

Multicast Context Transfer for Mobility Protocol Standards

draft-schmidt-multimob-fmipv6-pfmipv6-multicast-04

Thomas C. Schmidt, Matthias Wählisch, Rajeev Koodli, Gorry Fairhurst

Motivation of this work

- o Context transfer is mainly an issue between Access Routers → Fast Handovers
- o Plugging into Mobility Management Schemes harmonizes protocol suite
 - start from FMIPv6 / PFMIPv6
- o Fast Context transfer requires fast handoff
 - Cannot overrun unicast reassociation

Status of the Draft

- o Initial work flowing out of MobOpts (IETF 74)
- o **First presented in Anaheim** (IETF 77) (v1)
- o Updated Version 2 (Sept. '10):
 - Major revision, filled in details
- o Updated Version 3 (Nov. '10):
 - Completed remaining details
- o Updated Version 4 (May '11):
 - Minor update
- o Currently in wait for progressing

Design Objectives

1. Optimize for seamless handover
 - **Synchronize** multicast with unicast operations
2. Align with mobility protocols
 - **Transparently** plug in multicast of all flavors
3. Abstract from multicast routing
 - **Remain independent** of routing solution
4. Simplify protocol extensions
 - **Use existing message structures**

Main Contributions

- o Defines a coherent multicast membership transfer based on MLD/IGMP state records (easy handling)
- o Defines a common Multicast Mobility Header Option
- o Defines per group feedback in Multicast Acknowledgement Option
- o Dynamically steers Multicast forwarding via MLD
- o Transparently accounts for MLD/IGMP interoperability
- o Seamlessly plugs into FMIPv6 and PFMIPv6 protocol semantics and behavior

Summary & Outcome

- o Document matured in details

- Protocol includes transport of MLD records in MobOpt/ AckOpt Mobility Options, IPv4 support, MLD interoperability, ...

- o Several reviews arrived:

- Please have a look & help to improve the document!

Proposal to WG:

Adopt this as a WG item

Questions/Comments?