How we integrated the LTTng pipeline to monitor .NET Core applications on Linux
Criteo in numbers

• 8747 servers running Windows

• 4000+ front-end servers

• 205 billions HTTP request per day
Plumbing time
Windows Pipeline to Grafana

Windows

App

CLR

ETW

Companion Service

CLR events

ETW events

grafana

Trace Event
Windows Pipeline to Grafana
CentOS Pipeline to Grafana - 1/3

CentOS

App

CLR

LTTng

CTF events

Companion listener

grafana
How to integrate the LTTng pipeline in Criteo

CentOS

App

Companion listener

UST

Consumer d

Relay d

Companion listener

Debugging Profiling

Companion listener

Windows
CentOS Pipeline to Grafana - 2/3

CentOS

App

CLR

LTTng

CTF events

Companion listener

Parse CLR events

Trace Event

grafana
Decyphering CLR event produced as CTF traces

- Use TraceEvent library but… only file-based ctor

```csharp
44 45  public CtfTraceEventSource(string fileName)
46  {
```

- Implement LTTng live session support: https://github.com/Microsoft/perfview/pull/340
CentOS Pipeline to Grafana - 3/3

CentOS

App

CLR

LTTng

CTF events

Parse CLR events

Companion listener

Trace Event

grafana
$ lttng-relayd --live-port=net:0.0.0.0
Lessons we learned

• Linux rocks for Windows developers … with .NET Core!

• LTTng documentation… not very Windows developer friendly

• Ongoing effort on Microsoft TraceEvent Open Source Library