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**The LoST-Validation S-NAPTR Application Service Tag  
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Abstract

This document adds LoST-Validation to the S-NAPTR Application Service Tag IANA registry.

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## [1.](#) Document Scope

This document only adds a new Service Tag.

## [2.](#) Introduction

The Location-to-Service Translation Protocol, LoST [[RFC5222](#)] defines a mapping service with the additional ability to request that a civic address be validated. The National Emergency Number Association (NENA) has defined an architecture (known as "i3" [[NENA-i3](#)]) which defines the mapping and routing functions as two distinct roles, defined as an Emergency Call Routing Function (ECRF) and a Location Verification Function (LVF). NENA i3 requires that the mapping (ECRF) and validation (LVF) functions be separable, so that an entity responsible for a LoST server cluster can decide to provide mapping and validation services using consolidated or separate server clusters (i.e., using the same or separate boxes). The rationale is that the mapping service is used in real-time during emergency call routing, while the validation service is used in advance, typically when data is provisioned, and therefore the mapping service has much higher availability and response time requirements than the validation service. An organization might choose to deploy these services using different server clusters to make it easier to provide higher levels of service for the mapping function while shielding it from the potentially bursty load of validation, while another organization might choose to use the same sets of servers for both, configured and deployed to offer the high service level demanded of the mapping service.

In order to permit this separability, any entity querying a LoST server needs to be able to resolve an Application Unique String (AUS) into a URL for a server that offers the required service (mapping or



validation). This separability needs to be maintained throughout the LoST tree structure, from forest guide to leaf node. Because LoST referrals return an AUS rather than a URL, different Service Tags are needed for the different services. This document adds 'LoST-Validation' to the S-NAPTR Application Service Tag registry created by [RFC3958]. The 'LoST-Validation' tag serves as a counter-part to the 'LoST' tag added by [RFC4848]: The 'LoST' tag identifies servers able to perform the core mapping function, while 'LoST-Validation' identifies servers explicitly willing to perform the validation function. A server identified using the 'LoST' service tag might also perform the validation function (and might resolve to the same URL as a server identified using the 'LoST-Validation' service tag), but the 'LoST-Validation' tag makes this explicit.

### **3. The LoST-Validation Application Service Tag**

LoST [RFC4848] specifies that LoST servers are located by resolving an application Unique String (AUS) using U-NAPTR/DDDS (URI-Enabled NAPTR/Dynamic Delegation Discovery Service) [RFC4848], and defined the 'LoST' Application Service Tag. In order to permit separability of the mapping and validation services performed using LoST, this document defines the 'LoST-Validation' Service Tag. NAPTR records for LoST servers available for location validation contain the 'LoST-Validation' Service Tag. An entity needing to perform location validation using LoST performs the discovery procedure as described in [RFC4848], except that the 'LoST-Validation' Service Tag is used in preference to the 'LoST' Service Tag. For both Service Tags, the HTTP and HTTPS URL schemes are used. In the absence of any NAPTR records containing the 'LoST-Validation' Service Tag, the 'LoST' Service Tag is used. Using the 'LoST-Validation' Service Tag might result in the same URL as the 'LoST' Service Tag, or it may result in a different URL. The URLs might result in the same physical servers being contacted, or different servers.

### **4. Security Considerations**

The security considerations described in [RFC3958] and [RFC4848] apply here.

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### **5. IANA Considerations**

IANA is requested to add 'LoST-Validation' to the S-NAPTR Application Service Tag registry created by [RFC3958]. This tag serves as a counter-part to the 'LoST' tag added by [RFC4848].



### **5.1. U-NAPTR Registration**

This document registers the following U-NAPTR application service tag:

Application Service Tag: LoST

Defining Publication: This document.

## **6. Contributors**

## **7. Acknowledgements**

## **8. Changes from Previous Versions**

This is the initial version

## **9. References**

### **9.1. Normative References**

- [RFC3958] Daigle, L. and A. Newton, "Domain-Based Application Service Location Using SRV RRs and the Dynamic Delegation Discovery Service (DDDS)", [RFC 3958](#), DOI 10.17487/RFC3958, January 2005, <<https://www.rfc-editor.org/info/rfc3958>>.
- [RFC4848] Daigle, L., "Domain-Based Application Service Location Using URIs and the Dynamic Delegation Discovery Service (DDDS)", [RFC 4848](#), DOI 10.17487/RFC4848, April 2007, <<https://www.rfc-editor.org/info/rfc4848>>.
- [RFC5222] Hardie, T., Newton, A., Schulzrinne, H., and H. Tschofenig, "LoST: A Location-to-Service Translation Protocol", [RFC 5222](#), DOI 10.17487/RFC5222, August 2008, <<https://www.rfc-editor.org/info/rfc5222>>.

### **9.2. Informative references**

- [NENA-i3] National Emergency Number Association (NENA) Interconnection and Security Committee, i3 Architecture Working Group, , "Detailed Functional and Interface Standards for the NENA i3 Solution", 2016, <[https://www.nena.org/page/i3\\_Stage3](https://www.nena.org/page/i3_Stage3)>.



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