

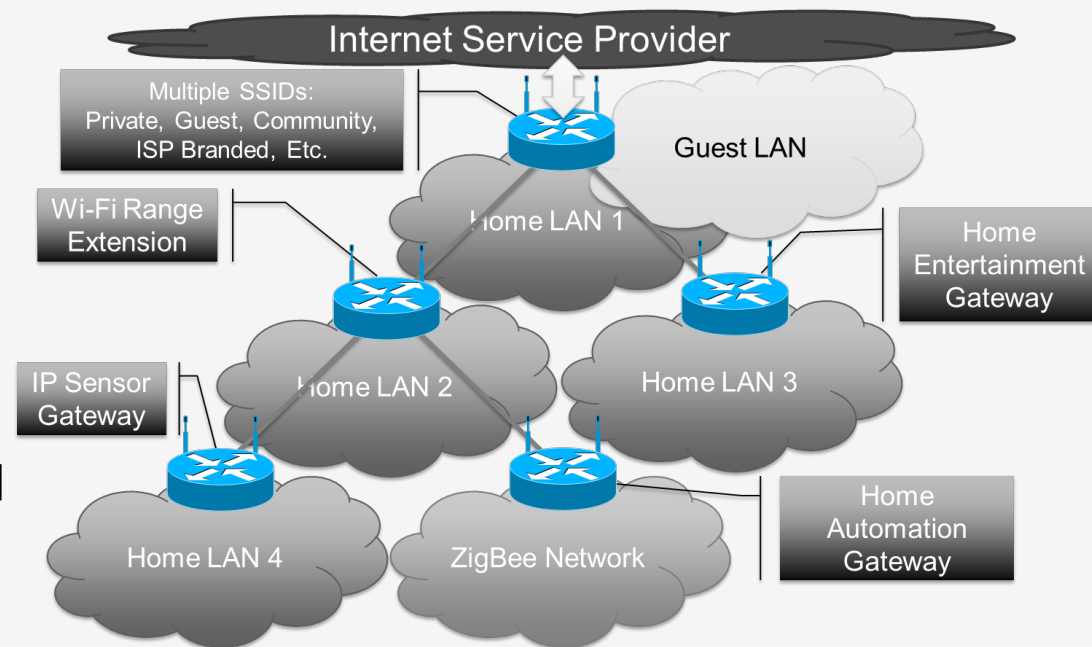
## Virtual Home Networking (vHN) Introduction for IETF

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- CableLabs is a vendor-neutral R&D environment wholly funded by cable operators (global span)
- We are using virtualization technologies to simplify home networking and provide opportunity for more value added services
- Virtual Home Networks is a collaborative R&D project involving cable operators and vendors
  - Vendors need to sign both an NDA and Open Source Contributor Agreement to participate

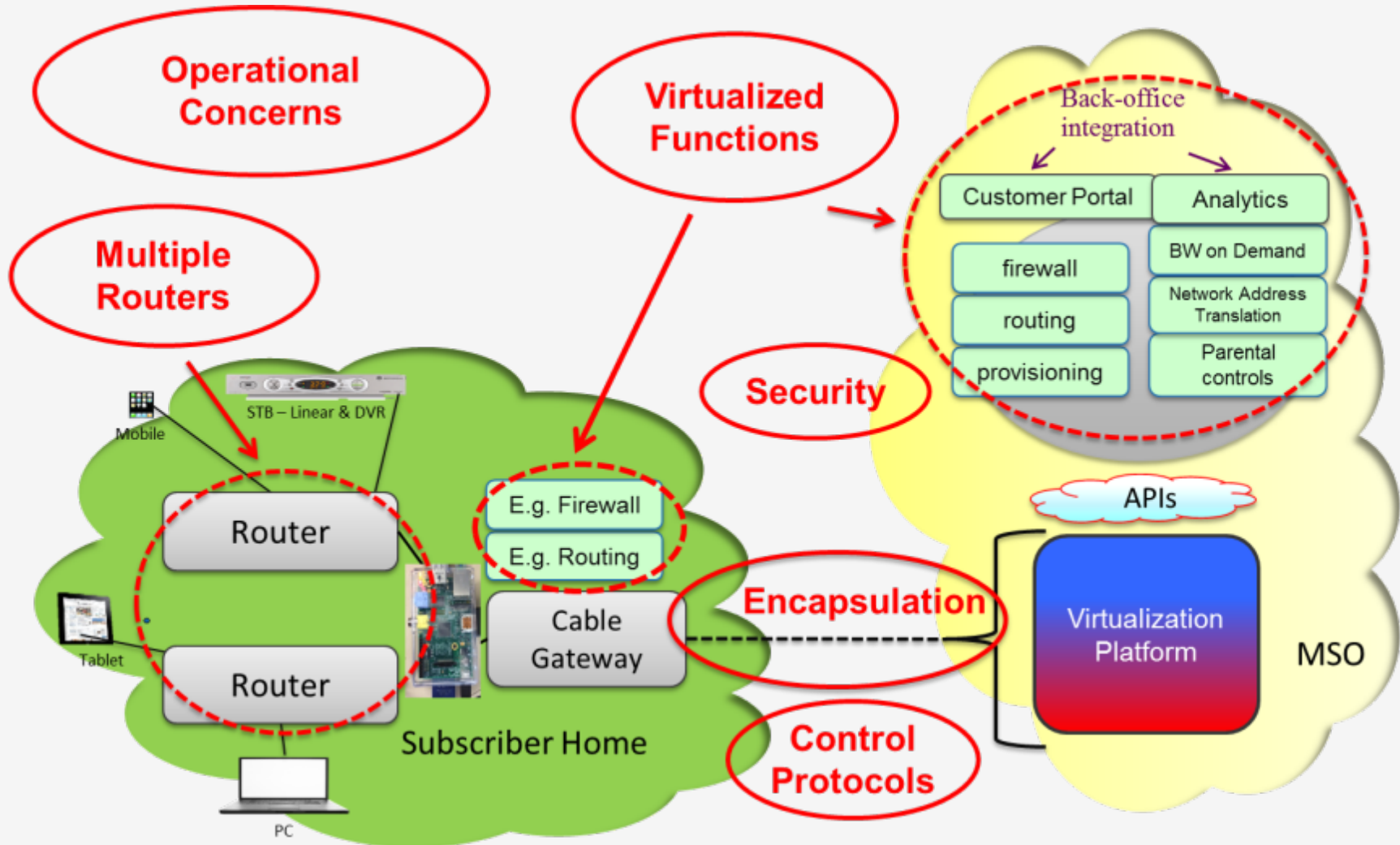
## Challenges...

- Increasing end-user device complexity
- Sharing personal content across router boundaries
- Optimizing in-home network paths
- Service provider visibility and management of the home network
- Consistently administering and enforcing policy
  - Firewall
  - Parental controls
- Enabling remote access
- Providing new services



- We are using ‘lean startup’ methodologies to rapidly acquire learning and deliver results as soon as they accrue
  - 2-week cadence for study topics, 1-week cadence for results review and decision
- We are focused on open source solutions and standards to enable interoperability and growth of an open ecosystem
  - Involved in ETSI NFV, OPNFV, ODL, OpenStack, MEF, IETF, ...

# vHN Architecture Vision and Challenges



- Part of an extensive and growing CableCloud™ R&D activity within CableLabs
- Draft vHN Technical report developed in 8-weeks (reduced from typically 18-months due to lean methodology)
  - Conclusions endorsed by cable operators
  - Vendor participants providing feedback and helping to refine the document
- References ETSI NFV and IETF Specs.
  - Joint contributions expected based on project learning
- Prototype under development
- Data Models and APIs will be prototyped by our own developers and contributed to open source (e.g. OPNFV, ODL)