

shim6-applicability-01

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- An Internet Standard Specification includes both Technical Standards (TS) and an Applicability Statement (AS)
- The applicability statement specifies how one or more technical standards may be applied to support a particular Internet capability

Applicability

- Summarise interactions between shim6 and related protocols
- The AS is also a convenient place to introduce concepts and capabilities to integrators and operators, as well as implementers

Draft History

- (00) An empty template; a skeleton on which to hang words.
- (01) Meat (mainly due to Marcelo)

Brief Summary

Application Scenarios

- a brief description of the approach taken by shim6 to provide a multi-homing capability
- future content might describe more explicitly the advantages of this approach from the perspective of residential users, enterprise users, etc.

Addressing

- IPv6-only (probably!)
 - chances of acceptance of shim6 by operators in IPv4 arguably substantially lower than IPv6, but who knows
- CGA/HBA involves encoding data in the lower 64 bits of an address, which imposes a restriction on prefix length

Capabilities

- Fault Tolerance
 - good once context is established, cycling through (source, dest) locator pairs
- Load Balancing
 - weak; relies on aggregate behaviour of many sessions over which a useful distribution of (source, dest) pairs has been achieved

Capabilities

- Traffic Engineering
 - weak; some ability to influence selection of locator pairs using the Locator Preferences option, but not TE in the manner that many operators have come to interpret the term

Other Protocols

- Mobile IPv6, NEMO
- Secure Neighbour Discovery (SeND)
- SCTP
- HIP (we have some text, but it's not in -01)

Next Steps

Missing Content

- Interaction with transport protocols
 - state machine hints (e.g. TCP timeout approaching)
 - timer manipulation
 - hook to disable shim6 context on individual sessions

Missing Content

- Site Policy
 - the ability of a site administrator to impose site policy in order to guide load distribution
- Clearer presentation of TE scenarios