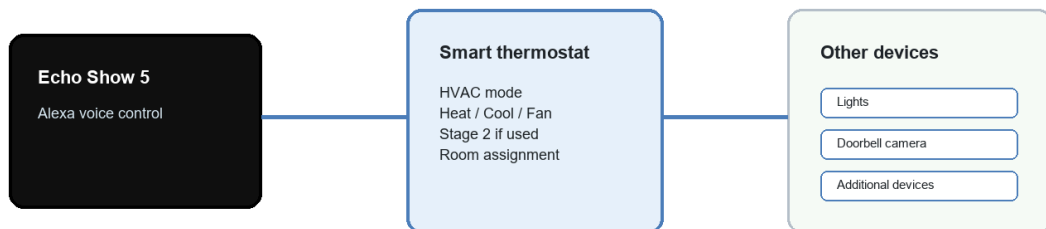
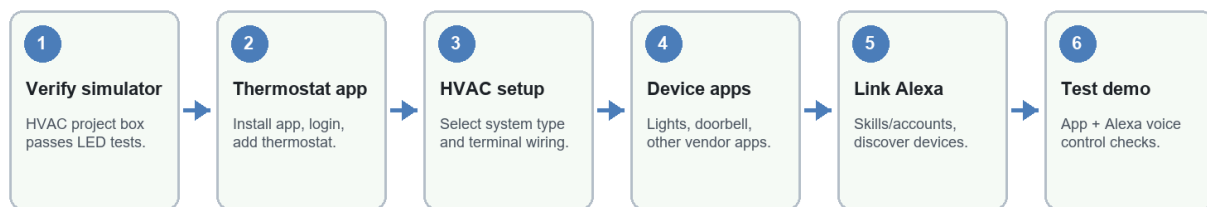
GOAL OF THIS PHASE

Configure the smart thermostat and smart-home devices so they work in their vendor apps, appear in Alexa, respond through the Echo Show 5, and trigger the correct physical simulator response.

- Configure the smart thermostat in its own app before linking it to Alexa.
- Confirm HVAC terminals and system type match the project box: R, C, W, Y, G, and B/Stage 2 if used.
- Configure lights, doorbell camera, and additional devices in their own third-party apps first.
- Link each vendor app/account to Alexa, discover devices, rename them clearly, and test app plus voice control.

CONFIGURATION FLOW

Configure smart thermostat and smart devices



Configure each device in its own app first, then link/sync it to Alexa and test from the Echo Show 5.

Fig 1 — Configure each device in its own app first, then link/sync to Alexa and test from the Echo Show 5.

CONFIGURE THE SMART THERMOSTAT

- 1** **Install the thermostat app**
Use the app required by the thermostat brand. Sign in with the simulator account and record the account/password storage location.
- 2** **Add thermostat to app**
Follow the app pairing steps. Connect the thermostat to the IoT Devices SSID unless the instructor assigns it to Smart Home Admin.
- 3** **Select HVAC system type**
Choose the simulator system type that matches the project box. Use heat/cool/fan and Stage 2/B only if wired and supported by the thermostat.
- 4** **Confirm terminal detection**
Verify the app or thermostat screen sees R, C, W, Y, G, and B/Stage 2 as expected. Correct wiring before continuing.
- 5** **Name and assign room**
Use a clear name such as Demo Thermostat and assign it to the simulator room/group.
- 6** **Run heat/cool/fan tests**
Call for heat, cool, fan, and Stage 2 if used. Confirm the matching LED lights on the HVAC project box.

CONFIGURE OTHER SMART DEVICES

- 1** **Confirm device app**
Identify the required app for each light, thermostat accessory, doorbell camera, or other device.
- 2** **Install bracket or mount first**
Install any mounting bracket, base, plate, or camera mount before pairing the device in the app.
- 3** **Add device in vendor app**
Create/login to the vendor account, connect the device to the IoT Devices SSID, and update firmware if prompted.

- 4** Rename in vendor app
Use clear simulator names: Demo Light 1, Demo Light 2, Demo Doorbell, Demo Thermostat, etc.

- 5** Confirm app control
Before linking to Alexa, verify the vendor app can control or view the device reliably.

LINK DEVICES TO ALEXA

- 1** Open Alexa app
Use the simulator Alexa account from Guide 06.

- 2** Enable skill or link account
For each third-party app, enable the matching Alexa skill or account link if required.

- 3** Discover devices
Run device discovery in Alexa. Confirm the thermostat, lights, doorbell camera, and any additional devices appear.

- 4** Rename and group
Use consistent names and assign devices to the simulator room/group so Echo Show commands are predictable.

- 5** Test on Echo Show 5
Use voice and display controls to test each device. Fix app linking or names before creating routines.

DEVICE CONFIGURATION WORKSHEET

DEVICE	APP	ACCOUNT	WIFI	ALEXA NAME	TEST RESULT
Smart thermostat			IoT Devices / Admin	Demo Thermostat	
Light 1			IoT Devices	Demo Light 1	
Light 2			IoT Devices	Demo Light 2	
Doorbell camera			IoT Devices	Demo Doorbell	
Additional device					

FINAL TEST PATH

Final smart-home simulator test path

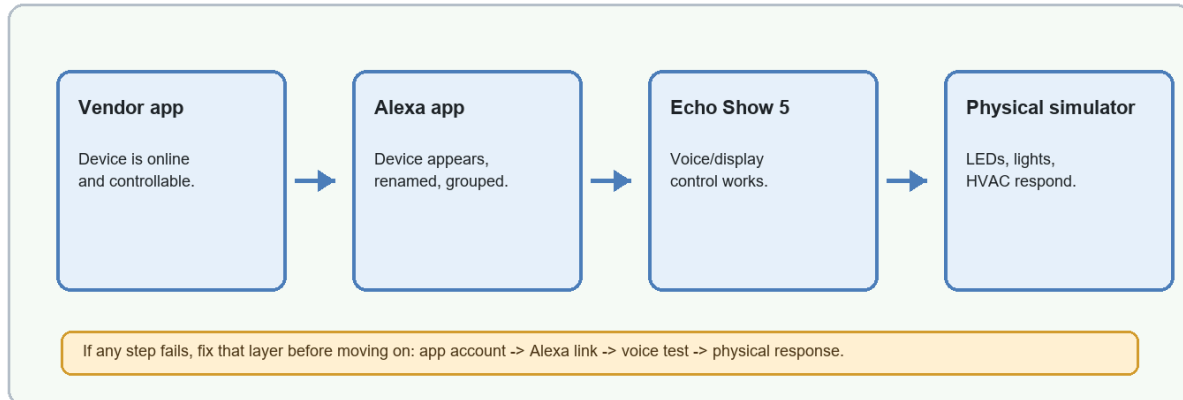


Fig 2 — Test every device through its vendor app, Alexa app, Echo Show 5, and physical simulator response.

FINAL CONFIGURATION CHECKLIST

CHECK	PASS CRITERIA	STATUS
Thermostat app	Thermostat is online and configured with correct HVAC terminals/system type.	<input type="checkbox"/> Pass
HVAC response	Heat, cool, fan, and Stage 2 if used light the correct LEDs.	<input type="checkbox"/> Pass
Lights	Lights respond in vendor app and Alexa.	<input type="checkbox"/> Pass
Doorbell camera	Camera appears in vendor app and Alexa/Echo Show if supported.	<input type="checkbox"/> Pass
Alexa discovery	All intended devices appear with clear names.	<input type="checkbox"/> Pass
Echo Show voice test	Echo Show controls thermostat/lights and displays camera where supported.	<input type="checkbox"/> Pass
Documentation	Accounts, app names, Wi-Fi, device names, and test results are recorded.	<input type="checkbox"/> Pass

NEXT PHASE — BUILD ROUTINES AND DEMO SCENARIOS

READY FOR AUTOMATION Alexa routines Scenes Voice commands Demo scripts Student scenarios	DO NOT SKIP Thermostat tested LED calls verified Apps linked to Alexa Device names clean Worksheet complete
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