

HIGH PERFORMANCE SCALABLE WEB APPS IN C/C++

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KLone is an open source framework (GPL or commercial license) for developing Web Applications in C/C++.

The main advantage of KLone compared to its “competitors” is that middleware (intended as interpreter, interface, runtime support, etc.) is totally absent: dynamic pages written in C/C++ are translated and linked statically with the Web Server, hence forming a single, ROM-able, executable object¹. In such a manner, KLone gains a performance boost of a few orders of magnitude. This minimisation of resources makes KLone optimal not only for embedded systems, but also for large-scale environments, in which the throughput of connections needs to be maximised.

KLone also provides developers with an SDK which defines a simple mechanism for building dynamic pages, based on the classical paradigm of mixing static and dynamic code via inclusion directives similar to other scripting languages: `<%...%>`. A set of primitives for I/O and application state handling is provided, as well as a set of utilities for debugging, logging, memory, string and configuration management, all offered by the integrated LibU library.

In the following article, KLone’s architecture, the interaction between its components and the steps involved in the executable generation process are illustrated. In conclusion, KLone’s main potential and objectives for the future are outlined, putting particular emphasis on its aim of bringing the Web closer to man by molding highly efficient services into embedded and distributed systems: the Web in a nutshell.

¹size from 100-120 KB, depending on architecture.