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IPv6 Tunnel Discovery
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Abstract

This document defines how to discover tunnel services using the _service domain.

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1. Requirements notation

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119].

2. Introduction

When a user requires IPv6 connectivity in a IPv4-only or IPv4 connectivity in a IPv6-only environment, currently a user has to find out where to find a IPv6 or IPv4 provider herself or use 6to4.

This document describes a way how organisations can easily document the location of their services and have local users automatically make use of them.

3. Entries in the _service domain

The following records are possible to be inserted in the organisations _service domain [SERVICE].

This example mentions to the user to try the TSP and TIC [TIC] protocol first, them having equal weight. When that fails the user can use the website for more information.

```
$ORIGIN example.net.
_http._tcp            PTR     Example._http._tcp
Example._http._tcp    SRV     42   100    80   www

_https._tcp           PTR     Example._https._tcp
Example._https._tcp   SRV     13   100   443   ssl

; Tunneling Services (Configuration etc)
_tic._tcp             SRV     10   100  3874   tic
_tsp._tcp             SRV     10   100  3653   tsp

; _service domain entries
_service              TXT     "Example"
_website._service     PTR     Example._https._tcp
                      PTR     Example._http._tcp
_ipv6-tunnel._service PTR     _website._service
                      PTR     _tic._tcp
                      PTR     _tsp._tcp

tic                   A       192.0.2.42
tsp                   A       192.0.2.13
ssl                   A       192.0.2.80
www                   A       192.0.2.80
```

4. Security Considerations

There are no additional security considerations except the ones already given for the _service domain and prefix.

5. IANA Considerations

There are no considerations for IANA

6. Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

[SERVICE] Massar, J., "The _service domain and prefix", draft-massar-dnsop-service-00 (work in progress), July 2005.

[TIC] Massar, J., "TIC - Tunnel Information Control Protocol", draft-massar-v6ops-tic-00 (work in progress), January 2004, <http://www.sixxs.net/tools/tic/>.

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