

# **Status of BPbis (BPv7)**

**Scott Burleigh**

**Jet Propulsion Laboratory,  
California Institute of Technology**

# Status

Version 27 of the draft was posted on October 27, addressing the remaining open questions and the points raised by Ben Kaduk in his Discuss ballot position.

As best I can work out from the last sixteen weeks of emails, here is the status of the remaining open questions on this draft.

# Should the BPbis specification mandate implementation of the BPsec security extensions?

- On July 27, Marc Blanchet strongly opposes this mandate.
- On July 28, Brian Sipos supports the mandate in a limited way: when bundle-level security is needed, that security must be provided by BPsec rather than by some other mechanism. [This language now appears in section 9 of version 26 of the BPbis Internet Draft.]
- On July 28, Ronny Bull agrees with Brian.
- On July 28, Mehmet Adalier agrees with Brian.
- On July 28, Ed Birrane agrees with Brian.
- On July 29, Ran Atkinson supports the mandate in a more expansive way: implementation of BPsec is mandatory for any Bundle Protocol Agent that sources, verifies, and/or accepts a bundle. A BPA that only forwards bundles (without verifying them) need not implement BPsec.
- On July 29, Rick Taylor agrees with Ran.
- On July 29, Ed Birrane agrees with Ran.
- On July 29, Ronny Bull agrees with Ran.
- On August 3, Adam Wiethuechter agrees with Brian.
- On September 2, Magnus Westerlund supports the mandate without limitation.
- On September 16-18, Marc and Ran and Scott and Ed and Magnus discuss the question further.
- On September 24, Lloyd Wood and Ran and Scott clarify the term “verify” in Ran’s proposed language.
- On October 23, Ben Kaduk agrees that BPsec should be mandatory.
- On October 25, Ran proposes a small change in language to resolve Ben’s Discuss.

Is the registration policy for Bundle and Block Processing Control flags in sections 10.3 and 10.4 of BPbis version 26 satisfactory?

- To date, no comments from the Working Group.

Does the language in section 5.4 Step 2 of BPbis version 26 satisfactorily address the question of mandating implementation of TCPCL in the BPbis specification?

- To date, no comments from the Working Group.

Does the language in section 4.2.2 and 5.5 of BPbis version 26 satisfactorily address the question of authorizing Bundle Protocol Agents to override the bundle lifetimes asserted by BP applications?

- To date, no comments from the Working Group.

Does the language in section 4.1.5.1.1 of BPbis version 26 satisfactorily address the question of discerning whether or not a given dtn-scheme endpoint ID identifies a singleton endpoint?

- To date, no comments from the Working Group.

Does the language in section 10.6 of BPbis version 26 satisfactorily address the question of limiting the permitted number of different BP URI scheme type codes?

- To date, no comments from the Working Group.

In version 26 of the BPbis specification, all BP time values (e.g., bundle creation time, lifetime, bundle age) are denominated in milliseconds rather than in seconds or microseconds. Is this satisfactory?

- On July 28, Carsten Bormann notes that the CBOR representation of time values could utilize tags to reduce transmission bandwidth consumption.
- On July 29, Jeremy Mayer endorses Carsten's idea: times may be denominated in seconds (tag 1) or at other granularity (tag 1001).
- On July 29, Ed Birrane warns that this concept introduces the possibility of time values changing in transit, violating the immutability of primary blocks.
- On July 29, Rick Taylor, Scott Burleigh, Ed Birrane, and Ran Atkinson discuss the question of what is really meant by the immutability of the primary block: semantic immutability or syntactic immutability?
- On August 3, Adam Wiethuechter agrees with Ran that both semantic immutability and syntactic immutability are required. He believes that denominating all DTN times in milliseconds is a good resolution.
- On August 4, Lloyd Wood explains immutability.

Does the language in section 4.3 of BPbis version 26 satisfactorily address the question of whether implementation of all extension blocks defined in the BPbis specification is mandatory or conditional?

- To date, no comments from the Working Group.