

## Database Working Group

To subscribe: [dbwg-request@arin.net](mailto:dbwg-request@arin.net)

To post: [dbwg@arin.net](mailto:dbwg@arin.net)

Archives: <http://www.arin.net/maillinglists/dbwg/index.html>

- Should/must a downstream self-register prior to receiving resources from an upstream?
- Should ARIN accept country code aliases?
- Proposed Templates
- Proposed Enhancements
- Soliciting Beta Testers

## Pros:

- Maintainer ID controlled by downstream
- Reduce duplicate Mainainer IDs
- Downstream to update POC and Org information
- Cleaner data
- Facilitates multi-homed companies
- No Org information required on SWIP template

## Cons:

- Downstream Maintainer ID is required to process SWIP Allocations
- Requires registration from downstream
- May require education from upstream regarding ARIN registration process
- Requires clean-up process by ARIN, to remove Orgs without resources

## Pros:

- Reduces return templates due to erroneous data
- More user-friendly

## Cons:

- Requires additional resources for ARIN to maintain
- Not ISO 3166 compliant
- May require some interpretation by ARIN

- Seven Templates ready to be reviewed:
  - 2 Organization Templates
  - 1 POC Template
  - 2 IPv4 Network Address Templates
  - 2 Autonomous Systems Templates
- <ftp://ftp.arin.net/pub/proposed>
- Templates have ability to be compacted
  - If POC is registered, only POC handle required
  - If Organization is registered, only Org handle required
- Action type defines new/modify/delete

- Resources associated with an Organization
  - Organization information required only once
- If no POC provided for resources, defaults to Organization POCs
  - Reduced redundancy
- Only require canonical name for inaddrs
- No longer store host handles
- Complete registration templates via the web
- Expand types of POCs to include Abuse & NOC
- Expand types of Phones to include Mobil & Pager

Who would like to test the new software before we go live?

Email us at [dbwg@arin.net](mailto:dbwg@arin.net)

Questions?

# Early Registration Record Transfers

Richard Jimmerson  
Director of Operations

- Current Situation
- Background
- Goals
- Tasks
- Maintaining in-addr.arpa
- RIR Coordination Efforts
- Next Steps

- Many registration records are not maintained in the appropriate RIR database
- Many organizations
  - have to interact with more than one RIR to modify their registration records
  - have difficulty making efficient and timely in-addr.arpa updates
- The in-addr.arpa zone contains delegations longer than a /8 (/16s & /24s)

1980s:

- All IP and AS number registrations were made by entities under a US Department of Defense contract

1990s:

- APNIC and RIPE NCC began registering IP and AS numbers for their respective regions
- All previous registrations from these regions remained in the InterNIC database
- In 1997 all IP and AS number registrations were transferred from the InterNIC to ARIN

- Registration records will be maintained in the appropriate RIR database
- Organizations will be able to:
  - interact with a single RIR
  - make more efficient and timely in-addr.arpa updates
- In-addr.arpa zone will contain only /8 delegations

- Transfer all IPv4 registrations from ARIN to the appropriate RIR DB (does not include reassigned records)
- Transfer AS registrations from ARIN to the appropriate RIR DB
- Establish process for maintaining in-addr.arpa sub-domains
  - Update the in-addr.arpa zone file to contain only /8 delegations
  - RIRs maintain /8 zone files

- Each RIR will maintain a suite of in-addr.arpa servers
  - APNIC & RIPE NCC have already deployed this solution
  - ARIN will establish a suite of in-addr.arpa sub-domain servers (testing now underway)
- Non-shared /8s maintained by appropriate RIR
- Shared /8s maintained by majority record holder
  - RIR having majority of network space for a /8 will have primary responsibility
  - RIRs will provide updates to zones maintained by other registry

- Planning and preparation
  - Sample dump was provided by ARIN in early 2000
  - Candidate list of transfer networks provided by ARIN 08/22/2000
  - Companion dump of all network data provided by ARIN 08/23/2000
  - Updated/additional data provided in March 2001
- Options for updating shared zones
  - Database update and secure copy
  - Dynamic updates (RFC 2136) and TSIG (RFC 2845)

- RIRs to complete testing of shared zone update mechanism (Q2 2001)
- Notification to registrants to be submitted
- Completion/Cut-over target: CY 2001

Questions?

# Exporting WHOIS Data AUP

Richard Jimmerson  
Director of Operations

- October 2000 Meeting Discussion
- AUP
- Data Availability
- Data Format

- PPM attendees voted in favor of providing bulk WHOIS data to research organizations
- AUP to be signed before data is made available
  - Data would not include point of contact information

- BOT has reviewed an AUP for this data
- Counsel is currently reviewing European privacy issues related to AUP
- Completed AUP will soon become available

- Which Data?
  - Network/AS name
  - Associated IP or AS numbers
  - Organization name
  - Postal address
  - **No POC information**
- Release Procedure
  - Made available only to organizations who have signed the AUP

- Which Format?
  - RPSL
  - XML
  - Other

**Additional Comments?**

# Routing Information Service (RIS)

Antony Antony, Thomas Franchetti,  
Henk Uijterwaal, Daniel Karrenberg

presented by Mirjam Kühne

RIPE NCC

# Overview

- Why a Routing Information Service?
- What is the Routing Information Service?
- How to use the RIS!
- How to participate!

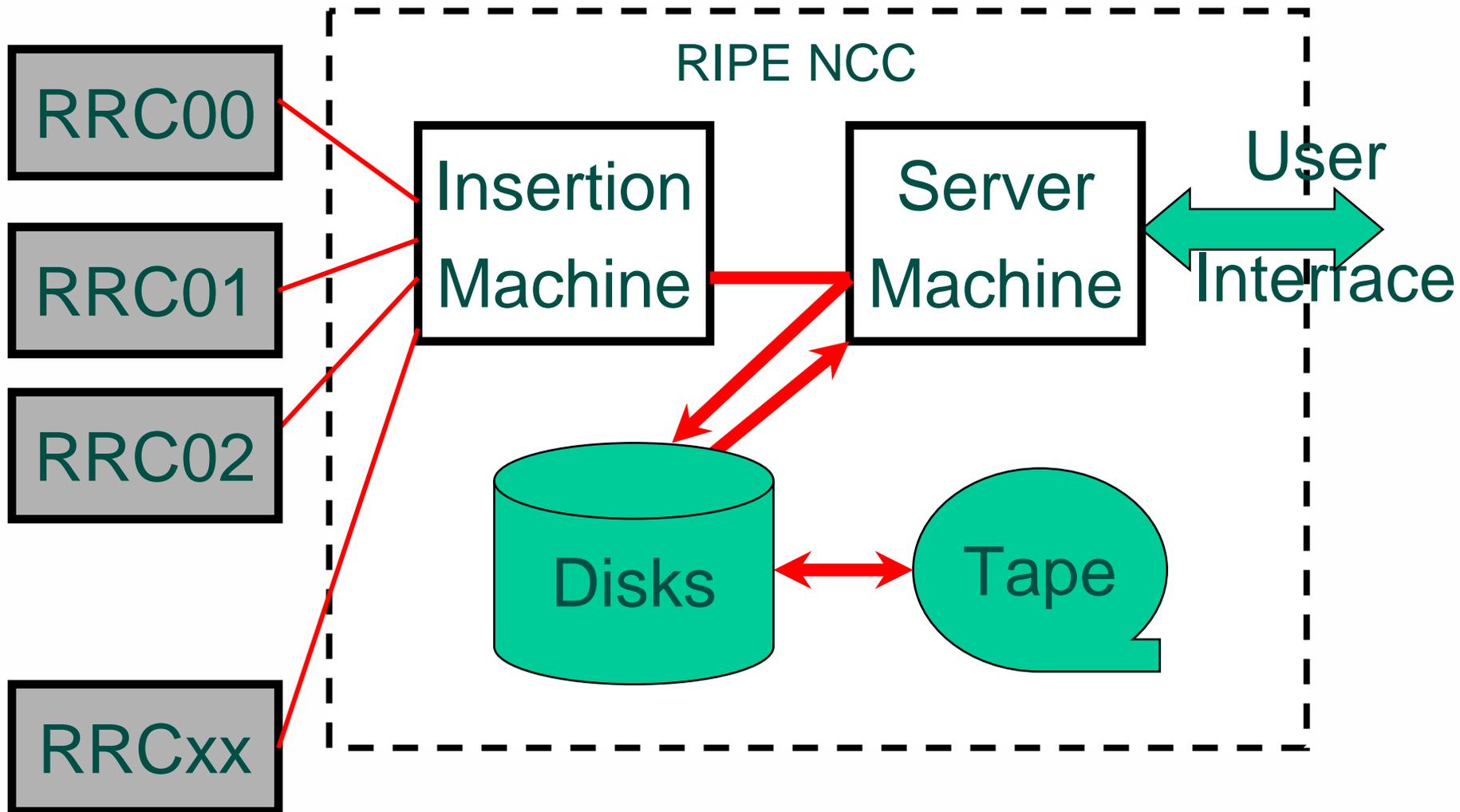
# Why a RIS?

- Global routing behavior affects I(S)P service
- Distant routing problems difficult to diagnose
- ‘Routing quality’ of neighbors difficult to assess
- Destination based routing provides ‘one-way-only’ control & diagnostics
- Looking glasses are crude tools to cover the ‘other direction’

# What is RIS?

- “Looking Glass on Drugs”
- Multiple route collectors integrate multiple views
- Access to more than just instantaneous data
- Supports various (longer term) analysis
- Multiple collectors and database enable complex analysis products

# Data Base @ the RIPE NCC new setup



# Remote Route Collectors

- Currently 4:
  - RIPE NCC,  $\pm$  15 peers worldwide
  - LINX,  $\pm$  40 peering sessions from LINX members
  - AMS-IX
  - SFINX, in transit
- Next steps:
  - Investigate the added value from more RRC's?
  - Where to locate the next RRC's?
  - 2 more in Europe, Americas, Asia Pacific?

# User Interface

- <http://www.ripe.net/ris/ris-index.html>
- Raw Database Queries
- ASinuse
  - shows peering history of a particular AS
  - Beta, but quite popular
  - used by RIPE NCC registration staff

- Other queries? Yes



# Raw Database Query

- Main Parameters

- RRC
- AS# or IP Address
- Time Period

live

- Example: APNIC Service Machine in Tokyo

- AS# in form not used (we clicked 'Search Network')
- Note: query for /32s possible
  - returns routes containing address
- output starts with routing table dump, then updates

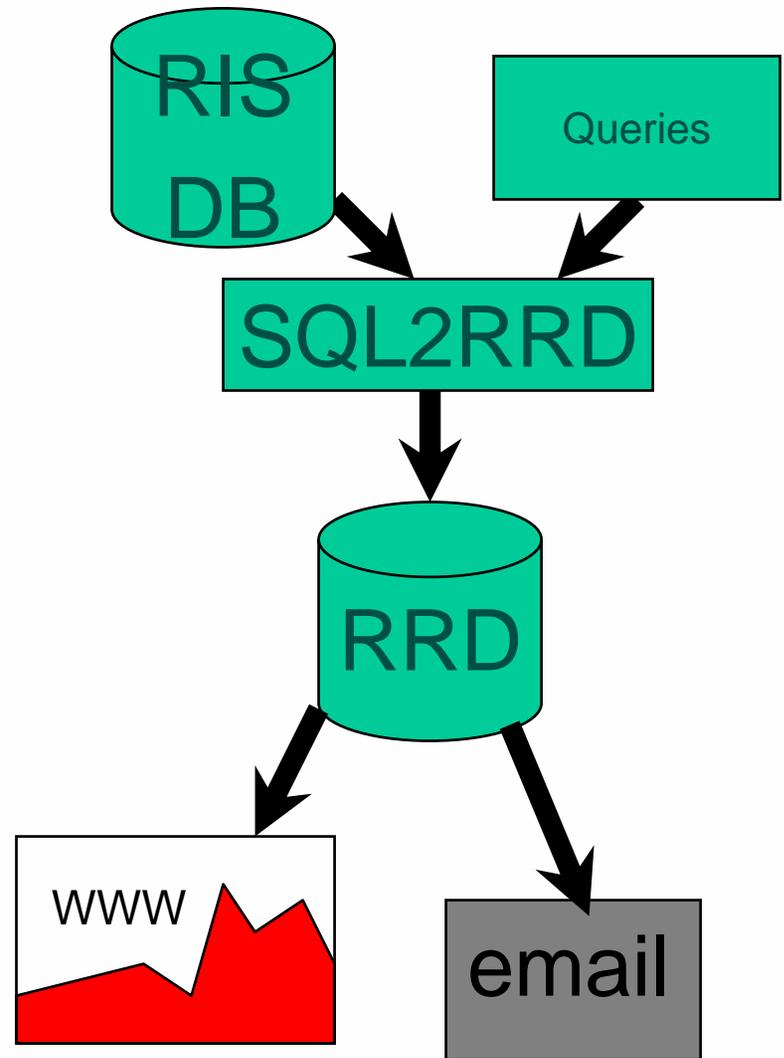
# ASinuse Tool

- Presents 'Peering History' of an AS
  - current main user is RIPE NCC registration staff
  - after informal announcement other users appeared
- Example: AS4777
  - takes 1-3 minutes, whole database searched
  - provides links to registration data
  - useful to check out your own AS

live

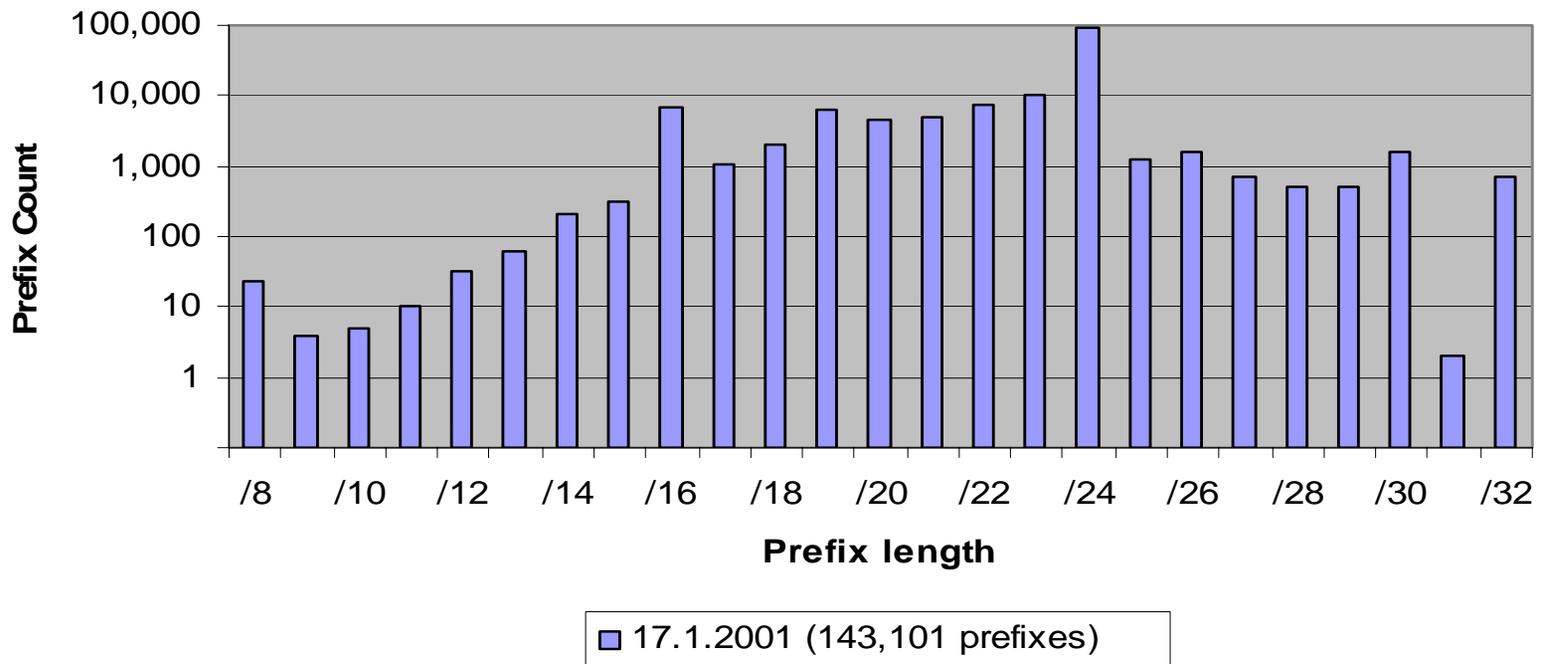
# Daily Analysis

- RIS Database
- SQL2RRD: Universal tool to do large amounts of (similar) queries
- RRD Database:
  - Plots on the Web
  - *Last* command to generate report



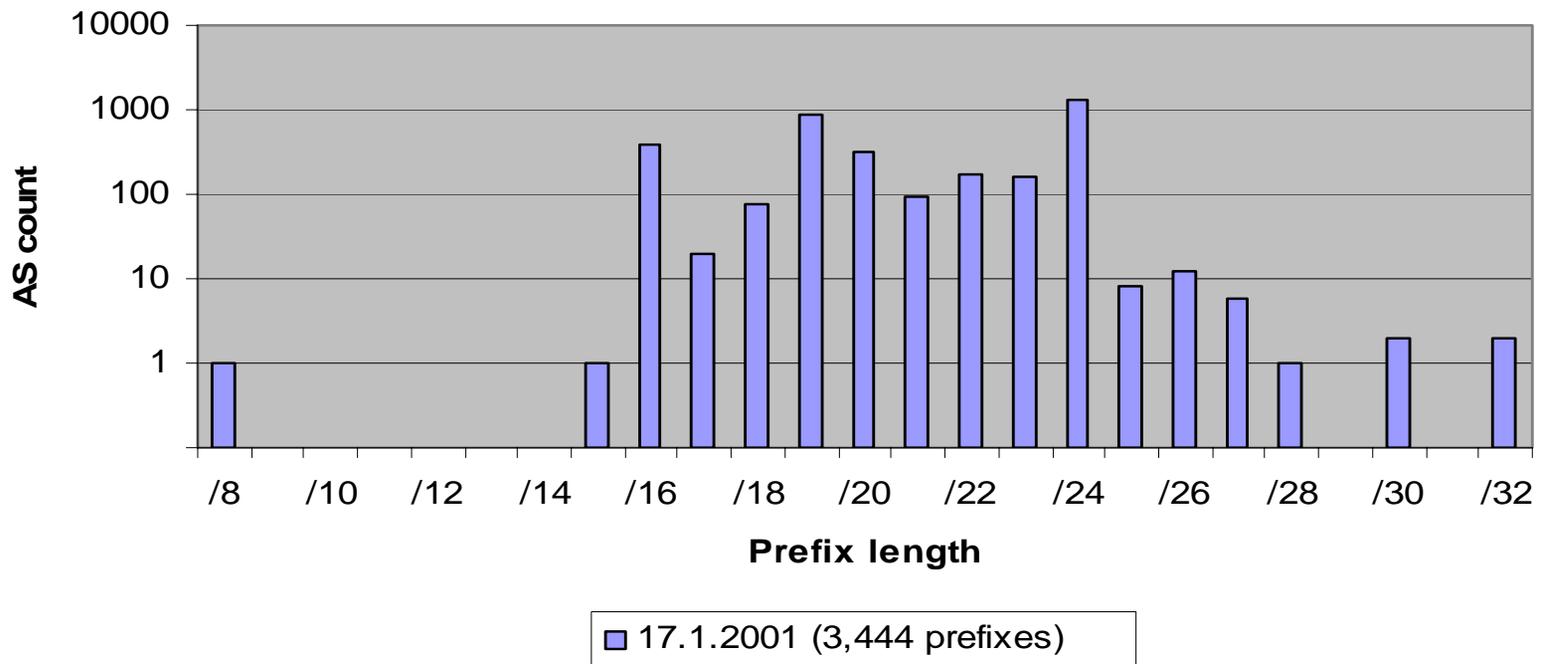
# Prefixes per Prefix Length

Prefixes per prefix length



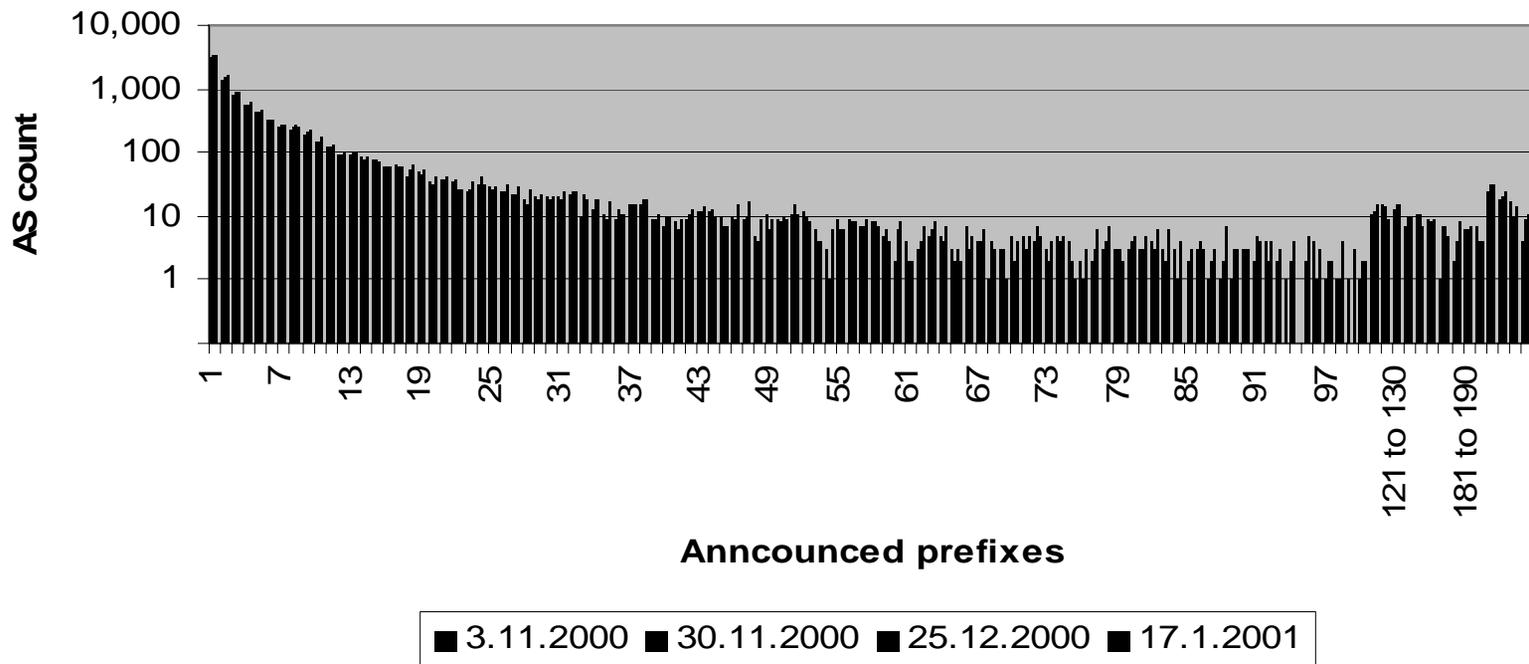
# Origin ASes announcing only one Prefix

Origin ASes announcing only one prefix



# Origin ASes per announced Prefixes

Origin ASes per announced prefixes



## How to Participate

Please suggest topologically interesting places willing to house a remote route collector to us at

[<ris@ripe.net>](mailto:ris@ripe.net)

# Questions, Discussion





# *OPEN MICROPHONE*

April 1 – 4, 2001

San Francisco, CA