

Workgroup: Delay-Tolerant Networking
Internet-Draft:
draft-ietf-dtn-bpv7-admin-iana-02
Updates: [9171](#) (if approved)
Published: 10 August 2023
Intended Status: Standards Track
Expires: 11 February 2024
Authors: B. Sipos
JHU/APL

Bundle Protocol Version 7 Administrative Record Types Registry

Abstract

This document clarifies that a Bundle Protocol Version 7 agent is intended to use an IANA sub-registry for Administrative Record types. It also makes a code point reservation for private or experimental use.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <https://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on 11 February 2024.

Copyright Notice

Copyright (c) 2023 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to BCP 78 and the IETF Trust's Legal Provisions Relating to IETF Documents (<https://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Revised BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Revised BSD License.

Table of Contents

- [1. Introduction](#)
 - [1.1. Scope](#)
 - [1.2. Terminology](#)
- [2. Administrative Record Types Registry](#)
- [3. Security Considerations](#)
- [4. IANA Considerations](#)
 - [4.1. Bundle Administrative Record Types](#)
- [5. References](#)
 - [5.1. Normative References](#)
 - [5.2. Informative References](#)
- [Acknowledgments](#)
- [Author's Address](#)

1. Introduction

The earlier Bundle Protocol (BP) Version 6 (BPv6) defined an IANA sub-registry for Administrative Record type code points under [[IANA-BP](#)]. When Bundle Protocol Version 7 (BPv7) was published in [[RFC9171](#)] it included an explicit table of Administrative Record types but made no mention of an IANA registry nor a requirement for BPv7 agents to be extensible in how they handle Administrative Record types. 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 Administrative Record type registry 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 or experimental use to avoid collisions with assigned code points.

1.1. Scope

This document describes updates to the IANA Administrative Record type sub-registry and how a BPv7 agent is supposed to use that registry for identifying Administrative Record types.

This document does not specify how BPv6 and BPv7 can interoperate for overlapping code points or how a specific code point is to be interpreted either similarly or differently between Bundle Protocol versions. It is up to each individual Administrative Record type specification to define how it 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 use an existing IANA registry and updates that sub-registry 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 explicit list of types in [Section 6.1](#) of [[RFC9171](#)], a BPv7 administrative element **SHALL** interpret administrative record type code values in accordance with the IANA "Bundle Administrative Record Types" sub-registry under [[IANA-BP](#)] for entries having a "Bundle Protocol Version" of 7.

If an administrative element receives a not-well-formed ADU or an administrative record type code which 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 BPA processing of (e.g. status reports on) the enveloping bundle.

3. Security Considerations

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

The existing security considerations of [[RFC9171](#)] still apply when using the IANA Administrative Record Types sub-registry.

4. IANA Considerations

This specification modifies a BPv6 sub-registry to extend BPv7.

4.1. Bundle Administrative Record Types

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

Bundle Protocol Version	Value	Description	Reference
6,7	0	Reserved	[RFC7116] [This specification]
6,7	1	Bundle status report	[RFC5050] [RFC9171]
6	2	Custody signal	[RFC5050]
6,7	3	Unassigned	
6	4	Aggregate Custody Signal	[CCSDS-BP]
6,7	5-15	Unassigned	
7	16-65535	Unassigned	
7	greater than 65535	Reserved for Private or Experimental Use	[This specification]

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 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>>.

Acknowledgments

Author's Address

Brian Sipos
The Johns Hopkins University Applied Physics Laboratory
11100 Johns Hopkins Rd.
Laurel, MD 20723
United States of America

Email: brian.sipos+ietf@gmail.com