Abstract

This document provides a YANG data model for WSON TE tunnel.

Status of this Memo

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1. Introduction

This document provides a YANG data model for WSON tunnel model. The YANG model described in this document is a WSON technology-specific Yang Tunnel model based on the information model developed in [RFC7446] and the two encoding documents [RFC7581] and [RFC7579] that developed protocol independent encodings based on [RFC7446].

This document augments the generic TE tunnel model [TE-Tunnel].

2. YANG Model (Tree Structure)

module: ietf-te-wson
  augment /te:te:tunnels/te:tunnel/te:config:
    +-rw wavelength-assignment? identityref
    +-rw selected-frequency?    decimal64
    +-rw channel-spacing?      decimal64
    +-rw resource-pool* [resource-pool-id]
module ietf-te-wson{
    prefix "te-wson";

    import ietf-te {
        prefix "te";
    }

    import ietf-te-device {
        prefix "te-dev";
    }
}

3. TE Tunnel Model for WSON

<CODE BEGINS> file "ietf-te-wson@2017-06-27.yang"

module ietf-te-wson{
    prefix "te-wson";

    import ietf-te {
        prefix "te";
    }

    import ietf-te-device {
        prefix "te-dev";
    }
}
import ietf-wson-topology {
  prefix "wson";
}

organization
  "IETF CCAMP Working Group";

contact
  "WG Web:   <http://tools.ietf.org/wg/ccamp/>
  WG List:  <mailto:ccamp@ietf.org>
  WG Chair: Daniele Ceccarelli
            <mailto:daniele.ceccarelli@ericsson.com>
  WG Chair: Fatai Zhang
            <mailto:zhangfatai@huawei.com>
  Editor: Young Lee <leeyoung@huawei.com>
  Editor: Dhruv Dhody <dhruv.ietf@gmail.com>
  Editor: Ricard Vilalta <ricard.vilalta@cttc.es>";

description
  "Latest update to WSON TE YANG data model.";

revision "2017-06-27" {
  description "Update to add Resource Pool Model.";
  reference "version 1";
}

revision "2017-06-21" {
  description "Update to WSON TE YANG initial revision.";
  reference "version 0";
}

identity wavelength-assignment {
  description "Wavelength selection base";
}

identity unspecified-wavelength-assignment {
  base wavelength-assignment;
  description "No method specified";
}

identity first-fit-wavelength-assignment {
  base wavelength-assignment;
  description "All the available wavelengths are numbered,
    and this WA method chooses the available wavelength
with the lowest index.
}

identity random-wavelength-assignment {
    base wavelength-assignment;
    description "This WA method chooses an available wavelength randomly."
}

identity least-loaded-wavelength-assignment {
    base wavelength-assignment;
    description "This WA method selects the wavelength that has the largest residual capacity on the most loaded link along the route (in multi-fiber networks)."
}

/* TE WSON LSPs groupings */
grouping lsp-attributes-flags-wson_config {
    description "Configuration parameters relating to TE WSON LSP attribute flags"

    leaf wavelength-assignment {
        type identityref {
            base wavelength-assignment;
        }
        description "Wavelength Allocation Method"
    }

    leaf selected-frequency {
        type decimal64 {
            fraction-digits 5;
        }
        units THz;
        default 193.1;
        description "Selected Central Frequency"
    }

    leaf channel-spacing {
        type decimal64 {
            fraction-digits 5;
        }
        units GHz;
        description "This is fixed channel spacing for WSON, e.g, 12.5, 25, 50, 100, .."
    }

    uses wson:resource-pool-attributes;
}
grouping tunnel-properties-wson {
    description
        "Top level grouping for LSP properties.";
    uses lsp-attributes-flags-wson_config;
}

grouping lsp-properties-wson {
    description
        "Top level grouping for LSP properties.";
    uses lsp-attributes-flags-wson_config;
}
/* End of TE WSON LSPs groupings */

/**
 * Interface groupings
 */
grouping wson-reservable {
    description "Top level grouping for interface properties";
    leaf selected-frequency {
        type decimal64 {
            fraction-digits 5;
        }
        units THz;
        default 193.1;
        description "Selected Central Frequency";
    }

    leaf channel-spacing {
        type decimal64 {
            fraction-digits 5;
        }
        units GHz;
        description "This is fixed channel spacing for WSON, 
                        e.g, 12.5, 25, 50, 100, ..";
    }
}
/* End of interface groupings */

/**
 * Augmentation to TE generic module
 */
augment "/te:te/te:tunnels/te:tunnel/te:config" {
    description
        "Augmentations for WSON TE tunnel properties";
    uses tunnel-properties-wson;
}
augment "/te:te:tunnels/te:tunnel/te:state" {
  description  
    "Augmentations for WSON TE tunnel properties"; 
  uses tunnel-properties-wson; 
}

augment "/te:te:lsp-state/te:lsp" {
  description  
    " WSON LSP state properties"; 
  uses lsp-properties-wson; 
}

augment "/te:te-dev:interfaces/te-dev:interface" {
  description  
    "WSON reservable bandwidth configuration properties"; 
  uses wson-reservable; 
}

}<CODE ENDS>

4. Security Considerations
TDB

5. IANA Considerations
TDB

6. Acknowledgments
This document was prepared using 2-Word-v2.0.template.dot.
7. References

7.1. Normative References


7.2. Informative References


8. Contributors

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