Community Metrics Report

Tully Foote
Reporting on July 2016

Comparisons are to July 2015 Report
Awareness Metrics

Discovering the community, learning more about it (potential community members)
ros.org:
Visitors & Page Views
wiki.ros.org Visitors: July 2016

Overview

<table>
<thead>
<tr>
<th>Pageviews</th>
<th>Unique Pageviews</th>
<th>Avg. Time on Page</th>
<th>Bounce Rate</th>
<th>% Exit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,394,363</td>
<td>1,058,375</td>
<td>00:02:49</td>
<td>42.79%</td>
<td>26.44%</td>
</tr>
</tbody>
</table>

Site Content

<table>
<thead>
<tr>
<th>Site Content</th>
<th>Page Title</th>
<th>Site Search</th>
<th>Search Term</th>
<th>Events</th>
<th>Event Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page</td>
<td>Page</td>
<td>Page Title</td>
<td>Page Title</td>
<td>Page Title</td>
<td>Page Title</td>
</tr>
</tbody>
</table>

Site: wiki.ros.org
Source: Google Analytics
Annual Growth: 21%

<table>
<thead>
<tr>
<th>Page Title</th>
<th>Pageviews</th>
<th>% Pageviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ROS/Tutorials</td>
<td>63,899</td>
<td>4.58%</td>
</tr>
<tr>
<td>/</td>
<td>51,515</td>
<td>3.69%</td>
</tr>
<tr>
<td>/ROS/Installation</td>
<td>29,506</td>
<td>2.12%</td>
</tr>
<tr>
<td>/indigo/Installation/Ubuntu</td>
<td>24,773</td>
<td>1.78%</td>
</tr>
<tr>
<td>/kinetic/Installation/Ubuntu</td>
<td>23,933</td>
<td>1.72%</td>
</tr>
<tr>
<td>/ROS/Tutorials/InstallingandConfiguringROSEnvironment</td>
<td>18,178</td>
<td>1.30%</td>
</tr>
<tr>
<td>/cn/ROS/Tutorials</td>
<td>16,057</td>
<td>1.15%</td>
</tr>
<tr>
<td>/ROS/Tutorials/CreatingPackage</td>
<td>15,020</td>
<td>1.08%</td>
</tr>
<tr>
<td>/ROS/Tutorials/WritingPublisherSubscriber(c++)</td>
<td>13,636</td>
<td>0.98%</td>
</tr>
<tr>
<td>/Robots</td>
<td>11,490</td>
<td>0.82%</td>
</tr>
</tbody>
</table>
wiki.ros.org visitor locations:

Source: Google Analytics
Site: wiki.ros.org in July 2016
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

- 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 2016

Site: answers.ros.org
Source: Google Analytics
Annual Growth: 32%

<table>
<thead>
<tr>
<th>Page Content</th>
<th>Pageviews</th>
<th>% Pageviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>/questions/</td>
<td>14,339</td>
<td>3.67%</td>
</tr>
<tr>
<td>/question/87800/how-to-edit-the-bashrc-file/</td>
<td>2,684</td>
<td>0.69%</td>
</tr>
<tr>
<td>/questions/ask/</td>
<td>1,332</td>
<td>0.34%</td>
</tr>
<tr>
<td>/question/225098/ros-on-ubuntu-xenial-1604/</td>
<td>1,300</td>
<td>0.33%</td>
</tr>
<tr>
<td>/question/188732/e-unable-to-locate-package-ros-indigo-desktop-op-fu1/</td>
<td>1,067</td>
<td>0.27%</td>
</tr>
<tr>
<td>/question/57213/how-i-completely-remove-all-ros-from-my-system/</td>
<td>1,061</td>
<td>0.27%</td>
</tr>
<tr>
<td>/question/196455/kinect-installation-and-setup-on-ros-update/</td>
<td>891</td>
<td>0.23%</td>
</tr>
<tr>
<td>/account/signin/?next=/</td>
<td>882</td>
<td>0.23%</td>
</tr>
<tr>
<td>/account/signin/</td>
<td>880</td>
<td>0.23%</td>
</tr>
<tr>
<td>/question/10543/how-do-i-link-a-library-in-cmake/</td>
<td>805</td>
<td>0.21%</td>
</tr>
</tbody>
</table>
Membership Metrics

Taking the time to sign up and join the community (passive and active community members)
Site & list membership

- ros-users@lists.ros.org subscribers:
  - 2445 (18% increase)
- wiki.ros.org users:
  - 5875 (20% increase)
- answers.ros.org users:
  - 14,774 (30% increase)
- discourse.ros.org users
  - 280 (New)

Sources: MailMan, MoinMoin, askbot  
Sampled: 2016-10-03
Engagement Metrics

Interacting with other community members (active community members)
wiki.ros.org: activity in July 2016

• Wiki pages:
  • 17,058 (6% increase)

• Wiki page edits:
  • 14.7 / day (averaged over July, 53% decrease)

• Wiki page views:
  • 44,979 / day (averaged over July, 21% increase)

Source: MoinMoin, Google Analytics (sampled 2016-10-03)
answers.ros.org: activity

• Total questions:
  • 30,243 (26% increase)

• Answered questions:
  • 21,697 (24% increase)

• New questions in July:
  • 533 (17.2 / day, 1.7% increase)

Source: answers.ros.org
Sampled: 2016-10-03
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

### Site Statistics

<table>
<thead>
<tr>
<th></th>
<th>All Time</th>
<th>Last 7 Days</th>
<th>Last 30 Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topics</td>
<td>202</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td>Posts</td>
<td>1.2k</td>
<td>14</td>
<td>151</td>
</tr>
<tr>
<td>New Users</td>
<td>280</td>
<td>9</td>
<td>31</td>
</tr>
<tr>
<td>Active Users</td>
<td>—</td>
<td>38</td>
<td>102</td>
</tr>
<tr>
<td>Likes</td>
<td>208</td>
<td>1</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: http://discourse.ros.org/about
Sampled: 2016-10-03
Code Metrics

Engaging with the ROS project at a code level (developers and users)
Binary Downloads – July 2016

- Total Unique IP addresses downloading .deb files:
  - 113,345 (143% increase)
- Total downloads of .deb packages:
  - 8,441,279 (158% increase)
- Unique package names downloaded as .deb files:
  - 7,582 (35% increase)
- Number of unique versions of .deb packages downloaded:
  - 63,636 (66% decrease)

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.
<table>
<thead>
<tr>
<th>Package Name</th>
<th>Downloads</th>
<th>Package Name</th>
<th>Downloads</th>
</tr>
</thead>
<tbody>
<tr>
<td>ros-indigo-roscpp</td>
<td>26454</td>
<td>ros-indigo-rosbag</td>
<td>25676</td>
</tr>
<tr>
<td>ros-indigo-message-generation</td>
<td>26159</td>
<td>ros-indigo-roslaunch</td>
<td>25667</td>
</tr>
<tr>
<td>ros-indigo-std-msgs</td>
<td>26120</td>
<td>ros-indigo-actionlib-msgs</td>
<td>25647</td>
</tr>
<tr>
<td>ros-indigo-rospy</td>
<td>26022</td>
<td>ros-indigo-rosout</td>
<td>25625</td>
</tr>
<tr>
<td>ros-indigo-roslib</td>
<td>26006</td>
<td>ros-indigo-rotest</td>
<td>25598</td>
</tr>
<tr>
<td>ros-indigo-geometry-msgs</td>
<td>25985</td>
<td>ros-indigo-roslz4</td>
<td>25518</td>
</tr>
<tr>
<td>ros-indigo-message-runtime</td>
<td>25967</td>
<td>ros-indigo-topic-tools</td>
<td>25500</td>
</tr>
<tr>
<td>ros-indigo-sensor-msgs</td>
<td>25950</td>
<td>ros-indigo-rosbag-storage</td>
<td>25486</td>
</tr>
<tr>
<td>ros-indigo-genpy</td>
<td>25948</td>
<td>ros-indigo-message-filters</td>
<td>25450</td>
</tr>
<tr>
<td>ros-indigo-gencpp</td>
<td>25922</td>
<td>ros-indigo-rosservice</td>
<td>25414</td>
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<tr>
<td>ros-indigo-rosconsole</td>
<td>25915</td>
<td>ros-indigo-rosmsg</td>
<td>25368</td>
</tr>
<tr>
<td>ros-indigo-rosgraph-msgs</td>
<td>25887</td>
<td>ros-indigo-rosnode</td>
<td>25342</td>
</tr>
<tr>
<td>ros-indigo-xmlrpcpp</td>
<td>25886</td>
<td>ros-indigo-rostopic</td>
<td>25336</td>
</tr>
<tr>
<td>ros-indigo-rospack</td>
<td>25882</td>
<td>ros-indigo-roswtf</td>
<td>25280</td>
</tr>
<tr>
<td>ros-indigo-rosbuild</td>
<td>25875</td>
<td>ros-indigo-std-srvs</td>
<td>25137</td>
</tr>
<tr>
<td>ros-indigo-rosgraph</td>
<td>25837</td>
<td>ros-indigo-nav-msgs</td>
<td>25111</td>
</tr>
<tr>
<td>ros-indigo-rosclean</td>
<td>25705</td>
<td>ros-indigo-actionlib</td>
<td>25027</td>
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<tr>
<td>ros-indigo-rosmaster</td>
<td>25695</td>
<td>ros-indigo-visualization-msgs</td>
<td>24908</td>
</tr>
<tr>
<td>ros-indigo-rosparam</td>
<td>25686</td>
<td>ros-indigo-pluginlib</td>
<td>24827</td>
</tr>
<tr>
<td>ros-indigo-rosunit</td>
<td>25683</td>
<td>ros-indigo-rosconsole-bridge</td>
<td>24754</td>
</tr>
</tbody>
</table>
Downloads by architecture

Direct downloads from packages.ros.org - July 2016

i386: 7.16 %
amd64: 86.41 %
armhf: 3.62 %
arm64: 0.06 %
source: 0.43 %

jessie_amd64: 0.23 %
jessie_arm64: 0.06 %
jessie_armhf: 0.00 %
jessie_source: 0.01 %
precise_amd64: 1.73 %
precise_i386: 0.70 %
precise_source: 0.03 %
quantal_amd64: 0.04 %
quantal_i386: 0.03 %
quantal_source: 0.03 %
raring_amd64: 0.03 %
raring_i386: 0.02 %
raring_source: 0.02 %
saucy_amd64: 0.09 %
saucy_i386: 0.08 %
saucy_source: 0.03 %

trusty_amd64: 73.01 %
trusty_armhf: 2.94 %
trusty_i386: 5.49 %
trusty_source: 0.24 %
ubuntu_amd64: 0.02 %
ubuntu_i386: 0.01 %
ubuntu_source: 0.01 %
vivid_amd64: 0.26 %
vivid_i386: 0.06 %
vivid_source: 0.01 %
wily_amd64: 0.38 %
wily_i386: 0.09 %
wily_source: 0.01 %
xenial_amd64: 9.12 %
xenial_armhf: 0.57 %
xenial_i386: 0.53 %
xenial_source: 0.04 %
Binary Downloads by rosdistro

The fraction of packages downloaded per rosdistro

- Groovy and earlier: 0.46%
- Hydro: 1.92%
- Indigo: 72.84% (Long Term Support Release)
- Jade: 3.96%
- Kinetic: 11.02% (Long Term Support Release)
- Rosdistro independent: 9.79% (packages like python-rosdistro and python-rosinstall, 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
- 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
The rosdistro [http://github.com/ros/rosdistro](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):

2683 (46% increase)

Source: Google Scholar 2016-10-03
The number of different types of robots available to the community with ROS drivers.

Source: Ken Conley, Tully Foote, wiki.ros.org/Robots