

RSVP for TSN Networks

draft-trossen-detnet-rsvp-tsn-00

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RECAP: Premise of the Draft



“This document provides a solution for control plane signaling by virtue of **proposing changes to RSVP** signaling with deterministic services at the underlying TSN enabled layer. The solution covers distributed, centralized, and hybrid signaling scenarios in the TSN and SDN domain. The proposed changes to RSVP IntServ, called **RSVP TSN** in the remainder of this document, provide a **better integration** with lower layer technologies for resource reservation, for which we outline example API specifications for the realization of RSVP TSN”


Limited the scope of draft to RSVP changes for better TSN integration, following discussion at IETF110


Main Changes from Last Version

- Focused on RSVP TSN and its interactions with lower layer technologies
 - Mapping of DnFlows onto lower layer network technologies, not limited to IEEE802.1Q bridges
- Simplified use cases
 - Provided single deterministic network with TSN-enabled end systems, enabling three use cases with service proxy for TSN-Detnet interconnection or non-proxy E2E deterministic services -> use of RSVP TSN across those use cases
- Section 3 on design rationale
 - Focus on outlining changes to (i) data plane model, (ii) reservation styles, (iii) object definitions and (iv) flow specifications
- Section 4 on RSVP-TSN
 - Layer interactions revised from previous version
 - Changed API descriptions to align with revised focus

Revised Structure

- 1 Introduction
 - 2 Use Cases 
 - 3 Design Rationale
 - RSVP IntServ vs RSVP TSN Data Plane Model
 - RSVP IntServ vs RSVP TSN Resource Reservation Styles
 - RSVP IntServ vs RSVP TSN Object Definitions
 - RSVP IntServ vs RSVP TSN Flow Specification

Revised from previous version to fit TSN scope
 - 4 RSVP-TSN
 - Layer interactions between RSVP TSN & Lower Layer
 - API for deterministic QoS
 - DnFlow Signaling Interface (DnFSI)
 - RSVP-TSN lower API
 - DnFlow Transport Interface (DnFTI)

Revised and aligned terminology
 - 7 Security Considerations 
 - 8 IANA Considerations
 - 9 Conclusion
 - 10 References
- Will come in next version

Addressing Received Feedback

- What is the focus of the document? CP signaling? TSN?
 - > narrowed the document to RSVP TSN proposal for TSN-enabled lower layer technologies
 - > impact on use case, design rationale and RSVP TSN proposal
- What is the scenario here?
 - > Addressed in new use case section
- Clarify terminology overall
 - > Done

Next Steps

- Fill in message formats and protocol info
- Seek more input from list

Feedback & Comments are
highly welcome!

...including co-authors and contributions!