remote uptime

https://github.com/alexmyczko/ruptime

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History

Ground truth, having the overview over the hosts

The r-commands were written in 1982, allowing users and system administrators to view information about their hosts on a single network (UDP/513 using broadcast).

The rwho and rwhod packages in Debian and their bugs get resolved.

https://en.wikipedia.org/wiki/Berkeley_r-commands

Purpose

Why this and not one the many already available tools?

Having hosts in multiple networks and data being declared sensitive, ruptime was written in client/server architecture, encrypting the traffic.

The interface is CLI, allowing instant queries/updates and automation, extension. A web interface is available.

It’s portable as in, runs on Linux, macOS and FreeBSD, easy to port to JUNOS, and should also be possible for embedded like ESP32.

Functions

What can it do?

ruptime - remote uptime, show status of remote machines

runame - remote uname and OS/release

rsw - remote software overview (package managers / installed pkgs)

rhw - remote hardware

rload - remote load (cpu, mem, gpu, mem)

rbench - remote benchmark (single cpu, memory)

rboot - remote bootable query

rnet - remote network connectivity

rdisk - remote storage information (devices with sizes)

rac - remote accounting (screen time)

rwho - remote who

Configuration

Almost zero config

/etc/ruptime/ruptime.conf

```
SERVER=129.132.127.87
PORT=1984
HOSTNAMECMD=‘hostname -f’
```

/etc/ruptime/ruptime.key

symmetric key for content encryption (it’s public to all users)

Alternativily the defaults command can be used for configuration on Linux or macOS

Examples I

Some commands that are useful for user and administrator

Getting an overview of your hosts:

```
runame | awk ‘{i[$NF]++} END { for (for n in i) print i[n] “ “ n} | sort -nr
```

Find hosts that are least used by CPU:

```
rload | sort -k2n
```

List all hosts sorted by network connectivity speed:

```
rnet | sort -k3nr
```

Combined ruptime + rload output:

```
join <(ruptime) <(rload) | column -t
```

Examples II

Some commands that are useful for user and administrator

Run something really fast on all hosts, online, limited to a type.

Find out the command yourself using the join of runame and ruptime, here’s one to run on all Ubuntu 22.04 machines:

```
runame | grep jammy | awk ‘{print $1}’ | parallel -j0 ‘ssh root@{} “something”’
```

Current state of code

What is implemented and what not

ruptime is implemented same as original ruptime functionality wise (original code is C, this one is shell), with the following details:

- hostname is FQDN
- down, without downtime
- can fully replace rwho/rwhod/ruptime

Future features

What is planned

Logging on ruptimed

Debian package / brew receipe

ACL

Web interface

Histograms (exercise for you)

Backend xml/yml/pl instead of ascii/csv

openssl (symmetric key) or gnupg (asymmetric public/private key)

More data like: rgps, rloc, raccess, rtemp, rpower, rinstall/rupdate, alerting API, push/pull modes, server redundancy, load spreading client side, signal handling (trap), maybe iselect TUI

Questions?

Ask now or never