C++0xCompilerSupport

The following table lists C++0x features and their support in popular compilers.

						Status Of C++ 0x Language Features in Compilers					
C++ 0x FEATURE	PAPER(S)	HPaCC	EDG eccp	GCC	Intel C++	MSVC	IBM XLC++	Sun/Oracle C++	Embarcadero C++ Builder	Digital Mars C++	Clang
`alignas`	N2341			4.8							3.0
`alignof`	N2341			4.5					Yes		2.9
Atomic operations	N2427			4.4	13.0	11.0					3.1
`auto`	v0.9: N1984, v1.0: N2546		4.1(v0.9)	4.4(v1.0)	11.0 (v0.9)	10.0(v0.9)	11.1 (V1.0)				Yes
C99 preprocessor	N1653			4.3	11.1		10.1	5.9		Yes	Yes
<ac:structured-macro ac:name="unmigrated-wiki-markup" ac:schema-version="1" ac:macro-id="90c0c9ab-e64f-41b7-8e79-841482edeb27" ><ac:plain-text-body><![CDATA[	*Concepts [removed]*	[N2617	http://www.open-std.org/jtc1/sc22/wg21/docs/papers/2008/n2617.pdf]			ConceptGcc	]]></ac:plain-text-body></ac:structured-macro>				
`constexpr`	N2235			4.6	13.0		12.1				3.1
`decltype`	v1.0: N2343, v1.1: N3276		4.1(v1.0)	4.3(v1.0) 4.8.1 (v1.1)	11.0 (v1.0)	10.0(v1.0), 11.0(v1.1)	11.1 (V1.0)		Yes		2.9
Defaulted And Deleted Functions	N2346		4.1	4.4	12.0						3.0
Delegating Constructors	N1986			4.7							
11.0 nov'12	11.1				3.0						
Explicit conversion operators	N2437			4.5	13.0	11.0 nov'12	12.1		Yes		3.0
Extended `friend` Declarations	N1791		4.1	4.7	11.0	10.0***	V1R11,11.1				2.9
`extern template`	N1987	3, 5, 6		3.3	9	6.0	V1R11,11.1		Yes		Yes
Forward declarations for enums	N2764			4.6		11.0	12.1				3.1
Inheriting Constructors	N2540			4.8							
				3.3							
Initializer Lists	N2672			4.4	13.0	11.0 nov'12					3.1
Lambda expressions and closures	v0.9: N2550, v1.0: N2658, v1.1: N2927		4.1(v0.9)	4.5(v1.1)	11.0 (v0.9) 12.0 (v1.0)	10.0(v1.0), 11.0(v1.1)					3.1
Local and Unnamed Types as Template Arguments	N2657			4.5	12.0	10.0					2.9
`long long`	N1811	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Namespace Association	N2535			4.4							
	11.1				2.9						
New character types	N2249			4.4							2.9
New function declaration syntax for deduced return types	N2541		4.1	4.4	12.1	10.0	12.1				2.9
`nullptr`	N2431			4.6	12.1*	10.0					2.9
Unicode String Literals	N2442			4.4	11.0*			5.7	Yes		3.0
Raw String Literals	N2442			4.5							
11.0 nov'12					Yes						
User-defined Literals	N2765			4.7							3.1
Right Angle Brackets	N1757		4.1	4.3	11.0	8.0	12.1				Yes

R-Value References, std::move	v1.0: N2118, v2.0: N2844, v2.1: N2844+, v3.0: N3053		4.1(v1.0)	4.3(v1.0) 4.5(v2.1) 4.6(v3.0)	11.1 (v1.0) 12.0 (v2.0)	10.0(v2.0), 11.0(v2.1)	12.1(v2.1)		Yes		Yes
`static_assert`	N1720		4.1	4.3	11.0	10.0	11.1		Yes		2.9
Strongly-typed {{enum}}s	N2347			4.4	12.0	11.0	12.1		Yes		2.9
Template aliases	N2258			4.7	12.1						3.0
Thread-Local Storage	N2659			4.8 (4.4 ****)	11.1***						
10.0***		5.9***			3.3 (2.9 ****)						
Unrestricted Unions	N2544			4.6							
					3.0						
Built-in Type Traits	N1836	6.16	4.0	4.3	10.0	8.0			Yes		3.0
Variadic Templates	v0.9: N2242, v1.0: N2555		4.1(v0.9)	4.3(v0.9) 4.4 (v1.0)	12.1 (v0.9)	11.0 nov'12	11.1 (v0.9)				2.9 (1.0)
Range-based for-loop	N2930			4.6	13.0	11.0					3.0
override and final	v0.8: N2928, v0.9: N3206, v1.0: N3272			4.7	12.0 (v0.8) ***	8.0(v0.8)*** 11.0 (v1.0)					2.9
Attributes	N2761			4.8	12.1						3.3
ref-qualifiers	N2439			4.8.1							2.9
Non-static data member initializers	N2756			4.7							3.0
Dynamic initialization and destruction with concurrency (Magic statics)	N2660			4.3	?						2.9

- — 1) unicode string literals is a feature of the EDG frontend, but it is undocumented at Intel C++ compiler (/Qoption,cpp,"--uliterals" option enables it)
  2) nullptr and nullptr_t supported with /Qoption,cpp,"--nullptr".

** — available in separate patch

*** — Partial support

**** — Partial support using the "`__thread`" keyword instead of "`thread_local`"

IBM XLC/C++ V1R11 is the IBM zSeries C/C++ compiler.

Intel c++ C+0x Features Supported by Intel(R) C+ Compiler