

draft-ietf-opsawg- discardmodel-04

J. Evans, O. Pylypenko, Amazon

J. Haas, Juniper Networks

A. Kadosh, Cisco Systems, Inc.

B. M. Boucadair, Orange

draft-ietf-opsawg-discardmodel

- Following IETF120, Information Model refactored in YANG using RFC8791 data structure extensions
- Incorporated feedback from subsequent YANGDOCTORS review
 - Changed YANG Module to “address-family” type for v4 and v6
 - Added Design Rationale (4.1) and Structure sections (4.2)

Modelling challenges

- Support different reported entities – which may be combined
 - Interface
 - Control plane
 - Device
 - Flow
- Directionality
 - Ingress, egress, none
- Layer: L2, L3
- Agnostic of implementation, but flexible to different implementations

```

+-- interface* [name] {per-interface-stats}?
  | +-- name          string
  | +-- direction?  identityref
  | +-- traffic
  | | +-- 12
  | | +-- 13
  | | | +-- address-family-stat* [address-family]
  | | |   +-- address-family  identityref
  | | |   +-- unicast
  | | |   +-- multicast
  | | +-- qos
  | |   +-- class* [id]
  | +-- discards
  |   +-- 12
  |   +-- 13
  |   | +-- address-family-stat* [address-family]
  |   |   +-- address-family  identityref
  |   |   +-- unicast
  |   |   +-- multicast
  |   +-- errors
  |   | +-- 12
  |   | | +-- rx
  |   | | +-- tx
  |   | +-- 13
  |   | | +-- rx
  |   | | +-- tx
  |   | +-- internal
  |   +-- policy
  |   | +-- 12
  |   | +-- 13
  |   +-- no-buffer
  |       +-- class* [id]

```

Implementation 1: Interface

Leaves omitted for brevity

```
+- device {per-device-stats}?
  +- traffic
  | +- 12
  | +- 13
  | | +- address-family-stat* [address-family]
  | |   +- address-family identityref
  | |   +- unicast
  | |   +- multicast
  | +- qos
  |   +- class* [id]
+- discards
  +- 12
  +- 13
  | +- address-family-stat* [address-family]
  |   +- address-family identityref
  |   +- unicast
  |   +- multicast
+- errors
  | +- 12
  | | +- rx
  | | +- tx
  | +- 13
  | | +- rx
  | | +- tx
  | +- internal
+- policy
  | +- 12
  | +- 13
+- no-buffer
  +- class* [id]
```

Implementation 2: Device

Leaves omitted for brevity

```
module: ietf-packet-discard-reporting
```

```
structure packet-discard-reporting:
```

```
+-- control-plane {control-plane-stats}?
```

```
  | +-- direction?  identityref
```

```
  | +-- traffic
```

```
  | | +-- packets?  uint32
```

```
  | | +-- bytes?    uint32
```

```
  | +-- discards
```

```
  |   +-- packets?  uint32
```

```
  |   +-- bytes?    uint32
```

```
  |   +-- policy
```

```
  |     +-- packets?  uint32
```

Control Plane

```

+-- flow {flow-reporting}?
|   +-- direction?  identityref
|   +-- traffic
|   |   +-- 12
|   |   +-- 13
|   |   |   +-- address-family-stat* [address-family]
|   |   |   +-- address-family  identityref
|   |   |   +-- unicast
|   |   |   +-- multicast
|   |   +-- qos
|   |   +-- class* [id]
|   +-- discards
|       +-- 12
|       +-- 13
|       |   +-- address-family-stat* [address-family]
|       |   +-- address-family  identityref
|       |   +-- unicast
|       |   +-- multicast
|       +-- errors
|           +-- 12
|           |   +-- rx
|           |   +-- tx
|           +-- 13
|           |   +-- rx
|           |   +-- tx
|           +-- internal
|       +-- policy
|           +-- 12
|           +-- 13
|       +-- no-buffer
|           +-- class* [id]

```

Flow

Leaves omitted for brevity

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- Updated model available:

<https://github.com/johnevansuk/ietf/tree/draft-ietf-opsawg-discardmodel/draft-ietf-opsawg-discardmodel/yang>