

Conditional Enablement

draft-kwatsen-conditional-enablement-00

Disclosure

This preso now goes past *enablement*

It's now includes *assignment* and *triggers* too...

Motivation

- Ad-hoc nodes defined in various drafts
 - Static Disablement
 - enabled, use-ntp, enable-nacm, etc.
- Use in JUNOS and Tail-F's products
 - Static Disablement
 - XML Attribute "inactive"
 - Temporal Configuration
 - "when" conditions in Configuration Group definitions
- I2RS Requirements
 - Temporal Configuration
 - Enabled at start-time with optional expiration-time or duration
 - Triggered Configuration
 - Enabled based on asynchronous events with optional duration

Use Cases

- End-user wants to *manually* disable a part of the configuration without losing it forever
- End-user wants a part of the configuration to automatically become **active** based on time or an async event
- End-user wants a part of the configuration to automatically become *inactive* based on time or duration

Strategies Discussed on List

- **Concern for XML attributes**
 - YANG doesn't model (but XSD or RelaxNG could be used)
 - Not referenceable via must/when statements (really?)
- **Standardize an “enable” or “disable” leaf**
 - e.g. 6021bis (ietf-yang-types)
- **Use Xpath just for complex expressions**
 - Can't do time-of-day
 - Not easy for a NMS to import
- **Use a rulebase like NACM**
- **Implement conditional config like a 1st-class “patch” object**

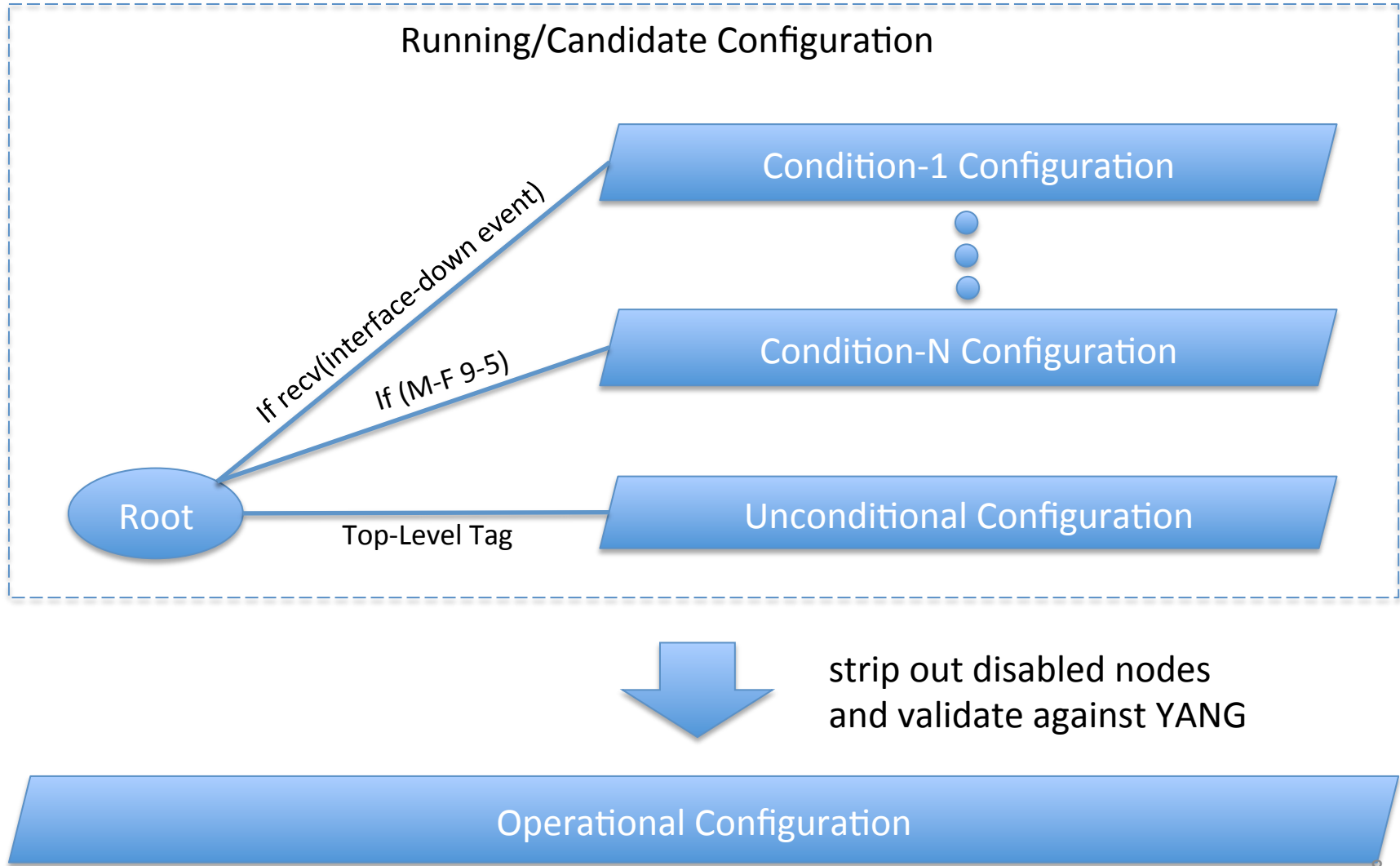
Other Considerations

- Client discretion vs. modeler's selection
- Flags need to be available to must/when statements and XPath select in get operations
- Access to the rule-base that controls the enable property for object X is different than access to object X directly
- Validation should conceptually after disabled nodes have been filtered out
- Should running config include conditional policy or just its evaluation?

Updated Proposal

- Use XML attributes for static/const “disable” flag
 - Simple
 - We allow XML attributes for metadata
 - Client can disable any arbitrary subtree
 - No impact to must/when statements
 - Assume disabled node are removed prior to validation
- Introduce a mechanism for temporal/triggered
 - Modeled within config or external (e.g. cron)???
 - JUNOS has temporal setting within the config
 - Like a template – a complete tree
 - Next slide illustrates idea

Temporal/Triggered Configuration



Next Steps

Take on as a chartered working group item?