Introduction

To put the numbers in this section into perspective, I'd like to mention two points:

- Every test here is done without any state behaviours. Having one or more state behaviours on any layer of any controller increases the runtime of all controllers on that avatar by 50%. This happens regardless which state behaviour you are using, and since there are state behaviours on the default Action & Gesture layer, this cost is probably incurred on every single avatar that gets used. Because this cost is always there, I have chosen not to include it in any of my testing, since my tests are supposed to be comparative, but do note that if you're looking at any of the raw numbers, you should probably add a 50% cost on top of it to get the actual numbers.
- Animator controllers don't scale linearly. I will touch on this later, but having two avatars with 100 layers is not as laggy as having a single avatar with 200 layers. It is useful to optimize controllers, since less frametime is still a win, but if you get weird numbers (like the fact that if it scaled linearly, having 40 avatars with 50 layers would take 68 ms, but in reality it takes 6.4 ms)

I will first go over single controller frame time performance, and then I will go over how this scales with having multiple controllers.

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