

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

MIB Object	YANG
schedLocalTime	local-time
schedType	schedule-type
schedName	schedule-id
schedOwner	Not Supported
schedDescr	description
schedInterval	interval
schedWeekDay	weekday
schedMonth	byearmonth
schedDay	bymonthday

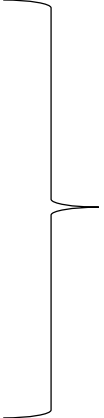
schedHour	byhour
schedMinute	byminute
schedContextName	Not Supported
schedAdminStatus	state
schedOperStatus	state
schedFailures	failure-counter
schedLastFailure	Not Supported
schedLastFailed	last-failed-occurrence
schedStorageType	Not Supported
schedVariable	Not applicable
schedValue	Not applicable
schedTriggers	counter/failure-counter

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