

# The C++98 Utility Library

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Before C++11, the standard C++ library lacked support for smart pointers with shared semantics, and did not provide a standard API to create threads, mutexes and other synchronization primitives.

Ice provides its own implementation of such utility-classes for the Ice C++98 mapping in the `IceUtil` namespace. These classes are visible only when using the C++98 mapping.

## Topics

- [Threads and Concurrency with C++](#)
- [The C++ Handle Template](#)
- [The C++ Handle Template Adaptors](#)
- [The C++ ScopedArray Template](#)
- [The C++ Shared and SimpleShared Classes](#)
- [The C++ Time Class](#)
- [The C++ Timer and TimerTask Classes](#)

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