Fast Network Notifications Problem Statement

draft-ietf-rtgwg-net-notif-ps-00

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Background Recap

- Modern network applications, ranging from AI/ML training to cloud services, require adaptive networks to ensure reliable and congestion-free data transfer within or across data centers.
- Existing traffic management mechanisms often face limitations in responsiveness, coverage, and operational complexity, particularly in high-speed, large-scale, dynamic network environments.
- A good and timely understanding of network operational status (such as congestion and failures) can help to improve utilization, reduce latency, and enable faster response to critical events
- This document describes the problem statement of fast network notifications
  - It is used as a supporting document for the incubation of a new WG on FAst Network Notification (FANN)

Updates since IETF 124

- Many comments and suggestions have been incorporated
  - Thanks again to people who reviewed the draft and contributed to the text
- Changes before the adoption call:
  - New coauthor: Reshad Rahman
  - The scope is narrowed down to **Fast Network Notifications**
  - The structure of the document is reorganized
  - The introduction is enhanced with why fast notifications is needed, and what fast notification means
  - The descriptions of the existing mechanisms are revised to be more accurate
  - One subsection about the possible actions is added, it also clarifies that the action mechanisms are out of the scope
  - The security considerations are enhanced

Updates since IETF 124 (Cont.)

- Changes during the adoption call:
  - The abstraction is revised to address the comments on “lossless”
  - Further clarify the scope is limited to fast network notifications
  - Fast network notifications apply to a range of network scenarios and topologies, while the solutions for them may differ
  - The text about recipients is reduced to focus on the receiver entities
  - Delivery mechanisms for fast network notification are expanded to include subscription based approaches
  - A set of editorial changes
- After WG adoption, a github repository was created for collaboration
  - https://github.com/ietf-wg-rtgwg/draft-ietf-rtgwg-net-notif-ps
  - All the issues received so far are closed

Progress of Fantel/FANN Side Meeting

- The goal was to polish the charter text in a face-to-face meeting
- Very constructive meeting and good discussion there
  - Thanks to all the participants
  - One of the agreement was to use FANN as the potential WG name
- The charter text has been updated and all the issues have been closed
  - https://github.com/Yingzhen-ietf/FANN-charter/blob/main/Proposed%20FANN%20charter.txt
- Please review and continue the discussion on FANTEL list (fantel@ietf.org)

Next Steps

- Authors will update the problem statement draft to reflect the comments received during the side meeting
- Welcome further review and comments to the problem statement document
  - Either send comments to the list or raise issue in the github repository

Thanks