

Network Working Group  
Internet-Draft  
Intended status: Informational  
Expires: May 14, 2015

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November 10, 2014

**A Uniform Resource Name (URN) Namespace for Resource Description  
Framework (RDF) URI References  
draft-seantek-rdf-urn-00**

Abstract

The Resource Description Framework contains nodes that are identified by URI references. This document defines a URN specifically for RDF URI references.

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## **1. Introduction**

The Resource Description Framework [[RDF](#)] is a framework for representing information in the web. RDF contains nodes that are identified by URI references. The URI reference is basically an opaque string with semantics applied onto it by the RDF standard; RDF applications are not required or expected to dereference the URI. This document defines a URN specifically for identifying RDF URI references. An RDF designer now has the option of choosing a short, memorable identifier without the cost of maintaining and relying upon a long-lived network location (such as an HTTP URL), and without the hassle of registering a URN namespace identifier via IETF Consensus.

A name in the urn:rdf namespace uniquely and persistently identifies an abstract RDF URI reference node resource. The abstract resource does not have any particular concrete representation (such as a type of content identified by Internet media type), although concrete representations may be associated with it. Abstract parts of the abstract resource can be identified with fragment identifiers.

### **1.1. Requirements Language**

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](#).

## **2. Registration Template**

Namespace ID:  
rdf

Registration Information:  
Version: 1  
Date: 2014-11-10

Declared registrant of the namespace:  
IETF

Declaration of syntactic structures:

The structure of the Namespace Specific String is any valid XML name corresponding to the "Name" production in Section 2.3 of [[XML](#)] (production 5), with the following restrictions:

1. The name MUST be at least four characters.
2. Colons MAY be used as arbitrary intra-name dividers.
3. Colons MUST NOT appear at the beginning or end of the name.
4. Consecutive colons are PROHIBITED.

and the following relaxation:

5. The first part of the name preceding the first colon MAY



be a whole decimal number as discussed in "Process of identifier assignment".

When encoded in a URN, Unicode code points beyond U+007F are encoded as percent-encoded UTF-8. Conveniently, all XML name characters in the US-ASCII range are in the [\[RFC3986\]](#) unreserved set.

Relevant ancillary documentation:

[\[RDF\]](#), [\[XML\]](#).

Identifier uniqueness considerations:

Once a name is registered in the IANA registry, it is unique.

Identifier persistence considerations:

Once a name is registered in the IANA registry, it is permanent.

Process of identifier assignment:

Identifiers are registered with IANA on a First-Come, First-Served basis. One-character names and prefixes are RESERVED for further use. Two- and three-character names and prefixes are RESERVED for language tags and regional codes; however, those names have no such semantic content when used in an RDF URN. Whole number prefixes are RESERVED for IANA Private Enterprise Numbers. Registrants are free to register names with reserved two-character and three-character prefixes, such as "au:flag" or "en:us:ca:lax". Registrants are also free to register names with reserved whole number prefixes, such as "20:10-250".

Process for identifier resolution:

The registration for a particular identifier MAY include any number of URIs that a URN resolver MAY use to resolve the URN to return specific resources (presumably application/rdf+xml). The registered URIs are not equivalent to the registered URN, so an RDF document that refers to that particular node MUST use the registered URN as the RDF URI reference.

Fragments (delimited by the # character) are not considered part of the namespace-specific string, so a fragment would not affect lexical equivalence. Nevertheless, a urn: URI will likely be produced with a fragment component. For compatibility purposes, a URN resolver SHALL pass any [\[RFC3986\]](#) fragment component in the urn: URI through to the resolved URI if the registered URI does not have a fragment component. If the registered URI has a fragment component, a URN resolver SHALL NOT pass any [\[RFC3986\]](#) fragment component in the urn: URI; the fragment component SHALL be ignored.

Rules for Lexical Equivalence:

The namespace-specific string (NSS) is compared case sensitively.

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**Conformance with URN Syntax:**

The URN of this namespace conforms to new URN Syntax [[URNBIS](#)], old URN syntax [[RFC2141](#)], and Uniform Resource Identifier (URI): Generic Syntax [[RFC3986](#)].

**Validation mechanism:**

An RDF URN may be validated by looking it up in the IANA Registry.

**Scope:**

Global.

**3. IANA Considerations**

This document requests the assignment of formal URN namespace ID "rdf".

This document requests the creation of an IANA registry called "urn:rdf Names". The registry is First-Come, First-Served [[RFC5226](#)]. Each registration shall contain:

- a. the name conforming to this document
  - 1) in Unicode characters and
  - 2) with characters beyond U+007F percent-encoded in UTF-8,
- b. an optional description,
- c. optional [[RFC3986](#)] conforming URIs that are not URNs that are to be used for URN resolution, and
- d. contact information for the registrant.

Registrants or their successors may update their entries from time to time. The registration template SHALL be encoded in UTF-8.

If a registrant attempts to register a name that is confusingly similar to other registered names (such as only differing by case, or differing by code points but generating the same or confusingly similar visual representations), the registrants of the prior names are to receive a warning notification of the impending registration. However, there is no protest mechanism; the registration will still succeed unless withdrawn by the registrant. IANA SHOULD implement a modern algorithm to detect such confusingly similar names.

If a registrant attempts to register a name that contains a whole number prefix, the registrant of the corresponding IANA Private Enterprise Number is to receive a warning notification of the



impending registration. However, there is no protest mechanism; the registration will still succeed unless withdrawn by the registrant.

#### 4. Security Considerations

RDF processors use RDF URI references to identify nodes (subjects, predicates, and objects). This document is not expected to introduce any additional security considerations beyond those inherent in RDF processing.

#### 5. References

##### 5.1. Normative References

- [RDF] Klyne, G. and J. Carroll, "Resource Description Framework (RDF): Concepts and Abstract Syntax", World Wide Web Consortium Recommendation REC-rdf-concepts-20040210, February 2004, <<http://www.w3.org/TR/2004/REC-rdf-concepts-20040210>>.
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
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- [RFC3986] Berners-Lee, T., Fielding, R., and L. Masinter, "Uniform Resource Identifier (URI): Generic Syntax", STD 66, [RFC 3986](#), January 2005.
- [RFC5226] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs", [BCP 26](#), [RFC 5226](#), May 2008.
- [URNBIS] Saint-Andre, P., "Uniform Resource Name (URN) Syntax", [draft-ietf-urnbis-rfc2141bis-urn-07](#) (work in progress), January 2014.
- [XML] Bray, T., Paoli, J., Sperberg-McQueen, M., Maler, E., and F. Yergeau, "Extensible Markup Language (XML) 1.0 (Fifth Edition)", World Wide Web Consortium Recommendation REC-xml-20081126, November 2008, <<http://www.w3.org/TR/2008/REC-xml-20081126>>.

##### 5.2. Informative References

- [RFC2276] Sollins, K., "Architectural Principles of Uniform Resource Name Resolution", [RFC 2276](#), January 1998.



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