

Contents

- Motivation
- Objective of this draft
- Changes from -00 draft
- Open issues
- Next steps

2002/3/18

Min. Req. for IPv6 LCNA

1

2002/3/18

Min. Req. for IPv6 LCNA

2

LCNA definition

- Low Cost Network Appliances (LCNA) will be connected to the Internet
 - Special purpose devices (unlike ordinary PC).
 - Having limited network functionality under limited resources.
 - Not a router, but a host.

2002/3/18

Min. Req. for IPv6 LCNA

3

LCNA example (Home appliances)



Toshiba Internet Refrigerator



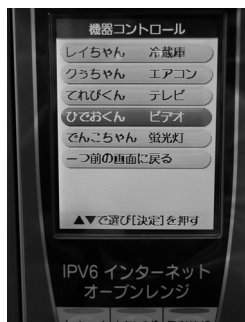
2002/3/18

Min. Req. for IPv6 LCNA

4

LCNA example (Home appliances)

Panasonic Internet Microwave Oven



2002/3/18

Min. Req. for IPv6 LCNA

5

LCNA example (IP sensor)

- SIMM size
- 1MROM
- 1MRAM
- 8bits,40MHz
- IPv4: 7KB
- IPv6:21KB
- JVM
- HTTPD, Telnet, Ftp



2002/3/18

Min. Req. for IPv6 LCNA

6

Motivation

- In Japan, many LCNA trials are promoted as a national project.
 - <http://www.v6pc.jp/>
 - IP Sensors
 - Home appliances (Refrigerator, Microwave oven)
 - Playstation2 w/ IPv6 functionality
 - Currently prototyped w/ KAME/USAGI full-spec IPv6 stack
 - But in order to make them commercial products, cost down by compact implementation (including LSI packaging) is necessary

2002/3/18

Min. Req. for IPv6 LCNA

7

Our objectives

- Submit a LCNA node requirement document in order to make a guideline for implementing IPv6 on LCNAs.
 - Sharing implementation experience of various LCNAs.
 - How to select necessary functionality under certain resource limitation
 - Making reference code and test suites to public
 - Drive LCNA industry
 - LCNA Interoperability test (Jan.23-26 @Pacifico Yokohama)
 - 27 organization joined with 7 LCNA implementations (from 6 organizations)

2002/3/18

Min. Req. for IPv6 LCNA

8

3rd TAHI IPv6 Interoperability Test Event



2002/3/18

Min. Req. for IPv6 LCNA

9

Changes from -00 draft

- Reflected comments of IPv6 WG
- Corrected several editorial errors
- Mobility parts (2.8, Chapter 5) are appended
- Default address selection for IPv6 (3.8) is appended
- Security part is completely changed
 - Threat analysis of LCNA (4.1)
 - IPsec not mandatory (4.2-4.3)
 - LCNA must support appropriate security solution depending upon the contents of communication and operation capability
 - IPsec minimum requirement in 00 draft is now moved to Appendix as one (IP-layer) example of security solution (but we cannot mention about other layers' security solutions)

2002/3/18

Min. Req. for IPv6 LCNA

10

Open issues (IPsec mandatory ?)

- Discussion of cellular draft also works for LCNA
 - Basically, IPv6 mandates implementing IPsec.
 - No-IPsec must not be allowed even if currently LCNAs cannot support IPsec
 - On IPv6 end-to-end environment, no-security nodes cannot exist (it might be victim of intrusion/highjacking)
 - It might happen that a vendor have to limit (or omit) IPsec implementation on its own responsibility.
 - If IPsec minimum specification is regulated, draft-00 (ESP with manual key exchange) will be fine

2002/3/18

Min. Req. for IPv6 LCNA

11

Open issues (document structure)

- Is generic node requirement document possible ?
 - In case of cellular draft, usage model and network configuration are regulated by 3G network document
 - But in case of LCNAs, we have not discussed network/usage models yet
- We need descriptions for network/usage models of typical LCNAs
 - Home appliance LCNAs and home gateway model
 - Sensor type LCNAs and information gathering server model
- Should these items be merged to this draft ? Or separate documents ?

2002/3/18

Min. Req. for IPv6 LCNA

12

Next Steps

- On 02 draft
 - Update Chapter 4(Security) again
 - Update Mobile IPv6 part by watching mobileip WG progress
 - Network/Usage model description (on separate document ??)
 - Security solution evaluation data on appendix
 - How difficult it is for LCNAs to implement current security solutions must be evaluated !!
- After that, proceed to WG item
 - Target for Informational RFC or BCP

More Info.

- Contact Points
 - <http://www.tahi.org/minspec/>
 - tiny@tahi.org