

## Introduction

This document provides an initial proposal by the commenter (Johannes Specht) with steps for a more accurate suggested change/response of comment #15 on P802.1Qcw/D1.0 (<http://www.ieee802.org/1/files/private/cw-drafts/d1/802-1Qcw-d1-0-pdis-v01.pdf>).

## Steps

- a) Move identity set-gate-states, identity set-and-hold-mac, and identity set-and-release-mac from ieee802-dot1q-types.yang to ieee802-dot1q-sched.yang.
- b) Delete typedef ipv-type and gate-state-value-type in ieee802-dot1q-types.yang.
- c) Replace grouping gate-control-entry (and all contained nodes) in ieee802-dot1q-types.yang with the following:

```
grouping base-gate-control-entries {
  list gate-control-entry {
    key "index";
    leaf index {
      type uint32;
    }
    leaf operation-name {
      type identityref {
        base type-of-operation;
      }
      mandatory true;
      description
        "The name (type) of the operation for this entry.";
    }
  }
  leaf time-interval-value {
    type uint32;
    description
      "timeIntervalValue is a 32-bit unsigned integer,
      representing a number of nanoseconds. After timeIntervalValue
      nanoseconds have elapsed since the completion of the previous
      entry in the gate control list, control passes to the next
      entry.";
    reference
      "12.29.1.2.3 of IEEE Std 802.1Q-2018 8.6.8.4 of IEEE Std
      802.1Q-2018";
  }
}
}
```

- d) Delete identity type-of-operation in ieee802-dot1q-psfp.yang.
- e) Insert the following into ieee802-dot1q-psfp.yang:

```
grouping stream-gate-control-entries {
  uses dot1q-types:base-gate-control-entries {
    refine "gate-control-entry/operation-name" {
      must ". = 'set-gate-and-ipv'";
    }
  }
  augment "gate-control-entry" {
    leaf gate-state-value {
      type gate-state-value-type;
      mandatory true;
      description

```

```

        "The PSFPgateStatesValue indicates the desired gate state,
        open or closed, for the stream gate.";
    reference
        "";
}
leaf ipv-spec {
    type sfsg:ipv-spec-type;
    mandatory true;
    description
        "The IPV value indicates the IPV to be associated with
        frames that pass the gate.";
    reference
        "";
}
}
}
}
}

```

f) Replace list admin-control-list in ieee802-dot1q-psfp.yang with the following:

```

container admin-control-list {
    config true;
    description
        "The AdminControlList and OperControlList are ordered
        lists containing AdminControlListLength or OperControlListLength
        entries, respectively. Each entry represents a gate operation.
        Each entry in the list is structured as a GateControlEntry.";
    reference
        "";
    uses stream-gate-control-entries;
}

```

g) Replace list oper-control-list in ieee802-dot1q-psfp.yang with the following:

```

container oper-control-list {
    config false;
    description
        "The AdminControlList and OperControlList are ordered
        lists containing AdminControlListLength or OperControlListLength
        entries, respectively. Each entry represents a gate operation.
        Each entry in the list is structured as a GateControlEntry.";
    reference
        "";
    uses stream-gate-control-entries;
}

```

h) Insert the following into ieee802-dot1q-sched.yang:

```

grouping sched-gate-control-entries {
    uses dot1q-types:base-gate-control-entries {
        refine "gate-control-entry/operation-name" {
            must "(. = 'set-gate-states') or
                (. = 'set-and-hold-mac') or
                (. = 'set-and-release-mac')";
        }
    }
    augment "gate-control-entry" {
        leaf gate-state-value {
            type uint8;
            mandatory true;
            description

```

```

    "gateStatesValue is the gate states for this entry for the
    Port. The gates are immediately set to the states in
    gateStatesValue when this entry executes. The bits of the
    octet represent the gate states for the corresponding
    traffic classes; the most-significant bit corresponds to
    traffic class 7, the least-significant bit to traffic class
    0. A bit value of 0 indicates closed; a bit value of 1
    indicates open.";

```

```

reference
    "12.29.1.2.2 of IEEE Std 802.1Q-2018
    8.6.8.4 of IEEE Std 802.1Q-20"

```

```

    }
  }
}

```

- i) Replace list admin-control-list in ieee802-dot1q-sched.yang with the following:

```

container admin-control-list {
  config true;
  description
    "AdminControlList is the administrative value of the gate
    control list for the Port. The value must be retained across
    reinitializations of the management system.";
  reference
    "";
  uses sched-gate-control-entries;
}

```

- j) Replace list oper-control-list in ieee802-dot1q-sched.yang with the following:

```

container oper-control-list {
  config false;
  description
    "OperControlList is the operational value of the gate control list
    for the Port.";
  reference
    "";
  uses sched-gate-control-entries;
}

```

- k) Fix description arguments, reference arguments, and trivia as appropriate, re-order nodes canonically.

## Notes/Observations

- Beyond the original comment on ipv-type, this also fixes the duplicate existence of identity type-of-operation in two modules.
- Moreover, the need for a choice in the original grouping gate-control-entry instead of when-constraints in containers is entirely avoided.
- We may discuss IEEE Std 802.1Q-2018 w.r.t. to the SetAndHoldMac and SetAndReleaseMac operations (IEEE Std 802.1Q-2018, Table 8-7), though such a discussion appears to be far out of scope of P802.1Qcw:
  - Specification of these operations ends with “If frame preemption is not supported..., this operation behaves the same...”.
  - Considering that scheduled traffic may be supported without preemption, we may discuss whether we allow such implementation to not support for the SetAndHoldMac and SetAndReleaseMac operation. Yet, neither conformance clause

nor PICS clauses allow this (i.e., all implementations of scheduled traffic must support these operations, even if they do not implement preemption)