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Analysis of Multihoming in MIPv6 draft-ietf-monami6-mipv6-analysis-03.txt

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Introduction

 Document details issues arising with multihomed MNs operating MIP6

Structure

- Terminology
- Goals and Node Capabilities
- Multihoming Configurations: (#HoAs,#CoAs)
- Multihoming Issues
- Appendix: why MN would redirect flows

Changes between v-02 and v-03

- Vast editorial brush-up
- Nits: Added Security and IANA considerations
- "Interface Switching" removed (kept only "Flow Distribution")
- S3: Cababilites re-ordered
- S4: Taxonomy: (x,y) instead of (Hx,Cy)
- S5: Title change from "Scenarios" to "Configurations"

Changes between v-02 and v-03

- General IPv6-related issues (6.1)
 - Reordered and clarified
 - Match NEMO multihoming analysis
- Now:
 - 6.1.1 Failure Detection
 - -6.1.2 Path Exploration: Added
 - -6.1.3 Path Selection
 - 6.1.4 Rehoming: was "6.1.4 Flow Redirection" / reworded
 - 6.1.5 Ingress Filtering completely rephrased

Changes between v-02 and v-03

- MIP6-specific Issues
 - "HA Synchronisation" added

Undergoing Changes

- Definition of MN reviewed:
- A MN is said multihomed when it has either i) multiple addresses which are used as source addresses or ii) multiple tunnels to transmit packets, or both.
- A MN may have multiple tunnels in the following cases:
 - When it has multiple HoAs, that is if multiple prefixes are available on the home link or if it has multiple interfaces named on (presumably) distinct home links.
 - When it has multiple CoAs, that is if multiple prefixes are available on the foreign link or if it has multiple interfaces attached to (presumably) distinct foreign links.
 - When the HA has multiple addresses.

Open Points: Comments & Contribs Appreciated

- Any issue missing ?
- Shall we deal more with HA addresses than we currently do, if so how ?
 - Is the current document coherent ?
 - HA address not considered in the taxonomy
 - Does it bring new issues we shall document ?
- MIP6 & RO
 - RO brings an alternative path
 - Is this sufficiently covered in the document ?
- Check Issue Table and match Issues with (x,y) cases

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Open Points: Comments & Contribs Appreciated

- May need to better refer to Shim6 docs
- Do we agree about the classification between "MIP6-specific Issues" and "Implementation Issues" ?
- Add a section explaining the situations where failures would occur

– Appendix ?