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IANA Registration for ENUMservices web and ft <draft-ietf-enum-webft-01.txt>

Status of this Memo

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Abstract

This document registers the 'ENUMservices' [3] 'web' and 'ft' using the URI schemes 'http:', 'https:' and 'ftp:' as per the IANA registration process defined in the ENUM specification RFC3761 [3].

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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 BCP 14, RFC2119 [2].

2. Introduction

ENUM (E.164 Number Mapping, RFC3761 [3]) is a system that transforms E.164 numbers [4] into domain names and then uses DNS (Domain Name Service, RFC1034 [5]) services like delegation through NS records and NAPTR records to look up what services are available for a specific domain name.

This document registers 'ENUMservices' according to the guidelines given in RFC3761 to be used for provisioning in the services field of a NAPTR [8] resource record to indicate what class of functionality a given end point offers. The registration is defined within the DDDS (Dynamic Delegation Discovery System [6][7][8][9][10]) hierarchy, for use with the "E2U" DDDS Application defined in RFC3761.

The following 'ENUMservices' are registered with this document: 'web' and 'ft'. These share a common feature in that they each indicate that the functionality of the given end points and the associated resources are primarily sources of information.

According to RFC2619bis, the 'ENUMservice' registered must be able to function as a selection mechanism when choosing one NAPTR resource record from another. That means that the registration MUST specify what is expected when using that very NAPTR record, and the URI scheme which is the outcome of the use of it.

Therefore an 'ENUMservice' acts as a hint, indicating the kind of service with which the URI constructed using the regexp field is associated. There can be more than one 'ENUMservice' included within a single NAPTR; this indicates that there is more than one service that can be achieved using the associated URI scheme.

The common thread with this set of definitions is that they reflect the kind of service that the end user will hope to achieve with the communication using the associated URI.

The services specified here are intended NOT to specify the protocol or even method of connection that MUST be used to achieve each service. Instead they define the kind of interactive behavior that an end user will expect, leaving the end system to decide (based on policies outside the remit of this specification) how to execute the service.

Since the same URI scheme may be used for different services (e.g. 'tel:'), and the same kind of service may use different URI schemes (e.g. for VoIP 'sip:', 'h323:' and 'tel:' may be used), it is necessary in some cases to specify the service and the URI scheme used.

The service parameters defined in RFC3761 allow therefore a 'type' and a 'subtype' to be specified. Within this set of specifications the convention is assumed that the 'type' (being the more generic term) is defining the service and the 'subtype' is defining the URI scheme.

3. Web Service

3.1 Introduction

The ENUMservices registered in this section indicate that the resource identified by the associated URI is capable of being a source of information.

3.2 Web Service Registration with 'http:'

Enumservice Name: "web"

Enumservice Type: "web"

Enumservice Subtype: "http"

URI Scheme: 'http:'

Functional Specification:

This ENUMservice indicates that the resource identified by the associated URI scheme is capable of being a source of information.

It has to be noted that the kind of information retrieved can be manifold. Usually, contacting a resource by an 'http:' URI provides a document. This document can contain references that will trigger download of many different kinds of information, like audio or video or executable code. Thus, one can not be more specific about the kind of information that can be expected when contacting the resource.

Security Considerations:

There are no specific security issues with this 'ENUMservice'. However, the general considerations of Section 5 apply.

Intended Usage: COMMON

Author:

Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see Authors' Addresses section)

Any other information the author deems interesting:

None

3.3 Web Service Registration with 'https:'

Enumservice Name: "web"

Enumservice Type: "web"

Enumservice Subtype: "https"

URI Scheme: 'https:'

Functional Specification:

This ENUMservice indicates that the resource identified by the associated URI scheme is capable of being a source of information, which can be contacted by using TLS or Secure Socket Layer protocol.

It has to be noted that the kind of information retrieved can be manifold. Usually, contacting a resource by an 'https:' URI provides a document. This document can contain all different kind of information, like audio or video or executable code. Thus, one can not be more specific what information to expect when contacting the resource.

Security Considerations:

There are no specific security issues with this 'ENUMservice'. However, the general considerations of Section 5 apply.

Intended Usage: COMMON

Author:

Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see Authors' Addresses section)

Any other information the author deems interesting:

None

4. FT Service Registration

Enumservice Name: "ft"

Enumservice Type: "ft"

Enumservice Subtype: "ftp"

URI Scheme: 'ftp:'

Functional Specification:

This ENUMservice indicates that the resource identified by the associated URI scheme is a file service from which a file or file listing can be retrieved.

Security Considerations:

There are no specific security issues with this 'ENUMservice'. However, the general considerations of Section 5 apply.

Intended Usage: COMMON

Author:

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Any other information the author deems interesting:

None

5. Security Considerations

DNS, as used by ENUM, is a global, distributed database. Thus any information stored there is visible to anyone anonymously. Whilst this is not qualitatively different from publication in a Telephone Directory, it does open the data subject to having "their" information collected automatically without any indication that this has been done or by whom.

Such data harvesting by third parties is often used to generate lists of targets for unrequested information; in short, they are used to address "spam". Anyone who uses a Web-archived mailing list is aware that the volume of "spam" email they are sent increases when they post to the mailing list; publication of a telephone number in ENUM is no different, and may be used to send "junk faxes" or "junk SMS" for example.

Many mailing list users have more than one email address and use "sacrificial" email accounts when posting to such lists to help filter out unrequested emails sent to them. This is not so easy with published telephone numbers; the PSTN E.164 number assignment process is much more involved and usually a single E.164 number (or a fixed range of numbers) is associated with each PSTN access. Thus providing a "sacrificial" phone number in any publication is not possible.

Due to the implications of publishing data on a globally accessible database, as a principle the data subject MUST give their explicit informed consent to data being published in ENUM.

In addition, they should be made aware that, due to storage of such data during harvesting by third parties, removal of the data from publication will not remove any copies that have been taken; in effect, any publication may be permanent.

However, regulations in many regions will require that the data subject can at any time request that the data is removed from publication, and that their consent for its publication is explicitly confirmed at regular intervals.

The user SHOULD be asked to confirm opening a web page or starting an ftp session (particularly if the ftp client is configured to send the user's email address as an "anonymous" user password).

Using a web:http or ft:ftp service is not secure, and so the user should apply the same caution when entering personal data as they would do if using a client application started with any other method. Whilst this is not a feature of ENUM or these ENUMservices, the ENUM-using application on the end system may appear different from

the user's "normal" browser, and so the user SHOULD receive an indication on whether or not their communication is secured.

As evaluating a web page can involve execution of embedded (or linked) content that may include executable code, there are risks involved in evaluating a web URL. If automatic evaluation of a web link were to be used, the querying user would be exposed to risks associated with that automatic download and execution of content. Thus the client MUST ask the querying user for confirmation before evaluating the web URL; the client MUST NOT download and evaluate the web content automatically.

An analysis of threats specific to the dependence of ENUM on the DNS, and the applicability of DNSSEC [15] to these, is provided in RFC3761 [3].

6. References

6.1 Normative References

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8. Full Copyright Statement

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