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RIDE referencing

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Abstract

This document describes two variants of a proposal on how to find information regarding some critical resources (domain names, IP addresses and routing registry information) on the Internet. The proposed solution uses globally unique registry identifiers that are derived from a domain name in use by a registry.

Introduction

use your domain name as the global registry identifier
register in DNS where to query for the data
query the appropriate server using the local identifier

Discussion

Advantage:

no central authority needed

Disadvantage:

the same thing.

Variant of the prososal:

double tree. IANA managed registries.int tree.

Detailed proposal

globally unique registry identifier

local to the registry unique identifier

example: KH1-ARIN

KH1 is local identifier ARIN is global registry identifier (last part of domain name can possibly be omitted)

example: ISI-DOM

suffix is not globally unique

ISI-DOM is local identifier INTERNIC is global identifier

What do we store in DNS?

- server, protocol and protocol options - what kind of data is available:

IPv4 193/8, 194/8, 195/8, 62/8

Domain .NOM, .STORE, ...

AS 100-300, 1000-2000

Note: IANA is authoritative for most of this data!

Which records to use: new record, TXT record, kitchen sink, reusing old record

Security considerations

The two different schemas described here have somewhat different properties regarding security.

The IANA delegated model is in principle a very secure way of providing identifiers that indeed point to the registry that contains authoritative data regarding the allocation of Internet resources, provided that DNS security mechanisms get implemented soon. The situation for contact information pointers is somewhat different. While the IANA delegated model provides trusted pointers to trusted repositories of such data, anybody has the ability to register whatever contact data they want to such a trusted registry, and thus not providing much extra trust in the data itself. The distributed approach has no guarantees whatsoever that one can trust that a pointer points to a trusted party, since there is no system in place that checks if registries are trustable. However, the pointers themselves are reliable provided that DNSSEC is widely used. Also, the RIDE mechanisms themselves provide ways of retrieving the pointed-to data and letting an individual registry decide after parsing the data if it contains enough and good enough information to accept the reference.

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References

- [1] D. Kessens et. al., [draft-ride-classes-00.txt](#),
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