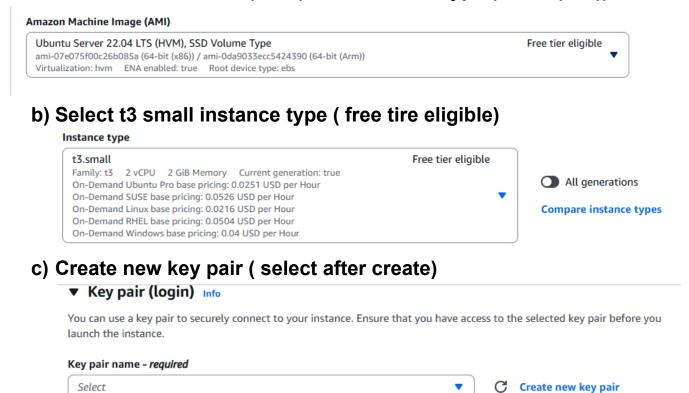# Setup Custom linux OS Yocto Project and build a custom Linux image (`core-image-minimal`) using **BitBake**.

# Follow below steps:
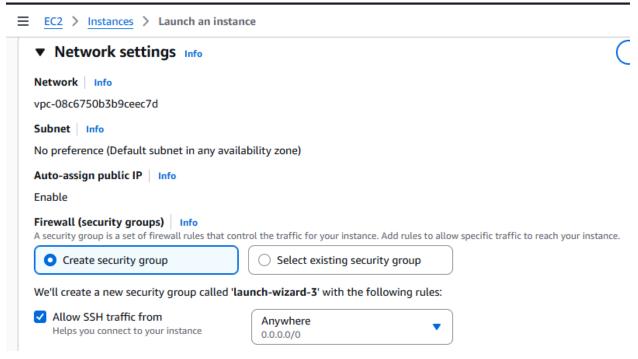
Step1:

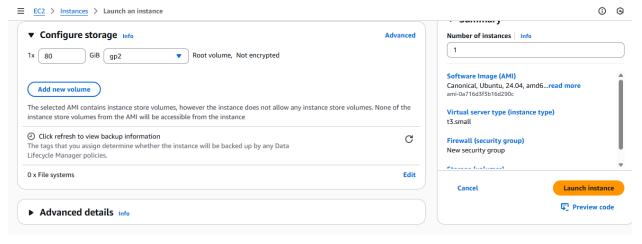**a) I need to create aws Ubuntu Server. Choose the version below in aws.**

**Ubuntu Server 22.04 LTS (HVM), SSD Volume Type (64-bit (x86))**



**b) Select t3 small instance type ( free tire eligible)**



**c) Create new key pair ( select after create)**

## d) Select network settings

▼ **Network settings** Info

**Network** | Info

vpc-08c6750b3b9ceec7d

**Subnet** | Info

No preference (Default subnet in any availability zone)

**Auto-assign public IP** | Info

Enable

**Firewall (security groups)** | Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

◉ Create security group          ○ Select existing security group

We'll create a new security group called '**launch-wizard-3**' with the following rules:

☑ **Allow SSH traffic from**
Helps you connect to your instance

Anywhere
0.0.0.0/0

## e) Setup configure storage

▼ **Configure storage** Info                                  Advanced

1x  80  GiB  gp2  ▼  Root volume, Not encrypted

**Add new volume**

The selected AMI contains instance store volumes, however the instance does not allow any instance store volumes. None of the instance store volumes from the AMI will be accessible from the instance

🕐 **Click refresh to view backup information**                   ↻
The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems                                                  Edit

▶ **Advanced details** Info

**Number of instances** | Info

1

**Software Image (AMI)**
Canonical, Ubuntu, 24.04, amd6...read more
ami-0a716d3f3b16d290c

**Virtual server type (instance type)**
t3.small

**Firewall (security group)**
New security group

Cancel                              **Launch instance**

                                    🖥 Preview code

## f) Click on launch instance: ubuntu server has been created.
Step2:

### a) how to connect aws ubuntu server:
Run the below command in git bash.

ssh - i /c/users/kasev/downloads/.pem key  ubuntu(username)@ipadress of aws ubuntu server



**Once connected to the ubuntu server run below syntax to**
# build a custom Linux image in ubuntu server.

**b)**  lsb_release -a  to Check Ubuntu version and flavor

**c)** sudo apt update && sudo apt upgrade -y

d) Once run above cmd, will get below kernel version upgrade output.

Package configuration

┤ Pending kernel upgrade ├

Newer kernel available

The currently running kernel version is 6.8.0-1035-aws which is not the expected kernel version 6.8.0-1036-aws.

Restarting the system to load the new kernel will not be handled automatically, so you should consider rebooting.

<Ok>

e)

f) sudo reboot

g) uname -r

h) sudo apt update
   sudo apt install -y \
       gawk wget git diffstat unzip texinfo
   gcc-multilib \
       build-essential chrpath socat cpio python3
   python3-pip \
       python3-pexpect xz-utils debianutils
   iputils-ping \
       python3-git python3-jinja2 libegl1-mesa
   libsdl1.2-dev \
       pylint xterm

i) sudo fallocate -l 4G /swapfile

j) sudo chmod 600 /swapfile

k) sudo mkswap /swapfile

l) sudo swapon /swapfile

m) swapon --show

n) echo '/swapfile none swap sw 0 0' | sudo tee
   -a /etc/fstab

o) free -h

p) cd ~

q) Ls

r) Pwd

s) git clone git://[git.yoctoproject.org/poky](git.yoctoproject.org/poky)

t) cd poky

u) Pwd

v) git checkout scarthgap

w) git branch

x) source oe-init-build-env

y) cd ..

z) Ls

aa) cd build/

bb) bitbake core-image-minimal

cc)
```
ubuntu@ip-172-31-20-44:~/poky/build$ bitbake core-image-minimal ⟵
ERROR: The following required tools (as specified by HOSTTOOLS) appear to be unavailable in PATH, please install them in order to procee
   lz4c ⟵
ubuntu@ip-172-31-20-44:~/poky/build$
```

dd) sudo apt update

ee) sudo apt install lz4

ff)bitbake core-image-minimal