YANG Data Model for DHCPv6 Configuration

draft-ietf-dhc-dhcpv6-yang-03

IETF96 Berlin
What’s New since IETF94

• Support generic option formats described in RFC7227
  • `operator-option-ipv6-address`
  • `operator-option-single-flag` ...

• Use `option-set-id` to identify the configured option set
  • Under each level, there is an `option-set-id`

• Has been allocated to YANG doctor for review
  • Started from July 1st by Peter Van Horne

• Finished a basic mapping to Kea configuration
  • Produce a minimum model for Hackathon
  • Available at github: https://github.com/sysrepo/sysrepo-plugin-kea
Findings When Mapping to Kea

• Global level parameters / local (subnet/pool) level parameters
  • Solution: Allow parameter definition everywhere!

• Full option list and/or generic option format definition
  • Need clear text in the draft to describe the difference
  • Should we have one approach or support both?

• A logging module is required

• DHCPv6 option definition is required (new IANA & vendor-specific)

The above findings are Kea-specific but similar things exist in other implementations!
Applicability of the model to real implementations

• The YANG model has been developed without reference to any specific implementation
  • ‘Generic’ DHCP constructs/structures used
• The current model needs to be compared to the data structures/configuration/existing YANG of real implementations
• Some work is done (Kea YANG model created at Hackathon)
• Info about more implementer's structures needed for research!
What Will Be in Version 04?

• Add more text to the model descriptions
  • The current model is not readable : (  

• Split model into configurable and operational sections
  • Better for the model’s implementation

• Make the model slimmer, remove redundant nodes
  • E.g. inet:ipv6-prefix has already contain the prefix length

• Incorporate outcome of mapping models to real implementations
Next Steps

• Resolve comments from YANG doctor
• Continue working on the YANG interface for Kea
• Need a careful review for the option set container, Volunteer?
• Need input from vendors
• Any other comments?