**JS engines optimize JavaScript Code.**

A software that understands the human language can make compile to machine code called V8 engine. All the popular website has V8 software that convert the Java Script code to machine executable code. For instance, the Chrome V8 engine, V8 a multi -threated program written in C++, this C++ code has one code functionality, to convert the java script code that feeds into the horse machine code in the most efficient way. Basically, V8 engine are interpreters that works on the code line by line, and it employs a technique called just in time. V8 engine is at the core of node as wall.

Optimized machine code leads to the high efficiency, it is greater executed code efficiency. Optimizations, lining, all the function calls in the <hot paths> are replaced with the actual code from the function to improve performance. Hidden classes, the compiler generates something call hidden classes which maintain the pointers to every object property in a class structure, so that it need not be looked up every time. Inline caching, a cache of the object type that is most likely to be pass the function is maintained so that unnecessary lookups are avoided every time.

V8 THREADS,

The main thread > Fetch the code > Compile > Execute it > Compile thread > full Codegen >

Crankshaft

Garbage Collectors threads

Work Cite.

https://codeburst.io/javascript-compiler-optimization-techniques-only-for-experts-58d6f5f958ca