Snappy Ubuntu Core
Enabling secure devices with app stores
We are the company behind Ubuntu.
Canonical and Ubuntu | Best of both worlds

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

Global Services, Support, Certification!

#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

RTOS/Embedded cross-compilation
single-purpose
constrained
rare updates
offline

expensive & custom software devel

Modern Embedded

General Linux normal toolchain
multi-purpose
256M RAM 2G SD
constant updates
connected

cheap & easy software devel
Linux Server Ops

- centralised
- supported
- expensive
- elastic

cheap to service

Linux Device Ops

- distributed
- field-serviced
- cheap
- spof

expensive to fix
Autopilot App
Lite (free, included)
Pro ($100)
Elite ($250)

$600 drone (hardware)

Apps, Services and SaaS

Infrastructure

Familiar Ubuntu app development

Transactional updates

Application confinement

Familiar Ubuntu app development
**classic**

any package can write to any file

filesystem

**snappy**

read-only snaps

app writable area

app snap

os writable files

app writable area

app snap

writable spaces per snap

os snap

kernel config

kernel snap
Snappy system architecture

- Automatic updates
- Secure by design
- Automatic backups
- Automatic rollback
Transactional update and rollback
Snaps are confined and isolated
WebDM

Installed snaps

- beagleblack 692.54 kB
- lxd 73.98 MB
- pastebinit 287.77 kB
- ubuntu-core -1 B
- webdm 36.67 MB
- xkcd-webserver 39.01 kB

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Snappy Store

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