Subscription Drafts

IETF #101 - NETCONF WG Eric Voit & Alexander Clemm 20-Mar-2018

With Thanks to...

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NETCONF WG Subscription Drafts addressed in the session...

Custom Subscription to Event Streams draft-ietf-netconf-subscribed-notifications

YANG Datastore Subscription draft-ietf-netconf-yang-push

NETCONF Support for Event Notifications draft-ietf-netconf-netconf-event-notifications

RESTCONF & HTTP Transport for Event Notifications draft-ietf-netconf-restconf-notif

Notification Message Headers and Bundles draft-ietf-netconf-notification-messages

WG Last Call underway

draft-ietf-netconf-subscribed-notifications Updated with WGLC so far...

v10 to v11: based on review comments

- Filtering of event records within streams based on NACM permissions of event type added
- Security considerations updated based on YANG template
- Dependency QoS made non-normative on HTTP2 QoS
- Tree diagrams referenced for each figure using them
- Reference numbers placed into state machine figures
- Broke configured replay into its own section
- Trees and YANG model reconciled where deltas existed
- Many wording clarifications

Unresolved

- Several questions in coming slides.
- More could evolve out of existing discussions.

draft-ietf-netconf-subscribed-notifications Review Question to WG #1:

Do we use a integer object as an index for receiver instead of address+port

Option 1

+--rw receiver* [address port] +--rw address inet:host +--rw port

Current

Option 2

+--ro receiver* [name]
+--ro name unit8
+--ro address inet:host
+--ro port

Preference

Option 3

+--ro receiver* [name] +--ro name unit8

allows for future augmentation of leafref to:

- draft-ietf-netconf-netconf-client-server
- draft-ietf-netconf-restconf-client-server
- •other?

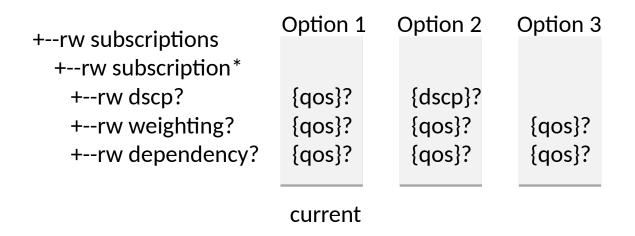
draft-ietf-netconf-subscribed-notifications Question 2:

Should we have the "subscription-state-notif" extension?

- 1.Yes (current solution)
- 2.hardcode the these notifications so none will ever go on the NETCONF stream
- 3. Rename to a different extension "exclude-from-NETCONF-stream".
 - It is possible that other drafts will want to exclude events.

draft-ietf-netconf-subscribed-notifications Question 3:

DSCP: an optional feature on its own, or should it be mainline



subscribed-notifications(sn) & yang-push(yp) Question 4:

yang-data containers in rpc-error replies, what names to use:

```
<rpc-reply ...">
  <rpc-error>
  <error-type>application</error-type>
  <error-tag>...</error-tag>
  <error-severity>...</error-severity>
  <error-app-tag>...</error-app-tag>
  <error-info>
    place the container here
  </error-info>
  </rpc-error>
  </rpc-reply>
```

```
Option 1 (current)
establish-subscription-error-stream
modify-subscription-error
delete-subscription-error
establish-subscription-error-datastore
modify-subscription-error-datastore
```

```
Option 2
stream-establish-subscription-error-info
stream-modify-subscription-error-info
delete-subscription-error-info

datastore-establish-subscription-error-info
datastore-modify-subscription-error-info
```

draft-ietf-netconf-yang-push Updated with WGLC so far...

- v15 to v16: based on review comments
 - On-change dampening period and excluded change becomes a feature
- Unresolved
 - So far minor items, still being worked.

draft-ietf-netconf-netconf-event-notifications Updated with WGLC so far...

v15 to v16: based on review comments

- Wording updates per LC. Proposed fixes still to be ok'ed.
- Tweaks to non-normative examples. A script to validate examples loaded onto git.

Unresolved

 Wording for Abstract and Intro (Several alternatives exist, will take whatever the reviewers prefer.)

draft-ietf-netconf-restconf-notif Current status

- v03 to v04
 - Minor tweaks. Many updates still needed.
 - A main focus after other drafts complete WGLC

- Intersection: draft-openconfig-rtgwg-gnmi-spec-01?
 - gNMI RPCs { Capabilities, Set, Get, Subscribe }
- Unclear on how to define a standards based framework enabling transparent GRPC over HTTP2
 - Identified issue stretching back to WG adoption in 2016

draft-ietf-netconf-notification-messages

Updates since IETF #100

-v02 to -v03

- Reduced to a single bundled notification format. Will revisit as the work completes.
- New message structure driven by the desire to put the signature information at the end

```
yang-data message
  +--ro message!
    +--ro message-header
     +--ro message-time
                                vang:date-and-time
      +--ro message-id?
      +--ro message-generator-id? string
     +--ro notification-count?
    +--ro notifications*
      +--ro notification-header
       +--ro notification-time
                                   vang:date-and-time
       +--ro yang-module?
                                    yang:yang-identifier
       +--ro yang-notification-name? notification-type
       +--ro subscription-id*
                                   uint32
                                  uint32
       +--ro notification-id?
       +--ro observation-domain-id? string
      +--ro notification-contents?
        -ro notification-footer!
       +--ro signature-algorithm string
       +--ro signature-value
                                 string
       +--ro integrity-evidence?
                                  string
    +--ro message-footer!
      +--ro signature-algorithm string
      +--ro signature-value
      +--ro integrity-evidence?
                                 string
```

- Upcoming: dialogs on specific headers
 - Signatures, attestation, others
 - Implications of COMI, CBOR, UDP

Thank you!