Snappy Ubuntu Core

Enabling secure devices with app stores

ubuntu

We are the company
behind Ubuntu.

Canonical and Ubuntu | Best of both worlds

CANONICAL

Commercial backing for the #1 general purpose Linux OS: Ubuntu

Global Services, Support, Certification!

Ubuntu

#1 Linux Desktop

#1 Cloud OS

Now also for phones, tablets & IoT devices

It has never been easier to make a custom hardware appliance...

Building an IoT Appliance
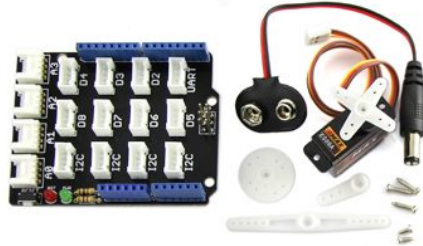

Beaglebone Black

Raspberry Pi 2

Snickerdoodle

Intel NUC

Samsung Artik

Qualcomm DragonBoard

But why?

Old-School Embedded ≠ Modern Embedded

Old-School Embedded	Modern Embedded
RTOS/Embedded cross-compilation single-purpose constrained rare updates offline	General Linux normal toolchain multi-purpose 256M RAM 2G SD constant updates connected
expensive & custom software devel	**cheap & easy software devel**

Linux Server Ops ≠ Linux Device Ops

centralised
supported
expensive
elastic

distributed
field-serviced
cheap
spof

cheap to service

expensive to fix

$600 drone (hardware)

+
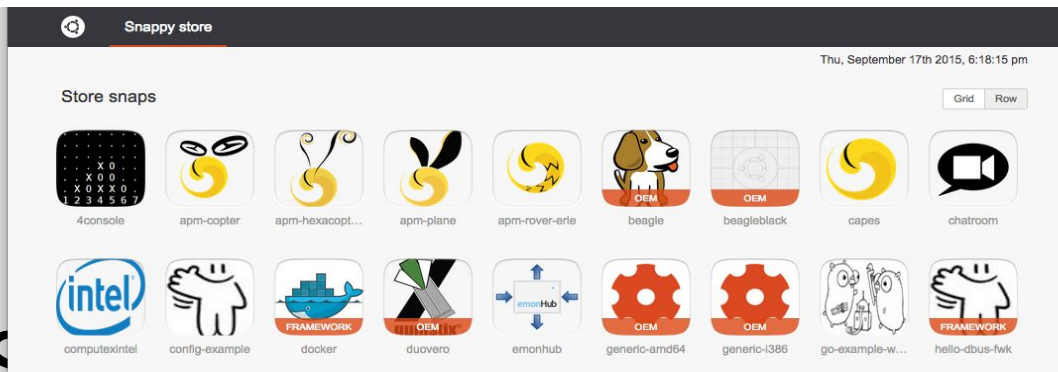
Apps, Services and SaaS

Infrastructure

Certification. Support. Assurance. Security.
Maintenance. Compatibility.
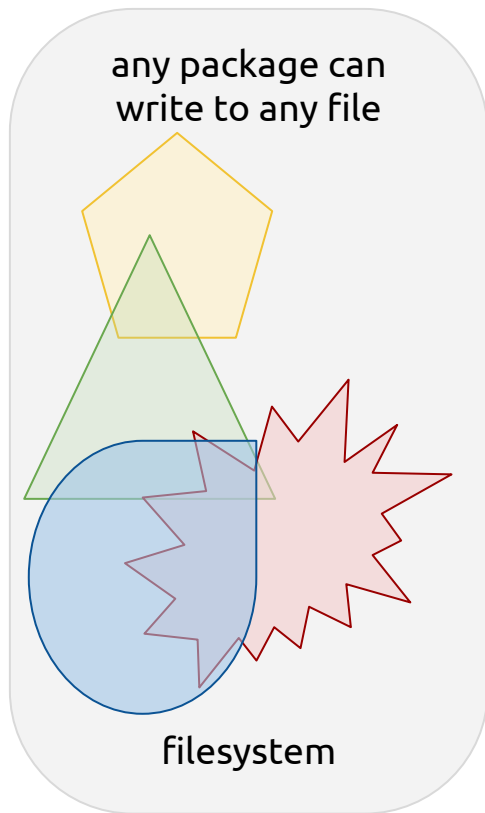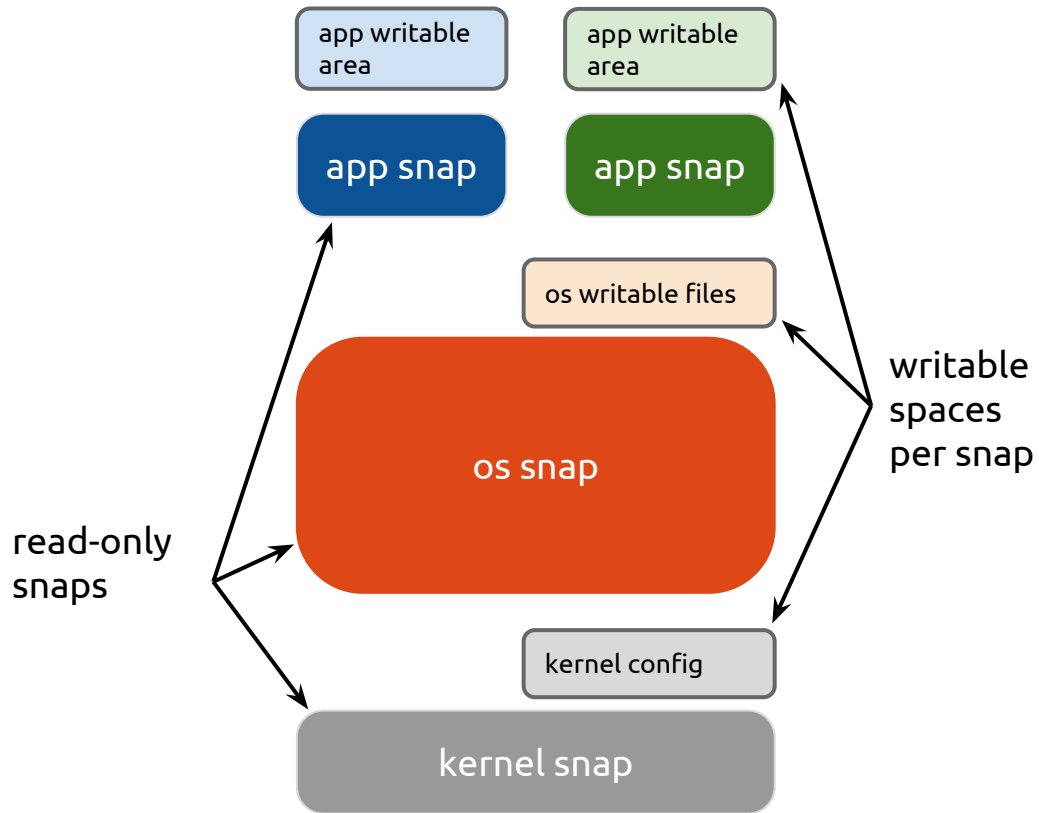
snappy

Transactional updates

Application confinement
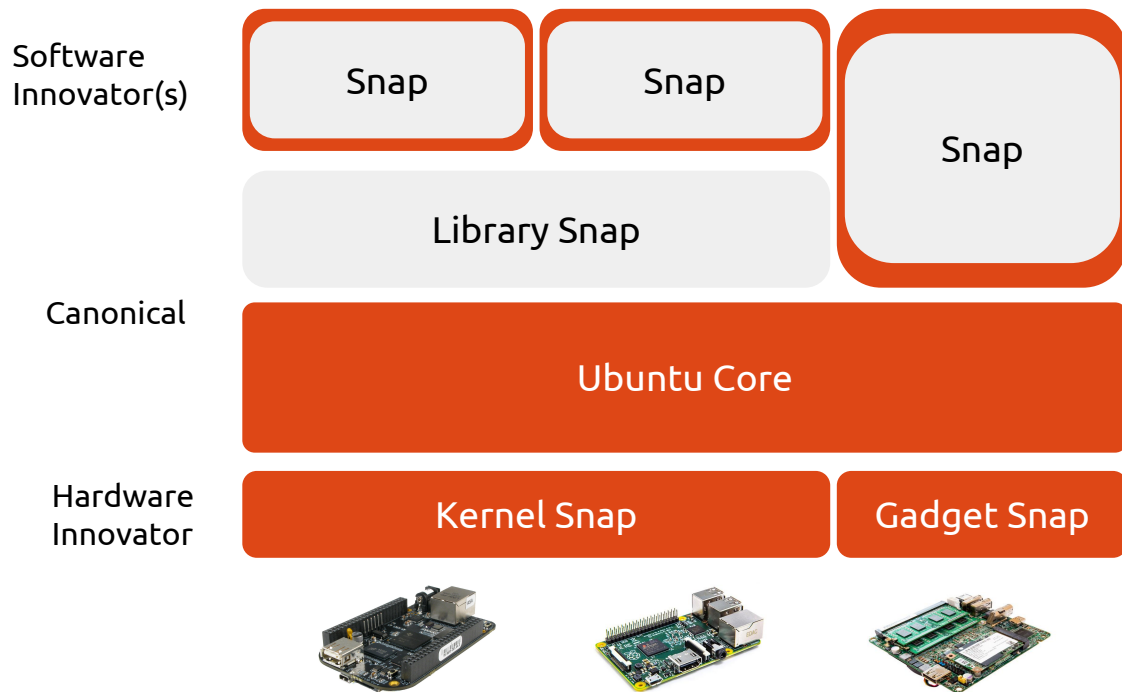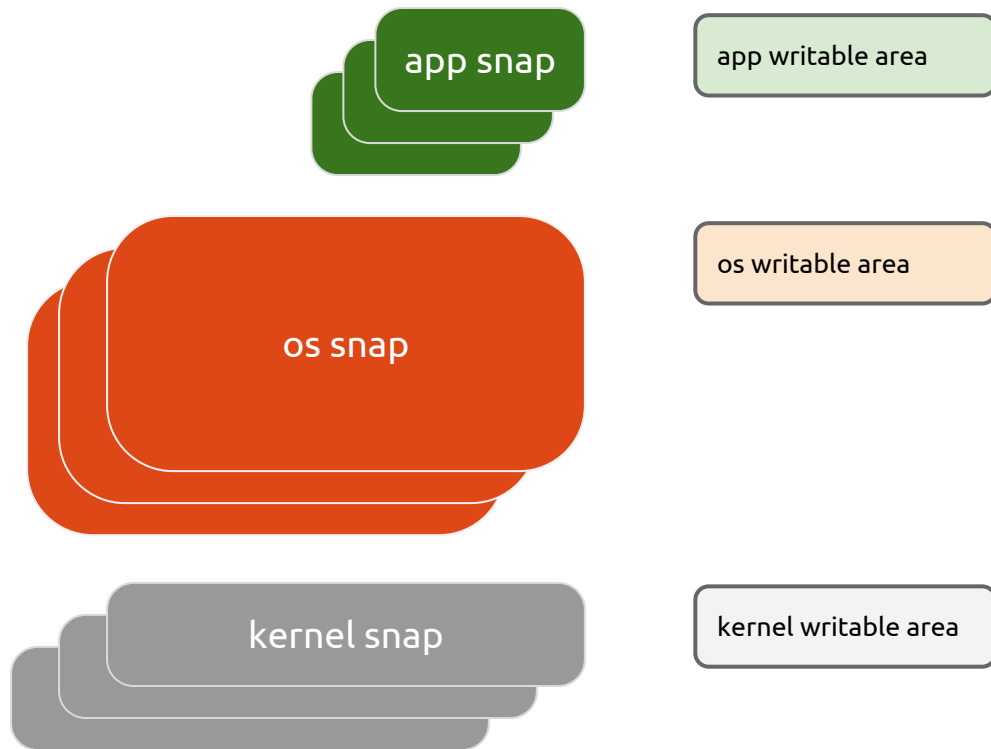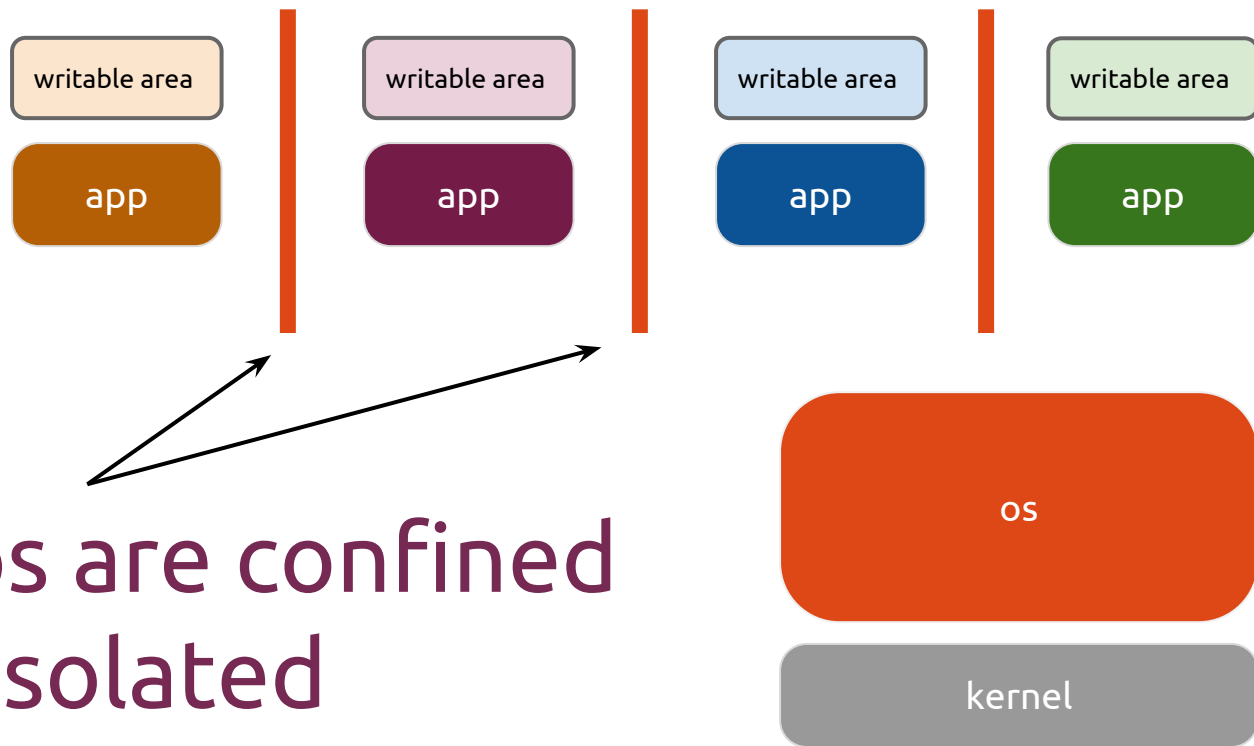
Familiar Ubuntu app development

classic

snappy

any package can write to any file

app writable area

app writable area

app snap

app snap

os writable files

read-only snaps

os snap

writable spaces per snap

filesystem

kernel config

kernel snap

Snappy system architecture

Software Innovator(s)

Snap   **Snap**

Snap

Library Snap

Canonical

Ubuntu Core

Hardware Innovator

Kernel Snap   **Gadget Snap**

- Automatic updates
- Secure by design
- Automatic backups
- Automatic rollback

Transactional update and rollback

app snap

app writable area

os snap

os writable area

kernel snap

kernel writable area

writable area

app

writable area

app

writable area

app

writable area

app

Snaps are confined and isolated

os
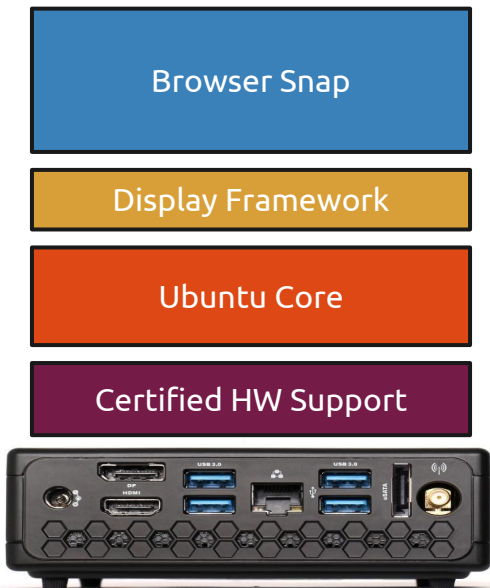
kernel

WebDM

Snappy Store

Long Lasting Value and Revenue out of "Device Real Estate"
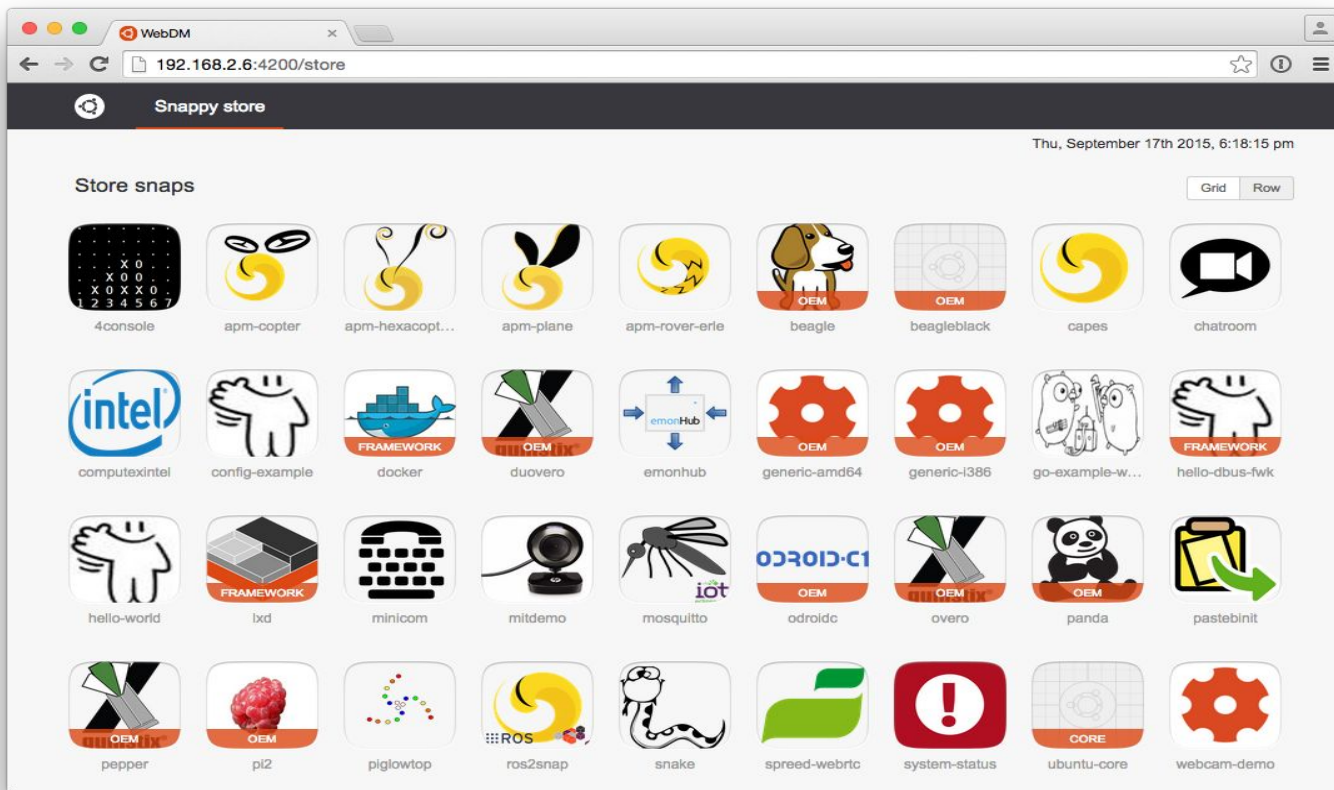
The end of 'one size fits all'

Snappy Ubuntu Browsing Appliance

Browser Snap
Display Framework
Ubuntu Core
Certified HW Support

Snappy Ubuntu Digital Signage Appliance

Digital Signage Agent Snap	Browser Snap
	Display Framework
Ubuntu Core	
Certified HW Support	

Snappy Ubuntu Home Router Appliance

Device Mgmt Snap	Router Admin UI
	OpenWRT Framework
Ubuntu Core	
Certified HW Support	
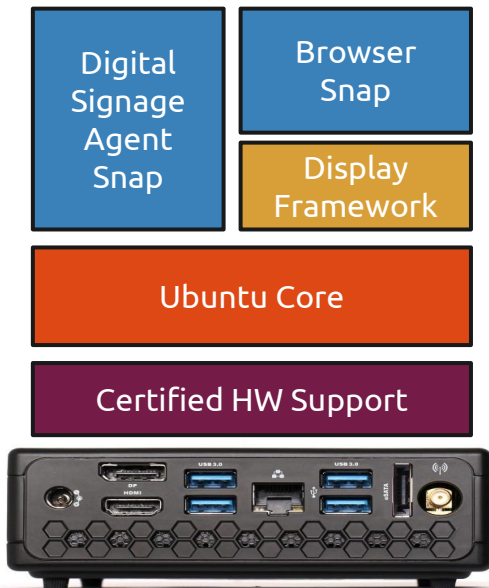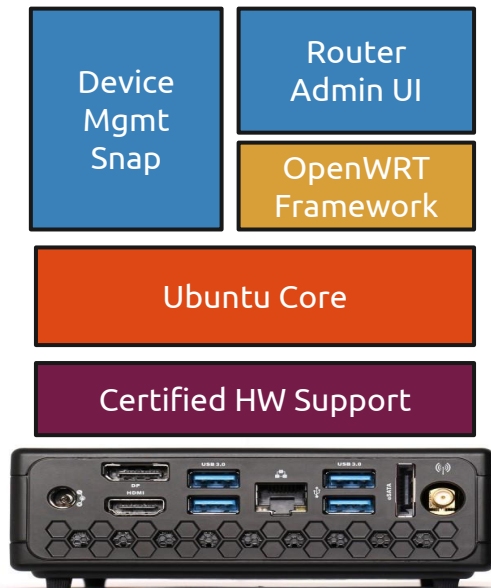
The end of the 'early device death'

**Snappy Ubuntu
Home Router Appliance**
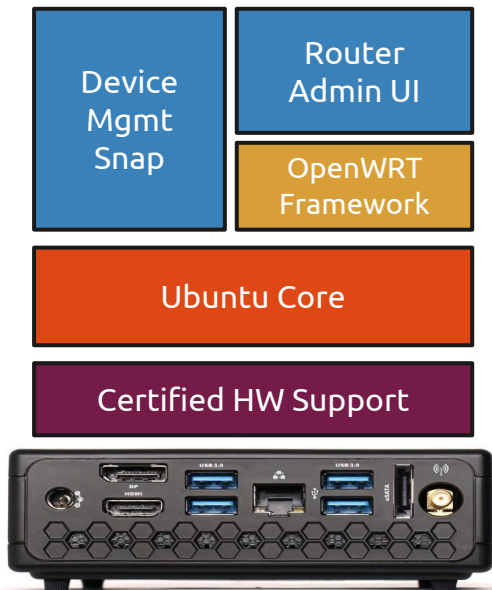
| Device Mgmt Snap | Router Admin UI |
| | OpenWRT Framework |

Ubuntu Core

Certified HW Support

**Snappy Ubuntu
Home Router Appliance w/ Store**

| Device Mgmt Snap | Router Admin UI | Parental Control |
| | OpenWRT Framework | Store WebDM |

Ubuntu Core

Certified HW Support

**Snappy Ubuntu
Home Router Appliance w/ IoT**

| Device Mgmt Snap | Router Admin UI | Iotivity |
| | OpenWRT Framework | Store WebDM |
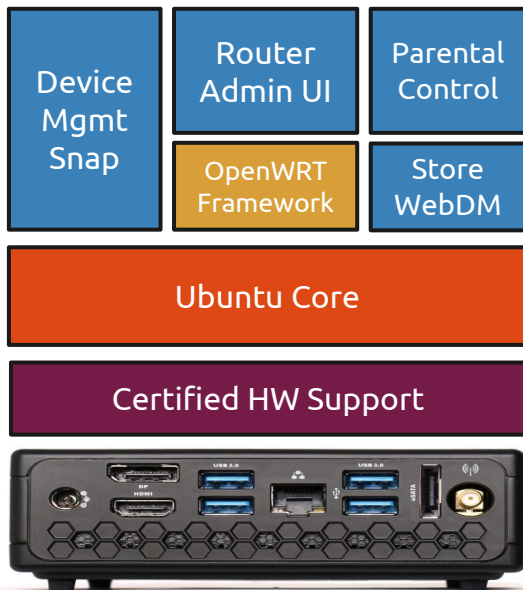
Ubuntu Core

Certified HW Support
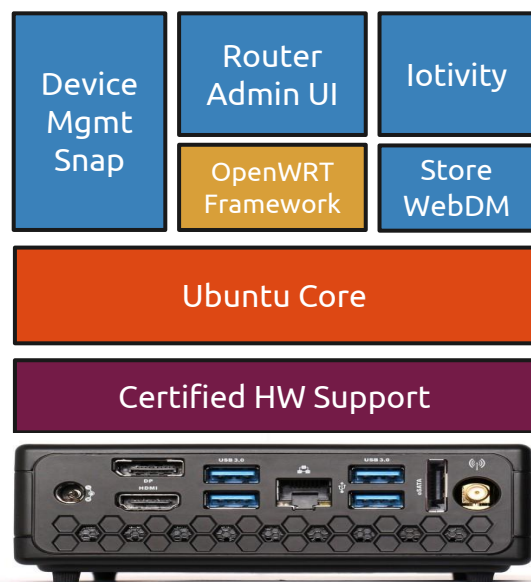
Snappy Factory Story

Another problem you don't need to solve...
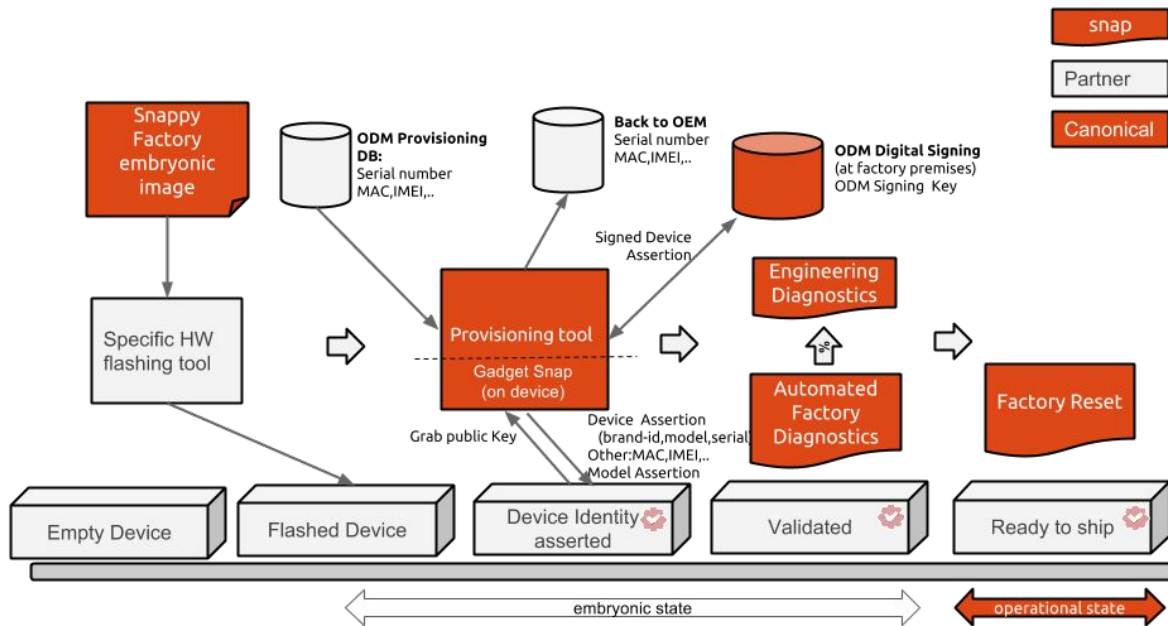
Snappy Sandboxes & Interfaces

snap writable area

snap

slot:
iface3

plug:
iface1
iface2

plug:
iface1
iface3

snap writable area

snap

slot:
iface1
iface2

os snap

kernel snap
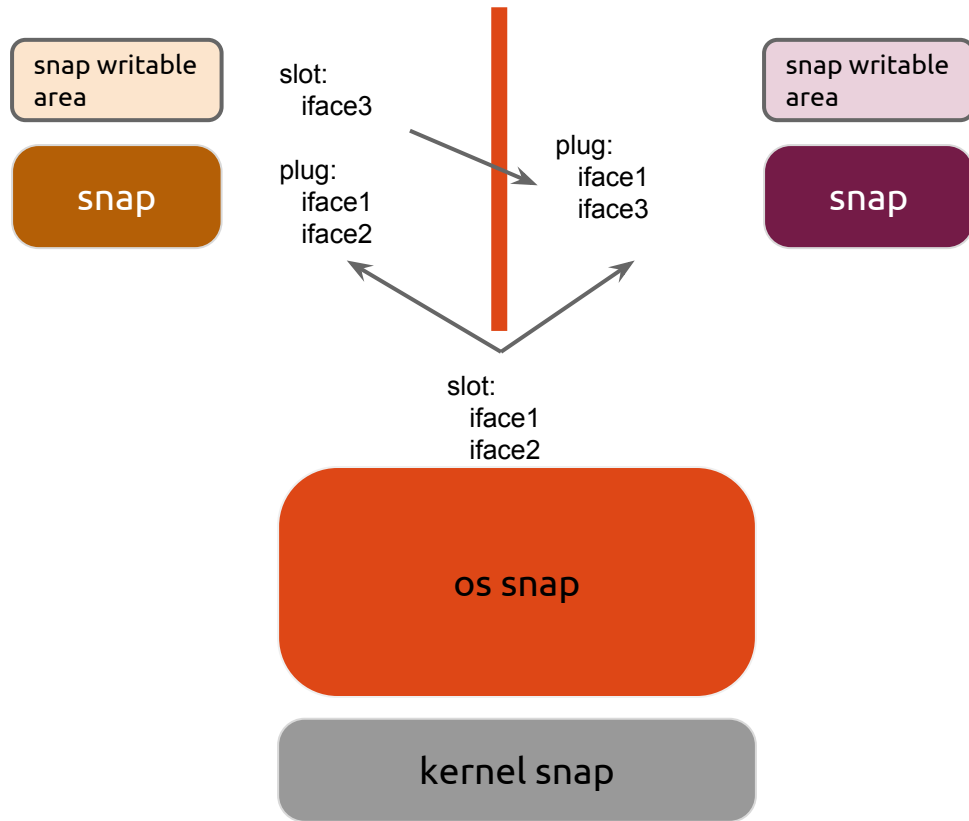
Ubuntu Core in the Cloud
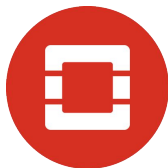
Snappy images are in public clouds like AWS, Azure, and GCE
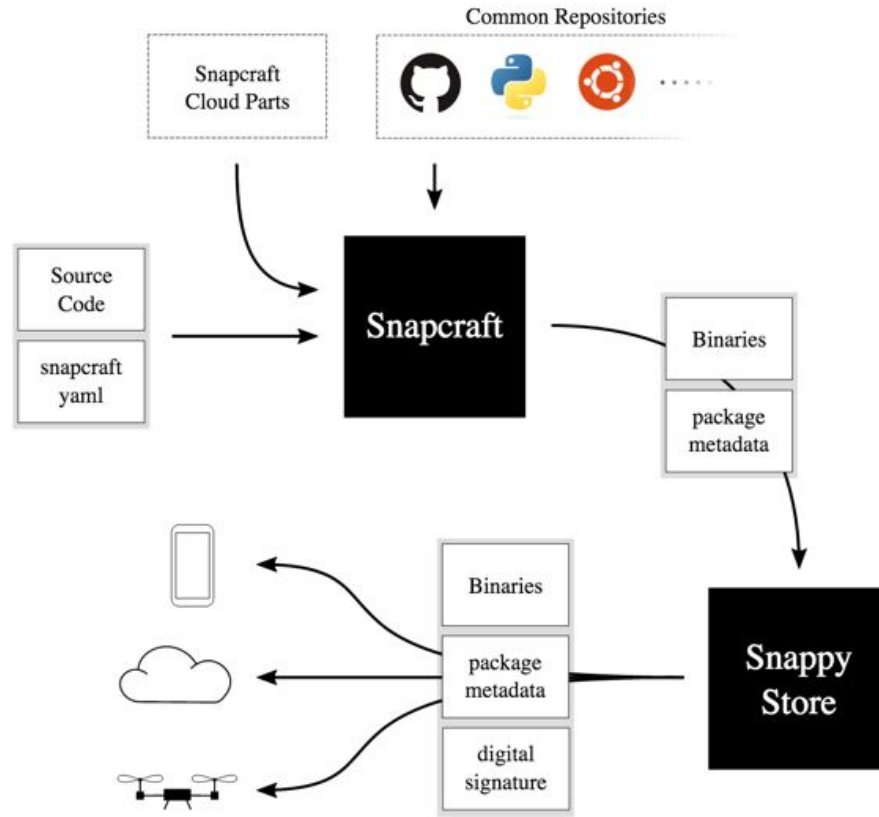
Vagrant and KVM images are ideal for rapid prototyping

Snappy is available for private clouds

Snapcraft

Getting Started

http://developer.ubuntu.com/en/snappy/start

Docs:
> http://www.ubuntu.com/things
> http://developer.ubuntu.com/snappy

Github:
> http://www.github.com/ubuntu-core

Mailing Lists:
> snappy-devel@lists.ubuntu.com
> snappy-app-devel@lists.ubuntu.com

IRC:
> #snappy on irc.freenode.net

snappy

ubuntu.com/snappy

Backup

Minimum system requirements

Processor Architecture

x86 or ARMv7+ (Cortex-A7 single core)

Memory

256MB

Flash Storage

1GB storage

Available Connectivity types

WiFi, Ethernet, USB, BT4.0 BLE, ..