

JMH version: 1.32

VM version: JDK 11.0.8, OpenJDK 64-Bit Server VM, 11.0.8+10-LTS

Test host: MacBook Pro (2019) 2.3 GHz 8-Core Intel Core i9

	1 thread	4 threads	8 threads	16 threads
System.currentTimeMillis				

currentTime

This benchmark measures EnvironmentEdgeManager.currentTime(), which just calls System.currentTimeMillis().

median	56	111	131	151
p99	134	166	261	390

BoundedIncrementYieldAdvancingClock

currentTime

This clock uses an atomic to ensure the time returned does not jump backwards between the clock's notion of time and the system.

median	58	205	338	557
p99	136	348	850	1362

currentTimeAdvancing

This clock advances the time forward up to 1ms ahead of system time (1000 ticks forward) and then yields until the system time catches up.

Yielding is accomplished with Thread.sleep(1,0).

median	140	140	140	141
p99	221	1089	989	1132

BoundedIncrementSpinAdvancingClock

currentTime

This clock uses an atomic to ensure the time returned does not jump backwards between the clock's notion of time and the system.

median	58	209	331	566
p99	132	358	833	1376

currentTimeAdvancing

This clock advances the time forward up to 1ms ahead of system time (1000 ticks forward) and then spins until the system time catches up.

median	65	410	1196	3784
p99	102	273678336	206831616	159907840

IncrementAdvancingClock

currentTime

This clock uses an atomic to ensure the time returned does not jump backwards between the clock's notion of time and the system.

median	59	203	335	539
p99	134	342	871	1388

currentTimeAdvancing

This clock advances the time forward as needed, as many times as needed. System time may catch up, but this not guaranteed.

median	59	383	693	1960
p99	131	2188	12096	20992

SpinAdvancingClock

currentTime

This clock uses an atomic to ensure the time returned does not jump backwards between the clock's notion of time and the system.

median	60	204	325	479
p99	141	353	805	1358

currentTimeAdvancing

This clock waits for the system time to advance by spinning.

median	999424	999424	999424	999424
p99	1016832	1998848	1998848	5996544

YieldAdvancingClock

currentTime

This clock uses an atomic to ensure the time returned does not jump backwards between the clock's notion of time and the system.

median	60	205	330	506
p99	138	347	860	1362

currentTimeAdvancing

This clock waits for the system time to advance by yeielding the scheduler via Thread.sleep(1,0).

median	1280000	1296384	1310720	2236416
p99	1359872	44223037	85065728	126104371