                     The 'tn3270' URI Scheme
                  <draft-yevstifeyev-tn3270-uri-18>

Abstract

   This document is the specification of the 'tn3270' Uniform Resource
   Identifier (URI) scheme, which is used to designate the access to the
   resources available via Telnet 3270 mode (TN3270) and Telnet 3270
   Enchanted mode (TN3270E). It updates RFC 1041 and RFC 2355, which
   specify these protocols, and RFC 1738, which firstly mentioned this
   URI scheme without defining its syntax and semantics.

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1. Introduction

This document specifies the 'tn3270' Uniform Resource Identifier
(URI) scheme, which is used to designate the access to the resources
available via Telnet 3270 mode (TN3270), as described in RFC 1041
[RFC1041] (especially, see Section 4 of RFC 1041; visit RFC 1576
[RFC1576] for TN3270 practices), and Telnet 3270 Enchanted mode
(TN3270E), as described in RFC 2355 [RFC2355].

The 'tn3270' URI scheme was firstly mentioned in RFC 1738 [RFC1738]
as used in URIs that designate the access to "Interactive 3270
emulation sessions". Following the creation of the URI scheme
registries per RFC 4395 [RFC4395], this scheme was added to the
"Provisional URI Schemes" sub-registry in the "Uniform Resource
Identifier (URI) Schemes" IANA registry [URIREG]. However RFC 1738
[RFC1738] does not give any definition of syntax and semantics of the
'tn3270' URIs and does not have any guidelines for registration of
this scheme.

Since there is no acceptable specification of 'tn3270' URI, there is
a risk that somebody might try to implement it with some new,
possibly undocumented, syntax, just by looking at IANA registry. In
order to minimize such risk, this document gives precise definition
of syntax, semantics and use of this URIs and registers the
corresponding scheme. It also updates RFC 2355 [RFC2355], RFC 1738

[RFC1738] and RFC 1041 [RFC1041].

The generic syntax of URIs is described in RFC 3986 [RFC3986].
Registration procedures for new URI schemes are defined in RFC 4395
[RFC4395].

1.1. Terminology

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 RFC 2119 [RFC2119].

2. 'tn3270' URI Definition

The 'tn3270' URI is used to access services which are available via
Telnet 3270 mode (TN3270), as described in RFC 1041 [RFC1041], and
Telnet 3270 Enchanted mode (TN3270E), as described in RFC 2355
[RFC2355]. In fact these protocols are a modified form of Telnet
[RFC0854]; see their specifications for details.

Note: This document does not specify the TN3270 and TN3270E
      services themselves, but only the URI scheme for them.

There already is the 'telnet' URI scheme [RFC4248], which designates
the access to resources available via usual Telnet [RFC0854]. The
syntax of 'tn3270' URI is similar to that of 'telnet' one (except the
<scheme> part) and takes the form of <tn3270-uri> rule below (given
in ABNF, as described in RFC 5234 [RFC5234]):

```
tn3270-uri       = "tn3270:" "//" authority ["/"]
                     ;the 'tn3270' URI takes the form
                     ;tn3270://<userinfo>@<host>:<port>/
                     ;that is formally defined via the <authority>
```

The <authority> rule is specified in RFC 3986 [RFC3986]. If <port>
(in the <authority>) is omitted, it SHALL default to 21, as
registered in [PORTREG]. The final character "/" MAY be omitted.
The <userinfo> (in the <authority>) is assumed to provide information
for authentication using RFC 2941 [RFC2941] Telnet Authentication
option.

3. Security Considerations

Generic security considerations for the usage of URIs are discussed
in Section 7 of [RFC3986].

Since 'tn3270' URIs provide access to services that are available via TN3270 and TN3270E, which do not add any new security issues to Telnet session, as they are a modified form of it, there are no other security considerations for 'tn3270' URIs not discussed in RFC 4248 [RFC4248] - the 'telnet' URI scheme specification.

4. IANA Considerations

IANA is asked to update the registration of the 'tn3270' URI scheme using the following registration template (see [RFC4395]):

URI scheme name: tn3270

Status: Permanent

URI scheme syntax: see Section 2 of RFC xxxx

URI scheme semantics: see Section 2 of RFC xxxx

URI scheme encoding considerations: there are no other encoding considerations for 'tn3270' URIs not described in RFC 3986 [RFC3986]

Protocols that use the scheme: Telnet 3270 mode (TN3270) [RFC1041] and Telnet 3270 Enchanted Mode (TN3270E) [RFC2355]

Security considerations: see Section 3 of RFC xxxx

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References: see Section 5 of RFC xxxx

[RFC Editor: Replace xxxx with assigned RFC number]

5. References

5.1. Normative References

[RFC1041]   Rekhter, Y., "Telnet 3270 regime option", RFC 1041, January 1988.

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

   [RFC2355]   Kelly, B., "TN3270 Enhancements", RFC 2355, June 1998.

   [RFC3986]   Berners-Lee, T., Fielding, R., and L. Masinter, "Uniform
                Resource Identifier (URI): Generic Syntax", STD 66, RFC
                3986, January 2005.

   [RFC4248]   Hoffman, P., "The telnet URI Scheme", RFC 4248, October
                2005.

   [RFC5234]   Crocker, D., Ed., and P. Overell, "Augmented BNF for
                Syntax Specifications: ABNF", STD 68, RFC 5234, January
                2008.

5.2. Informative References

   [PORTREG]   Internet Assigned Numbers Authority (IANA) Registry "Port
                Numbers" <http://www.iana.org/assignments/port-numbers>

   [RFC0854]   Postel, J. and J. Reynolds, "Telnet Protocol
                Specification", STD 8, RFC 854, May 1983.

   [RFC1576]   Penner, J., "TN3270 Current Practices", RFC 1576, January
                1994.

   [RFC1738]   Berners-Lee, T., Masinter, L., and M. McCahill, "Uniform
                Resource Locators (URL)", RFC 1738, December 1994.
                Obsoleted by RFC4248, RFC4266.

   [RFC2941]   Ts'o, T., Ed., and J. Altman, "Telnet Authentication
                Option", RFC 2941, September 2000.

   [RFC4395]   Hansen, T., Hardie, T., and L. Masinter, "Guidelines and
                Registration Procedures for New URI Schemes", BCP 35, RFC
                4395, February 2006.

   [URIREG]   Internet Assigned Numbers Authority (IANA) Regsitry,
                "Uniform Resource Identifer (URI) Schemes",
                <http://www.iana.org/assignments/uri-schemes.html>

Appendix A. Acknowledgments

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