

## Thermostat running locally and saving data to blob storage

The dashboard displays the following information:

- Live Telemetry:**
  - Device: thermo-001
  - Current Temperature: 20.8 °C
  - Target Temperature: 21 °C
  - Humidity: 41.14%
  - Pressure: 1016.36 hPa
  - Heating: ON
  - Cooling:
- Temperature Graph:** A line graph showing temperature fluctuations over time, with a current reading of approximately 20.8 °C.

The code editor shows the `simulator.py` script:

```
31 def simulate(device_id):  
32     # simple heating/cooling logic  
33     heating = True  
34     cooling = False  
35  
36     if current_temp[device_id] < target_temp[device_id] - 0.5:  
37         heating = True  
38         current_temp[device_id] += 0.4  
39     elif current_temp[device_id] > target_temp[device_id] + 0.5:  
40         cooling = True  
41         current_temp[device_id] -= 0.4  
42  
43     # small variation  
44     humidity[device_id] += random.uniform(-0.4, 0.4)  
45     pressure[device_id] += random.uniform(-1, 1)  
46  
47     telemetry = {  
48         "temperature": round(current_temp[device_id], 2),  
49         "humidity": round(humidity[device_id], 2),  
50         "pressure": round(pressure[device_id], 2),  
51         "heating": heating,  
52         "cooling": cooling,  
53         "targetTemperature": target_temp[device_id]  
54     }  
55  
56     url = f"{API_BASE}/devices/{device_id}/telemetry"  
57     response = requests.post(url, json=telemetry)  
58  
59     print(device_id, telemetry, "→", response.status_code)  
60  
61
```

The terminal output shows the simulated data being sent to the API:

```
41.36, 'pressure': 1016.09, 'heating': True, 'cooling': False, 'targetTemp': 21  
thermo-001 {'temperature': 19.6, 'humidity': 43.31, 'pressure': 1014.85, 'heating': True, 'cooling': False, 'targetTemperature': 20} → 200  
thermo-001 {'temperature': 20.8, 'humidity': 41.38, 'pressure': 1016.14, 'heating': True, 'cooling': False, 'targetTemperature': 21} → 200  
thermo-002 {'temperature': 19.6, 'humidity': 43.41, 'pressure': 1015.11, 'heating': True, 'cooling': False, 'targetTemperature': 20} → 200  
thermo-001 {'temperature': 20.8, 'humidity': 41.14, 'pressure': 1016.36, 'heating': True, 'cooling': False, 'targetTemperature': 21} → 200  
thermo-002 {'temperature': 19.6, 'humidity': 43.52, 'pressure': 1015.66, 'heating': True, 'cooling': False, 'targetTemperature': 20} → 200
```

The browser shows the JSON response from the Azure API endpoint:

```
{"cooling":false,"heating":true,"humidity":41.01,"pressure":1019.18,"targetTemperature":21,"temperature":20.8}
```

The deployment log shows the deployment details:

```
id:"d141f51d-22c4-47e0-bdc4-226b28159441", "status":4, "status_text":"", "author_email":"N/A", "author":"N/A", "deployer":"OneDeploy", "message":"OneDeploy", "progress":"","received_time":"2025-12-16T11:14:34.188412", "start_time":"2025-12-11:14:36.21990217", "end_time":"2025-12-16T11:17:12.16987042", "last_success_end_time":"2025-12-16T11:17:12.16987042", "complete":true, "active":false, "is_temp":false, "is_READONLY":true, "url":"https://thermostatproject-bndcdmefqbteagf.scm.switzerlandnorth.azurewebsites.net/api/deployments/d141f51d-22c4-47e0-bdc4-226b28159441", "log_url":"https://thermostatproject-bndcdmefqbteagf.scm.switzerlandnorth-01.azurewebsites.net/api/deployments/d141f51d-22c4-47e0-bdc4-226b28159441?log", "site_name":"thermostatproject", "build_summary":{"errors":[], "warnings":[]}}
```