Yang-Push Notification Capabilities

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draft-ietf-netconf-notification-capabilities-02
The problem

A contract – “MAYBe”

› Publishers generally supporting on-change notifications will not always be able to push on-change updates for some object types
  - Frequent change (inOctets counter)
  - Meaningless small change (temperature changing 0.1 degrees)
  - Not implemented
  - Resource limitation (missing HW)
  - Small constrained network node

› Support for on-change does not mean that notifications are sent for any specific object

› Need a way to indicate which object types support on-change updates
Changes 01 - 02

› On-change capability can be defined per datastore
› Added "if-feature yp:on-change" where relevant
› Unified units used (centiseconds)
› Added instance data examples

› Ready for WGLC ?
Yang Model

- Document notification capabilities
- Yang module ietf-notification-capabilities
  - On-change capability per *datastore* and per data node (yes or no)
    - 2 top level default values
    - Inherited down the data tree
    - + a *few* exceptions for specific data nodes
  - Other capacity related capabilities
    - Max objects per update
    - update & dampening period
module: ietf-notification-capabilities

ro datastore-subscription-capabilities
  +-ro (update-period)?
    |     +-ro minimum-update-period?   uint32
    |     +-ro supported-update-period*  uint32
  +-ro max-objects-per-update?  uint32
  +-ro minimum-dampening-period?  uint32 {yp:on-change}?
  +-ro on-change-capable-nodes* [datastore] {yp:on-change}?
     +-ro datastore union
  +-ro notification-sent-for-config-default?  boolean
  +-ro notification-sent-for-state-default?   boolean
  +-ro on-change-notification-capability* [node-selector]
     +-ro node-selector nacm:node-instance-identifier
  +-ro on-change-supported boolean
Example capabilities

Blue items send on-change notifications

module: ietf-interfaces

   +--rw interfaces
      +--rw interface* [name]
         +--rw name string
         +--rw type identityref
         +--rw enabled boolean
         +--ro oper-status enumeration
         +--ro statistics
            +--ro in-octets counter64
            +--ro in-broadcast-pkts counter64
            +--ro in-multicast-pkts counter64
            +--ro out-octets counter64

yangpush-notification-capabilities

notification-sent-for-config-default = true (by default)

notification-sent-for-state-default = true

/interfaces/interface/statistics :
   on-change-notification-sent = false

/interfaces/interface/statistics/out-octets :
   on-change-notification-sent = true

/interfaces/interface/statistics/in-octets :
   on-change-notification-sent = true