

# CY15-Q1

## Open Source IaaS Community Analysis

OpenStack vs OpenNebula vs Eucalyptus vs CloudStack

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# Discussion Data Source

- OpenStack
  - <https://lists.launchpad.net/openstack/>
  - <https://answers.launchpad.net/openstack/>
  - [http://lists.openstack.org/pipermail/\\*/](http://lists.openstack.org/pipermail/*/)
  - <https://ask.openstack.org/>
- 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-users/)
  - [http://mail-archives.apache.org/mod\\_mbox/incubator-cloudstack-dev/](http://mail-archives.apache.org/mod_mbox/incubator-cloudstack-dev/)
  - [http://mail-archives.apache.org/mod\\_mbox/incubator-cloudstack-users-cn/](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

- CloudStack
- OpenStack
- OpenNebula
- Eucalyptus

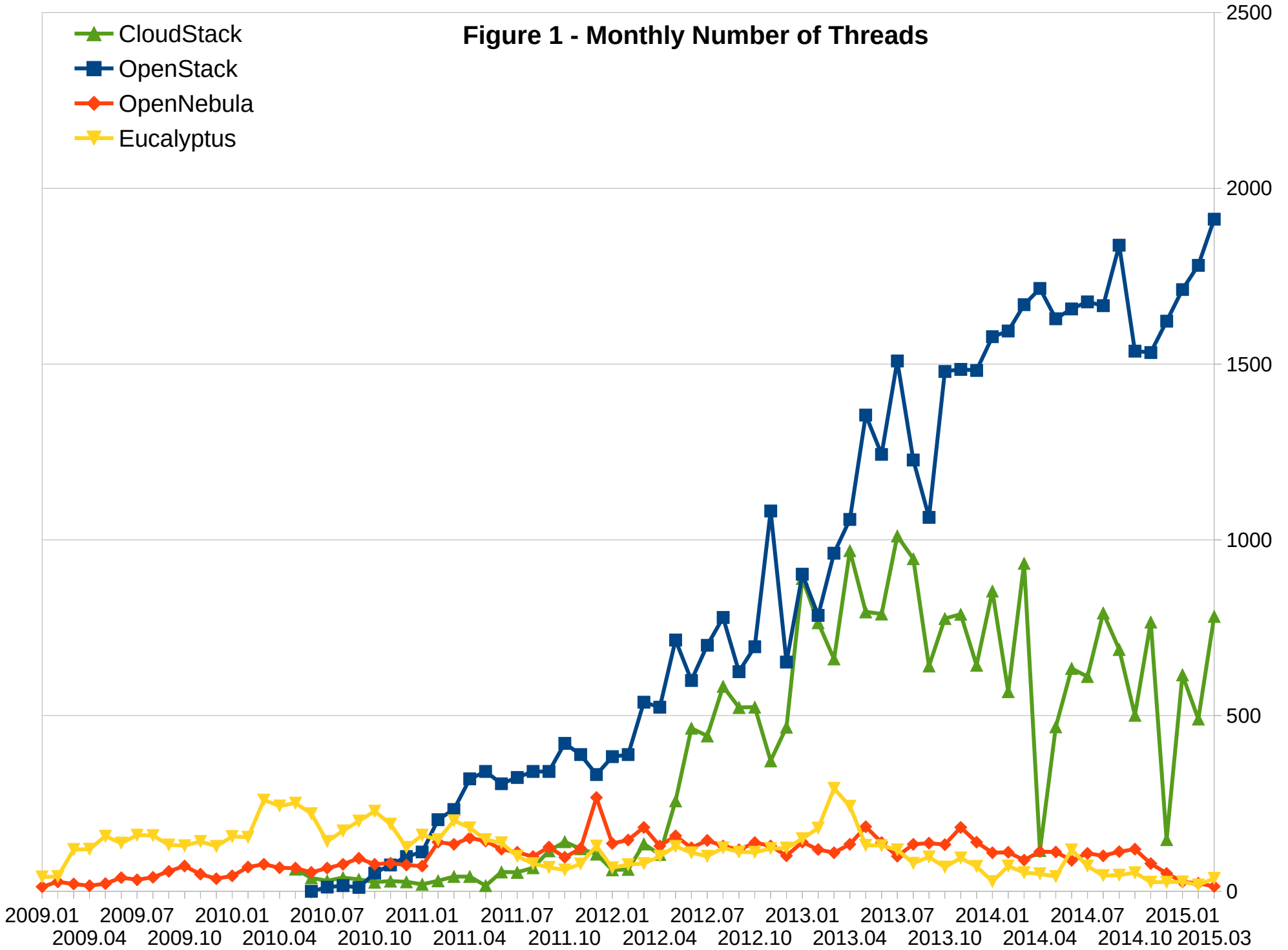


Figure 2 - Monthly Number of Messages

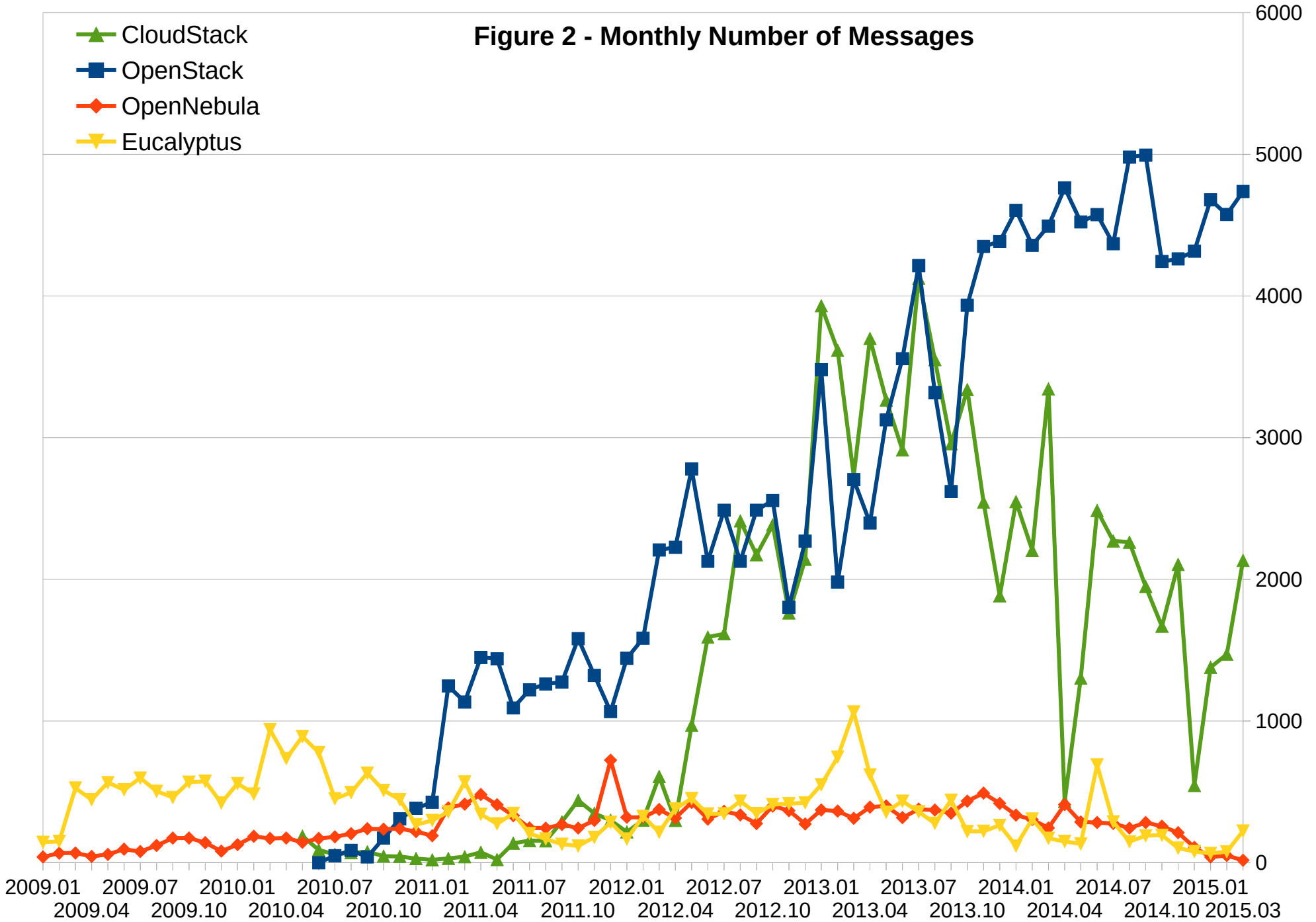
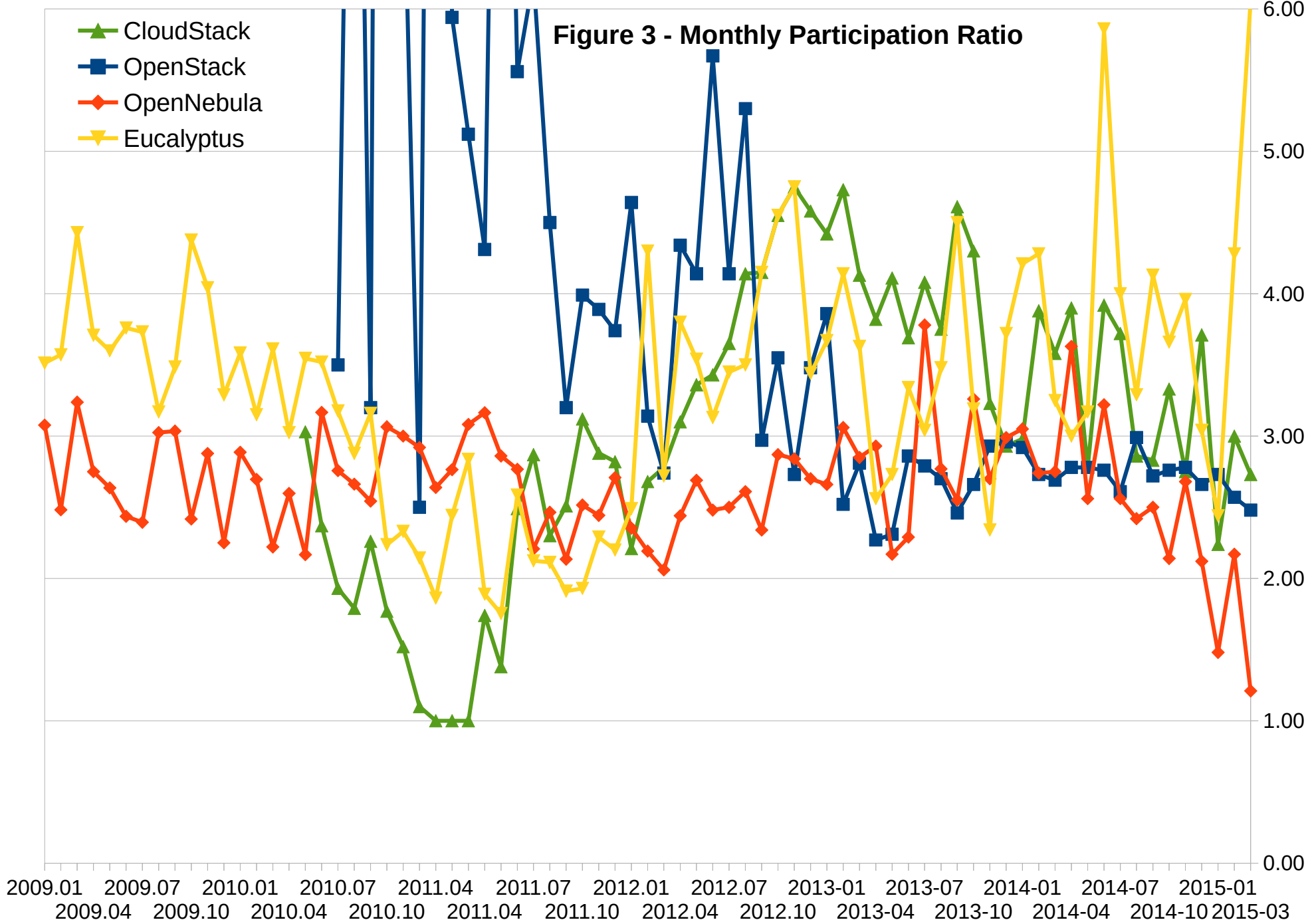
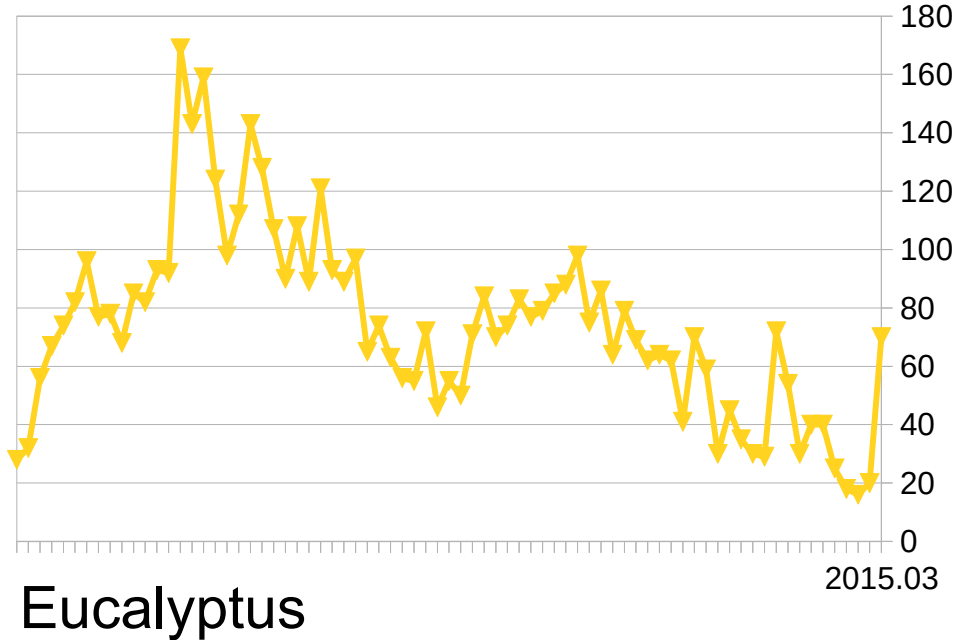
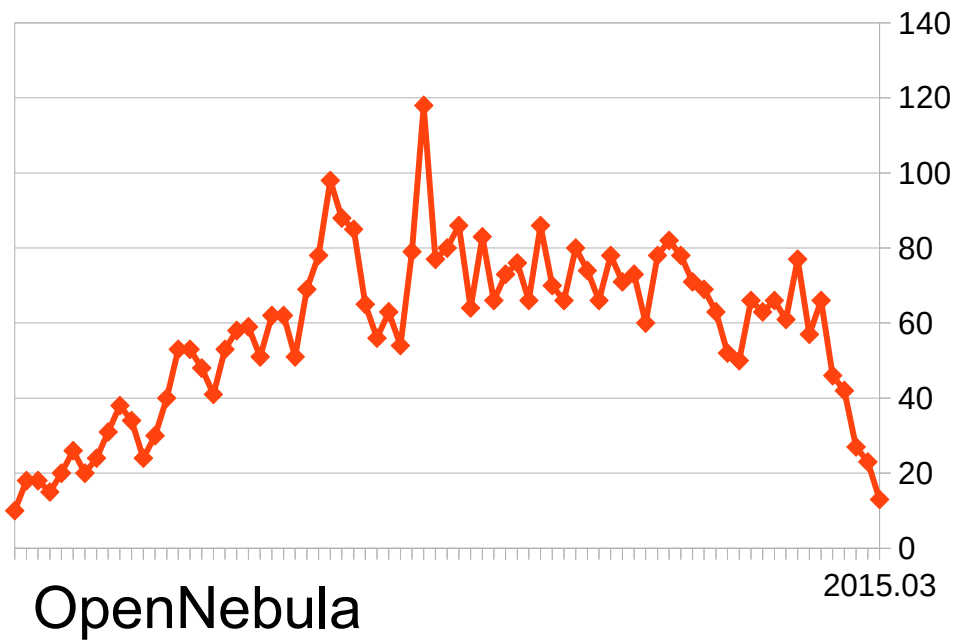
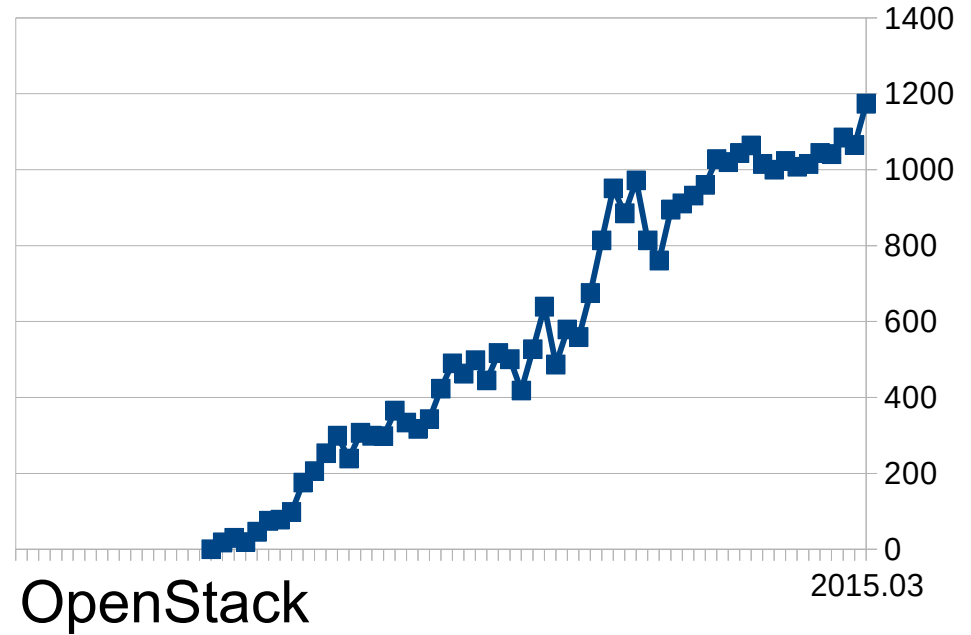
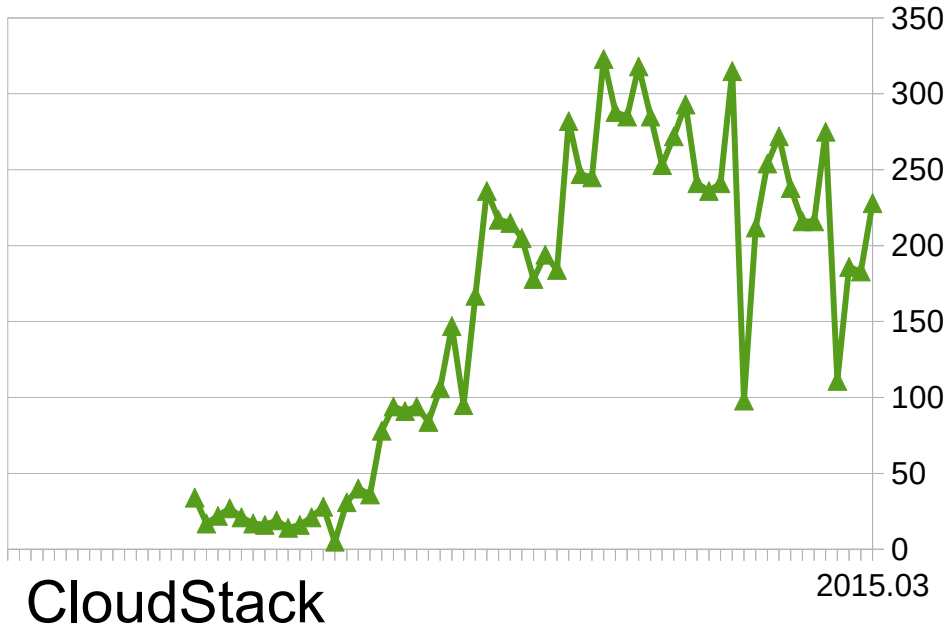


Figure 3 - Monthly Participation Ratio



# Active Participants in Discussion Community



# Git Data Source

- OpenStack
  - <https://github.com/openstack> (137 projects)
  - <https://github.com/openstack-infra> (14 projects)
- OpenNebula
  - <https://git.opennebula.org/one.git>
- Eucalyptus
  - <https://github.com/eucalyptus/eucalyptus.git>
- CloudStack
  - <https://git-wip-us.apache.org/repos/asf/cloudstack.git>

Figure 10 -- Monthly Git Commits

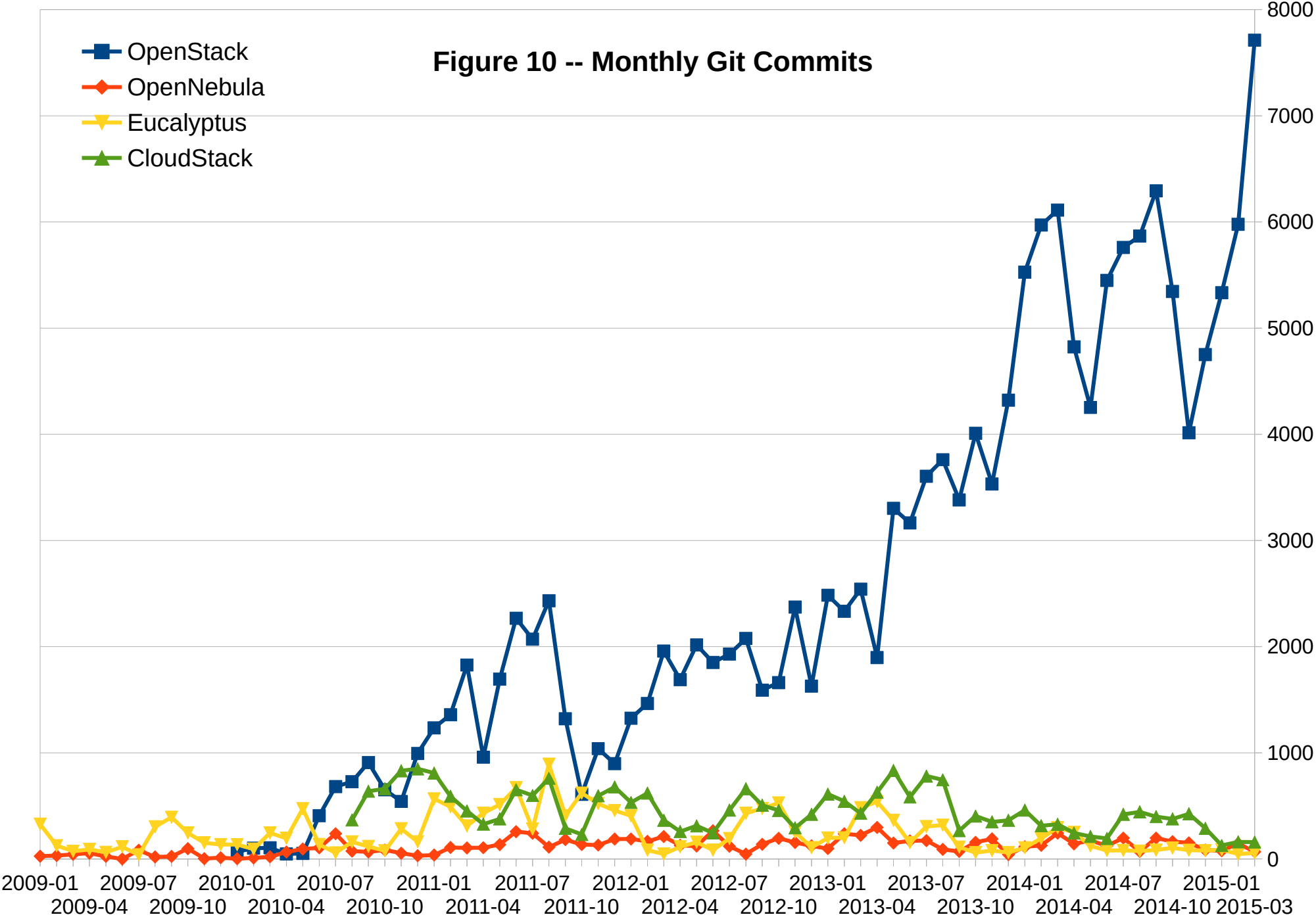




Figure 11 -- Monthly Git Commits (OpenStack)

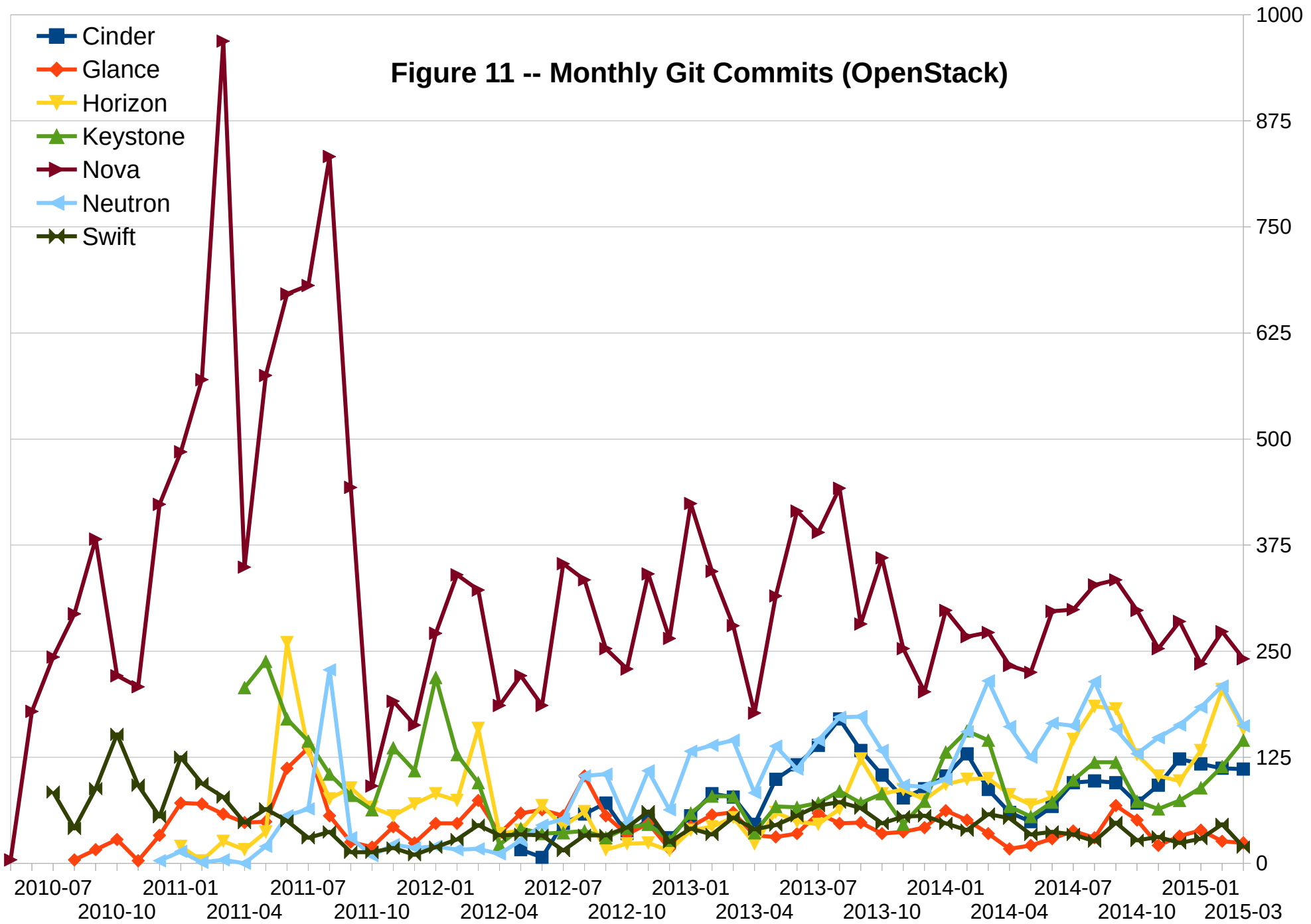
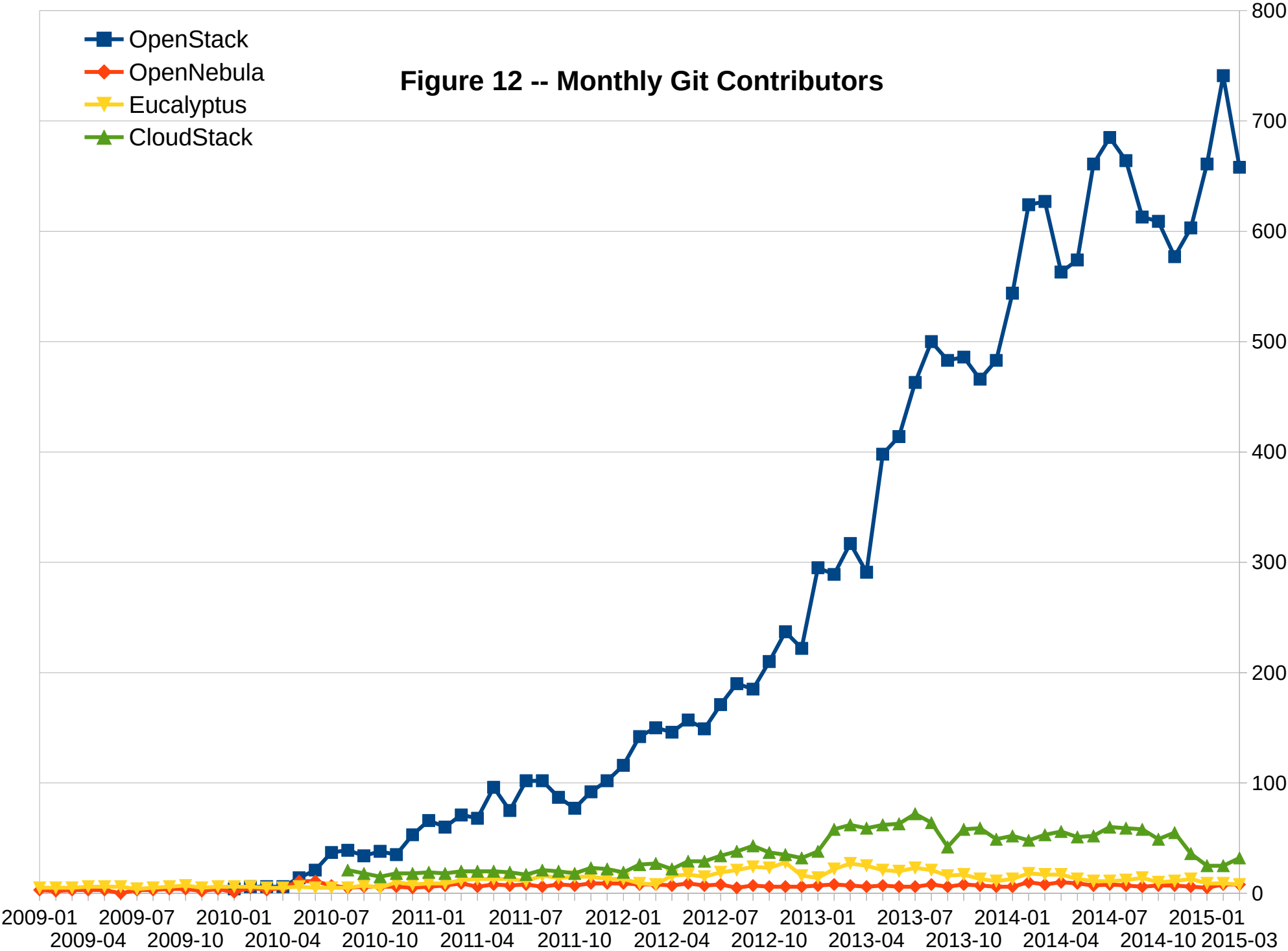
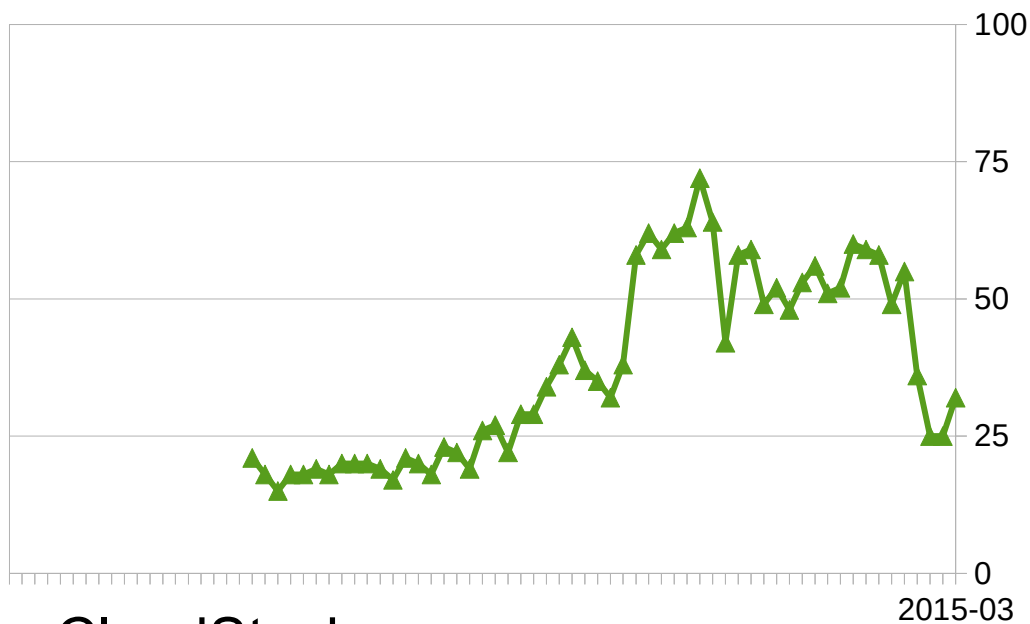


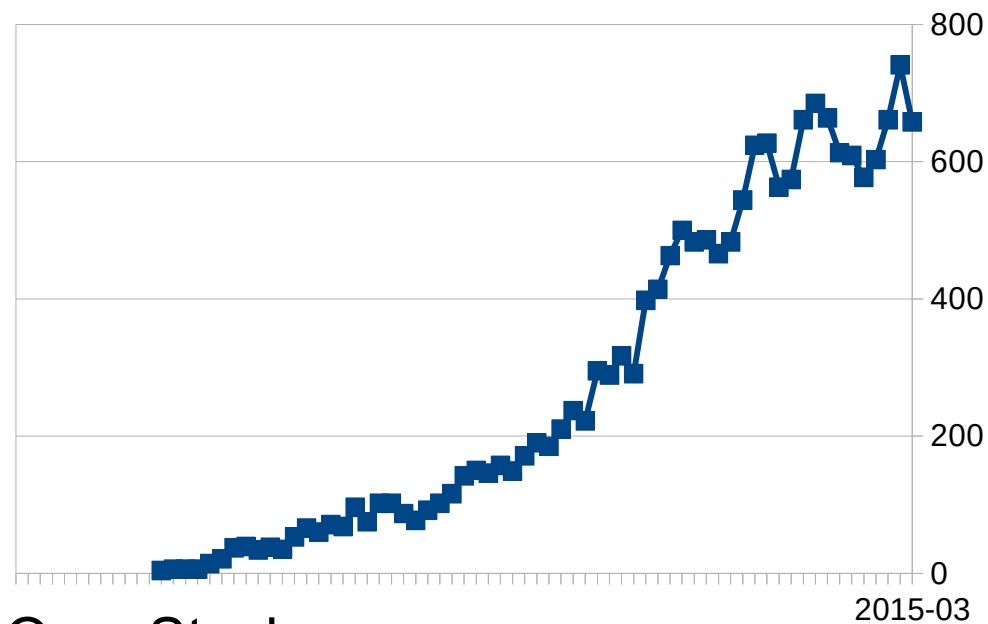
Figure 12 -- Monthly Git Contributors



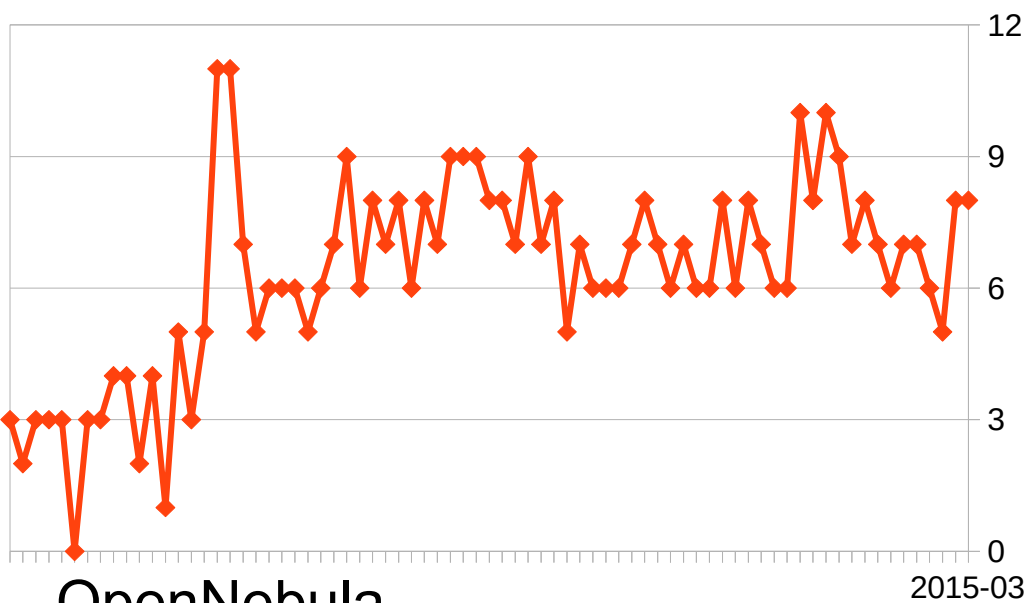
# Active Git Contributors in Developer Community



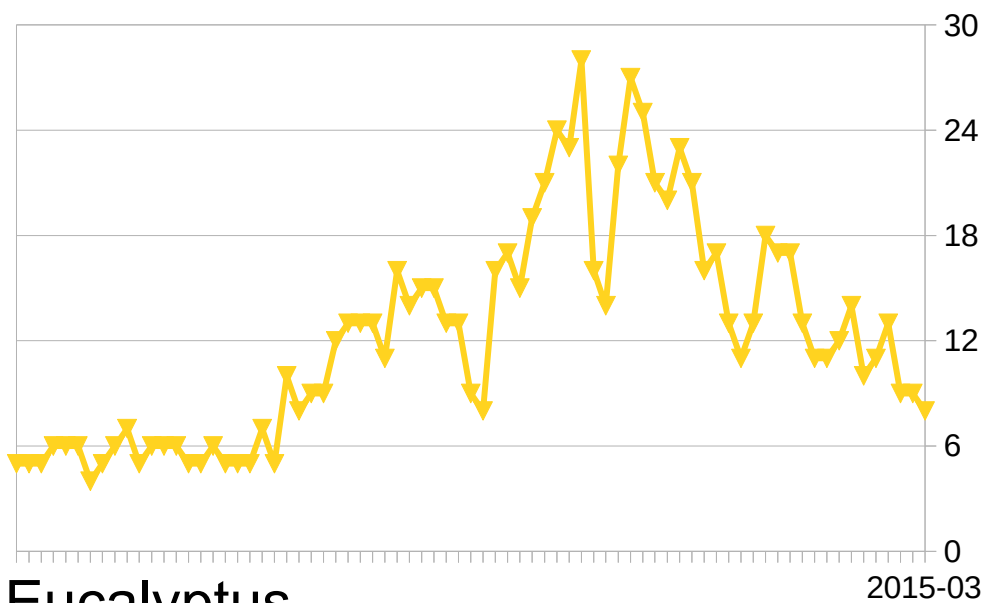
CloudStack



OpenStack



OpenNebula



Eucalyptus

Figure 13 -- Monthly Git Contributors (OpenStack)

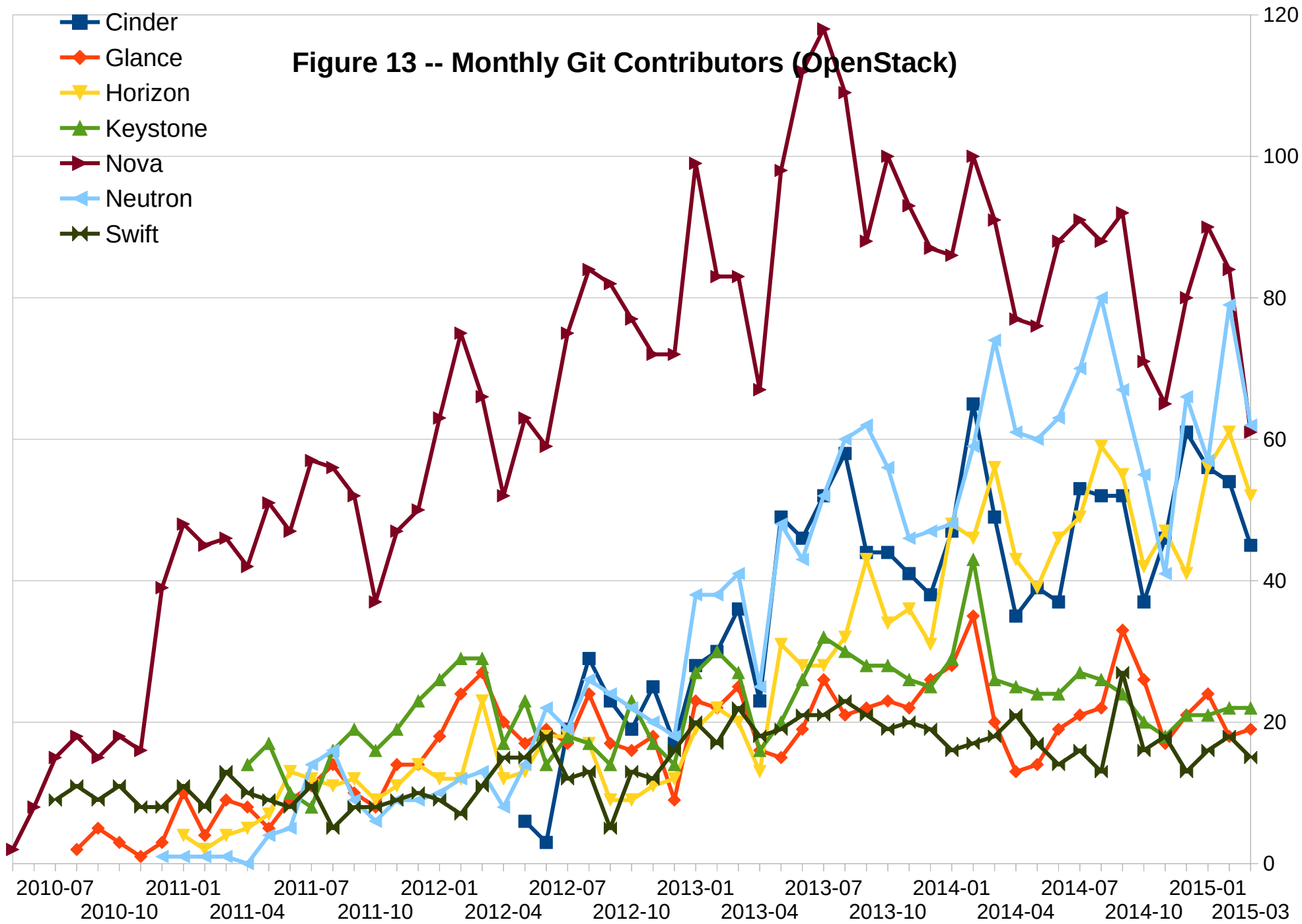


Figure 14 -- Monthly Git Domains

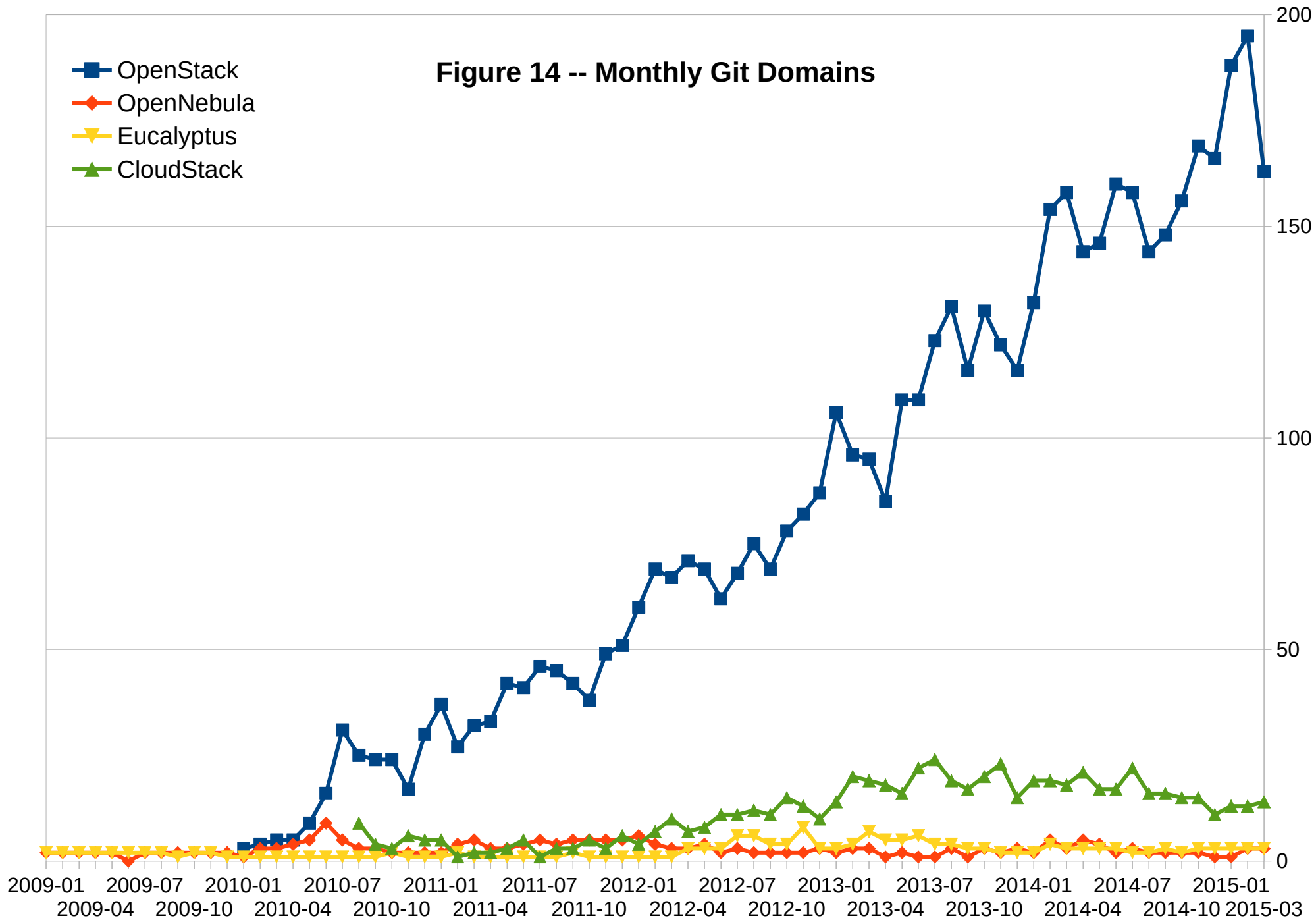
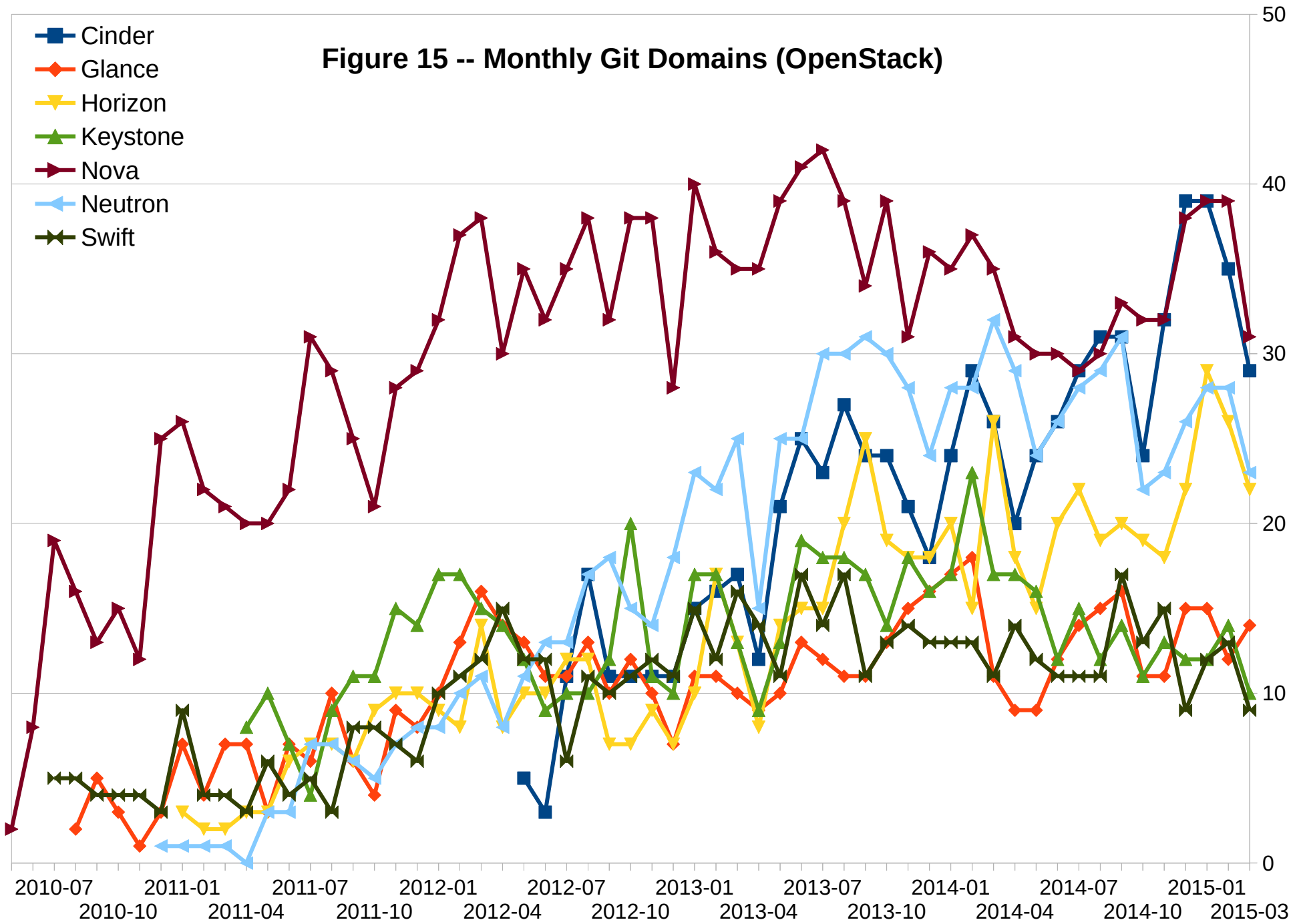


Figure 15 -- Monthly Git Domains (OpenStack)



# Top 10 Contributing Organizations

<u>CloudStack</u>		<u>Eucalyptus</u>		<u>OpenNebula</u>		<u>OpenStack</u>	
<u>Domain</u>	<u>%</u>	<u>Domain</u>	<u>%</u>	<u>Domain</u>	<u>%</u>	<u>Domain</u>	<u>%</u>
<u>Schubergphilis.com</u>	25.5	<u>Eucalyptus.com</u>	90	<u>Opennebula.org</u>	98	<u>Gmail.com</u>	9.6
<u>Shapeblue.com</u>	22.1	<u>Gmail.com</u>	5.8			<u>Redhat.com</u>	7.3
<u>Clogeny.com</u>	11.4	<u>Devzero.com</u>	4.2			<u>ibm.com</u>	5.0
<u>Apache.org</u>	8.7					<u>Mirantis.com</u>	4.7
<u>Gmail.com</u>	7.2					<u>Hp.com</u>	4.6
<u>Citrix.com</u>	5.8					<u>Rackspace.com</u>	1.6
<u>Onecht.net</u>	4.5					<u>Intel.com</u>	1.4
<u>Solidfire.com</u>	3.6					<u>Yahoo-inc.com</u>	1.2
<u>Credativ.de</u>	2.7					<u>Doughellmann.com</u>	1.1
<u>Apple.com</u>	2.2					<u>Cisco.com</u>	0.8

# Top 10 Contributing Organizations

Cinder		Glance		Horizon		Keystone	
Domain	%	Domain	%	Domain	%	Domain	%
<a href="mailto:Gmail.com">Gmail.com</a>	13.5	<a href="mailto:Gmai.com">Gmai.com</a>	18.0	<a href="mailto:Hp.com">Hp.com</a>	18.1	<a href="mailto:Ibm.com">Ibm.com</a>	42.2
<a href="mailto:Ibm.com">Ibm.com</a>	10.0	<a href="mailto:Rackspace.com">Rackspace.com</a>	9.0	<a href="mailto:Gmail.com">Gmail.com</a>	10.1	<a href="mailto:Gmail.com">Gmail.com</a>	15.8
<a href="mailto:Emc.com">Emc.com</a>	8.2	<a href="mailto:hp.com">hp.com</a>	9.0	<a href="mailto:Redhat.com">Redhat.com</a>	8.1	<a href="mailto:Lsd.ufcg.edu.br">Lsd.ufcg.edu.br</a>	8.3
<a href="mailto:Redhat.com">Redhat.com</a>	7.1	<a href="mailto:Intel.com">Intel.com</a>	9.0	<a href="mailto:Ibm.com">Ibm.com</a>	7.9	<a href="mailto:Huawei.com">Huawei.com</a>	4.0
<a href="mailto:Hp.com">Hp.com</a>	7.1	<a href="mailto:Mirantis.com">Mirantis.com</a>	7.9	<a href="mailto:Enovance.com">Enovance.com</a>	5.2	<a href="mailto:Dstanek.com">Dstanek.com</a>	3.7
<a href="mailto:Solidfire.com">Solidfire.com</a>	6.2	<a href="mailto:Nttdata.com">Nttdata.com</a>	4.5	<a href="mailto:Code-smash.net">Code-smash.net</a>	5.0	<a href="mailto:Mirantis.com">Mirantis.com</a>	3.4
<a href="mailto:Dell.com">Dell.com</a>	5.0	<a href="mailto:Danjou.info">Danjou.info</a>	4.5	<a href="mailto:Outlook.com">Outlook.com</a>	4.6	<a href="mailto:Cem.ch">Cem.ch</a>	3.2
<a href="mailto:Hds.com">Hds.com</a>	3.8	<a href="mailto:Vmware.com">Vmware.com</a>	3.4	<a href="mailto:Intel.com">Intel.com</a>	4.2	<a href="mailto:Intel.com">Intel.com</a>	2.6
<a href="mailto:Vmware.com">Vmware.com</a>	2.9			<a href="mailto:99cloud.net">99cloud.net</a>	4.2	<a href="mailto:Redhat.com">Redhat.com</a>	1.7
<a href="mailto:Purestorage.com">Purestorage.com</a>	2.4			<a href="mailto:Mirantis.com">Mirantis.com</a>	2.4		



# Top 10 Contributing Organizations

Nova		Neutron		<u>project-config</u>		<u>openstack-manuals</u>	
Domain	%	Domain	%	Domain	%	Domain	%
<u>Redhat.com</u>	16.4	<u>Redhat.com</u>	29.5	<u>Gmai.com</u>	17.3	<u>Gmai.com</u>	15.5
<u>Ibm.com</u>	15.1	<u>Gmai.com</u>	17.8	<u>hp.com</u>	11.0	<u>Mirantis.com</u>	9.8
<u>Gmail.com</u>	14.4	<u>hp.com</u>	8.8	<u>Redhat.com</u>	10.3	<u>B1-systems.de</u>	8.3
<u>Intel.com</u>	9.9	<u>Cisco.com</u>	6.1	<u>Ibm.com</u>	5.6	<u>Suse.de</u>	6.1
<u>Mirantis.com</u>	6.1	<u>Valinux.co.jp</u>	5.9	<u>Mirantis.com</u>	4.9	<u>Openstack.org</u>	5.1
<u>Vmware.com</u>	5.1	<u>Mirantis.com</u>	5.6	<u>Yuggoth.org</u>	4.3	<u>Rackspace.com</u>	3.8
<u>Nectechologies.in</u>	5.1	<u>Vmware.com</u>	2.3	<u>Suse.de</u>	4.3	<u>Ibm.com</u>	3.4
<u>Dague.net</u>	4.3	<u>Ibm.com</u>	1.6	<u>Nitrotech.org</u>	3.9	<u>Yahoo.com.au</u>	3.0
<u>Rackspace.com</u>	3.1	<u>Cloudbasesolutions.com</u>	1.4	<u>Dague.net</u>	2.5	<u>Ericsson.com</u>	2.6
<u>Yahoo-inc.com</u>	1.2			<u>Kortar.org</u>	2.1	<u>Objectif-libre.com</u>	2.6

Figure 16 -- Accumulated Developer Population

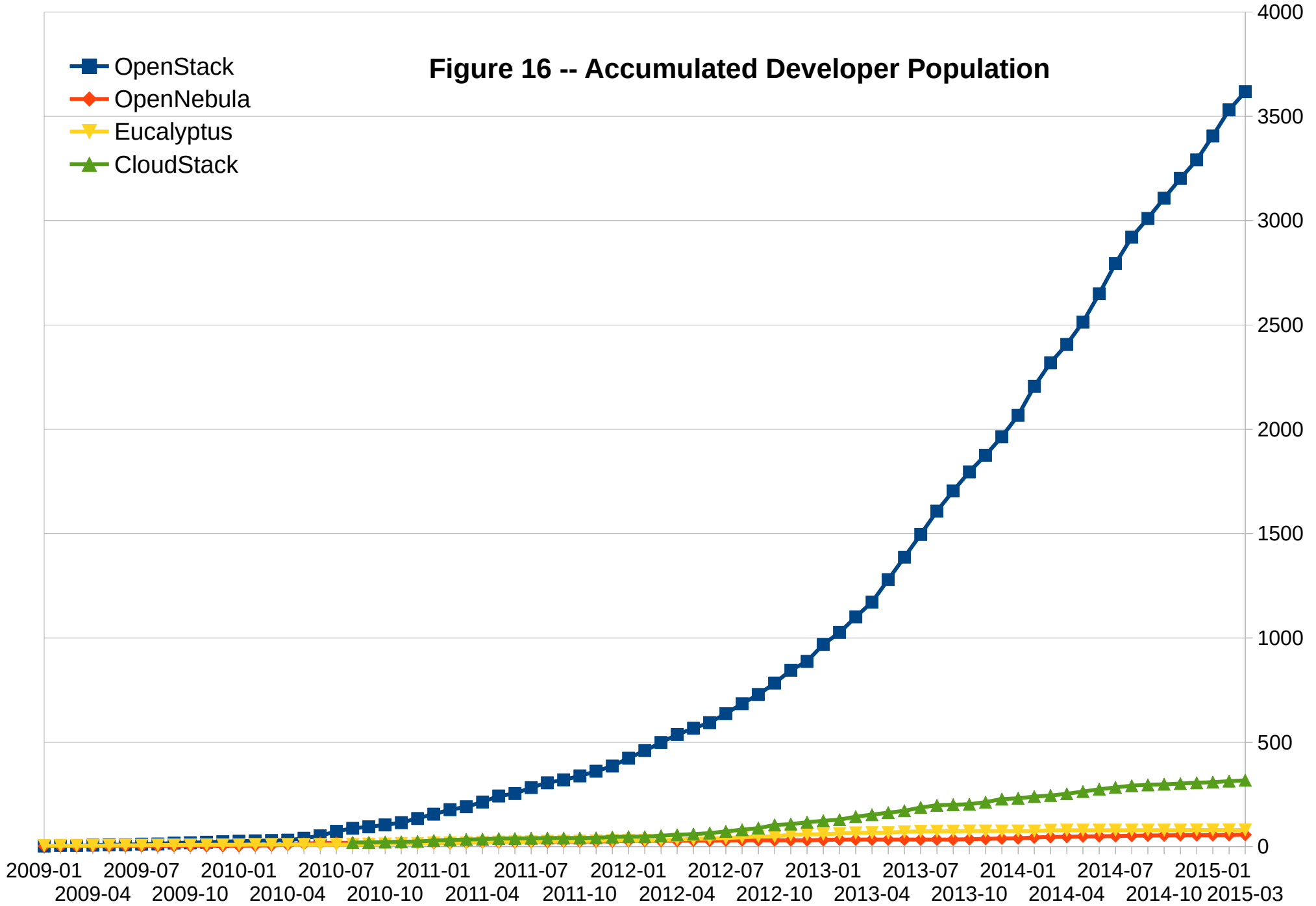
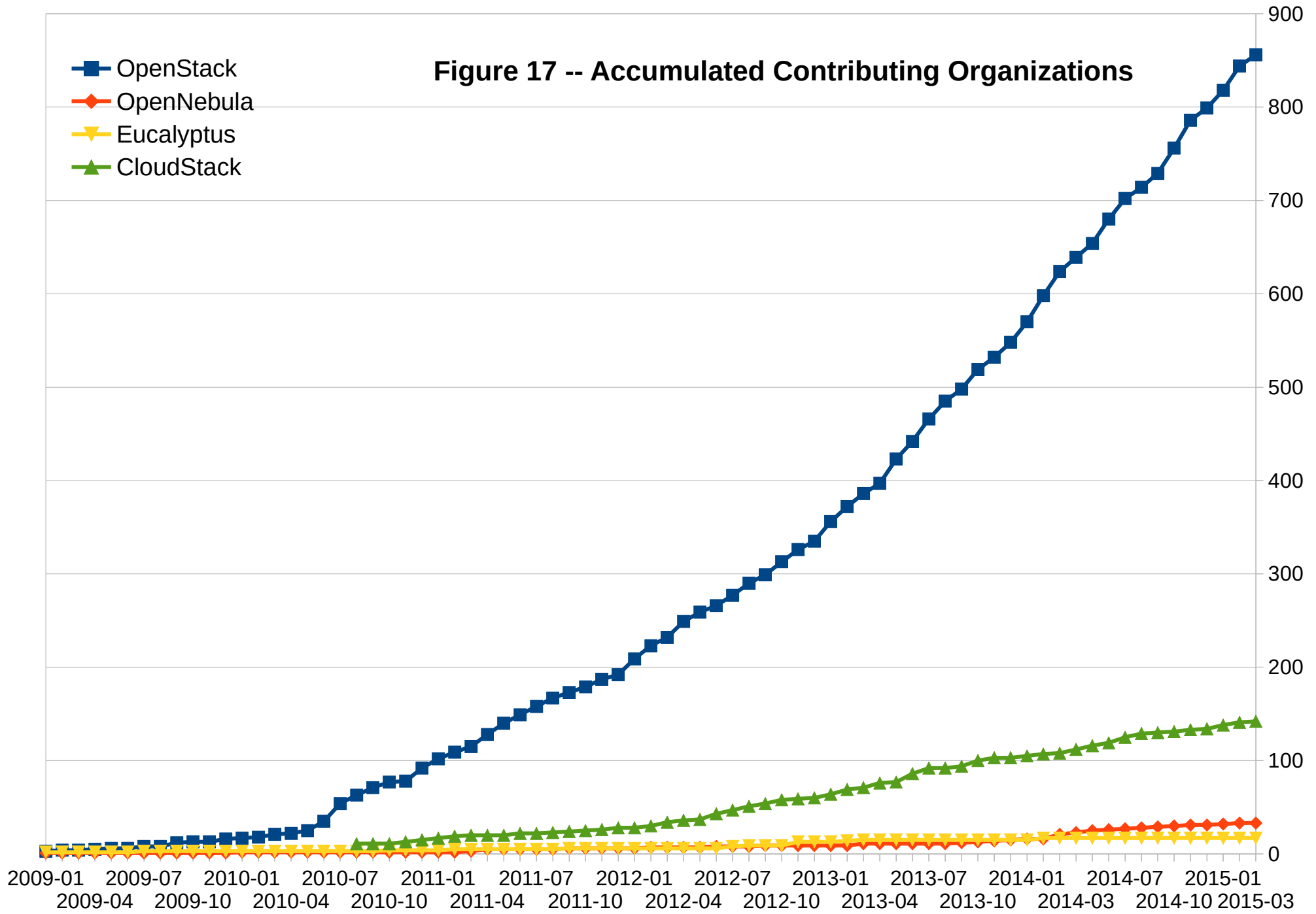


Figure 17 -- Accumulated Contributing Organizations



# Further Information

An extensive analysis on the data presented here can be found in my “CY15-Q1 Community Analysis – OpenStack vs OpenNebula vs Eucalyptus vs CloudStack”, which is available at the following URL:

<http://www.qyjohn.net/?p=3801>

The Java program being used for the git analysis is now available on github:

<https://github.com/qyjohn/GitAnalysis>

# Safe Harbor Statement

Qingye Jiang (John) is Senior Member of IEEE. He is currently a full-time graduate student (Master of Philosophy) in the School of Information Technologies at the University of Sydney. His research interests include parallel and distributed computing, high performance computing, open source community, as well as the impact of technology advancements on human society. This report is part of his on-going research on the growth of open source communities (started in 2011).

Qingye Jiang (John) is at the same time a full-time employee of Amazon Web Services (AWS). However, this report is not part of his duties with AWS. The opinions presented in this report strictly belong to the author himself, and do not reflect the opinions of his employer.

If you want to quote this report, please refer to the author as “Qingye Jiang (John) from the University of Sydney”.

# Acknowledgements

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- Randy Bias (VP of Technology, EMC), for reminding me to come up with an updated version of this community analysis.