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How to use options

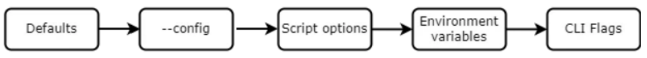
k6 provides multiple places to set options:

- In CLI flags
- In environment variables
- In the script `options` object
- In a configuration file

Most likely, your use case will determine where you want to set the particular options for a particular test. You can also access option values as your test runs.

Order of precedence

Command-line flags override all other options.



You can set options in multiple places. If there are conflicts, k6 uses the option from the place with the highest *order of precedence.*

1. First, k6 uses the option's default value.
2. Next, k6 uses the options set in a configuration file via the `--config` flag.
3. Then, k6 uses the script value (if set).
4. After, k6 uses the environment variable (if set).
5. Finally, k6 takes the value from the CLI flag (if set).

That is, **command-line flags have the highest order of precedence**.

Where to set options

Sometimes, how you set options is a matter of personal preference. Other times, the context of your test dictates the most sensible place to put your options.

export const options = {
vus: 1,
duration: '1s',
cloud: {
projectID: 3704066
}

3

Options in the script to version control and keep tests tidy.

The script `options` object is generally the best place to put your options. This provides automatic version control, allows for easy reuse, and lets you modularize your script.

5

CLI flags to set options on the fly

When you want to run a quick test, command-line flags are convenient.

You can also use command-line flags to override files in your script (as determined by the order of precedence). For example, if your script file sets the test duration at 60 seconds, you could use a CLI flag to run a one-time shorter test. With a flag like `--duration 30s`, the test would be half as long but otherwise identical.

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Environment variables to set options from your build chain

For example, you could derive the option from a variable in your Docker container definition, CI UI, or vault—wherever you declare environment variables.

The block hostnames option is an example of an option that works well with environment variables.

Examples of setting options

The following JS snippets show some examples of how you can set options.

Set options in the script

example.js

```javascript
import http from 'k6/http';

export const options = {
  hosts: { 'test.k6.io': '1.2.3.4' },
  stages: [
    { duration: '1m', target: 10 },
    { duration: '1m', target: 20 },
    { duration: '1m', target: 0 },
  ],
  thresholds: { http_req_duration: ['avg<100', 'p(95)<200'] },
  noConnectionReuse: true,
  userAgent: 'MyK6UserAgentString/1.0',
};
```

```
export default function () {
  http.get('http://test.k6.io/');
}
```

Set options with environment variables

You can also set the options from the previous example through environment variables and command-line flags:

Bash | Windows: CMD | Windows: PowerShell

```
$ K6_NO_CONNECTION_REUSE=true K6_USER_AGENT="MyK6UserAgentString/1.0" k6 run script.js

$ k6 run --no-connection-reuse --user-agent "MyK6UserAgentString/1.0" script.js
```

Set options from k6 variables

With the `--env` flag, you can use the CLI to define k6 variables. Then, you can use the variable to dynamically define an option's value in the script file.

For example, you could define a variable for your user agent like this:

```
k6 run script.js --env MY_USER_AGENT="hello"
```

Then, your script could then set the `userAgent` option based on the variable's value. This allows for quick configuration.

script.js

```
import http from 'k6/http';

export const options = {
  userAgent: __ENV.MY_USER_AGENT,
};

export default function () {
  http.get('http://test.k6.io/');
}
```

Note: Though this method uses the `--env` flag, this is not the same as using an environment variable. For an explanation, refer to the environment variables document.

Set options with the --config flag

k6 includes a default configuration file that you can edit, or you can create a new file and then use a CLI flag to point to that file. If you use it, the options take the *second lowest order of precedence* (after defaults). If you set options anywhere else, they will override the `--config` flag options.

Use the `--config` flag to declare the file path to your options.

```
k6 run --config options.json script.js
```

This command would set test options according to the values in the `options.json` file.

options.json

```
{
  "hosts": {
    "test.k6.io": "1.2.3.4"
  },
  "stages": [
    {
      "duration": "1m",
      "target": 10
    },
    {
      "duration": "1m",
      "target": 30
    },
    {
      "duration": "1m",
      "target": 0
    }
  ],
  "thresholds": {
    "http_req_duration": ["avg<100", "p(95)<200"]
  },
  "noConnectionReuse": true,
  "userAgent": "MyK6UserAgentString/1.0"
}
```

For an alternative way to separate configuration from logic, you can use the `JSON.parse()` method in your script

For an alternative way to separate configuration from logic, you can use the `JSON.parse()` method in your script file:

```
// load test config, used to populate exported options object:
const testConfig = JSON.parse(open('./config/test.json'));
// combine the above with options set directly:
export const options = testConfig;
```

Get an option value from the script

The `k6/execution` API provides a test.options object. With `test.options`, you can access the consolidated and derived options of your script as the test runs.

A common use of this feature is to log the value of a tag, but there are many possibilities. For example, this script accesses the value of the test's current stage:

```
import exec from 'k6/execution';

export const options = {
  stages: [
    { duration: '5s', target: 100 },
    { duration: '5s', target: 50 },
  ],
};

export default function () {
  console.log(exec.test.options.scenarios.default.stages[0].target); // 100
}
```

PREVIOUS
Options

NEXT
Options reference