

Benefits of .NET Framework¹



The compiling process of the code is accomplished in two phases. First, the compiler passes over the source code, doing as much work as possible in producing IL. But to execute the code, the IL itself must be compiled into native CPU instructions at runtime requiring more memory to be allocated and requiring additional CPU time to do work.

This second stage that occurs at the runtime does hurt performance. However, Microsoft has done a lot of performance work to keep this additional overhead to a minimum.

Benefits:

- The application can be adjusted after the target machine.
 - The JIT compiler can determine the system CPU in order to adjust the code for it. An unmanaged code is usually compiled for the lowest common-denominator.
- Verification of the IL code.

Explaining terms:

- CPU – central process unit
- IL – stack-based language.
- JIT compiler – build in to the .NET

¹ The text above comes from: CLR via C# 3th Edition by Jeffrey Richter published by Microsoft Press.