Updates on NRS documents

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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

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)

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Terminology added

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!