A YANG Data model for Event Management
draft-wwx-netmod-event-yang-00

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Why this draft?

• Objective
  • Defines a YANG data model for abstract event management.
  • Provide the ability to monitor yang instance on a local or remote system using the NETCONF/RESTCONF;
  • Initiates simple actions whenever a trigger condition is met.

• Motivation
  • To support closed-loop automation management of data collection and network optimization. For example:
    • Monitor the collected data,
    • Trigger the notification or reconfiguration if the collected data touch the threshold.
  • To provide an abstract template which
    • Clear and precise identification of Event types and instances.
    • Allow the server to inform the client that certain Events are related to other Events.
    • Allow one event to be able to trigger another external event or generate derived events.
What is an event?

- Something that happens which may be of interesting or trigger the invocation of the rule.
- Such as:
  - A fault;
  - An alarm;
  - A change in network state;
  - A network security threat;
  - Hardware malfunction;
  - Buffer utilization crossing a threshold;
  - Network connection setup;
  - An external input to the system, etc.
What does the event yang do?

- **Event A**: A TE tunnel (tunnel a2b) is set up between VPN’s site A and site B;
  - **Target**: ../../tunnel [name='a2b']
  - **Trigger**: this tunnel be set up successfully
  - **Action**: trigger a function: enable the performance monitoring of tunnel a2b
- Above action may involve a set of events, for example:
  - **Event B**: Monitor the tunnel a2b’s loss packets number
    - **Target**: ../../tunnel [name='a2b'] /loss-pkts
    - **Trigger**: loss packets number cross the threshold
    - **Action**:
      1. sent a notification – “Loss packets number cross the threshold”,
      2. and automatic set corresponding value, for example switch the path.
  - **Event C**: Monitoring the tunnel a2b’s state
    - **Target**: ../../tunnel [name='a2b'] /state
    - **Trigger**: tunnel a2b down
    - **Action**:
      1. sent a notification – “a2b down”,
      2. and trigger an another event—Event D: active/standby failover.

Usage Example: Lifecycle management for a VPN service
What’s the difference between event and yang push?

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Next Steps

• Solicit more comments
  • Your comments and suggestions are welcome!
• Improve our solution and document