

IPv6 activities in Japan

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STLA (2001/02/06)

- APNIC
 - Allocated: 24 (KR 6, JP 12)
 - Announced: 17 (71%)
- ARIN
 - Allocated: 13
 - Announced: 8 (61%)
- RIPE
 - Allocated: 26
 - Announced: 18 (69%)

ISPs in Japan (1)

IPv6 tunneling services

- IJ <http://www.ij.ad.jp/IPv6/index-e.html>
- OCN <http://www.v6.ntt.net/english.html>
- JENS <http://www.jens.co.jp/news/20001030.html> (JP)
- DION <http://www.v6.kddi.com/> (JP)
- ODN <http://www.v6.japan-telecom.co.jp/>
- BIGLOBE <http://biz.biglobe.ne.jp/service/IPv6/> (JP)

ISPs in Japan (2)

IPv6 native services

- IJ <http://www.ij.ad.jp/IPv6/index-e.html>
- JENS <http://www.jens.co.jp/news/20001030.html> (JP)

IPv6 products

- Translators**
 - YDC TTB
▷ <http://www.ydc.co.jp/TT/ipp/TTB/index-j.html> (JP)
- Embedded stack**
 - Access ave-TCP 6.0
▷ <http://www.access.co.jp/press/001016.html> (JP)
- Mail readers**
 - Orangesoft Winbiff
▷ <http://www.orangesoft.co.jp/e/index.html>

IPv6 products

- Routers**
 - IJ SEIL
▷ <http://www.seil-t1.com/> (JP)
 - Fujitsu Geo Stream R940
▷ http://www.fujitsu.co.jp/jp/cover/network3/products_1.html (JP)
 - Fujitsu NetVehicle
▷ <http://www.hitachi.co.jp/Prod/comp/network/index.htm>
 - Hitachi GR2000
 - MGCS S16
 - NEC IX5000
▷ <http://www.nec.co.jp/japanese/product/kiban/den/ix5k7k/> (JP)
 - NEC CX5210
 - NEC IP8800/700
 - Yamaha RT300i/RT105i/RTA52i/RT60w
▷ <http://www.rtpro.yamaha.co.jp/> (JP)

The KAME project (1)

- High quality code for BSD variants
 - Reference code
 - ▷ One of the keys to deploy IPv6
 - IPv6, IPsec, Mobile IP and advanced networking
 - Provided "AS IS" like BSD
 - ▷ Free and no warranty
 - ▷ Commercial use is OK
 - Organization
 - April 1998 - March 2002
 - 9 core members from 8 Japanese companies
 - ▷ Fujitsu, Hitachi, Iij, NEC, Toshiba, YDC, Yokogawa
 - ▷ MGCS (newi)

□ The basic spec has been implemented

- IPv6
 - ▷ Basic specifications
 - ▷ Routing: RIPv6, OSPFv3, BGP4+, PIM-DM, PIM-SM
 - ▷ Translator: TCP-relay and protocol translator
- IPsec, IKE, Mobile IP
- Many IPv6 applications
 - ▷ DNS, SMTP, POP, HTTP, FTP, TELNET, SSH...
- Adopted
 - ▷ BSD/OS 4.2, FreeBSD 4.2, NetBSD 1.5, OpenBSD 2.8,
 - ▷ Iij SEIL T1, Hitachi GR2000, Fujitsu NetVehicle

High quality code for Linux distributions

Like KAME

GPL2

IPv6, IPsec, Mobile IP

Organization

November 2000 -

6 core members

Iij, NTT soft, Kyushu Univ, Keio Univ, Tokyo Univ,

Toshiba, Hitachi, MIND, Yokogawa, CRL

Collaboration

IPsec

Frees/WAN (<http://www.freeswan.org/>)

Mobile IP

Helsinki University and Nokia (<http://www.mipi.mediaipoli.com/>)

The USAGI project (1)

Release

Snapshot every Monday

Stable is obsoleted

Obtaining the KAME software

<http://www.kame.net/>

Mailing-lists

snap-users@kame.net

Questions and announcements

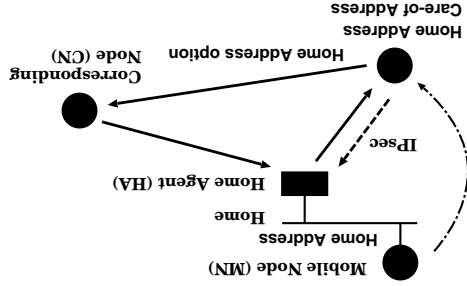
core@kame.net

The core members

secretary@kame.net

Questions about license policy, etc.

The KAME project (3)



Mobile IPv6

MIPv6 (1)

- Release
 - Snapshot
 - ▷ Every other week
 - ▷ Source patches (kernel, glibc, commands)
 - ▷ Binary package for Debian GNU/Linux
 - Stable
 - ▷ Binary package for Debian GNU/Linux, Rad Hat Linux, Turbo Linux, Kondara MNU/Linux
- Obtaining the USAGI software
 - <http://www.linux-ipv6.org/>
- Mailing-lists
 - usagi-users@linux-ipv6.org
 - ▷ Questions and announcements
 - usagi-core@linux-ipv6.org
 - ▷ The core members

The USAGI project (2)

MIP6 (2)

- MIP6 (Mobile IPv6)
 - WG last call (in IETF)
 - Nokia adopted MIP6 for cellular phone
 - ▷ http://press.nokia.com/PR/200101/806305_5.html
- For KAME (BSD)
 - Ericsson
 - ▷ Delivered with KAME snapshots (MIP6 macro)
 - Keio Univ. (SFC)
 - ▷ Not announced yet
 - NEC
 - ▷ Not announced yet
- For USAGI (Linux)
 - Helsinki (Nokia)
 - ▷ <http://www.mipl.mediapoli.com/>

Two inter-operability test envets

Results

- W/o IPsec auth, inter-operability is pretty good
 - ▷ But the spec requires authentication b/w MN and HA
- W/ IPsec auth, inter-operability is poor
 - KAME can act as CN by default
 - ▷ Even if MIP6 is disabled, KAME can communicate with MN
 - ▷ Understand the home address option
 - ▷ First step to merge three code
- Plan
 - More inter-operability test events
 - Merging three code to one on KAME
 - ▷ Ericsson, Keio, NEC