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RFC 9713
Bundle Protocol Version 7 Administrative Record Types Registry

Abstract

This document updates RFC 9171 to clarify that Bundle Protocol Version 7 agents are expected to use the IANA "Bundle Administrative Record Types" registry to identify and document administrative record types. This document also designates code points for Private and Experimental Use.

Status of This Memo

This is an Internet Standards Track document.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Further information on Internet Standards is available in Section 2 of RFC 7841.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at https://www.rfc-editor.org/info/rfc9713.

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1. Introduction

An earlier specification [RFC7116] defined an IANA registry for administrative record type code points [IANA-BP] for use with the Bundle Protocol (BP) Version 6 (BPv6) [RFC5050]. When Bundle Protocol Version 7 (BPv7) was published in [RFC9171], it identified the IANA registry for administrative record types but did not update the table to be explicit about which entries applied to which Bundle Protocol version(s). The BPv7 specification also did not discriminate between code point reservations and unassigned ranges for administrative record types.

This document updates BPv7 to explicitly use the IANA "Bundle Administrative Record Types" registry as described in Section 2. This document makes a reservation of the zero value for consistency with BPv6. This document also makes a reservation of high-valued code points for Private Use and Experimental Use in accordance with [RFC8126] to avoid collisions with assigned code points.

1.1. Scope

This document describes updates to the IANA "Bundle Administrative Record Types" registry and how a BPv7 agent is supposed to use that registry to identify administrative record types.

This document does not specify how BPv6 and BPv7 can interoperate when both use the same code points or how a specific code point is to be interpreted either similarly or differently by Bundle Protocol versions. The specification for each administrative record type is to define how the administrative record type relates to each BP version.

1.2. Terminology

The key words "**MUST**", "**MUST NOT**", "**REQUIRED**", "**SHALL**", "**SHALL NOT**", "**SHOULD**", "**SHOULD NOT**", "**RECOMMENDED**", "**NOT RECOMMENDED**", "**MAY**", and "**OPTIONAL**" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

2. Administrative Record Types Registry

This document updates the requirements in Section 6.1 of [RFC9171] to specify use of an existing IANA registry and updates that registry as described in Section 4.1.

The code point allocated in Annex D of [CCSDS-BP] was never added to the IANA registry. To avoid a collision, this document adds that allocation to the registry.

Instead of using the list of types in Section 6.1 of [RFC9171], a BPv7 administrative element **SHALL** determine which administrative record type code values can be used by the "7" noted in the Bundle Protocol Version column of the IANA "Bundle Administrative Record Types" registry [IANA-BP].

If an administrative element receives a not-well-formed application data unit (ADU) or an administrative record type code that is not able to be processed by the element, the record **SHALL** be ignored by the element. The processing of a received administrative record ADU does not affect the fact that the bundle itself was delivered to the administrative element or any related bundle protocol agent processing of (e.g., status reports on) the enveloping bundle.

3. Security Considerations

This document does not define any requirements or structures that introduce new security considerations.

The existing security considerations of [RFC9171] still apply when using the IANA "Bundle Administrative Record Types" registry.

4. IANA Considerations

This specification modifies a BPv6 registry by extending it for BPv7.

4.1. Bundle Administrative Record Types

Within the "Bundle Protocol" registry group [IANA-BP], the "Bundle Administrative Record Types" registry has been updated to include a leftmost "Bundle Protocol Version" column. New entries have been added and existing entries have been updated to include BP versions as in Table 1. This document makes no changes to the registration procedures for this registry.

Bundle Protocol Version	Value	Description	Reference
6,7	0	Reserved	[RFC7116] RFC 9713
6,7	1	Bundle status report	[RFC5050] [RFC9171]
6	2	Custody signal	[RFC5050]
	3	Unassigned	
6	4	Aggregate Custody Signal	[CCSDS-BP]
	5 - 15	Unassigned	
7	16 - 64383	Unassigned	
7	64384 - 64511	Reserved for Experimental Use	RFC 9713
7	64512 - 65535	Reserved for Private Use	RFC 9713

Table 1: Bundle Administrative Record Types

5. References

5.1. Normative References

[IANA-BP] IANA, "Bundle Protocol", <https://www.iana.org/assignments/bundle/>.

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <https://www.rfc-editor.org/info/rfc2119>.

[RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <https://www.rfc-editor.org/info/rfc8174>.

[RFC9171] Burleigh, S., Fall, K., and E. Birrane, III, "Bundle Protocol Version 7", RFC 9171, DOI 10.17487/RFC9171, January 2022, <https://www.rfc-editor.org/info/rfc9171>.

5.2. Informative References

[CCSDS-BP] Consultative Committee for Space Data Systems, "CCSDS Bundle Protocol Specification", CCSDS Recommended Standard, CCSDS 734.2-B-1, September 2015, <https://public.ccsds.org/Pubs/734x2b1.pdf>.

[RFC5050] Scott, K. and S. Burleigh, "Bundle Protocol Specification", RFC 5050, DOI 10.17487/RFC5050, November 2007, <https://www.rfc-editor.org/info/rfc5050>.

[RFC7116] Scott, K. and M. Blanchet, "Licklider Transmission Protocol (LTP), Compressed Bundle Header Encoding (CBHE), and Bundle Protocol IANA Registries", RFC 7116, DOI 10.17487/RFC7116, February 2014, <https://www.rfc-editor.org/info/rfc7116>.

[RFC8126] Cotton, M., Leiba, B., and T. Narten, "Guidelines for Writing an IANA Considerations Section in RFCs", BCP 26, RFC 8126, DOI 10.17487/RFC8126, June 2017, <https://www.rfc-editor.org/info/rfc8126>.

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