

CY13-Q1

Open Source IaaS Community Analysis

OpenStack vs OpenNebula vs Eucalyptus vs CloudStack

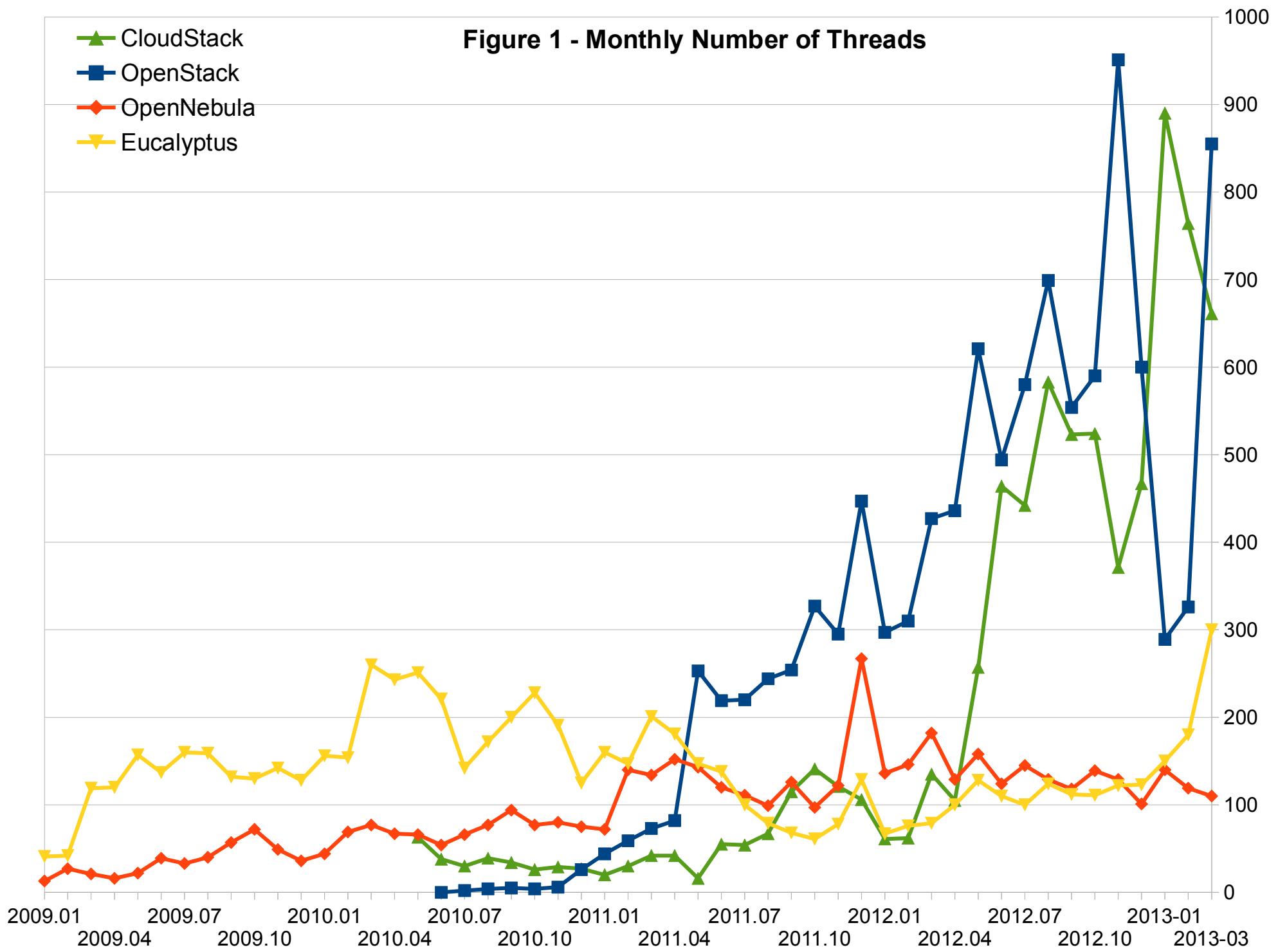
Qingye Jiang (John)
qjiang@ieee.org

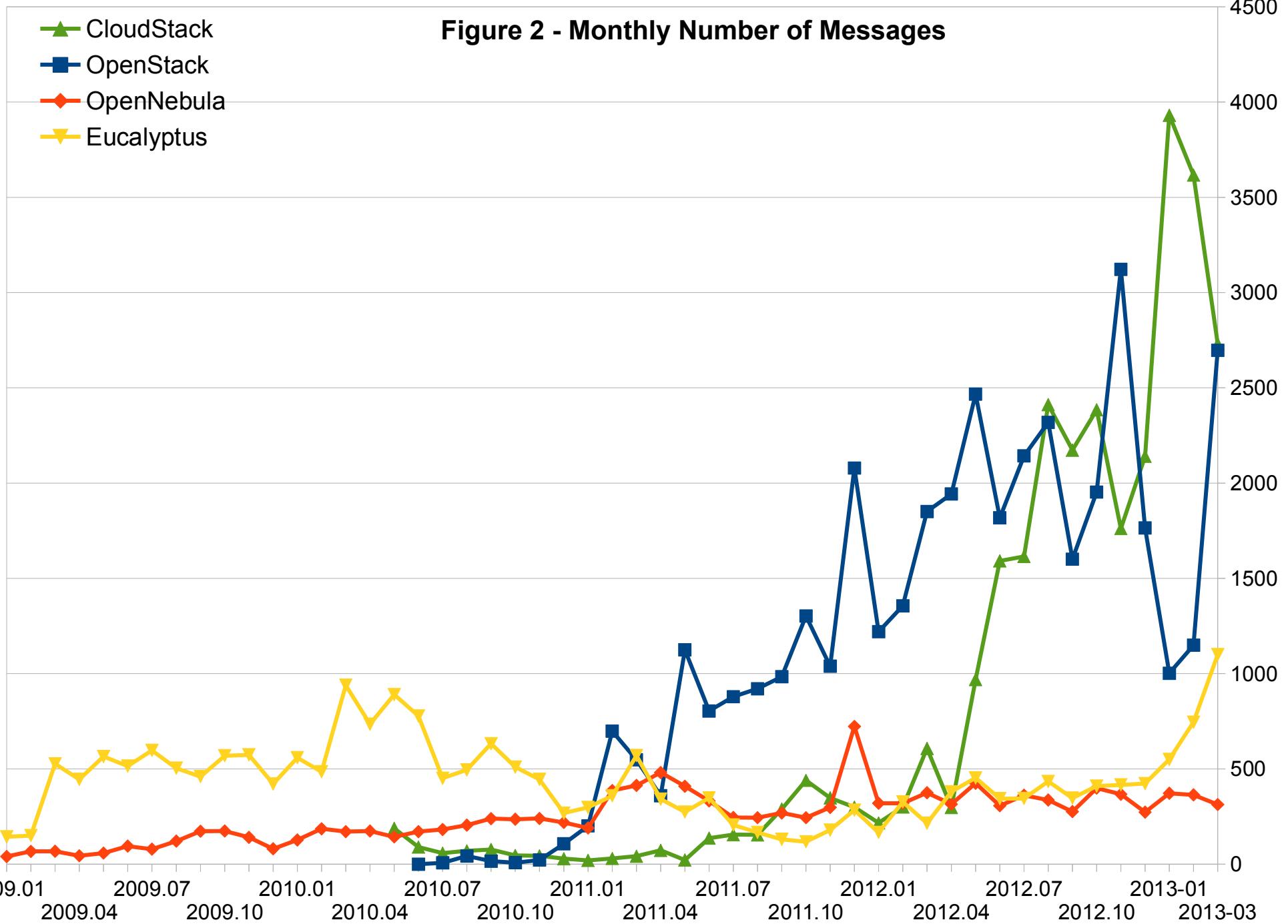
Sina weibo: [@qyjohn_](https://weibo.com/qyjohn_)

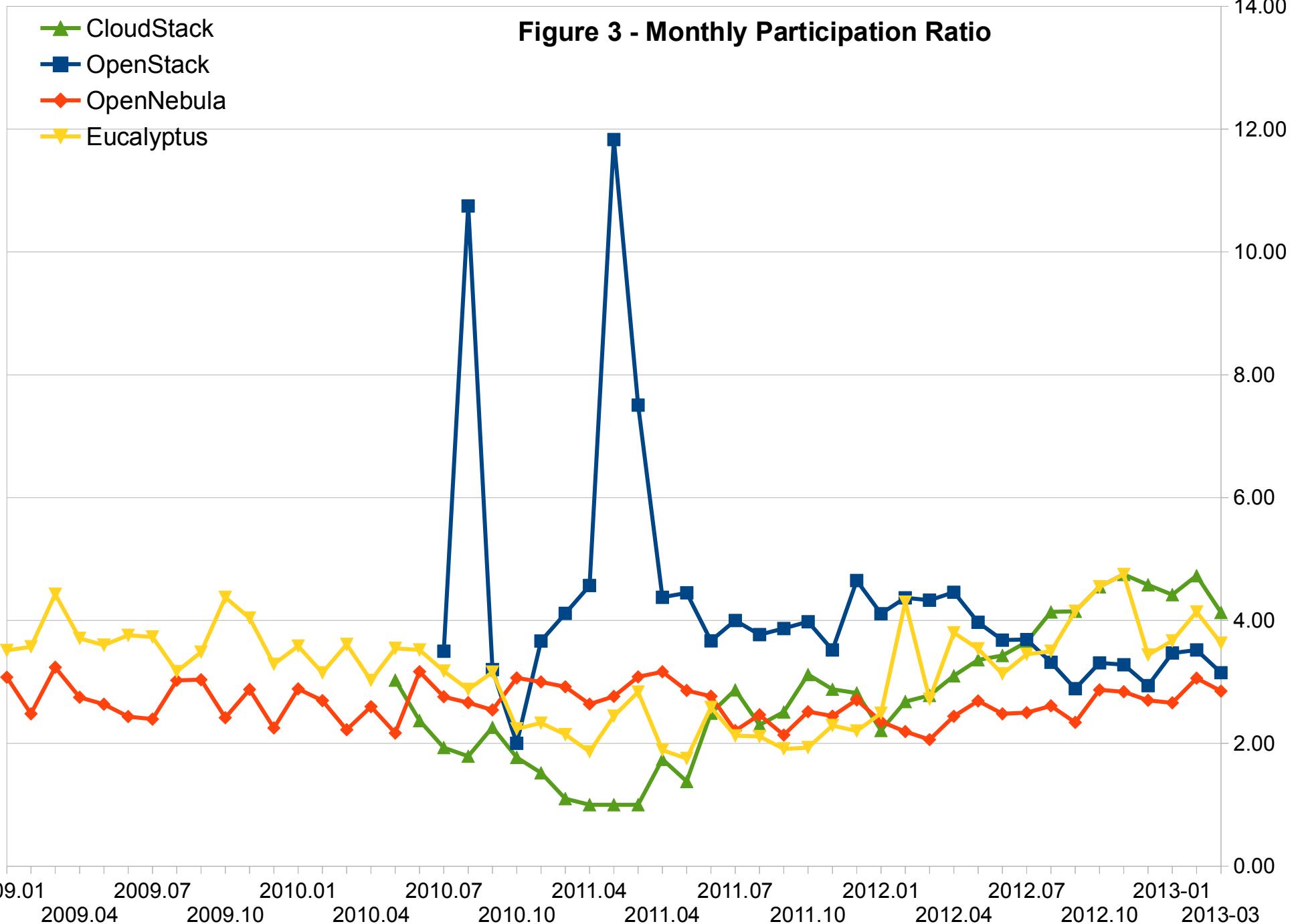
Discussion Data Source

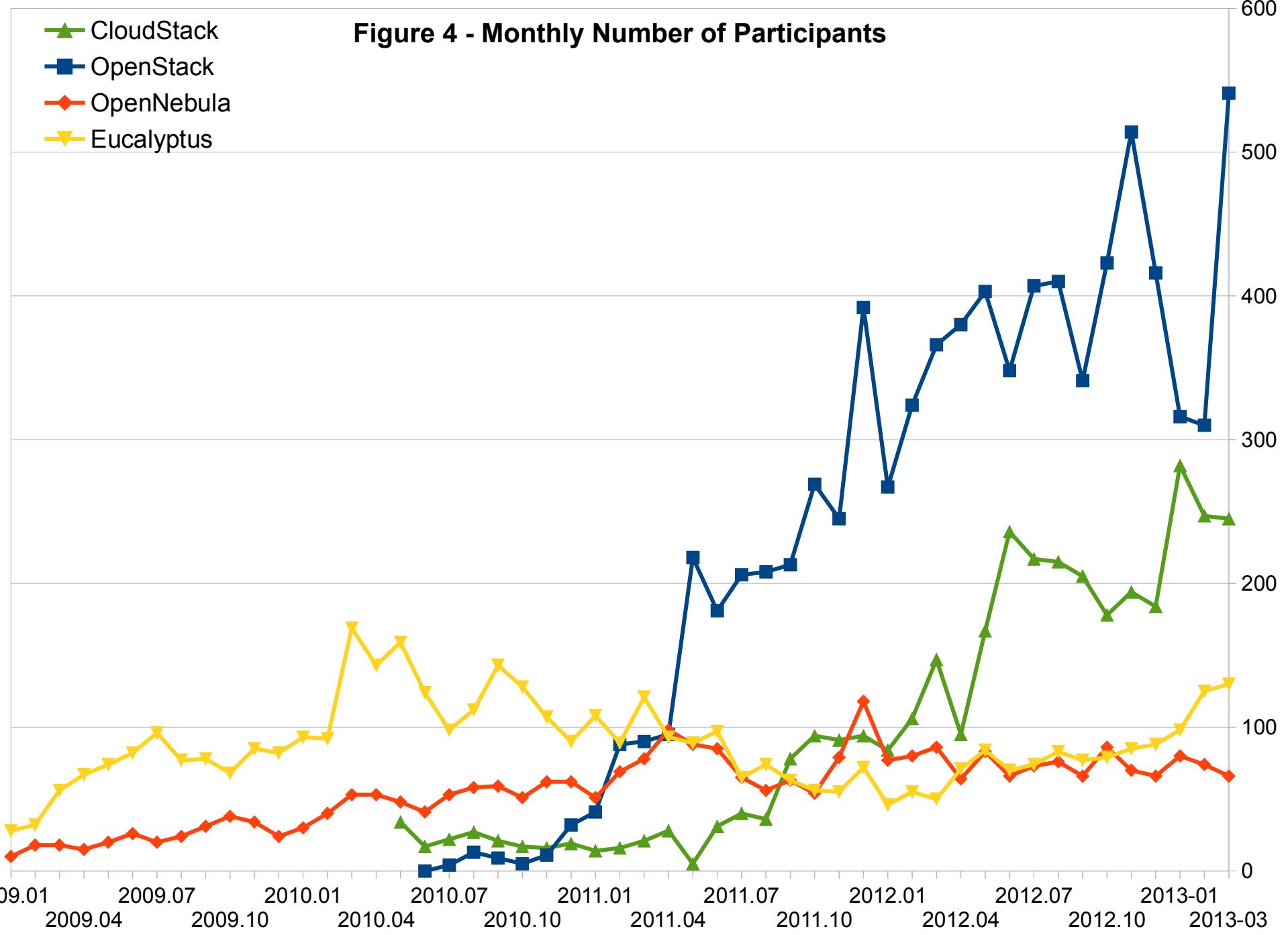
- OpenStack
 - <https://lists.launchpad.net/openstack/>
 - <https://answers.launchpad.net/openstack/>
 - http://lists.openstack.org/pipermail/*/
- OpenNebula
 - <http://lists.opennebula.org/pipermail/users-opennebula.org/>
 - <http://lists.opennebula.org/pipermail/ecosystem-opennebula.org/>
 - <http://lists.opennebula.org/pipermail/interoperability-opennebula.org/>
- Eucalyptus
 - <https://engage.eucalyptus.com/customer/portal/topics/215645-general-discussions/questions>
 - <http://lists.eucalyptus.com/pipermail/community/> (Until 2013-01)
 - <https://groups.google.com/a/eucalyptus.com/forum/#!forum/euca-users>
- CloudStack
 - http://mail-archives.apache.org/mod_mbox/incubator-cloudstack-users/
 - http://mail-archives.apache.org/mod_mbox/incubator-cloudstack-dev/
 - http://mail-archives.apache.org/mod_mbox/incubator-cloudstack-users-cn/
 - <http://www.cloudstack.org/forum/index.html> (Until 2012-09)

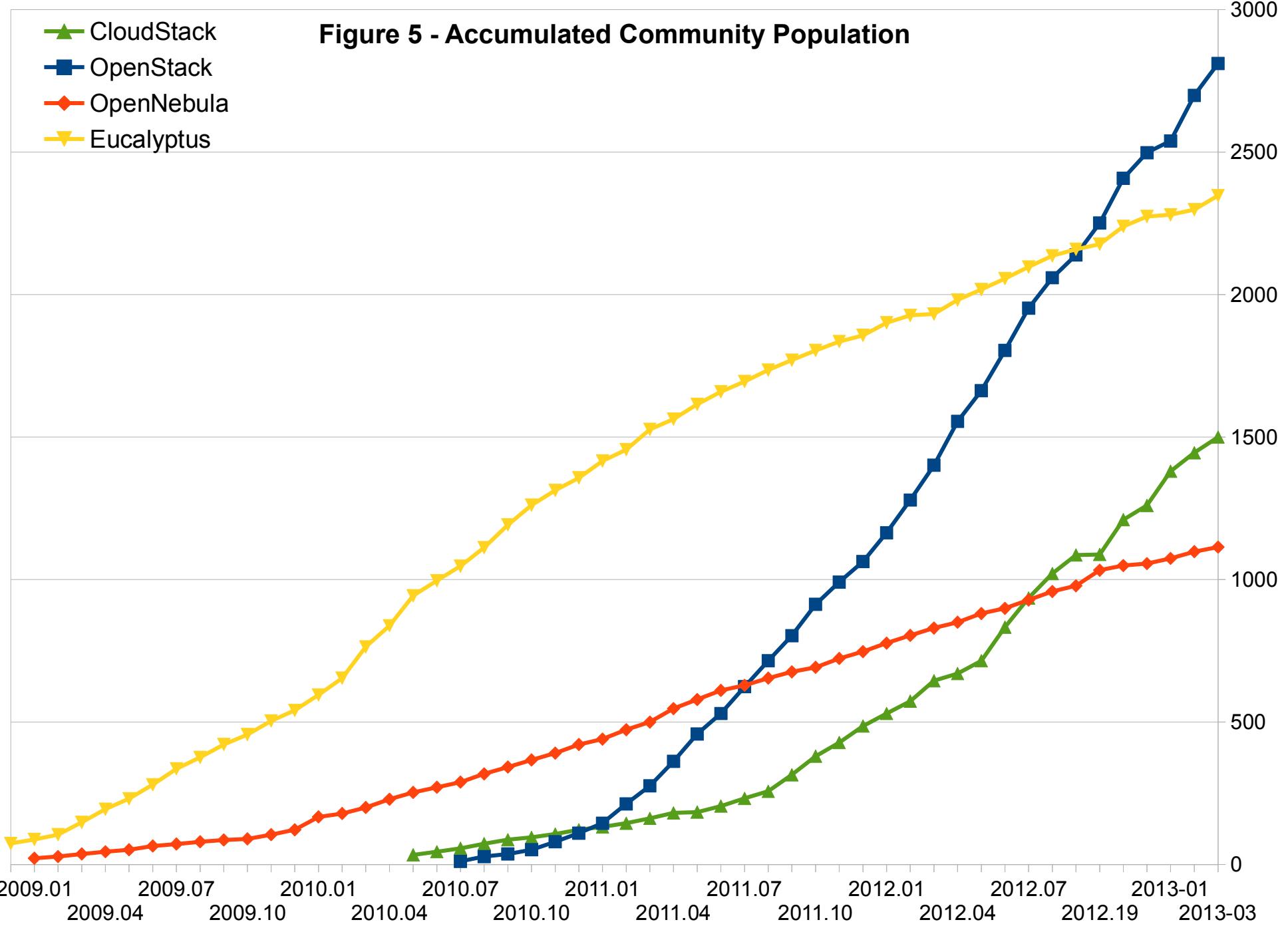
Figure 1 - Monthly Number of Threads











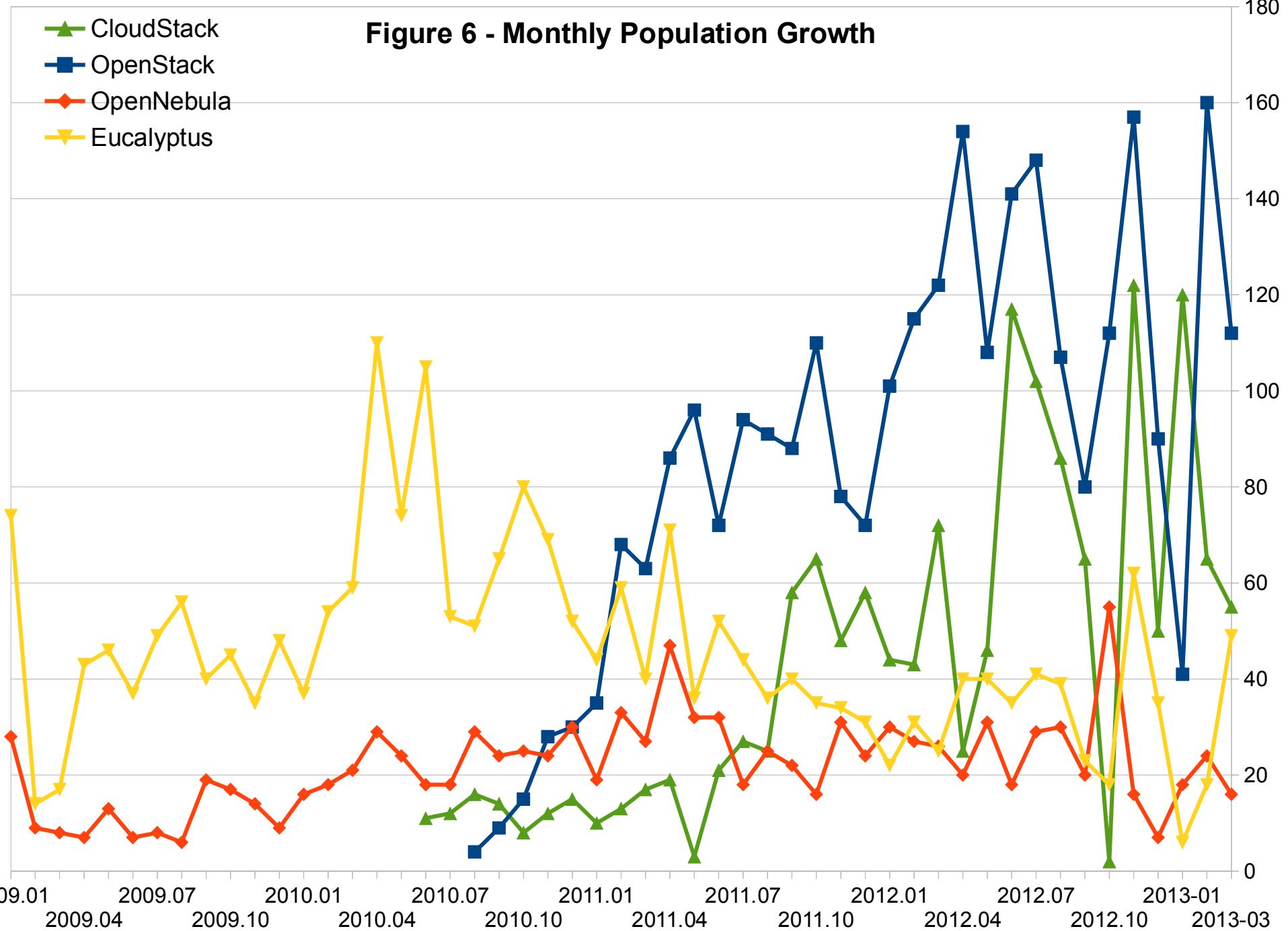


Figure 7 - Monthly Participants vs New Members

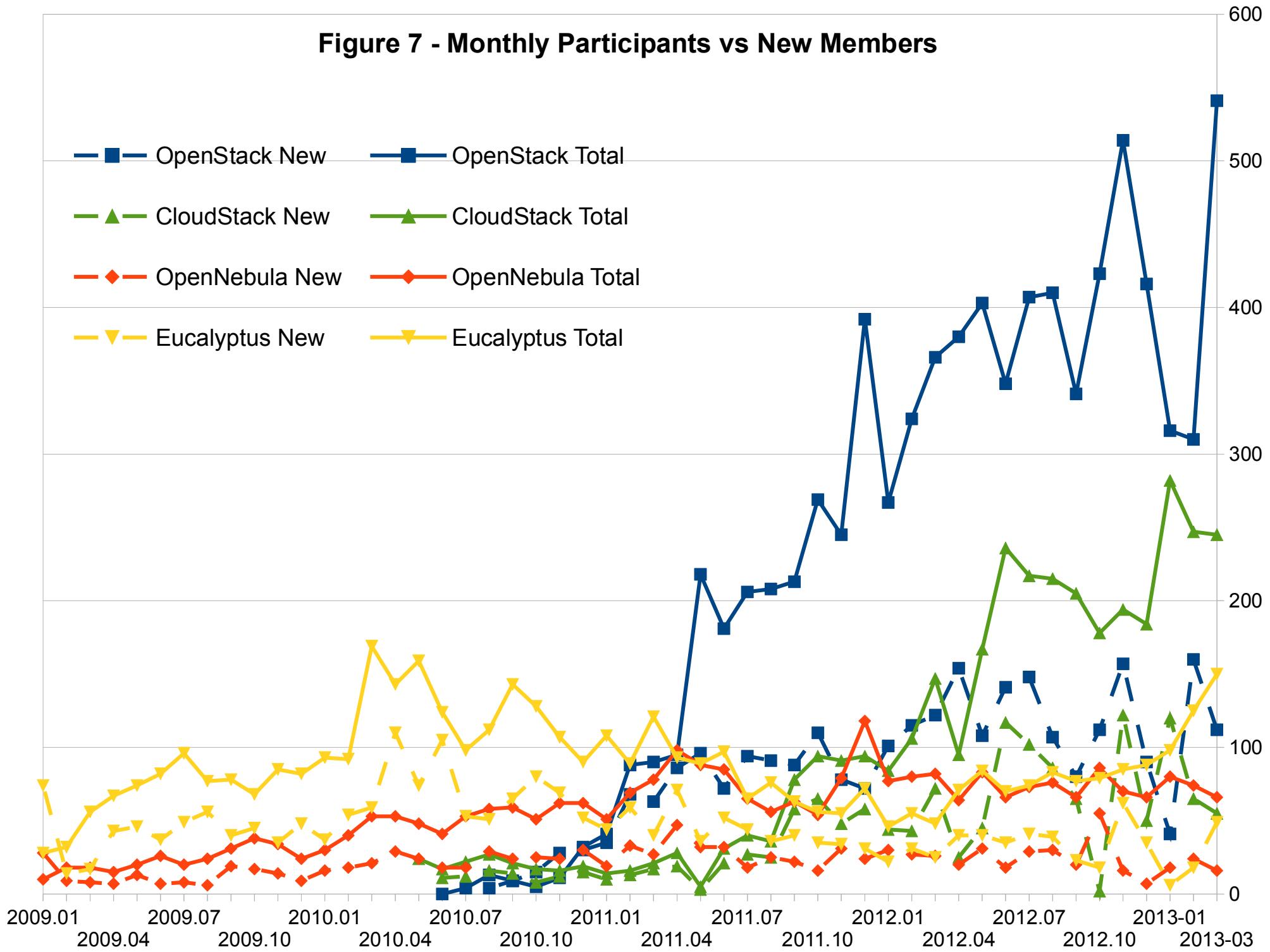


Figure 8 - Active Community Population

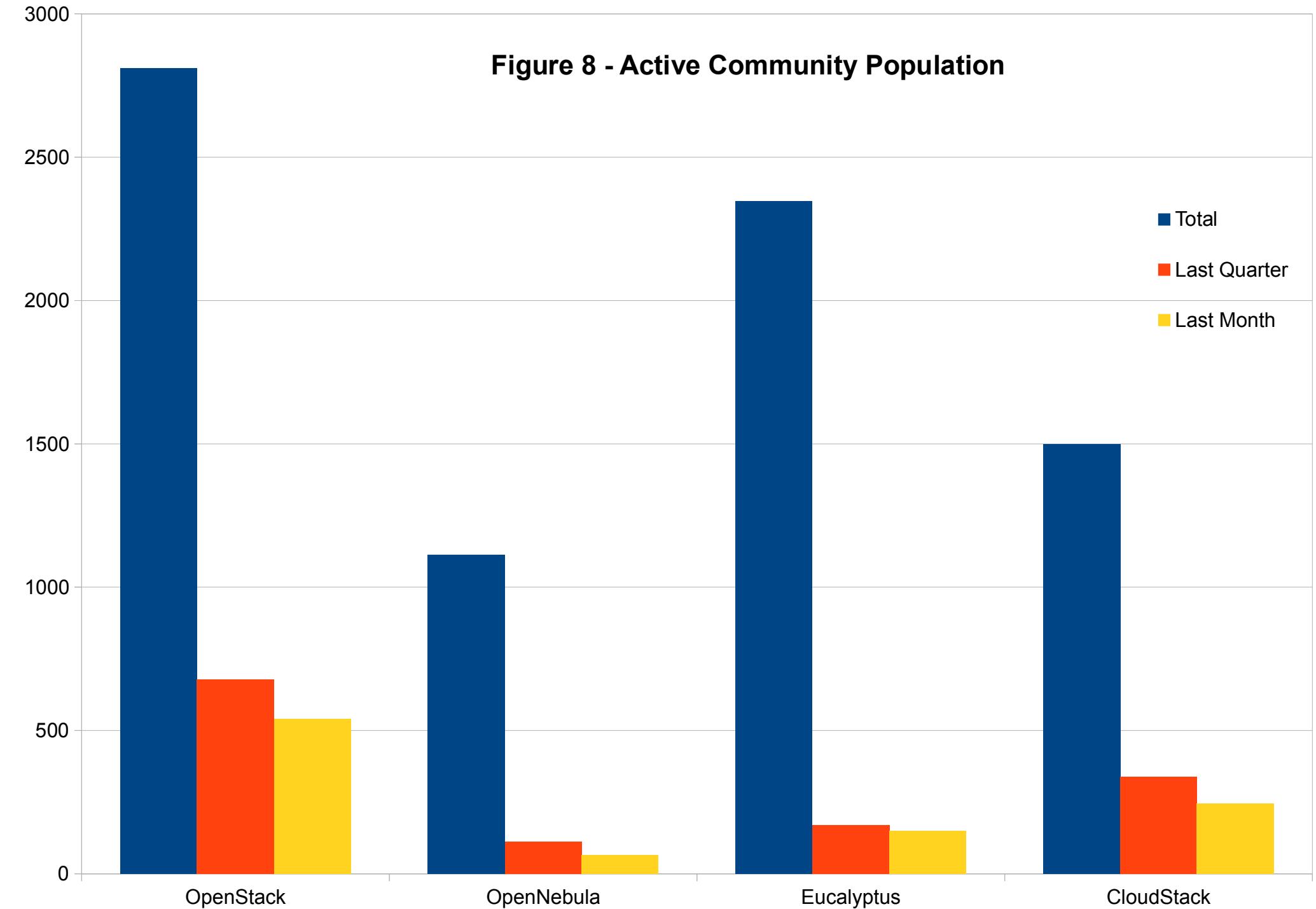


Figure 9 – Community Activeness Index

Computing the Reference Data Set

	OpenStack	OpenNebula	Eucalyptus	CloudStack	Average
Monthly Messages	2697	313	1064	2731	1701
Participation Ratio	3.15	2.85	3.63	4.13	3.44
Quarterly Population	679	112	170	339	325
Monthly Population	541	66	150	245	250

Computing the Activeness Index

	Relative Monthly Messages	Relative Participation Ratio	Relative Quarter Population	Relative Monthly Population	Activeness Index
OpenStack	1.58	0.91	2.09	2.16	6.75
OpenNebula	0.18	0.83	0.34	0.26	1.62
Eucalyptus	0.63	1.06	0.52	0.60	2.80
CloudStack	1.61	1.20	1.04	0.98	4.83

Git Data Source

- OpenStack
 - <https://github.com/openstack/quantum.git>
 - <https://github.com/openstack/keystone.git>
 - <https://github.com/openstack/glance.git>
 - <https://github.com/openstack/horizon.git>
 - <https://github.com/openstack/swift.git>
 - <https://github.com/openstack/cinder.git>
 - <https://github.com/openstack/nova.git>
- OpenNebula
 - <https://github.com/OpenNebula/one.git>
- Eucalyptus
 - <https://github.com/eucalyptus/eucalyptus.git>
- CloudStack
 - <https://github.com/apache/incubator-cloudstack.git>

2500

2000

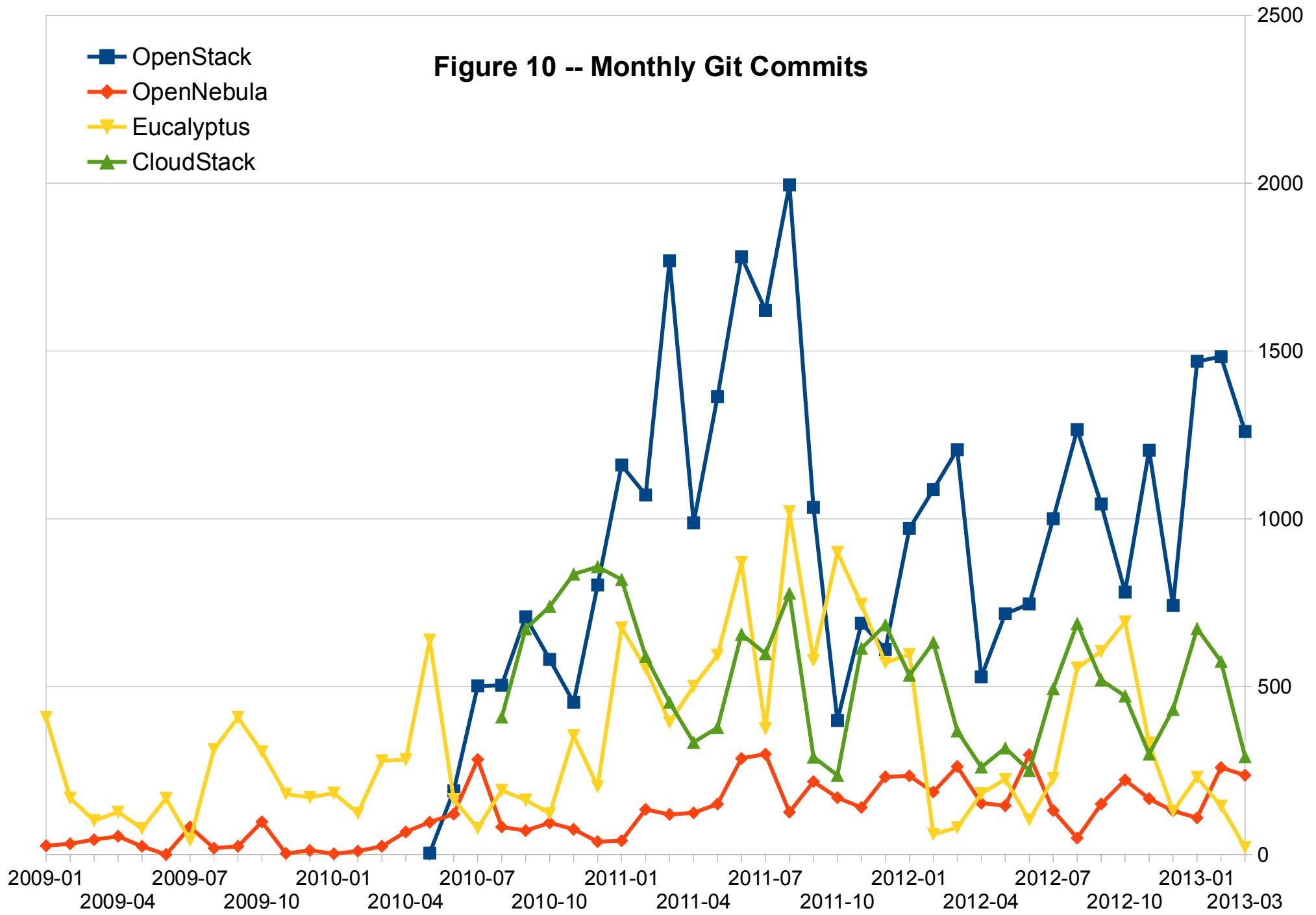
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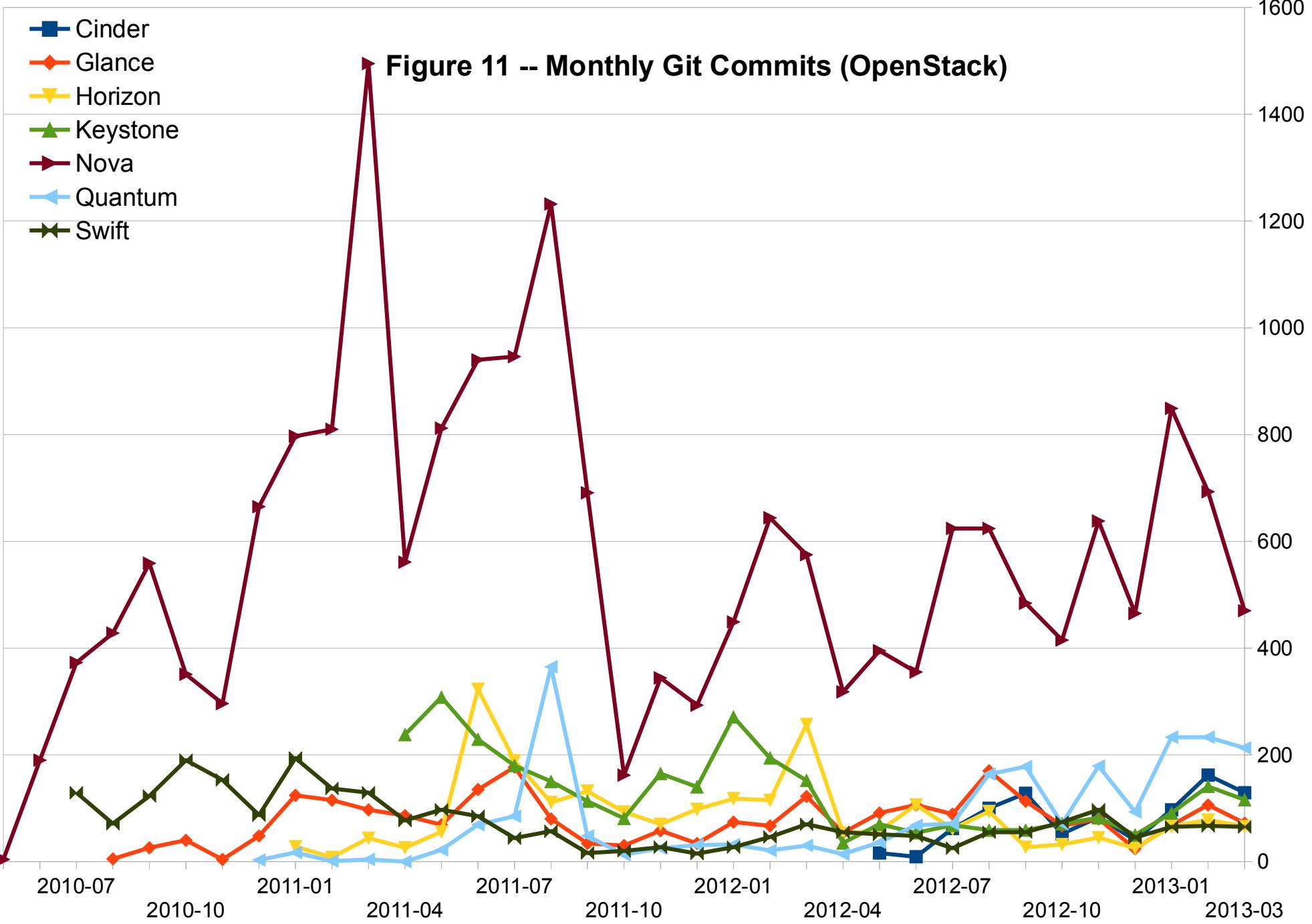
1000

500

0

Figure 10 -- Monthly Git Commits





- OpenStack
- OpenNebula
- Eucalyptus
- CloudStack

Figure 12 -- Monthly Git Contributors

