

Diameter Extended NAPTR

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draft-ietf-dime-extended-naptr

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I-D in a nutshell



- The I-D specifies an extended RFC3403 NAPTR service field format that permits discovery of Diameter peers that support a specific Diameter application or applications:
 - "AAA+D2" <trans-protocol> [*appln-list]
- Example:
 - 'AAA+D2S+AP:6,1,5,4294967295'
 - Means that the Diameter node in the SRV record supports the Diameter Session Initiation Protocol (SIP) Application ('6'), NASREQ Application ('1'), EAP Application ('5') and SCTP as the transport protocol. The Diameter node also provides Relay functionality ('4294967295').
- Builds on NAPTR usage defined in RFC3588.

NAPTR & RFC3588



- Refresher:
 - RFC3588 defines NAPTR service/ protocol mapping as AAA+D2[T/S]
 - 3588bis added AAA+D2L for TLS.
- Issues:
 - NAPTR text in RFC3588 depends on RFC2915 (NAPTR) which is now obsoleted by RFC3403 (DDDS).
 - The IANA registry established by RFC3588 for Diameter NAPTR service/ protocol mappings does not exist.
- Suggest fixing this in 3588bis.
 - Current NAPTR mappings are not a suitable foundation for extension.

Proposed fix for 3588bis



- Align to S-NAPTR (RFC3958).
- Define Application Service / Application Protocol mappings for Diameter and RADIUS:
 - Application Service Tag:
 - aaa
 - Application Protocol Tags:
 - diameter.[tcp|sctp|tls]
 - radius.[udp|tcp]
- For example, the S-NAPTR Service field entry for Diameter over SCTP would be:
 - aaa:diameter.sctp
- RFCs are required to update the IANA S-NAPTR registry:
 - Diameter entries can be created by 3588bis.
 - RADIUS entries can be created by draft-ietf-radext-dynamic-discovery.

Application IDs in S-NAPTR



- Extend the Application Service tag to include the Diameter Application ID, i.e.
 - “aaa+ap” + ApplicationID
- Create entries in S-NAPTR Application Service Tag registry for the existing IETF Diameter Applications:

Tag	Reference
aaa+ap1	[dime-extended-naptr] [RFC4005]
aaa+ap2	[dime-extended-naptr] [RFC4004]
...etc...	

- New IETF Diameter Applications specify their service tag entries in their RFCs (if required).

Open Issue



- How do we maintain the S-NAPTR Application Service Tag entries for vendor-specific Diameter Applications?
 - “First-come, first-served” so no RFC obligation.
- Suggestions:
 - I-D could provide guidelines for “x-” usage?
 - If a S-NAPTR Application Service tag is required, vendor must publish an Informational RFC as an individual contribution?
 - Note: RFC3958 (S-NAPTR) requires an RFC to register a new Application Service Tag but not a standards track RFC:
 - “All other application service and protocol tags are registered based on the "specification required" option defined in [\[7\]](#), with the further stipulation that the "specification" is an RFC (**of any category**). “

Feedback?

