

# IoT: Client Devices

Where did the Internet of Things come from?

# Consumer Computing

Chips/System-on-chip smaller and cheaper

---

features phones, smart phones, other space constrained computers

Old protocols (X10) and home automation

---

Replaced by things like bluetooth, wifi, 6LoWPAN, wifi HaLow

Smart homes

---

Domain of the super-rich, inspiring things like Nest, smart plugs, etc.

# Open Source Software

Linux Linux Linux!

---

Many IoT devices use non-real-time linuxes

Open-source boot chains

---

Das U-Boot

GCC, widespread cross-compilation

---

GCC has supported cross-compilation, mainstreaming today

# The Internet

Widespread internet connectivity

---

Fast, always on internet connectivity enables device access

Low prices

---

Internet prices are low, and getting lower

Easy home-based wireless networks

---

Home wifi networks are easier and easier to configure and install

# Cloud Computing

Inexpensive infrastructure & scaling

---

Very cheap to start, easier to manage scale

Uptime for the masses

---

Reliable service deployment made easier

Much lower barriers to entry

---

Pay as you go, start small with cloud only, migrate to hybrid strategies