

New Feature for NFD Validator: Fetching Certificate from Remote Prefix Registration Requester

- Motivation and problem statement
 - For NFD running on the router and gateway hub, when doing the signature validation of a remote prefix registration command, now validator can only fetch certificate from a node who has already registered a prefix to NFD.
 - The certificate signing a remote registration command may be available only at the machine issuing the command.
 - This creates a chicken-and-egg problem: to verify command NFD-RIB needs to fetch the cert, to fetch the cert the prefix should be already registered.
 - To solve this problem: NFD-RIB's validator should send two Interests at the same time, first one to the requester (using NextHopFacelId) and second one to the infrastructure (without NextHopFacelId).

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- Contribution to NDN
 - The implementation will be implemented in ndn-cxx. The project will add a new feature to NFD validator, and the feature will be used by NFDs deployed on NDN test bed.
- Tasks
 - Add the feature
 - Add the test cases
- Required knowledge for participants
 - C++ and ndn-cxx
- Expected outcome
 - The new feature works well and no error in test cases