



APNIC

Asia Pacific Network Information Centre

# APNIC Security Update

APSIRCC 2002  
Tokyo, 25 March 2002



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# What is APNIC?

- Regional Internet Registry (RIR) for the Asia Pacific Region
  - Regional authority for Internet Resource distribution
  - IP addresses (IPv4 and IPv6), AS numbers, in-addr.arpa delegation
- Industry self-regulatory body
  - In the “Internet Tradition” ...
  - Non-profit, neutral and independent
  - Consensus-based, open and transparent
  - Open membership-based structure

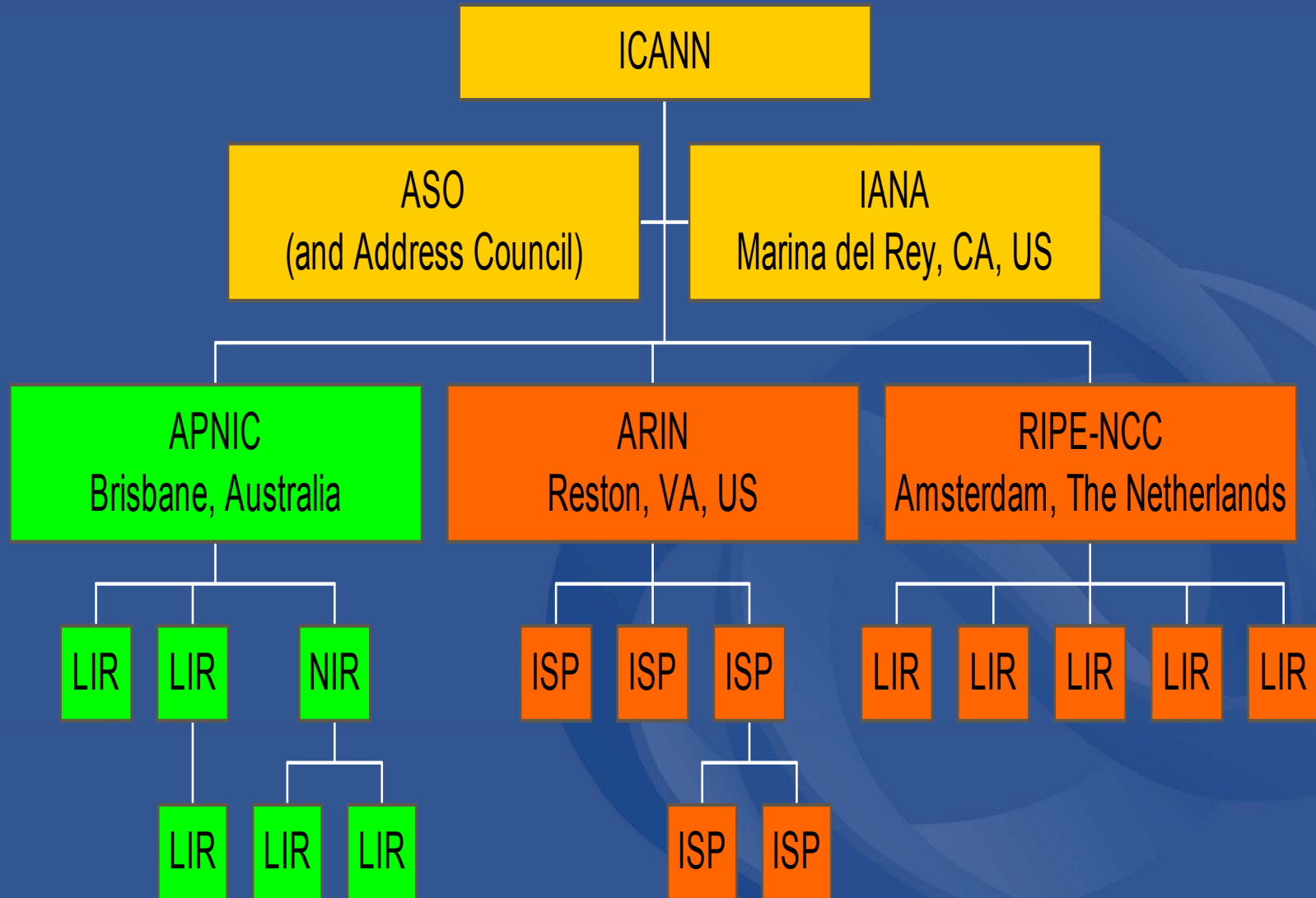
# What does APNIC do?

1. Internet resource management
  - IP address allocation and assignment
  - AS number assignments
2. Resource registration
  - Authoritative registration server: *whois*
  - Internet Routing Registry: *apirr*
3. DNS management
  - Delegate reverse DNS zones/domains
  - Authoritative DNS servers
    - *in-addr.arpa, ip6.arpa (ip6.int)*

# Where is APNIC?



# Where is APNIC?



# What else does APNIC do?

- Training and Seminars
  - 2 training courses per month in 2002
  - Seminars with other AP\* organisations
- Publication
  - Newsletter, web site, mailing lists etc
  - Regional and global statistics
- Policy development and coordination
  - Major Open Policy Meetings: 2/year
    - SIGs, WGs, BOFs, training sessions
  - ASO and ICANN processes

# APNIC Status Summary

- Location: Brisbane, Australia
  - Tokyo, Japan from 1993 to 1998
- Staff: 33 full time
- Membership: over 700
  - ISPs, multinationals, national NICs
  - Total ISPs served: over 1200
- Allocations: 1.7 /8 in 2001 (28 million addresses)
  - More than allocated in EU (first time)
- Budget: USD 3.75m in 2002
  - Maintain 1 year capital reserve
- Contact details:
  - <http://www.apnic.net>
  - [info@apnic.net](mailto:info@apnic.net), [abuse@apnic.net](mailto:abuse@apnic.net), etc

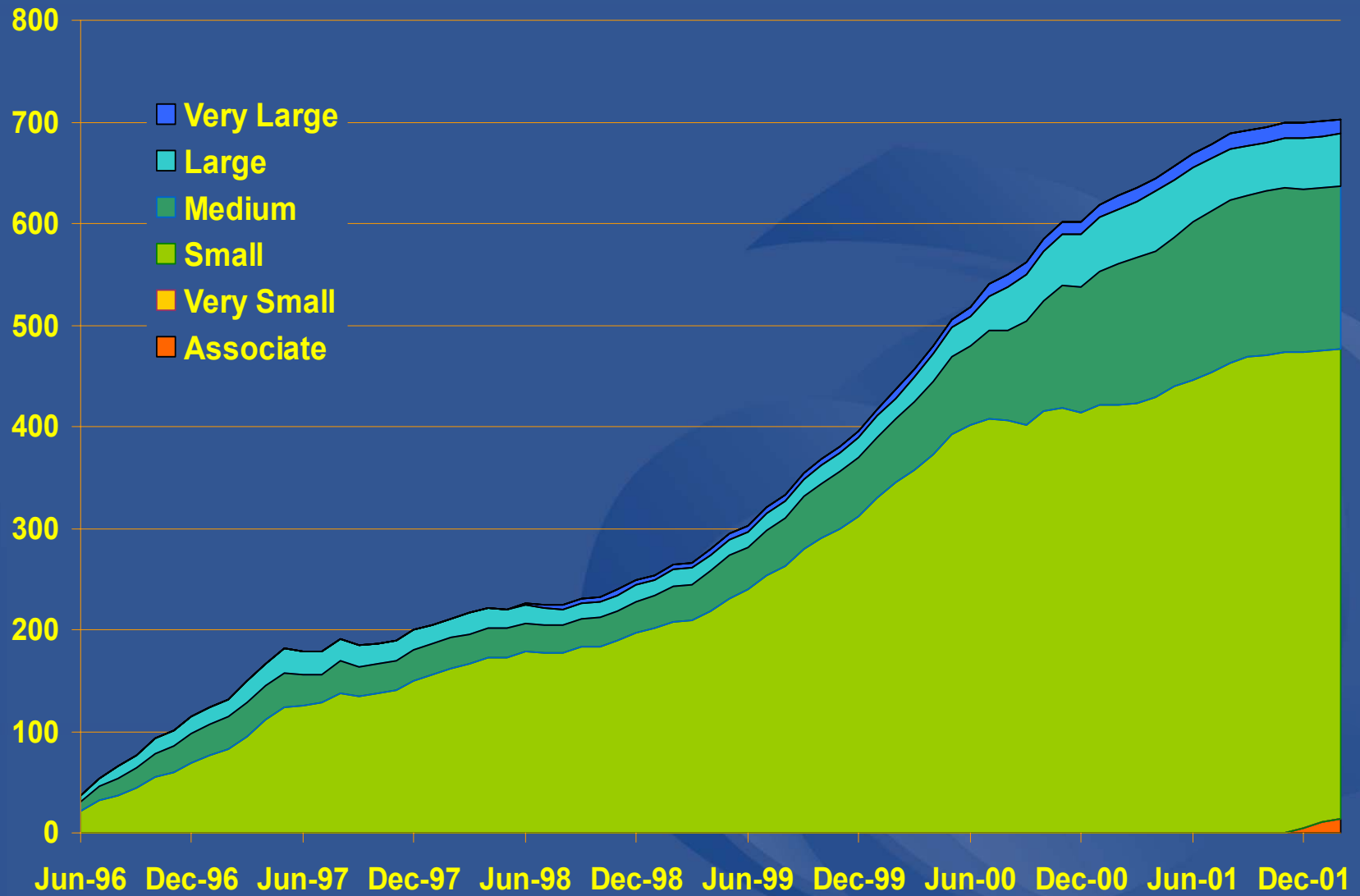




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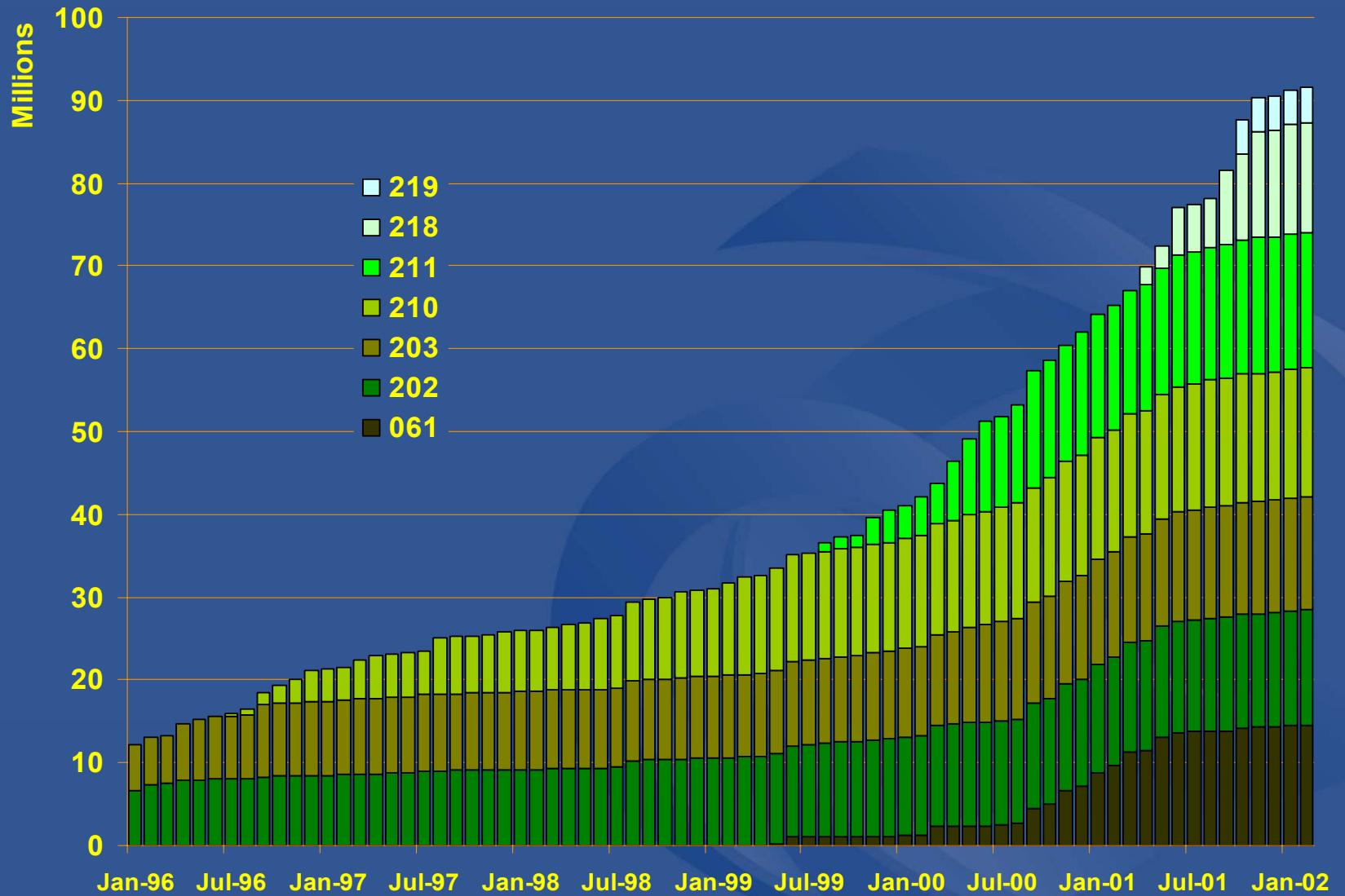
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# Total APNIC Membership





# IPv4 Addresses Allocated in Total

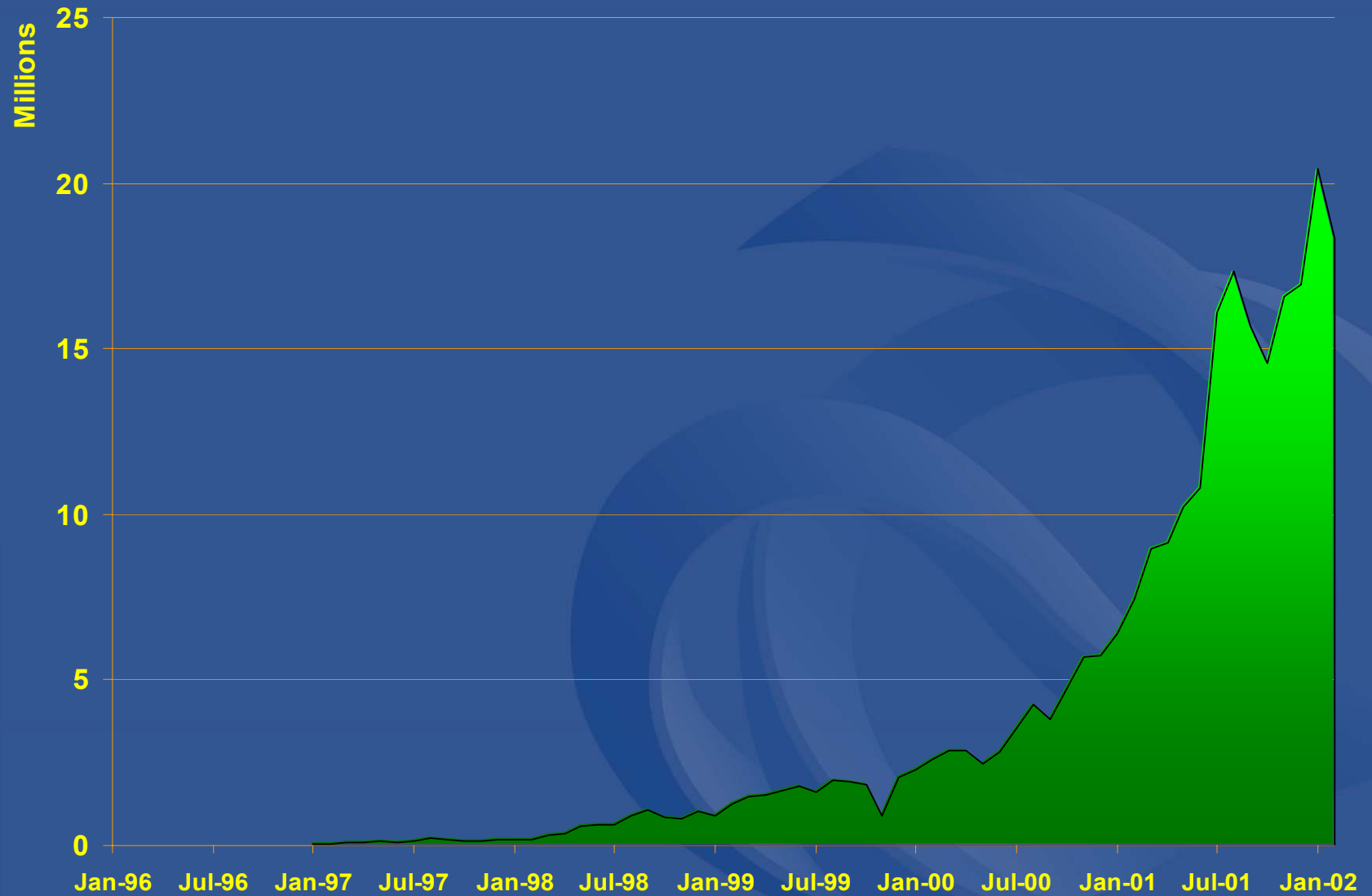




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# Whois Queries per Month





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## Issues and Developments

# RIR security issues

- Online server security
  - Whois, APIRR, in-addr.arpa, ip6.arpa (ip6.int)
  - Standard security measures: 24x7
  - Redundant distribution model under dev.
- “Internal” information security
  - Common membership concern
  - Member agreement, NDA, etc
- Registration issues
  - Database development, distribution etc
  - Handling abuse reports (security, spam etc)
- Routing system security
  - More later

# APNIC certificate authority (CA)

- Trial service established
  - Public key certificates (PKI/X.509)
  - Started in 2000
- APNIC-specific applications
  - Email security to/from APNIC
  - “MyAPNIC” access
  - Database access (whois/IRR)
  - Future: Resource certification
    - Supporting routing system security
  - Future: Other general purposes
    - As determined by community

# Registration issues

- APNIC database whois.apnic.net
  - Primary APNIC responsibility as RIR
  - Covers only APNIC address space
    - 61/8, 202/7, 210/7, 218/7
- Increasing abuse report load
  - Often misdirected at APNIC
    - Resulting from query of whois.arin.net
  - Often relate to outdated information or unresponsive ISPs
  - Need improved database mirror/distribution
  - Need improved policies/agreements



# Routing system security

- Currently vulnerable
  - Routing system attacks yet to come
  - Currently ISPs rely on registry data, but without common auth\* framework
  - ISP priority is to serve customers, respond quickly to route requests
  - Better system will be needed



# Routing system security

- Proposed PKI-based scheme
  - Address space holders reliably identified
  - Resource allocations certified
  - Clear chain of trust
- Incomplete system
  - Does not eliminate need for secure routing protocols
- Details and procedures need to be defined...
  - Work in progress

# Finally – you're invited...

- 14<sup>th</sup> APNIC Open Policy Meeting
  - 3-6 Sep 2002, Kita-Kyushu, Japan
  - Hosted by JPNIC
    - <http://www.apnic.net/meetings>
- 15<sup>th</sup> APNIC Open Policy Meeting
  - In conjunction within APRICOT 2003
  - March 2003, Taipei, Taiwan
    - <http://www.apricot.net>



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# APNIC Security Update

*Thank you*

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