

Pharo 8.0^{alpha} (and more)

S. Ducasse

<http://www.pharo.org>

<http://consortium.pharo.org>



Let us start with a super
super cool announce from
this spring...

Consortium...

- Lifeware supports one year engineer
 - Schmidt supports one year engineer
- ...to improve Pharo infrastructure



For Pharo 8.0: 4 engineers

Esteban 



Iceberg
C
FFI
Spec
VM

Pablo 



ClassBuilder
NewTraits
Iceberg
C - FFI
Windows
VM

Cyril  



UI
Tools
Spec
Web
Fixing
Cleaning

Guille  



Iceberg
ClassDef
TaskIt
Spec
Tests
Windows

And we got two new RMOD team members

Steven 



Debugger
Reflectivity
(Compiler)
IoT
(VM)
...

Vincent 



Python
C
Assembly
Meta modeling
Testing
VM ...



Pharo 7.0

<https://pharo.org/news/pharo7.0-released>

2142 issues!

Latest update 7.0.4 : August'19

P 7.0 in a Nutshell

- ✦ 64-bit version in Linux, OSX and Windows (preview)
- ✦ PharoLauncher
- ✦ Totally new build process with full bootstrap from sources
- ✦ All source on <http://github.com/pharo-project/pharo>
- ✦ Iceberg: git client significantly improved
- ✦ Calypso, the angular stone of PharoThings, new system Pharo browser

P 7.0 main points...

- Stateful traits
- Streams refactor
- Working directory now is a real working directory
- UFFI has been adapted to Windows 64bit
- “Plugin replacement program”: FreeType done
- Windows 64bit VM closer and closer
- The OpenSmalltalkVM has continued improving in several ways.
- Specific plugins like FilePlugin for Windows



Pharo 8.0^{alpha}



In a Nutshell

- Default VM: Headless VM (alpha out) + new FFI non blocking backend
- VM builds under control (more tests) - See Pablo's talk
- Spec 2.0 (alpha out) - See Esteban's Talk
- Rewriting tools to Spec 2.0 (underway)
- Improving refactorings / eCompletion (under way)
- Better tools with Roassal 3.0 (under way)
- DrTests: Infrastructure for Tests: Much more Tests
- Clap: New command line
- Use new block closure (Sista's back-end) - fixing debugger
- Object-centric debugger (see Steven's talk)

We are supporting



... let us have a look

Supporting business

- ✦ Better 64 bits Windows
- ✦ Support for multiple graphical backends
- ✦ Better tools and custom points
- ✦ Much better UFFI (non-blocking back-end) See Pablo's talk
- ✦ Continuously improving (cleans, refactoring, tests)

8 Addressed

 Analysis of File primitives performance on Windows

 Support for multiple windows








 Headless VM (alpha)

 Non-blocking FFI back-end







 Degradation in performance  8&7

 Tons of more tests (see below)

8 Under way for P8

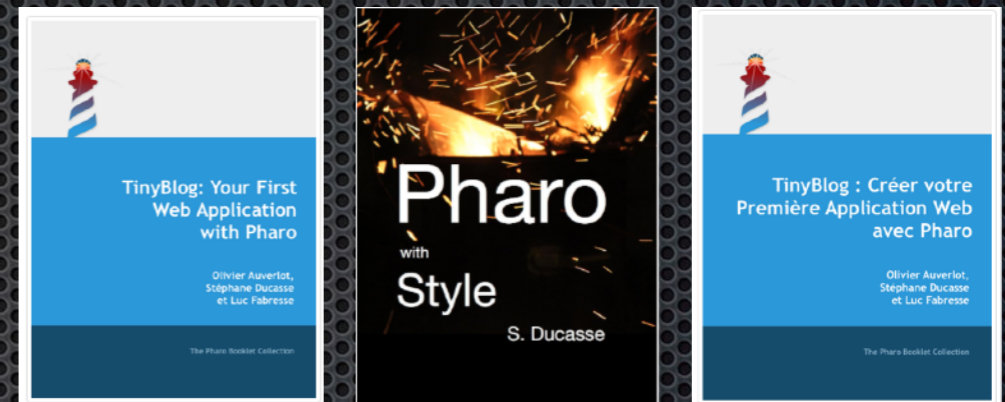
-  Memory management and command line
-  Parallel testing (Checking TaskIt extensions)
-  Better refactorings/eCompletion
-  Latency (Spotter and completion) large images
-  Quality rules on big classes/images
-  Spec 2.0 (new layout/widgets/transmission/backends)
-  Infrastructure for assembly generation (tests, newlib)

9 Potentially for P9.0

-  Better GC GC stops 2-3min for fullGC (in large images)
-  cmd+dot not working in all cases
-  Bloc
-  Parallel processing (not just parallel testing, which can be resolved at image side)
-  More more and more tests for the VM and
-  Cleaner VM

Community, docs and more

[<http://books.pharo.org>]



- ✦ **NEW** TinyBlog
- ✦ **NEW** Pharo with Style
- ✦ under writing: Spec20, Testing in Pharo, Iceberg, Concurrency



https://github.com/pharo-open-documentation/awesome-pharo

Search or jump to... Pull requests Issues Marketplace Explore

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pharo-open-documentation / awesome-pharo

Code Issues 6 Pull requests 1 Projects 0 Wiki Security

Insights

A collection of awesome Pharo libraries, tools, frameworks and software.
<https://twitter.com/PharoOpen>

pharo smalltalk awesome-list awesome documentation

libraries


162 commits 55 branches 0 releases 11 contributors CC0-1.0

Branch: master - New pull request Create new file Clone or download - Upload files Find File

jecisc Merge pull request #91 from pharo-open-documentation/juliendelplanque... Latest commit 64947ca 13 days ago

<code>.travis.yml</code>	Set up continuous integration	3 months ago
<code>CODE_OF_CONDUCT...</code>	Create CODE_OF_CONDUCT.md	7 months ago
<code>CONTRIBUTION...</code>	Create CONTRIBUTION.md	7 months ago
<code>LICENCE.md</code>	Add CC0 licence	7 months ago
<code>README.md</code>	Merge pull request #91 from pharo-open-doc...	13 days ago

README.md

Awesome Pharo 

https://github.com/pharo-open-documentation/pharo-wiki

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pharo-open-documentation / pharo-wiki


Code Issues 57 Pull requests 0 Security Insights

Wiki related to the Pharo programming language and environment
<https://twitter.com/PharoOpen>

pharo smalltalk wiki tips-and-tricks tips tricks tutorial
tutorials examples guide guides

594 commits 6 branches 0 releases 21 contributors CC-BY-4.0

Branch: master - New pull request Create new file Upload files Find File Clone or download -

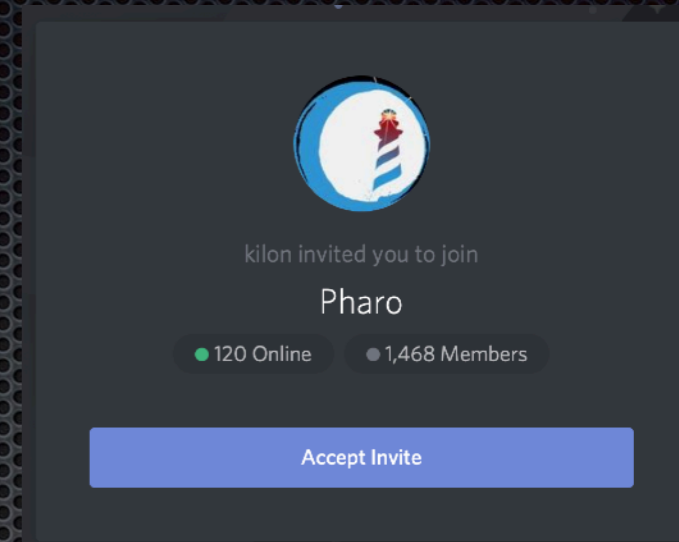
 **juliendelplanque** Merge pull request #209 Latest commit 8584187 6 days ago
from pharo-open-documentation/sorting-collect...

ExternalProjects	Use #writeHeader:	6 months ago
General	Apply suggestions from code review	7 days ago
Migration	Note about new binary streams	4 months ago
PharoProjects	Merge pull request #138 from pharo-open-do...	3 months ago
Resources	Add resources for contribution guide	8 months ago
.travis.yml	Added links to whitelist	3 months ago

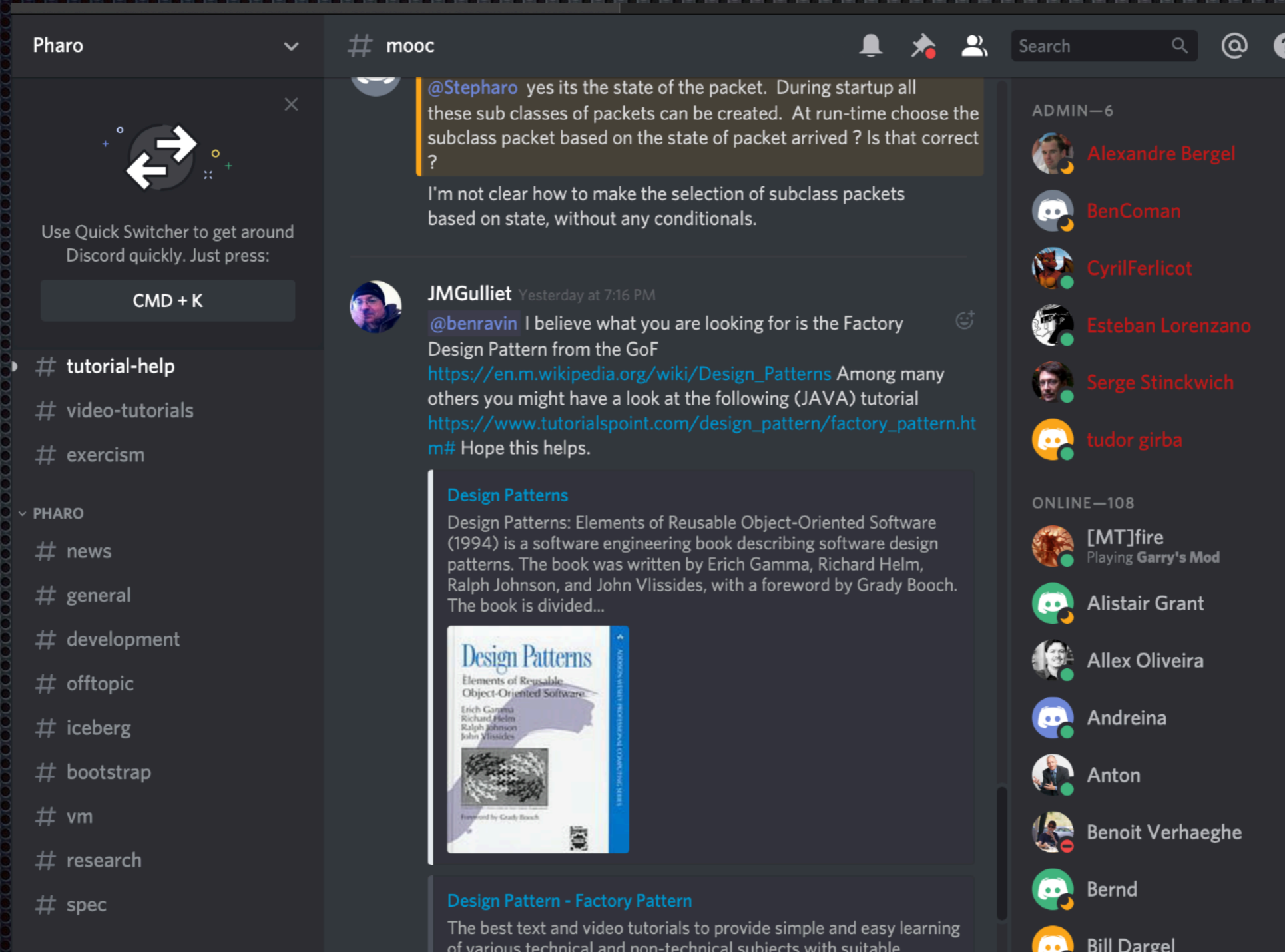


Discord server

<https://discordapp.com/invite/QewZMZa>



Invite card for the Pharo server. It features the server's profile picture (a lighthouse), the name 'Pharo', and statistics: 120 Online and 1,468 Members. A blue 'Accept Invite' button is at the bottom.



A screenshot of a Discord chat window for the 'Pharo' server, specifically in the '# mooc' channel. The interface includes a sidebar with channel lists, a main chat area with messages, and a member list on the right.

Channel List (Left Sidebar):

- Pharo (Server Name)
- # tutorial-help
- # video-tutorials
- # exercism
- PHARO (Server Name)
- # news
- # general
- # development
- # offtopic
- # iceberg
- # bootstrap
- # vm
- # research
- # spec

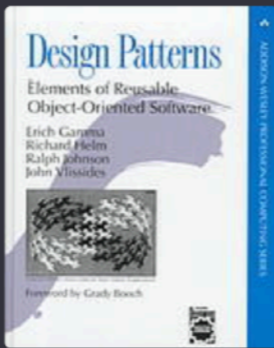
Chat Area (Center):

Message 1: **@Stepharo** yes its the state of the packet. During startup all these sub classes of packets can be created. At run-time choose the subclass packet based on the state of packet arrived ? Is that correct ?

Message 2: I'm not clear how to make the selection of subclass packets based on state, without any conditionals.

Message 3: **JMGulliet** Yesterday at 7:16 PM
@benravin I believe what you are looking for is the Factory Design Pattern from the GoF https://en.m.wikipedia.org/wiki/Design_Patterns Among many others you might have a look at the following (JAVA) tutorial https://www.tutorialspoint.com/design_pattern/factory_pattern.htm Hope this helps.

Design Patterns
Design Patterns: Elements of Reusable Object-Oriented Software (1994) is a software engineering book describing software design patterns. The book was written by Erich Gamma, Richard Helm, Ralph Johnson, and John Vlissides, with a foreword by Grady Booch. The book is divided...



Design Pattern - Factory Pattern
The best text and video tutorials to provide simple and easy learning of various technical and non-technical subjects with suitable

ADMIN—6

- Alexandre Bergel**
- BenComan**
- CyrilFerlicot**
- Esteban Lorenzano**
- Serge Stinckwich**
- tudor girba**

ONLINE—108

- [MT]fire**
Playing Garry's Mod
- Alistair Grant**
- Allex Oliveira**
- Andreina**
- Anton**
- Benoit Verhaeghe**
- Bernd**
- Bill Dargel**



Stepping back for a moment

Pharo is
getting seriously cool!

Iceberg is making us **super** agile and efficient

The screenshot displays the Iceberg IDE interface, which is used for managing Git repositories. The main window is titled "Repositories" and shows a table with columns for Name, Status, and Branch. The "pharo" repository is selected, showing "Uncommitted changes" and the "myb" branch.

Below the main window, a smaller window titled "Repository of pharo" is open, showing the "myb" branch selected in the left sidebar. The main area of this window displays a commit history table with columns for Timestamp, Commit, Author, and Description. The commit history is visualized as a vertical timeline on the left side of the table.

Timestamp	Commit	Author	Description
2019-07-29 20:45	d6485e3	James Foster	Use 'Networ
2019-07-29 04:35	e240d65	James Foster	Include Netv
2019-07-29 02:37	cb4cb7f	James Foster	Move Netwo
2019-07-28 19:47	4389546	StéphaneDucasse	Merge pull re
2019-07-28 19:42	2c74b73	StéphaneDucasse	Merge pull re
2019-07-27 23:56	b78bca0	CyrilFerlicot	Deprecate C
2019-07-27 16:40	080670d	lin777	Resolve som
2019-07-27 13:27	e9aa69e	StéphaneDucasse	Merge pull re
2019-07-27 13:19	5092325	StéphaneDucasse	Merge pull re
2019-07-27 13:16	2130717	StéphaneDucasse	Merge pull re
2019-07-27 08:36	c0d50ec	Marcus Denker	Merge pull re
2019-07-27 04:06	3190cdd	James Foster	Cleanup con
2019-07-27 01:15	9151bf1	carlo.teixeira	fixes #4025
2019-07-26 23:29	c5486b8	Evelyn Cusi Lopez	Update src/S
2019-07-26 23:29	819be36	Evelyn Cusi Lopez	Update src/S

At the bottom of the interface, there are buttons for "Info", "HEAD to 91464d4", and "91464d4 to 4389546". The commit details for the selected commit are shown below:

Commit: [91464d4] 91464d42506726ec8f5b44cd885b0afbd94f4eee
Parents: 4389546, d6485e3
Author: StéphaneDucasse



Plugging are coming :)

The screenshot displays the Pharo IDE interface for the 'Repository of Roassal3'. The top menu includes 'Pharo', 'Tools', 'System', 'Debugging', 'Windows', and 'Help'. Below the menu is a toolbar with 'Push', 'Pull', 'Fetch', 'Branch', and 'Merge' buttons. On the left, a sidebar shows 'Branches' (ASTARES, master) and 'Remotes' (origin, master, pr/16, pr/77, pr/78). A central table lists commit history with columns for 'Timestamp' and 'Com'.

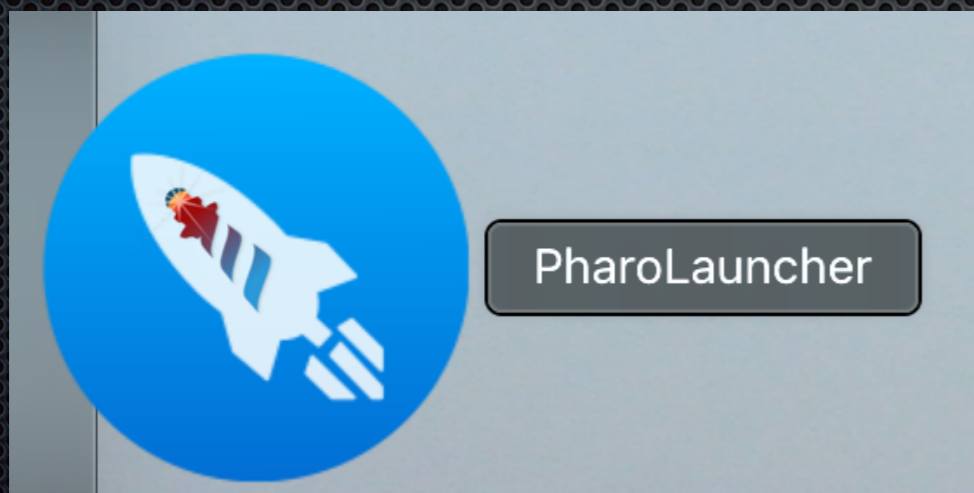
Timestamp	Com
2019-08-09 01:45	bf8f7
2019-08-08 12:54	d7da
2019-08-08 12:27	d0af1
2019-08-08 12:25	e1dd
2019-08-08 11:30	4083c
2019-08-08 11:27	7557f
2019-08-08 11:20	b9f2f
2019-08-08 01:54	c2b4
2019-08-07 23:59	453dc
2019-08-07 23:58	f36af
2019-08-07 20:33	a042a
2019-08-07 20:32	afb5c
2019-08-07 20:14	a8ad
2019-08-06 03:18	8ee4e
2019-08-06 02:16	1f723
2019-08-06 02:14	36e90
2019-08-06 00:22	01bcf
2019-08-06 00:05	0dbd
2019-08-05 23:56	a5cf0
2019-08-05 23:53	2758e
2019-08-05 23:35	aca67
2019-08-05 23:28	c8a3t
2019-08-05 22:14	6112
2019-08-05 22:03	e6a8t
2019-08-05 18:56	8f950
2019-08-05 18:56	735b
2019-08-02 22:21	779e

The main area shows a class hierarchy diagram for 'RSAbstractUMLRenderer' and 'RSUMLCalypso'. The diagram includes classes like 'RSAbstractUMLClassRenderer', 'RSAbstractUMLPackageRenderer', 'RSBasicUMLClassRenderer', 'RSTorchUMLClassRenderer', 'RSBasicUMLPackageRenderer', 'RSUMLAbstractModelDescriptor', 'RSUMLClassDescriptor', 'RSUMLPackageDescriptor', 'RSActivityMonitorView', 'RSUMLClassCalypso', 'RSUMLPackageCalypso', 'RSUMLClassCalypso', 'RSUMLAbstractBuilder', 'RSUMLPackageBuilder', 'RSUMLClassBuilder', 'RSInspectableExample', and 'TSAthensRenderer'. A file browser on the left shows the 'SRC' directory structure, including 'Roassal3-Examples', 'Roassal3-Inspector', and 'Roassal3-Interaction'.



Much better Pharo Launcher

- ✦ Much better support for windows
- ✦ New library to call windows
- ✦ 64 bits



About the “pharo is moving”...

No my friend, Pharo is massively

improving

More tests than ever

Much stronger and better process



Constant enhancements

pharo

Pharo is a dynamic reflective pure object-oriented language supporting live programming inspired by Smalltalk.



- bootstrap
- language
- tools
- mit
- pharo
- live-programming
- object-oriented-programming

● Smalltalk MIT 175 342 462 26 Updated 1 hour ago

pharo-project / pharo Unwatch 38 Unstar 342 Fork 175

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Pharo is a dynamic reflective pure object-oriented language supporting live programming inspired by Smalltalk. <http://pharo.org> [Edit](#)

[pharo](#) [Manage topics](#)

8,403 commits 5 branches 348 releases 94 contributors MIT

Branch: Pharo8.0 [New pull request](#) [Create new file](#) [Upload files](#) [Find File](#) [Clone or download](#)

MarcusDenker Merge pull request #4368 from MarcusDenker/4080-remove-the-class-inst... Latest commit d66e5a4 1 hour ago



Constant enhancements

pharo-project / pharo

Unwatch - 38 Unstar 342 Fork 175

Code Issues 463 Pull requests 24 Wiki Security Insights

Settings

- Pulse
- Contributors
- Community
- Traffic
- Commits
- Code frequency
- Dependency graph
- Network
- Forks
- People

July 20, 2019 – August 20, 2019 Period: 1 month -

Overview

209 Active Pull Requests 181 Active Issues

188 Merged Pull Requests	21 Proposed Pull Requests	122 Closed Issues	59 New Issues
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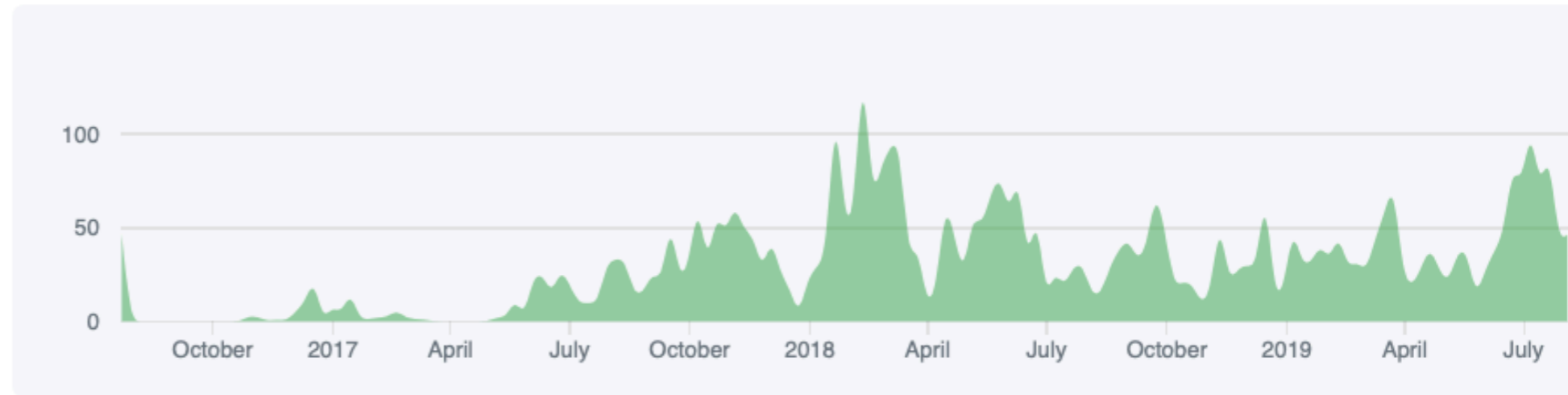
Excluding merges, 22 authors have pushed 285 commits to Pharo8.0 and 286 commits to all branches. On Pharo8.0, 1,503 files have changed and there have been 48,990 additions and 53,522 deletions.



Jul 24, 2016 – Aug 9, 2019

Contributions: Commits

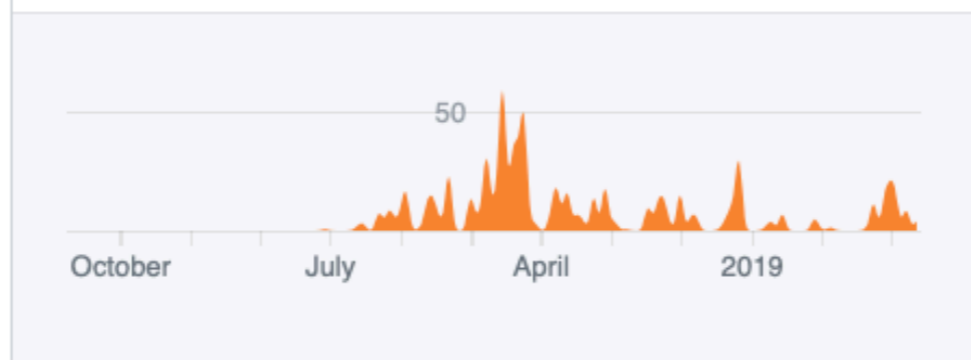
Contributions to Pharo8.0, excluding merge commits



astares

#1

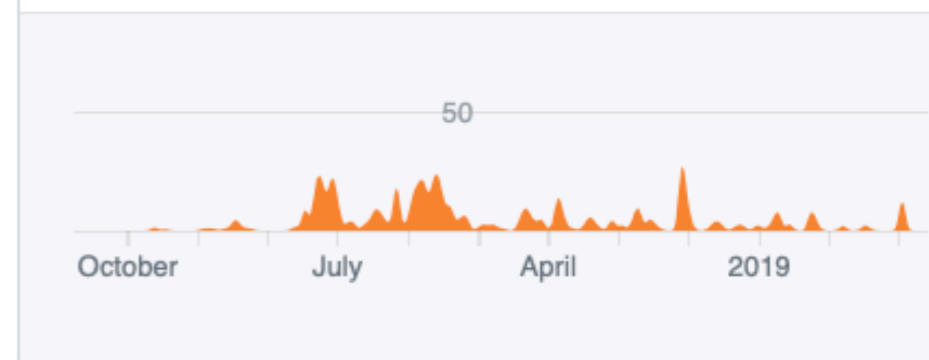
884 commits **41,873 ++** **35,866 --**



pavel-krivanek

#2

619 commits **169,294 ++** **178,118 --**



MarcusDenker

#3

592 commits **18,135 ++** **26,105 --**



guillep

#4

424 commits **1,738,163 ++** **833,872 --**



jecisc

#5

377 commits **151,528 ++** **112,912 --**



tesonep

#6

319 commits **38,630 ++** **67,966 --**

Yes you really can join

Better process: Github @ Work

- Public and transparent
- Code review / discussion
- Not a single commit without a PR
- Systematic automated validation



Much

more tests



More low-level tests

- ✦ Compiler tests (optimised, unoptimised, fullblock, ...)
- ✦ UI tests on multiple back-ends
- ✦ More virtual machine tests
- ✦ FFI marshalling tests!! (yes with libs in C to test)

Architecture for test analysis

DrTests is there to get gold out (y)our tests

Better usability

New test analyses are coming

Much more tests

Parameterised tests are
simply gorgeous

Validated comments

- More comments and turned into tests
- Verified executable comments!

```
asInteger
```

```
"Return the integer present in the receiver, or nil. In case of float, re
```

```
"'1' asInteger >>> 1"
```

```
"'-1' asInteger >>> -1"
```

```
"'10' asInteger >>> 10"
```

```
"'a' asInteger >>> nil"
```

```
"'1.234' asInteger >>> 1"
```

```
^self asSignedInteger
```

You can have an impact

- ✦ With one hour per week...
- ✦ Enhance tests
- ✦ Discord...
- ✦ Add tests
- ✦ Review fixes
- ✦ Open `***clear***` issue
- ✦ Fix simple points
- ✦ Make us focus on difficult points



The background features the word "Pharo" in a large, blue, sans-serif font with a halftone dot pattern. To the right of the text is a circular graphic of a globe with a red maple leaf on its right side. The entire background has a dark blue halftone dot pattern.

Pharo is really getting
seriously productive!

Give a hand and invent the
future with us