wrel

```
#!/bin/sh
#
# Create a gnuplot generated graph showing the distribution of the round-trip
# time (RTT) of a number of packets sent across a network link. Meant to be
# used for showing the reliability of a wireless link.
#
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if [ $# -lt 2 ]; then
    echo "Usage: wrel <host> <file.png> [count] [topology] [packetsize]" >&2
    echo "  count defaults to 1000" >&2
    echo "  topology is the subtitle of the graph, and defaults to" >&2
    echo "  \$host <--> \$thishost" >&2
    echo "  NOTE: If run as root, packet interval = 0.1s" &2
    exit 1
fi

function pinggauge()
{
    # Note: in Perl, the expression 'STRING x N' repeats STRING N times
    perl -we '
        my ($host,$count,$interval,$packetsize) = @ARGV;
        open PING, "ping -c $count $interval -s $packetsize $host|";
        while( <PING> ) {
            next unless m/ icmp_seq=/;
            my($seq,$rtt) = m/ icmp_seq=(\d+) .* time=([\d.]+)/;
            my($chars_done) = "#" x (($seq/$count)*50);
            my($chars_todo) = "-" x (50-length($chars_done));
            printf STDERR "\r%20s |%s%s|", $host, $chars_done, $chars_todo;
            print int($rtt*10)/10.0 . "\n";
        }
        printf STDERR "\r%20s |%s|\n", $host, "#" x 50;
        close PING;
        ' "$1" "$2" "$3" "$4"           # pass function args to perl args
}

host=$1; shift
file=$1; shift
count=${1:-1000}; shift
topology=$1; shift
packetsize=${1:-56}; shift      # ping(1) default size
interval=""
if [ `whoami` = 'root' ]; then
    interval="-i0.1"
fi
if [ -z "$topology" ]; then
    topology="`hostname` <--> $host"
fi

tmpfile=`mktemp ${TMPDIR:-/tmp}/wrel.XXXXXX`
```

```
pinggauge $host $count "$interval" $packetsize | \
    sort -n | uniq -c | awk '{print $2,$1}' > "$tmpfile"

gnuplot > $file <<EOF
set terminal png transparent
set title "RTT Distribution of $count pings with $packetsize byte payload\n
$topology"
set xlabel "RTT (msecs.)"
set ylabel "Frequency"
plot "$tmpfile" notitle with impulses
EOF

rm -f $tmpfile
```