

1. Connect a USB A to USB C cord from your computer to the ESP32. Plug in the white connector cord from the ESP32 to the DHT11 sensor. Open the Arduino program and open the DHT11 Default file from the class repository. Edit the ssid to the name of the wifi network you would like to connect to; change the password to the login password for the wifi network.
2. Go to the sandbox environment on AWS academy under the 'sandbox' module, then click start lab; when the light goes green click it. Then in the new pop up window search 'EC2' and click on it. Then click on the orange button that says 'launch instance'. From then on click Ubuntu, t2.micro, proceed without a key pair, and configure storage to 28 GiB, then click on the orange 'launch instance' button

Quick Start

Amazon Linux
aws

macOS
Mac

Ubuntu
ubuntu

Windows
Microsoft

Red Hat
Red Hat

SUSE Linux
SUS

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type
ami-0e86e20dae9224db8 (64-bit (x86)) / ami-096ea6a12ea24a797 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Description

Ubuntu Server 24.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available at <http://www.ubuntu.com/cloud/services>.

Architecture
64-bit (x86)

AMI ID
ami-0e86e20dae9224db8

Username ⓘ
ubuntu

Verified provider

▼ Instance type [Info](#) | [Get advice](#)

t2.micro
Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Windows base pricing: 0.0162 USD per Hour
On-Demand SUSE base pricing: 0.0116 USD per Hour
On-Demand RHEL base pricing: 0.026 USD per Hour
On-Demand Linux base pricing: 0.0116 USD per Hour

Free tier eligible

☐ All generations
[Compare instance types](#)

[Additional costs apply for AMIs with pre-installed software](#)

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required
Proceed without a key pair (Not recommended) Default value ▼ [Create new key pair](#)

1x

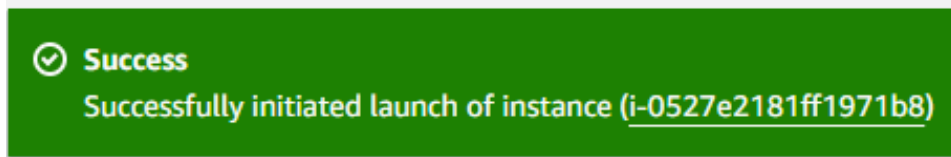
28

GiB

gp3

▼ Configure storage [Info](#)

3. Then click on the underlined portion of the green box like the one shown below.



4. Then select the instance line you would like to launch and then click 'connect', and then on the new page click 'connect'. Next type the lines 'sudo apt update', 'sudo apt install nodejs', 'sudo apt install npm' and 'sudo npm install -g http-server'.
5. Type 'http-server' to start the server. Then make sure to go into your security groups and click on 'edit inbound rules'. Then add a new rule with the port number you want to send from, make sure the port number in your code is the same one you are allowing in your security group. Make sure the source is 0.0.0.0/0

```
15 packages are looking for funding
  run `npm fund` for details
ubuntu@ip-172-31-81-227:~$ http-server
Starting up http-server, serving ./

http-server version: 14.1.1

http-server settings:
CORS: disabled
Cache: 3600 seconds
Connection Timeout: 120 seconds
Directory Listings: visible
AutoIndex: visible
Serve GZIP Files: false
Serve Brotli Files: false
Default File Extension: none

Available on:
  http://127.0.0.1:8080
  http://172.31.81.227:8080
Hit CTRL-C to stop the server
```

6. In your Arduino program with the DHT11 Default file open, in your AWS sandbox copy the public IP address and paste it into the code section on the DHT11 file that looks like "[http://\[Paster here\]:\[Your port#\]/sendData](#)" and again verify the port number is allowed by the security group.
7. Compile and upload your arduino code. Your final result should look like this:

```
[2024-10-01T02:41:29.141Z] "GET /sendData?t=25&h=43" "ESP32HTTPClient"
(node:9009) [DEP0066] DeprecationWarning: OutgoingMessage.prototype._headers is deprecated
(Use `node --trace-deprecation ...` to show where the warning was created)
[2024-10-01T02:41:29.148Z] "GET /sendData?t=25&h=43" Error (404): "Not found"
[2024-10-01T02:41:36.291Z] "GET /sendData?t=24&h=44" "ESP32HTTPClient"
[2024-10-01T02:41:36.293Z] "GET /sendData?t=24&h=44" Error (404): "Not found"
[2024-10-01T02:41:43.051Z] "GET /sendData?t=25&h=45" "ESP32HTTPClient"
[2024-10-01T02:41:43.053Z] "GET /sendData?t=25&h=45" Error (404): "Not found"
[2024-10-01T02:41:49.793Z] "GET /sendData?t=25&h=42" "ESP32HTTPClient"
```