Yang-Push
On-change Notification Capability

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2018-03-12
A contract – “MAYBe”

› Publishers supporting on-change notifications will not always able to push updates for some object types on-change.
  - 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
NMS Needs

› A client e.g. a management system (NMS) needs to know in which case will it get the on-change notifications

› NMS applications may depend on the notifications
  – Notifications are not just nice to have, they may be critical to a management function

› How can NMS depend on notifications if they may or may not come?

› Yang Interface is a contract (Andy B. as I remember)
  – A contracts can’t use terms like may or may-not
Yang Model based

› Lets document on-change capabilities. But how:
  - vendor independent (standard)
  - formal (no freeform English text please)
  - Information needed both in
    › implementation-time - for NMS developers, system integrators
    › run-time - useful especially if the capability might change
  - Same format both in implementation-time and run-time

› So let’s make it a YANG Module
  - Describe for each data node whether it supports on-change notification

› Let’s use YANG Instance Data for implementation-time
  - draft-netmod-lengyel-yang-instance-data
ietf-notification-capabilities.yang

Augment ietf-yang-library with module specific data

• Default values for each module
• Data node specific values
• Effective capability value inherited down the data tree

module: ietf-notification-capabilities
  augment /yanglib:yang-library/yanglib:module-set/yanglib:module:
    +--ro notification-sent-for-config-default? boolean
    +--ro notification-sent-for-state-default? boolean
    +--ro on-change-notification-capability* [data-node-selector]
      +--ro data-node-selector nacm:node-instance-identifier
      +--ro on-change-notification-sent? boolean
<instance-data
ida:instance-data-set="acme-on-change-capability"
<yang-library>
 <module-set>
  <name>basic</name>
  <module>
   <name>ietf-system</name>
   <notification-sent-for-config-default>
    true
   </notification-sent-for-config-default>
   <notification-sent-for-state-default>
    true
   </notification-sent-for-state-default>
   <on-change-notification-capability>
    <data-node-selector>
     /sys:system-state/sys:clock/sys:current-datetime
    </data-node-selector>
   </on-change-notification-capability>
  </module>
 </module-set>
</yang-library>