

System-defined Configuration

draft-ma-netmod-with-system-02

Qiufang Ma (Presenter)

Kent Watsen

Qin Wu

Chong Feng

Jan Lindblad

Chongfeng Xie

Jason Sterne

Recap Since IETF 112

- Still a lot of discussion on mailing list about the open issues
 - Thank you!
 - Jason, Rob, Juergen, Andy, Martin, Sergio, Jan, Kent...
 - 1. MUST offline-validation of <running> alone be required?
 - Vigorous discussion
 - The authors decide to answer “YES” to this question, to maintain backward compatibility
 - 2. Should the origin=“system”/“intended” be required for system configuration copied/pasted into <running>?
 - Different opinions are received
 - More folks incline to use origin=“intended”
 - Current draft doesn’t limit which origin should be used
 - 3. “Immutable” flag
 - Defined in another independent I-D without being restricted to system config
 - 4. Should the “with-origin” parameter be supported for <intended>?
 - Not easy to support this idea given the definition of “with-origin”
 - when 'derived-from-or-self(../datastore, "ds:operational")'

Document updates Since IETF 112

- Changes from -00 to -02 according to WG feedback
 - Define that any referenced system configuration in <system> MUST be present in <running> to make <running> valid
 - Remove the “with-system” parameter which is used to return a merged review of <running> and system configuration previously
 - Add a new optional parameter “resolve-system” to allow the server to populate referenced system-defined nodes automatically
 - When provided and the server detects that there is a reference to a system-defined node during the validation, the server will automatically populate the referenced system configuration into the validated ds to make the configuration valid.
 - Legacy clients interacting with servers that support this parameter don't see any changes in <edit-config> and <edit-data> behaviors.

Some quotations from the draft

- “Servers **MUST** ensure that <running> contains any referenced system objects.”
- “Clients **MUST** either explicitly configure system-defined nodes in <running> or use the ‘resolve-system’ parameter.”
- “Only <system> aware clients copy referenced system nodes from <system>. How clients unaware of the <system> datastore can find appropriate configurations are beyond the scope of this document.”
- “If the ‘resolve-system’ parameter is not given by the client, the server **MUST NOT** modify <running> in any way not specified by the client.”

Open issues

- Is this “resolve-system” parameter valuable for us?
 - Pros
 - Convenient: Avoid or reduce having to copy the entire contents of system configuration into <running> when possible
 - Matches common expectations from the RESTCONF community, where a complete understanding of the server's configuration is rarely desired, and where injecting multiple, disjoint pieces of configuration is perceived as complicated by some.
 - Con
 - Implementation complexity
 - 1) The server must be able to identify if the missing referenced instance is system-defined
 - 2) If yes, then the server must be able to copy the referenced system-defined instance into target ds
 - 3) If the target ds is <running> or <startup>, the server-populating MUST be enforced at the end of the <edit-config>/<edit-data> operations during the validation; if the target ds is <candidate>, the server-populating of the target datastore is delayed until a <commit> or <validate> operation takes place.

Comments, Questions, Concerns?