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/](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
Look Around

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

[https://opencomputeproject.github.io/onie/cli](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
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