

# Beyond string-based logging

Structured-logging with Serilog



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```
log.info("Home page for customer %s loaded in %d ms", customerName, duration)
```

```
2012-12-12 11:51:11,332 [main] INFO: App is starting
2012-12-12 11:56:19,643 [Cart] INFO: Customer john@doe.com added 5 items to the cart
2012-12-12 11:56:19,902 [Home] INFO: Home page for customer john@doe.com loaded in 3 ms
2012-12-12 11:57:32,042 [Cart] INFO: Customer john@doe.com added 1 items to the cart
2012-12-12 11:58:17,902 [Home] INFO: Home page for customer paul.smith@gmail.com loaded in 1 ms
2012-12-12 11:59:13,631 [Cart] INFO: Customer paul.smith@gmail.com added 1 items to the cart
2012-12-12 11:59:43,902 [Home] INFO: Home page for customer paul.smith@gmail.com loaded in 4 ms
```

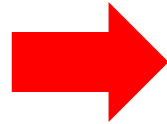
```
log.info("Home page for customer %s loaded in %d ms", customerName, duration)
```

```
2012-12-12 11:51:11,332 [main] INFO: App is starting
2012-12-12 11:56:19,643 [Cart] INFO: Customer john@doe.com added 5 items to the cart
2012-12-12 11:56:19,902 [Home] INFO: Home page for customer john@doe.com loaded in 3 ms
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2012-12-12 11:59:13,631 [Cart] INFO: Customer paul.smith@gmail.com added 1 items to the cart
2012-12-12 11:59:43,902 [Home] INFO: Home page for customer paul.smith@gmail.com loaded in 4 ms
```

*Can you tell me the customers for which  
the home page took >3 ms to load today,  
please ?*

## Text-based logging

Write log messages



## Structured-logging

Write log events

```
9,902 [Home] INFO: Home page for customer john@doe.com loaded in 3 ms
```

```
timestamp : "2012-12-12 11:56:19,902"  
level : "Information"  
module : "Home"  
msg : "Home page for customer %s loaded in %d ms"  
customerName : "john@doe.com"  
duration : "3"
```

```
log.Information("Processed {@SensorInput} in {Time} ms", sensorInput, time)
```

Position	
Lat	24.7
Long	132.2



32



```
log.Information("Processed {@SensorInput} in {Time} ms", sensorInput, time)
```

Position	
Lat	24.7
Long	132.2

32
----



`log.Information("Processed {@SensorInput} in {Time} ms", sensorInput, time)`

Capturing

MessageTemplate	Processed {@SensorInput} in {Time} ms			
Timestamp	2016-03-11 15:59:00			
SensorInput	Lat	24.7	Long	132.2
Time	32			

Position	
Lat	24.7
Long	132.2

32



`log.Information("Processed {@SensorInput} in {Time} ms", sensorInput, time)`

Capturing

MessageTemplate	Processed {@SensorInput} in {Time} ms			
Timestamp	2016-03-11 15:59:00			
SensorInput	Lat	24.7	Long	132.2
Time	32			

Rendering

Flat log file

`[2016-...] Processed Lat: 24.7, Long: 132.2 in 32 ms`

JSON file

`{ ...`

Document





StatusCode = 200 AND ElapsedMilliseconds &gt; 300



...



FIRST

to

NOW



01 Feb 2018 15:44:21.270	HTTP GET /Pandora.Server/permissions/v1/applications/77/membres/32506/roles responded 200 in 593ms
01 Feb 2018 15:36:13.723	HTTP GET /Pandora.Server/rh/v1/agents/9886 responded 200 in 1740ms
01 Feb 2018 14:21:09.132	HTTP GET /Pandora.Server/annuaire/v1/bureaux/116/affectations?active=true responded 200 in 532ms
01 Feb 2018 14:16:35.272	HTTP GET /Pandora.Server/annuaire/v1/affectations?email=[REDACTED]&active=true responded 200 in 412ms
01 Feb 2018 13:05:05.962	HTTP GET /Pandora.Server/rh/v1/agents/12283/affectations/latest responded 200 in 609ms

StatusCode = 200 AND ElapsedMilliseconds &gt; 300



FIRST

to

NOW



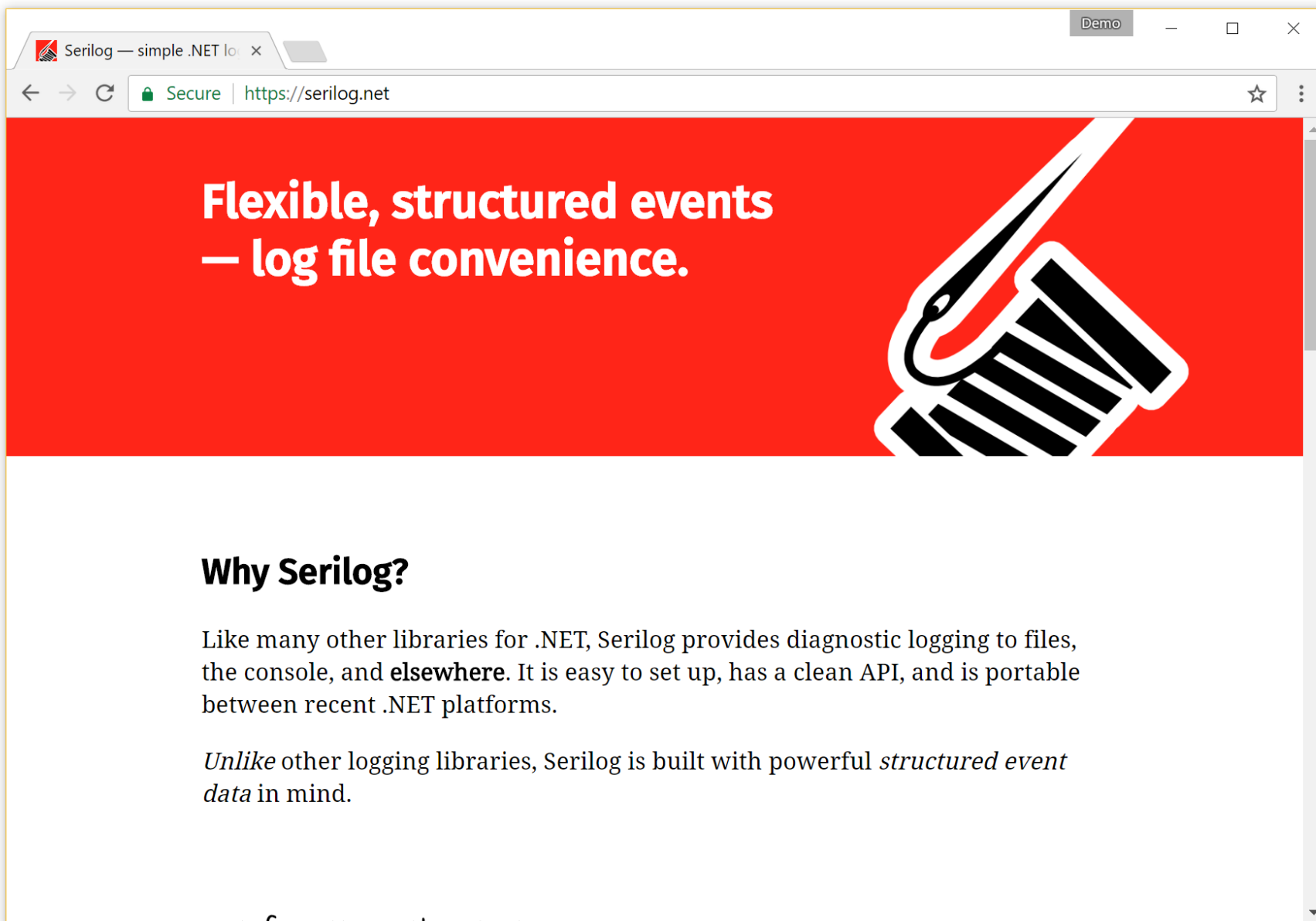
01 Feb 2018 15:44:21.270 HTTP GET /Pandora.Server/permissions/v1/applications/77/membres/32506/roles responded 200 in 593ms  
01 Feb 2018 15:36:13.723 HTTP GET /Pandora.Server/rh/v1/agents/9886 responded 200 in 1740ms  
01 Feb 2018 14:21:09.132 HTTP GET /Pandora.Server/annuaire/v1/bureaux/116/affectations?active=true responded 200 in 532ms  
01 Feb 2018 14:16:35.272 HTTP GET /Pandora.Server/annuaire/v1/affectations?email=[REDACTED]&active=true responded 200 in 412ms  
01 Feb 2018 13:05:05.962 HTTP GET /Pandora.Server/rh/v1/agents/12283/affectations/latest responded 200 in 609ms  
01 Feb 2018 13:04:23.728 ● HTTP GET /Pandora.Server/permissions/v1/membres/38368/applications?visible=true responded 200 in 708ms

Id ▾ Level (Information) ▾ Type (0x5FF28D57) ▾ Retain ▾ Send to app ▾ Raw JSON

✓✗	AppComponent	Server
✓✗	AppName	Pandora
✓✗	ElapsedMilliseconds	708
✓✗	Environment	Production
✓✗	HttpRequestId	1940061a-3bc7-49d7-9b1b-91ce6c19a6c5
✓✗	HttpRequestUrl	https://[REDACTED]-production.dmz-si.local/Pandora.Server/permissions/v1/membres/38368/applications?visible=true
✓✗	MachineName	BO-PROD1
✓✗	Method	GET
✓✗	PandoraApplication	Odyssee.API-Production
✓✗	PandoraClient	Pandora.Permissions.Client:1.8.0, .NET:v4.0.30319
✓✗	RawUrl	/Pandora.Server/permissions/v1/membres/38368/applications?visible=true
✓✗	SourceContext	SerilogWeb.Classic.ApplicationLifecycleModule
✓✗	StatusCode	200
✓✗	UserName	[REDACTED]\PROD-CdS-[REDACTED]seeAPI
✓✗	WebApiAction	GetByAffectation
✓✗	WebApiController	Applications
✓✗	WebApiRouteData	{idAffectation: "38368"}
✓✗	WebApiRouteTemplate	permissions/v1/membres/{idAffectation}/applications

01 Feb 2018 12:39:43.953 HTTP GET /Pandora.Server/annuaire/v1/bureaux/1122/chef responded 200 in 411ms

01 Feb 2018 12:39:43.390 HTTP GET /Pandora.Server/annuaire/v1/bureaux/287/parents responded 200 in 329ms



## About Serilog

OSS/Apache 2.0 License

.NET Framework & Core

4 years active development

~~2.5M+~~ package downloads

80+ contributors

6.7M+

100+ sinks

Made with ❤️

More info :

<https://serilog.net>

<https://github.com/serilog>

<https://messageTemplates.org/>

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