Updates on NRS documents

IETF104 ICNRG interim meeting in Prague

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Contents

• ICNRG documents (adopted after IETF102)
  • Requirements for Name Resolution Service in ICN
    • draft-irtf-icnrg-nrs-requirements-01
  • Architectural Considerations of ICN using Name Resolution Service
    • draft-irtf-icnrg-nrsarch-considerations-01

Updates on NRS documents
Scope of each document (1/2)

• Requirements for Name Resolution Service in ICN
  • Focus on NRS itself as a service or a system in ICN
  • Discuss the motivation and requirements for NRS in ICN
    • What NRS is
    • What kinds of ICN challenges can be overcome by using NRS
    • How NRS to be utilized in different ICN architectures
    • What are the requirements of designing NRS
Scope of each document (2/2)

• Architectural Considerations of ICN using Name Resolution Service
  • Focus on things related to ICN architecture
  • Discuss changes of ICN routing system with integrating NRS into ICN
    • Who/when performs the name resolution
    • Protocol design for NRS system
    • How to process the information after name resolution
Requirements for NRS in ICN

• draft-irtf-icnrg-nrs-requirements-01

• Authors
  • Jungha Hong, Tae-Wan You, Yong-Geun Hong (ETRI)
  • Lijun Dong, Cedric Westphal (Huawei)
  • Ved Kafle (NIC)
  • Borje Ohlman (Ericsson)
Terminology added

Deleted
Terminologies added in Section 3

• Two main NRS components
  • NRS server
    • The NRS consists of the distributed NRS servers storing the mapping records in database
  • NRS resolver
    • The client side of the NRS is called an NRS resolver
    • It is responsible for initiating and sequencing the name resolution request queries
    • It can be located in the consumer (client) nodes or ICN routers

• Two main NRS processes
  • Name registration
    • Content names and their mapping records must be registered in NRS system by a publisher/producer
  • Name resolution
    • It is the main process of the NRS and performed by an NRS resolver
4. Objectives of NRS in ICN

• 4.1 to 4.3 describes
  • what kinds of ICN challenges can be overcome by using NRS

• 4.4 (use cases) describes
  • how NRS to be utilized in different ICN architectures

• 4.4 can be integrated into 4.1 to 4.3

• What is the best title for Section 4?
  • Changed motivations to objectives
  • e.g. capabilities/advantages/features/functionalities ... ?
Possible another use case of NRS

• Use the NRS to retrieve metadata related to the information objects
• Metadata describes which protocol to use for retrieval of the object in a resource efficient and secure fashion
5. Requirements for NRS in ICN

• Added more descriptions to clarify what requirements are
• Still, we will discuss more on Section 5 for revision
Architectural Considerations of ICN using NRS (1/2)

- draft-irtf-icnrg-nrsarch-considerations-01
- Discusses architectural considerations and implications of ICN related to the usage of the NRS
- Describes that how ICN architecture changes and what implications are in the routing system when NRS is integrated into ICN
  - Who/when performs the name resolution
  - Protocol design for NRS system
  - How to process the information after name resolution

- Editorial updates are done
Architectural Considerations of ICN using NRS (2/2)

• We are planning to update the document based on a real experience in implementing an NRS system
  • Search for what kind of design choices taken in different ICN architectures using NRS

• We are still looking for contributors who have implemented a NRS system
Thank you!