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## A Yang Data Model for WSON Tunnel

[draft-lee-ccamp-wson-tunnel-model-04.txt](#)

### 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-wson-tunnel

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```
augment /te:te/te:tunnels/te:tunnel:
  +--rw src-client-signal?  identityref
  +--rw dst-client-signal?  identityref
augment /te:te/te:tunnels/te:tunnel/te:state:
  +--ro src-client-signal?  identityref
  +--ro dst-client-signal?  identityref
augment /te:te/te:globals/te:named-path-constraints/te:named-path-
constraint:
  +--rw wavelength-assignment?  identityref
augment /te:tunnels-rpc/te:input/te:tunnel-info/tepc:request-list:
  +---- src-client-signal?      identityref
  +---- dst-client-signal?      identityref
  +---- wavelength-assignment?  identityref
```

## [3. TE Tunnel Model for WSON](#)

<CODE BEGINS> file "ietf-wson-tunnel@2018-01-08.yang"

```
module ietf-wson-tunnel {
  //TODO: FIXME
  //yang-version 1.1;

  namespace "urn:ietf:params:xml:ns:yang:ietf-wson-tunnel";
  prefix "wson-tunnel";

  import ietf-te { prefix "te"; }
  import ietf-otn-types { prefix "otn-types"; }
  import ietf-te-wson-types { prefix "wson-types"; }
  import ietf-te-path-computation { prefix "tepc"; }

  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>>

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description

"This module defines a model for WSON Tunnel Services.";

revision "2018-01-08" {

description

"Updates to version 4";

reference "version 4";

}

grouping wson-tunnel-endpoint {

description "Parameters for OTN tunnel.";

leaf src-client-signal {

type identityref {

base otn-types:client-signal;

}

description

"Client signal at the source endpoint of  
the tunnel.";

}

leaf dst-client-signal {

type identityref {

base otn-types:client-signal;

}

description

"Client signal at the destination endpoint of  
the tunnel.";

```

    }
}

grouping wson-path-constraints {
  description
    "Global named path constraints configuration
    grouping for WSON tunnel";

  leaf wavelength-assignment {
    type identityref {
      base wson-types:wavelength-assignment;
    }
  }
}

```

```

    description "Wavelength Allocation Method";
  }
}

augment "/te:te/te:tunnels/te:tunnel" {
  description
    "Augment with additional parameters required for WSON
    tunnel.";
  uses wson-tunnel-endpoint;
}

augment "/te:te/te:tunnels/te:tunnel/te:state" {
  description
    "Augment with additional parameters required for WSON
    tunnel.";
  uses wson-tunnel-endpoint;
}

augment "/te:te/te:globals/te:named-path-constraints/"
+ "te:named-path-constraint" {
  description
    "Augment with additional constraints WSON
    tunnel.";
  uses wson-path-constraints;
}

augment "/te:tunnels-rpc/te:input/te:tunnel-info/"
+ "tepc:request-list" {
  description

```

```

        "Augment with additional constraints WSON
        tunnel.";
    uses wson-tunnel-endpoint;
    uses wson-path-constraints;
}

}

<CODE ENDS>

```

#### 4. Security Considerations

The configuration, state, and action data defined in this document

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are designed to be accessed via a management protocol with a secure transport layer, such as NETCONF [[RFC6241](#)]. The NETCONF access control model [[RFC6536](#)] provides the means to restrict access for particular NETCONF users to a preconfigured subset of all available NETCONF protocol operations and content.

A number of configuration data nodes defined in this document are writable/deletable (i.e., "config true") These data nodes may be considered sensitive or vulnerable in some network environments.

#### 5. IANA Considerations

This document registers the following namespace URIs in the IETF XML registry [[RFC3688](#)]:

```

-----
URI: urn:ietf:params:xml:ns:yang:ietf-wson-tunnel
Registrant Contact: The IESG.
XML: N/A, the requested URI is an XML namespace.
-----

```

This document registers the following YANG modules in the YANG Module

Names registry [[RFC7950](#)]:

```
-----  
name:          ietf-wson-tunnel  
namespace:     urn:ietf:params:xml:ns:yang:ietf-wson-tunnel  
reference:     RFC XXXX (TDB)  
-----
```

## [6.](#) Acknowledgments

This document was prepared using 2-Word-v2.0.template.dot.

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## [7.](#) References

### 7.1. Normative References

[TE-TOPO] X. Liu, et al., "YANG Data Model for TE Topologies", work in progress: [draft-ietf-teas-yang-te-topo](#).

### 7.2. Informative References

[RFC7446] Y. Lee, G. Bernstein, D. Li, W. Imajuku, "Routing and Wavelength Assignment Information Model for Wavelength Switched Optical Networks", [RFC 7446](#), February 2015.

[RFC7579] G. Bernstein, Y. Lee, D. Li, W. Imajuku, "General Network Element Constraint Encoding for GMPLS Controlled Networks", [RFC 7579](#), November 2015.

[RFC7581] G. Bernstein, Y. Lee, D. Li, W. Imajuku, "Routing and Wavelength Assignment Information Encoding for Wavelength Switched Optical Networks", [RFC 7581](#), November 2015.

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