

The Case for Bonjour in Routed Networks

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Bonjour

- Apple marketing name

Bonjour

- Automatic address assignment
 - DHCP + IPv4 & IPv6 link-local
- Host name lookup
 - Conventional DNS + Multicast DNS
- Service discovery

Overview

- DNS-based Service Discovery (DNS-SD)
 - Service Discovery using DNS queries
- Multicast DNS (mDNS)
 - Zero Configuration transport for DNS queries
 - Limited to local link

mDNS is Link-Local

- By Design
- In 2002, small networks suffering worst
- Big networks already had IT staff
 - and...
flooding multicast on big networks is a Bad Idea

Bonjour Environments

- Home networks
- Big flat university and enterprise networks
- Small multicast domains break discovery
- Large multicast domains are inefficient
- Want small multicast domains without losing discovery

Educause Petition

[https://www.change.org/petitions/
from-educause-higher-ed-wireless-networking-admin-group](https://www.change.org/petitions/from-educause-higher-ed-wireless-networking-admin-group)

We the undersigned academic and research institutions request that Apple provide improved support for Airplay and Bonjour technologies in our academic environments.

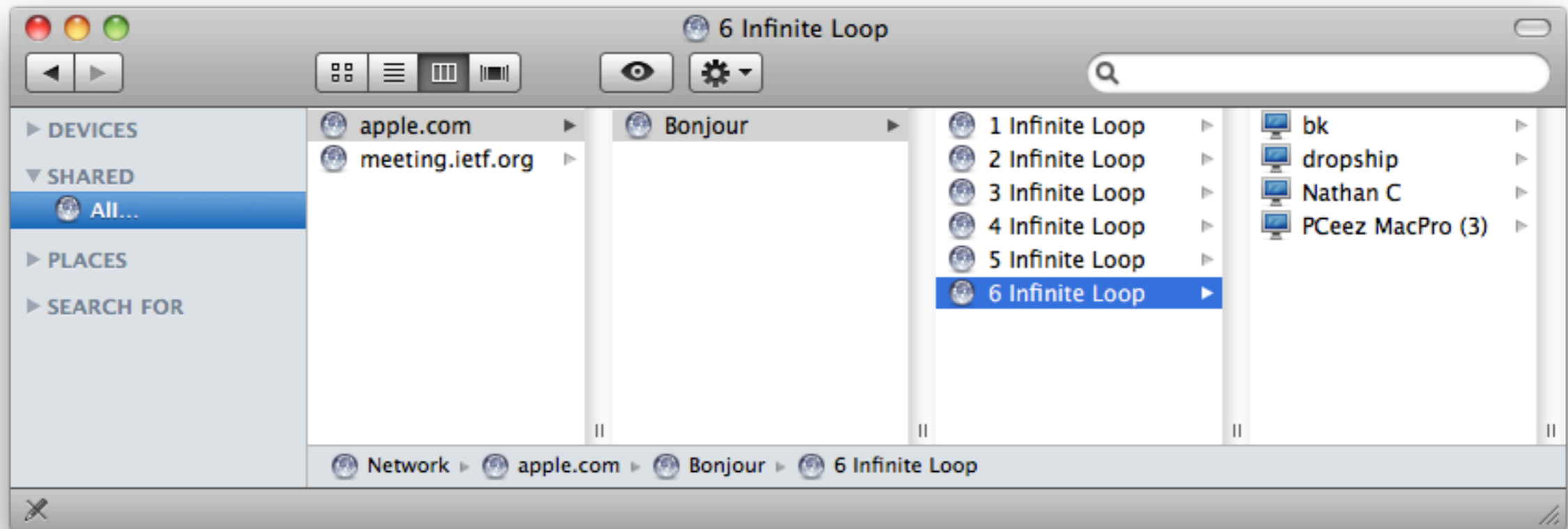
Our faculty, staff, and students are requesting the ability to utilize Airprint to print from their Apple devices on our enterprise networks.

Bonjour technologies also do not work in a scalable, sustainable fashion between different IP subnets.

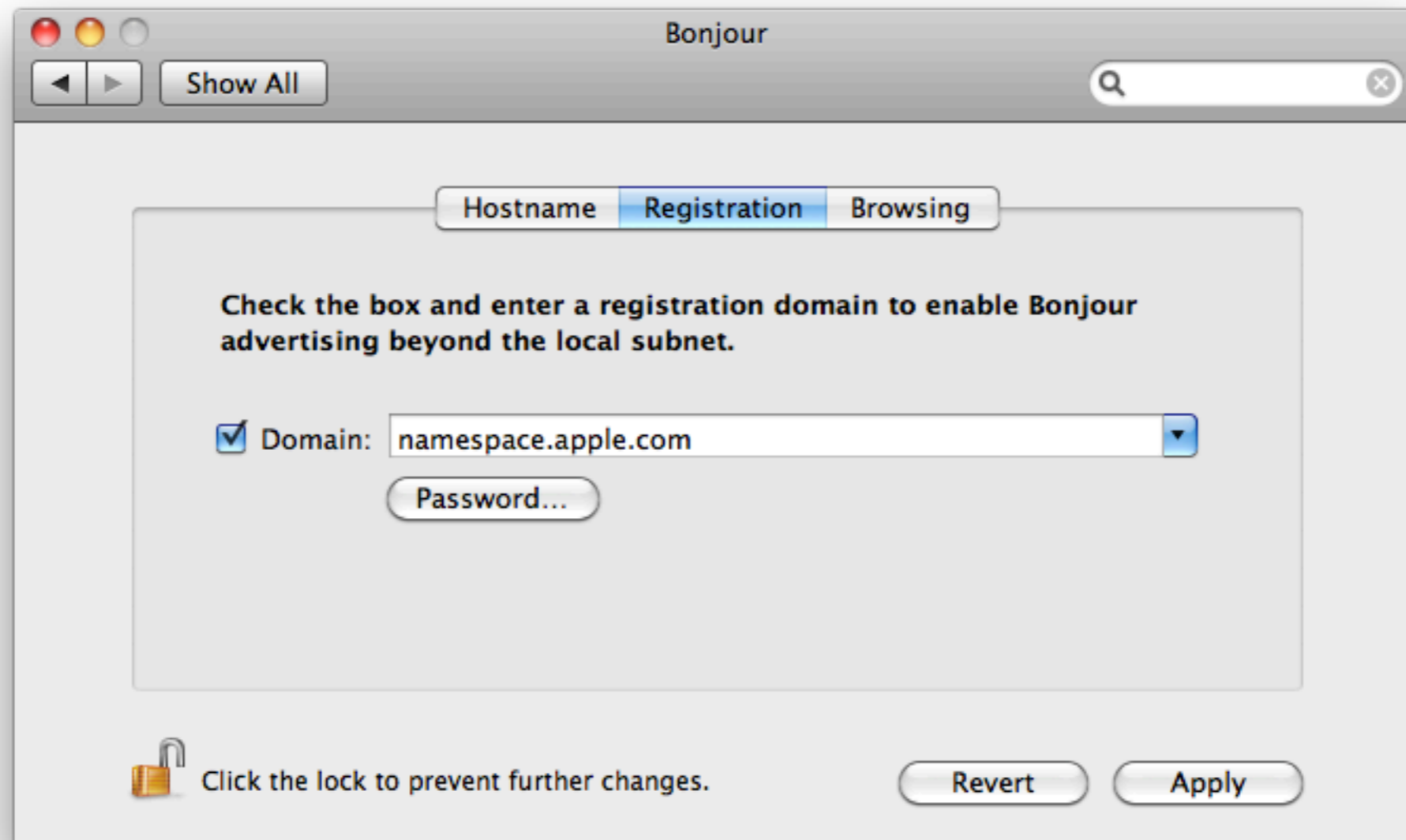
Wide-Area Bonjour

- APIs present since 2002 (Mac OS X 10.2)
- DNS Dynamic Update present since 2005 (Mac OS X 10.4 & Bonjour for Windows)

Wide-Area Browsing



Wide-Area Advertising



Vendor Announcements



Conclusion

- Bonjour has some non-local capabilities already
 - But clearly they missed the mark
- Vendors are now stepping in to fill the vacuum
 - But possibly not in the ideal way
- The IETF can play a guiding a role
 - Work out how we really want to see this solved