

NFD measurements table manager

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Motivation

- Retrieve stats for measurements based strategies such as ASF
- Help operators understand/debug the forwarding behavior of ASF strategy

Objectives

Query the measurement table entries given by a name prefix and list all the faces and their corresponding measurements

Tasks

- 1) Provide an query operation at `/localhost/nfd/measure/query/PREFIX`: where PREFIX is encoded as one name component
- 2) Encode a measurement entry such as (in increasing order of difficulty):
 - 2.1. For a given name, represent the entry as a string of your choice
 - The format of the string is strategy dependent. The client will only display them as is
 - 2.2. For a given name, represent the entry as a map of strings indexed by face IDs and the collected measurements as string values
 - The format of the string is strategy dependent. The client will only display them indexed by face ID.
 - 2.3. For a given name, represent the entry fields as extra TLVs:
 - This requires the client to understand the TLV structures but is machine readable
- 3) Provide nfdc subcommand: `nfdc measure query [PREFIX]`

Required Knowledge for Participants

- C++11
- A machine capable of running NFD
- Knowledge of NFD and the strategies concept
- Knowledge of the measurements table

Expected Outcome

Demonstrate the new `nfdc measure` command applied to the ASF strategy with `ndn-traffic-generator` or `ndnping`