Context Switches

An Overview of the Context Switches in Unreal Insights.
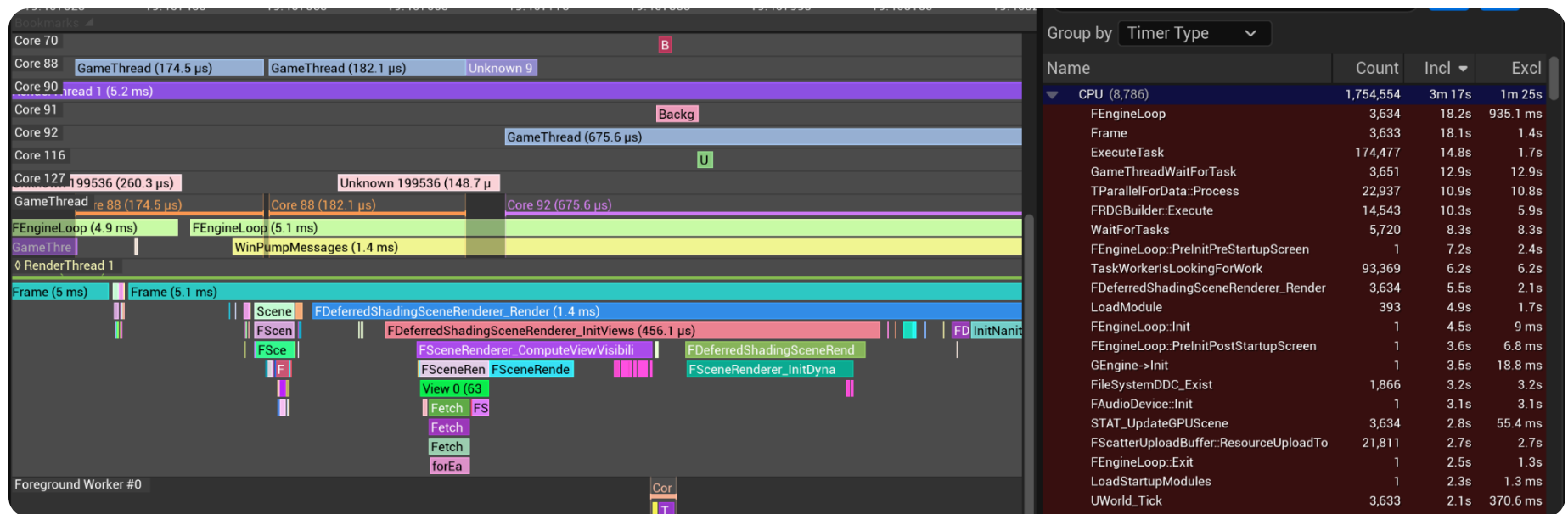
Context Switches

A **Context Switch** stores the state of a process or a thread, so it can be restored and resume execution at a later point. When attempting to profile Context Switches with a Launcher Build, You will want to ensure that you enable "Editor Symbols for Debugging" from the Options for your Engine Version.

Unreal Engine 5.1.0 Installation Options ✕

Starter Content	641.71 MB	☑
Templates and Feature Packs	3.53 GB	☑
Engine Source	284.27 MB	☑
Editor symbols for debugging	63.16 GB	☑

ⓘ   Context Switches are supported on Windows, XB1/XSX, and PS4/PS5 platforms.

1. You can enable the **ContextSwitch** trace channel in the command line:

```
1  -trace=default,ContextSwitch
2
```

  Copy full snippet

> ⚠️ On Windows, depending on your user permission settings your project runtime should be "run as administrator".

2. Open your trace file in Unreal Insights, If a session has the `ContextSwitch` trace event enabled, then the following information will be displayed in the Timing Insights view:

a) Additional CPU Core tracks. One for each CPU core in the recorded trace; shows timing events indicating what thread does execute on the respective CPU core. "Unknown" timing events indicate execution of threads from other applications / processes or from the OS.

b) Each CPU Thread has a header lane with core number events indicating on which core the respective thread is executing. The time range when a thread is executing and when it is preempted it is highlighted.
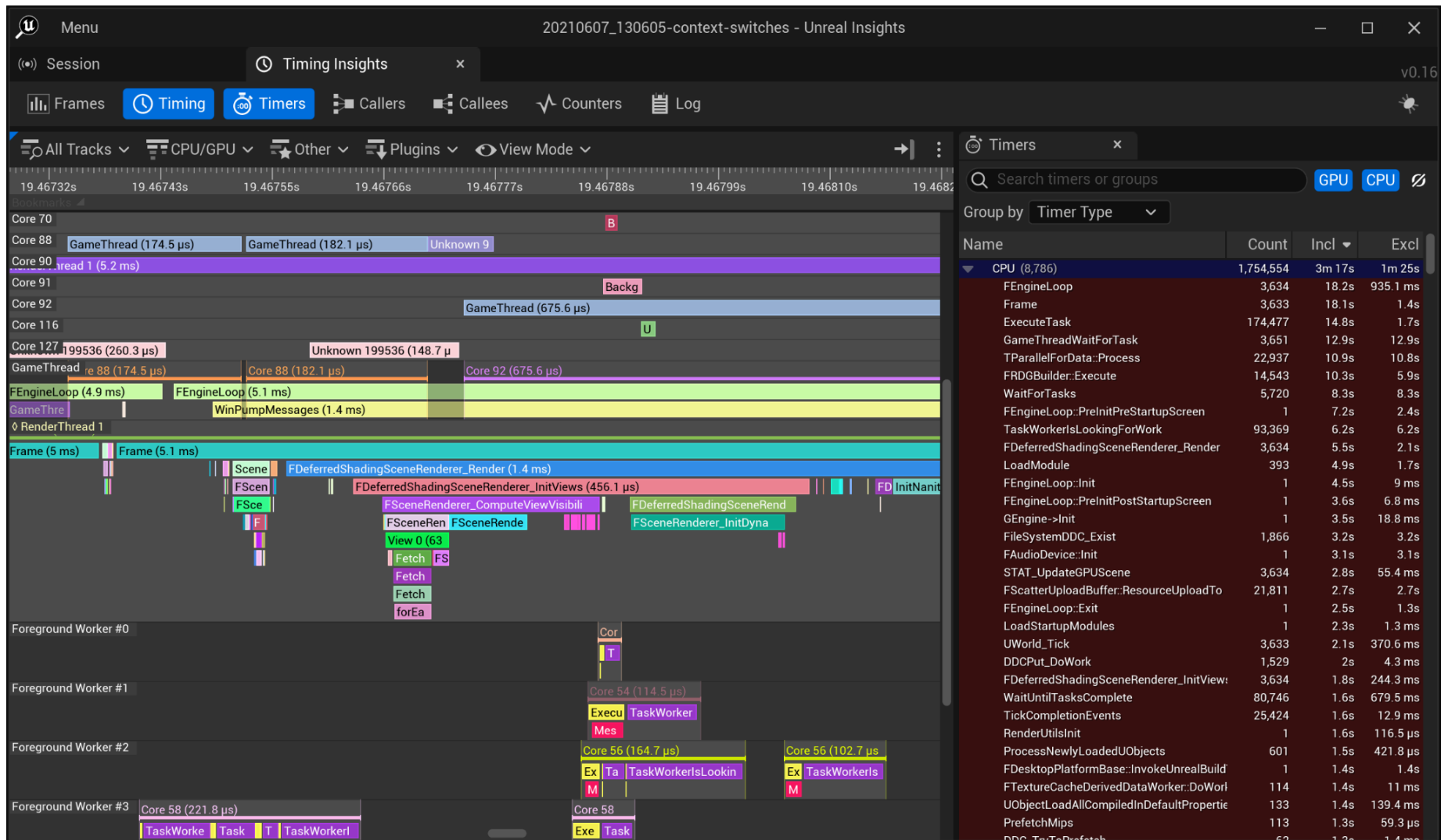
c) CPU/GPU drop down menu shows additional options re Context Switches:
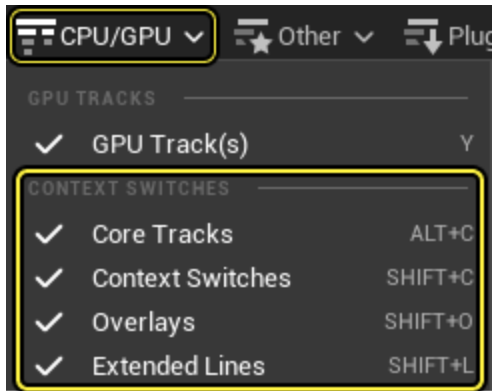
d). The context menu of a "Core" timing event in a Cpu Thread track shows additional options:
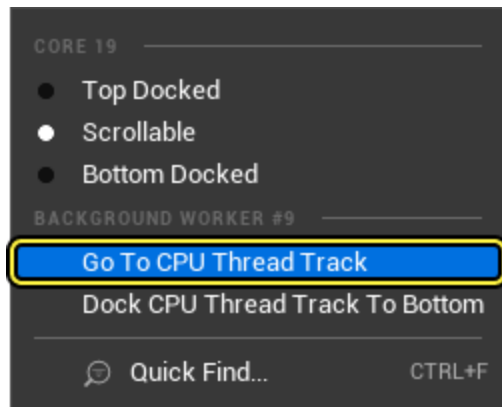
e). The context menu of a "Thread" timing event in a CPU Core track shows additional options:

GAMETHREAD

● Top Docked
○ Scrollable
● Bottom Docked

CPU THREAD

Group: GameThread
Thread Id: 2 (0x2)

CORE 19

Go To CPU Core Track   CTRL+TAB
Dock CPU Core Track To Top

TIMING EVENTS

≡ Filter Track...

⊙ Quick Find...   CTRL+F