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**SCTP Socket API Extensions for Concurrent Multipath Transfer  
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**Abstract**

This document describes extensions to the SCTP sockets API for configuring the CMT-SCTP and CMT/RP-SCTP extensions.

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## 1. Introduction

This draft describes extensions to the SCTP sockets API (see [\[RFC6458\]](#), [\[RFC4960\]](#)) which allow an application to configure the behaviour of the Concurrent Multipath Transfer (CMT) extensions CMT-SCTP, CMT/RPv1-SCTP, CMT/RPv2-SCTP and MPTCP-like (see [\[I-D.tuexen-tsvwg-sctp-multipath\]](#), [\[Globecom2010\]](#), [\[PAMS2012\]](#), [\[Dre2012\]](#), [\[PAMS2011\]](#), [\[SoftCOM2011\]](#), [\[ConTEL2011\]](#), [\[AINA2010\]](#), [\[IAS2006\]](#)).

## 2. Concurrent Multipath Transfer and Resource Pooling Activation/Deactivation (SCTP\_CMT\_ON\_OFF)

This socket option activates or deactivates CMT and sets the corresponding Resource Pooling variant to be applied. The `sctp_assoc_value` structure is used to specify the association for which the CMT state should be changed and the new CMT state.

Definition of the `sctp_assoc_value` structure:

```
struct sctp_assoc_value {
    sctp_assoc_t  assoc_id;
    uint32_t      assoc_value;
};
```

`assoc_id`: Holds the identifier for the association of which the CMT state should be changed. Ignored for one-to-one style sockets.

`assoc_value`:

- 0 Turns CMT off.
- 1 Turns plain CMT-SCTP on. No Resource Pooling is applied.
- 2 Turns CMT-SCTP on. CMT/RPv1 Resource Pooling as defined in [\[AINA2010\]](#) is applied.
- 3 Turns CMT-SCTP on. CMT/RPv2 Resource Pooling as defined in [\[ConTEL2011\]](#) is applied.
- 4 Turns CMT-SCTP on. MPTCP-like Resource Pooling as defined in [\[SoftCOM2011\]](#), [\[ConTEL2011\]](#), [\[PAMS2012\]](#) is applied.



### **3. Security Considerations**

Security considerations for the SCTP sockets API are described by [\[RFC6458\]](#).

### **4. IANA Considerations**

This document does not require IANA actions.

### **5. Acknowledgments**

The authors would like to thank Michael Tuexen for his support.

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