Subscription to Multiple Stream Originators

draft-zhou-netconf-multi-stream-originators

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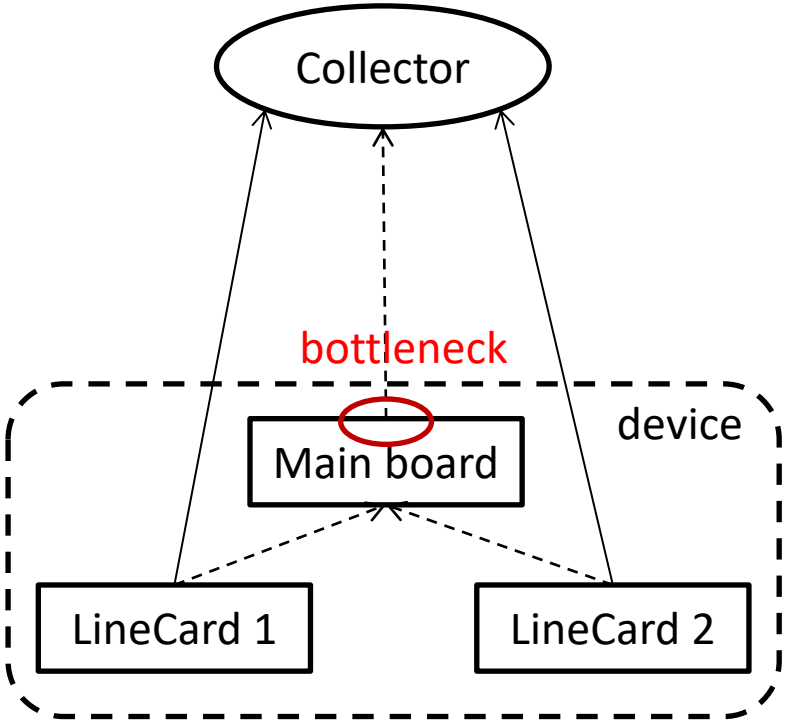
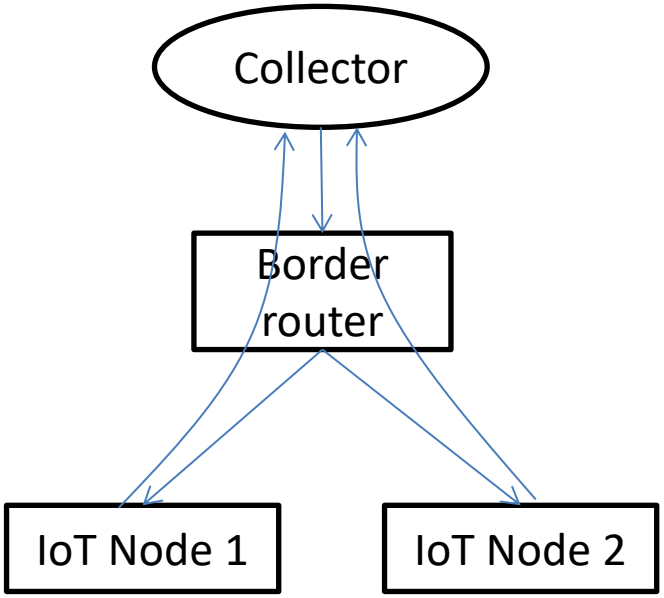
Use Case 1

- Large amount of data collection from devices with main board and line cards.
- Existing solution consider only one push server reside in the main board.
  - Result in performance bottleneck when data are forwarded to the main board and converged to one consolidated stream.
- Request for **distributed data collection mechanism** which can directly push data from line cards to a collector.



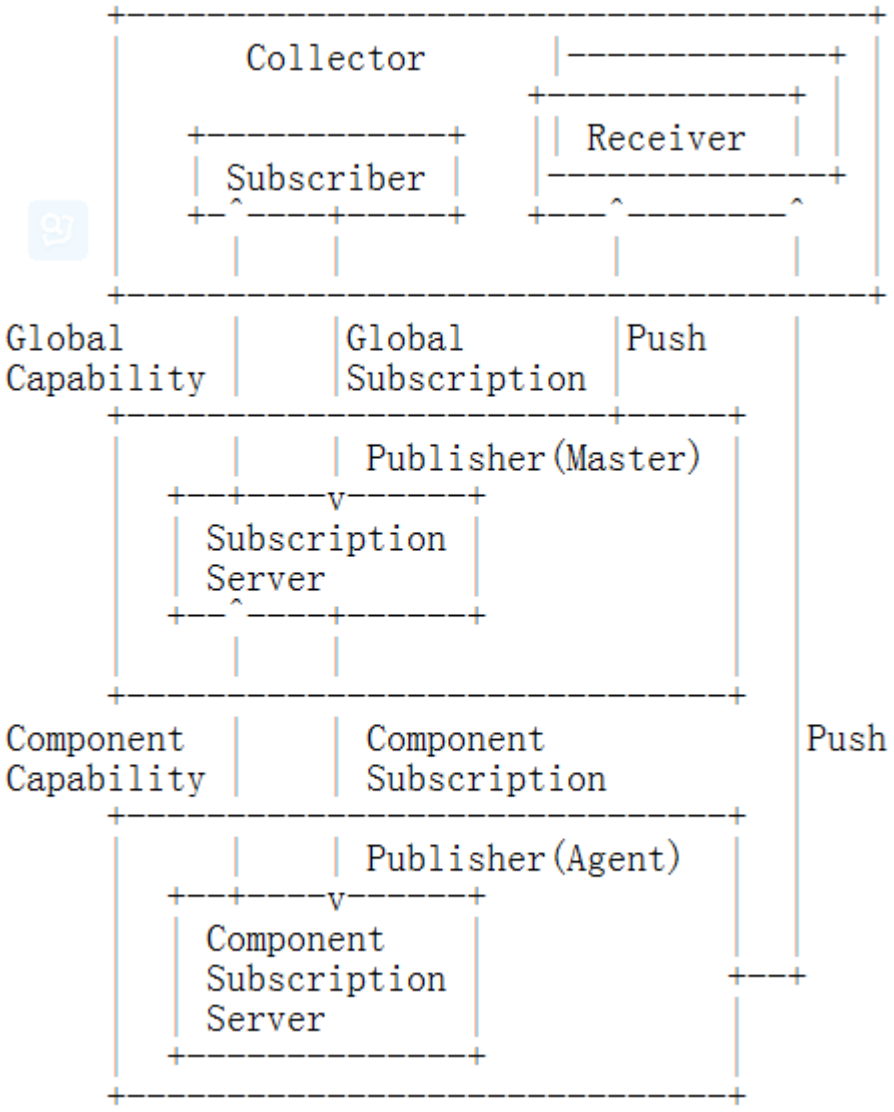
Use Case 2

- Collector cannot subscribe/access data directly from IoT nodes.
  - subscribe data from border router
  - border router distribute the subscription to Nodes.
  - IoT Nodes stream data to the collector through BR.
  - Collector assembles the subscription data.



Solution Overview

- Collector
  - Subscriber
  - Receiver
- Publisher
  - Two roles: master and agent
  - Subscription server
  - Component subscription server



Issues Being Worked

- Subscription Decomposition
  - Keep track of resources and the associated publisher
  - Make decision on decomposing the global subscription into multiple component subscriptions.
- Publication Composition
  - Compose the component notifications into one.
- Subscription Management
  - Error codes related to the Subscription Decomposition and Component Subscription
- Notifications on Subscription State Changes
  - Each component subscription maintains its own subscription state and is responsible for sending its own OAM notifications.
- Potential Issues
  - Synchronization
  - Service discovery
  - NAT

Thank you