.NET - Any Platform

11.0 2026	Runtime Async	Process API improvements	Compression enhancements (zstd)	C# 15.0 2026: Collection expression arguments, Union types, Closed hierarchies, Extension indexers, Labeled break and continue, Non-virtual static interface members on older runtimes, Memory safety (preview feature)
	Cross-lane SIMD vector operations	Unsafe API accessibility	New Stream types (ReadOnlyMemoryStream etc.)	
10.0 2025	AVX10.2	File based apps `dotnet run app.cs`	System.Numerics.Tensors stable and enhanced	C# 14.0 2025: Extension members, Null-conditional assignment, nameof supports unbound generic types, More implicit conversions for Span<T> and ReadOnlySpan<T>, Modifiers on simple lambda parameters, field backed properties, partial events and constructors, user-defined compound assignment operators
	One shot tool execution `dotnet tool exec`	Stack allocation for small arrays	String CompareOptions .NumericOrdering	
9.0 2024	ARM64 SVE (128-bit)	Dictionary<,>/HashSet<> .AlternateLookup	ReadOnlySpan<T> params overloads	C# 13.0 2024: params collections, New lock type and semantics, New escape sequence - \e, Method group natural type improvements, Implicit indexer access in object initializers, Enable ref locals and unsafe contexts in iterators and async methods, Enable ref struct types to implement interfaces, Allow ref struct types as arguments for type parameters in generics, Partial properties and indexers are now allowed in partial types, Overload resolution priority
	Terminal logger enabled by default	object stack allocation for boxes	BinaryFormatter In-box Throws	
	Aspire			
8.0 2023	Vector512 AVX-512	TimeProvider ITimer	FrozenDictionary FrozenSet	C# 12.0 2023: Primary constructors, Collection expressions, Inline arrays, Optional parameters in lambda expressions, ref readonly parameters, Alias any type, Experimental attribute, Interceptors
	IUtf8SpanFormattable IUtf8SpanParsable	Simplified output paths	Codegen struct promotion	
7.0 2022	Generic Math	Cross-Platform Vector64/128/256		C# 11.0 2022: File-scoped types, Generic math support, Auto-default structs, Pattern match Span<char> on a constant string, Extended nameof scope, Numeric IntPtr, UTF-8 string literals, Required members, ref fields and scoped ref, Raw string literals, Improved method group conversion to delegate, Warning wave 7, Generic attributes, Newlines in string interpolation expressions, List patterns
	On Stack Replacement	Native AOT		
	MAUI			
6.0 2021	Improved FileStream	Crossgen2 (AOT)		C# 10.0 2021: Record structs, Improvements of structure types, Interpolated string handlers, global using directives, File-scoped namespace declaration, Extended property patterns, Improvements on lambda expressions, Allow const interpolated strings, Record types can seal ToString(), Improved definite assignment, Allow both assignment and declaration in the same deconstruction, Allow AsyncMethodBuilder attribute on methods, CallerArgumentExpression attribute, Enhanced #line pragma
	Dynamic PGO	Hot reload		
5.0 2020	Single file apps	App trimming		C# 9.0 2020: Records, Init only setters, Top-level statements, Native sized integers, Function pointers, Suppress emitting localsinit flag, Target-typed new expressions, static anonymous functions, Target-typed conditional expressions, Covariant return types, Extension GetEnumerator support for foreach loops, Lambda discard parameters, Attributes on local functions, Support for code generators, Module initializers, New features for partial methods
	Unified platform	ARM64 for Windows		

CoreCLR

.NET Core - Cross-platform

				3.1 2019: Support for C++/CLI; Windows Forms Controls Removal
				3.0 2019: Windows Desktop apps (WinForms, WPF); Hardware intrinsics; Range Index; Blazor
				2.2 2018: Runtime diagnostics improvements; ARM32 for Windows
				2.1 2018: Span<T>; Tiered JIT; SocketsHttpHandler
				2.0 2017: RyuJIT x86; ARM32; .NET Standard 2.0
				1.1 2016: Kestrel Web Server; Azure support; >Linux distros
				1.0 2016: Unsafe; ASP.NET Core; Entity Framework Core

.NET Framework - Windows

4.8 2019	RyuJIT from .NET Core 2.1	ZLib 1.2.11	ARM64	C# 7.0 2017: Out variables, Tuples and deconstruction, Pattern matching, Local functions, Expanded expression bodied members, Ref locals and returns, Discards, Binary Literals and Digit Separators, Throw expressions
4.7 2017	Improved High DPI	ASP.NET Object Cache		C# 6.0 2015 Roslyn: Static imports, Exception filters, Auto-property initializers, Expression bodied members, Null propagator, String interpolation, nameof operator, Index initializers, Await in catch/finally blocks, Default values for getter-only properties
4.6 2015	High DPI	HTTP/2	RyuJIT 64-bit	
4.5 2012	Task-Based Async Model	UWP		C# 5.0 2012: Asynchronous members; Caller info attributes
4.0 2010	Task Parallel Library	Parallel LINQ		C# 4.0 2010: Dynamic binding, Named/optional arguments, Generic covariant and contravariant, Embedded interop types
3.5 2007	LINQ	Expression Trees	Entity Framework	C# 3.0 2007: Auto-implemented properties, Anonymous types, Query expressions, Lambda expressions, Expression trees, Extension methods, Implicitly typed local variables, Partial methods, Object and collection initializers
3.0 2006	WPF	WCF	WF	CardSpace
2.0 2005	Generics	ClickOnce	64-bit	C# 2.0 2005: Generics, Partial types, Anonymous methods, Nullable value types, Iterators, Covariance and contravariance, Getter/setter separate accessibility, Method group conversions (delegates), Static classes, Delegate inference
	Debugger edit and continue			
1.1 2003	.NET Compact Framework	IPv6		C# 1.2 2003: foreach loop calls Dispose on IEnumerator
1.0 2002	WinForms	ASP.NET	ADO.NET	C# 1.0 2002: Classes, Structs, Interfaces, Events, Properties, Delegates, Operators and expressions, Statements, Attributes
	Base Class Library			

CLR 4.0 · CLR 2.0 · CLR 1.1 · CLR 1.0

.NET Core - Cross-platform

				C# 8.0 2019: Readonly members, Default interface methods, Switch expressions, Property patterns, Tuple patterns, Positional patterns, Using declarations, Static local functions, Disposable `ref structs`, Nullable reference types, Asynchronous streams, Indices and ranges, Null-coalescing assignment, Unmanaged constructed types, Stackalloc in nested expressions, Enhancement of interpolated verbatim strings
				C# 7.3 2018: Reassign `ref` local variables, Initializers on stackalloc arrays, Access fixed fields without pinning, `unmanaged` generic type constraints
				C# 7.2 2017: Declare `readonly struct` types, Add the `in` modifier on parameters, Use the `ref readonly` modifier on method returns, Declare `ref struct` types, Use additional generic constraints, Non-trailing named arguments, Named arguments can be followed by positional arguments, Leading underscores in numeric literals, private protected access modifier, Conditional `ref` expressions, Result of a conditional expression (?:) can be a reference
				C# 7.1 2017: async Main method, default literal expressions, Inferred tuple element names, Pattern matching on generic type parameters,

.NET Framework - Windows