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## JEP 410: Remove the Experimental AOT and JIT Compiler

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<i>Type</i>	Feature
<i>Scope</i>	JDK
<i>Status</i>	Closed / Delivered
<i>Release</i>	17
<i>Component</i>	hotspot / compiler
<i>Discussion</i>	hotspot dash compiler dash dev at openjdk dot java dot net
<i>Effort</i>	S
<i>Duration</i>	S
<i>Reviewed by</i>	Mikael Vidstedt
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### Summary

Remove the experimental Java-based ahead-of-time (AOT) and just-in-time (JIT) compiler. This compiler has seen little use since its introduction and the effort required to maintain it is significant. Retain the experimental Java-level JVM compiler interface (JVMCI) so that developers can continue to use externally-built versions of the compiler for JIT compilation.

### Motivation

Ahead-of-time compilation (the `jaotc` tool) was incorporated into JDK 9 as an experimental feature via [JEP 295](#). The `jaotc` tool uses the Graal compiler, which is itself written in Java, for AOT compilation.

The Graal compiler was made available as an experimental JIT compiler in JDK 10 via [JEP 317](#).

We have seen little use of these experimental features since they were introduced, and the effort required to maintain and enhance them is significant. These features were [not included](#) in the JDK 16 builds published by Oracle, and no one complained.

### Description

Remove three JDK modules:

- `jdk.aot` — the `jaotc` tool
- `jdk.internal.vm.compiler` — the Graal compiler
- `jdk.internal.vm.compiler.management` — Graal's MBean

Preserve these two Graal-related source files so that the JVMCI module (`jdk.internal.vm.ci`, [JEP 243](#)) continues to build:

- `src/jdk.internal.vm.compiler/share/classes/module-info.java`
- `src/jdk.internal.vm.compiler.management/share/classes/module-info.java`

Remove HotSpot code related to AOT compilation:

- `src/hotspot/share/aot` — dumps and loads AOT code
- Additional code guarded by `#if INCLUDE_AOT`

Finally, remove tests as well as code in makefiles related to Graal and AOT compilation.

### Alternatives

Developers who wish to use the Graal compiler for either AOT or JIT compilation can use [GraalVM](#).

### Risks and Assumptions

We assume that developers actively using these features have had sufficient notice of this removal.

