

IETF – 3GPP workshop on IPv6 migration

Summary and Conclusions

Source: Workshop chairmen
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Summary

- Scenarios for IPv6 migration were discussed based on 3GPP Technical Report 23.975
 - The discussion focused on validating the scenarios
- General IPv6 transition and deployment guidelines were outlined based on input from IETF
- Solutions for migration and v4-v6 co-existence were presented
 - Solutions included existing RFCs and working group items but also proposals in Internet Drafts
 - Gap analysis wrt transition scenarios was discussed

Conclusions on scenarios

- Scenarios 1 and 3 based on dual-stack and IPv6-only deployments were generally recognized as valid
 - See docs IPW100013, IPW100028
- Scenario 2 was also recognized as valid, addressing two separate problems related to insufficient RFC1918 space and subscriber identification
 - See doc IPW100027
- Scenario 4 did not receive wide support from the workshop, largely because it was felt that it addressed a problem already solved by other scenarios
- Variants of some of these scenarios were brought up during the discussions, conclusions were not reached on these
 - These may need further discussion

Conclusions on solutions

- It was recognized that necessary support in the network and devices is already available to “switch on” IPv6 in 3GPP networks
 - Some networks reported running dual stack
 - Some networks reported running IPv6-only now
- Solutions enhancing existing mechanisms for dual stack deployments and new solutions for IPv6-only deployments drew wide support
 - Gateway-initiated Dual Stack Lite
 - Stateless and stateful IPv4/IPv6 translation

Next steps: 3GPP

- IETF and 3GPP are expected to focus further work based on the conclusions of the workshop
 - Note that the workshop itself does not have the mandate to make formal decisions
- 3GPP is expected to identify possible normative specification impacts, if any, of the preferred solutions
- A need was identified to provide more operational guidelines about IPv6 deployment to 3GPP operators
 - The best location for these guidelines is FFS (e.g. 3GPP TR 23.975, GSMA, etc)

Next steps: IETF

- IETF and 3GPP are expected to focus further work based on the conclusions of the workshop
 - Note that the workshop itself does not have the mandate to make formal decisions
- IETF is encouraged to continue working on stateless and stateful IPv4/IPv6 translation mechanisms
 - These mechanisms are being worked on in IETF BEHAVE group
- IETF is also encouraged to consider new solutions that are not yet working group items
 - Gateway Initiated DS Lite
 - Per-interface NAT44 bindings addressing IPv4 address shortage
- Note that the workshop has not set any timelines