

Introduction

- Hello, Good Afternoon
- After the election, I hope you know who I am
 - For the one who slept up to now
 - I wrote my name on the slide anyway
- As the slide says, I will be presenting AS-STATS

an application to help you with finding who should you should peer with.

Joining LINX, an easy process ?

- Before I do, let's take a step back
- Is joining LINX easy ?
- YES, it is
- Linx staff are friendly and helpful
- The linx site has some tech. docs
- Members can see traffic immediately after joining thanks to the route servers

Joining LINX, not an easy process ?

- In truth, getting the full benefit of an IX requires some work
 - many mails to send, track, answer, ...
 - NOC to re-re-contact to get a no
 - Lots of sessions to setup, monitor, ...
- With so many members, does the route servers make new members lazy ?
- Are new members getting the full benefit of LINX ?
- Are they peering with everyone they should ?

Who will peer with you ?

- The first question new members ask themselves is.
 - "Who will peer with me ?
 - So .. WHO will peer with you ?

Who will peer with you ?

- Good news !
- Akamai, WILL most likely peer with you
- But who else ?

Who will peer with you ?

- Peering is a social activity
 - Knowing people helps
 - but you are new
 - you may not know anyone :(
 - being new is hard, intimidating
- Most others members are present for a long time already
 - Have the peer they want
 - They do not have to justify their presence anymore

Who will peer with you ?

- So who are the usual suspect ? The YES men.
 - Akamai, Patrick Gilmore,
 - Google, Steve Wilcox
- Present at most Linx meeting
- Speak with them, they are friendly
 - Well, Patrick is scary, but only at first
- The answer is : Everyone who can save on money on THEIR transit
- And never forget : peering DB is your friend

Who should you peer with ?

- The right question is
 - NOT, who will peer with you
 - BUT, who should YOU be you be peering with
- You should peer FIRST with
 - People who cost YOU money in transit
 - Networks you exchange lots of traffic with

How to find those « good » peers ?

- Who are those network ?
 - Traceroute, however, the traffic may not symmetrical
 - Still a good tool for a quick answer
- What else ? Are you sleeping already ?
 - Nope not AS-STATS, the title is a give-away
 - The LINX looking glass
- Netflow is the best peering coordinator tool
- SIDE NOTE:
 - I would be interested to hear if you would like new tools

What is NetFlow ?

- So, what is netflow ?
- READ RFC ..
 - The perfect, smartass, answer
 - Do you like reading RFCs ?

What is NetFlow ?

- No one like RFCs - but perhaps Adrian - wink :p
 - Read slide definition
- Not every packet routed matters
 - No need for a flood of UDP packets
 - Taking one packet every so often is enough

Where to use NetFlow ?

- You care about traffic leaving your network
 - need a full routing table for the ASN
 - this mean your edge
- Granularity does not matter much
 - the more you route
 - the less you need to sample

NetFlow collectors

- What can you do with that information ?

It need to be processed and stored - the role of the collector

- AS-STATS is my favorite
 - Is it the simplest application around
 - People seems to like PMACT and NSFEN as well
-
- It is so simple, I am sure someone can install it today

AS-STATS

- What is in AS-STATS
 - simple, small, easy to hack applications
 - in perl for the collector/cron
 - with a PHP web interface
 - Something you or your team are likely familiar with
- The netflow daemon
 - listen on UDP
 - Update the RRD files
- The cron program analyse them
- The PHP site provide the user interface

How as-stats look ? peers

- Sorry no demo, live demo never work
- This screenshot is a per ASN view
 - display peers ordered by traffic transferred
 - The colour let you see what link the traffic used to enter/leave
 - you can then click on graph to see longer graphs
- Show you clearly people you should peer with.
 - From My top 10 networks - 9 are peers
 - Do not underestimate the value of the "long tail"

How as-stats looks ? link

- AS-STATS can show you your link top speakers
 - Allow you to see who cost you money in transit
 - Detect source of abnormal increase on links

AS-STATS (configuration)

- If I done my job correctly, and you do not use netflow yet, you are sold
- How does one configure it ?
 - You need to list the netflow sources
 - the routers you will netflow from
 - the interface you have sampling configured for
 - to know which links the traffic comes from
- Netflow use the SNMP interface ID
 - arbitrary number for each interface
 - should be stable if you do not add new interface
 - OS upgrade may change it (unlikely)

AS-STATS (daemon)

- Simple program to run
 - does not need and should not be run by root
 - command line is about
 - where is the configuration file
 - where to store the RRD files
 - what sampling you are using on your routers
 - To provide you meaningful numbers

AS-STATS (daemon)

- It is Perl
- And like every perl program : It is an hack :D
 - You need to edit it
 - Just to change some paths
- What is `asstats_day.txt` ?
 - a hourly generate file by cron
 - contains the ASN you speak with ordered by data transferred

AS-STATS (cron)

- How do you generate that cron file
- the knownlink file defines the source names

AS-STATS (apache)

- No need to any fancy apache configuration
- However there is no built-in authentication
 - No login page, you will need to place
 - An ACL and/or
 - An .htaccess file

Example (Cisco) untested

- Here are some example of netflow configuration
 - This is ONE of the way to configure netflow on cisco
 - Cisco has different way depending on the model
 - GSR, 7600/6500, 7200, ...
 - have slightly different way to set the sampling
- Only the Juniper configuration was tested
- The links at the end slide will provide more information

Example (Cisco cont.) untested

- Here is the rest of the configuration
- If you wonder why it says : version 5
 - Cisco weirdness
 - Cisco like Juniper is sending v8 messages

Example (Juniper)

- The IPv6 line is to remind me to say :
 - Does AS-STATS support IPv6 ?
- ATM, AS-STATS only support netflow v8
 - IPv6 comes with version 9
 - So NO it does not :(
- To make things worse
 - Juniper can only export v8 netflow
 - v9 require a Multi-Service PIC
 - AND a software licence

Example (Juniper cont.)

- The juniper configuration is straight forward
 - First part: sampling parameters
 - Second part: Destination collector
- The max-packet-per-second
 - Protect the routing-engine CPU
 - You can kill/freeze your router with a low rate taking all your RE CPU
 - You will then need console access to fix it

More information

- Some other useful links
 - For those of you with cisco gear
- Before the questions a small parenthesis on PMACCT
 - use a BGP feed
 - know about transiting ASes
 - can tell you about the transiting ASes traffic
 - AS-STATS can not
- Any questions ?