Hitachi IPv6 activity and GR2000

Munechika SUMIKAWA

Hitachi, Ltd. & KAME Project

sumikawa@sumikawa.jp
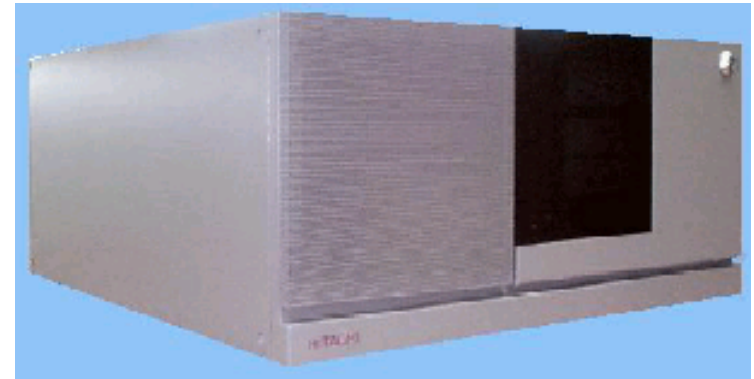
IPv6 and Hitachi

- **Started developing IPv6 since 1995**
  - Homebrew stack on BSD/OS(--> NR60)
- **Joined to KAME Project(Apr/1998)**
- **Hitachi IPv6 products**
  - Client
    - Toolnet6
  - Router
    - NR60
    - GR2000

Toolnet6 and NR60

- ## NR60
  - PC based software router (homebrewed codes)
  - Shipped in Mar/1997
  - Implemented several experimental features.
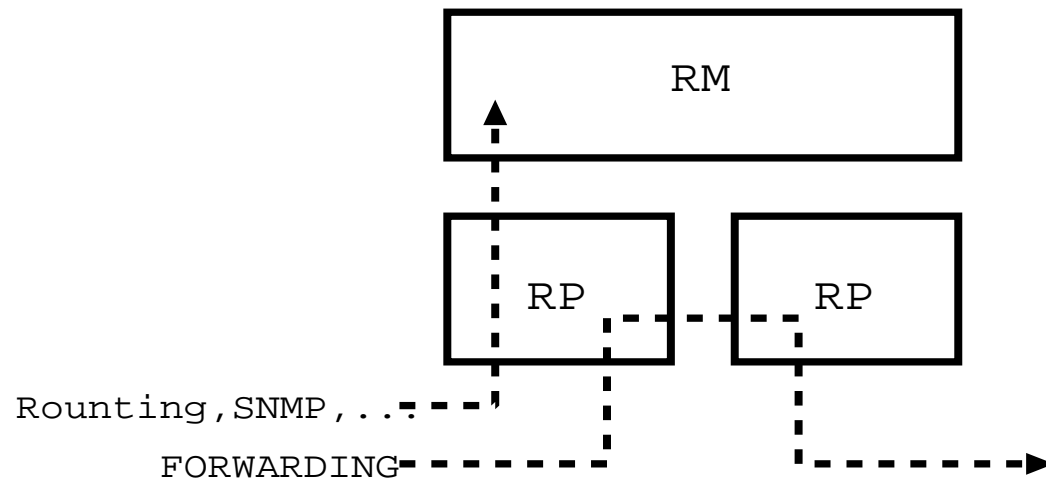   - IPsec, IKE and translator(ported to Toolnet6)

- ## Toolnet6
  - Migration tool from IPv4 to IPv6
  - Self-translator using the Bump-In-the-Stack technique
    - "draft-ietf-ngtrans-bis-00.txt"
  - Free software
    - works on Windows 98/NT

GR2000

- IPv4 router
- Distributed architecture
  - Routing Manager (BSD/OS on AMD K6-2)
    - Easily porting software (rouing daemon, SNMP, httpd)
  - Routing Processor
    - Customed LSI(forwarding engine/routing looking up LSI)
    - Fast forwarding/filtering/diffserv by hardware

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                    |        RM         |
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                    +-------+   +-------+
                    |  RP   |   |  RP   |
                    +-------+   +-------+
Rounting,SNMP,..------
FORWARDING------------------------------>
```

KAME on GR2000

- **Ported KAME on GR2000**
  - On Routing Manager
    - IPv6 forwarding by software now
  - Supporting several interfaces
    - Ethernet/Gigabit Ethernet/ATM/POS/Serial

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  Rounting,SNMP,...─ ─ ─ ─ ─┘  │         │
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  IPv6 FORWARDING ─ ─ ─ ─ ─ ─ ─┘         └ ─ ─ ─ ─ ─ ─→
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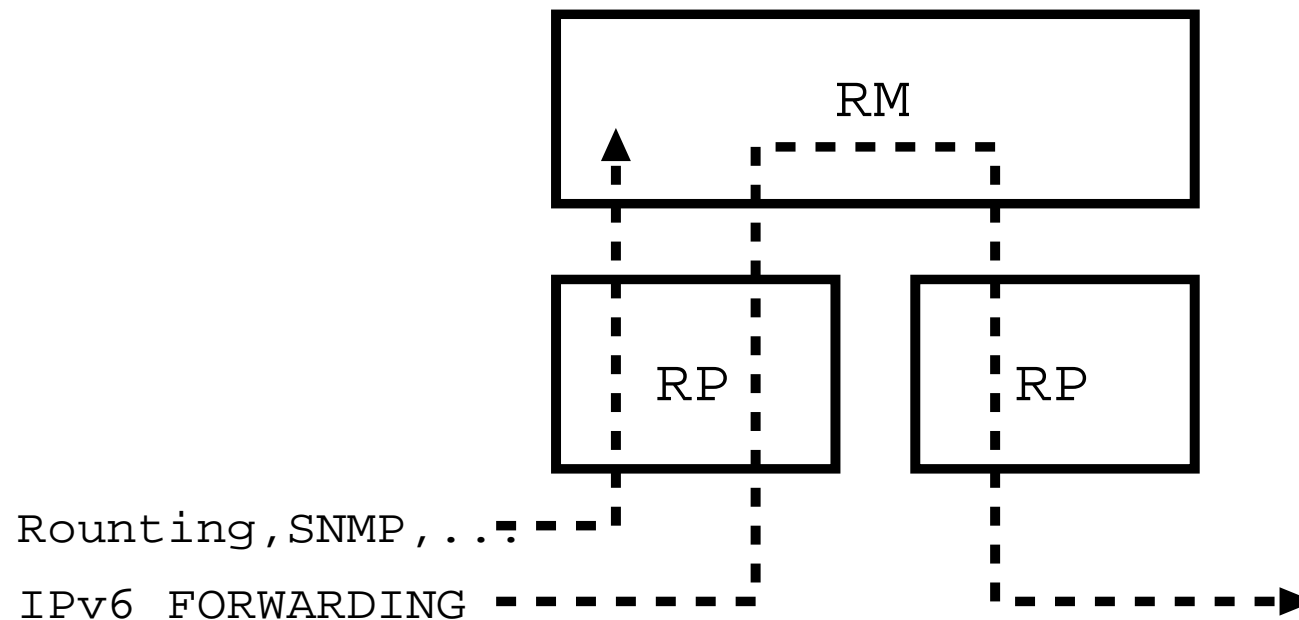
Future Plans

- **Operation in worldwide 6bone**
  - One of routers in this network
    - Fixed "src mac address is all zero" bugs in this meeting
- **First beta release on 2Q/2000**
- **IPv6 forwarding by hardware**

GR2000-20

GR2000-10

GR2000-4