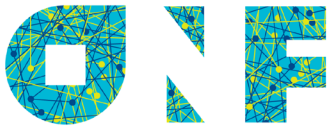

OPEN NETWORKING
FOUNDATION

Group notifications Extension

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Disclaimer

Contents

1 Introduction

This document describes an ONF extension for OpenFlow version 1.3.X that forward group modification message from one controller to the other controllers. This is useful in multi-controller setup, or if the local management stack of the switch modify the state of groups.

2 How it works

When a controller modifies the state a groups and meters, the request that successfully modifies this state may be forwarded to other controller. Other controller are informed with the `ONF_ET_REQUESTFORWARD` message defined by that extension, this message encapsulate the original group modification message or meter modification.

3 Group notifications Experimenter ID

The Experimenter ID of this extension is:

0x4F4E4600

4 Group notifications message

The extension defines the following message types :

```
/* Message types */
enum onf_exp_type {
  /* Request forwarding by the switch. */
  ONF_ET_REQUESTFORWARD = 2350,       /* Async message */
};
```

The `ONF_ET_REQUESTFORWARD` message type uses the following message structure :


```
/* Group/Meter request forwarding. */
struct onf_requestforward_header {
  struct ofp_header     header;
  uint32_t              experimenter;   /* ONF_EXPERIMENTER_ID. */
  uint32_t              exp_type;       /* ONF_ET_REQUESTFORWARD. */
  struct ofp_header     request;        /* Request being forwarded. */
};
OFP_ASSERT(sizeof(struct onf_requestforward_header) == sizeof(struct ofp_experimenter_header) + 8);
```

The `header` field is a standard OpenFlow header as defined in the specification.

The `experimenter` field is the Experimenter ID (see 3).

The `exp_type` field is set to `ONF_ET_REQUESTFORWARD`.

The `request` field is a copy of the group-mod request or meter-mod request that was sent to the switch by a controller. Other OpenFlow message types are not supported by this extension.