

Goals and Benefits of Multihoming

draft-ernst-generic-goals-and-
benefits-02.txt

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Motivations for ... this draft

- This is a document outlining why one would like to have a node (host or router) equipped with several interfaces
- Motivations are basically the same for:
 - Fixed nodes
 - Nomadic nodes
 - Mobile nodes
- So, this document is not about goals and benefits of the MONAMI6 WG but such needs applies more importantly to mobile nodes and thus to MONAMI6 WG.

Section 2: Terminology

- A node (either a host or a router) is **multihomed** when it has **multiple IPv6 addresses** to choose between, i.e. either when:
 - **Multiple prefixes** are advertised on the link the node is attached to
 - **Multiple interfaces** of the nodes are attached to the same link or not

Section 3: Scenarios & Motivations

- Real-life scenarios to demonstrate the need for multiple access technologies
 - As a replacement of a failed/inappropriate access
 - Simultaneously, according to user preferences or link characteristics
- Basic and complementary needs:
 - Accelerate transmission (F+N)
 - Redirect established sessions (F+N)
 - Set up preferences (F+N+M)
 - Ubiquitous access (M)
 - Reliability (F+N+M)

F=Fixed, N=Nomadic, M=Mobile

Section 4: Goals and Benefits of Multihoming

- 6 distinct benefits are devised:
 - Permanent and Ubiquitous Access: **M only**
 - Reliability: **F+N+M**
 - Load Sharing: **F+N+M**
 - Load Balancing/Flow Distribution: **F+N+M**
 - Preference Settings: **F+N+M**
 - Aggregate Bandwidth: **F+N+M**
- 1st only benefits to mobile nodes, but all the other benefit to either **F**ixed nodes, **N**omadic nodes or **M**obile nodes.

Section 5: Classification

- What benefits are achievable ?
 - Case 1: One interface, multiple prefixes are announced
 - Few benefits are achievable (load sharing, preference set up), most are unlikely, ubiquitous access impossible (in today's world)
 - Case 2: Several interfaces
 - All benefits are achievable, ubiquitous access is more likely.

Section 6: Issues

- Generic Issues that must be solved
 - Source Address Selection
 - Recovery Delay
 - Change of Traffic Characteristics
 - (probably more issues to come)
- Address Change: this is where MIP6 and NEMO Basic Support are coming in.
 - MIP6: draft-montavont-mobileip-multihoming-pb-statement
 - NEMO: draft-ietf-nemo-multihoming-issues

Monami6 WG Item ?

- This document shows motivations – when applied to mobile nodes – of the people behind the set up of this WG.
- This document is designed to fit the 1st WG deliverable:
 - A document explaining the motivations for a node using multiple interfaces and scenarios where it may end up with multiple global addresses on its interfaces [Informational]
 - June 06: Submit Motivations & Scenario to IESG

Monami6 WG Item ?

- Does the WG accept draft-ernst-generic-goals-and-benefits-02.txt as WG draft ?
- If yes, name it:
 - “Scenarios and Motivations for Host Multihoming”
 - draft-ietf-monami6-scen-motivations ?