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morgan DT

1.10.0 • Public • Published 2 years ago

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morgan

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HTTP request logger middleware for node.js

> Named after **Dexter**, a show you should not watch until completion.

API

```
var morgan = require('morgan')
```

morgan(format, options)

Create a new morgan logger middleware function using the given `format` and `options`. The `format` argument may be a string of a predefined name (see below for the names), a string of a format string, or a function that will produce a log entry.

The `format` function will be called with three arguments `tokens`, `req`, and `res`, where `tokens` is an object with all defined tokens, `req` is the HTTP request and `res` is the HTTP response. The function is expected to return a string that will be the log line, or `undefined` / `null` to skip logging.

Using a predefined format string

```
morgan('tiny')
```

Using format string of predefined tokens

```
morgan(':method :url :status :res[content-length] - :response-
```

Using a custom format function

```
morgan(function (tokens, req, res) {
  return [
    tokens.method(req, res),
    tokens.url(req, res),
    tokens.status(req, res),
    tokens.res(req, res, 'content-length'), '-',
    tokens['response-time'](req, res), 'ms'
  ].join(' ')
})
```

Options

Morgan accepts these properties in the options object.

immediate

Write log line on request instead of response. This means that a requests will be logged even if the server crashes, *but data from the response (like the response code, content* *length, etc.) cannot be logged.*

skip

Function to determine if logging is skipped, defaults to `false`. This function will be called as `skip(req, res)`.

```
// EXAMPLE: only log error responses
morgan('combined', {
  skip: function (req, res) { return res.statusCode < 400 }
})
```

stream

Output stream for writing log lines, defaults to `process.stdout`.

Predefined Formats

There are various pre-defined formats provided:

combined

Standard Apache combined log output.

```
:remote-addr - :remote-user [:date[clf]] ":method :url HTTP/:http-vers
```

common

Standard Apache common log output.

```
:remote-addr - :remote-user [:date[clf]] ":method :url HTTP/:http-vers
```

dev

Concise output colored by response status for development use. The `:status` token will be colored green for success codes, red for server error codes, yellow for client error codes, cyan for redirection codes, and uncolored for information codes.

```
:method :url :status :response-time ms - :res[content-length]
```

short

Shorter than default, also including response time.

```
:remote-addr :remote-user :method :url HTTP/:http-version :status :res
```

tiny

The minimal output.

```
:method :url :status :res[content-length] - :response-time ms
```

Tokens

Creating new tokens

To define a token, simply invoke `morgan.token()` with the name and a callback function. This callback function is expected to return a string value. The value returned is then available as ":type" in this case:

```
morgan.token('type', function (req, res) { return req.headers[
```

Calling `morgan.token()` using the same name as an existing token will overwrite that token definition.

The token function is expected to be called with the arguments `req` and `res` , representing the HTTP request and HTTP response. Additionally, the token can accept further arguments of it's choosing to customize behavior.

:date[format]

The current date and time in UTC. The available formats are:

- `clf` for the common log format (`"10/Oct/2000:13:55:36 +0000"`)
- `iso` for the common ISO 8601 date time format (`2000-10-10T13:55:36.000Z`)
- `web` for the common RFC 1123 date time format (`Tue, 10 Oct 2000 13:55:36 GMT`)

If no format is given, then the default is `web` .

:http-version

The HTTP version of the request.

:method

The HTTP method of the request.

:referrer

The Referrer header of the request. This will use the standard mis-spelled Referer header if exists, otherwise Referrer.

:remote-addr

The remote address of the request. This will use `req.ip` , otherwise the standard `req.connection.remoteAddress` value (socket address).

:remote-user

The user authenticated as part of Basic auth for the request.

:req[header]

The given `header` of the request. If the header is not present, the value will be displayed as `"-"` in the log.

:res[header]

The given `header` of the response. If the header is not present, the value will be displayed as `"-"` in the log.

:response-time[digits]

The time between the request coming into `morgan` and when the response headers are written, in milliseconds.

The `digits` argument is a number that specifies the number of digits to include on the number, defaulting to `3` , which provides microsecond precision.

:status

The status code of the response.

If the request/response cycle completes before a response was sent to the client (for example, the TCP socket closed prematurely by a client aborting the request), then the status will be empty (displayed as `"-"` in the log).

:total-time[digits]

The time between the request coming into `morgan` and when the response has finished being written out to the connection, in milliseconds.

The `digits` argument is a number that specifies the number of digits to include on the number, defaulting to `3`, which provides microsecond precision.

:url

The URL of the request. This will use `req.originalUrl` if exists, otherwise `req.url`.

:user-agent

The contents of the User-Agent header of the request.

morgan.compile(format)

Compile a format string into a `format` function for use by `morgan`. A format string is a string that represents a single log line and can utilize token syntax. Tokens are references by `:token-name`. If tokens accept arguments, they can be passed using `[]`, for example: `:token-name[pretty]` would pass the string `'pretty'` as an argument to the token `token-name`.

The function returned from `morgan.compile` takes three arguments `tokens`, `req`, and `res`, where `tokens` is object with all defined tokens, `req` is the HTTP request and `res` is the HTTP response. The function will return a string that will be the log line, or `undefined` / `null` to skip logging.

Normally formats are defined using `morgan.format(name, format)`, but for certain advanced uses, this compile function is directly available.

Examples

express/connect

Simple app that will log all request in the Apache combined format to STDOUT

```
var express = require('express')
var morgan = require('morgan')
var app = express()

app.use(morgan('combined'))

app.get('/', function (req, res) {
  res.send('hello, world!')
})
```

vanilla http server

Simple app that will log all request in the Apache combined format to STDOUT

```
var finalhandler = require('finalhandler')
var http = require('http')
var morgan = require('morgan')

// create "middleware"
var logger = morgan('combined')

http.createServer(function (req, res) {
  var done = finalhandler(req, res)
  logger(req, res, function (err) {
    if (err) return done(err)

    // respond to request
    res.setHeader('content-type', 'text/plain')
    res.end('hello, world!')
  })
})
```

write logs to a file

single file

Simple app that will log all requests in the Apache combined format to the file access.log.

```
var express = require('express')
var fs = require('fs')
var morgan = require('morgan')
var path = require('path')

var app = express()

// create a write stream (in append mode)
var accessLogStream = fs.createWriteStream(path.join(__dirname

// setup the logger
app.use(morgan('combined', { stream: accessLogStream }))

app.get('/', function (req, res) {
  res.send('hello, world!')
})
```

log file rotation

Simple app that will log all requests in the Apache combined format to one log file per day in the `log/` directory using the **rotating-file-stream module**.

```
var express = require('express')
var morgan = require('morgan')
var path = require('path')
var rfs = require('rotating-file-stream') // version 2.x

var app = express()

// create a rotating write stream
var accessLogStream = rfs.createStream('access.log', {
  interval: '1d', // rotate daily
  path: path.join(__dirname, 'log')
})

// setup the logger
app.use(morgan('combined', { stream: accessLogStream }))

app.get('/', function (req, res) {
  res.send('hello, world!')
})
```

split / dual logging

The `morgan` middleware can be used as many times as needed, enabling combinations like:

- Log entry on request and one on response
- Log all requests to file, but errors to console
- ... and more!

Sample app that will log all requests to a file using Apache format, but error responses are logged to the console:

```
var express = require('express')
var fs = require('fs')
var morgan = require('morgan')
var path = require('path')

var app = express()

// log only 4xx and 5xx responses to console
app.use(morgan('dev', {
  skip: function (req, res) { return res.statusCode < 400 }
}))
```

```
// log all requests to access.log
app.use(morgan('common', {
  stream: fs.createWriteStream(path.join(__dirname, 'access.lo
}))

app.get('/', function (req, res) {
  res.send('hello, world!')
})
```

use custom token formats

Sample app that will use custom token formats. This adds an ID to all requests and displays it using the `:id` token.

```
var express = require('express')
var morgan = require('morgan')
var uuid = require('node-uuid')

morgan.token('id', function getId (req) {
  return req.id
})

var app = express()

app.use(assignId)
app.use(morgan(':id :method :url :response-time'))

app.get('/', function (req, res) {
  res.send('hello, world!')
})

function assignId (req, res, next) {
  req.id = uuid.v4()
```

```
    next()
  }
```

License

MIT

Keywords

express http logger middleware

Install

```
> npm i morgan
```

Repository

github.com/expressjs/morgan

Homepage

github.com/expressjs/morgan#readme

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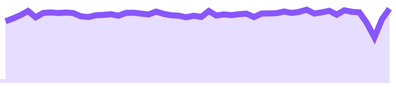

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