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debugging x86_64 on mac silicon(m series)

lima

the most straightforward and easiest way is to install a x86_64 linux vm with lima.

```
INSTALL LIMA

brew install lima qemu
```

- start an x86_64 lima vm with qemu

```
limactl start --arch=x86_64 --vm-type=qemu
```

you access the vm with `lima`

now you can use `gdb` for example to debug x86_64 binaries on the vm.

running a kali vm with lima

i tried the normal kali iso and the kali vm image from kali.org, but neither worked.

my workaround is to setup a debian vm and install kali tools on it.

- create a `kali.yaml` file with the following content:

```
KALI.YAML

1  vmType: "qemu"
2  os: "Linux"
3  arch: "x86_64"
5  # use debian cloud image as base (more reliable)
```

```yaml
 6  images:
 7    - location: "https://cloud.debian.org/images/cloud/bookworm/lates
 8      arch: "x86_64"
10  cpus: 4
11  memory: "4GiB"
12  disk: "60GiB"
13  firmware:
15    legacyBIOS: false
16  mounts:
18    - location: "~"
19      writable: true
20  ssh:
22    localPort: 0
23    loadDotSSHPubKeys: true
24  containerd:
26    system: false
27    user: false
28  provision:
30    - mode: system
31      script: |
32        #!/bin/bash
33        set -eux -o pipefail
34
35        export DEBIAN_FRONTEND=noninteractive
36        apt update
37        apt upgrade -y
38
39        apt install -y gnupg2 apt-transport-https
40
41        echo "deb http://http.kali.org/kali kali-rolling main contrib
42
43        wget -q -O - https://archive.kali.org/archive-key.asc | gpg -
44        apt update
45
46        apt install -y kali-linux-core
47
```

access the vm with `limactl shell kali`

if you want you can install

- no gui tools `apt install kali-linux-headless`

- deafult tools `apt install kali-linux-default`

- all of the tools `apt install kali-linux-everything`

- or a category `apt install kali-tools-reverse-engineering`

gdb debug mac