



Community Metrics Report

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Reporting on August 2021

Comparisons are to July 2020 Report

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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 2021



Users
208,563

Sessions
689,547

Pageviews
1,921,487

Avg. Session Duration
00:05:42

New Users
138,527

Number of Sessions per User
3.31

Pages / Session
2.79

Bounce Rate
51.90%

Site: wiki.ros.org
Source: Google Analytics
YoY Growth: -1.9%

Language	Users	% Users
1. en-us	92,495	43.54%
2. zh-cn	47,048	22.14%
3. en-gb	12,759	6.01%
4. ja	11,626	5.47%
5. ko-kr	7,848	3.69%
6. zh-tw	3,905	1.84%
7. de-de	3,858	1.82%
8. de	2,843	1.34%
9. en	2,511	1.18%
10. es-es	2,322	1.09%

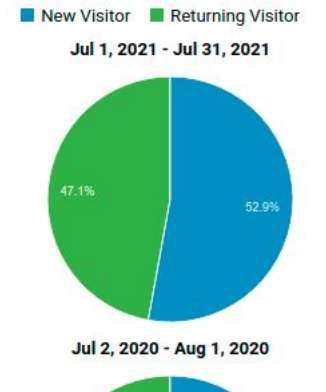
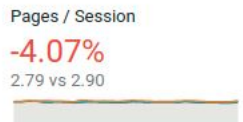
wiki.ros.org Visitors: 2020 vs 2021

Overview

Users vs. [Select a metric](#)

Hourly Day Week Month

Jul 1, 2021 - Jul 31, 2021: ● Users
 Jul 2, 2020 - Aug 1, 2020: ● Users



wiki.ros.org Visitors: 2020 vs 2021

We currently do not have a Google Analytics tracker on docs.ros.org (ROS 2 documentation).


We suspect that the drop in wiki visitors is related to an increase in ROS 2 documentation visitors.

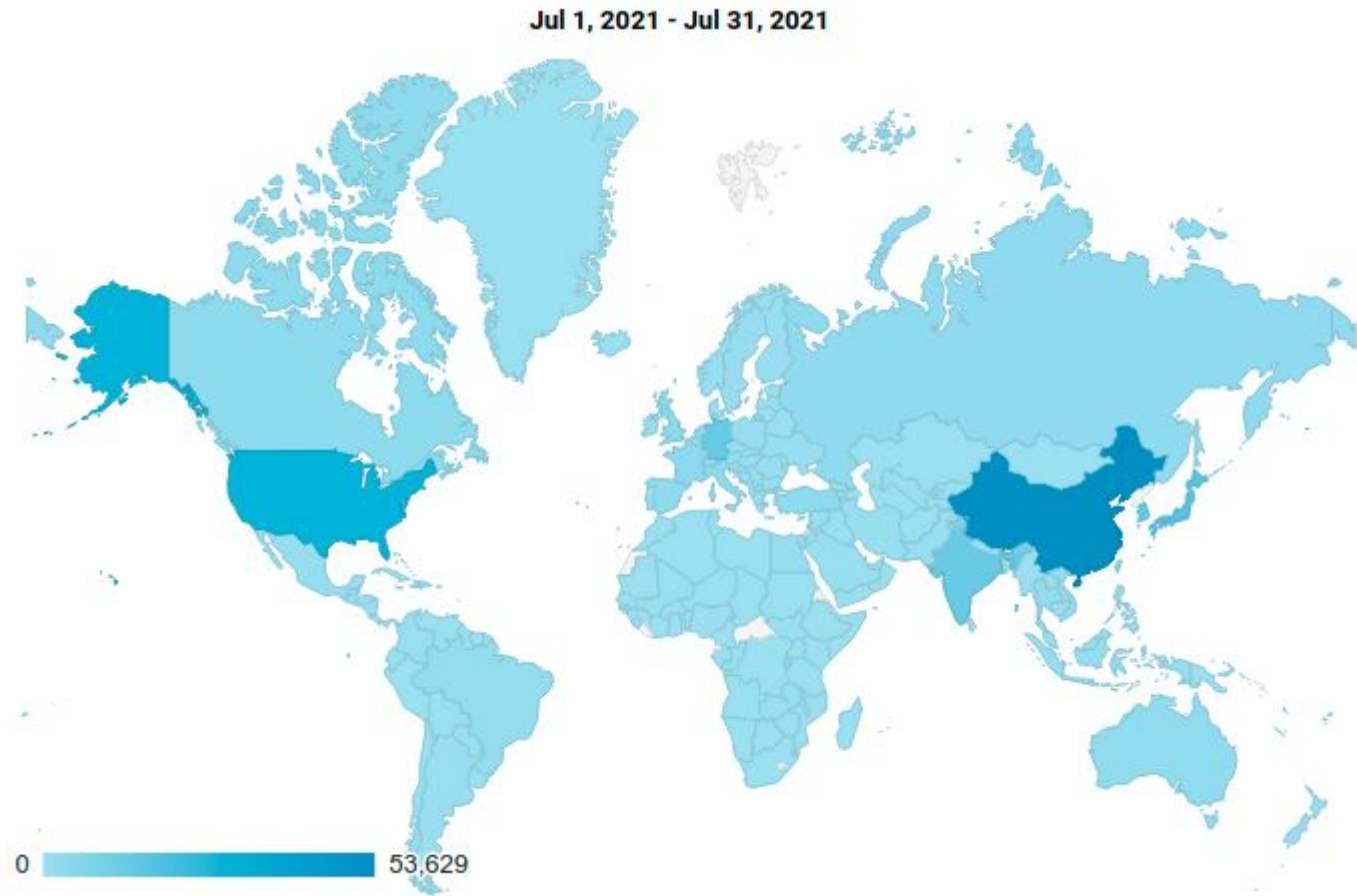


wiki.ros.org YoY Visitors: July 2021

<input type="checkbox"/>	User Type [?]	Acquisition			Behavior		
		Users [?] ↓	New Users [?]	Sessions [?]	Bounce Rate [?]	Pages / Session [?]	Avg. Session Duration [?]
		5.87% ▲ 208,563 vs 196,993	9.21% ▲ 139,111 vs 127,383	1.05% ▲ 689,547 vs 682,373	3.03% ▲ 51.90% vs 50.37%	4.07% ▼ 2.79 vs 2.90	6.76% ▼ 00:05:42 vs 00:06:07
<input type="checkbox"/>	1. New Visitor						
	Jul 1, 2021 - Jul 31, 2021	136,404 (52.86%)	139,111 (100.00%)	139,111 (20.17%)	59.03%	2.45	00:03:34
	Jul 2, 2020 - Aug 1, 2020	127,923 (52.49%)	127,383 (100.00%)	127,383 (18.67%)	57.41%	2.54	00:03:50
	% Change	6.63%	9.21%	9.21%	2.82%	-3.86%	-6.94%
<input type="checkbox"/>	2. Returning Visitor						
	Jul 1, 2021 - Jul 31, 2021	121,654 (47.14%)	0 (0.00%)	550,436 (79.83%)	50.10%	2.87	00:06:14
	Jul 2, 2020 - Aug 1, 2020	115,772 (47.51%)	0 (0.00%)	554,990 (81.33%)	48.76%	2.99	00:06:38
	% Change	5.08%	0.00%	-0.82%	2.75%	-3.84%	-5.99%

wiki.ros.org visitor locations: 2021

	208,563
	% of Total: 100.00% (208,563)
1.  China	53,629 (24.77%)
2.  United States	29,584 (13.66%)
3.  Japan	17,528 (8.09%)
4.  South Korea	13,851 (6.40%)
5.  Germany	13,519 (6.24%)
6.  India	13,082 (6.04%)
7.  Taiwan	5,462 (2.52%)
8.  Singapore	4,431 (2.05%)
9.  Hong Kong	4,065 (1.88%)
10.  United Kingdom	4,028 (1.86%)
11.  France	3,756 (1.73%)
12.  Canada	3,555 (1.64%)
13.  Italy	3,384 (1.56%)
14.  Russia	2,970 (1.37%)
15.  Turkey	2,908 (1.34%)
16.  Spain	2,827 (1.31%)
17.  Australia	2,529 (1.17%)
18.  Brazil	2,078 (0.96%)
19.  Thailand	2,034 (0.94%)
20.  Vietnam	1,701 (0.79%)
21.  Netherlands	1,684 (0.78%)
22.  Philippines	1,586 (0.73%)
23.  Indonesia	1,393 (0.64%)



Source: Google Analytics
Site: wiki.ros.org in July 2021

Public wiki.ros.org Mirrors

- Asia:
 - Singapore
 - China
 - Tokyo, Japan
 - Ho Chi Minh, Vietnam
- Europe:
 - Ireland
 - Freiburg, Germany
 - Barcelona, Catalonia

This report does not include data from these mirrors.

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

- North America:
 - College Park, Maryland
 - Saint Louis, Massachusetts
 - Potsdam, New York
- South America
 - Sao Paulo, Brazil

answers.ros.org visitors: July 2021



Users

156,533

New Users

114,130

Sessions

426,861

Number of Sessions per User

2.73

Pageviews

841,213

Pages / Session

1.97

Avg. Session Duration

00:04:55

Bounce Rate

63.97%

answers.ros.org visitors: July 2021 vs July 2020

Jul 1, 2021 - Jul 31, 2021: ● Users
Jul 2, 2020 - Aug 1, 2020: ● Users



Users

11.41%

156,533 vs 140,508



New Users

13.35%

114,130 vs 100,692



Sessions

11.06%

426,861 vs 384,358



Number of Sessions per User

-0.31%

2.73 vs 2.74



Pageviews

8.33%

841,213 vs 776,497



Pages / Session

-2.45%

1.97 vs 2.02



Avg. Session Duration

-0.28%

00:04:55 vs 00:04:55



Bounce Rate

0.81%

63.97% vs 63.45%



answers.ros.org
Source: Google Analytics
YoY Growth: 11.41%

index.ros.org visitors: July 2021



Users

13,201

New Users

6,944

Sessions

20,570

Number of Sessions per User

1.56

Pageviews

40,736

Pages / Session

1.98

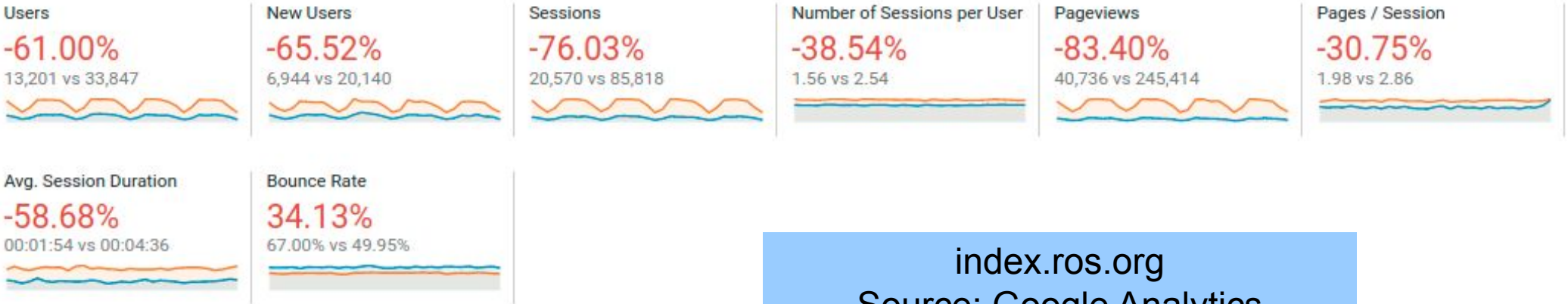
Avg. Session Duration

00:01:54

Bounce Rate

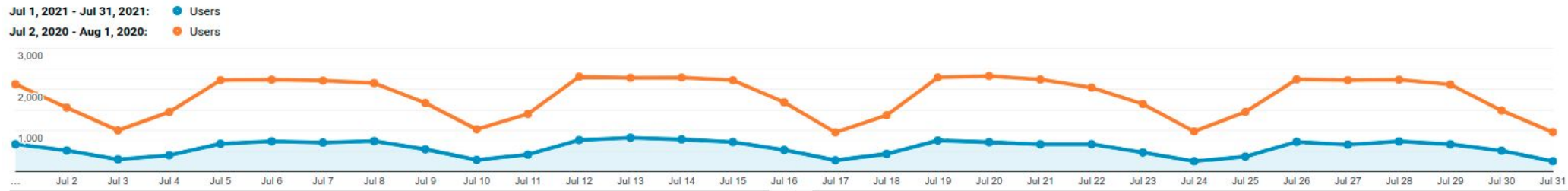
67.00%

index.ros.org visitors: July 2021 vs July 2020

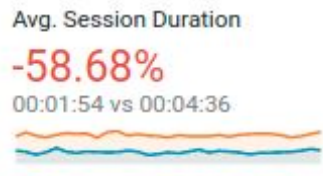


index.ros.org
Source: Google Analytics
YoY Growth: -61%

index.ros.org visitors: July 2021 vs July 2020



We believe that Google has demoted the index.ros.org page rank in the past year, hence the drop in traffic.



index.ros.org
Source: Google Analytics
YoY Growth: -61%

index.ros.org PageRank Demotion

Approximately March of 2021 Google changed its ranking of index.ros.org and traffic was reduced considerably.

All accounts > ros.org
index.ros.org

Try searching "Worst pages by load speed"

Audience Overview

SAVE EXPORT SHARE INSIGHTS

Jan 1, 2020 - Jan 1, 2022

All Users
100.00% Users

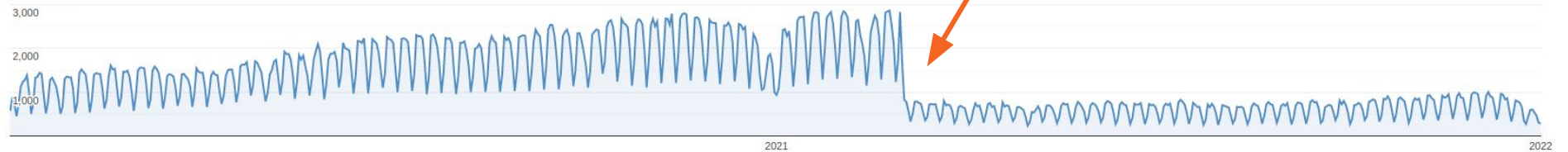
+ Add Segment

Overview

Users vs. Select a metric

Hourly Day Week Month

Users



Users

462,104

New Users

341,654

Sessions

1,326,150

Number of Sessions per User

2.87

Pageviews

3,605,784

Pages / Session

2.72

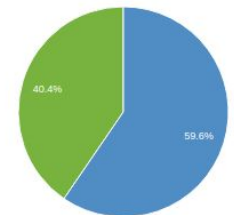
Avg. Session Duration

00:04:09

Bounce Rate

53.29%

New Visitor Returning Visitor



discourse.ros.org Visitors

July 2021



Users

27,525

New Users

20,940

Sessions

45,648

Number of Sessions per User

1.66

Pageviews

81,155

Pages / Session

1.78

Avg. Session Duration

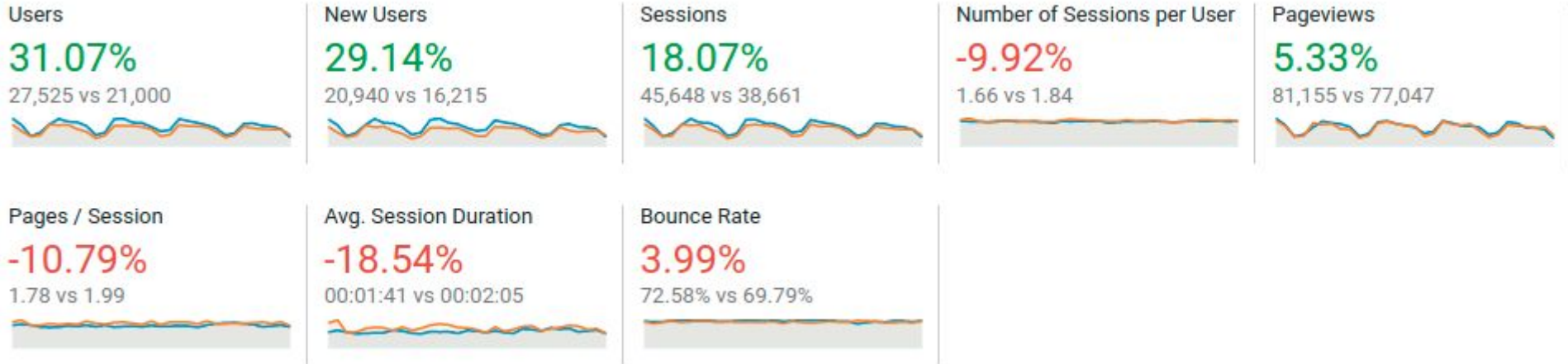
00:01:41

Bounce Rate

72.58%

discourse.ros.org Visitors

July 2021 vs July 2020



discourse.ros.org
Source: Google Analytics
YoY Growth: +31%

Membership Metrics

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

Community Resource Membership

- discourse.ros.org users
 - 7.6k (32% increase)
- wiki.ros.org users:
 - 2020 \Rightarrow 2021
 - 9,148 \Rightarrow 9,764 (~7% increase)
- answers.ros.org users:
 - 40,530 (19% increase)

Sources: MailMan, MoinMoin,
askbot, Discourse
Sampled: 2021-01-28

Engagement Metrics

Interacting with other community members
(active community members)

wiki.ros.org: activity in July 2021

- Wiki pages:
 - 16,542 \Rightarrow 17,320 (+11.2% YoY)
- Wiki page edits:
 - 5.5 / day (-75% YoY)
- Wiki page views:
 - 2020 \Rightarrow 2021
 - 2,026,525 \Rightarrow 1,921,487 (-5.2%)

answers.ros.org: activity

- Between Aug 2020 \Rightarrow Jan 2021
- Total Questions:
 - 54,205 \Rightarrow 63,356 (17% increase)
- Answered Questions:
 - 34,256 \Rightarrow 37,590 (10% increase)
- New questions in July 2020 vs July 2021:
 - 726 \Rightarrow 617 \Rightarrow 15% decrease
 - 23.4 / day \Rightarrow 19.9 / day
 - 7.2% Increase

discourse.ros.org activity

Aug 2020

Site Statistics			
	Last 7	Last 30	All Time
Topics	30	104	4.4k
Posts	290	1.2k	38.8k
Users	54	194	5.7k
Active Users	519	947	—
Likes	263	984	17.6k

Jan 2022

Site Statistics				
	Last 24 hours	Last 7 days	Last 30 days	All Time
Topics	4	20	72	6.1k
Posts	39	223	834	55.6k
Users	8	58	210	7.6k
Active Users	200	557	928	—
Likes	29	144	675	30.5k

Topics	+39%
Posts	+43%
Users	+32%
Likes	+73%

Source: <http://discourse.ros.org/about>
Sampled: 2022-1-28

Code Metrics

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

Binary Downloads

	July 2020	July 2021	YoY Change
Total Pkgs	86128	89144	3.50%
Diff Pkgs	16044	19197	19.65%
Deb Downloads	38554145	35036199	-9.12%
Unique Visitors	714,247	789,956	10.60%

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

Binary Downloads

	July 2020	July 2021	YoY Change
ROS is maturing and sync cycles have slowed. We believe that this impacted Deb Downloads in 2021. There were <u>five</u> syncs in July 2021 vs <u>nine</u> syncs in July 2020			3.50%
			19.65%
Deb Downloads	38554145	35036199	-9.12%
Unique Visitors	714,247	789,956	10.60%

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

Top 20 Downloaded Packages

Direct downloads from packages.ros.org - July 2021

Distro	2020 %	2021 %	YoY Change
boxturtle	0	0	0
cturtle	0	0	0
diamondback	0	0	0
electric	0	0	0
fuerte	0	0	0
groovy	0	0	0
hydro	0	0	0
indigo (LTS)	1.18	0.8	-0.38
jade	0	0	0
kinetic (LTS)	22.04	8.54	-13.5
lunar	0.18	0.1	-0.08
melodic (LTS)	47.06	35.24	-11.82
noetic (LTS)	4.43	18.97	14.54
ardent	0.01	0	-0.01
bouncy	0.03	0	-0.03
crystal	0.12	0.04	-0.08
dashing LTS	7.3	2.5	-4.8
eloquent	4.65	0.61	-4.04
foxy (LTS)	2.14	14.29	12.15
galactic	0	6.38	6.38
none	10.78	2.23	-8.55

Deb Downloads, Visitors, Packages

Direct downloads from packages.ros.org - July 2021

	July 2020	July 2021	YoY Change
Total Pkgs	86128	89144	3.50%
Diff Pkgs	16044	19197	19.65%
Deb Downloads	38554145	35036199	-9.12%
Unique Visitors	714,247	789,956	10.60%

Deb Downloads, Visitors, Packages

	Year Ending July 2020	Year ending July 2021	YoY Change
Total Pkgs	402,106.00	600,660.00	49.38%
Diff Pkgs	16,083.00	19,884.00	23.63%
Deb Downloads	395,187,333.00	595,524,493.00	50.69%
Data Served (TB)	231.19	156.60	-32.26%

Direct downloads from packages.ros.org - August 2020 - July 2021

Downloads by OS & Architecture

Direct downloads from packages.ros.org - July 2021

Results larger than 0.001%

Arch	2020 %	2021 %	YoY Change
bionic_amd64	54.96	33.43	-21.53
bionic_arm64	3.63	4.75	1.12
bionic_armhf	0.49	0.18	-0.31
buster_amd64	0.12	0.15	0.12
buster_arm64	0.02	0.02	0.02
focal_amd64	6.60	41.40	6.60
focal_arm64	0.36	2.18	0.36
focal_armhf	0.05	0.10	0.05
stretch_amd64	0.15	0.06	-0.09
stretch_arm64	0.04	0.03	-0.01
trusty_amd64	1.25	0.87	-0.38
trusty_armhf	0.03	0.02	-0.01
trusty_i386	0.04	0.03	-0.01
xenial_amd64	21.35	8.03	-13.32
xenial_arm64	0.29	0.17	-0.12
xenial_armhf	0.38	0.18	-0.2
xenial_i386	0.26	0.25	-0.01

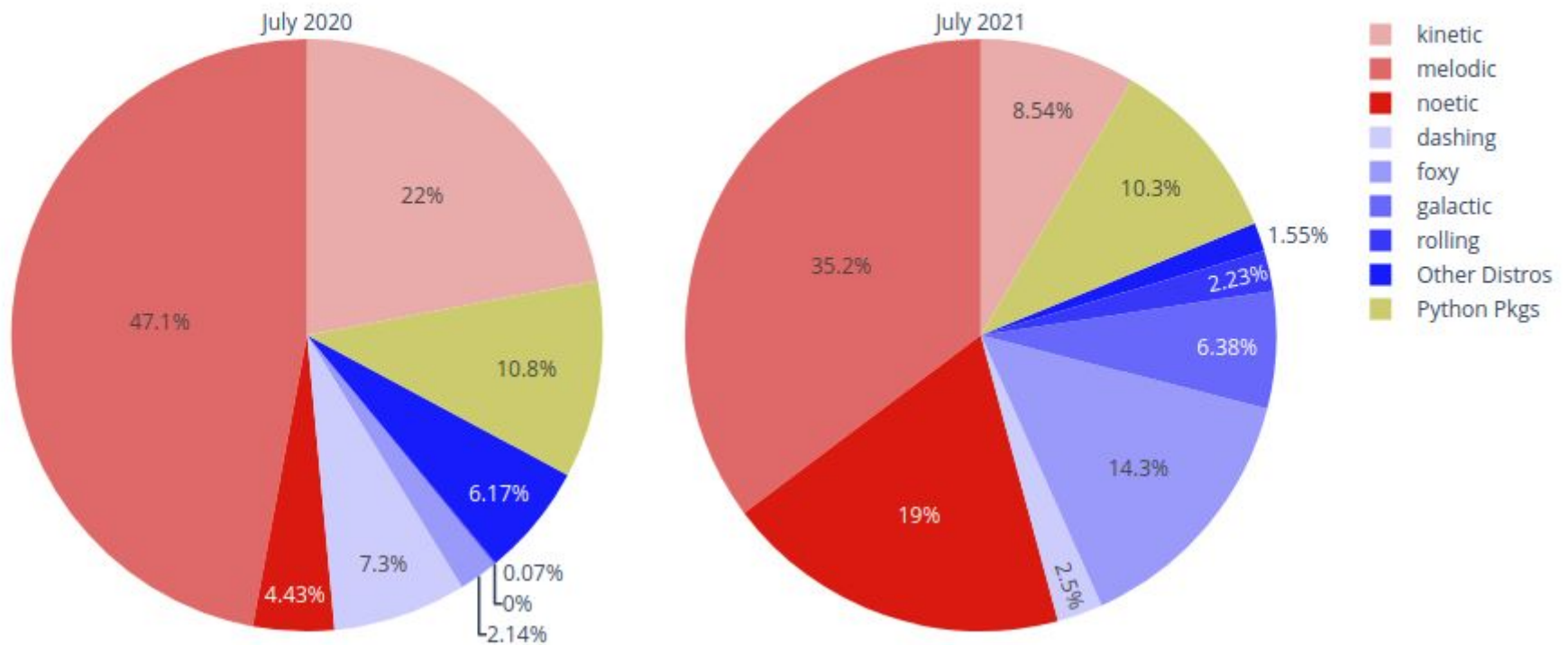
July 2021 Binary Downloads by rosdistro

Distro	2020 %	2021 %	YoY Change
indigo (LTS)	1.18	0.8	-0.38
kinetic (LTS)	22.04	8.54	-13.5
lunar	0.18	0.1	-0.08
melodic (LTS)	47.06	35.24	-11.82
noetic (LTS)	4.43	18.97	14.54
ardent	0.01	0	-0.01
bouncy	0.03	0	-0.03
crystal	0.12	0.04	-0.08
dashing LTS	7.3	2.5	-4.8
eloquent	4.65	0.61	-4.04
foxy (LTS)	2.14	14.29	12.15
galactic	0	6.38	6.38
rolling	NA	2.23	NA

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

Binary Downloads by rosdistro July 2020 vs July 2021

Download Percentage from packages.ros.org



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

Public Debian Package Mirrors

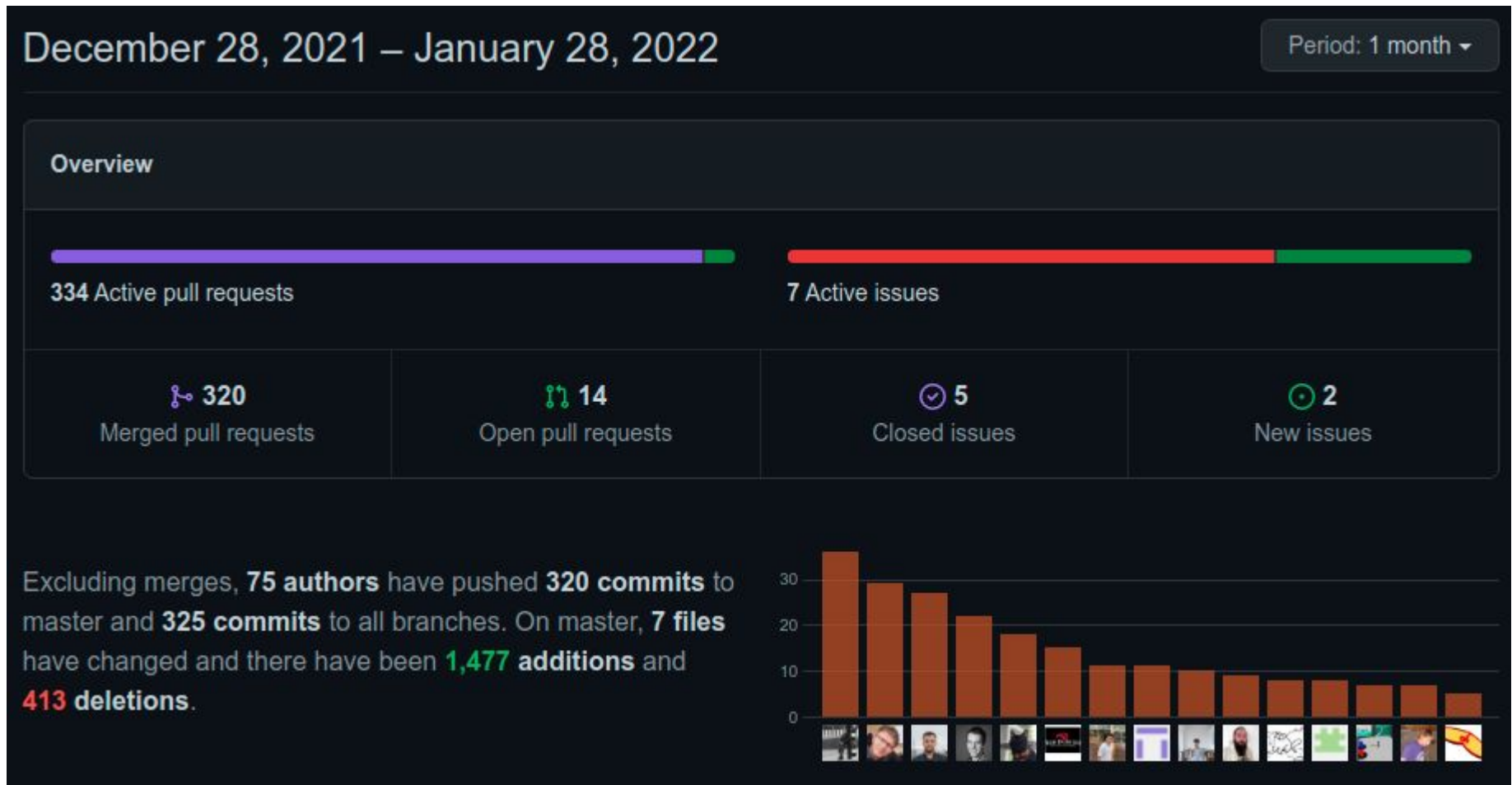
- Singapore
- Freiburg (Germany)
- University of Tokyo(Japan)
- Clarkson University (USA)
- University of Maryland (USA)
- Delft University of Technology (The Netherlands)
- Centro Universitário da FEI (Brazil)
- USTC (China)
- Tsinghua University (China)
- Beijing Foreign Studies University (China)
- Shanghai Jiao Tong University(China)

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/roscistro> 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)

7/2020	7410
1/2022	9260
Percent Change	25%

Source: Google Scholar 2022-01-28