NAME

sc_ally — scamper driver to run Ally on a list of candidate aliases.

SYNOPSIS

sc_ally [**-?D**] [**-a** *infile*] [**-o** *outfile*] [**-p** *port*] [**-U** *unix-socket*] [**-f** *fudge*] [**-i** *probe-wait*] [**-O** *options*] [**-q** *attempts*] [**-t** *logfile*] [**-w** *waittime*]

sc_ally [**-d** *dump-id*] [**-O** *options*] [*file ...*]

DESCRIPTION

The **sc_ally** utility provides the ability to connect to a running scamper(1) instance and have a set of IPv4 address sets tested for aliases using the Ally technique. For each address pair on a single line in the file, **sc_ally** establishes which probe methods (UDP, TCP-ack, ICMP-echo) solicit an incrementing IP-ID value, and then uses the Ally technique on pairs where a probe method is able to obtain an incrementing IP-ID for both addresses. **sc_ally** can also infer which IP addresses are aliases using the Mercator common source address technique as a byproduct of the UDP probing that **sc_ally** does. The output of **sc_ally** is written to a warts(5) file, which can then be processed to extract aliases. The options are as follows:

-? prints a list of command line options and a synopsis of each.

-D causes **sc_ally** to detach and become a daemon.

-a *infile*
specifies the name of the input file which consists of a sequence of IPv4 addresses, one candidate set per line.

-o *outfile*
specifies the name of the output file to be written. The output file will use the warts format.

-p *port*
specifies the port on the local host where scamper(1) is accepting control socket connections.

-U *unix-socket*
specifies the name of a unix domain socket where scamper(1) is accepting control socket connections.

-d *dump-id*
specifies the number identifying an analysis to conduct. The current choices for are 1-3, and are:
- **1:** dump aliases inferred using the Ally (IPID-based) technique.
- **2:** dump aliases inferred using the Mercator (common source address based) technique.
- **3:** dump aliases inferred using both Ally and Mercator techniques.

-f *fudge*
specifies the fudge factor to use when (1) inferring if IPIDs are assigned from a counter, and (2) inferring if two addresses share the same counter. A value of zero will cause ally to infer aliases if the IPIDs are in a monotonic sequence.

-i *probe-wait*
specifies the inter-probe gap for both ping and Ally measurements, in milliseconds. The default is 1000ms (1 second); the minimum is 200ms, and the maximum is 2000ms.

-O *options*
allows the behavior of **sc_ally** to be further tailored. The current choices for this option are:
- **nobs:** do not consider byte swapped IPID values when inferring if IPID values are assigned from a counter.

– **tc:** dump transitive closure when reporting aliases.

-q *attempts*
specifies the number of probes to use with Ally.

-t *logfile*
specifies the name of a file to log output from **sc_ally** generated at run time.

-w *waittime*
specifies the minimum length of time, in seconds, to wait between completing a measurement to a particular IP address and issuing the next.

EXAMPLES

Given a set of IPv4-address sets in a file named infile.txt:

192.0.2.1 192.0.32.10 192.0.31.60
192.0.2.2 192.0.31.8
192.0.2.3 192.0.30.64

and a `scamper`(1) daemon listening on port 31337, then these addresses can be tested for aliases using

sc_ally -a infile.txt -o outfile.warts -p 31337

To obtain a list of inferred alias pairs using the Ally technique from a `warts`(5) file:

sc_ally -d 1 outfile.warts

To obtain a list of inferred routers using a transitive closure of alias pairs inferred using the Ally and Mercator techniques:

sc_ally -d 3 -O tc outfile.warts

SEE ALSO

`scamper`(1), `sc_radargun`(1), `sc_wartsdump`(1), `sc_warts2text`(1),

N. Spring, R. Mahajan, and D. Wetherall, *Measuring ISP topologies with Rocketfuel*, Proc. ACM SIGCOMM 2002.

R. Govindan and H. Tangmunarunkit, *Heuristics for Internet Map Discovery*, Proc. IEEE INFOCOM 2000.

A. Bender, R. Sherwood, and N. Spring, *Fixing Ally's growing pains with velocity modeling*, Proc. ACM/SIGCOMM Internet Measurement Conference 2008.

AUTHORS

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