YANG-PUSH
ON-CHANGE
NOTIFICATION
CAPABILITY

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draft-lengyel-netconf-notification-capabilities

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A CONTRACT – “MAYBE”

› Publishers supporting on-change notifications will not always be able to push on-change updates for every object type.
  – Not implemented because
    › Too frequent change (inOctets counter)
      - (Note: SmartFilters may provide a solution -> later )
    › Meaningless small change (temperature changing 0.1 degrees)
    › Any other reason
  – Resource limitation (missing HW)
  – Small constrained network node using a common model with Big systems

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

Let's document on-change capabilities. But how:
- vendor independent (standard)
- formal (no free form English text please)
- Information needed both during
  - 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 (with default “not supported unless specified”)

Instantiated by server during runtime

YANG Instance Data for implementation-time
- draft-netmod-lengyel-yang-instance-data
IETF-NOTIFICATION-CAPABILITIES.YANG

• Simplified YANG module
• Standalone model
  • One model to cover full YANG server model, not list entry per YANG module implemented
  • Not augmenting ietf-yang-library
  • Not augmenting ietf-subscribed-notifications as it has no suitable root container
• Default values per YANG server – state/config
• Data node specific values
• Effective capability value inherited down the data tree
• Due to defaults and inheritance only few specific markings needed
module: ietf-notification-capabilities

  +--ro on-change-notification-capability
  
  +--ro config-default? boolean
  
  +--ro state-default? boolean
  
  +--ro notification-capability* [node-selector]
  
  +--ro node-selector nacm:node-instance-identifier
  
  +--ro notification-sent boolean
  <name>acme-router-on-change-capability</name>
  <revision>2108-01-25</revision>
  <description>Notification capability</description>
  <data>
    <on-change-notification-capability xmlns="urn:ietf:params:xml:ns:yang:ietf-notification-capabilities">
      <state-default>true</state-default>
      <notification-capability>
          /sys/system-state/sys:clock/sys:current-datetime
        </node-selector>
        <notification-sent>false</notification-sent>
      </notification-capability>
    </on-change-notification-capability>
  </data>
</instance-data-set>
OPEN ISSUES – WAY FORWARD

› Model capabilities separately for each NMDA datastore?
  – Proposal: No, it would be an overkill

› Names in model too long
  – Module structure should be OK
  – Make names shorter

› Request adoption as workgroup document

› Received support on last IETF
› Received support and comments on the mailing list