PRIDE

Progress Report

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1. Management Summary

PRIDE has made good progress during December, completing a major milestone, the first PRIDE Tools release.

2. PRIDE Activities

2.1. The Team

The project team remains unchanged. Next month Marten Terpstra will join us. During this month Marten already participated fully in the design discussions for the next tool release.

2.2. PRIDE Tools 1 Release

The first official release of the PRIDE tools was released on December 17th. It contains version one of the tools *prtraceroute* and *prcheck*. The tools release is available from:

ftp.ripe.net:pride/tools/pride-tools-1.tar.Z

Besides the complete package, each tool is also available separately in this directory.

As part of the introduction to the release an interactive usage menu was set up so operators could have a demonstration of the tools before actually installing them. This is reached by doing the following:

`%` **telnet info.ripe.net 4711**

Appendix E shows an example menu session showing the tool "prtraceroute".

The reaction for the tools has been very positive, judging by the comments from early adopters. Here are the current usage statistics regarding the use of the tools and the interactive PRIDE menu. The following statistics are taken from the period of December 17th - 31st, 1993.

Tool	Ftp'd S/W(1)	whois queries(2)	Menu Usage
Prcheck	7	2666	67
Prtraceroute	18	3782	127
Full Package(3)	39		100(4)

(1) - Amount of anonymous ftp transfers of the software
(2) - No. of RR queries related to the tools.
The average amount for each tools is
for prcheck 5 and for prtraceroute 10.
(3) - Means the full release package.
(4) - Total number of calls to the Menu.

Table 1: Statistics for PRIDE-TOOLS-1

2.3. Use of the Tools by non-European Providers.

Some service providers based outside Europe have discovered that the tools are not very useful to them because of the lack of routing registry coverage of their area. In order to move ahead quickly we have opened the RIPE RR to any service provider worldwide who wish to register their routing polices in RIPE-81 format. Those interested should contact <ncc@ripe.net> for details.

Currently, ALTERnet have participated in piloting the integration of RR information from other data sources. They managed to document their full routing policy with little trouble. The PRIDE project team is grateful for ALTERnet's collaboration and hopes more non-European service providers will join in adding their RR information to the RR database.

2.4. Design for further PRIDE Tools

We carefully evaluated the the experiences gained while producing the first two PRIDE tools. It appears that in order to do a good job at some of the diagnostic tasks, tools will have to have knowledge of big areas of the routing topology graph. With the present design, which uses the general whois server, this leads to a high number of RR queries and complex computations in the client. Consequently we decided that a redesign shifting some "knowledge" and computation from the clients to a specialised routing topology server is needed.

2.5. Tool Enhancements

In order to cut down on the bandwidth and time needed by the tools to get information from the whois server we have added an enhancement to the whois server known as the "FAST" option, This gives a more compact (DB short-form) output of the RR information. It significantly speeds up the tools when dealing with very large database objects such as complex transit ASes.

We have also added "version tracking" to the clients. They will report their version once before sending queries to the whois server. This way we can monitor which tool caused a query and have an overview which versions are being used in the field.

3. Related activities

3.1. SWIP/Other Routing registries.

There had been little progress on the SWIP activity in December. The next meeting of SWIP participants will be at the 'Regional Techs' meeting scheduled for February. We will discuss general RR issues and CIDR aggregation support in particular with interested parties before that.

4. Progress Against Milestones

4.1. PRIDE-2

PRIDE-2 was completed in week 50, one week late according to the original project plan.

PRIDE-3 is expected to be completed on schedule.

5. PRIDE Planning

PRIDE-3

A work plan is in place for PRIDE-3. This will include a revised edition of the RIPE-81 document. We plan to present a draft copy of the PRIDE guide at the forthcoming RIPE meeting and the 'Regional Techs' meeting.

The first guide will concentrate on the use of the tools and how to diagnose problems using the tools including a full tutorial on how to submit and maintain Routing Registry information.

6. Appendices

The list of appendices are a regular part of the monthly reports. They are expected to grow as the project evolves.

Appendix A — PRIDE documents

This contains the list of PRIDE documents.

The PRIDE project proposal:

`ftp.ripe.net:pride/docs/pride-prop.{ps,txt}`

Appendix B — Related documents

This contains a list of all PRIDE related documents.

RIPE Routing Registry format - RIPE 81

`ftp.ripe.net:ripe/docs/ripe-docs/ripe-081.ps`

SWIP proposal

`merit.edu:/pub/nsfnet/swip/swip.txt`

Appendix C — PRIDE tools

PRIDE-1 (First release of PRIDE-tools 1)

`ftp.ripe.net:pride/tools/pride-tools-1.tar.Z`

NOTE: The pride ftp directory is in the process of being re-arranged to include directories for reports, related documents and work as well as the milestones themselves.

Appendix D — Routing Registry (RR) Status

State: December 1993

Status of European ASes in RR	# of ASes	Percentage
In RIPE database with Routing Policy information	86	71 %
In RIPE database without Routing Policy information	17	14 %
Not in RIPE database but in NIC/related databases	15	12 %
Unknown in any database	3	3 %
Total	121	

Table 2: Breakdown of known European routed ASes

Appendix E — Example usage of Interactive menu

```
% telnet info.ripe.net 4711
Trying 192.87.45.1 ...
Connected to ns.ripe.net.
Escape character is '^]'
                 PRIDE Tools Server

     1 - prcheck
         This tool checks syntax and consistency of AS objects
         in RIPE-81 format. These objects describe routing
         policy and jointly form the RIPE Routing Registry.
         The server version can only check objects already in
         the database. If you install prcheck locally you can
         use it to check local objects (before submitting them)
         as well. You can also find out if your routing policy is
         consistent with those of your neighbors.

     2 - prtraceroute
         This tool combines the normal traceroute output with
         routing policy information from the RIPE Routing
         registry. The output clearly identifies routing problems.
         The server version can only trace routes from host
         ns.ripe.net.If you install prtraceroute locally you can
         also trace from your host.

     q - Quit

Enter Selection: 2

This server version will display a quite verbose
version of the prtraceroute output. The argument
to enter is a destination domain name or IP address.
The route from ns.ripe.net to the destination will
be displayed.

Enter destination host []: ns0.ja.net

doing prtraceroute -l -v ns0.ja.net

traceroute with AS and policy additions [Jan  4 14:02:47 UTC]

                from AS1104 ns.ripe.net (192.87.45.1)
                to   AS 786 ns0.ja.net (193.63.94.20)

 1 AS1104  hef-router.nikhef.nl          (192.87.45.80)     [I] 2 3 2 ms
 2 AS1103  Amsterdam1.router.surfnet.nl  (192.16.183.112)   [D1] 2 2 2 ms
 3 AS1103  Amsterdam2.router.surfnet.nl  (145.41.9.130)     [I] 5 3 4 ms
 4 AS2043  amsterdam4.empb.net           (193.172.4.17)     [E1] 6 7 5 ms
 5 AS2043  london1.empb.net              (193.172.4.5)      [I] 22 23 27 ms
 6 AS 786  int-gw.ulcc.ac.uk             (193.172.27.14)    [E1] 24 26 33 ms
 7 AS 786  ns0.ja.net                    (193.63.94.20)     [I] 45 24 56 ms

AS Path followed:  1104 1103 2043 786
```

```
AS1104 = NIKHEF-H
AS1103 = SURFnet IP
AS2043 = European Multiprotocol Backbone
AS 786 = The JANET IP Service

done.
Enter Selection: q
Goodbye
Connection closed by foreign host.
```