Extended Frogans Network Types - 1.0

Abstract

   This document sets forth extended types of Frogans networks intended
   to replace the original Frogans network types. It also describes the
   characteristics of each extended Frogans network type as concerns the
   operation of corresponding Frogans networks. A Frogans network is a
   group of Frogans addresses that have an identical network name.

Status

   This document is an official technical specification of the Frogans
   technology.

   This technical specification was adopted by the OP3FT on June 28,
   2022.

   Comments on this document are welcome and may be made on the Frogans
   technology mailing lists, accessible at the following permanent URL:
   https://lists.frogans.org/.

Location

   This document is accessible at the following permanent URL:
   https://www.frogans.org/en/resources/efnt/access.html.

Copyright Statement

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1. Introduction

1.1. Background

   Started in 1999, the Frogans project aims to introduce a new medium
   for publishing content and services on the Internet, called Frogans.

   From a technical standpoint, this new medium is designed as a new
   generic software layer running on top of the original Internet
   infrastructure, i.e. the TCP and IP protocols and the Domain Name
   System (DNS), alongside other existing generic software layers such
   as E-mail or the World Wide Web.

Frogans as a medium is intended for publishing Frogans sites. A
Frogans site is made up of free-form pages called Frogans slides
which are interconnected.

The technology making up the new medium, i.e. the Frogans technology,
involves using Frogans addresses which serve as the identifiers of
Frogans sites.

Frogans addresses include two parts, separated by the asterisk
character: the network name and the site name. Frogans addresses may
contain international characters and may include uppercase,
lowercase, and accented characters. Frogans addresses may be written
from left to right or from right to left. For example, in the left-
to-right writing direction, the pattern of a Frogans address is
"Network-Name*Site-Name". The pattern of Frogans addresses is fully
described in the IFAP technical specification [IFAP].

Frogans addresses also draw on the concept of linguistic categories,
which was introduced in order to deal with security issues related to
the use of international characters in Frogans addresses. A
linguistic category is a group of languages using the same writing
system, or a language using one or more writing systems. Each
linguistic category has employable characters and arrangement rules.
The concept of linguistic categories is fully described in the FACR
technical specification [FACR].

A Frogans network is a group of Frogans addresses that have an
identical network name. A Frogans network can group an unlimited
number of Frogans addresses. A Frogans network is associated with a
linguistic category. The Frogans addresses of a Frogans network are
associated with the same linguistic category as the Frogans network.

Frogans addresses and Frogans networks are registered in a central
database, called the Frogans Core Registry (FCR). The database
belongs to the OP3FT and is operated by the FCR Operator, the entity
responsible for the technical and commercial operation of the FCR,
under a delegation agreement with the OP3FT [FCRDA].

The concept of Frogans networks was introduced in the Frogans
technology in 2012 [FCRDA-ORIG]. The three original types of Frogans
networks were public Frogans networks, dedicated Frogans networks,
and internal Frogans networks.

These original types of Frogans networks do not give Frogans site
publishers holding Frogans addresses or Frogans networks the
potential to:

    * publish Frogans sites publicly using Frogans addresses whose site
       names are known only to the holder, and are not registered in the
       FCR as cleartext

    * publish Frogans sites publicly using Frogans addresses that are
       resolved by the holder instead of by the FCR Operator

    * publish Frogans sites privately using Frogans addresses whose
       network name is customizable

  To deliver this potential to Frogans site publishers, there is a need
  to define extended types of Frogans networks that replace the
  original types.

1.2. Purpose

  The purpose of this document is to set forth extended types of
  Frogans networks.

  This document also describes the characteristics of each extended
  Frogans network type as concerns the operation of corresponding
  Frogans networks.

  The extended types of Frogans network must be derived from the
  original Frogans network types, and include test Frogans networks
  used for testing purposes by developers.

  The extended types of Frogans network must also be designed according
  to the principle where the resolution of Frogans addresses involves
  two steps: the network lookup based on the network name, followed by
  the address lookup based on the site name.

  Any reorganization of the original Frogans network types that may be
  required must be carried out so as to keep the number of types to a
  bare minimum.

1.3. Intended Audience

  This document is intended for those involved in the publication of
  Frogans sites or in the resolution of Frogans addresses, such as
  Frogans site publishers and the FCR Operator.

  This document is also intended for those who develop and test Frogans
  sites, such as Frogans site developers.

1.4. Compliance

   The rules applicable to Frogans network types in this specification
   are defined in succession. The definition of each rule assumes
   compliance with all preceding rules.

   A conforming implementation of this specification is an
   implementation which is compliant with all descriptions appearing in
   this document.

   Hence, unlike in Request for Comments drawn up by the Internet
   Engineering Task Force (IETF), requirement levels in this
   specification are not indicated using key words such as "MUST", "MUST
   NOT", "SHOULD", and "SHOULD NOT" defined in RFC 2119 [RFC2119] and
   RFC 8174 [RFC8174]. This applies to all specifications drawn up by
   the OP3FT.

   In this document, normative and informative references detailed in
   the References section appear between square brackets [].

2. Public Frogans Networks

   A public Frogans network is a Frogans network whose network name is
   either "frogans" or the transcription of the name "frogans" into
   another writing system or another language, depending on the
   linguistic category. These network names are defined in the Reserved
   Terms for the Registration of Frogans Addresses [FCRReservedTerms].

   Public Frogans networks are intended to be used for publishing
   Frogans sites publicly, e.g. on the Internet. Public Frogans
   networks enable any Frogans site publisher to hold one or more stand-
   alone Frogans addresses.

   The site names of Frogans addresses of public Frogans networks are
   registered as cleartext in the FCR.

   Administrative and technical information on the registrations of
   Frogans addresses of public Frogans networks, including contact
   information on the holder, is made available as a service by the FCR
   Operator [FCRWhois]. The list of Frogans addresses of public Frogans
   networks is public data made available for download as a service by
   the FCR Operator [FCRPublicData]. These services are provided free
   of charge to members of the general public.

   The resolution of Frogans addresses of public Frogans networks is
   performed by the FCR Operator for both the network lookup and the
   address lookup.

3. Dedicated Frogans Networks

   A dedicated Frogans network is a Frogans network whose network name
   is customizable. Typically the network name can designate a
   trademark, a generic term, a geographical name, a community name,
   etc.

   There are three sub-types of dedicated Frogans networks:

   - standard dedicated Frogans networks
   - autonomous dedicated Frogans networks
   - internal dedicated Frogans networks

   Dedicated Frogans networks are intended to be used for publishing
   Frogans sites either publicly, e.g. on the Internet, or privately,
   e.g. in an intranet, depending on the sub-type. Dedicated Frogans
   networks enable any Frogans site publisher to build up and hold a
   distinctive group of Frogans addresses. All the Frogans addresses of
   a dedicated Frogans network are held by the holder of the dedicated
   Frogans network.

   Administrative and technical information on the registrations of
   dedicated Frogans networks, including contact information on the
   holder, is made available as a service by the FCR Operator
   [FCRWhois]. The list of dedicated Frogans networks and the list of
   Frogans addresses of standard dedicated Frogans networks are public
   data made available for download as a service by the FCR Operator
   [FCRPublicData]. These services are provided free of charge to
   members of the general public.

3.1. Standard Dedicated Frogans Networks

   A standard dedicated Frogans networks is a sub-type of dedicated
   Frogans network intended to be used for publishing Frogans sites
   publicly, e.g. on the Internet. A standard dedicated Frogans network
   can group any number of Frogans addresses.

   The site names of Frogans addresses of standard dedicated Frogans
   networks are registered in the FCR as cleartext.

   The resolution of Frogans addresses of standard dedicated Frogans
   networks is performed by the FCR Operator for both the network lookup
   and the address lookup.

3.2. Autonomous Dedicated Frogans Networks

   An autonomous dedicated Frogans networks is a sub-type of dedicated
   Frogans network intended to be used for publishing Frogans sites

publicly, e.g. on the Internet. An autonomous dedicated Frogans
network can group any number of Frogans addresses.

The site names of Frogans addresses of autonomous dedicated Frogans
networks are not registered in the FCR as cleartext, but in the form
of salted hash values, using salts known only to the holder of the
autonomous dedicated Frogans network.

The resolution of Frogans addresses of autonomous dedicated Frogans
networks is performed by the FCR Operator for the network lookup, and
by the holder of the autonomous dedicated Frogans network for the
address lookup.

3.3.   Internal Dedicated Frogans Networks

An internal dedicated Frogans network is a sub-type of dedicated
Frogans network to be used for publishing Frogans sites privately,
e.g. in an intranet. An internal dedicated Frogans network can group
any number of Frogans addresses.

The site names of Frogans addresses of internal dedicated Frogans
networks are not registered in the FCR as cleartext, but in the form
of salted hash values, using salts known only to the holder of the
internal dedicated Frogans network.

The resolution of Frogans addresses of internal dedicated Frogans
networks is performed by the holder of the internal dedicated Frogans
network for both the network lookup and the address lookup.

4.   Test Frogans Networks

A test Frogans network is a Frogans network whose network name is
"test".

Test Frogans networks are intended to be used only for testing
purposes by developers, they are not intended to be used for
publishing Frogans sites either publicly, e.g. on the Internet, or
privately, e.g. in an intranet.

Test Frogans networks enable developers to test Frogans sites under
development on their devices prior to publication. Test Frogans
networks also enable developers to test the management of address
lookup servers, prior to managing an autonomous or an internal
dedicated Frogans network.

Test Frogans networks and their Frogans addresses are not registered
in the FCR. Each developer uses a separate test Frogans network,

which is configured locally on the developer's device.

The resolution of Frogans addresses of a test Frogans network is performed by the developer for both the network lookup and the address lookup.

Test Frogans networks are associated with the 'LC-Latin' linguistic category. The site names of Frogans addresses of test Frogans networks have the following limitation: each character of the site name is either in the range from 'a' to 'z' (U+0061 LATIN SMALL LETTER A to U+007A LATIN SMALL LETTER Z, inclusive), in the range from '0' to '9' (U+0030 DIGIT ZERO to U+0039 DIGIT NINE, inclusive), or is the '-' (U+002D HYPHEN-MINUS) character.

5. Labels

The labels applicable to the extended types of Frogans networks are:

*   'PFN': this label corresponds to a public Frogans network

*   'PFNFA': this label corresponds to a Frogans address of a public Frogans network

*   'DFN': this label corresponds to a dedicated Frogans network, irrespective of its sub-type

*   'DFNFA': this label corresponds to a Frogans address of a dedicated Frogans network, irrespective of its sub-type

*   'SDFN': this label corresponds to a standard dedicated Frogans network

*   'SDFNFA': this label corresponds to a Frogans address of a standard dedicated Frogans network

*   'ADFN': this label corresponds to an autonomous dedicated Frogans network

*   'ADFNFA': this label corresponds to a Frogans address of an autonomous dedicated Frogans network

*   'IDFN': this label corresponds to an internal dedicated Frogans network

*   'IDFNFA': this label corresponds to a Frogans address of an internal dedicated Frogans network

6. References

6.1. Normative References

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6.2. Informative References

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   [FCRReservedTerms]
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               This document is published by the OP3FT and its content
               can be revised at any time as required. The version in
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