

# All Atomic Operations

This lesson lists all the useful atomic operations which are quite handy while working with concurrency in C++.

To get the full picture, here is a list of all atomic operations depending on the atomic type.

Method	<code>atomic_flag</code>	<code>atomic&lt;bool&gt;</code>	<code>atomic&lt;T*&gt;</code>	<code>atomic&lt;integral&gt;</code>	<code>atomic&lt;user defined&gt;</code>
<code>test_and_set</code>	yes	no	no	no	no
<code>clear</code>	yes	no	no	no	no
<code>is_lock_free</code>	yes	no	no	no	no
<code>load</code>	no	yes	yes	yes	yes
<code>store</code>	no	yes	yes	yes	yes
<code>exchange</code>	no	yes	yes	yes	yes
<code>compare_exchange_strong</code> <code>compare_exchange_weak</code>	no	yes	yes	yes	yes

fetch_ad d, += fetch_su b, -=  fetch_or ,  = fetch_an d, &= fetch_xo r, ^=  ++, --	no     no    no	no     no    no	yes     no    yes	yes     yes    yes	no     no    no
--	--	--	--	---	--