



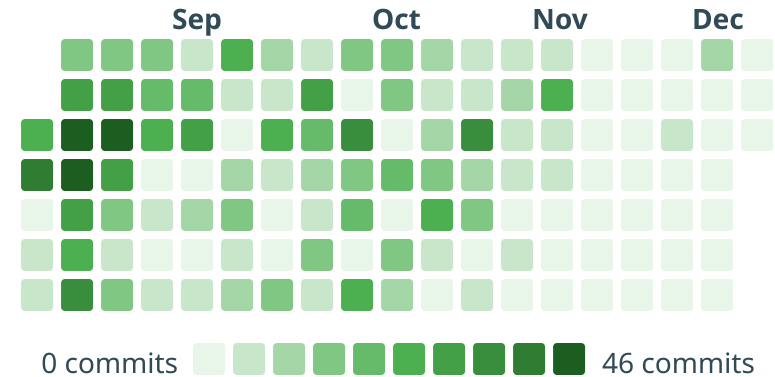
# Boost



112,111 commits up through 1.87.0  
594,851 lines added, 170,296 lines removed  
2,358 new commits in all library repositories  
108 commit contributors, 40 new  
372 issues opened, 374 closed  
958 posts to the developer's mailing list  
98 unique mailing list users, 16 new



Platform	File
 Unix	<a href="#">boost_1_87_0.tar.bz2</a>
	<a href="#">boost_1_87_0.tar.gz</a>
 Windows	<a href="#">boost_1_87_0.7z</a>
	<a href="#">boost_1_87_0.zip</a>



## From the Fiscal Sponsorship Committee











This release starts an exciting new chapter for the Boost C++ Library collection. The Fiscal Sponsorship Committee, formed from long-time Boost contributors, exists to manage the project's shared assets including the boost.org domain and social media accounts which help us get our message out there. This release report, created by the C++ Alliance, showcases the ongoing efforts of the community of developers continuing to maintain the excellence of the libraries.

Ion Gaztañaga, Joaquín M López Muñoz, René Ferdinand Rivera Morell

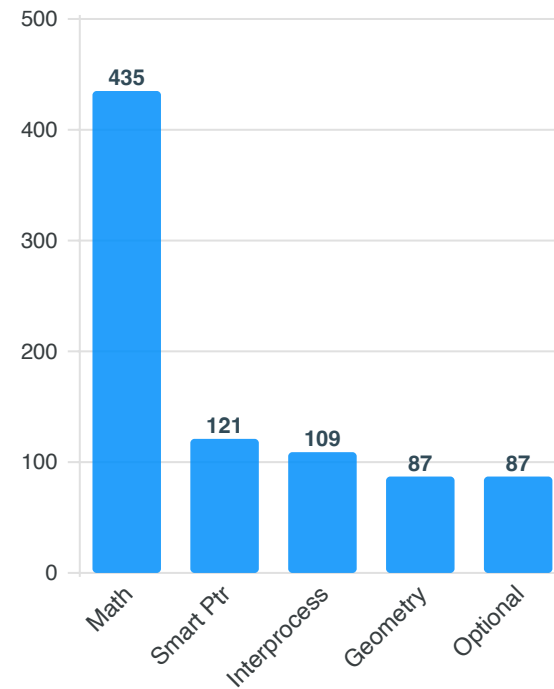
# Boost 1.87.0

2,358 Commits Across 152 Repositories

## Top Contributors

-  **Rene Rivera**  
577 commits
-  **Matt Borland**  
460 commits
-  **Peter Dimov**  
309 commits
-  **Ion Gaztañaga**  
140 commits
-  **Christopher Kohlhoff**  
71 commits
-  **Dmitry**  
46 commits
-  **Vissarion Fisikopoulos**  
45 commits
-  **Andrzej Krzemiński**  
44 commits
-  **Niall Douglas**  
43 commits
-  **Anarthal (Rubén Pérez)**  
43 commits

## Most Committed Libraries



## Top Contributors



**Vinnie Falco**  
142 posts



**Glen Fernandes**  
59 posts



**Peter Dimov**  
58 posts



**Andrzej Krzemieński**  
58 posts



**Andrey Semashev**  
49 posts



**Rene Rivera**  
36 posts



**Robert Ramey**  
32 posts



**Christian Mazakas**  
28 posts



**Ion Gaztañaga**  
27 posts



**Dmitry Arkhipov**  
22 posts

# Mailing List

There were 958 mailing list posts in version 1.87.0











There were 98 posters in this version. (16 New)















# Slack Activity

## Top Contributors in #boost

-  **Vinnie Falco**  
1307 messages
-  **Peter Dimov**  
1202 messages
-  **Dmitry Arkhipov**  
543 messages
-  **Christian Mazakas**  
529 messages
-  **René Ferdinand Rivera ...**  
439 messages
-  **Arnaud Becheler**  
307 messages
-  **Rubén Pérez Hidalgo**  
221 messages
-  **Joaquín M López Muñoz**  
157 messages
-  **Matt Borland**  
155 messages
-  **Klemens Morgenstern**  
132 messages

6,363 slack messages in #boost  
75 people conversing in this release. (18 New)











## Top Contributors in #boost-website

-  **Vinnie Falco**  
2103 messages
-  **Rob Beeston**  
990 messages
-  **Sam Darwin**  
286 messages
-  **René Ferdinand Rivera ...**  
176 messages
-  **Dave O'Connor**  
137 messages
-  **Alan de Freitas**  
127 messages
-  **Greg Kaleka**  
114 messages
-  **Julio C Estrada**  
101 messages
-  **Joaquín M López Muñoz**  
95 messages
-  **Peter Dimov**  
94 messages

4,387 slack messages in #boost-website  
23 people conversing in this release. (9 New)











# Slack Activity

## Top Contributors in #boost-http

-  **Vinnie Falco**  
1416 messages
-  **Mohammad Nejati**  
319 messages
-  **Peter Dimov**  
220 messages
-  **Rubén Pérez Hidalgo**  
142 messages
-  **Christian Mazakas**  
127 messages
-  **Klemens Morgenstern**  
95 messages
-  **Kyle Thompson**  
22 messages
-  **Giver**  
8 messages
-  **Ali Asadpoor**  
6 messages
-  **Sam Darwin**  
1 message

2,356 slack messages in #boost-http  
10 people conversing in this release. (3 New)











## Top Contributors in #boost-asio

-  **Vinnie Falco**  
412 messages
-  **Klemens Morgenstern**  
265 messages
-  **Rubén Pérez Hidalgo**  
171 messages
-  **João Távora**  
45 messages
-  **Peter Dimov**  
38 messages
-  **Marcelo Zimbres Silva**  
37 messages
-  **Christian Mazakas**  
17 messages
-  **Mohammad Nejati**  
15 messages
-  **Ivan Yanakiev**  
15 messages
-  **Kyle Thompson**  
14 messages

1,073 slack messages in #boost-asio  
20 people conversing in this release. (10 New)











# Slack Activity

## Top Contributors in #boost-json

-  **Dmitry Arkhipov**  
189 messages
-  **Peter Dimov**  
117 messages
-  **Seth Bromberger**  
91 messages
-  **Vinnie Falco**  
45 messages
-  **Giver**  
37 messages
-  **Darrell Wright**  
21 messages
-  **Alan de Freitas**  
11 messages
-  **RoyBellingan**  
7 messages
-  **René Ferdinand Rivera ...**  
1 message
-  **Alfredo Correa**  
1 message

523 slack messages in #boost-json  
13 people conversing in this release. (3 New)


## Top Contributors in #boost-url

-  **Vinnie Falco**  
237 messages
-  **Alan de Freitas**  
194 messages
-  **Peter Dimov**  
51 messages
-  **Sam Darwin**  
8 messages
-  **Rubén Pérez Hidalgo**  
7 messages
-  **Mohammad Nejati**  
4 messages
-  **Cristian Morales Vega**  
4 messages
-  **Me2**  
3 messages
-  **martinus**  
3 messages
-  **Dmitry Arkhipov**  
1 message

512 slack messages in #boost-url  
10 people conversing in this release. (2 New)

# Slack Activity

## Top Contributors in #boost-charconv

 **Vinnie Falco**  
113 messages

 **Matt Borland**  
54 messages

 **Peter Dimov**  
13 messages

 **Sam Darwin**  
12 messages


 **Rob Beeston**  
11 messages

 **Giver**  
7 messages


 **Dmitry Arkhipov**  
5 messages


215 slack messages in #boost-charconv  
7 people conversing in this release. (3 New)

## Top Contributors in #boost-unordered

 **Peter Dimov**  
95 messages


 **Joaquín M López Muñoz**  
58 messages


 **Braden Ganetsky**  
19 messages

 **Nuno Goncalves**  
13 messages

 **Giver**  
6 messages

 **Sam Darwin**  
4 messages

 **Christian Mazakas**  
4 messages

 **Ion Gaztañaga**  
4 messages

 **martinus**  
3 messages

 **Vinnie Falco**  
2 messages

208 slack messages in #boost-unordered  
10 people conversing in this release. (0 New)

# Slack Activity

## Top Contributors in #boost-docs



**Vinnie Falco**  
54 messages



**Rob Beeston**  
23 messages



**Alan de Freitas**  
20 messages



**Sam Darwin**  
17 messages



**Peter Turcan**  
13 messages



**René Ferdinand Rivera ...**  
12 messages



**Rubén Pérez Hidalgo**  
9 messages



**Klemens Morgenstern**  
1 message

149 slack messages in #boost-docs

8 people conversing in this release. (0 New)

## Top Contributors in #boost-process



**Cristian Morales Vega**  
15 messages



**Klemens Morgenstern**  
12 messages

27 slack messages in #boost-process

2 people conversing in this release. (1 New)

# Slack Activity

## Top Contributors in #boost-multi


 **Mikhail Kandel**  
7 messages

 **Alfredo Correa**  
5 messages

 **Marc Viala**  
1 message

13 slack messages in #boost-multi  
3 people conversing in this release. (1 New)

## Top Contributors in #boost-decimal

 **Alfredo Correa**  
1 message

 **Matt Borland**  
1 message

2 slack messages in #boost-decimal  
2 people conversing in this release. (1 New)

# Slack Activity

## Top Contributors in #boost-asiobook



**typenameTea**

1 message

1 slack message in #boost-asiobook

1 person conversing in this release. (1 New)



# Library Index

Accumulators	Conversion	GraphParallel	Move	Program Options	Stl_interfaces	Xpressive
Algorithm	Convert	Hana	Mp11	Property Map	System	YAP
Align	Core	Heap	MPI	Property Map (Parallel)	Test	
Any	Coroutine	Histogram	MPL	Property Tree	Thread	
Array	Coroutine2	HOF	Multi-Array	Proto	ThrowException	
Asio	CRC	ICL	Multi-Index	Python	Timer	
Assert	Date Time	Integer	Multiprecision	QVM	Tokenizer	
Assign	Describe	Interprocess	MySQL	Random	Tribool	
Atomic	Detail	Interval	Nowide	Range	TTI	
Beast	DLL	Intrusive	Numeric Conversion	Ratio	Tuple	
Bimap	Dynamic Bitset	IO	Odeint	Rational	Type Erasure	
Bind	Endian	Iostreams	Optional	Redis	Type Index	
CallableTraits	Exception	Iterator	Outcome	Regex	Typeof	
CharConv	Fiber	JSON	Parameter	Safe Numerics	Type Traits	
Chrono	Filesystem	Lambda	Parameter Python Bindings	Scope	uBLAS	
Circular Buffer	Flyweight	Lambda2	Parser	Scope Exit	Units	
Cobalt	Foreach	LEAF	PFR	Serialization	Unordered	
Compat	Format	Lexical Cast	Phoenix	Signals2	URL	
Compute	Function	Locale	Pointer Container	Smart Ptr	Utility	
Concept Check	Functional	Local Function	PolyCollection	Sort	Uuid	
Config	Function Types	Lockfree	Polygon	Spirit	Variant	
Container	Fusion	Log	Pool	Stacktrace	Variant2	
Container Hash	Geometry	Math	Predef	Statechart	VMD	
Context	GIL	Metaparse	Preprocessor	Static Assert	Wave	
Contract	Graph	Meta State Machine	Process	Static String	WinAPI	

## Top Contributors



**Matt Borland**  
396 commits



**tk-yoshimura**  
19 commits



**John Maddock**  
13 commits



**Pavel P**  
1 commit



**Rene Rivera**  
1 commit



**NickelWenzel**  
1 commit



**Reimar Döffinger**  
1 commit



**dschmitz89**  
1 commit



**Alexander Grund**  
1 commit



**Lucas Colley**  
1 commit

## Math

Boost.Math includes several contributions in the domain of mathematics: Floating Point Utilities, Specific Width Floating Point Types, Mathematical Constants, Statistical Distributions, Special Functions, Root Finding and Function Minimization, Polynomials and Rational Functions, Interpolation, and Numerical Integration and Differentiation. Many of these features are templated to support both built-in, and extended width types (e.g. Boost.Multiprecision)

There were 435 commits in release 1.87.0

144,328 lines added, 7,330 lines removed

There were 6 new contributors this release!

There were 16 issues opened. There were 10 issues closed.

## Top Contributors



**Peter Dimov**

103 commits



**Rene Rivera**

18 commits

## Smart Ptr

Smart pointer class templates.

There were 121 commits in release 1.87.0

1,423 lines added, 3,999 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Ion Gaztañaga**  
82 commits



**Rene Rivera**  
23 commits



**Braden Ganetsky**  
3 commits



**Egor Mikhaylov**  
1 commit

## Interprocess

Shared memory, memory mapped files, process-shared mutexes, condition variables, containers and allocators.

There were 109 commits in release 1.87.0

3,872 lines added, 3,500 lines removed

There was 1 new contributor this release!

There were 12 issues opened. There were 18 issues closed.

## Top Contributors



**Vissarion Fisikopoulos**

45 commits



**Barend Gehrels**

21 commits



**Rene Rivera**

16 commits



**Adam Wulkiewicz**

4 commits



**Andrey Semashev**

1 commit

# Geometry

The Boost.Geometry library provides geometric algorithms, primitives and spatial index.

There were 87 commits in release 1.87.0

5,274 lines added, 8,218 lines removed

There were 14 issues opened. There were 34 issues closed.

## Top Contributors



**Andrzej Krzemiński**  
44 commits



**Rene Rivera**  
13 commits



**Peter Dimov**  
9 commits



**Alexander Grund**  
9 commits



**Ryan Malcolm Underwo...**  
5 commits



**typenameTea**  
3 commits



**Andrey Semashev**  
3 commits



**Tosiekdev**  
1 commit

# Optional

A value-semantic, type-safe wrapper for representing 'optional' (or 'nullable') objects of a given type. An optional object may or may not contain a value of the underlying type.

There were 87 commits in release 1.87.0

1,854 lines added, 21,375 lines removed

There were 2 new contributors this release!

There were 6 issues opened. There were 4 issues closed.

## Top Contributors



**Rene Rivera**  
28 commits



**Braden Ganetsky**  
19 commits



**joaquintides**  
11 commits



**Braden Ganetsky**  
10 commits



**Peter Dimov**  
5 commits



**sdarwin**  
1 commit



**Dmitry**  
1 commit

# Unordered

Unordered associative containers.

There were 75 commits in release 1.87.0  
11,706 lines added, 611 lines removed

There was 1 new contributor this release!

There were 9 issues opened. There were 11 issues closed.

## Top Contributors



**Christopher Kohlhoff**

71 commits



**Rene Rivera**

1 commit

# Asio

Portable networking and other low-level I/O, including sockets, timers, hostname resolution, socket iostreams, serial ports, file descriptors and Windows HANDLES.

There were 72 commits in release 1.87.0

5,716 lines added, 10,791 lines removed

There were 2 issues opened. There were 0 issues closed.



## Top Contributors



**Ion Gaztañaga**  
37 commits



**Rene Rivera**  
26 commits



**Andrey Semashev**  
1 commit

# Container

Standard library containers and extensions.

There were 64 commits in release 1.87.0

986 lines added, 510 lines removed

There were 7 issues opened. There were 16 issues closed.

## Top Contributors



**Rene Rivera**

31 commits



**Peter Dimov**

25 commits



**Braden Ganetsky**

3 commits

## Uuid

A universally unique identifier.

There were 59 commits in release 1.87.0

313 lines added, 56 lines removed

There were 2 new contributors this release!

There were 5 issues opened. There were 3 issues closed.

## Top Contributors



**Matt Borland**

50 commits



**Rene Rivera**

1 commit



**Ivan A. Melnikov**

1 commit



**Georg Gast**

1 commit



**Martin Vejbona**

1 commit

# CharConv

An implementation of <charconv> in C++11.

There were 54 commits in release 1.87.0

535 lines added, 52 lines removed

There were 4 new contributors this release!

There were 3 issues opened. There were 2 issues closed.

## Top Contributors



**Dmitry**

43 commits



**Mikhail Khachayants**

2 commits



**Dmitry Arkhipov**

1 commit



**Rene Rivera**

1 commit



**Vinnie Falco**

1 commit



**Julien Blanc**

1 commit



**Martin Vejborg**

1 commit

# JSON

JSON parsing, serialization, and DOM in C++11

There were 50 commits in release 1.87.0

4,374 lines added, 1,743 lines removed

There were 4 new contributors this release!

There were 15 issues opened. There were 24 issues closed.

## Top Contributors



**Niall Douglas**

43 commits



**Jenkins nedprod CI**

3 commits

## Outcome

A deterministic failure handling library partially simulating lightweight exceptions.

There were 46 commits in release 1.87.0

2,494 lines added, 1,039 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Alan de Freitas**

41 commits



**Rene Rivera**

1 commit



**BrianWeed**

1 commit

## URL

URL parsing in C++11

There were 43 commits in release 1.87.0

7,041 lines added, 71,192 lines removed

There were 2 new contributors this release!

There were 15 issues opened. There were 14 issues closed.

## Top Contributors



**Anarthal (Rubén Pérez)**

40 commits



**Rene Rivera**

1 commit

# MySQL

MySQL client library built on top of Boost.Asio.

There were 41 commits in release 1.87.0

26,067 lines added, 20,039 lines removed

There was 1 new contributor this release!

There were 27 issues opened. There were 36 issues closed.

## Top Contributors



**Tim Blechmann**

25 commits



**Rene Rivera**

10 commits



**sdarwin**

2 commits



**slowriot**

1 commit



**Guus Waals**

1 commit



**Eike Verdenhalven**

1 commit

# Lockfree

Lockfree data structures.

There were 40 commits in release 1.87.0

3,815 lines added, 2,962 lines removed

There were 4 new contributors this release!

There was 1 issue opened. There was 1 issue closed.



## Top Contributors



**Emil Dotchevski**  
39 commits

## LEAF

A lightweight error handling library for C++11.

There were 39 commits in release 1.87.0

2,986 lines added, 4,369 lines removed

There were 2 issues opened. There were 2 issues closed.

## Top Contributors



**Oliver Kowalke**

14 commits



**Rene Rivera**

13 commits



**Claudio Jeker**

2 commits



**Reimar Döffinger**

2 commits



**Nikita Kniazev**

2 commits



**Andrii Batyiev**

1 commit



**Arnaud Le Blanc**

1 commit



**Chris Ward**

1 commit



**Liryna**

1 commit

## Context

(C++11) Context switching library.

There were 37 commits in release 1.87.0

674 lines added, 142 lines removed

There were 5 new contributors this release!

There was 1 issue opened. There was 1 issue closed.

## Top Contributors



**Klemens**  
24 commits



**Samuel Venable**  
5 commits



**Rene Rivera**  
1 commit



**brad0**  
1 commit



**Julien Schueller**  
1 commit



**Benjamin Buch**  
1 commit

## Process

Library to create processes in a portable way.

There were 33 commits in release 1.87.0

1,032 lines added, 731 lines removed

There were 3 new contributors this release!

There were 22 issues opened. There were 8 issues closed.

## Top Contributors



**Peter Dimov**  
17 commits



**Rene Rivera**  
11 commits



**tarun-t**  
2 commits



**Dmitry**  
1 commit

## Iostreams

Boost.IOStreams provides a framework for defining streams, stream buffers and i/o filters.

There were 31 commits in release 1.87.0

340,444 lines added, 133 lines removed

There were 2 new contributors this release!

There were 4 issues opened. There were 0 issues closed.

## Top Contributors



**Mohammad Nejati**  
24 commits



**Rene Rivera**  
1 commit



**Saleh Hatefinya**  
1 commit



**Alexey Romko**  
1 commit

# Beast

Portable HTTP, WebSocket, and network operations using only C++11 and Boost.Asio

There were 27 commits in release 1.87.0

1,548 lines added, 589 lines removed

There were 2 new contributors this release!

There were 31 issues opened. There were 34 issues closed.

## Top Contributors



**Jakob van Santen**

10 commits



**Rene Rivera**

9 commits



**Stefan Seefeld**

2 commits



**Konstantin Podsvirov**

1 commit



**Daniel Lüggt**

1 commit



**Vitaly Buka**

1 commit



**Alexis DUBURCQ**

1 commit



**Peter Dimov**

1 commit



**Billy K. Poon**

1 commit

## Python

The Boost Python Library is a framework for interfacing Python and C++. It allows you to quickly and seamlessly expose C++ classes functions and objects to Python, and vice-versa, using no special tools -- just your C++ compiler.

There were 27 commits in release 1.87.0

383 lines added, 137 lines removed

There were 6 new contributors this release!

There were 9 issues opened. There were 7 issues closed.

## Top Contributors



**Ion Gaztañaga**  
14 commits



**Rene Rivera**  
12 commits



**Julien Schueller**  
1 commit

## Move

Portable move semantics for C++03 and C++11 compilers.

There were 27 commits in release 1.87.0

138 lines added, 58 lines removed

There was 1 new contributor this release!

There were 2 issues opened. There were 3 issues closed.

## Top Contributors



**Rene Rivera**

20 commits



**Ion Gaztañaga**

6 commits

# Intrusive

Intrusive containers and algorithms.

There were 26 commits in release 1.87.0

141 lines added, 21 lines removed

There was 1 issue opened. There were 0 issues closed.



## Top Contributors



**Rene Rivera**

21 commits



**Peter Dimov**

4 commits

## Core

A collection of simple core utilities with minimal dependencies.

There were 25 commits in release 1.87.0

37 lines added, 10 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

11 commits



**joaquintides**

10 commits



**Peter Dimov**

3 commits

# Flyweight

Design pattern to manage large quantities of highly redundant objects.

There were 24 commits in release 1.87.0

1,575 lines added, 492 lines removed

There was 1 new contributor this release!

There was 1 issue opened. There was 1 issue closed.

## Top Contributors



**Rene Rivera**

12 commits



**Peter Dimov**

11 commits

# Function

Function object wrappers for deferred calls or callbacks.

There were 23 commits in release 1.87.0

106 lines added, 50 lines removed

There was 1 issue opened. There was 1 issue closed.

## Top Contributors



**Marcelo Zimbres**

21 commits



**Rene Rivera**

2 commits

# Redis

Redis async client library built on top of Boost.Asio.

There were 23 commits in release 1.87.0

323 lines added, 312 lines removed

There was 1 new contributor this release!

There were 10 issues opened. There were 8 issues closed.

## Top Contributors



**Peter Dimov**  
13 commits



**Rene Rivera**  
9 commits



**Quentin Chateau**  
1 commit

## Describe

A C++14 reflection library.

There were 23 commits in release 1.87.0

171 lines added, 49 lines removed

There were 2 new contributors this release!

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

13 commits



**Peter Dimov**

10 commits

# Chrono

Useful time utilities. C++11.

There were 23 commits in release 1.87.0

523 lines added, 31 lines removed

There were 0 issues opened. There was 1 issue closed.

## Top Contributors



**Rene Rivera**  
13 commits



**Peter Dimov**  
8 commits

## CRC

The Boost CRC Library provides two implementations of CRC (cyclic redundancy code) computation objects and two implementations of CRC computation functions. The implementations are template-based.

There were 21 commits in release 1.87.0

127 lines added, 26 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

13 commits



**Peter Dimov**

7 commits



**Anarthal (Rubén Pérez)**

1 commit

## Compat

C++11 implementations of standard components added in later C++ standards.

There were 21 commits in release 1.87.0

349 lines added, 15 lines removed

There were 2 new contributors this release!

There were 0 issues opened. There were 0 issues closed.



## Top Contributors



**Rene Rivera**

12 commits



**Peter Dimov**

5 commits



**Edward Diener**

1 commit



**joaquintides**

1 commit



**Ignacy Gawędzki**

1 commit

# Bimap

Bidirectional maps library for C++. With Boost.Bimap you can create associative containers in which both types can be used as key.

There were 20 commits in release 1.87.0

111 lines added, 33 lines removed

There was 1 new contributor this release!

There was 1 issue opened. There was 1 issue closed.

## Top Contributors



**Peter Dimov**  
10 commits



**Rene Rivera**  
8 commits



**joaquintides**  
1 commit



**Chris Ward**  
1 commit

# Mp11

A C++11 metaprogramming library.

There were 20 commits in release 1.87.0

485 lines added, 48 lines removed

There were 3 new contributors this release!

There were 2 issues opened. There were 2 issues closed.

## Top Contributors



**Rene Rivera**

14 commits



**Peter Dimov**

5 commits



**Ion Gaztañaga**

1 commit

## System

Extensible error reporting.

There were 20 commits in release 1.87.0

55 lines added, 33 lines removed

There were 2 new contributors this release!

There were 4 issues opened. There was 1 issue closed.

## Top Contributors



**Rene Rivera**

12 commits



**Peter Dimov**

7 commits

# Container Hash

An STL-compatible hash function object that can be extended to hash user defined types.

There were 19 commits in release 1.87.0

102 lines added, 34 lines removed

There was 1 new contributor this release!

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Kyle Lutz**

6 commits



**Anthony C**

6 commits



**Peter Dimov**

4 commits



**Jakub Szuppe**

2 commits



**mmitti**

1 commit

# Compute

Parallel/GPU-computing library

There were 19 commits in release 1.87.0

433 lines added, 20 lines removed

There was 1 new contributor this release!

There was 1 issue opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**  
12 commits



**Peter Dimov**  
5 commits



**Frank Mori Hess**  
1 commit

# Signals2

Managed signals & slots callback implementation (thread-safe version 2).

There were 18 commits in release 1.87.0

756 lines added, 500 lines removed

There was 1 issue opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

11 commits



**Peter Dimov**

7 commits

## Variant2

A never-valueless, strong guarantee implementation of `std::variant`.

There were 18 commits in release 1.87.0

69 lines added, 33 lines removed

There was 1 new contributor this release!

There were 2 issues opened. There was 1 issue closed.

## Top Contributors



**Rene Rivera**

9 commits



**Oliver Kowalke**

5 commits



**brad0**

2 commits



**xiaodaxia**

1 commit



**jakob lovhall**

1 commit

# Fiber

(C++11) Userland threads library.

There were 18 commits in release 1.87.0

81 lines added, 25 lines removed

There were 3 new contributors this release!

There were 3 issues opened. There were 4 issues closed.



## Top Contributors



**Rene Rivera**  
11 commits



**Alain Miniussi**  
5 commits



**David Seifert**  
1 commit



**LXYan2333**  
1 commit

## MPI

Message Passing Interface library, for use in distributed-memory parallel application programming.

There were 18 commits in release 1.87.0

145 lines added, 102 lines removed

There was 1 new contributor this release!

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Tim Blechmann**

10 commits



**Rene Rivera**

8 commits

## Heap

Priority queue data structures.

There were 18 commits in release 1.87.0

5,105 lines added, 4,053 lines removed

There were 2 issues opened. There were 3 issues closed.

## Top Contributors



**Antony Polukhin**

10 commits



**Rene Rivera**

1 commit



**Julien Schueller**

1 commit



**Mats Taraldsvik**

1 commit



**huangqinjin**

1 commit



**Dmitry**

1 commit



**Jaroslaw Pelczar**

1 commit



**int mian**

1 commit

## Stacktrace

Gather, store, copy and print backtraces.

There were 17 commits in release 1.87.0

150 lines added, 32 lines removed

There were 6 new contributors this release!

There were 9 issues opened. There were 17 issues closed.

## Top Contributors



**Peter Dimov**  
10 commits



**Rene Rivera**  
7 commits

# Function Types

Boost.FunctionTypes provides functionality to classify, decompose and synthesize function, function pointer, function reference and pointer to member types.

There were 17 commits in release 1.87.0

943 lines added, 106 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Andrey Semashev**  
11 commits



**Alexander Grund**  
5 commits



**Rene Rivera**  
1 commit

## Filesystem

The Boost Filesystem Library provides portable facilities to query and manipulate paths, files, and directories.

There were 17 commits in release 1.87.0

467 lines added, 195 lines removed

There were 7 issues opened. There were 6 issues closed.

## Top Contributors



**Rene Rivera**  
12 commits



**Peter Dimov**  
4 commits

## Endian

Types and conversion functions for correct byte ordering and more regardless of processor endianness.

There were 16 commits in release 1.87.0

74 lines added, 21 lines removed

There was 1 new contributor this release!

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

10 commits



**Peter Dimov**

6 commits

# Assert

Customizable assert macros.

There were 16 commits in release 1.87.0

66 lines added, 10 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**  
13 commits



**Peter Dimov**  
3 commits

## Timer

Event timer, progress timer, and progress display classes.

There were 16 commits in release 1.87.0

61 lines added, 23 lines removed

There were 0 issues opened. There were 0 issues closed.



## Top Contributors



**Rene Rivera**

12 commits



**Peter Dimov**

4 commits

## Ratio

Compile time rational arithmetic. C++11.

There were 16 commits in release 1.87.0

60 lines added, 20 lines removed

There were 0 issues opened. There was 1 issue closed.

## Top Contributors



**Rene Rivera**

7 commits



**Oliver Kowalke**

4 commits



**Lunar-YZ**

4 commits



**Antony Polukhin**

1 commit

# Coroutine2

(C++11) Coroutine library.

There were 16 commits in release 1.87.0

40 lines added, 15 lines removed

There were 2 new contributors this release!

There was 1 issue opened. There was 1 issue closed.

## Top Contributors



**Rene Rivera**

9 commits



**Zach Laine**

6 commits



**Edward Nolan**

1 commit

## Stl\_interfaces

C++14 and later CRTP templates for defining iterators, views, and containers.

There were 16 commits in release 1.87.0

42 lines added, 24 lines removed

There were 2 new contributors this release!

There were 4 issues opened. There were 5 issues closed.

## Top Contributors



**Rene Rivera**

10 commits



**Christophe Henry**

5 commits

# Meta State Machine

A very high-performance library for expressive UML2 finite state machines.

There were 15 commits in release 1.87.0

234 lines added, 34 lines removed

There was 1 new contributor this release!

There were 3 issues opened. There were 3 issues closed.

## Top Contributors



**Klemens**  
11 commits



**Rene Rivera**  
1 commit



**klemens-morgenstern**  
1 commit



**Vincent Palancher**  
1 commit

# Cobalt

Coroutines. Basic Algorithms & Types

There were 14 commits in release 1.87.0

540 lines added, 99 lines removed

There were 3 new contributors this release!

There were 14 issues opened. There were 9 issues closed.

## Top Contributors



**joaquintides**

8 commits



**Rene Rivera**

6 commits

# PolyCollection

Fast containers of polymorphic objects.

There were 14 commits in release 1.87.0

959 lines added, 23 lines removed

There was 1 new contributor this release!

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Antony Polukhin**

9 commits



**Anarthal (Rubén Pérez)**

2 commits



**Rene Rivera**

1 commit



**Lena**

1 commit



**Zachary Wassall**

1 commit

## PFR

Basic reflection for user defined types.

There were 14 commits in release 1.87.0

8,328 lines added, 158 lines removed

There were 3 new contributors this release!

There were 7 issues opened. There were 5 issues closed.

## Top Contributors



**Rene Rivera**

8 commits



**Peter Dimov**

5 commits

# ThrowException

A common infrastructure for throwing exceptions from Boost libraries.

There were 13 commits in release 1.87.0

62 lines added, 9 lines removed

There was 1 new contributor this release!

There were 0 issues opened. There were 0 issues closed.



## Top Contributors



**Rene Rivera**

8 commits



**Oliver Kowalke**

3 commits



**Michael Karcher**

1 commit



**Mohammad Bahoosh**

1 commit

# Coroutine

Coroutine library.

There were 13 commits in release 1.87.0

53 lines added, 28 lines removed

There were 2 new contributors this release!

There was 1 issue opened. There were 2 issues closed.

## Top Contributors



**Rene Rivera**

8 commits



**Peter Dimov**

4 commits

# Lambda2

A C++14 lambda library.

There were 12 commits in release 1.87.0

55 lines added, 19 lines removed

There was 1 new contributor this release!

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

9 commits



**Peter Dimov**

3 commits

## Bind

`boost::bind` is a generalization of the standard functions `std::bind1st` and `std::bind2nd`. It supports arbitrary function objects, functions, function pointers, and member function pointers, and is able to bind any argument to a specific value or route input arguments into arbitrary positions.

There were 12 commits in release 1.87.0

31 lines added, 3 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**  
7 commits



**Peter Dimov**  
2 commits



**Joel de Guzman**  
1 commit

# Tuple

Ease definition of functions returning multiple values, and more.

There were 10 commits in release 1.87.0

59 lines added, 13 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Matt Borland**

7 commits



**Nuno Nobre**

1 commit



**John Maddock**

1 commit

# Multiprecision

Extended precision arithmetic types for floating point, integer, and rational arithmetic.

There were 9 commits in release 1.87.0

190 lines added, 324 lines removed

There was 1 new contributor this release!

There were 3 issues opened. There were 3 issues closed.

## Top Contributors



**Jeff Trull**

4 commits



**Rene Rivera**

1 commit



**Peter Dimov**

1 commit



**njnobles**

1 commit



**jwnhy**

1 commit

## Wave

The Boost.Wave library is a Standards conformant, and highly configurable implementation of the mandated C99/C++ preprocessor functionality packed behind an easy to use iterator interface.

There were 8 commits in release 1.87.0

370 lines added, 87 lines removed

There were 2 new contributors this release!

There were 7 issues opened. There were 4 issues closed.

## Top Contributors



**Andrey Semashev**

5 commits



**Rene Rivera**

1 commit



**Georgiy Guminov**

1 commit

# Iterator

The Boost Iterator Library contains two parts. The first is a system of concepts which extend the C++ standard iterator requirements. The second is a framework of components for building iterators based on these extended concepts and includes several useful iterator adaptors.

There were 7 commits in release 1.87.0

61 lines added, 29 lines removed

There was 1 new contributor this release!

There were 3 issues opened. There were 3 issues closed.

## Top Contributors



**Andrey Semashev**

5 commits



**Rene Rivera**

1 commit



**Alexander Grund**

1 commit

# Atomic

C++11-style atomic types.

There were 7 commits in release 1.87.0

198 lines added, 88 lines removed

There were 2 issues opened. There were 2 issues closed.



## Top Contributors



**Andrey Semashev**  
6 commits

## Log

Logging library.

There were 6 commits in release 1.87.0

441 lines added, 405 lines removed

There were 4 issues opened. There were 5 issues closed.

## Top Contributors



**Matt Borland**  
4 commits



**Wataru Matsumoto**  
1 commit



**jspam**  
1 commit

## Test

Support for simple program testing, full unit testing, and for program execution monitoring.

There were 6 commits in release 1.87.0

25 lines added, 19 lines removed

There were 2 new contributors this release!

There were 2 issues opened. There were 3 issues closed.

## Top Contributors



**joaquintides**

4 commits



**Rene Rivera**

1 commit



**Peter Dimov**

1 commit

## Multi-Index

The Boost Multi-index Containers Library provides a class template named `multi_index_container` which enables the construction of containers maintaining one or more indices with different sorting and access semantics.

There were 6 commits in release 1.87.0

878 lines added, 621 lines removed

There was 1 issue opened. There was 1 issue closed.

## Top Contributors



**Andrey Semashev**

5 commits



**Rene Rivera**

1 commit

## Integer

The organization of boost integer headers and classes is designed to take advantage of `<stdint.h>` types from the 1999 C standard without resorting to undefined behavior in terms of the 1998 C++ standard. The header `<boost/cstdint.hpp>` makes the standard integer types safely available in namespace `boost` without placing any names in namespace `std`.

There were 6 commits in release 1.87.0

54 lines added, 44 lines removed

There was 1 issue opened. There was 1 issue closed.

## Top Contributors



**Andrey Semashev**

3 commits



**Rene Rivera**

1 commit



**Alexander Grund**

1 commit

## WinAPI

Windows API abstraction layer.

There were 5 commits in release 1.87.0

46 lines added, 4 lines removed

There was 1 new contributor this release!

There were 0 issues opened. There was 1 issue closed.

## Top Contributors



**Peter Dimov**  
4 commits

# Array

STL compliant container wrapper for arrays of constant size.

There were 4 commits in release 1.87.0

55 lines added, 22 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Emil Dotchevski**  
3 commits

## QVM

Generic C++ library for working with Quaternions Vectors and Matrices.

There were 3 commits in release 1.87.0

337 lines added, 556 lines removed

There were 2 issues opened. There were 3 issues closed.

## Top Contributors



**Rene Rivera**

1 commit



**Matt Borland**

1 commit



**Young Geun Kim**

1 commit

## Random

A complete system for random number generation.

There were 3 commits in release 1.87.0

199 lines added, 147 lines removed

There was 1 new contributor this release!

There was 1 issue opened. There was 1 issue closed.



## Top Contributors



**Glen Fernandes**  
2 commits



**Marshall Clow**  
1 commit

## Config

Helps Boost library developers adapt to compiler idiosyncrasies; not intended for library users.

There were 3 commits in release 1.87.0

2 lines added, 2 lines removed

There was 1 issue opened. There were 0 issues closed.

## Top Contributors



**Matt Borland**

2 commits



**Rene Rivera**

1 commit

# Odeint

Solving ordinary differential equations.

There were 3 commits in release 1.87.0

82 lines added, 70 lines removed

There was 1 new contributor this release!

There was 1 issue opened. There were 0 issues closed.

## Top Contributors



**Edward Diener**  
1 commit



**Peter Dimov**  
1 commit

# Statechart

Boost.Statechart - Arbitrarily complex finite state machines can be implemented in easily readable and maintainable C++ code.

There were 2 commits in release 1.87.0

3 lines added, 2 lines removed

There was 1 new contributor this release!

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Antony Polukhin**

1 commit



**Rene Rivera**

1 commit

# Lexical Cast

General literal text conversions, such as an int represented a string, or vice-versa.

There were 2 commits in release 1.87.0

67 lines added, 47 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Peter Dimov**  
2 commits

# Xpressive

Regular expressions that can be written as strings or as expression templates, and which can refer to each other and themselves recursively with the power of context-free grammars.

There were 2 commits in release 1.87.0

4 lines added, 4 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

1 commit



**Andrey Semashev**

1 commit

# Parameter

Boost.Parameter Library - Write functions that accept arguments by name.

There were 2 commits in release 1.87.0

36 lines added, 7 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

1 commit



**Andrey Semashev**

1 commit

## Scope

A collection of scope guards and a `unique_resource` wrapper.

There were 2 commits in release 1.87.0

66 lines added, 9 lines removed

There was 1 new contributor this release!

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

1 commit

## Conversion

Polymorphic casts.

There was 1 commit in release 1.87.0

30 lines added, 2 lines removed

There were 0 issues opened. There were 0 issues closed.



## Top Contributors



**Rene Rivera**

1 commit

# Any

Safe, generic container for single values of different value types.

There was 1 commit in release 1.87.0

38 lines added, 7 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

1 commit

## Variant

Safe, generic, stack-based discriminated union container.

There was 1 commit in release 1.87.0

46 lines added, 8 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

1 commit

## Type Index

Runtime/Compile time copyable type info.

There was 1 commit in release 1.87.0

44 lines added, 15 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**  
1 commit

## Detail

This library contains a set of header only utilities used internally by Boost C++ Libraries to facilitate their implementation.

There was 1 commit in release 1.87.0

36 lines added, 4 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**  
1 commit

# Hana

A modern C++ metaprogramming library. It provides high level algorithms to manipulate heterogeneous sequences, allows writing type-level computations with a natural syntax, provides tools to introspect user-defined types and much more.

There was 1 commit in release 1.87.0

30 lines added, 2 lines removed

There were 0 issues opened. There were 0 issues closed.

## Top Contributors



**Rene Rivera**

1 commit

## DLL

Library for comfortable work with DLL and DSO.

There was 1 commit in release 1.87.0

44 lines added, 3 lines removed

There were 3 issues opened. There was 1 issue closed.