



OPEN NETWORKING
FOUNDATION

Duplicate instruction error Extension

Version 0.1
May 21, 2013

ONF TS-011



ONF Document Type: OpenFlow Spec

ONF Document Name: openflow-switch-extension-ext260

Disclaimer

THIS SPECIFICATION HAS BEEN APPROVED BY THE BOARD OF DIRECTORS OF THE OPEN NETWORKING FOUNDATION (“ONF”) BUT WILL NOT BE A FINAL SPECIFICATION UNTIL RATIFIED BY THE MEMBERS PER ONF’S POLICIES AND PROCEDURES. THE CONTENTS OF THIS SPECIFICATION MAY BE CHANGED PRIOR TO PUBLICATION AND SUCH CHANGES MAY INCLUDE THE ADDITION OR DELETION OF NECESSARY CLAIMS OF PATENT AND OTHER INTELLECTUAL PROPERTY RIGHTS. THEREFORE, ONF PROVIDES THIS SPECIFICATION TO YOU ON AN “AS IS” BASIS, AND WITHOUT WARRANTY OF ANY KIND.

THIS SPECIFICATION IS PROVIDED “AS IS” WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, NONINFRINGEMENT, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY WARRANTY OTHERWISE ARISING OUT OF ANY PROPOSAL, SPECIFICATION OR SAMPLE.

Without limitation, ONF disclaims all liability, including liability for infringement of any proprietary rights, relating to use of information in this specification and to the implementation of this specification, and ONF disclaims all liability for cost of procurement of substitute goods or services, lost profits, loss of use, loss of data or any incidental, consequential, direct, indirect, or special damages, whether under contract, tort, warranty or otherwise, arising in any way out of use or reliance upon this specification or any information herein.

No license, express or implied, by estoppel or otherwise, to any Open Networking Foundation or Open Networking Foundation member intellectual property rights is granted herein.

Except that a license is hereby granted by ONF to copy and reproduce this specification for internal use only.

Contact the Open Networking Foundation at <https://www.opennetworking.org> for information on specification licensing through membership agreements.

Any marks and brands contained herein are the property of their respective owners.

WITHOUT LIMITING THE DISCLAIMER ABOVE, THIS SPECIFICATION OF THE OPEN NETWORKING FOUNDATION (“ONF”) IS SUBJECT TO THE ROYALTY FREE, REASONABLE AND NONDISCRIMINATORY (“RANDZ”) LICENSING COMMITMENTS OF THE MEMBERS OF ONF PURSUANT TO THE ONF INTELLECTUAL PROPERTY RIGHTS POLICY. ONF DOES NOT WARRANT THAT ALL NECESSARY CLAIMS OF PATENT WHICH MAY BE IMPLICATED BY THE IMPLEMENTATION OF THIS SPECIFICATION ARE OWNED OR LICENSABLE BY ONF’S MEMBERS AND THEREFORE SUBJECT TO THE RANDZ COMMITMENT OF THE MEMBERS.

Contents

| | | |
|----------|----------------------------|----------|
| 1 | Introduction | 2 |
| 2 | How it works | 2 |
| 3 | Experimenter ID | 2 |
| 4 | Experimenter errors | 2 |

1 Introduction

This document describes an ONF extension for OpenFlow version 1.3.X that returns errors for duplicate instructions.

2 How it works

A new error code is defined for duplicate instructions. The OpenFlow specification defines instructions associated with a flow entry as a set, and duplicate instruction is illegal. This error code enables the switch to properly report this error condition.

3 Experimenter ID

The Experimenter ID of this extension is:

```
ONF_EXPERIMENTER_ID = 0x4F4E4600
```

4 Experimenter errors

The following errors are defined by this extension:

```
/* Error types. */
enum onf_error_exp_type {
    ONFERR_DUP_INSTRUCTION = 2600, /* Duplicate instruction. */
};
```

The error ONFERR_DUP_INSTRUCTION uses the following structure:

```

/* Message structure for all errors. */
struct onf_error_msg {
    struct ofp_header header;
    uint16_t type;          /* OFPET_EXPERIMENTER. */
    uint16_t exp_type;      /* One of ONFERR_* above. */
    uint32_t experimenter;  /* ONF_EXPERIMENTER_ID. */
    uint8_t data[0];        /* Up to 64 bytes of failed request. */
};
OFP_ASSERT(sizeof(struct onf_error_msg) == sizeof(struct ofp_error_experimenter_msg));

```

The `type` field must be set to `OFPET_EXPERIMENTER`.

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

The `data` fields contains a copy of the failed request message, truncated to 64 bytes.

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