IPN URI Schema update


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IETF-117
Changes since IETF-116 (-03 to -06)

The substantive changes are:

● Services and the service number registry
  
  *I will cover this topic now*

● Allocator Identifier registry advice to designated experts
  
  *This will be covered as a later agenda item*
Definition of a Service

After good feedback from the list, the definition of a Service as identified by the service number component of an ipn URI has been altered.

Instead of considering a Service as some kind of generic “service type” (as defined in draft-01), or application protocol identifier (like TCP port numbers), a service is now defined as:

“... some logical function that requires its own resource identifier to discriminate it from other functions operating on the same node.”
Definition of a “Well-known” Service

The “well-known services” registry has been declared as explicitly for “...BPv7 services that have a public specification and wide adoption...”, to promote interoperability.

Entries in the registry are clarified as a “...pre-agreed default Service Number, so that unless extra configuration is applied, such services can be sensibly assumed to be operating on the well-known Service Number on a particular node.”

This formulation does not force particular Services to use particular Service Numbers, but provides convenience and consistency for implementers.
Instead of “forward-porting” the existing CBHE registry, a new registry has been requested, because:

- The CBHE registry was designed for a different definition of “well-known service”.
- No existing allocations in the registry met the requirements for the new registry.

However, the CBHE registry will continue to remain valid for BPv6.
'ipn' Scheme URI Well-known Service Numbers for BPv7 registry

Because of the nature of CBOR encoding, the new registry has a different allocation policy.

This policy is designed to share the number-space fairly between “Private Use” for deployment-specific service numbers, and registered “well-known” services:
### 'ipn' Scheme URI Well-known Service Numbers for BPv7 registry

<table>
<thead>
<tr>
<th>Encoding Length</th>
<th>Private Use</th>
<th>Registration Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1..24</td>
<td>N/a</td>
</tr>
<tr>
<td>1</td>
<td>25..127</td>
<td>128..255</td>
</tr>
<tr>
<td>2</td>
<td>0x0100..0x7FF</td>
<td>0x8000..0xFFFF</td>
</tr>
<tr>
<td>3..4</td>
<td>$2^{16}$ .. $2^{32} - 1$</td>
<td>N/a</td>
</tr>
</tbody>
</table>
Questions?