

Yang Data Model for Resource Management

draft-chen-rtgwg-resource-management-yang

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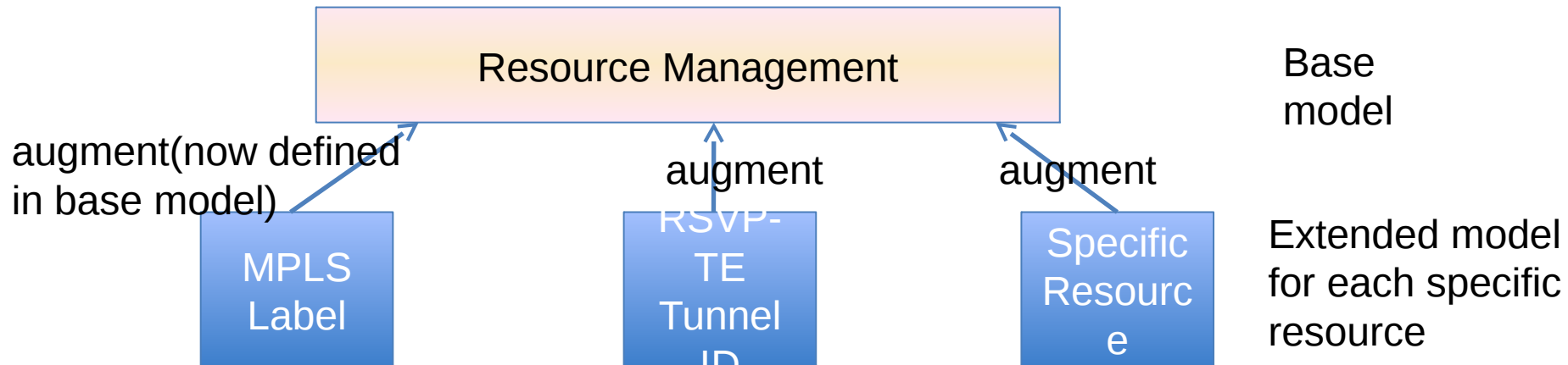
Introduction

- Resources:
 - system resources such as memory
 - service resources such as MPLS label
- This document describes a YANG data model for resource management of service resources.
- The data model defines the configuration and operational state for resource management.

Requirement

- Operator :
 - Creation and release of the pools of resources by configuration
 - Query the available resources in order to configure manually the service using the resource
- Typical Resource – MPLS label

Design of YANG Model



Design of YANG Model

module: ietf-resource-mgmt

 +--rw resource-cfg

 | +--rw mpls-label-cfg

 |

 | +--rw XXX-cfg

 |

 +--ro resource-state

 +--ro mpls-label-state

 |

 +--ro XXX-state

 |

MPLS Label

Specific resource

MPLS Label

Specific resource

YANG Model of Resource Management

```
+--rw resource-cfg
|  +--rw mpls-label-cfg
|  |  +--rw label-space-cfg
|  |  |  +--rw label-spaces* [label-type]
|  |  |  |  +--rw label-type          label-type
|  |  |  |  +--rw multiple-label-spaces* [label-begin label-end]
|  |  |  |  |  +--rw label-begin    uint32
|  |  |  |  |  +--rw label-end      uint32
```

YANG Model of Resource Management

```
+--ro resource-state
  +--ro mpls-label-state
    +--ro label-space-state
      | +--ro label-spaces* [label-type]
      |   +--ro label-type          label-type
      |   +--ro label-total-number?   uint32
      |   +--ro label-available-total-number? uint32
      |   +--ro multiple-label-spaces* [label-begin
label-end]
      |     +--ro label-begin          uint32
      |     +--ro label-end            uint32
      |     +--ro label-available-number? uint32
      +--ro used-label
      | +--ro used-labels* [label-value]
      |   +--ro label-value  uint32
      |   +--ro label-app?   label-app
      |   +--ro label-type?  label-type
      +--ro used-label-statistics
      | +--ro used-label-statistics* [label-app]
      |   +--ro label-app          label-app
      |   +--ro used-label-count?  uint32
      +--ro available-label
      | +--ro available-labels* [label-type]
      |   +--ro label-type      label-type
      |   +--ro label-segments* [label-begin label-end]
      |     +--ro label-begin  uint32
      |     +--ro label-end    uint32
      +--ro label-end          uint32
```

Next Steps

- Solicit comments and collaboration.
- More service resources are to be defined.
- Revise the draft.