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M. Chen
L. Zheng
Huawei Technologies Ltd.
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ICC_Operator_ID Attachment Individual Identifier (AII)
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Abstract

This document defines a new Attachment Individual Identifier (AII) type which could be used to identify the pseudowire endpoint when ICC_Operator_ID is used to uniquely identify an operator in MPLS-TP networks. The new AII (ICC_Operator_ID AII) consists a ICC_Operator_ID, a prefix and a AC ID field.

Requirements Language

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119](#) [[RFC2119](#)].

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1. Introduction

[RFC6370](#) [[RFC6370](#)] specifies an initial set of identifiers to be used in the Multiprotocol Label Switching Transport Profile (MPLS-TP). The Global_ID is defined in [RFC6370](#) [[RFC6370](#)] to uniquely identify an operator. [I.D.[draft-ietf-mpls-tp-itu-t-identifiers](#)] [[I-D.ietf-mpls-tp-itu-t-identifiers](#)] specifies the ICC_Operator_ID, an alternative way to uniquely identify an operator based on ITU-T conventions. We call both Global_ID and ICC_Operator_ID as Operator ID in this document.

[RFC4447](#) [[RFC4447](#)] defines the signaling mechanisms for establishing point- to-point pseudowires (PWs) between two provider edge (PE) nodes. It defines the Pwid FEC element and Generalized ID (GID) FEC element. In GID FEC element, the attachment individual identifiers (AIIIs) in conjunction with an attachment group identifier (AGI), serve as PW endpoint identifiers.

Six types of Attachment Individual Identifier (AII) have been defined. AII Type 1 defined in [RFC6074](#) [[RFC6074](#)] has a fixed-length 32-bit value that is unique within the scope of the local Provider Edge (PE). AII Type 2 defined in [RFC5003](#) [[RFC5003](#)] consists a 4-octet length Global ID, a 32-bit prefix field and a 4-octet attachment circuit identifier (AC ID) field. AII type 3-6 has been defined by MFA Forum. Existing AIIs do not support ICC based identifier.

This document defines a new AII type (ICC_Operator_ID AII). It use a combination of a 8-octet length ICC_Operator_ID, a 4-octet length prefix and a 4-octet length AC ID to create globally unique AII values. The ICC_Operator_ID AII could be used to identify the pseudowire endpoint when ICC_Operator_ID is used to uniquely identify an operator in MPLS-TP networks. A typical use for this AII in MPLS-TP enviroment is in Pseudowire Path Identifier.

2. ICC_Operator_ID AII

ICC_Operator_ID AII has the consistent structure with AII Type 2, which permits varying levels of AII summarization to take place, thus reducing the scaling burden on the AII distribution mechanisms and PE memory as described in [RFC5003](#) [[RFC5003](#)]. ICC_Operator_ID AII use a combination of a 8-octet length ICC_Operator_ID, a 4-octet length prefix and a 4-octet length AC ID to create globally unique AII values. The encoding of ICC_Operator_ID AII is as follows:

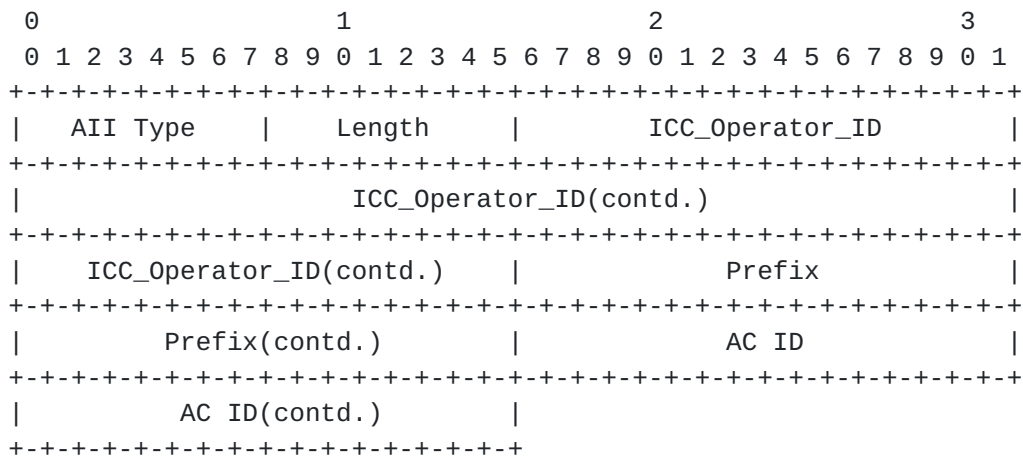


Figure 1. ICC_Operator_ID AII

AII Type: To be allocated by IANA.

Length: 1 octet in length, specifies the length of the value field in octets. The length is set to 14.

ICC_Operator_ID: ICC_Operator_ID of the sender node. As defined in [[I-D.ietf-mpls-tp-itu-t-identifiers](#)], the ICC_Operator_ID is formed by Country Code (CC) and ICC (ITU Carrier Code) as CC::ICC. The ICC itself is a string of one to six characters, global uniqueness is assured by concatenating the ICC with a CC. The Country Code (alpha-2) is a string of two alphabetic characters represented with upper case letters (i.e., A-Z). When the length of a ICC_Operator_ID string is less than 8 octets, the higher-order unused octets of the ICC_Operator_ID field MUST be set to zero.

Prefix: Same as [[RFC5003](#)].

AC ID field: Same as [[RFC5003](#)].

2.1. Procedures

Since the Operator ID MAY be either the Global_ID or ICC_Operator_ID, the two ends of a PW may use the different AII type. During the Label Mapping procedure, one end may not map the TAI to one of its Forwarders. In this case, it MUST send a Label Release message to the other end, with a Status Code of "Unassigned/Unrecognized TAI", and the processing of the Label Mapping message is complete.

3. IANA Considerations

The IANA is requested to assign a new AII type from the "Attachment Individual Identifier (AII) Type" registry.

| Value | Meaning | Reference |
|-------|----------------------------|------------------------|
| ----- | ----- | ----- |
| TBD | ICC_Operator_ID identifier | this document (sect 2) |

4. Security Considerations

This draft does not introduce any new security issues, the security mechanisms defined in [[RFC5003](#)] apply here.

5. Acknowledgements

6. References

6.1. Normative References

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6.2. Informative References

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Authors' Addresses

Mach Chen
Huawei Technologies Ltd.
China

Email: mach.chen@huawei.com

Lianshu Zheng
Huawei Technologies Ltd.
China

Email: vero.zheng@huawei.com