

# **ONIE Hands On**

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# Agenda

- What is ONIE ?
- Hands On Building / Modifying ONIE

# What is ONIE ?

- Provides an OS install environment
- Makes writing and running installers easier
- Helps open up hardware
- Is a small Linux based OS itself
- <https://opencomputeproject.github.io/onie/>

# Building / Running ONIE

- Clone the source code
- Prepare the build environment
- Build ONIE for a particular target
- Install ONIE on the target
- Install an OS on the target via ONIE
- Upgrade ONIE

# Preparing a Build Host

- On Debian and Debian-like platforms run  
`make debian-prepare-build-host`
- Or launch a Debian-9 docker container

<https://opencomputeproject.github.io/onie/developers/building.html>

# Build for a Target

For experiments, the virtual machine is great

Target: QEMU kvm\_x86\_64

```
make -j4 MACHINE=kvm_x86_64 all
```

# Install ONIE on a Target

- Assume the hardware is blank
- Connect to the target serial console
- Install ONIE using the USB .ISO image
- ONIE is installed to the hard disk

[https://github.com/opencomputeproject/onie/blob/master/machine/kvm\\_x86\\_64/INSTALL](https://github.com/opencomputeproject/onie/blob/master/machine/kvm_x86_64/INSTALL)

# Look Around

- Inspect the system
- Run `onie-sysinfo`
- Look at the EEPROM
- Run `onie-syseeprom`

<https://opencomputeproject.github.io/onie/cli>

# Install Demo NOS

- Install the demo NOS via http
- Check out the http headers
- Look around
- Go back to ONIE

[https://opencomputeproject.github.io/onie/developers/demo\\_os.html](https://opencomputeproject.github.io/onie/developers/demo_os.html)

# Rebuild ONIE and Install It

- Make a change to print “Hello” during boot
- Rebuild ONIE
- Note the new version
- Install new ONIE version using  
`onie-self-update`

<https://opencomputeproject.github.io/onie/cli/index.html#onie-self-update>