

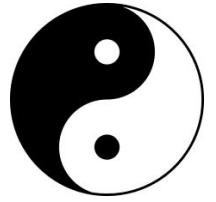
Yang-Push On-change Notification Capability

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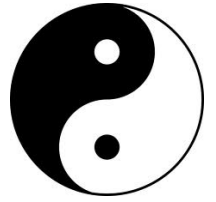
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A contract – “MAYBe”



- › Publishers supporting on-change notifications will not always be 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

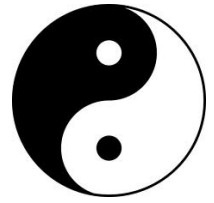


- › Lets document on-change capabilities. But how:
 - vendor independent (standard)
 - formal (no freeform English text please)
 - Information needed both in
 - › implementation-time - for NMS developers, system integrators
 - › run-time - useful especially if the capability might change
 - Same format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