


Essential Information

pScheduler and this cheat sheet are a work in progress.

Guide to Symbols

-  Something in development or used for development and debug purposes
- Required argument or parameter

Basic Command Structure

All pScheduler commands follow the same format:

```
pscheduler COMMAND [ ARGUMENTS ]
```

An alias, `psc` is provided for convenience:

```
psc COMMAND [ ARGUMENTS ]
```

Argument Types

- duration* An ISO 8601 duration (e.g., `PT1H30M` or `P3D`). Months and years are not supported.
- host* The DNS name or IP address of a host
- number* A number, usually positive.
- timesta* An ISO 8601 timestamp (e.g.,
mp `2016-05-04T12:34:56-04:00`)

pScheduler Commands

task

Tells pScheduler to set up a task

Synopsis:

```
psc task TASK-OPTIONS TEST-TYPE TEST-OPTIONS
```

General TASK-OPTIONS:

- `--export` - Export JSON for the task to the standard output and don't submit it for scheduling.
- `--format format` - Output format for results. Valid formats are `text`, `html`, `json` and `none`. Default is `text`.
- `--import file` - Import JSON for the task from *file*.
- `--quiet` - Display nothing but results and errors.
- `--reference json` - Include the arbitrary blob of JSON *json* for the submitter's reference.
- `--tool tool` - Force the tool *tool* to be used for the test. Repeat to allow a list of tools, preferred in the order specified.
- `--url` - Print the URL for the task and exit.

Scheduling TASK-OPTIONS:

task (cont)

- `--max-runs cardinal` - Repeat the task up to the specified number of times. Requires `--repeat`.
- `--randslip float` - Randomize the start time by this fraction of the allowed slip. Must be in `[0.0..1.0]`.
- `--repeat duration` - Amount of time between runs.
- `--slip duration` - Allow the start of any run to slip by the specified amount of time.
- `--start timestamp` - When the first run of the task should start.
- `--until timestamp` - Allow repeats to continue until the specified time. Requires `--repeat`.

watch


Synopsis:

```
psc watch URL
```

The `watch` command shows the results for runs of a task, identified by a URL, as they happen

Tests

latency - One-Way Network Traversal Time

 *This test is in development.*

rit - Round Trip Time Between Hosts

- `--count n` - How many times the round-trip time should be tested
- `--deadline duration` - Deadline for all measurements to finish
- `--dest host` - The destination host for the test
- `--flowlabel number` - The flow label to be used on outgoing packets
- `--[no-]hostnames` - [Dis]able resolution of host names from IPs. Default is to resolve.
- `--interval duration` - Time to wait between packets sent
- `--length number` - Set the size of outgoing packets
- `--source host` - Source address or interface
- `--timeout duration` - How long to wait for each packet to return
- `--tos number` - Set the IP type of service on outgoing packets
- `--ttl number` - Set the time to live on outgoing packets



throughput - Available Bandwidth Between Hosts

🔧 This test is in development.

trace - Path Between Hosts

--algorithm - Use a specific algorithm for the trace. Valid value is `paris-traceroute`.

--[no-]as - [Dis]able lookup of autonomous system numbers and owner information.

--dest-port *number* - Port where packets will be sent when the probe type is `udp` or `tcp`.

--dest *host* - The far end of the trace

--first-ttl *number* - Time to live on the first packet sent

--[no-]fragment - [Dis]able fragmentation

--hops *number* - Maximum number of hops (largest TTL)

--[no-]hostnames - [Dis]able resolution of host names from IPs.

Default is to resolve.

--ip-version *number* - Set the version of the IP protocol to be used. Valid values are 4 and 6.

--length *number* - Size of outgoing packets

--probe-type *t* - Type of probes sent. Valid values are `icmp`, `udp` and `tcp`. Default is `udp`.

--queries *number* - Number of queries per hop. Default is 1.

--sendwait *duration* - Amount of time to wait between probes

--source *host* - Source address or host name

--tos *number* - IP type of service on outgoing packets

--wait *duration* - Wait time for probes to be returned

idle - Do Nothing Useful

--duration *duration* - How long the test should do nothing

--host **host* - The host which should be idle

--parting-comment *text* - Text to be logged at the end of the idle period

--starting-comment *text* - Text to be logged at the start of the idle period

🔧 This test is intended for use in development and troubleshooting pScheduler.

simplestream - TCP Stream Between Hosts

--dest *host* - Receiving end of the stream

--dawdle *duration* - Maximum amount of time spent delaying before sending the test material

--fail *probability* - Probability that the test will be forced to fail

--test-material *text* - String to be sent. Defaults to a message containing a timestamp.

--timeout *duration* - How long the receiving end should wait for the sending end before giving up

🔧 This test is intended for use in development and troubleshooting pScheduler.

