



Community Metrics Report

Tully Foote
Reporting on July 2017

Comparisons are to July 2016 Report

Contents

Awareness Metrics
Membership Metrics
Engagement Metrics
Code Metrics

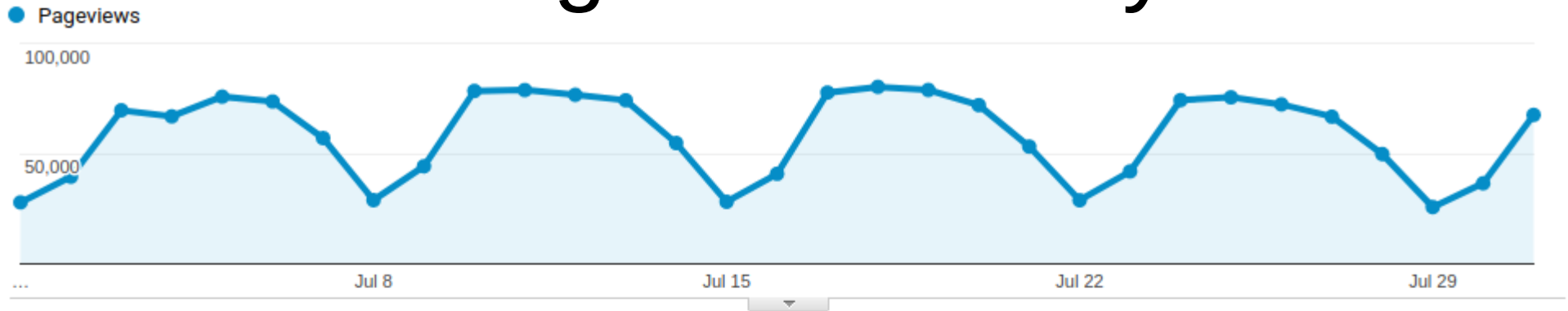
Source: Metrics categories borrowed from Dawn Foster of MeeGo:
<http://wiki.meego.com/Metrics>

Awareness Metrics

Discovering the community, learning more about it
(potential community members)

ros.org: Visitors & Page Views

wiki.ros.org Visitors: July 2017



Pageviews

1,816,181

Unique Pageviews

1,414,731

Avg. Time on Page

00:02:54

Bounce Rate

43.74%

% Exit

27.61%

Site Content

Page

Page Title

Site Search

Search Term

Site: wiki.ros.org
Source: Google Analytics
Annual Growth: 30%

Page

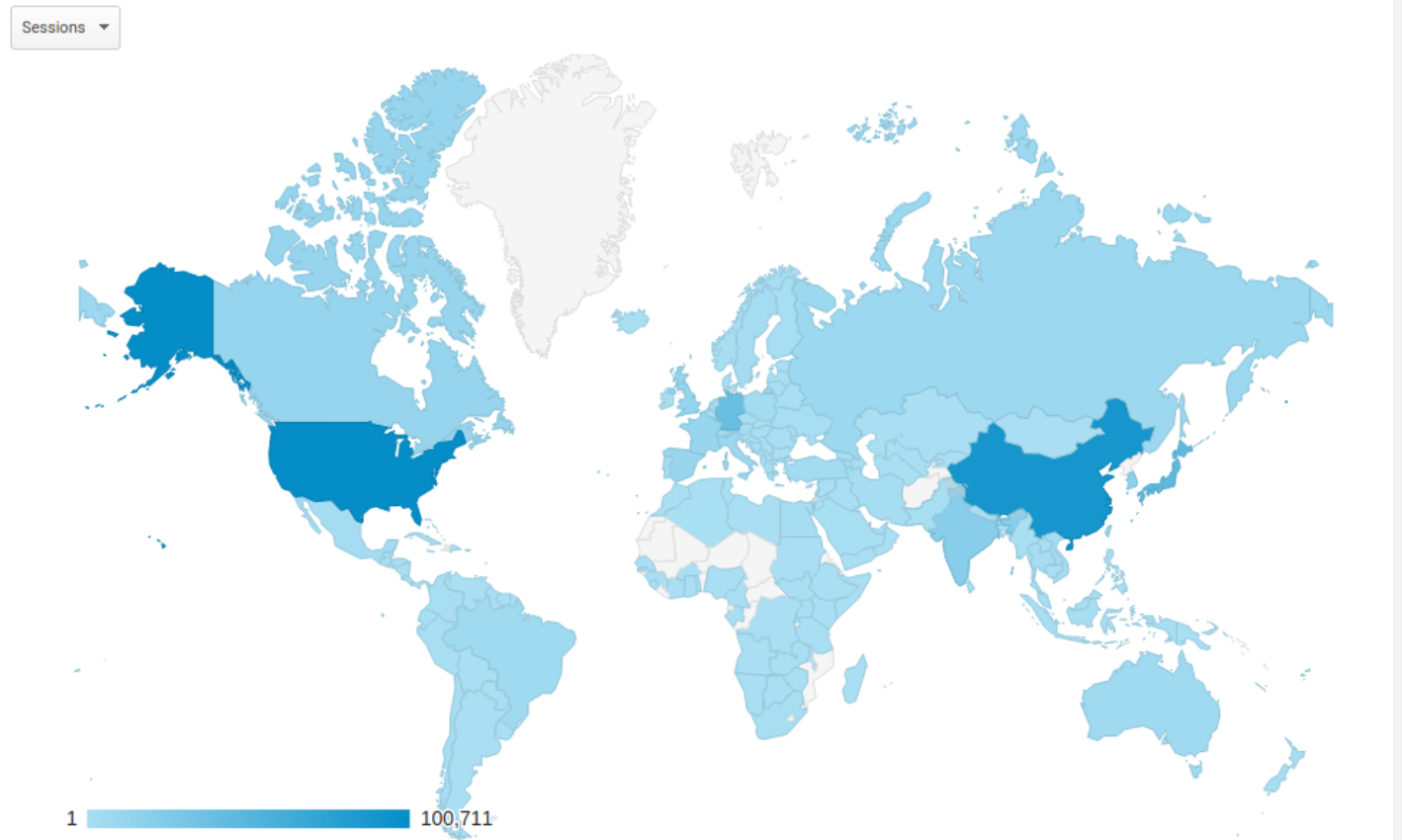
Pageviews

% Pageviews

1.	/ROS/Tutorials	82,409	4.54%
2.	/	54,003	2.97%
3.	/ROS/Installation	34,158	1.88%
4.	/kinetic/Installation/Ubuntu	33,529	1.85%
5.	/cn/ROS/Tutorials	28,981	1.60%
6.	/kinetic/Installation	25,496	1.40%
7.	/ROS/Tutorials/InstallingandConfiguringROSEnvironment	23,397	1.29%
8.	/indigo/Installation/Ubuntu	20,489	1.13%
9.	/ROS/Tutorials/CreatingPackage	19,803	1.09%
10.	/ROS/Tutorials/WritingPublisherSubscriber(c++)	17,871	0.98%

wiki.ros.org visitor locations:

1.	 United States	100,711 (20.08%)
2.	 China	90,120 (17.97%)
3.	 Japan	45,834 (9.14%)
4.	 Germany	39,590 (7.89%)
5.	 India	20,632 (4.11%)
6.	 South Korea	16,683 (3.33%)
7.	 United Kingdom	12,784 (2.55%)
8.	 Taiwan	11,809 (2.35%)
9.	 Canada	11,685 (2.33%)
10.	 France	11,651 (2.32%)
11.	 Spain	10,445 (2.08%)
12.	 Singapore	9,751 (1.94%)
13.	 Italy	9,366 (1.87%)
14.	 Hong Kong	9,289 (1.85%)
15.	 Russia	8,380 (1.67%)
16.	 Australia	6,346 (1.27%)
17.	 Brazil	5,959 (1.19%)
18.	 Switzerland	4,474 (0.89%)
19.	 Turkey	4,399 (0.88%)
20.	 Netherlands	4,343 (0.87%)
21.	 Poland	4,176 (0.83%)
22.	 Sweden	3,159 (0.63%)
23.	 Portugal	3,150 (0.63%)
24.	 Mexico	3,124 (0.62%)
25.	 Greece	2,683 (0.54%)



Source: Google Analytics
Site: wiki.ros.org in July 2017

Public wiki.ros.org Mirrors

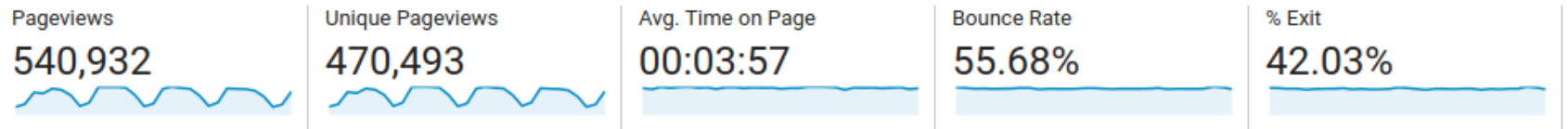
- Asia:
 - Singapore
 - Sun Yat-Sen University, China
 - China
 - Tokyo, Japan
- Europe:
 - Ireland
 - Freiburg, Germany
 - Barcelona, Catalonia
- North America:
 - College Park, Maryland
 - Saint Louis, Massachusetts
- South America
 - Sao Paulo, Brazil

This report does not include data from these mirrors.

Source: <http://wiki.ros.org/Mirrors>

answers.ros.org:
visitors

answers.ros.org visitors: July 2017



Site Content

Page

Page Title

Site Search

Search Term

Events

Event Category

Page

Pageviews % Pageviews

Page	Pageviews	% Pageviews
1. /questions/	13,639	2.52%
2. /question/87866/how-to-edit-the-bashrc-file/	3,108	0.57%
3. /question/57213/how-i-completely-remove-all-ros-from-my-system/	1,604	0.30%
4. /questions/ask/	1,450	0.27%
5. /question/188732/e-unable-to-locate-package-ros-indigo-desktop-full/	1,253	0.23%
6. /question/226098/ros-on-ubuntu-xenial-1604/	1,086	0.20%
7. /question/195962/rviz-fixed-frame-world-does-not-exist/	1,075	0.20%
8. /question/246015/installing-turtlebot-on-ros-kinetic/	1,061	0.20%
9. /question/163556/how-to-solve-couldnt-find-an-af_inet-address-for-problem/	1,051	0.19%
10. /question/69754/quaternion-transformations-in-python/	1,010	0.19%

Site: answers.ros.org
Source: Google Analytics
Annual Growth: 38%

Membership Metrics

Taking the time to sign up and join the community
(passive and active community members)

Site & list membership

- discourse.ros.org users
 - 462 (65% increase)
- ros-users@lists.ros.org subscribers (deprecated):
 - 2098 (14% decrease)
- wiki.ros.org users:
 - 6749 (15% increase)
- answers.ros.org users:
 - 18,283 (24% increase)

ROS Discourse under registration spam attack. 4.2k new users discounted, estimated 1.2k users.

Engagement Metrics

Interacting with other community members
(active community members)

wiki.ros.org: activity in July 2017

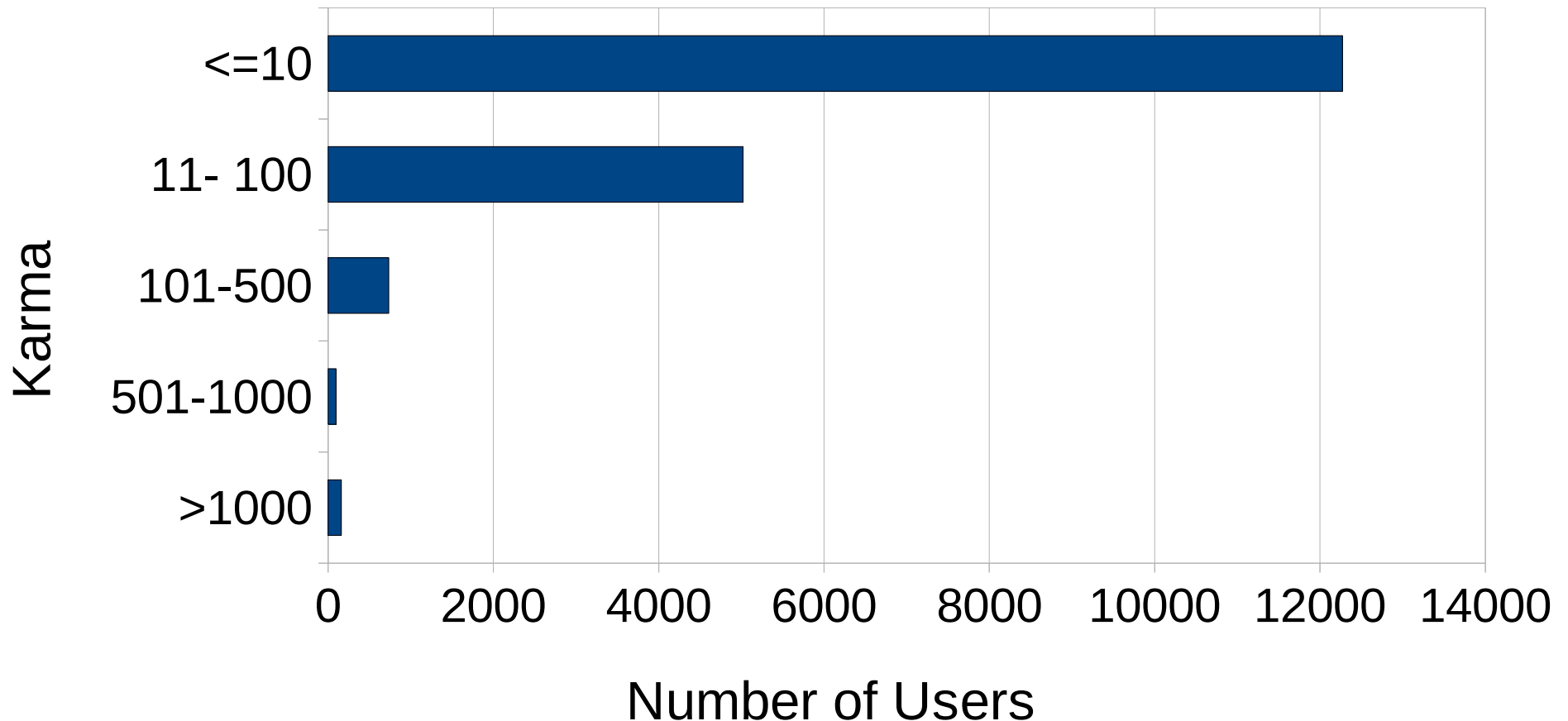
- Wiki pages:
 - 18,839 (10% increase)
- Wiki page edits:
 - 20.1 / day (averaged over July, 36% increase)
- Wiki page views:
 - 58,064 / day (averaged over July, 29% increase)

answers.ros.org: activity

- Total questions:
 - 35,998 (19% increase)
- Answered questions:
 - 24,776 (14% increase)
- New questions in July:
 - 508 (16.4 / day, 5% decrease)

answers.ros.org Karma

Sampled 2017-09-12



Histogram of users by karma. Users get karma points for having answers upvoted (+10) or accepted (+15) and for accepting someone else's answer (+2).

discourse.ros.org activity

ROS Discourse under registration spam attack. 4.2k new users discounted, estimated 1.2k real users.

Site Statistics

	All Time	Last 7 Days	Last 30 Days
Topics	921	22	74
Posts	5.8k	156	441
Users	5.5k	3.6k	4.2k
Active Users	—	175	365
Likes	1.4k	23	77

Source: <http://discourse.ros.org/about>
Sampled: 2017-09-12

Code Metrics

Engaging with the ROS project at a code level
(developers and users)

Binary Downloads – July 2017

- Total traffic on packages.ros.org:
 - 232,577 Unique Visitors (105 % increase)
 - 4714.22 GB (54% increase)
- Total downloads of .deb packages:
 - 13,441,711 (59% increase)
- Unique package names downloaded as .deb files:
 - 9395 (24% increase)
- Number of unique versions of .deb packages downloaded:
 - 53,382 (16 % decrease)

Source: Apache2, counting only debian packages from the main repository (not the testing repository, shadow-fixed, or mirrors)
Some server logs may have been lost prior to analysis.

Top 40 Downloaded Packages

Direct downloads from packages.ros.org - July 2017

python-catkin-pkg	45940	ros-kinetic-geometry-msgs	27900
python-catkin-pkg-modules	45781	ros-kinetic-rospy	27852
python-rosdep	43695	ros-kinetic-rosout	27761
python-rospkg	40876	ros-kinetic-topic-tools	27564
python-rospkg-modules	40736	ros-kinetic-rosmsg	27530
python-rosdistro	39924	ros-kinetic-rosnode	27508
python-rosdistro-modules	39769	ros-kinetic-diagnostic-aggregator	27461
ros-kinetic-diagnostic-updater	29612	ros-kinetic-image-transport	27416
ros-kinetic-roslisp	29000	ros-kinetic-urdf-parser-plugin	27405
ros-kinetic-ros-comm	28957	ros-kinetic-urdf	27389
ros-kinetic-ros-base	28898	ros-kinetic-std-srvs	27339
ros-kinetic-tf2	28843	ros-kinetic-cv-bridge	27318
ros-kinetic-tf2-msgs	28815	ros-indigo-rviz	27307
ros-kinetic-tf2-ros	28781	ros-kinetic-rosbuild	27272
ros-kinetic-tf2-py	28746	ros-kinetic-std-msgs	27270
ros-kinetic-tf	28677	ros-kinetic-sensor-msgs	27257
ros-kinetic-geneus	28365	ros-kinetic-nav-msgs	27253
ros-kinetic-ros-core	28352	ros-kinetic-roscpp	27241
ros-kinetic-message-generation	28199	ros-kinetic-rosconsole	27229
ros-kinetic-message-filters	27991	ros-kinetic-rosgraph-msgs	27194

Downloads by architecture

Direct downloads from packages.ros.org - July 2017

Architecture

i386: 4.51 %
amd64: 84.48 %
armhf: 4.49 %
arm64: 2.53 %
source: 0.45 %

Debian distro arch

jessie_amd64: 0.37 %
jessie_arm64: 0.05 %
jessie_source: 0.02 %

stretch_amd64: 0.15 %
stretch_arm64: 0.01 %
stretch_source: 0.01 %

Ubuntu distro arch

precise_amd64: 0.49 %
precise_i386: 0.19 %
precise_source: 0.02 %

quantal_amd64: 0.00 %
quantal_i386: 0.00 %

raring_amd64: 0.01 %
raring_i386: 0.01 %

saucy_amd64: 0.17 %
saucy_i386: 0.10 %

trusty_amd64: **34.06 %**
trusty_armhf: **1.17 %**
trusty_i386: **1.98 %**
trusty_source: 0.13 %

Ubuntu distro arch (contd)

utopic_amd64: 0.06 %
utopic_i386: 0.07 %

vivid_amd64: 0.11 %
vivid_i386: 0.08 %

wily_amd64: 0.14 %
wily_i386: 0.06 %

xenial_amd64: **44.24 %**
xenial_arm64: **2.31 %**
xenial_armhf: **3.04 %**
xenial_i386: **1.92 %**
xenial_source: 0.25 %

yakkety_amd64: 0.12 %
yakkety_source: 0.01 %

zesty_amd64: 0.83 %
zesty_source: 0.01 %

Binary Downloads by rosdistro

The fraction of packages downloaded per rosdistro

- Groovy and earlier: 0.21 %
- Hydro: 0.44 %
- Indigo: 32.43 % (Long Term Support Release)
- Jade: 2.22 %
- Kinetic: 50.08 % (Long Term Support Release)
- Lunar: 3.41 %
- Rosdistro independent: 11.22% (packages like python-roscpp and python-roscpp-msgs, as well as backported 3rdparty libraries like pcl and colladadom)

Source: Apache2, counting only downloads from the main repository (not the testing repository, shadow-fixed, or mirrors)

Public Debian Package Mirrors

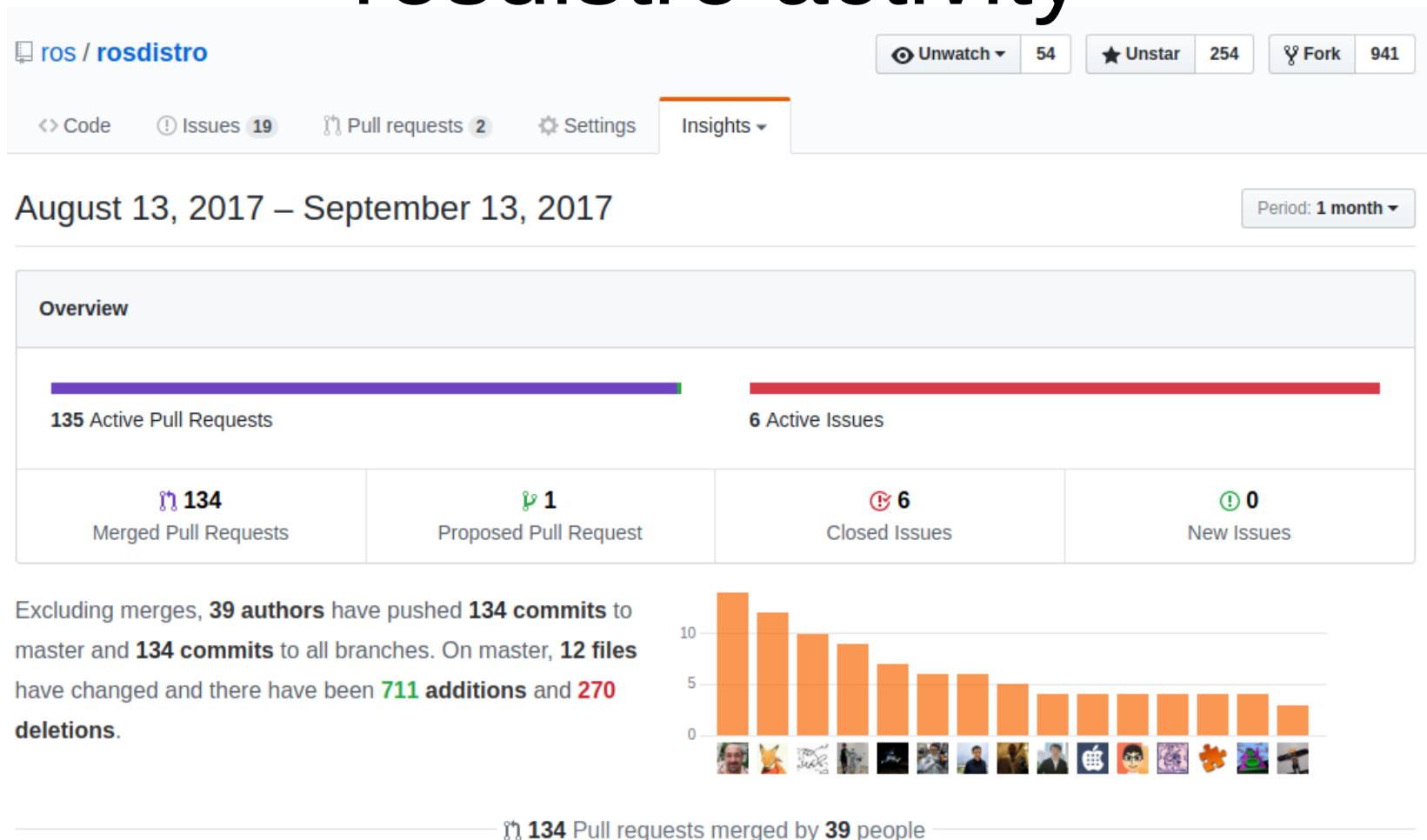
- Hefei (China)
- Sun Yat-Sen University (China)
- Shanghai (China)
- Ireland
- Singapore
- Freiburg (Germany)
- Delft University of Technology (The Netherlands)
- University of Maryland (USA)
- Case Western Reserve University (USA)
- Centro Universitário da FEI (Brazil)
- University of Tokyo(Japan)

This report does not include data from these mirrors.

Source:

<http://wiki.ros.org/ROS/Installation/UbuntuMirrors>

roscistro activity



The roscistro <http://github.com/ros/rosdistro> is the repository where releases are managed and the main index of publicly announced ROS packages. Most pull requests on this repository are requests for indexing or packaging of ROS packages.

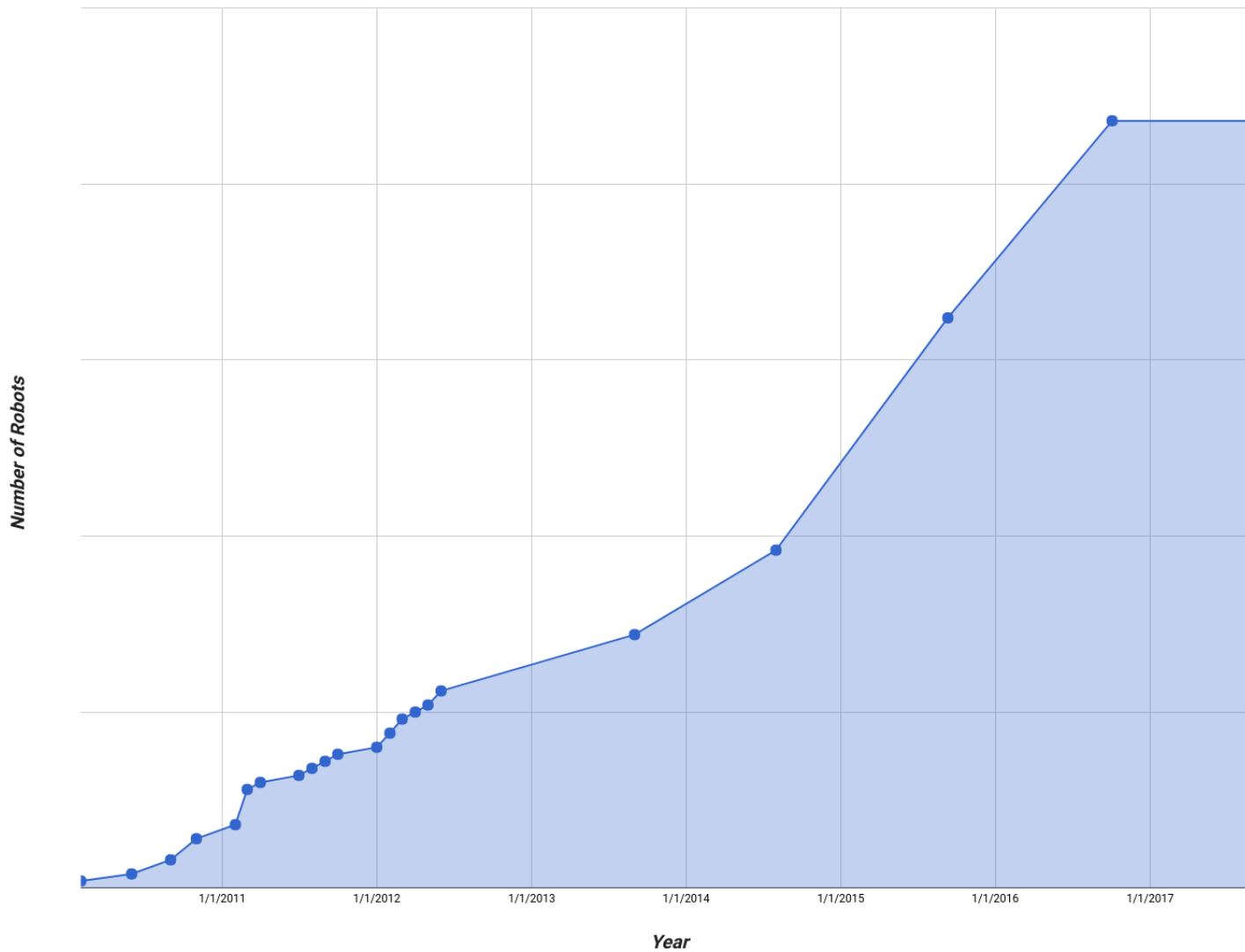
Research use

Total number of papers citing “ROS: an open-source Robot Operating System” (Quigley et al., 2009):

3704 (38% increase)

Source: Google Scholar 2017-09-13

Robots listed on robots.ros.org



The number of different types of robots available to the community with ROS drivers.

Source: Ken Conley, Tully Foote, wiki.ros.org/Robots, 2017 changed over to Robots.ros.org