

Extensible YANG Model for Network Telemetry Notifications

draft-netana-nmop-message-broker-telemetry-message

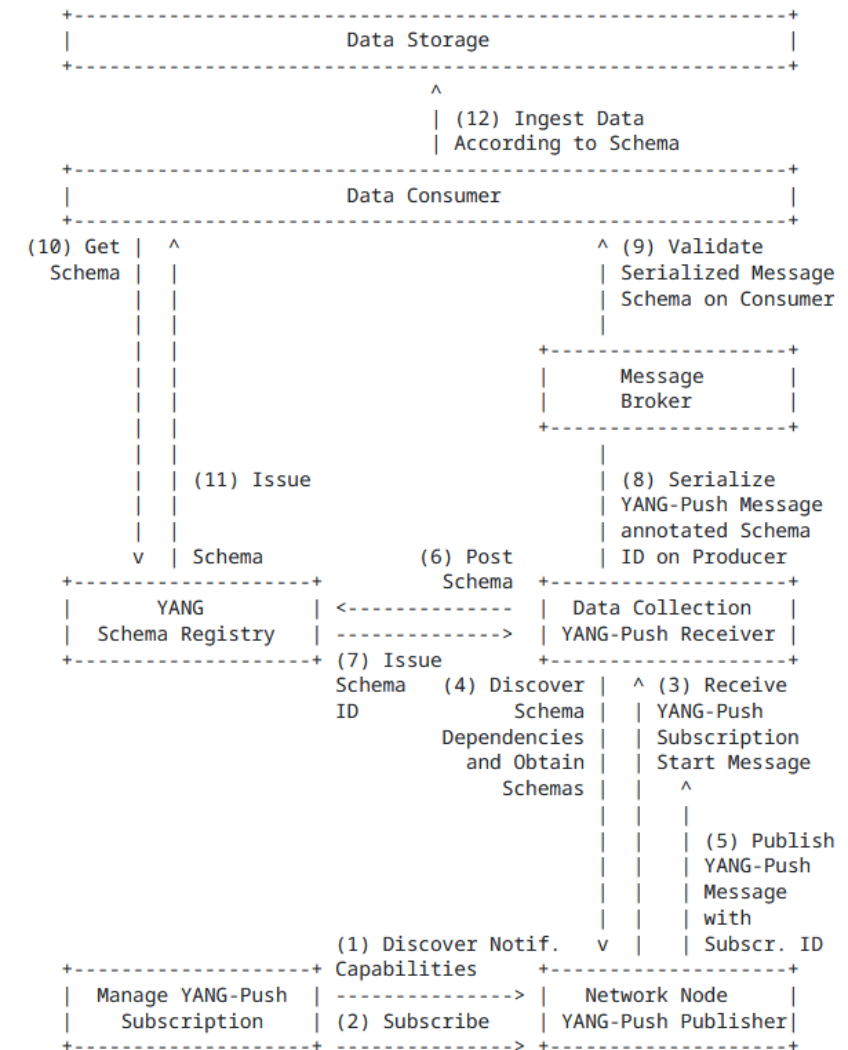
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YANG-Push to Message Broker Architecture

draft-ietf-nmop-yang-message-broker-integration

- The integration architecture is defined in draft-ietf-nmop-yang-message-broker-integration
- The message produced by the **Data Collection YANG-Push receiver** towards the **Message Broker** is assumed to be the same as the one received from the router.
- In production networks, operators often enrich collected data with additional information such as collection time and the YANG-Push subscription path.



What metadata are need?

- The network operating system collected the data
- Network platform belongs the network node
- The subscribed xpath, sub-tree filter and its schema reference
- Time of data collection received the data
- Additional provider-specific metadata is necessary for a consumer to make sense of the data

ietf-telemetry-message Schema Tree

draft-netana-nmop-message-broker-telemetry-message

1. When and how the message is collected
2. Information about the publisher node.
3. Information about the YANG-Push receiver
4. Session specific metadata, extended with augmentations.
5. Provider specific metadata
6. YANG-Push message received from the router

```
module: ietf-telemetry-message
  +--ro message
    +--ro timestamp          yang:date-and-time      1
    +--ro session-protocol    telemetry-session-protocol-type
    +--ro node
      | +--ro address          inet:host
      | +--ro port             inet:port-number
      | +--ro platform-name?   string
      | +--ro vendor?          string
      | +--ro vendor-pen?      uint32
      | +--ro software-version? string
      | +--ro software-flavor? string
      | +--ro os-version?      string
      | +--ro os-type?         string
      +--ro collector
        | +--ro address          inet:host
        | +--ro port             inet:port-number
        | +--ro platform-name?   string
        | +--ro vendor?          string
        | +--ro vendor-pen?      uint32
        | +--ro software-version? string
        | +--ro software-flavor? string
        | +--ro os-version?      string
        | +--ro os-type?         string
        +--ro session-metadata
          | +--ro event-time      yang:date-and-time
          +--ro metadata
            | +--ro labels* [name]
            | +--ro name          string
            | +--ro (value)
            |   +--:(string-value)
            |   | +--ro (string-value)?
            |   | +--:(string-value)
            |   | +--ro string-value? string
            |   +--:(anydata-value)
            |   +--ro (anydata-value)?
            |   +--:(anydata-value)
            |   +--ro anydata-value? anydata
            +--ro payload?        anydata
    +--ro payload?              anydata      6
```

ietf-telemetry-message Schema Tree

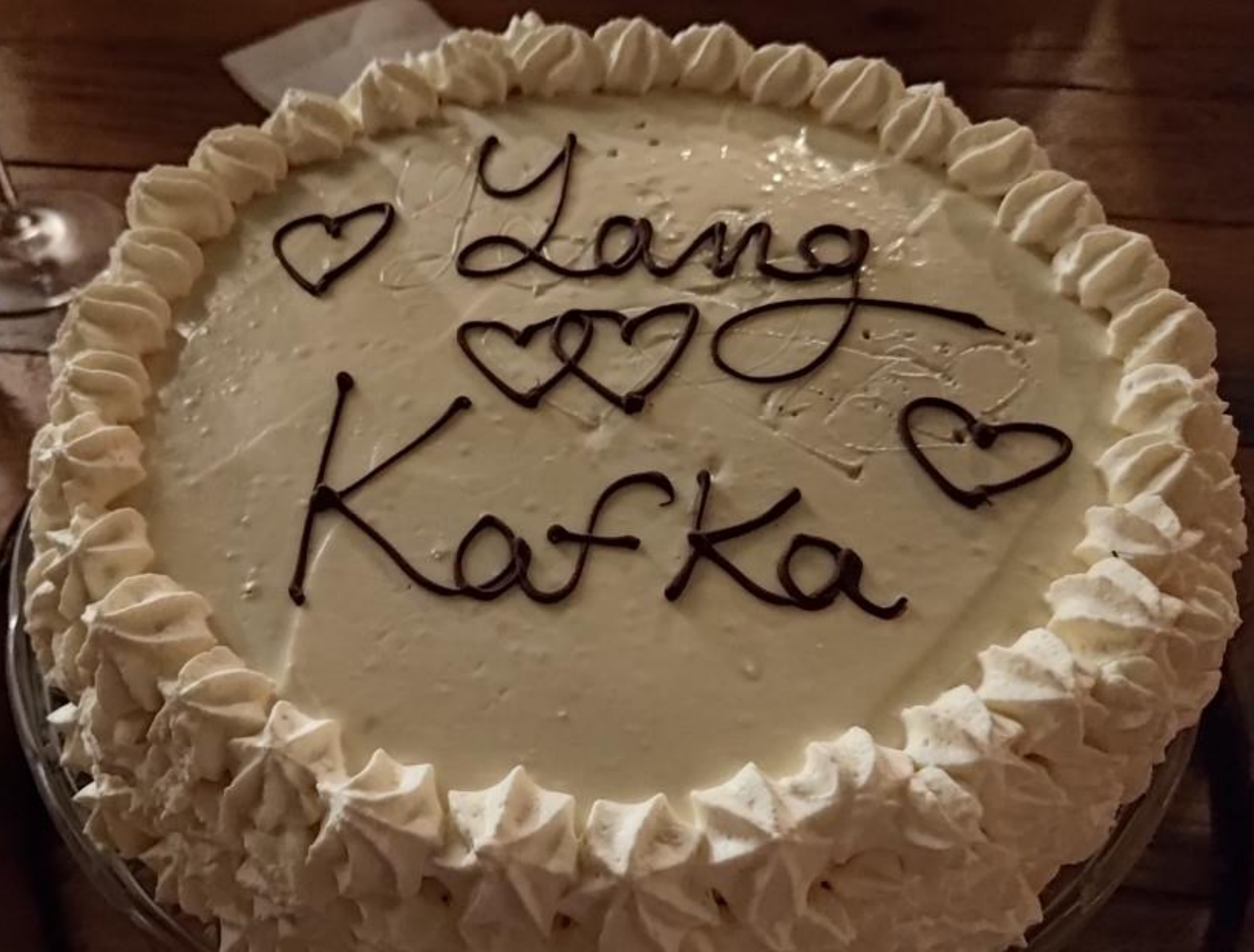
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Extends ietf-telemetry-message ietf-telemetry-message with YANG-Push subscription.

The subscription id and filters are obtained from the YANG-Push subscription the started message.

```
module: ietf-yang-push-telemetry-message

augment /tm:message/tm:session-metadata:
  +--ro yang-push-subscription
    +--ro id                                     sn:subscription-id
    +--ro filters
      | +--ro stream-filter* [name]
      |   +--ro name                               string
      |   +---u sn:stream-filter-elements
      +---u ypr:yang-push-module-version-list
```



♥ Yang ♥♥
Kafka ♥