

IPV6 @ COMCAST



PTC17

"Route 6 runs uncertainly from nowhere to nowhere, scarcely to be followed from one end to the other, except by some devoted eccentric"



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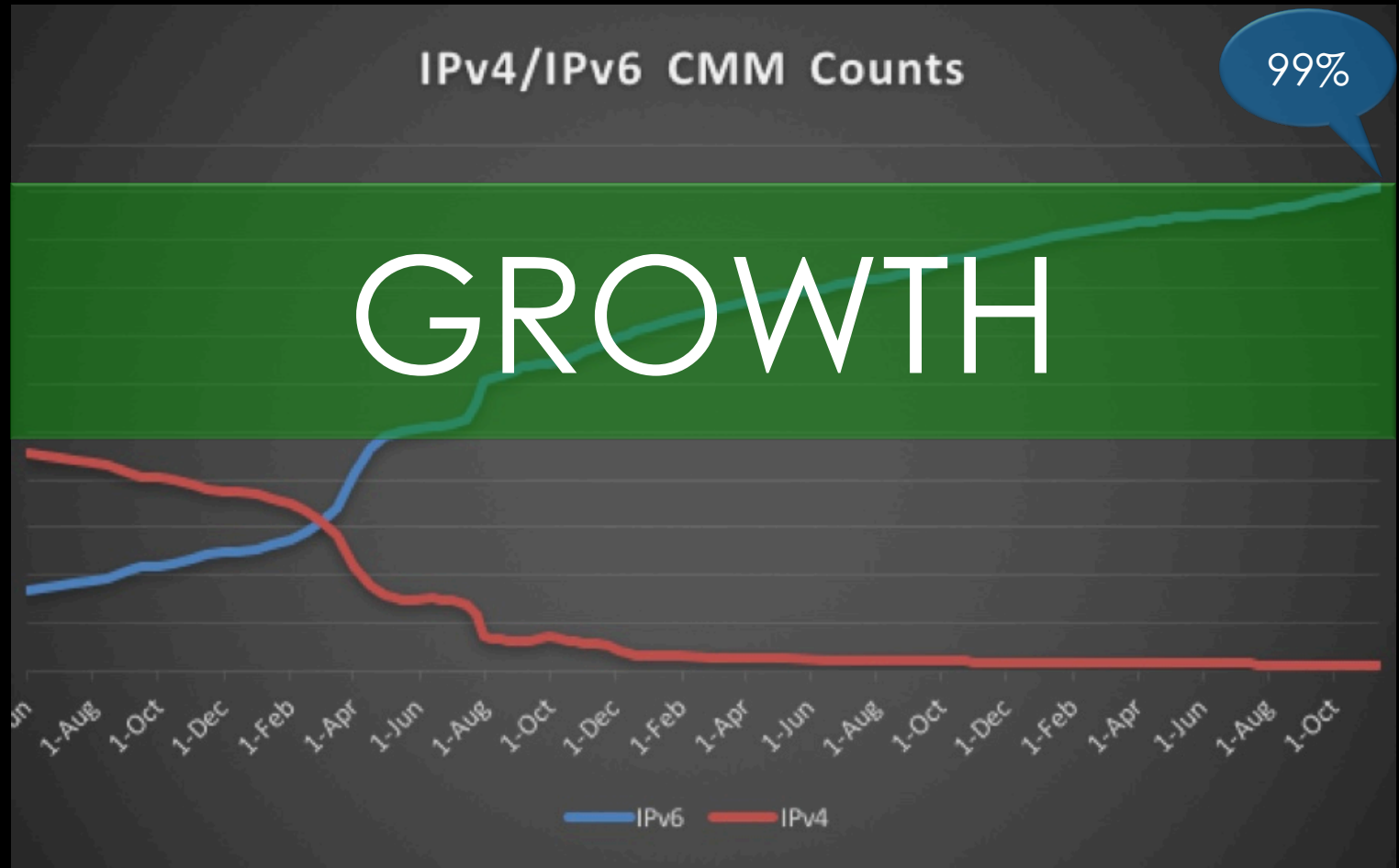
BACKGROUND

- The IPv6 program at Comcast began in 2005
- Seamlessness is a cornerstone of our program
- Motivation
 - IPv4 is not adequate, could not support near or long term growth requirements
 - IPv6 is inevitable
- Scope
 - Everything, over time!

IPv6 ONLY

THE FIRST IPV6 ONLY SERVICE...

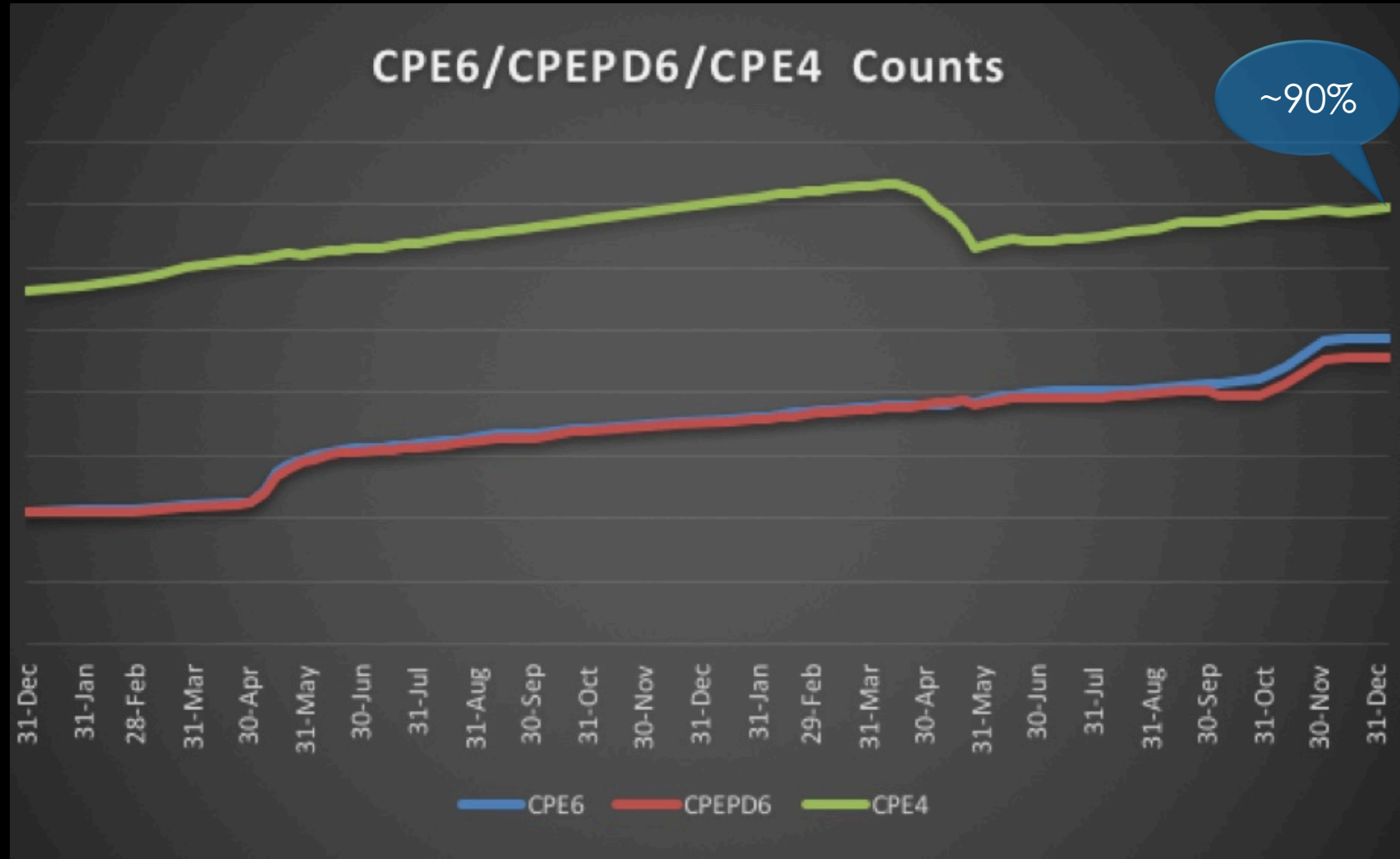
- 99+% of devices are managed using IPv6 only
- Management use of IPv6 (only) is one of the largest deployments of IPv6 worldwide
- Trending towards 100% of all new and existing devices managed using IPv6 only, no IPv4



Dual Stack

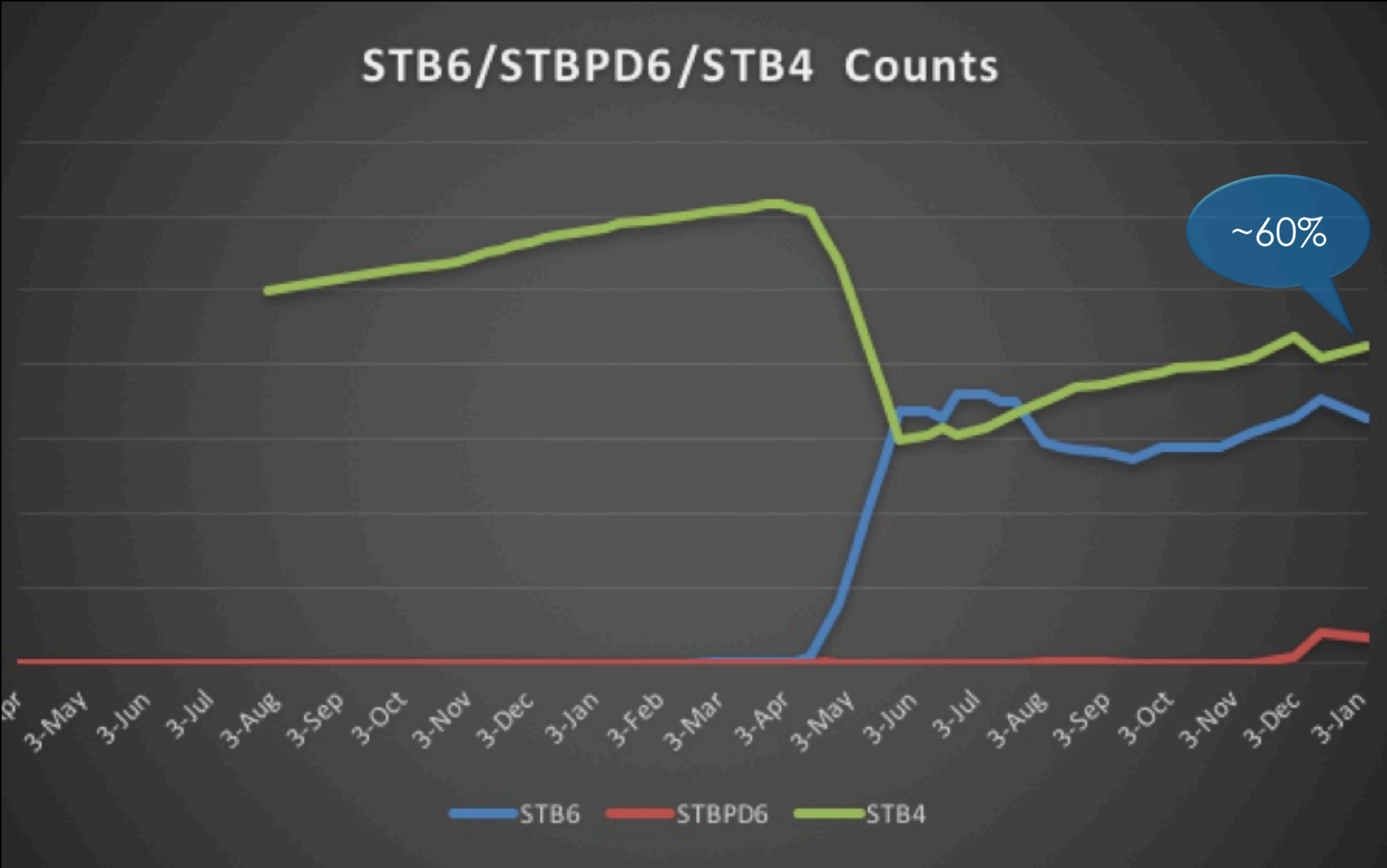


BROADBAND

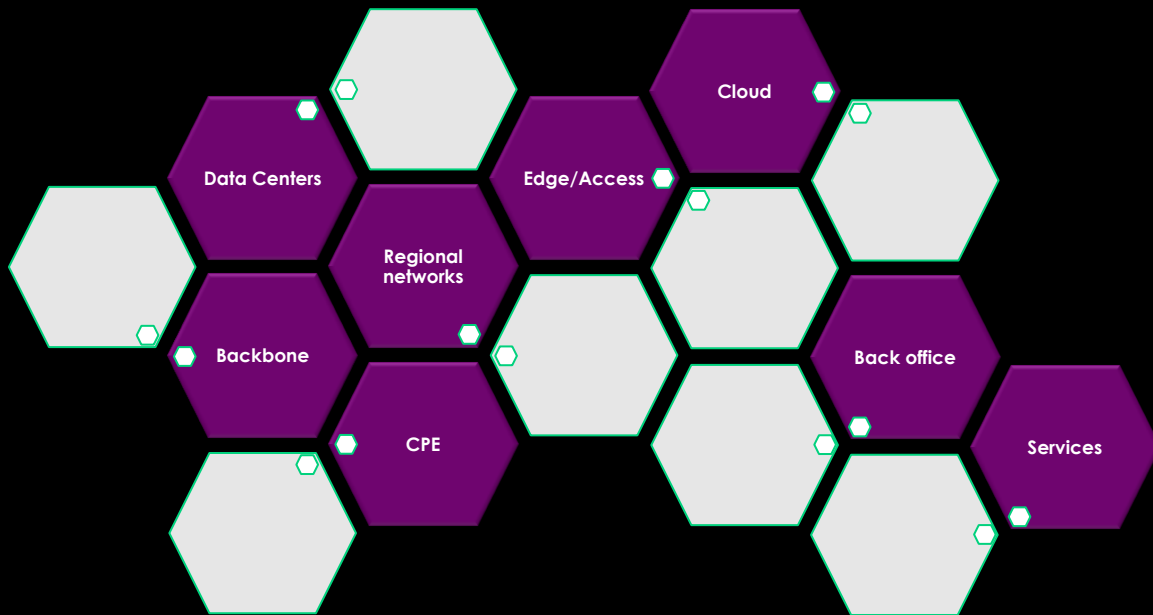


IPv6 ONLY

X1



APPROACH



- Building blocks
- Deployed from the core of the network out
 - Backbone, regional networks, edge/access
- Leveraged back office enhancements incrementally
 - Singular provisioning system, no one offs
- Deployed IPv6 one time for each service
 - Native IPv6, no transition technologies

TODAY...

- Minimizing and reducing IPv4 dependencies
- IPv6 is used to manage the majority (and growing) of our business needs today
- IPv6 utilization continues to grow
 - Currently approaching 40% of our Internet facing communications is over IPv6
- Leverage IPv6 as a platform for innovation

NEXT...

Infrastructure

- IPv6 only network
 - IPv6 Zero Touch Provisioning
 - Managing the network with IPv6 only
 - IPv6 only interconnects
- IPv6 only enterprise network
- IPv6 only cloud and data centers
 - Instigated by X1 migrating to IPv6 only

Services

- Enterprise applications
- IPv4aaS
 - MAP for Broadband
 - NFV for MAP BR
 - GRE over IPv6 for Wi-Fi + Dual stack UE
 - IPv6 only access network (PON, DOCSIS 3.1)
- Voice
- Xfinity Home