Processing of Reservation Messages in SRP

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On receipt of Reservation Messages - I

1. On receipt of RESV message

2. Corresponding stream exists? (10.4.1.a) NO

3. Inbound port == Stored Value? (10.4.1.b) NO

4. Resv. Status >= Stored Value? (10.4.1.b) NO

5. Exit

6. Restart Resvtimer (10.4.1.c) YES

7. Update the information stored in Stream Information Database (10.4.1.d) YES

Information including Inbound Port, Resv. Status, Resource Requirement.

Message arrives from a different inbound port. Check the priority of Resv. Status.
On receipt of Reservation Messages - II

1. New Resv. Status == SUCCEEDED?
     - NO: Old Resv. Status == SUCCEEDED?
       - NO: Repeat for each Port which is Forwarding in the Reservation Message Port Map of the associated Stream Registration Entry.
       - YES: Set the Stream Data Port Map as "Filtering" for this port (10.4.1.g)
     - YES: Release any reserved resource for this stream on this port (10.4.1.g)
   - YES: Exit

   - NO: Exit
   - YES: Send out a RESV message via this port with the new Resv. Status (10.4.1.f)

3. Exit
On receipt of Reservation Messages -III

1. Old Resv. Status == SUCCEEDED?
   - NO
     - Local admission control and resource reservation for the stream on this port (10.4.1.e)
   - YES
     - Resource reservation successful?
       - YES
         - Set the Stream Data Port Map as "Forwarding" for this port
       - NO
         - Set the Stream Data Port Map as "Filtering" for this port

2. Repeat for each Port which is Forwarding in the Reservation Message Port Map of the associated Stream Registration Entry.

3. Resource reservation successful?
   - NO
     - Old Resv. Status == FAILED?
       - NO
         - Send out a RESV message via this port with FAILED status
       - YES
         - Send out a RESV message via this port with SUCCEEDED status
   - YES
     - Send out a RESV message via this port with SUCCEEDED status

4. Set the Stream Data Port Map as "Forwarding" for this port

5. Send out a RESV message via this port with SUCCEEDED status

Exit
On receipt of Reservation Messages -IV

New Resv. Status ==
Old Resv. Status ==
SUCCEEDED

NO

Resource requirement changed?

NO

Exit

NO

Modify resource reservation for the stream on this port (10.4.1.h)

NO

Resource reservation successful?

YES

Set the Stream Data Port Map as “Forwarding” for this port

Send out a RESV message via this port with SUCCEEDED status and updated resource requirement

NO

Send out a RESV message via this port with FAILED status and updated resource requirement

YES

Set the Stream Data Port Map as “Filtering” for this port

Repeat: for each Port which is Forwarding in the Reservation Message Port Map of the associated Stream Registration Entry.

Exit

Exit
Expiration of Reservation message timer

- On expiration of Reservation timer of a stream (10.4.2):
  - Restart the Reservation timer of this stream

- Old Resv. Status == TIMEOUT?
  - NO: Update the Resv. Status in Stream Information Database as TIMEOUT
  - YES: Exit

- Old Resv. Status == SUCCEEDED?
  - NO: Send out a RESV message via this port with the TIMEOUT Resv. Status (10.4.1.f)
  - YES: Set the Stream Data Port Map as 'Filtering' for this port (10.4.1.g)

- Release any reserved resource for this stream on this port (10.4.1.g)

- Send out a RESV message via this port with the TIMEOUT Resv. Status (10.4.1.g)

Repeat for each Port which is Forwarding in the Reservation Message Port Map of the associated Stream Registration Entry.
Expiration of Refresh timer

1. On expiration of Refresh timer (10.4.3)
   - Restart the Refresh timer

2. For each registered stream
   - Resv. Status := SUCCEEDED?
     - NO: Send out a refresh RESV message via this port with the stored Resv. Status
       - Exit
     - YES: Repeat: for each Port which is Forwarding in the Reservation Message Port Map of the associated Stream Registration Entry.

3. This Port is Forwarding in the Stream Data Port Map?
   - NO: Local admission control and resource reservation for the stream on this port
   - YES: Send out a refresh RESV message via this port with the stored Resv. Status (SUCCEEDED)
     - Exit

4. Resource reservation successful?
   - NO: Send out a RESV message via this port with FAILED status
     - Exit
   - YES: Set the Stream Data Port Map as “Forwarding” for this port
     - Send out a RESV message via this port with SUCCEEDED status