BPbis Draft Status

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Summary

- The BPbis specification has been reviewed by the Internet Engineering Steering Group.

- Email exchange with the Area Directors has resulted in a number of updates. The latest posted draft, draft-ietf-dtn-bpbis-25, reflects most points of agreement; some small revisions required by IANA, and one revision proposed by Magnus, will appear in the next version of the draft (which will be posted when the I-D blackout period ends at the start of August).

- As described in the following slides, several issues remain that will require consensus decision by the DTN Working Group.

1. Alvaro's Discuss

§10.3/§10.4 [Bundle and Block Processing Control Flags]:

The registration policy for this namespace is changed to "Standards
Action". Given the limited number of bits available, the allocation
should only be granted for a standards-track RFC approved by the
IESG.

The original BP work (rfc5050) is a product of the IRTF. The new registration policy blocks the ability for anyone outside the IETF to register new values.

I understand the need to conserve resources, and the intent to Obsolete rfc5050 in a separate document, which should mean that future work on the BP is done in the IETF. That process hasn't been done yet.

I am balloting DISCUSS on this point of the process so that the needed steps can catch up and the group of documents can progress together.

[Note that changing the registration policy to allow work from outside the IETF to use the registries would also lead me to clear this DISCUSS. However, I don't think that is necessary.]

1. Magnus's Assessment

The update of the registration rules to Standards Action policy prevents future IRTF registrations in the DTN related registries that are updated by BPbis. This issue I think can be resolved in either of two ways:

1. WG makes it clear that they have consensus for this tightening and I assuming that sufficient amount of the more DTN research folks are active in this WG to state their position, or

2. We change the policies to Specification Required with expert verifying reasonable use of the code points. The expert guidance would then be included in the specification stating what the WG consider appropriate usage.

2. Alexey's Discuss

- Is the TCP Convergence-Layer protocol (defined in a separate I-D) mandatory to implement for every BP node?

3. Mirja's Discuss

- Is it okay for the BPA to be authorized to override the user-requested bundle lifetime (see 4.2.2) as a means of mitigating network or node congestion?

- Magnus's assessment:

    The second one has been reworded and I am fine with implementation aspect of this issue.

4. Benjamin's Discuss (1)

- Under what circumstances are the BPsec extensions (defined in a separate I-D) mandatory to implement for any BP node?

- Magnus's assessment:

  The issue for this one is that a protection profile needs to be normative reference. We are also lacking automatic key- exchange for this, but I believe the Sec ADs are ok with this on the WGs ToDo list. However, I am not yet certain that the WG are okay with this.

5. Benjamin's Discuss (2)

- Are all dtn-scheme endpoints singletons (like all ipn-scheme endpoints)? If not, what element of the scheme-specific part of the dtn URI scheme syntax indicates whether or not the identified endpoint is singleton?

6. Benjamin's Discuss (10)

- Shall the number of BP URI scheme type codes be unlimited, rather than limited to 256?

- Magnus's assessment:

> When it comes to Issue 10, I think it would be good to make 10.6 clearer that values above 255 are open for private usage?

> I do wonder if not a First Come First Service for the values above 255 would make sense.

7. Benjamin's Comments (4.3.2)

• Should bundle lifetime and bundle age both be denominated in seconds rather than in microseconds?

> My understanding is that this bundle age is a difference of absolute times (time forwarded - time created) and that time created is only known precisely by the node doing the creation. Any other node that needs to update the bundle age will have a precise value for "time forwarded" but only seconds accuracy for "time created", so normal propagation of uncertainty techniques would require that this field can only convey information useful to seconds precision. (If the bundle age was instead an accumulator for quantities known locally at each step, this could be different, but that's not my understanding of what it's supposed to be.)

8. Benjamin's Comments (4.3)

- Are the Previous Node, Bundle Age, and Hop Count extensions mandatory to implement for any BP node?

  In some sense all three feel like key components of the protocol and their use is mandated in some cases by this spec, so I hope it would be okay (but I am not 100% sure).