

# Rapid Transition of IPv4 contents to be IPv6-accessible

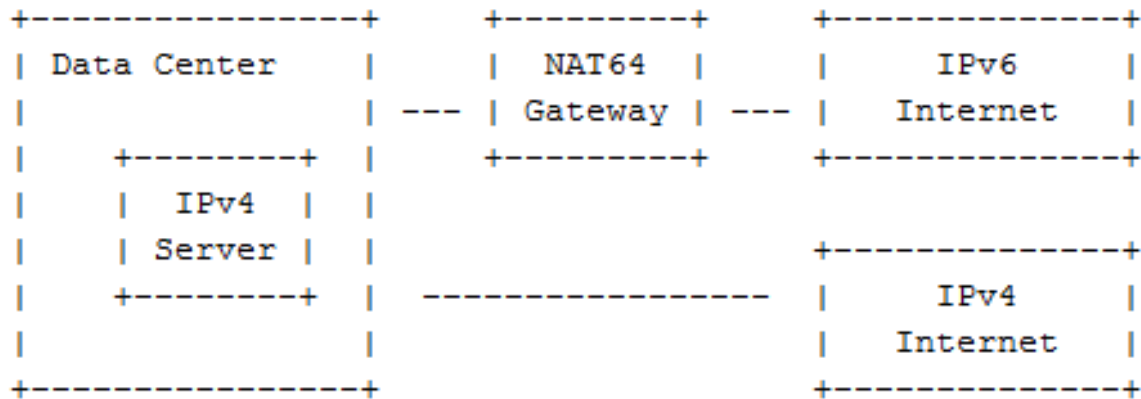
*draft-sunq-v6ops-contents-transition-02*

Q. Sun, C. Xie, Q. Liu, X. Li, J. Qin and D. Liu

# Purpose

- The lack of IPv6-reachable contents becomes one of the main obstacles in IPv6 development.
- Our motivation is to increase the IPv6-accessible contents rapidly
  - So as to encourage the IPv6 deployments of the end users
  - An attractive method for a great many small-to-media CP/SPs at the very early stage of IPv6 transition
- To increase the amount of IPv6 contents is key for breaking the chicken or the egg dilemma.

# Deployment Model



- The communications are initiated from the IPv6 side.
- The IPv6 node will firstly get A/AAAA addresses of the server from DNS.
- The communication will follow the path to NAT64 Gateway.

NAT64 gateway can be regarded as a shared platform from the operator to offer transition service for multiple CP/SPs.

# Address Mapping

- To save global IPv4 addresses which become scarce resources , private blocks, for instance 10.0.0.0/8 may be used for the Stateful NAT64.
- Two modes:
  - 1:1, one IPv6 address is mapped to one IPv4 address with no port mapping, better scalability
  - N:1, each of the IPv4 addresses will be shared by multiple IPv6 users from Internet with port mapping

# DNS implementations

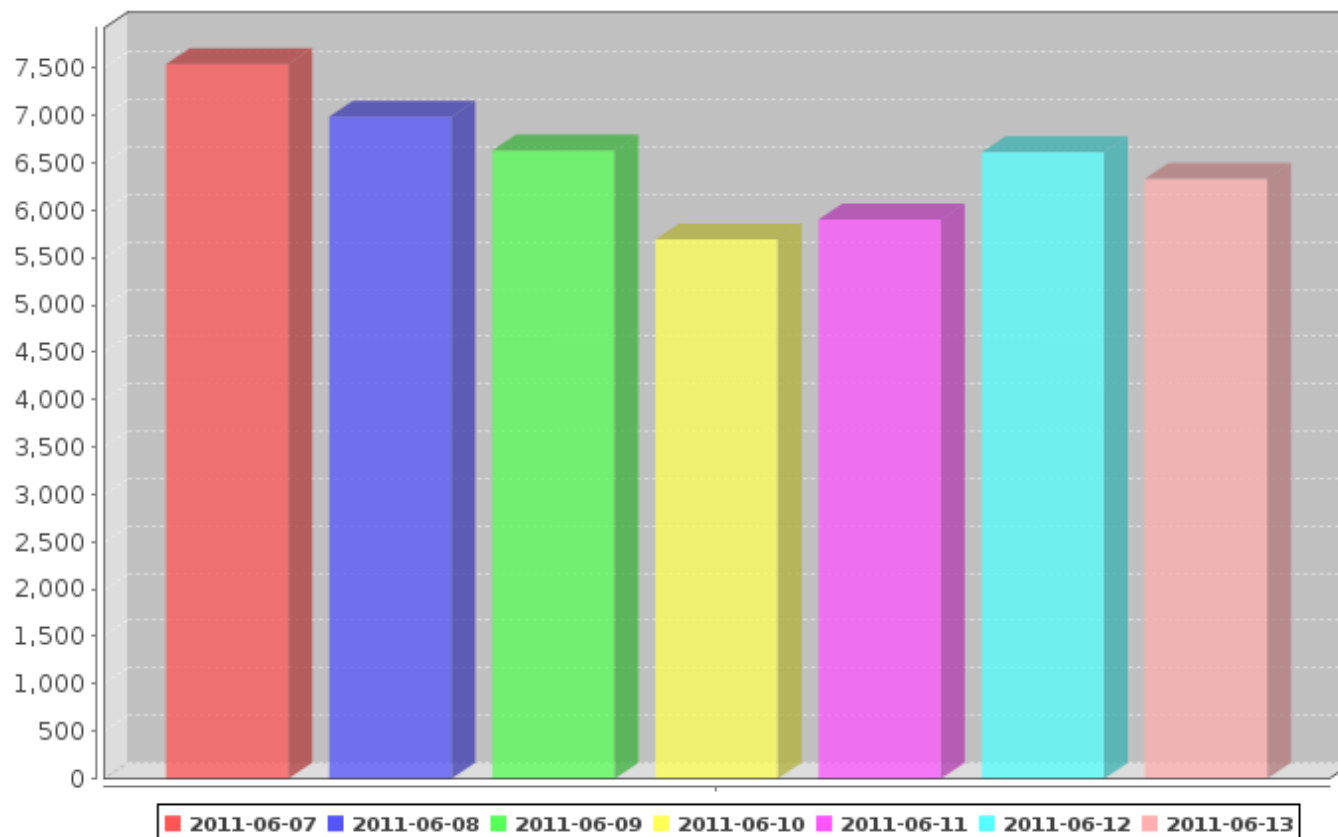
- Add Static synchronized AAAA records in authoritative DNS servers.
  - Small-to-medium websites would normally have more than 50 sub-domain names.
  - Additional tools to automatically synchronize AAAA records are used to reduce the burden of manual configurations.
- **Notice:** make sure AAAA records can be added in authoritative DNS servers in case the Content Provider's domain names are maintained by third party DNS providers.

# Example

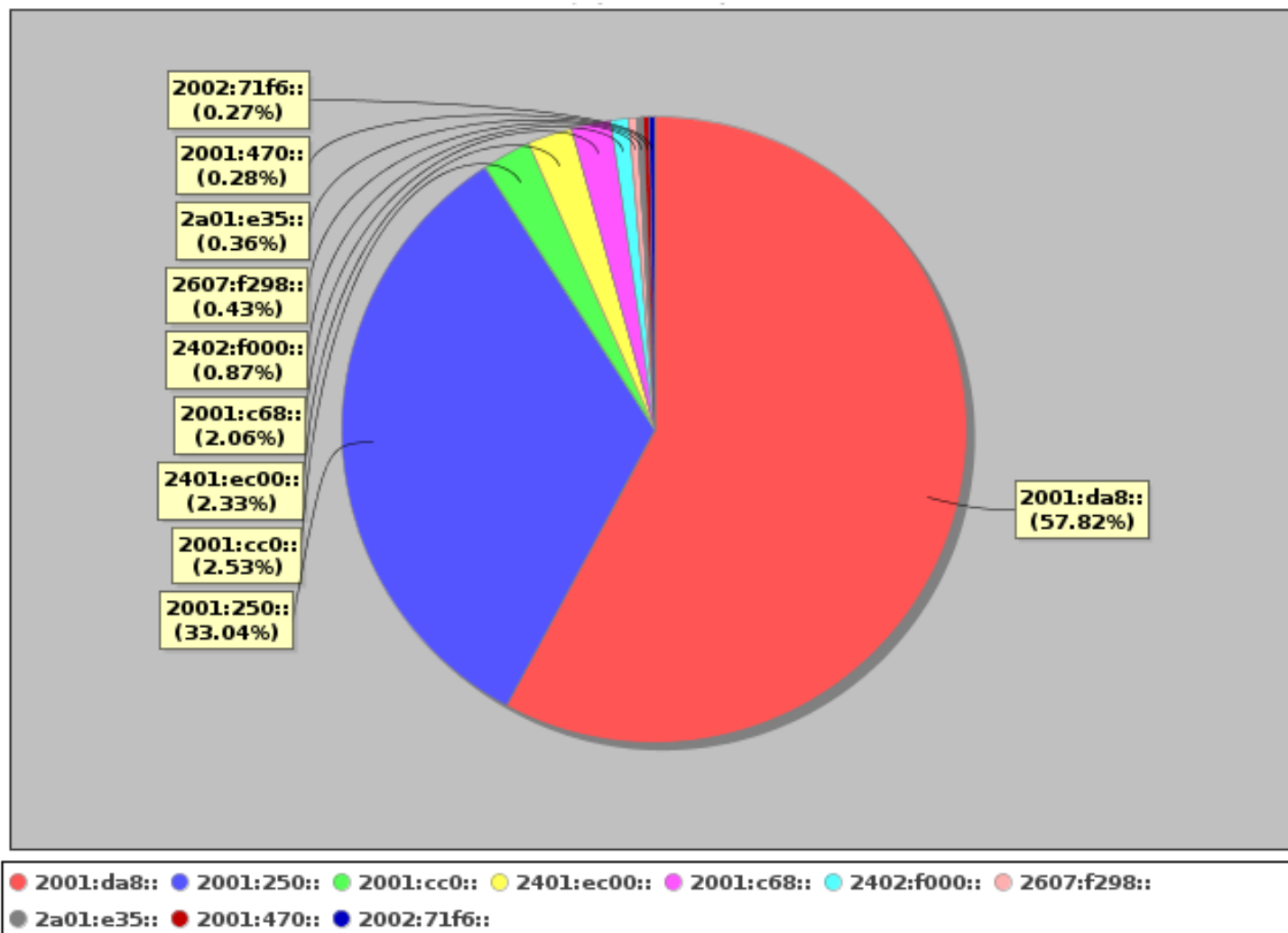
Content Provider	Categories
www.2118.com.cn	News, BBS, E-commerce, Video
www.5460.net	BBS, Album
www.118326.com	News, Video
www.hnradio.com	Video
www.voc.com.cn	News, BBS, E-commerce, Video
www.chinatelecom.com.cn	News, BBS, Recruitment

# Logging and Statistics

- More than 15 thousands different IPv6 users ever accessing the above six Content Providers.



# Logging and Statistics





# Next step

- Is it good for encouraging IPv6 deployments?
- Comments and contributions are welcome
  - <http://tools.ietf.org/id/draft-sunq-v6ops-contents-transition-01.txt>