A Common YANG Data Model for Scheduling

draft-ietf-netmod-schedule-yang-02

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Document Status Since IETF #119

• Side meeting (IETF #119) with authors of I-D.ietf-tvr-schedule-yang to discuss requirements from TVR WG
  • The TVR WG is chartered to define data models that address time-based, scheduled changes to a network.

• Adopted in NETMOD after IETF #119
  • Feel free to report issues or propose changes on the GitHub repo: https://github.com/netmod-wg/schedule-yang

• Other drafts that use this common schedule YANG:
  • I-D. contreras-opsawg-scheduling-oam-tests
    Perform scheduled network diagnosis procedures
  • I-D.ietf-opsawg-ucl-acl
    Enable scheduled activation of access control policies
  • I-D.ietf-tvr-schedule-yang
    Manage network devices and topology with time-variant attributes

• Key design rationale: better modularity and ease of reuse
Major Updates Since IETF #119

*Updates from -00 to -02:*

- Address WG adoption Comments
  - Improve narrative text, enrich examples, fix nits

- Incorporate comments raised during IETF #119 TVR session
  - Split the recurrence definition into UTC and TZ types to accommodate different needs (machine-friendly vs. human-friendly).
  - Parameters naming improvement, e.g., date-time-start vs. utc-start-time.

- Others identified by authors
  - Add examples of using schedule YANG module in the context of RFC 8413
    - Which is about the framework for scheduled use of TE resources
  - Add relationship to the DISMAN-SCHEDULE-MIB in RFC 3231
Mapping Between Schedule YANG & MIB

*SCHEDULE-MIB not supported in YANG:*
- `schedOwner`
  - *Is this needed?*
- `schedContextName`
  - Common schedule YANG definition should not care using context
- `schedLastFailure`
  - Error code could depend on its invoked action
- `schedstorageType`
  - YANG persistency depends on the datastore
- `schedVariable` & `schedValue`
  - SNMP-specific; the value `schedValue` is written to the context MIB object pointed to by `schedVariable`
Next Steps

• Request (cross-)WG review

• Continued collaboration with authors of consumer drafts

• Request YANG doctors early review, right after IETF #120

• Target WGLC (October 2024)
backup
Groupings in schedule YANG model

• generic-schedule-params
  • A set of parameters used by a system for validating requested schedules

• period-of-time
  • Representation of a precise period of time

• recurrence

• recurrence-utc

• recurrence-with-time-zone

• recurrence-utc-with-date-times

• recurrence-time-zone-with-date-times

• icalendar-recurrence

• schedule-status
  • Scheduling management/status exposure

• schedule-status-with-name
  • Scenario where multiple scheduling contexts exists

• in modular approach for better flexibility
• at different levels of complexity
• icalendar-recurrence refers to RFC 5545