CCNx Technical Working Group

Meeting Minutes

10/21/15

Overview

Attendees: Jim Gibson, Ilya Moiseenko, Glenn Scott, Ignacio Solis, Mark Stapp, Christian Tschudin, Christopher Wood

Scribe: Christopher Wood

Agenda

1. Review the CCNx forwarder bootstrapping specification
2. Assess the manifest requirements document
3. Discuss potential Yokohama focus groups and topics

Related Material

- CCNx End-host Forwarder Connection Bootstrapping (draft-wood-icnrg-ccnxbootstrap.txt)
- CCNx Manifests (draft-wood-icnrg-ccnxmanifests.txt)

1) Review the CCNx forwarder bootstrapping specification

- There are three kinds of DNS systems and the document is inconsistent and unclear about what is being used. This needs to be cleaned up.
    - Managed DNS
        - This is a place where we can and should use SRV records, assuming that someone has the rights to administer DNS and install those records.
        - The scope of the SRV record needs to be correct (i.e., it should provide the correct "local" forwarder for clients).
    - mDNS (see https://tools.ietf.org/html/rfc6762)
        - Does not use SRV records.
        - Clients just ask for names and get back addresses.

        - We need to specify the port number that would be used in response to this address.
    - DNS-SD (see https://tools.ietf.org/html/rfc6763):
        - This type is consistent with both mDNS and unicast managed DNS.
        - Supports TXT and SRV records so we can include additional CCNx forwarder information.
- Continuing to use DHCP seems to open up many problems, e.g.: IPv4 and IPv6 compatibility and host configuration. We will just remove this options and stick with DNS-based and manual bootstrapping options.
- The fourth option (fixed (IP,port) tuples) is sketchy. We did not decide whether or not it should be kept, so it will remain for the time being.
- Some references are incorrect, unused, and out of date, e.g., a reference to STUN.
- The term "local forwarder" is misleading, since a local forwarder is one that would run on the endhost. A better term is "first hop forwarder."
- We expect that the first hop forwarder will participate in the routing protocol, and may therefore also give you a name (prefix) to be using.
    - An endhost may also request to use a particular prefix after identifying the first hop forwarder.
    - This issue is outside the scope of the document. We decided to mention the issue by defer it to a second meeting.
- The document title should be updated.
- The documentation motivation needs to be relaxed; IP overlays may still be needed even if and when CCNx does run over Ethernet (layer 2).
- We need to mention that DNS answers can be prioritized, but that the implementation is free to choose which answer it uses first.
- It is assumed that all UDP links will use DTLS, so we should point to the "CCNx over UDP" document which states this fact. Moreover, we should mention that it is assumed the first hop forwarder supports DTLS.

2) Assess the Manifest requirements document

- Requirement #8 (log(N) traversal time) was disliked by a majority of the group, so it will be removed.
- A requirement for Manifest loop freedom was not included.
- We need to emphasize that the intended Manifest is for a big and finite piece of data--not possibly endless streams of data.

3) Discuss potential Yokohama focus groups and topics

- Privacy should definitely be discussed, but we need everyone to be on the same page with respect to the current state of the art.
- Chris will put together a document that describes how things are done **today** to serve as a basis for comparison.

Action Items

- IP and CCN security and privacy overview document. [Chris]
- Update the bootstrapping specification document based on the meeting feedback. [Chris]

- Remove unnecessary Manifest requirements from the document. Add more motivation to the Manifest document to justify the requirements. [Chris]

Next Meeting

Date & Time: 10/28/15 at 11am PST

Tentative agenda:

- Review changes to the bootstrapping document
- Review updates to the Manifest requirements
- Discuss the beginnings of the IP and CCN security and privacy comparison document