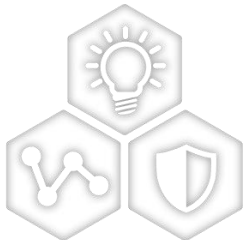


ATS & PSFP YANG maintenance items #0392 & #0393 Updates



A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



SMART | CONNECTED | SECURE

Woojung Huh

Aug/11/2026

Maintenance items

- #0392

- ATS schedulers and scheduler-groups YANG containers don't align with 802.1Q
- Issue: Multiple Scheduler Instance Tables and Scheduler Group Instance Tables are created in a bridge component.
- Also propose end-station (802.1DC) update in addition to 802.1Q

- #0393

- Need a clarification of using stream-filter when a bridge uses both ATS and PSFP
- Issue: Multiple stream-filters & stream-gates are created in a bridge component
- Also propose end-station (802.1DC) updates in addition to 802.1Q

Updates since Jul/2026 Plenary

Minutes for [0392](#): ATS schedulers and scheduler-groups YANG containers don't align with 802.1Q-2022.

Standard: IEEE Std 802.1Qcz-2023

Clause: 48.5.13

Draft with fix:

Status: Complete then Ballot

Submitter: [Woojung Huh](#)

Date: 2026-02-27

Rationale: [IEEE Std 802.1Q-2022 amendment of 802.1Qcz added YANG for ATS. It define...](#)

Show Request

Show Preformatted Request

Date	Meeting	Text	Status
2026-03-10	10 Mar 2026 Plenary	YANGsters plans to follow up and make a recommendation to the maintenance TG.	Technical experts review
2026-05-12	12 May 2026 Interim	YANGsters has given the submitter a recommendation for a path forward. Maintenance will discuss further.	Technical experts review
2026-07-15	13 Jul 2026 Plenary	This comment has been discussed in YANGsters and a path forward has been identified. Use the presentation found at https://www.ieee802.org/1/files/public/docs2026/maint-whuh-ATSandPSFP-YANG-0726-v01.pdf as a basis for the resolution to this comment.	Complete then Ballot

Updates since Jul/2026 Plenary

Minutes for 0393: Maintenance request - clarification of using stream-filter when a bridge uses both ATS and PSFP

Standard: IEEE Std 802.1Qcz-2023

Clause: 8.6.5

Draft with fix:

Status: Technical experts review

Submitter: [Woojung Huh](#)

Date: 2026-02-27

Rationale: [IEEE Std 802.1Q-2022 amendment of 802.1Qcz added YANG for ATS. 8.6.5 sta...](#)

Show Request

Show Preformatted Request

Date	Meeting	Text	Status
2026-03-10	10 Mar 2026 Plenary	YANGsters plans to follow up and make a recommendation to the maintenance TG.	Technical experts review
2026-05-12	12 May 2026 Interim	YANGsters has given the submitter a recommendation for a path forward. Maintenance will discuss further.	Technical experts review
2026-07-15	13 Jul 2026 Plenary	This comment has been discussed in YANGsters and a path forward has been identified. Use the presentation found at https://www.ieee802.org/1/files/public/docs2026/maint-whuh-ATSandPSFP-YANG-0726-v01.pdf as a basis for the resolution to this comment.	Complete then Ballot
2026-07-28	28 Jul 2026 Concall	Re-evaluate based on slide 38 in the presentation referenced above. YANGsters would like to understand the plan for implementation of item 393 and discuss the pros/cons of the following options: 1. Doing nothing – leaving the YANG the way it currently is. 2. Keep the existing implementation and also implement -v2 modules 3. Keep the existing implementation (and deprecate the uses that are being moved) and also implement -v2 modules 4. Integrate -v2 solution into the existing YANG Constraints: Try to have minimal impact/change on the existing YANG. Maintain backward compatibility. Once the four options have been discussed and a recommendation has been made in YANGsters, the maintenance item will be revisited.	Technical experts review

Today's discussion

- **Maintenance 0392 & 0393 resolution options**
 1. No changes (drop maintenance 0393, leaving the YANG the way it currently is)
 2. Keep the existing implementation and also implement -v2 modules
 3. Keep the existing implementation (and deprecate the uses that are being moved) and also implement -v2 modules
 4. Integrate -v2 solution into the existing YANG

#0392 Updates

ATS schedulers and scheduler-groups YANG containers
don't align with 802.1Q-2022

802.1Q

- **802.1Q-2022 and P802.1Q-2022-Rev-Dx.x**
 - **12.31.5 The Scheduler Instance Table**
 - There is one Scheduler Instance Table per Bridge Component. Each table row in the Scheduler Instance Table comprises a set of parameters that defines a single ATS scheduler instance, as detailed in Table 12-38.
 - **12.31.6 The Scheduler Group Instance Table**
 - There is one Scheduler Group Instance Table per Bridge Component. Each table row in the Scheduler Group Instance Table comprises a set of parameters that defines a single ATS scheduler group instance (8.6.5.6), as detailed in Table 12-39.

• 48.2.7 Asynchronous Traffic Shaping (ATS) model

- The ATS model augments the Bridge component model (48.3.1) and the stream filters and stream gates model (48.3.6) by nodes that represent to following managed objects:

- a) The Scheduler Instance Table (12.31.5)
- b) The Scheduler Group Instance Table (12.31.6)
- c) The Scheduler Port Parameter Table (12.31.7)
- d) The Scheduler Timing Characteristics Table (12.31.8)
- e) A Stream Filter specification type representing an ATS scheduler instance identifier (12.31.2.5)

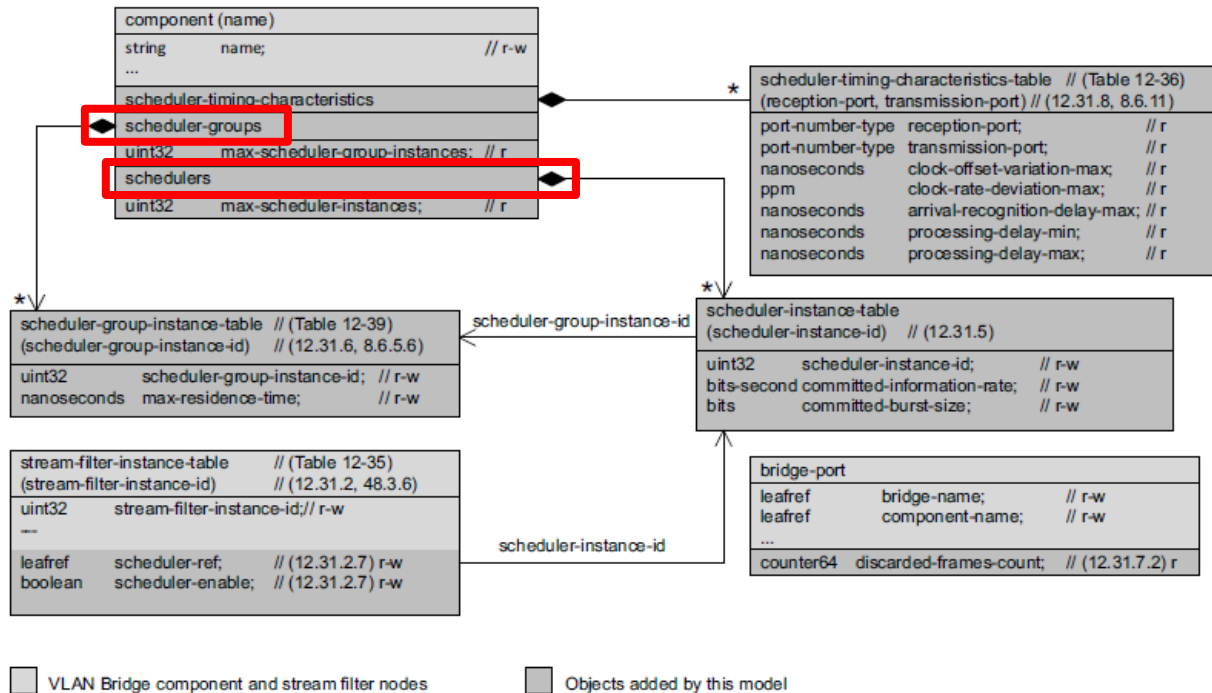


Figure 48-16—Asynchronous Traffic Shaping model

ieee802-dot1q-ats-bridge.yang

- The latest revision 2023-07-03 doesn't align with 802.1Q
 - *ats:ats-parameters* is under augment of “stream-filters/stream-filter-instance-table”
 - It creates multiple ***the Scheduler Instance Table (12.31.5)*** and ***the Scheduler Group Instance Table (12.31.6)*** under ***the Stream Filter Instance Table (12.31.2)*** than one per the Bridge Component.

ieee802-dot1q-ats-bridge.yang

```
module: ieee802-dot1q-bridge
  +--rw bridges
    +--rw bridge* [name]
      +--rw component* [name]
        +--rw ats-bridge:stream-gates
          | +--rw ats-bridge:stream-gate-instance-table* [stream-gate-instance-id]
        +--rw ats-bridge:stream-filters
          | +--rw ats-bridge:stream-filter-instance-table* [stream-filter-instance-id]
          | | +--rw ats-bridge:stream-filter-instance-id          uint32
          | | +--rw ats-bridge:stream-gate-ref -> ../../../stream-gates/stream-gate-instance-table/stream-gate-instance-id
          | | +--rw ats-bridge:schedulers
          | | | +--rw ats-bridge:scheduler-instance-table* [scheduler-instance-id]
          | | | +--rw ats-bridge:scheduler-groups
          | | | | +--rw ats-bridge:scheduler-group-instance-table* [scheduler-group-instance-id]
          | | | +--rw ats-bridge:scheduler
          | | | | +--rw ats-bridge:scheduler-ref? -> ../../../schedulers/scheduler-instance-table/scheduler-instance-id
          | | | | +--rw ats-bridge:scheduler-enable?    boolean
```

A proposed solution

- No change on `ieee802-dot1q-ats.yang`
- Modified `ieee802-dot1q-ats-bridge.yang`
 - Move *ats:ats-parameters*
 - from under of *augment "stream-filters/stream-filter-instance-table"*
 - to under *augment "/dot1q:bridges/dot1q:bridge/dot1q:component"*
 - It creates ***single Scheduler Instance Table (12.31.5)*** and ***single Scheduler Group Instance Table (12.31.6)*** under the Bridge Component.

A proposed solution (yang changes)

```
experimental/ieee/802.1/ieee802-dot1q-ats-bridge-v2.yang
@@ -60,12 +60,13 @@ module ieee802-dot1q-ats-bridge-v2 {
60 60      augment "/dot1q:bridges/dot1q:bridge/dot1q:component" {
61 61          description
62 62              "Augments the Bridge component with ATS parameters.";
63 +      uses ats:ats-parameters;
63 64      uses sfsg:sfsg-parameters {
64 65          augment "stream-filters/stream-filter-instance-table" {
65 66              description
66 67                  "Augments the Bridge component stream filter for ATS
67 68                  schedulers.";
68 -      uses ats:ats-parameters;
69 +
69 70      container scheduler {
70 71          description
71 72              "This container encapsulates ATS scheduler nodes.";
@@ -74,6 +75,8 @@ module ieee802-dot1q-ats-bridge-v2 {
74 75      path
75 76          '..'+
76 77          '/../'+
78 +      +      '/../'+
79 +      +      '/../'+
77 80          '/schedulers'+
78 81          '/scheduler-instance-table'+
79 82          '/scheduler-instance-id';

```

A proposed solution (changed tree)

```
module: ieee802-dot1q-bridge
  +--rw bridges
    +--rw bridge* [name]
      +--rw component* [name]
        +--rw ats-bridge-v2:stream-gates
          | +--rw ats-bridge-v2:stream-gate-instance-table* [stream-gate-instance-id]
        +--rw ats-bridge-v2:stream-filters
          | +--rw ats-bridge-v2:stream-filter-instance-table* [stream-filter-instance-id]
          | | +--rw ats-bridge-v2:stream-gate-ref -> ../../../../stream-gates/stream-gate-instance-table/stream-gate-
instance-id
          | | +--rw ats-bridge-v2:scheduler
          | | | +--rw ats-bridge-v2:scheduler-ref? -> ../../../../schedulers/scheduler-instance-table/scheduler-
instance-id
          | | | +--rw ats-bridge-v2:scheduler-enable? boolean
        +--rw ats-bridge-v2:schedulers
          | +--rw ats-bridge-v2:scheduler-instance-table* [scheduler-instance-id]
          | | +--rw ats-bridge-v2:scheduler-instance-id uint32
          | | +--rw ats-bridge-v2:committed-information-rate uint64
          | | +--rw ats-bridge-v2:committed-burst-size uint32
          | | +--rw ats-bridge-v2:scheduler-group-ref -> ../../../../scheduler-groups/scheduler-group-instance-
table/scheduler-group-instance-id
          | +--ro ats-bridge-v2:max-scheduler-instances? uint32
        +--rw ats-bridge-v2:scheduler-groups
          | +--rw ats-bridge-v2:scheduler-group-instance-table* [scheduler-group-instance-id]
```

802.1DC-2024

- **9.1 YANG framework**

- In order to make certain YANG modules that control features in IEEE Std 802.1Q and its amendments easy to incorporate into both IEEE 802.1Q Bridges and IEEE 802.1Q end stations, those YANG modules are defined in pairs, one pair for each feature.
- The modules defined in this clause use the modules that control IEEE 802.1Q features required for GFQoS to augment ***systems*** and/or ***interfaces***, instead of ***Bridge components*** and/or ***Bridge Ports***.
- This implies that “There is one Scheduler Instance Table and one Scheduler Group Instance Table per Bridge Component” rule applies to 802.1DC system.

ieee802-dot1dc-ats-if.yang

- The latest revision 2024-09-26 has same issue
 - *ats:ats-parameters* is under augment of “stream-filters/stream-filter-instance-table”
 - It creates multiple ***the Scheduler Instance Table (12.31.5)*** and ***the Scheduler Group Instance Table (12.31.6)*** under ***the Stream Filter Instance Table (12.31.2)*** than one per the Bridge Component.

ieee802-dot1dc-ats-if.yang

```
module: ietf-system
  +--rw system
  |   +--rw ats-if:stream-gates
  |   |   +--rw ats-if:stream-gate-instance-table* [stream-gate-instance-id]
  |   |   +--rw ats-if:stream-filters
  |   |   |   +--rw ats-if:stream-filter-instance-table* [stream-filter-instance-id]
  |   |   |   |   +--rw ats-if:stream-gate-ref -> ../../../stream-gates/stream-gate-instance-table/stream-gate-instance-id
  |   |   |   |   +--rw ats-if:schedulers
  |   |   |   |   |   +--rw ats-if:scheduler-instance-table* [scheduler-instance-id]
  |   |   |   |   |   +--rw ats-if:scheduler-group-ref -> ../../../scheduler-groups/scheduler-group-instance-table/scheduler-group-
instance-id
  |   |   |   |   |   +--ro ats-if:max-scheduler-instances?      uint32
  |   |   |   |   |   +--rw ats-if:scheduler-groups
  |   |   |   |   |   |   +--rw ats-if:scheduler-group-instance-table* [scheduler-group-instance-id]
  |   |   |   |   |   |   +--rw ats-if:scheduler
  |   |   |   |   |   |   |   +--rw ats-if:scheduler-ref?      -> ../../schedulers/scheduler-instance-table/scheduler-instance-id
  |   |   |   |   |   |   |   +--rw ats-if:scheduler-enable?  boolean
```

A proposed solution

- **Modified ieee802-dot1dc-ats-if.yang**
 - Move *ats:ats-parameters*
 - from under of “*stream-filters/stream-filter-instance-table*”
 - to under “*/sys/system*”
 - It creates ***single Scheduler Instance Table (12.31.5)*** and ***single Scheduler Group Instance Table (12.31.6)*** under the Bridge Component.

A proposed solution (yang changes)

▼ experimental/ieee/802.1/ieee802-dot1dc-ats-if-v2.yang		@@ -71,12 +71,12 @@ module ieee802-dot1dc-ats-if-v2 {
71	71	augment "/sys:system" {
72	72	description
73	73	"Augments the system with ATS parameters.";
74	+	uses ats:ats-parameters;
74	75	uses sfsg:sfsg-parameters {
75	76	augment "stream-filters/stream-filter-instance-table" {
76	77	description
77	78	"Augments the system stream filter for ATS
78	79	schedulers.";
79	-	uses ats:ats-parameters;
80	80	container scheduler {
81	81	description
82	82	"This container encapsulates ATS scheduler nodes.";
@@ -85,6 +85,8 @@ module ieee802-dot1dc-ats-if-v2 {		
85	85	path
86	86	'..'+
87	87	'/.'+
88	+	'/.'+
89	+	'/.'+
88	90	'/schedulers'+
89	91	'/scheduler-instance-table'+
90	92	'/scheduler-instance-id';
↓		

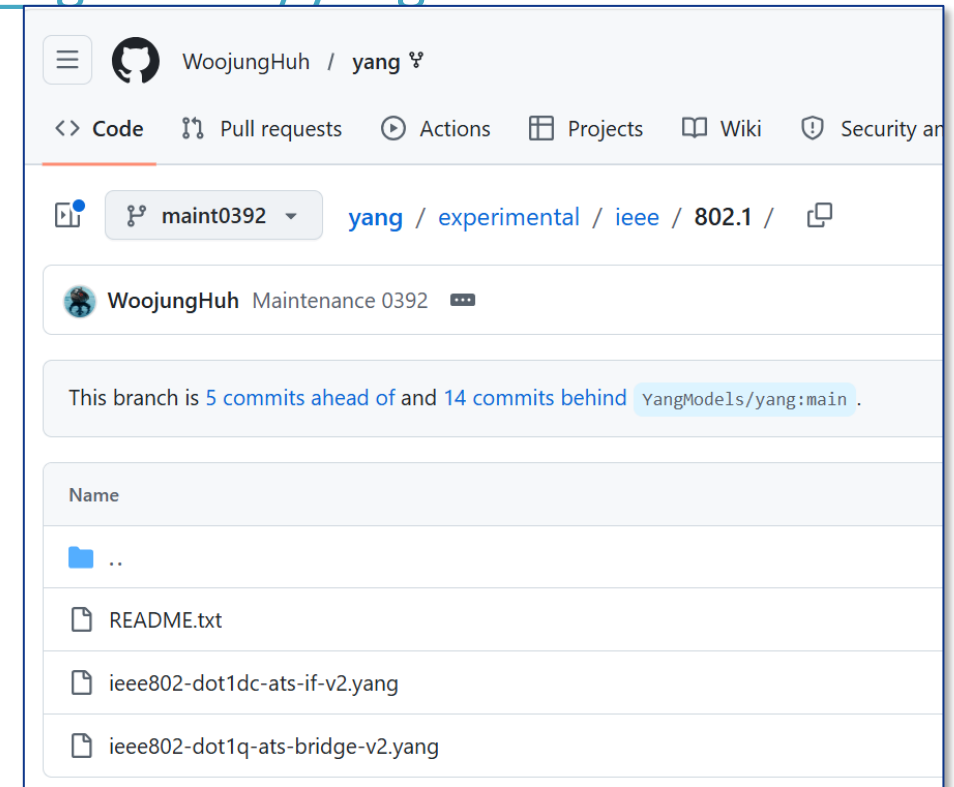
A proposed solution (tree update)

```
module: ietf-system
  +--rw system
  |   +--rw ats-if-v2:schedulers
  |   |   +--rw ats-if-v2:scheduler-instance-table* [scheduler-instance-id]
  |   |   |   +--rw ats-if-v2:scheduler-group-ref -> ../../../scheduler-groups/scheduler-group-instance-table/scheduler-group-
instance-id
  |   |   +--ro ats-if-v2:max-scheduler-instances?      uint32
  |   +--rw ats-if-v2:scheduler-groups
  |   |   +--rw ats-if-v2:scheduler-group-instance-table* [scheduler-group-instance-id]
  |   +--rw ats-if-v2:stream-gates
  |   |   +--rw ats-if-v2:stream-gate-instance-table* [stream-gate-instance-id]
  |   +--rw ats-if-v2:stream-filters
  |   |   +--rw ats-if-v2:stream-filter-instance-table* [stream-filter-instance-id]
  |   |   |   +--rw ats-if-v2:stream-gate-ref -> ../../../stream-gates/stream-gate-instance-table/stream-gate-instance-id
  |   |   |   +--rw ats-if-v2:scheduler
  |   |   |   |   +--rw ats-if-v2:scheduler-ref? -> ../../../schedulers/scheduler-instance-table/scheduler-instance-id
  |   |   |   |   +--rw ats-if-v2:scheduler-enable?    boolean
```

Proposed YANG files

- **Working repo**

- GitHub: <https://github.com/WoojungHuh/yang/tree/maint0392>
 - Private repo forked from <https://github.com/YangModels/yang>
 - Branch name: maint0392
- Files are copied into
 - experimental/ieee/802.1 and,
 - Updated file names are appended by “-v2”
 - ieee802-dot1dc-ats-if-v2.yang
 - ieee802-dot1q-ats-bridge-v2.yang



Updated Proposal (Aug/2026)

- **Because current YANG is not implemented correctly based on 802.1 standards and change is limited to ATS modules, would recommend to change standard file directly than creating “-V2” files.**
- **Change following files**
 - standard/ieee/published/802.1/ieee802-dot1dc-ats-if.yang
 - standard/ieee/published/802.1/ieee802-dot1q-ats-bridge.yang

#0393 Update for Bridge & End Station

Need a clarification of using stream-filter
when a bridge uses ATS and PSFP

- **802.1Q-2022-Rev includes**

- IEEE Std 802.1Qdy™-2025: YANG for the Multiple Spanning Tree Protocol.
- IEEE Std 802.1Qdx™-2024: YANG Data Models for the Credit-Based Shaper.
- IEEE Std 802.1Qdj™-2024: Configuration Enhancements for Time-Sensitive Networking.
- IEEE Std 802.1Qcj™-2023: Automatic Attachment to Provider Backbone Bridging (PBB) services.
- IEEE Std 802.1Qcw™-2023: YANG Data Models for Scheduled Traffic, Frame Preemption, and Per-Stream Filtering and Policing.
- **IEEE Std 802.1Qcz™-2023: Congestion Isolation.**

802.1Q-2022-Rev allows PSFP, ATS & CI simultaneously.

- **8.6.5 states**

- “PSFP, ATS, and CI share common per-stream classification and metering elements, as shown in Figure 8-13..”

- **8.6.5.2 d) states**

- “... A given stream filter can be configured with flow meters and an ATS scheduler if both PSFP and ATS are supported.”

- **8.6.5.2.2 b) states**

- “If the Bridge component does not support PSFP in addition to ATS, each stream gate only supports IPV assignment. ...”
- NOTE 2—For bridges with support for ATS, and without support for PSFP, stream gates of ATS traffic will never close. In this case, stream gates are only used for IPV assignment.

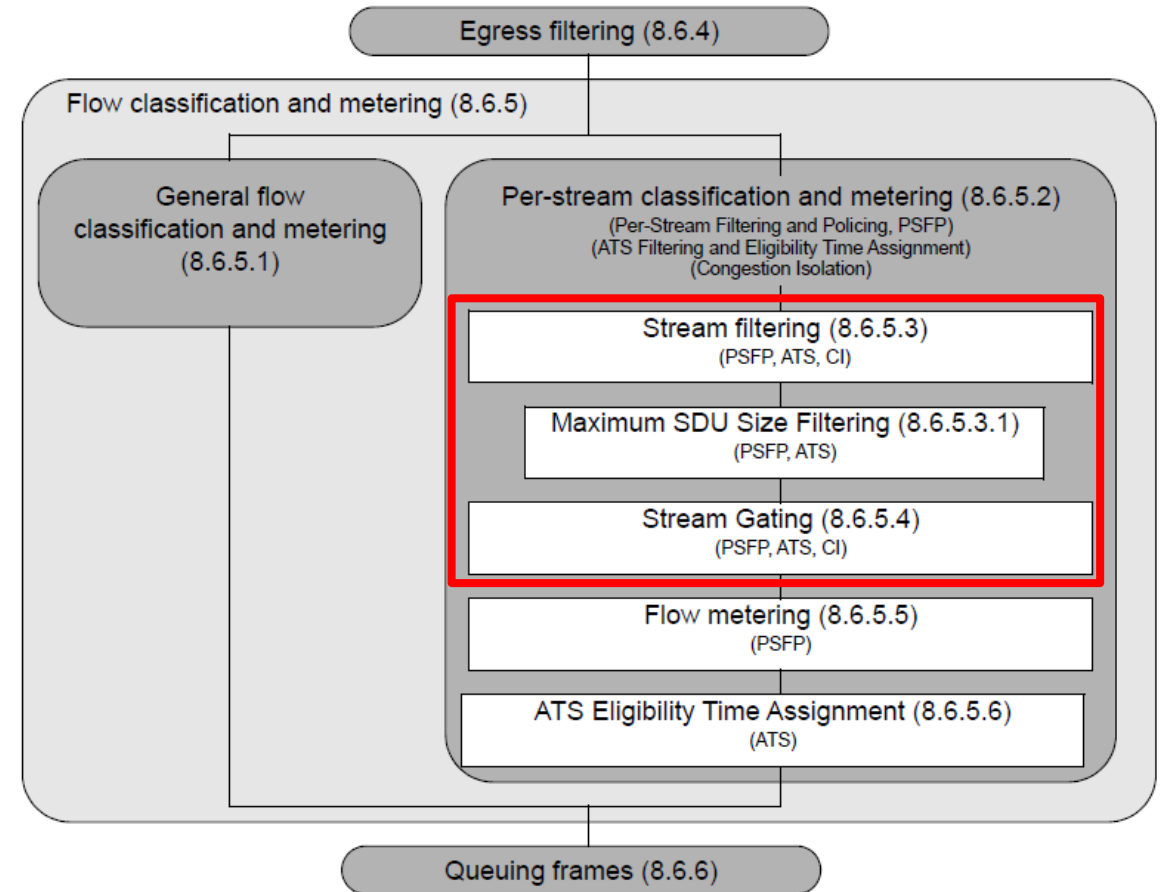
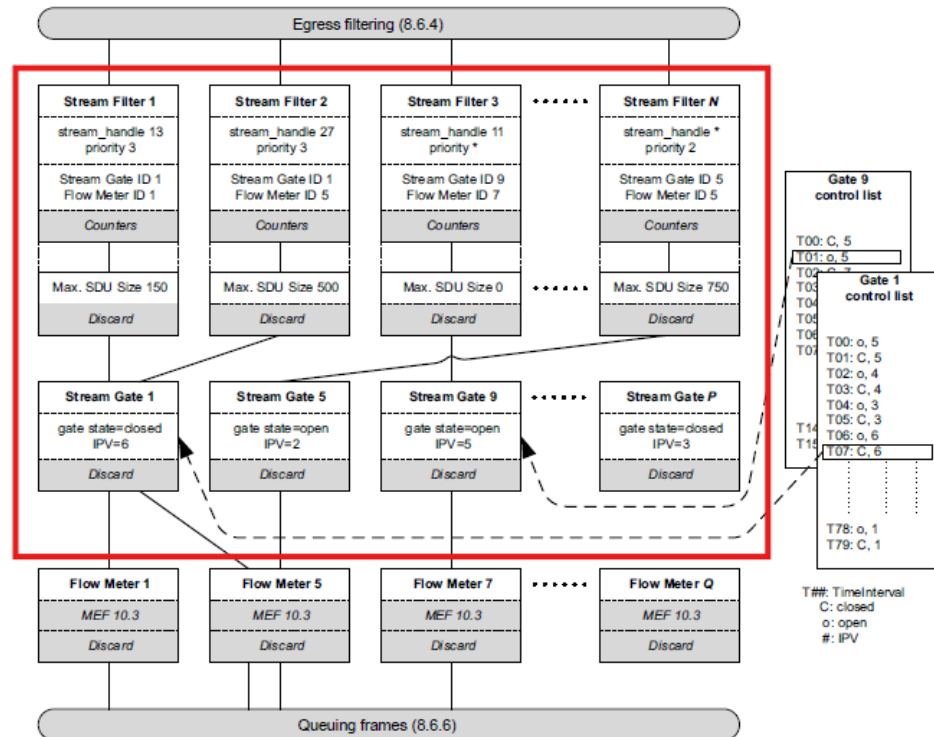


Figure 8-13—Flow classification and metering

Usage of Stream Filters and Stream Gates

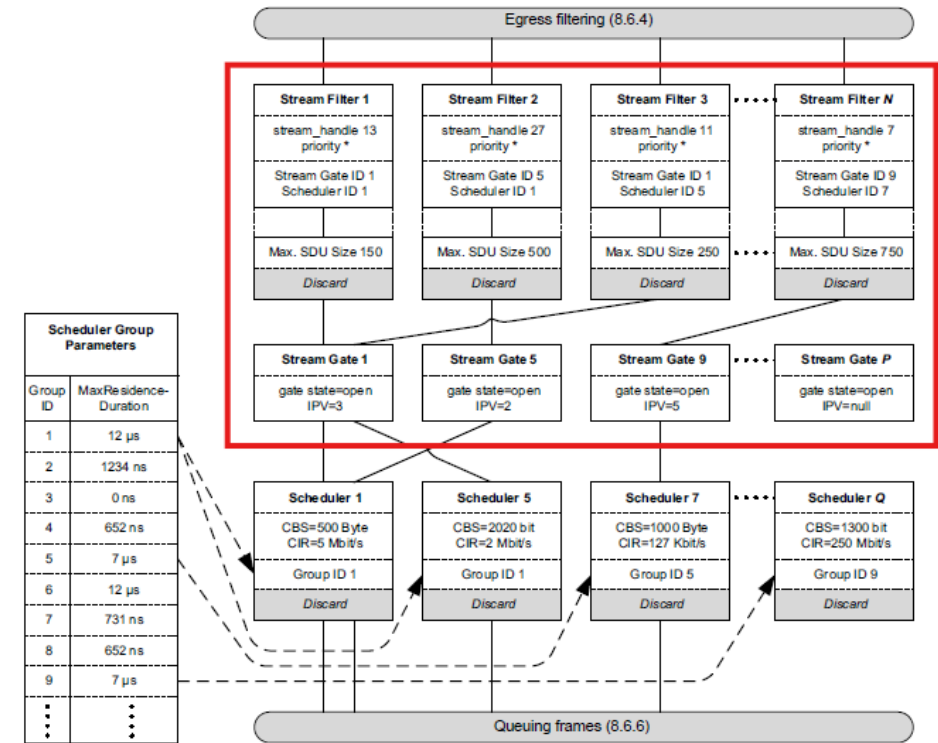
- PSFP



KEY
 Counters: Matching, passing, and discarded frame counters (8.6.5.3).
 Discard: Frame discarding abilities and parameters (8.6.5.3.1, 8.6.5.4, 8.6.5.5).
 MEF 10.3: Flow metering based on MEF 10.3 Bandwidth Profile parameters and algorithm as specified in 8.6.5.5.

Figure 8-14—Per-stream classification for PSFP

- ATS



KEY
 Discard: Frame discarding abilities and parameters (Clause 8.6.5.3.1, Clause 8.6.5.4, 8.6.5.6).
 CBS: CommittedBurstSize parameter (8.6.5.6, 8.6.11.3.5).
 CIR: CommittedInformationRate parameter (8.6.5.6, 8.6.11.3.6).

Figure 8-15—Per-stream classification and metering for ATS

- Congestion Isolation

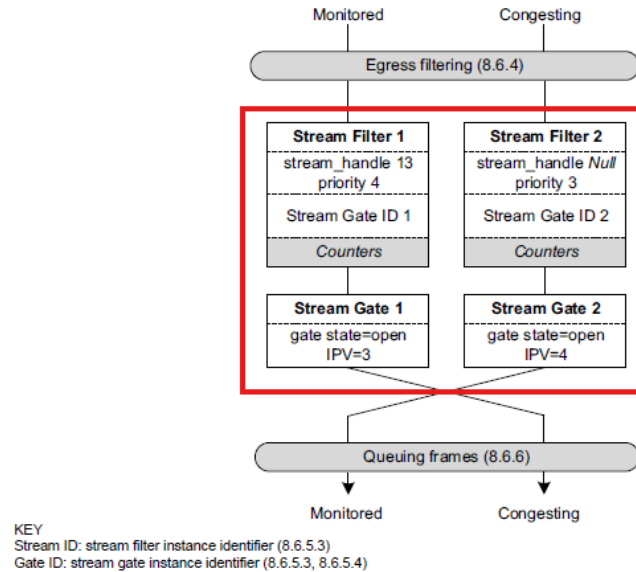


Figure 8-16—Per-stream classification and assignment for CI

Number of Instance Tables

- **12.31.2 The Stream Filter Instance Table**
 - There is one Stream Filter Instance Table per Bridge Component.
- **12.31.3 The Stream Gate Instance Table**
 - There is one Stream Gate Instance Table per Bridge Component.
- **12.31.4 The Flow Meter Instance Table**
 - There is one Flow Meter Instance Table per Bridge component.

802.1Q-2022-Rev ATS/PSFP/CI YANG schema

- **Current implementation**

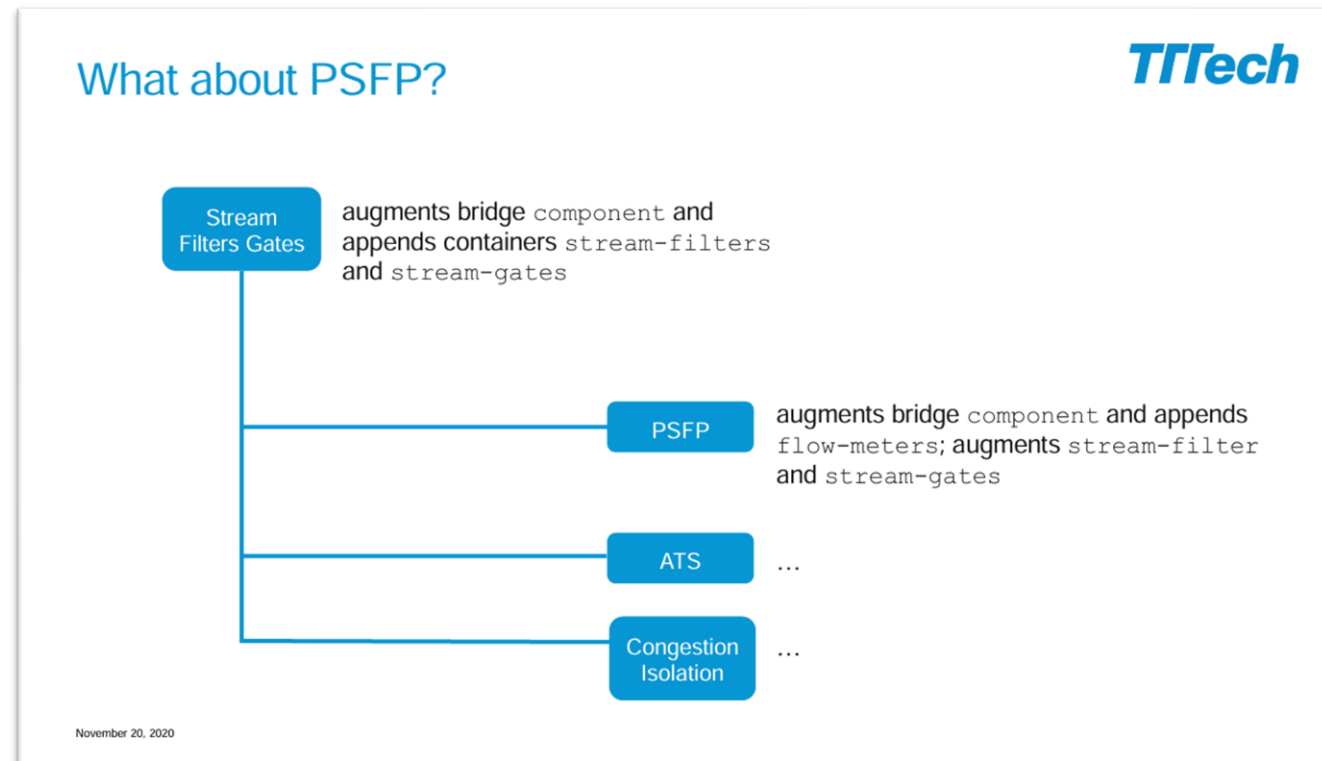
- Define “*grouping sfsg-parameters*” in ieee802-dot1q-stream-filters-gates.yang
- Uses “*uses sfsg:sfsg-parameters*” in 3 modules of ieee802-dot1q-[ats/psfp/congestion-isolation]-bridge.yang

- **Problem**

- “*Uses*” statement copies the nodes defined by the “*grouping*” into the current schema tree.
- This creates **own Stream Filter and Stream Gate of each module** under the bridge component.

802.1Q-2022-Rev ATS/PSFP/CI YANG schema

- The last updated at 802.1Qcz-2023
 - Update at Qcz-D2.1 based on <https://www.ieee802.org/1/files/private/cz-drafts/d2/802-1Qcz-d2-0-dis-v02.pdf>



802.1Q-2022-Rev ATS/PSFP/CI YANG schema

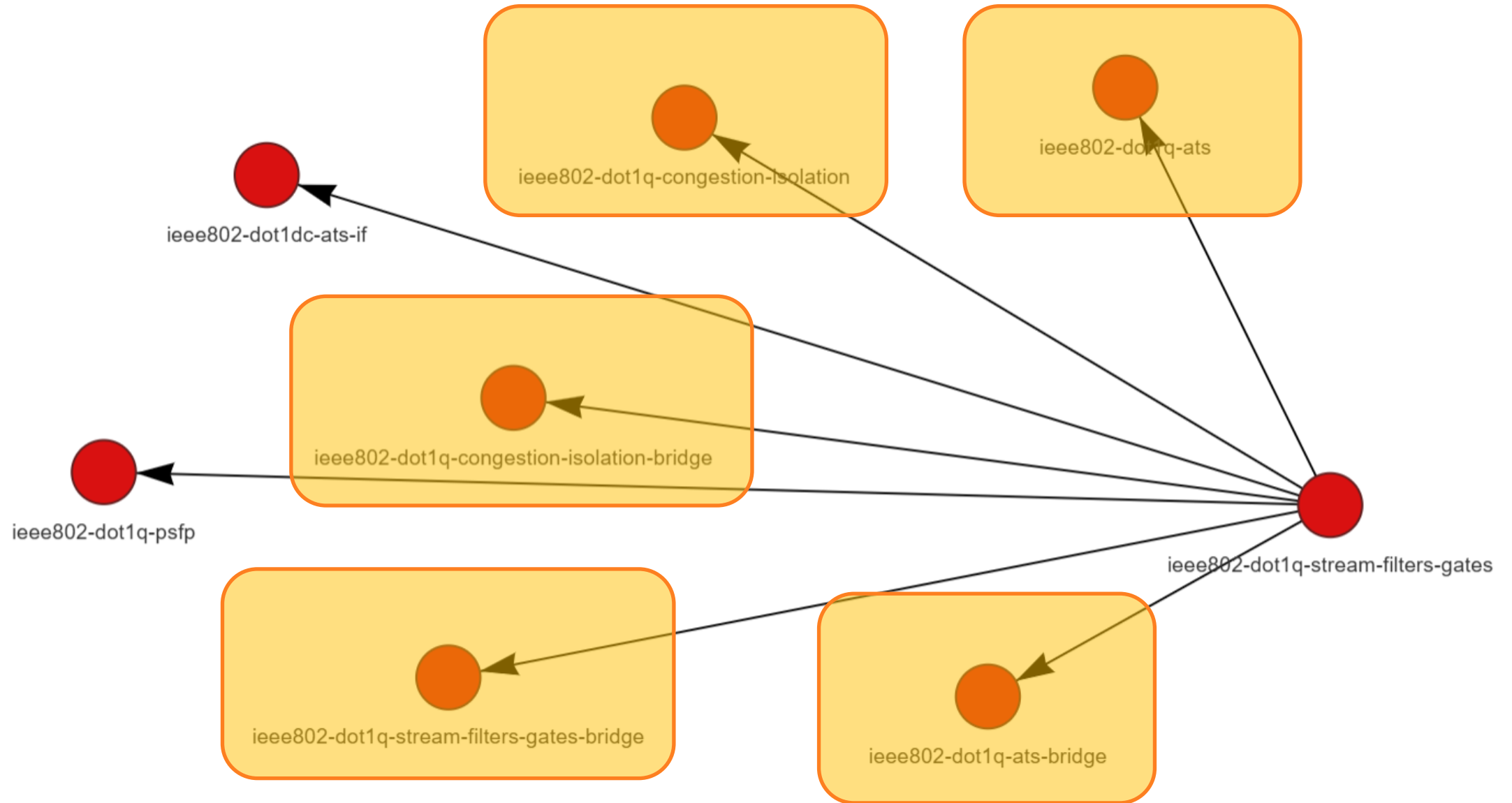
- **Problem**

- “*Uses*” statement copies the nodes defined by the “*grouping*” into the current schema tree.
- This creates **own Stream Filter and Stream Gate of each module** under the bridge component.

802.1Q-2022-Rev ATS/PSFP/CI YANG schema

```
module: ieee802-dot1q-bridge
  +--rw bridges
    +--rw bridge* [name]
      +--rw component* [name]
        +--rw ats-bridge:stream-gates
          |   +--rw ats-bridge:stream-gate-instance-table* [stream-gate-instance-id]
        +--rw ats-bridge:stream-filters
          |   +--rw ats-bridge:stream-filter-instance-table* [stream-filter-instance-id]
        +--rw psfp-bridge:flow-meters
          |   +--rw psfp-bridge:flow-meter-instance-table* [flow-meter-instance-id]
        +--rw psfp-bridge:stream-gates
          |   +--rw psfp-bridge:stream-gate-instance-table* [stream-gate-instance-id]
        +--rw psfp-bridge:stream-filters
          |   +--rw psfp-bridge:stream-filter-instance-table* [stream-filter-instance-id]
        +--rw ci-bridge:stream-gates {congestion-isolation-bridge}?
          |   +--rw ci-bridge:stream-gate-instance-table* [stream-gate-instance-id]
        +--rw ci-bridge:stream-filters {congestion-isolation-bridge}?
          |   +--rw ci-bridge:stream-filter-instance-table* [stream-filter-instance-id]
```

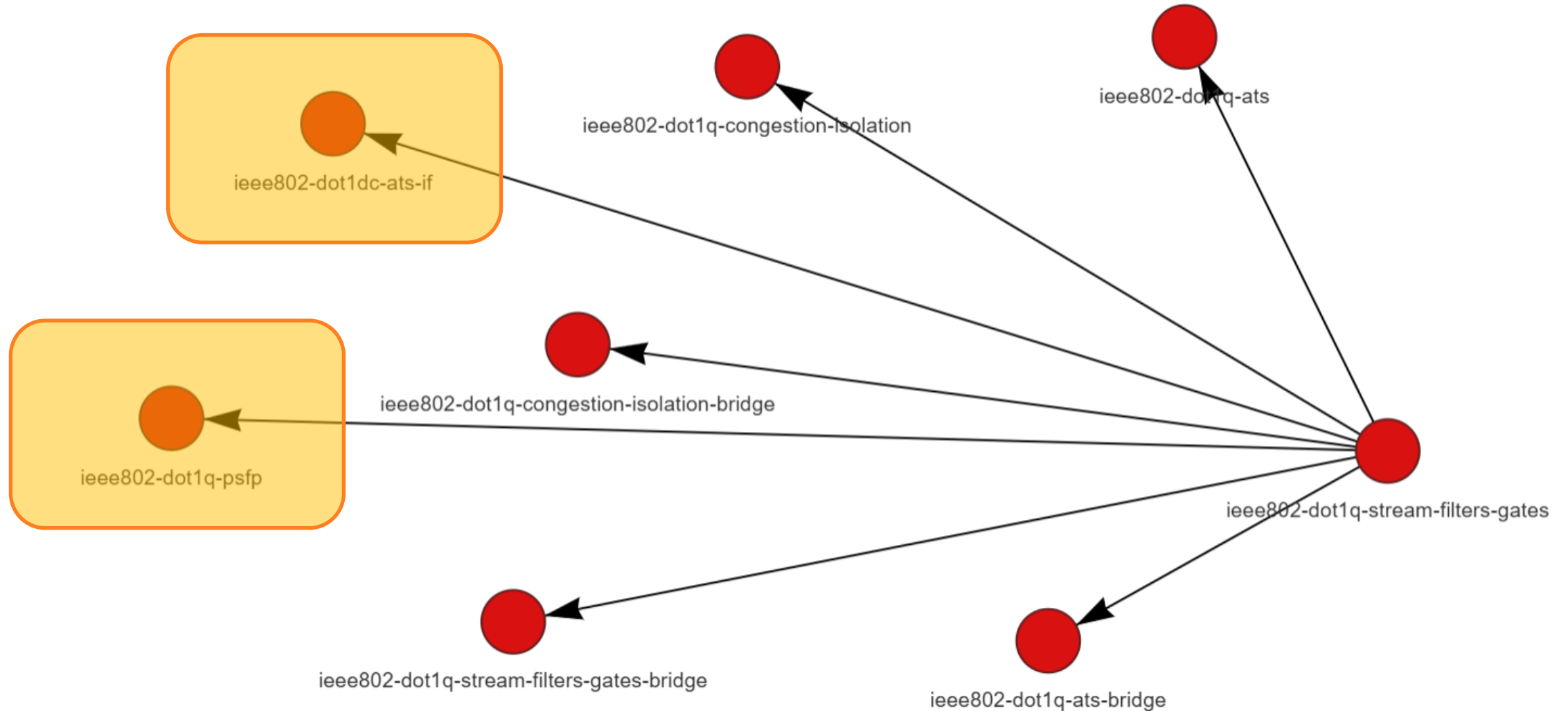
sfsg:sfsg-parameters reference analysis



802.1DC-2024 ATS/PSFP YANG schema

```
module: ietf-system
  +--rw system
  |   +--rw ats-if:stream-gates
  |   |   +--rw ats-if:stream-gate-instance-table* [stream-gate-instance-id]
  |   +--rw ats-if:stream-filters
  |   |   +--rw ats-if:stream-filter-instance-table* [stream-filter-instance-id]
  |   +--rw psfp-sys:flow-meters
  |   |   +--rw psfp-sys:flow-meter-instance-table* [flow-meter-instance-id]
  |   +--rw psfp-sys:stream-gates
  |   |   +--rw psfp-sys:stream-gate-instance-table* [stream-gate-instance-id]
  |   +--rw psfp-sys:stream-filters
  |       +--rw psfp-sys:stream-filter-instance-table* [stream-filter-instance-id]
```

sfsg:sfsg-parameters reference analysis



802.1DC-2024 ATS/PSFP YANG schema

- **Current implementation**

- Define “*grouping sfsg-parameters*” in ieee802-dot1q-stream-filters-gates.yang
- Uses “*uses sfsg:sfsg-parameters*” in ieee802-dot1dc-psfp-sys.yang (from ieee802-dot1q-psfp.yang) and ieee802-dot1dc-ats-if.yang

- **Problem**

- “*Uses*” statement copies the nodes defined by the “*grouping*” into the current schema tree.
- This creates **own Stream Filter and Stream Gate of each module** under the bridge component.

A proposed solution

- **Removing “use sfsg:sfsg-parameters” in**
 - ...ats-bridge.yang, ...psfp-bridge.yang (i.e., ...pspf.yang) and ...congestion-isolation-bridge (i.e., ..congestion-isolation.yang)
 - ...ats-if.yang, & ...psfp-sys.yang
- **Use a base modules**
 - **ieee802-dot1q-streams-filters-gates-bridges.yang** for bridge functions
 - for bridge (802.1Q) : sfsg-bridge
 - **ieee802-dot1dc-streams-filters-gates-sys.yang** for system functions
 - for system (802.1DC) : sfsg-sys
- **Each module augment into base node created by base modules**
 - sfsg-bridge
 - ats-bridge
 - psfp-bridge
 - ci-bridge

A proposed solution (YANG tree for bridge)

```
module: ieee802-dot1q-bridge
  +--rw bridges
    +--rw bridge* [name]
      +--rw component* [name]
        +--rw sfsg-bridge:stream-gates
          | +--rw sfsg-bridge:stream-gate-instance-table* [stream-gate-instance-id]
        +--rw sfsg-bridge:stream-filters
          | +--rw sfsg-bridge:stream-filter-instance-table* [stream-filter-instance-id]
        +--rw psfp-bridge-v2:flow-meters
          | +--rw psfp-bridge-v2:flow-meter-instance-table* [flow-meter-instance-id]
```

```

+--rw component* [name]
+--rw sfsg-bridge:stream-gates
+--rw sfsg-bridge:stream-gate-instance-table* [stream-gate-instance-id]
+--rw sfsg-bridge:stream-gate-instance-id uint32
+--rw sfsg-bridge:gate-enable? boolean
+--rw sfsg-bridge:admin-gate-states? gate-state-value-type
+--rw sfsg-bridge:admin-ipv? ipv-spec-type
+--ro psfp-bridge-v2:oper-gate-state? sfsg:gate-state-value-type
+--rw psfp-bridge-v2:oper-ipv? sfsg:ipv-spec-type
+--rw psfp-bridge-v2:admin-control-list
+--rw psfp-bridge-v2:gate-control-entry* [index]
+--rw psfp-bridge-v2:index uint32
+--rw psfp-bridge-v2:operation-name identityref
+--rw psfp-bridge-v2:time-interval-value? uint32
+--rw psfp-bridge-v2:gate-state-value sfsg:gate-state-value-type
+--rw psfp-bridge-v2:ipv-spec sfsg:ipv-spec-type
+--rw psfp-bridge-v2:interval-octet-max? uint32
+--ro psfp-bridge-v2:oper-control-list
+--ro psfp-bridge-v2:gate-control-entry* [index]
+--ro psfp-bridge-v2:index uint32
+--ro psfp-bridge-v2:operation-name identityref
+--ro psfp-bridge-v2:time-interval-value? uint32
+--ro psfp-bridge-v2:gate-state-value sfsg:gate-state-value-type
+--ro psfp-bridge-v2:ipv-spec sfsg:ipv-spec-type
+--ro psfp-bridge-v2:interval-octet-max? uint32
+--rw psfp-bridge-v2:admin-cycle-time
+--rw psfp-bridge-v2:numerator? uint32
+--rw psfp-bridge-v2:denominator? uint32
+--ro psfp-bridge-v2:oper-cycle-time
+--ro psfp-bridge-v2:numerator? uint32
+--ro psfp-bridge-v2:denominator? uint32
+--rw psfp-bridge-v2:admin-cycle-time-extension? uint32
+--ro psfp-bridge-v2:oper-cycle-time-extension? uint32
+--rw psfp-bridge-v2:admin-base-time
+--rw psfp-bridge-v2:seconds? uint64
+--rw psfp-bridge-v2:nanoseconds? uint32
+--ro psfp-bridge-v2:oper-base-time
+--ro psfp-bridge-v2:seconds? uint64
+--ro psfp-bridge-v2:nanoseconds? uint32
+--rw psfp-bridge-v2:config-change? boolean
+--ro psfp-bridge-v2:config-change-time
+--ro psfp-bridge-v2:seconds? uint64
+--ro psfp-bridge-v2:nanoseconds? uint32
+--ro psfp-bridge-v2:tick-granularity? uint32
+--ro psfp-bridge-v2:current-time
+--ro psfp-bridge-v2:seconds? uint64
+--ro psfp-bridge-v2:nanoseconds? uint32
+--ro psfp-bridge-v2:config-pending? boolean
+--ro psfp-bridge-v2:config-change-error? yang:counter64
+--rw psfp-bridge-v2:gate-closed-due-to-invalid-rx-enable? boolean
+--rw psfp-bridge-v2:gate-closed-due-to-invalid-rx? boolean
+--rw psfp-bridge-v2:gate-closed-due-octets-exceeded-enable? boolean
+--rw psfp-bridge-v2:gate-closed-due-octets-exceeded? boolean
+--ro sfsg-bridge:max-stream-gate-instances? uint32
+--rw psfp-bridge-v2:supported-list-max? uint32
+--rw psfp-bridge-v2:supported-cycle-max
+--rw psfp-bridge-v2:numerator? uint32
+--rw psfp-bridge-v2:denominator? uint32
+--rw psfp-bridge-v2:supported-interval-max? uint32

```

```

+--rw sfsg-bridge:stream-filters
+--rw sfsg-bridge:stream-filter-instance-table* [stream-filter-instance-id]
+--rw sfsg-bridge:stream-filter-instance-id uint32
+--rw (sfsg-bridge:stream-handle-spec)?
+-- (sfsg-bridge:wildcard)
+--rw sfsg-bridge:wildcard? empty
+-- (sfsg-bridge:stream-handle)
+--rw sfsg-bridge:stream-handle uint32
+-- (ci-bridge-v2:null-handle) {congestion-isolation-bridge}?
+--rw ci-bridge-v2:null-handle? empty
+--rw sfsg-bridge:priority-spec priority-spec-type
+--rw sfsg-bridge:max-sdu-size uint32
+--rw sfsg-bridge:stream-blocked-due-to-oversize-frame-enabled? boolean
+--rw sfsg-bridge:stream-blocked-due-to-oversize-frame? boolean
+--rw sfsg-bridge:stream-gate-ref -> ../../stream-gates/stream-gate-instance-table/stream-gate-instance-id
+--rw ats-bridge-v2:scheduler
+--rw ats-bridge-v2:scheduler-ref? -> ../../schedulers/scheduler-instance-table/scheduler-instance-id
+--rw ats-bridge-v2:scheduler-enable? boolean
+--ro psfp-bridge-v2:matching-frames-count? yang:counter64
+--ro psfp-bridge-v2:passing-frames-count? yang:counter64
+--ro psfp-bridge-v2:not-passing-frames-count? yang:counter64
+--ro psfp-bridge-v2:red-frames-count? yang:counter64
+--ro psfp-bridge-v2:passing-sdu-count? yang:counter64
+--ro psfp-bridge-v2:not-passing-sdu-count? yang:counter64
+--rw psfp-bridge-v2:flow-meter-ref? -> ../../flow-meters/flow-meter-instance-table/flow-meter-instance-id
+--rw psfp-bridge-v2:flow-meter-enable? boolean
+--ro sfsg-bridge:max-stream-filter-instances? uint32

```

```

+--rw psfp-bridge-v2:flow-meters
+--rw psfp-bridge-v2:flow-meter-instance-table* [flow-meter-instance-id]
+--rw psfp-bridge-v2:flow-meter-instance-id uint32
+--rw psfp-bridge-v2:committed-information-rate uint64
+--rw psfp-bridge-v2:committed-burst-size uint32
+--rw psfp-bridge-v2:excess-information-rate uint64
+--rw psfp-bridge-v2:excess-burst-size uint32
+--rw psfp-bridge-v2:coupling-flag enumeration
+--rw psfp-bridge-v2:color-mode enumeration
+--rw psfp-bridge-v2:drop-on-yellow boolean
+--rw psfp-bridge-v2:mark-all-frames-red-enable? boolean
+--rw psfp-bridge-v2:mark-all-frames-red? boolean
+--rw psfp-bridge-v2:max-flow-meter-instances? uint32

```

A proposed solution (YANG tree for end-station)

```
module: ietf-system
  +--rw system
    +--rw sfsg-sys:stream-gates
      | +--rw sfsg-sys:stream-gate-instance-table* [stream-gate-instance-id]
    +--rw sfsg-sys:stream-filters
      | +--rw sfsg-sys:stream-filter-instance-table* [stream-filter-instance-id]
    +--rw psfp-sys-v2:flow-meters
      +--rw psfp-sys-v2:flow-meter-instance-table* [flow-meter-instance-id]
```

```

module: ietf-system
+--rw system
+--rw sfsg-sys:stream-gates
+--rw sfsg-sys:stream-gate-instance-table* [stream-gate-instance-id]
+--rw sfsg-sys:stream-gate-instance-id uint32
+--rw sfsg-sys:gate-enable? boolean
+--rw sfsg-sys:admin-gate-states? gate-state-value-type
+--rw sfsg-sys:admin-ipv? ipv-spec-type
+--ro psfp-sys-v2:oper-gate-state? sfsg:gate-state-value-type
+--rw psfp-sys-v2:oper-ipv? sfsg:ipv-spec-type
+--rw psfp-sys-v2:admin-control-list
+--rw psfp-sys-v2:gate-control-entry* [index]
+--rw psfp-sys-v2:index uint32
+--rw psfp-sys-v2:operation-name identityref
+--rw psfp-sys-v2:time-interval-value? uint32
+--rw psfp-sys-v2:gate-state-value sfsg:gate-state-value-type
+--rw psfp-sys-v2:ipv-spec sfsg:ipv-spec-type
+--rw psfp-sys-v2:interval-octet-max? uint32
+--ro psfp-sys-v2:oper-control-list
+--ro psfp-sys-v2:gate-control-entry* [index]
+--ro psfp-sys-v2:index uint32
+--ro psfp-sys-v2:operation-name identityref
+--ro psfp-sys-v2:time-interval-value? uint32
+--ro psfp-sys-v2:gate-state-value sfsg:gate-state-value-type
+--ro psfp-sys-v2:ipv-spec sfsg:ipv-spec-type
+--ro psfp-sys-v2:interval-octet-max? uint32
+--rw psfp-sys-v2:admin-cycle-time
+--rw psfp-sys-v2:numerator? uint32
+--rw psfp-sys-v2:denominator? uint32
+--ro psfp-sys-v2:oper-cycle-time
+--ro psfp-sys-v2:numerator? uint32
+--ro psfp-sys-v2:denominator? uint32
+--rw psfp-sys-v2:admin-cycle-time-extension? uint32
+--ro psfp-sys-v2:oper-cycle-time-extension? uint32
+--rw psfp-sys-v2:admin-base-time
+--rw psfp-sys-v2:seconds? uint64
+--rw psfp-sys-v2:nanoseconds? uint32
+--ro psfp-sys-v2:oper-base-time
+--ro psfp-sys-v2:seconds? uint64
+--ro psfp-sys-v2:nanoseconds? uint32
+--rw psfp-sys-v2:config-change? boolean
+--ro psfp-sys-v2:config-change-time
+--ro psfp-sys-v2:seconds? uint64
+--ro psfp-sys-v2:nanoseconds? uint32
+--ro psfp-sys-v2:tick-granularity? uint32
+--ro psfp-sys-v2:current-time
+--ro psfp-sys-v2:seconds? uint64
+--ro psfp-sys-v2:nanoseconds? uint32
+--ro psfp-sys-v2:config-pending? boolean
+--ro psfp-sys-v2:config-change-error? yang:counter64
+--rw psfp-sys-v2:gate-closed-due-to-invalid-rx-enable? boolean
+--rw psfp-sys-v2:gate-closed-due-to-invalid-rx? boolean
+--rw psfp-sys-v2:gate-closed-due-octets-exceeded-enable? boolean
+--rw psfp-sys-v2:gate-closed-due-octets-exceeded? boolean
+--ro sfsg-sys:max-stream-gate-instances? uint32
+--rw psfp-sys-v2:supported-list-max? uint32
+--ro psfp-sys-v2:supported-cycle-max
+--ro psfp-sys-v2:numerator? uint32
+--ro psfp-sys-v2:denominator? uint32
+--rw psfp-sys-v2:supported-interval-max? uint32

```

```

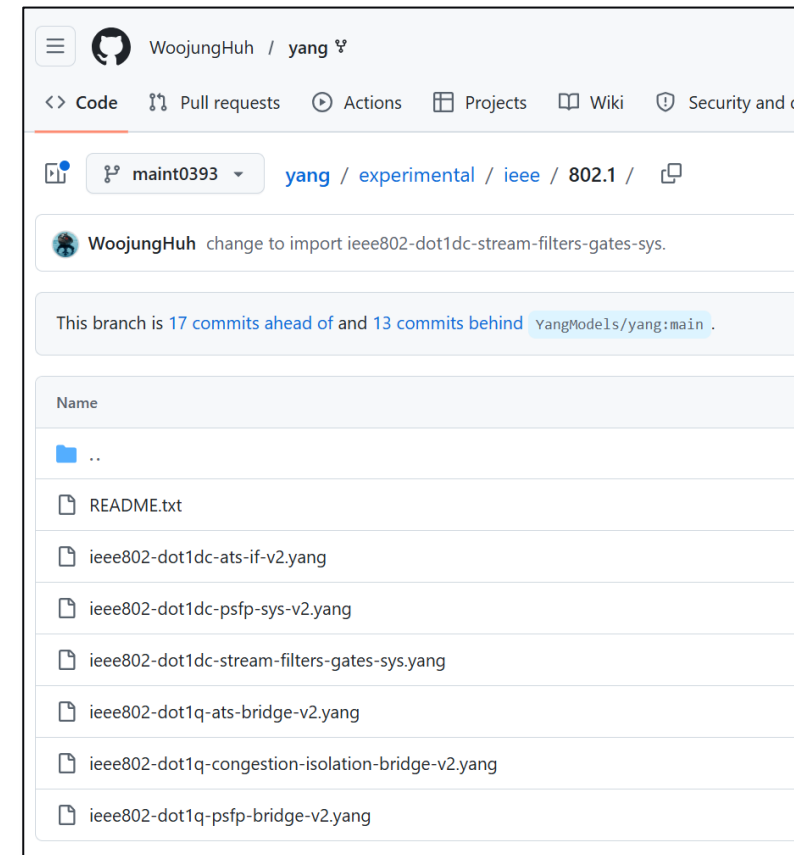
module: ietf-system
+--rw system
+--rw sfsg-sys:stream-filters
+--rw sfsg-sys:stream-filter-instance-table* [stream-filter-instance-id]
+--rw sfsg-sys:stream-filter-instance-id uint32
+--rw (sfsg-sys:stream-handle-spec)?
+--:(sfsg-sys:wildcard)
+--rw sfsg-sys:wildcard? empty
+--:(sfsg-sys:stream-handle)
+--rw sfsg-sys:stream-handle uint32
+--rw sfsg-sys:priority-spec priority-spec-type
+--rw sfsg-sys:max-sdu-size uint32
+--rw sfsg-sys:stream-blocked-due-to-oversize-frame-enabled? boolean
+--rw sfsg-sys:stream-blocked-due-to-oversize-frame? boolean
+--rw sfsg-sys:stream-gate-ref -> ../../../../stream-gates/stream-gate-instance-table/stream-gate-instance-id
+--rw ats-if-v2:scheduler
+--rw ats-if-v2:scheduler-ref? -> ../../../../schedulers/scheduler-instance-table/scheduler-instance-id
+--rw ats-if-v2:scheduler-enable? boolean
+--ro psfp-sys-v2:matching-frames-count? yang:counter64
+--ro psfp-sys-v2:passing-frames-count? yang:counter64
+--ro psfp-sys-v2:not-passing-frames-count? yang:counter64
+--ro psfp-sys-v2:red-frames-count? yang:counter64
+--ro psfp-sys-v2:passing-sdu-count? yang:counter64
+--ro psfp-sys-v2:not-passing-sdu-count? yang:counter64
+--rw psfp-sys-v2:flow-meter-ref? -> ../../../../flow-meters/flow-meter-instance-table/flow-meter-instance-id
+--rw psfp-sys-v2:flow-meter-enable? boolean
+--ro sfsg-sys:max-stream-filter-instances? uint32
+--rw psfp-sys-v2:flow-meters
+--rw psfp-sys-v2:flow-meter-instance-table* [flow-meter-instance-id]
+--rw psfp-sys-v2:flow-meter-instance-id uint32
+--rw psfp-sys-v2:committed-information-rate uint64
+--rw psfp-sys-v2:committed-burst-size uint32
+--rw psfp-sys-v2:excess-information-rate uint64
+--rw psfp-sys-v2:excess-burst-size uint32
+--rw psfp-sys-v2:coupling-flag enumeration
+--rw psfp-sys-v2:color-mode enumeration
+--rw psfp-sys-v2:drop-on-yellow boolean
+--rw psfp-sys-v2:mark-all-frames-red-enable? boolean
+--rw psfp-sys-v2:mark-all-frames-red? boolean
+--rw psfp-sys-v2:max-flow-meter-instances? uint32

```

Proposed YANG files

- **Working repo**

- GitHub: <https://github.com/WoojungHuh/yang/tree/maint0393>
 - Private repo forked from <https://github.com/YangModels/yang>
 - Branch name: maint0393
- Files are copied into
 - experimental/ieee/802.1, and
 - Updated file names are appended by “-v2”
 - ieee802-dot1dc-ats-if-v2.yang
 - ieee802-dot1dc-psfp-sys-v2.yang
 - ieee802-dot1q-ats-bridge-v2.yang
 - ieee802-dot1q-congestion-isolation-bridge-v2.yang
 - ieee802-dot1q-psfp-bridge-v2.yang
 - New file created
 - ieee802-dot1dc-stream-filter-gates-sys.yang



Updated Proposal (Aug/2026)

- **Because current YANG is not implemented correctly based on 802.1 standards, changes are required.**
However, changes are over several modules (ATS, PSFP & CI) would recommend to keep current versions and “-V2” versions for now with proper comments and way to select version per implementations.
- **When moving forward with new module names, base module name of “sfsg-bridge” would need to be changed in bridge YANG**

Bridge Tree with current modules

```
module: ieee802-dot1q-bridge
+--rw bridges
+--rw bridge* [name]
+--rw name                dot1qtypes:name-type
+--rw address              ieee:mac-address
+--rw bridge-type          identityref
+--ro ports?               uint16
+--ro up-time?             yang:zero-based-counter32
+--ro components?          uint32
+--rw component* [name]
+--rw name                  string
+--rw id?                   uint32
+--rw type                  identityref
+--rw address?              ieee:mac-address
+--rw traffic-class-enabled? boolean
+--ro ports?                uint16
+--ro bridge-port*          if:interface-ref
...
+--rw sfsg-bridge:stream-gates
| +--rw sfsg-bridge:stream-gate-instance-table* [stream-gate-instance-id]
...
+--rw sfsg-bridge:stream-filters
| +--rw sfsg-bridge:stream-filter-instance-table* [stream-filter-instance-id]
...
+--rw psfp-bridge:flow-meters
| +--rw psfp-bridge:flow-meter-instance-table* [flow-meter-instance-id]
...
+--rw psfp-bridge:stream-gates
| +--rw psfp-bridge:stream-gate-instance-table* [stream-gate-instance-id]
...
+--rw psfp-bridge:stream-filters
| +--rw psfp-bridge:stream-filter-instance-table* [stream-filter-instance-id]
...
+--rw ats-bridge:stream-gates
| +--rw ats-bridge:stream-gate-instance-table* [stream-gate-instance-id]
...
+--rw ats-bridge:stream-filters
| +--rw ats-bridge:stream-filter-instance-table* [stream-filter-instance-id]
...
+--rw ci-bridge:stream-gates {congestion-isolation-bridge}?
| +--rw ci-bridge:stream-gate-instance-table* [stream-gate-instance-id]
...
+--rw ci-bridge:stream-filters {congestion-isolation-bridge}?
+--rw ci-bridge:stream-filter-instance-table* [stream-filter-instance-id]
```

Bridge Tree with new modules

```
module: ieee802-dot1q-bridge
  +--rw bridges
    +--rw bridge* [name]
      +--rw name          dot1qtypes:name-type
      +--rw address       ieee:mac-address
      +--rw bridge-type   identityref
      +--ro ports?        uint16
      +--ro up-time?      yang:zero-based-counter32
      +--ro components?   uint32
      +--rw component* [name]
        +--rw name          string
        +--rw id?           uint32
        +--rw type          identityref
        +--rw address?      ieee:mac-address
        +--rw traffic-class-enabled? boolean
        +--ro ports?       uint16
        +--ro bridge-port*  if:interface-ref
        ...
      +--rw sfsg-bridge:stream-gates
      | +--rw sfsg-bridge:stream-gate-instance-table* [stream-gate-instance-id]
      | ...
      +--rw sfsg-bridge:stream-filters
      | +--rw sfsg-bridge:stream-filter-instance-table* [stream-filter-instance-id]
      | ...
      +--rw psfp-bridge-v2:flow-meters
      | +--rw psfp-bridge-v2:flow-meter-instance-table* [flow-meter-instance-id]
      | ...
      +--rw ats-bridge-v2:schedulers
      | +--rw ats-bridge-v2:scheduler-instance-table* [scheduler-instance-id]
      | ...
      +--rw ats-bridge-v2:scheduler-groups
      | +--rw ats-bridge-v2:scheduler-group-instance-table* [scheduler-group-instance-id]
```

Bridge Tree with current & new modules

```
module: ieee802-dot1q-bridge
+--rw bridges
+--rw bridge* [name]
+--rw name          dot1qtypes:name-type
+--rw address        ieee:mac-address
+--rw bridge-type    identityref
+--ro ports?         uint16
+--ro up-time?       yang:zero-based-counter32
+--ro components?    uint32
+--rw component* [name]
+--rw name           string
+--rw id?            uint32
+--rw type           identityref
+--rw address?       ieee:mac-address
+--rw traffic-class-enabled? boolean
+--ro ports?         uint16
+--ro bridge-port*   if:interface-ref
...
+--rw sfsg-bridge:stream-gates
| +--rw sfsg-bridge:stream-gate-instance-table* [stream-gate-instance-id]
...
+--rw sfsg-bridge:stream-filters
| +--rw sfsg-bridge:stream-filter-instance-table* [stream-filter-instance-id]
...
+--rw psfp-bridge:flow-meters
| +--rw psfp-bridge:flow-meter-instance-table* [flow-meter-instance-id]
...
+--rw psfp-bridge:stream-gates
| +--rw psfp-bridge:stream-gate-instance-table* [stream-gate-instance-id]
...
+--rw psfp-bridge:stream-filters
| +--rw psfp-bridge:stream-filter-instance-table* [stream-filter-instance-id]
...
+--rw psfp-bridge-v2:flow-meters
| +--rw psfp-bridge-v2:flow-meter-instance-table* [flow-meter-instance-id]
...
+--rw ats-bridge-v2:schedulers
| +--rw ats-bridge-v2:scheduler-instance-table* [scheduler-instance-id]
...
+--rw ats-bridge-v2:scheduler-groups
| +--rw ats-bridge-v2:scheduler-group-instance-table* [scheduler-group-instance-id]
...
+--rw ats-bridge:stream-gates
| +--rw ats-bridge:stream-gate-instance-table* [stream-gate-instance-id]
...
+--rw ats-bridge:stream-filters
| +--rw ats-bridge:stream-filter-instance-table* [stream-filter-instance-id]
...
+--rw ci-bridge:stream-gates {congestion-isolation-bridge}?
| +--rw ci-bridge:stream-gate-instance-table* [stream-gate-instance-id]
...
+--rw ci-bridge:stream-filters {congestion-isolation-bridge}?
| +--rw ci-bridge:stream-filter-instance-table* [stream-filter-instance-id]
```

End Station Tree with current modules

```
module: ietf-system
+--rw system
|   +--rw contact?          string
|   +--rw hostname?         inet:domain-name
|   +--rw location?         string
|   ...
|   +--rw psfp-sys:flow-meters
|   |   +--rw psfp-sys:flow-meter-instance-table* [flow-meter-instance-id]
|   |   ...
|   +--rw psfp-sys:stream-gates
|   |   +--rw psfp-sys:stream-gate-instance-table* [stream-gate-instance-id]
|   |   ...
|   +--rw psfp-sys:stream-filters
|   |   +--rw psfp-sys:stream-filter-instance-table* [stream-filter-instance-id]
|   |   ...
|   +--rw ats-if:stream-gates
|   |   +--rw ats-if:stream-gate-instance-table* [stream-gate-instance-id]
|   |   ...
|   +--rw ats-if:stream-filters
|   |   +--rw ats-if:stream-filter-instance-table* [stream-filter-instance-id]
|   |   ...
+--ro system-state
+--ro platform
|   +--ro os-name?          string
|   +--ro os-release?       string
|   +--ro os-version?       string
|   +--ro machine?          string
+--ro clock
    +--ro current-datetime?  yang:date-and-time
    +--ro boot-datetime?     yang:date-and-time
```

End Station Tree with new modules

```
module: ietf-system
  +--rw system
  |   +--rw contact?          string
  |   +--rw hostname?         inet:domain-name
  |   +--rw location?         string
  |   ...
  |   +--rw sfsg-sys:stream-gates
  |   |   +--rw sfsg-sys:stream-gate-instance-table* [stream-gate-instance-id]
  |   |   ...
  |   +--rw sfsg-sys:stream-filters
  |   |   +--rw sfsg-sys:stream-filter-instance-table* [stream-filter-instance-id]
  |   |   ...
  |   +--rw psfp-sys-v2:flow-meters
  |   |   +--rw psfp-sys-v2:flow-meter-instance-table* [flow-meter-instance-id]
  |   |   ...
  |   +--rw ats-if-v2:schedulers
  |   |   +--rw ats-if-v2:scheduler-instance-table* [scheduler-instance-id]
  |   |   ...
  |   +--rw ats-if-v2:scheduler-groups
  |   |   +--rw ats-if-v2:scheduler-group-instance-table* [scheduler-group-instance-id]
  |   |   ...
  +--ro system-state
  |   +--ro platform
  |   |   +--ro os-name?      string
  |   |   +--ro os-release?   string
  |   |   +--ro os-version?   string
  |   |   +--ro machine?      string
  |   +--ro clock
  |   |   +--ro current-datetime? yang:date-and-time
  |   |   +--ro boot-datetime?   yang:date-and-time
```

End Station Tree with current & new modules

```
module: ietf-system
+--rw system
| +--rw contact?          string
| +--rw hostname?         inet:domain-name
| +--rw location?         string
| ...
| +--rw psfp-sys:flow-meters
| | +--rw psfp-sys:flow-meter-instance-table* [flow-meter-instance-id]
| | ...
| | +--rw psfp-sys:stream-gates
| | | +--rw psfp-sys:stream-gate-instance-table* [stream-gate-instance-id]
| | | ...
| | +--rw psfp-sys:stream-filters
| | | +--rw psfp-sys:stream-filter-instance-table* [stream-filter-instance-id]
| | | ...
| | +--rw sfsg-sys:stream-gates
| | | +--rw sfsg-sys:stream-gate-instance-table* [stream-gate-instance-id]
| | | ...
| | +--rw sfsg-sys:stream-filters
| | | +--rw sfsg-sys:stream-filter-instance-table* [stream-filter-instance-id]
| | | ...
| +--rw psfp-sys-v2:flow-meters
| | +--rw psfp-sys-v2:flow-meter-instance-table* [flow-meter-instance-id]
| | ...
| +--rw ats-if:stream-gates
| | +--rw ats-if:stream-gate-instance-table* [stream-gate-instance-id]
| | ...
| +--rw ats-if:stream-filters
| | +--rw ats-if:stream-filter-instance-table* [stream-filter-instance-id]
| | ...
| +--rw ats-if-v2:schedulers
| | +--rw ats-if-v2:scheduler-instance-table* [scheduler-instance-id]
| | ...
| +--rw ats-if-v2:scheduler-groups
| | +--rw ats-if-v2:scheduler-group-instance-table* [scheduler-group-instance-id]
| | ...
+--ro system-state
+--ro platform
| +--ro os-name?      string
| +--ro os-release?   string
| +--ro os-version?   string
| +--ro machine?      string
+--ro clock
+--ro current-datetime? yang:date-and-time
+--ro boot-datetime?    yang:date-and-time
```

Thank You

Backup Slides