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Duplicate instruction error Extension

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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`.