



# Using web technologies for trace visualization tools

Yonni CHEN KUANG PIAO

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École Polytechnique de Montréal  
Distributed Open Reliable Systems Analysis Lab

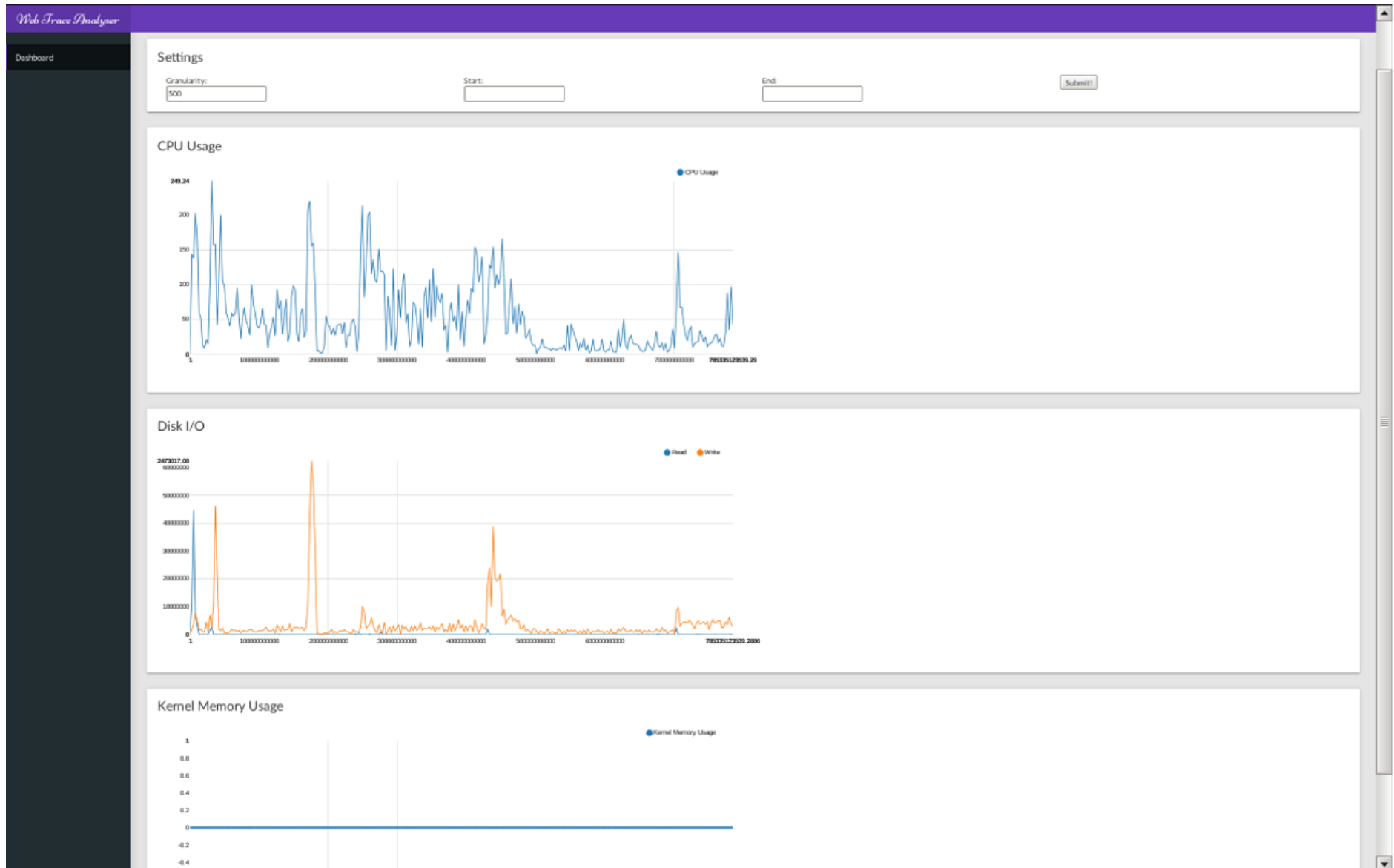
# Presentation plan

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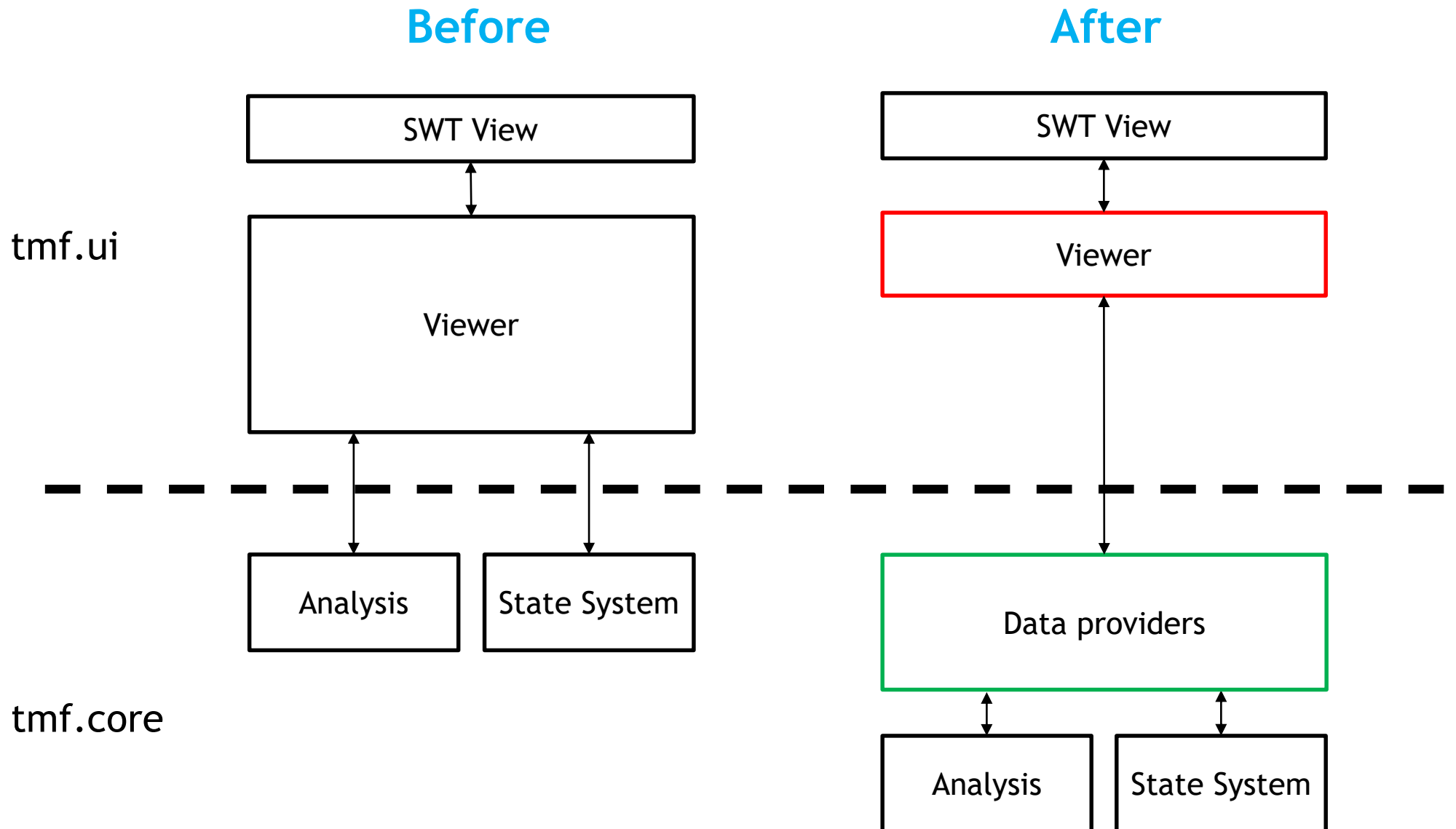
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# Previously



# Contribution to Trace Compass



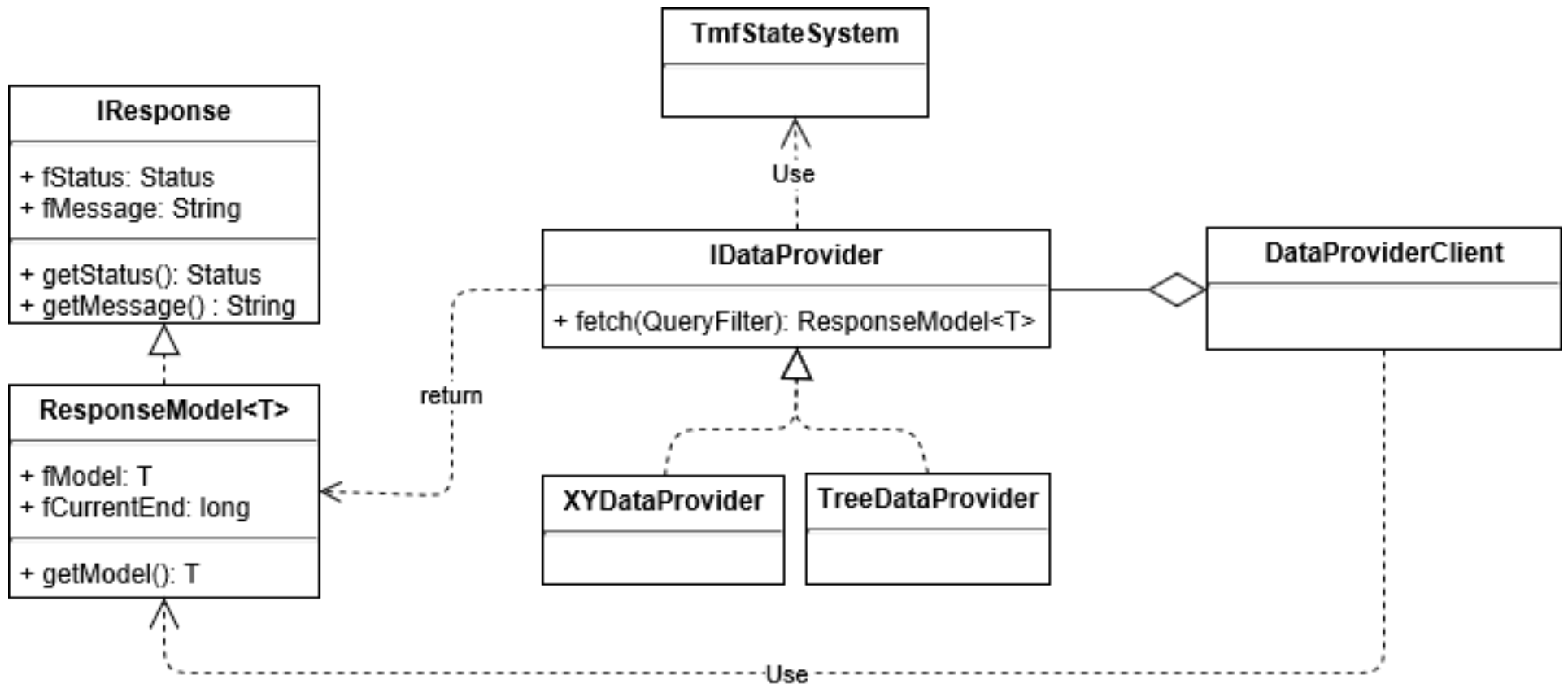
## Contribution to Trace Compass

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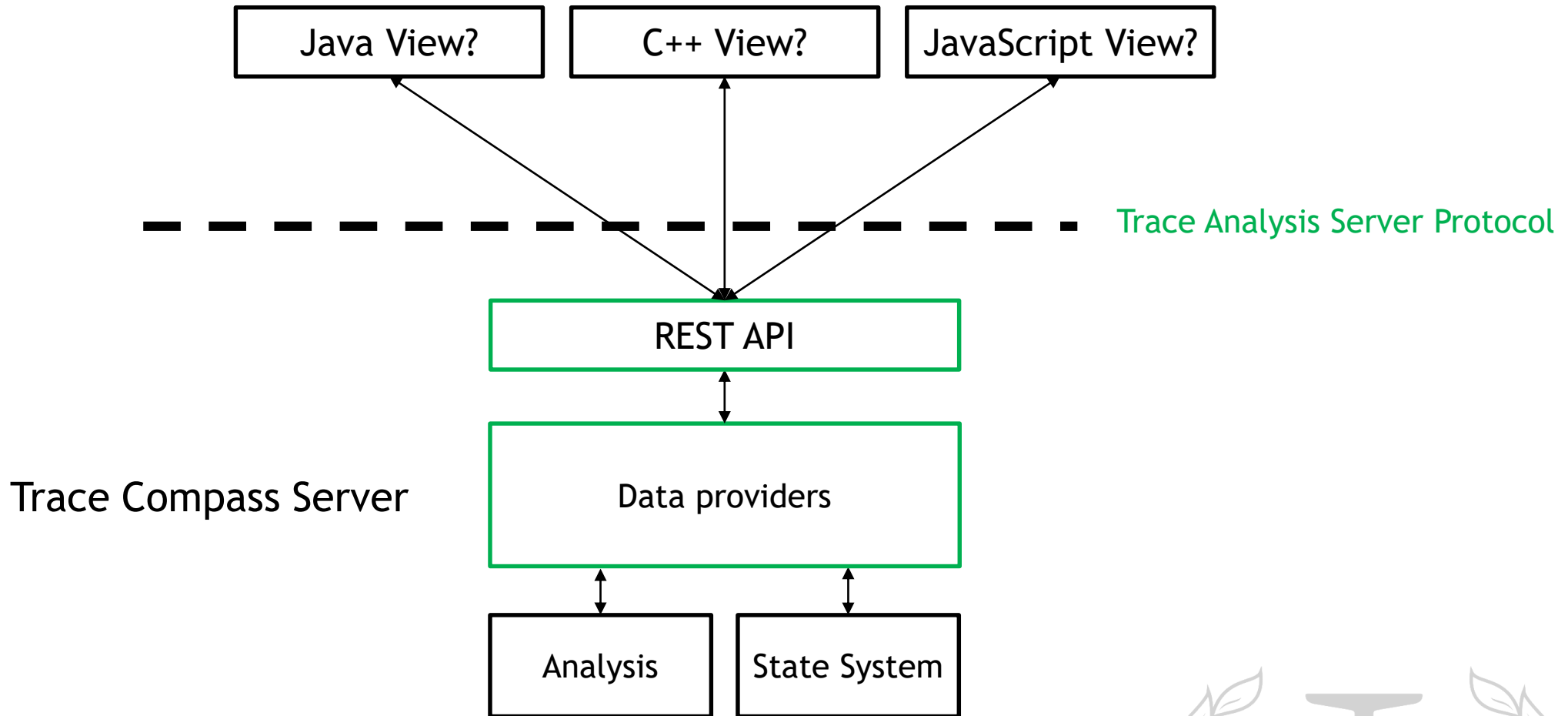
- There is less business logic in the UI layer
- Data providers return a “ready to render” model
  - Simple
  - Immutable
  - Serializable
- All XY views are refactored
  - Patches for Control Flow and Call stack are ready to merge
  - Patch for Event table is on Gerrit
- Easier to test



# Contribution to Trace Compass



# What are the possibilities now?



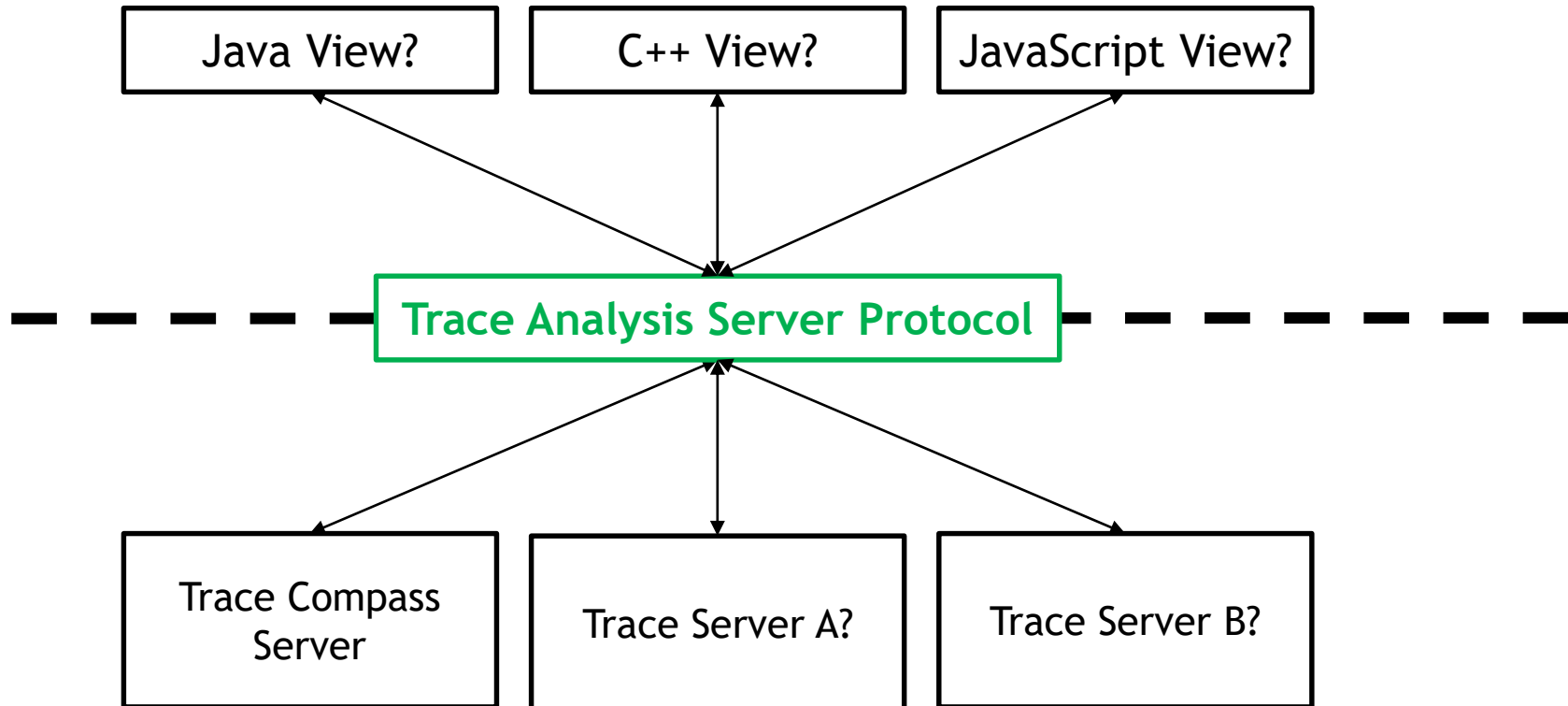
Trace Analysis Server Protocol

Trace Compass Server



# What are the possibilities now?

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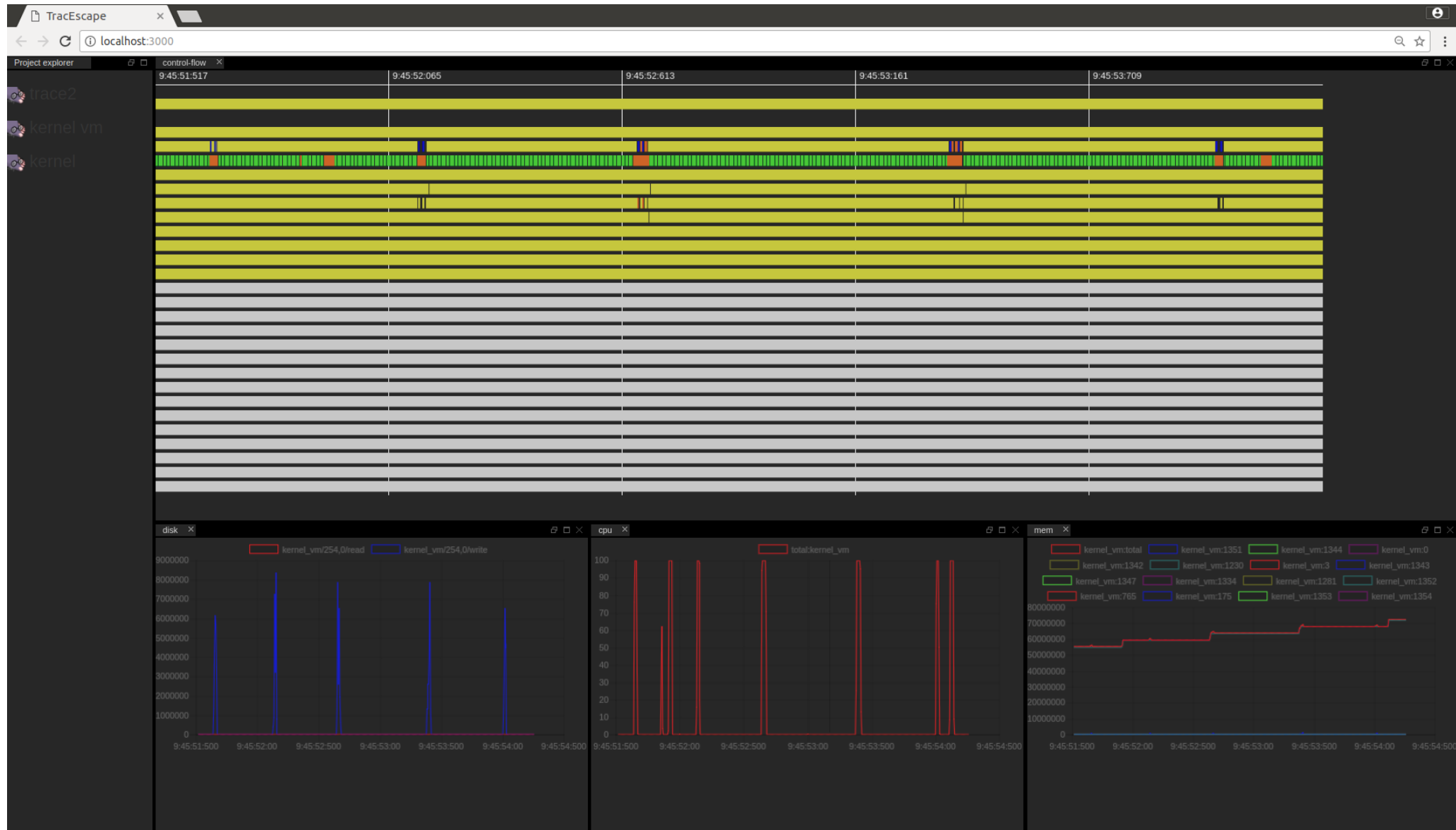
## What are the possibilities now? \_\_\_\_\_

Imagine if we have the possibility to...

- Switch to a C++ backend and keep Trace Compass Eclipse ?
- Visualize traces without Eclipse with command line ?
- Visualize traces which are not on your filesystem ?
- Visualize very large traces in Chromium ?
- Have a Theia plugin to visualize traces ?



# In practice : TracEscape



# In practice : TracEscape

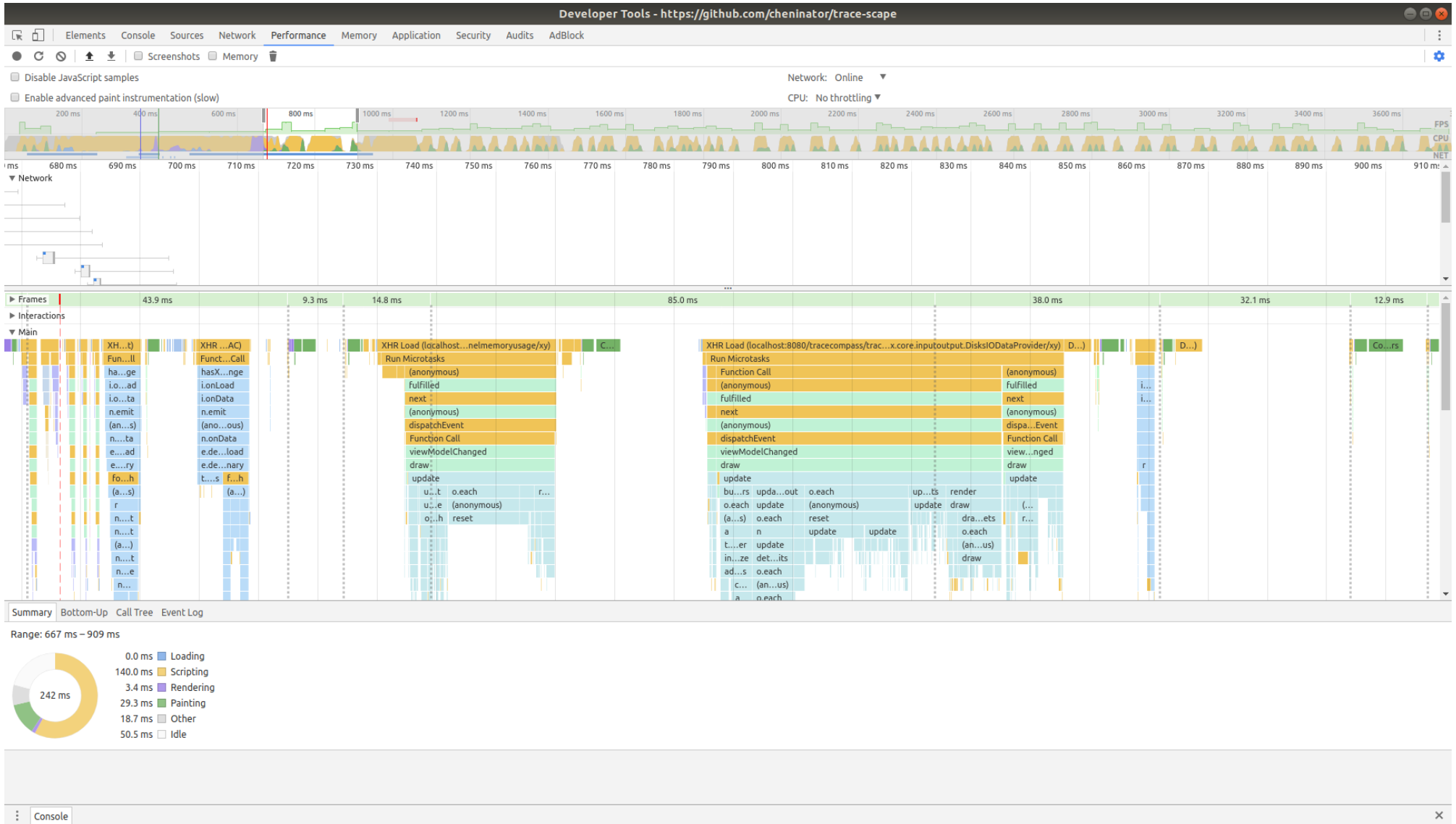
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## Data exchange

Trace size (in MB)	JSON	Protobuf	Difference
1.1	346 KB	85.8 KB	-75.2 %
57.8	87.8 KB	28.5 KB	-67,5 %
793	6.9 MB	1.9 MB	-72.5%
2200	17.3 MB	4.6 MB	-73.9%



# What's next?



## What's next?

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- ✓ We can trace TracEscape with Chromium Developer tools
- ✓ We can trace TraceCompass
- ✓ We defined a first draft of the Trace Analysis Server Protocol
  
- Performance benchmarks BEFORE/AFTER data providers
- Merge the two trace and see what's happening
- Automatic benchmarks
- Investigating gRPC vs HTTP REST



# Questions ?

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yonni.scholars@gmail.com



<https://github.com/cheninator/trace-scape>

