draft-ietf-netconf-subscribed-notifications
Open - Replay for configured subscriptions

- Without replay, events are just sent once transport is available.
- There are classes of applications (e.g., IMA) which require visibility into all events placed into a event stream since boot.
- What is the visibility mechanism for configured subscriptions when there are meaningful events between Publisher boot & the “subscription-started” notification?
- Without a mechanism, only events created after transport is available are visible, which doesn’t meet the requirement for that class of applications.

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Options - Replay for configured subscriptions

Option 1: Configured Replay *Current draft*

The empty leaf "configured-replay" requires features {configured, replay}.
Events beginning with boot are placed at the front of the stream.

Option 2: Do not support replay for a configured subscription

To fill the event gap, each receiver creates a targeted dynamic subscription. However:

- Independent dynamic subscriptions will be needed to each receiver. Could result in an large number of temporary subscriptions at boot time.
- Delayed initial stream processing at receiver:
  - At "subscription-started" recognize missing events,
  - pause event processing and buffer incoming events,
  - request missing events via the dynamic subscription,
  - and insert them into the stream in the proper order.

  These functions already needed where you need to recover from packet loss. But many a higher quantity of events might be in play:
  - Boot time often longer than network loss
  - Event quantities at boot are high
  - Dynamic subscription availability delay
- Receiver won't know when boot occurred, and therefore will subscribe to events pre-boot, and then interpret from the events themselves when boot occurred.
- Receiver must always support dynamic subscription.
  - This may be a new function needed for receivers where network loss is not an issue.
  - For Option 1, if it is not an issue, receiver RPCs can be locked-out (resulting in tighter security)

Note: Where there are independent receiver transport sessions for a subscription, these will be established at different times. And different initial events will go to each receiver.