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Information Centric Networking Program

Information access is the dominant use case in today's Internet with more than 90% of Internet traffic being content distribution, mainly due to video streaming and file sharing. However, the Internet Protocol (IP) in today's Internet is host-centric and relies on point-to-point communication. Solving content distribution problems via IP's point-to-point model is complex and inefficient.

INFORMATION CENTRIC NETWORKING PROGRAM

This program develops ICN technologies (including Named-Data Network routers that are as essential to ICN as IP routers to IP networks) and ICN applications (including ICN-based secure onboarding of IoT devices and distributed caching of contents and software).

WHAT IS ICN?

ICN is a new networking paradigm that routes data based on names, rather than endpoint addresses, of data. It brings important benefits over conventional IP networking, including built-in security, in-network caching, and native support for multicast

INFORMATION CENTRIC NETWORKING PROGRAM

This program objective is to help mature the emerging NDN technology and associated metrology, showcase proof of concepts in different use cases and application areas, and carry out evaluations (performance measurement with modeling/analysis) for increased confidence among technology adopters. ICN program, with emphasis on NDN, covers protocols and applications and leverages real-world experimentation for performance evaluations. Some of the outcomes of this program include:

NDN-DPDK

NDN Push-To-Talk

IoT Onboarding

References

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https://www.nist.gov/programs-projects/core-network-technologies

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