IEEE P802.1Qdd Resource Allocation Protocol (RAP)

Examples for Using Multiple-Context Talker Announce for Redundancy

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Introduction

This deck provides the examples for the feature of Multiple-Context Talker Announce used to make reservations for streams transmission over redundant paths, as introduced in P802.1Qdd/D0.2.

The description and specification for this feature and relevant to this deck can be found in the following subclauses in D0.2:

- 99.2.3.1: Talker Announcement
- 99.2.3.2: Listener Attachment
- 99.7.3.7: Redundancy Control sub-TLV
- 99.10.1.1: VLAN context
CB Scenario: End-2-End Redundancy (FRER only in End Stations)

- 2 VLAN contexts provide two redundant paths from Talker to each Listener
Multiple-Context Talker Announce for End-2-End Redundancy

- Talker declares two Talker Announce attributes, each with one VLAN context.
Listener Attach – Case 1

- Both Listeners accept a minimum of one successful path and declare Listener Attach with “ready”.

Established stream paths

Stream’s data frames tagged with VID (1)
Listener Attach – Case 2

- L1 does not accept only one successful path and declares a Listener Attach with “failed”.

Established stream paths

Stream’s data frames tagged with VID (1)
CB Scenario: Network Redundancy (FRER only in Bridges)

- 3 VLAN contexts provide 3 redundant paths from Talker to each Listener

VLAN membership registration on potential stream transmission ports

Redundant stream paths to be established

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Multiple-Context Talker Announce for Network Redundancy

- Talker declares one Talker Announce attribute to carry 3 VLAN contexts.

Talker Announce: ready on VLAN 1, 2, 3

Talker Announce: ready on VLAN 3, failed on VLAN 2

Failure point (e.g. lack of resources)
Listener Attach – Case 1

- All Listeners accept a minimum of 2 successful redundant paths and declare Listener Attach with “ready”.

Established stream paths

- Listener Attach: ready
- Listener Attach: partial ready
- Listener Attach: failed

Stream’s data frames tagged with VID (1)
Listener Attach – Case 2

• L1 does not accept only 2 successful paths and declares a Listener Attach with “failed”.

Established stream paths

Stream’s data frames tagged with VID (1)

Listener Attach: ready
Listener Attach: partial ready
Listener Attach: failed