



# **THE OPEN SOURCE DEVELOPER REPORT**

2010 ECLIPSE COMMUNITY SURVEY

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JUNE 2010

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## EXECUTIVE SUMMARY

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Eclipse is a large, vibrant, well-established open source community with over 200 open source projects, close to 1,000 committers, 160 plus member companies, thousands of companies embedding Eclipse into products and applications and million of users. Eclipse began as a Java IDE but has evolved into a much larger and more diverse open source community. Eclipse has become a major destination for people involved in developing software that includes open source software.

In April 2010, the Eclipse Foundation undertook a survey of the Eclipse community to better understand how people are using Eclipse, using other open source software (OSS) and participating in open source communities. The purpose was to create a profile of how open source developers interact with the community.

### Key Survey Highlights

Among the highlights revealed by The Open Source Developer Report:

- » Linux continues to gain market share on the developer desktop. Close to one third of developers (33%) now use Linux as their primary development operating system; this is up from 20% in 2007. In parallel Microsoft Windows has dropped from 74% in 2007 to 58% in 2010. Linux continues to be the most popular deployment operating system.
- » Developers continue to use open source solutions in their software development environment. Respondents report JQuery and Spring are the most popular frameworks for building RIA and server side applications.
- » Deploying to a cloud infrastructure is a current option or planned option for 29.5% of the respondents. Amazon EC2, Google App Engine and a private cloud are the popular choices for those considering a cloud infrastructure.
- » Eclipse users tend to use the most recent version of Eclipse. A large majority of developers use the most current Eclipse Galileo release (75.5%) or a milestone build (7.1%).
- » 89.1% are satisfied or very satisfied with Eclipse.

Complete survey results are available in [\[xls\]](#) or [\[ods\]](#) format.

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## METHODOLOGY

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The survey was promoted to individuals who visited the eclipse.org home page during the period of April 15 - May 15, 2010. On average, the eclipse.org home page receives approximately 1 million unique visitors per month. The survey was also promoted: 1) on the Eclipse Foundation newsgroup, 2) in a blog post that also appeared on PlanetEclipse, and 3) a number of times via Twitter.

The number of responses from Germany (25.7%) and France (15.4%) is significantly higher than other countries. We assume this is due to press coverage of the survey in those local markets. However, we don't believe this biased the survey results.

The survey was written in English and the eclipse.org website is only available in English, so the representation is limited to English-speaking users. The survey is biased to Eclipse users. However, respondents did not need to be an Eclipse user to complete the survey. Due to the large penetration of Eclipse in the Java developer community, we also believe the survey sample is a close approximation to the Java developer community.

In total 1,948 individuals responded to the survey and 1,696 completed the entire survey. The results in this report are based on the 1,696 completed surveys. The survey can be found at: <insert url>.

Similar surveys were conducted in August 2007 and April 2009. The results for these surveys can be found at (2007) [http://www.eclipse.org/org/press-release/20071106\\_cbsurvey.php](http://www.eclipse.org/org/press-release/20071106_cbsurvey.php) and (2009) [http://www.eclipse.org/org/press-release/20090527\\_survey09.php](http://www.eclipse.org/org/press-release/20090527_survey09.php). In this report we will make comparisons between the survey results.

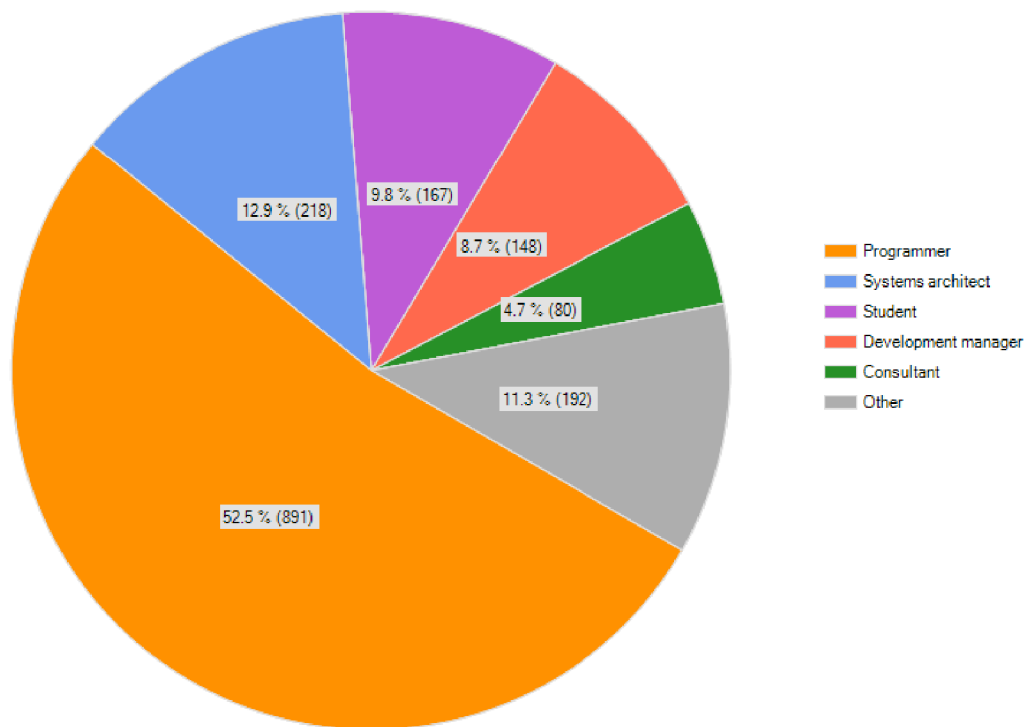
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## DEMOGRAPHICS

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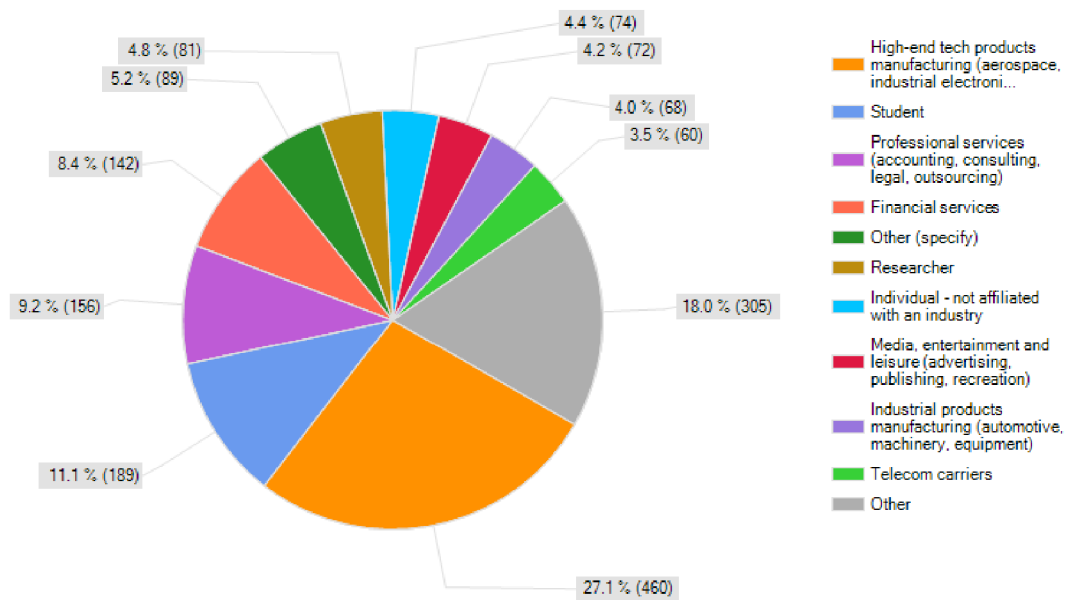
In general, survey respondents identified themselves as programmers (52.5%) or system architects (12.9%), male (97%) and having professionally written code for 2-5 years (31.1%) or 6-10 years (24.7%). 33.2% of respondents spend 17-32 hours a week writing code and 30% spend more than 32 hours a week writing code.

**7. Which of these titles best fits your role in the organization?  
(Choose one.)**



The respondents identified themselves from a wide variety of industries, high technology (27.1%), students (11.1%) and professional services (9.2%) being the most prevalent.

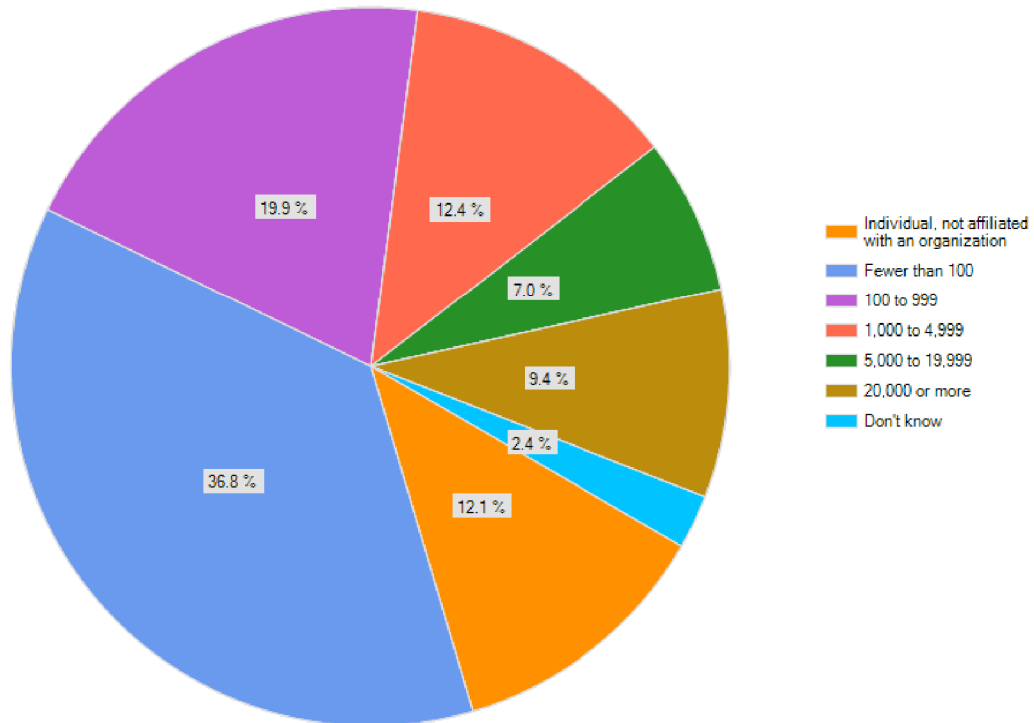
**5. Which of the following most closely describes your industry?  
(Choose one.)**





Most of the respondents work for organizations of less than 1,000 employees (56.7%) or consider themselves an unaffiliated individual (12.1%). The distribution of respondents across organization sizes is consistent with the 2009 survey.

**6. What is your best estimate of how many employees work at your organization? (Choose one.)**

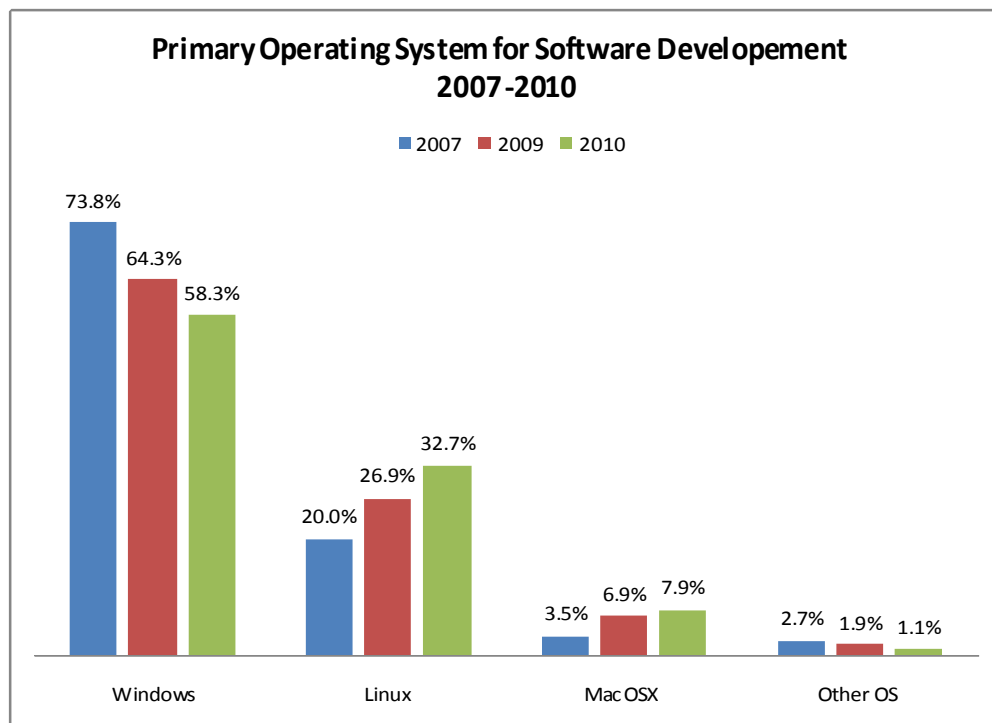


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## THE DEVELOPER DESKTOP

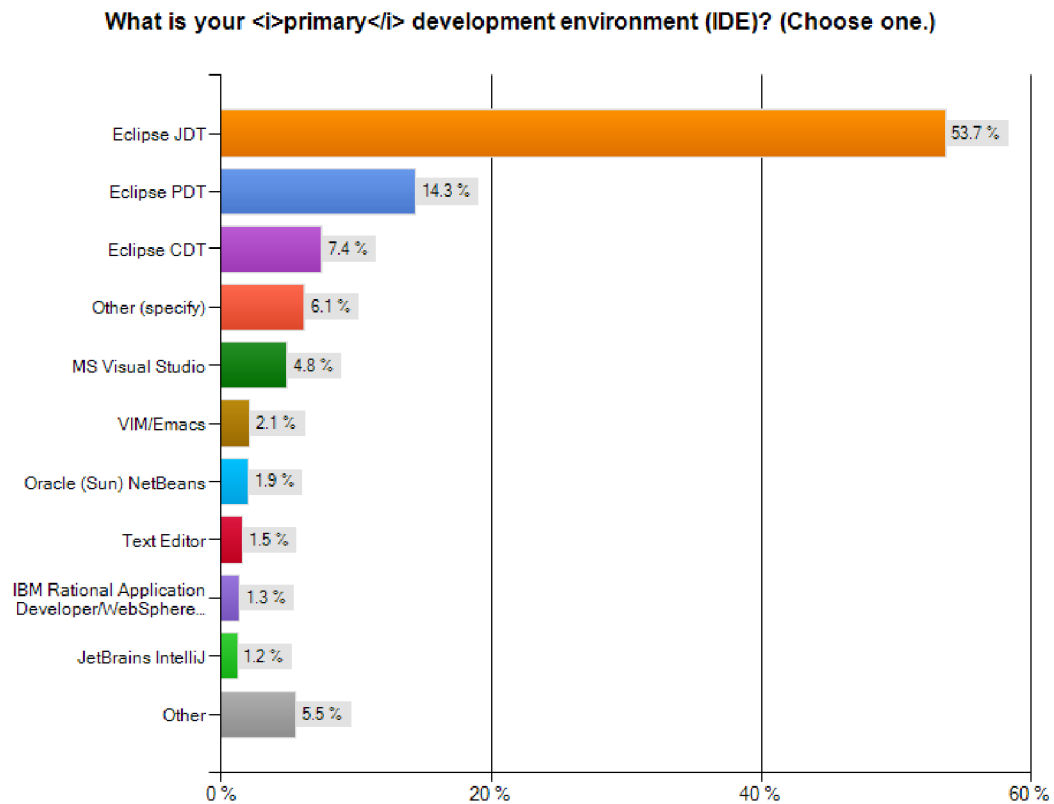
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A definite trend is emerging towards the preferred operating system of the developer desktop. In 2007, 74% of the developers indicated that Windows was their primary development operating system. In the 2010 survey this number has dropped to 58.3%, a drop of 16 points and a 6 point drop from the 2009 survey. Developers appear to be shifting away from Microsoft Windows to Linux for their development operating system. 32.7% of respondents, an increase of almost 6 points from 2009, use a variant of Linux on their desktop, Ubuntu (18.3%) being the most popular followed by Fedora (4.7%). Mac OSX grew from 6.9% to 7.9% between 2009 and 2010. Mac OSX grew from 6.9% to 7.9% between 2009 and 2010.



## Language and IDE Preference

The most popular programming language of the respondents was Java (69.5%), followed by C/C++ (10.5%) and PHP (9%). Similarly, Eclipse IDEs are the most popular primary development environments among respondents; Eclipse JDT (53.7%), Eclipse PHP Development Tools (14.3%) and C/C++ Developer Tools (7.4%). This is not surprising given the history of Eclipse as being a Java IDE.



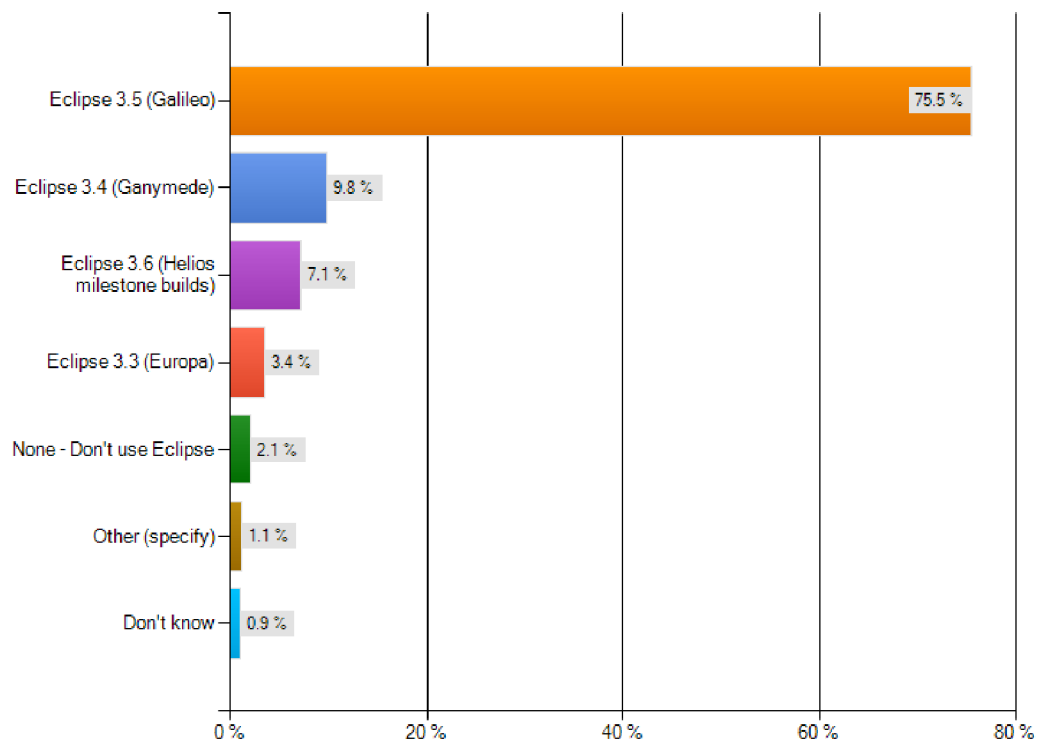
## Multi-language Development

Developers tend to use not just one language for their development work. When asked to allocate their time across programming languages, Java continues to be the dominant language but a significant number also use C/C++ (36%), Javascript (35%), PHP (30%) and Python (20%). However, the amount of time spent writing Javascript is considerably less than the amount spent on some of the other popular languages, indicating developers are using Javascript, but as a secondary language.

## Eclipse Usage

Developers tend to move to a new version of Eclipse very quickly. In less than 1 year, 75.55 have moved to the most recent version of Eclipse 3.5 (Galileo). An additional 7.1% actually use the milestone builds of the upcoming release train.

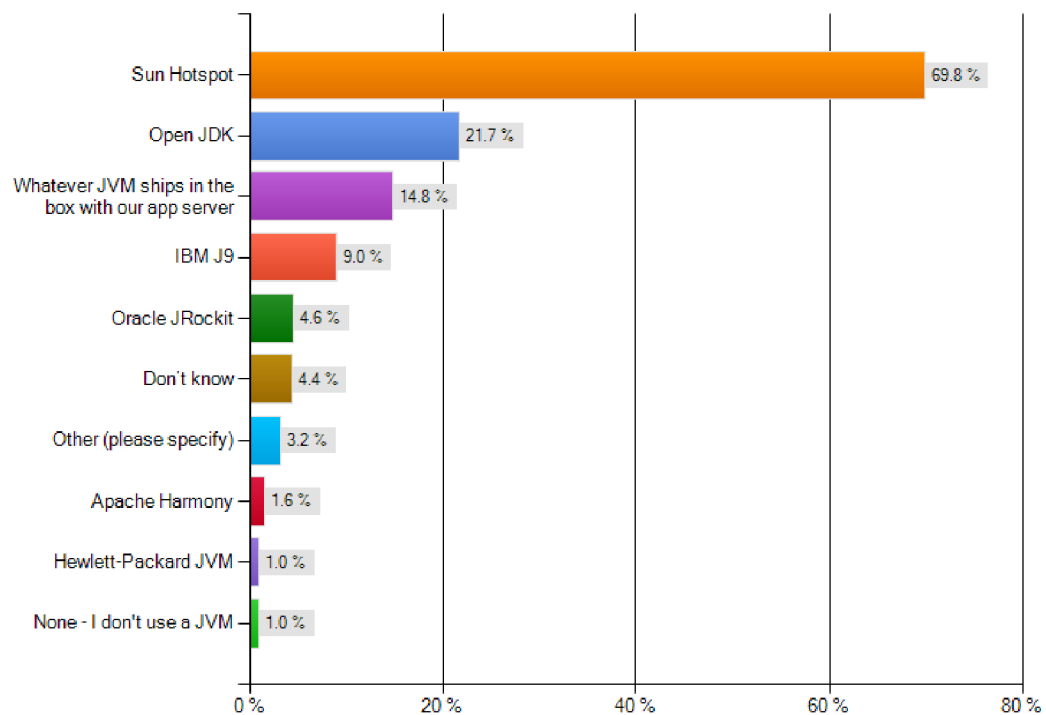
**12. What is the version of Eclipse you use most often? (Choose one.)**



## Java Usage

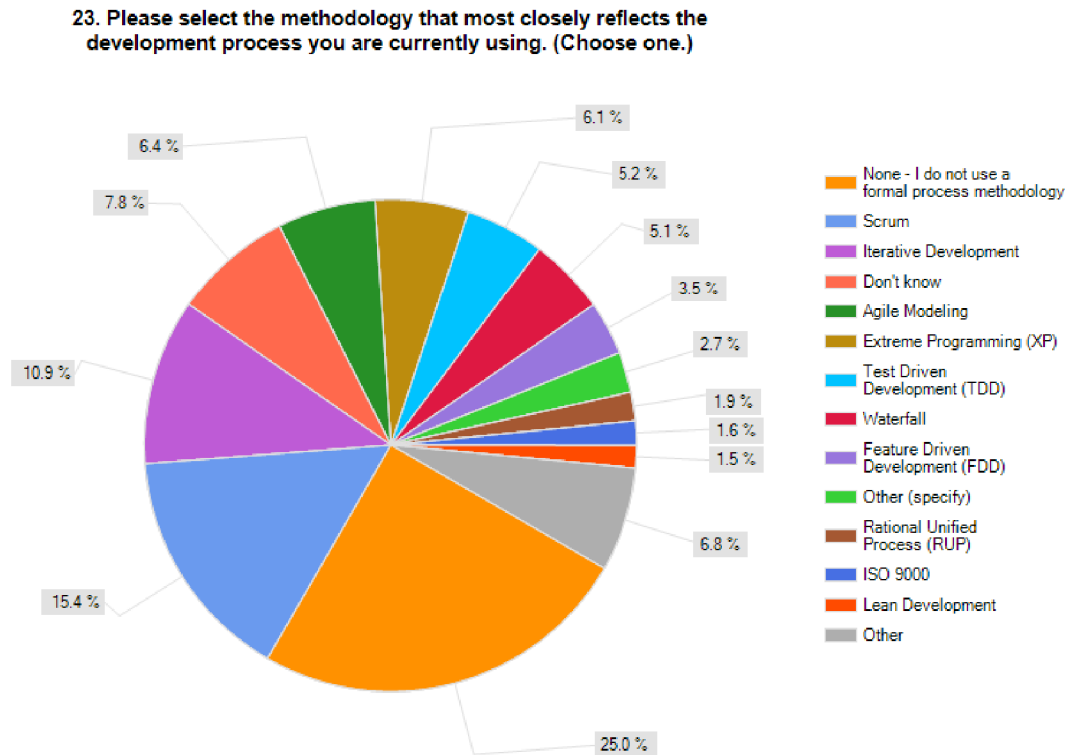
For those respondents that indicated Java was their primary programming language, most indicate they deploy to Java SE 1.5 or Java SE 1.6. For deployment, they typically choose the Sun Hotspot JVM (69.8%) or Open JDK (21.7%).

**16a. What Java virtual machine(s) (JVM) do you typically use for deployed applications?  
(Select all that apply.)**



## Development Methodology

Respondents were asked to identify which methodology best reflects their process for development. Close to a third responded that they didn't use a methodology (25%) or didn't know (7.8%). Of the methodologies identified, Scrum was the most popular (15.4%) but the rest was fragmented across 18 other methodologies.

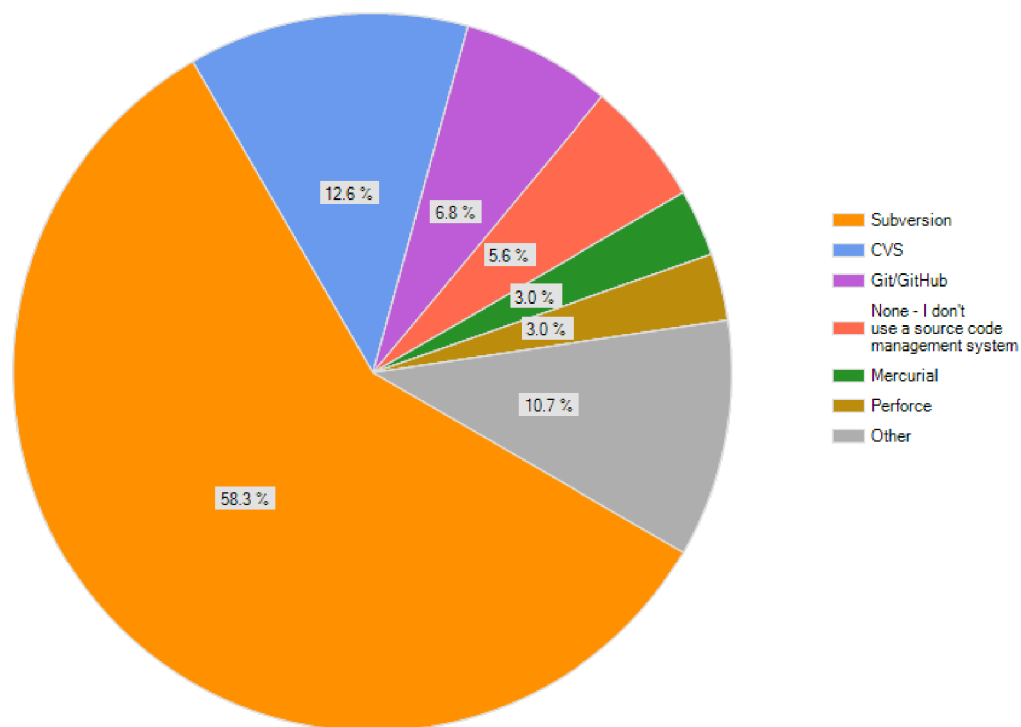


## Tools: Source Code, Change, and Build Management

Source code management (SCM), change management (CMS) and build management (BM) are important tools for most developers. The survey asked respondents to select their primary tool in each category.

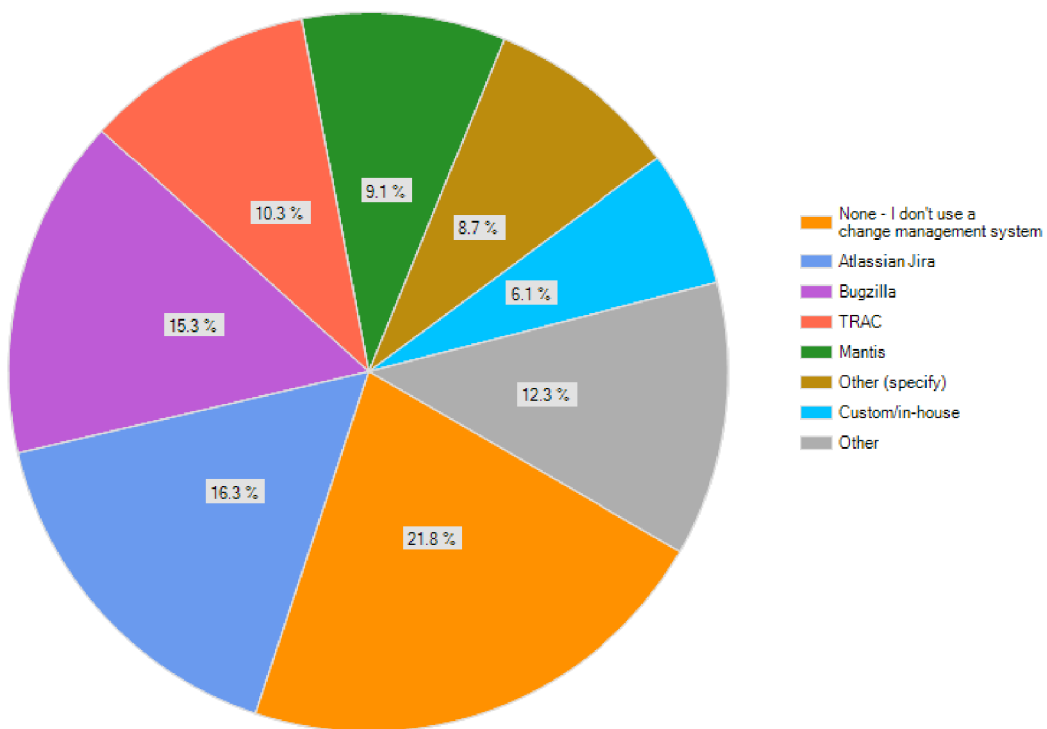
**SCM:** The dominant source code management system continues to be Subversion, which is used by 58.3% of respondents (compared with 57.5% in 2009). CVS is second at 12.6% but this is a decrease from 20% in 2009. Distributed code management systems, Git and Mercurial, are increasing in popularity. Git/GitHub increased from 2.4% to 6.8% and Mercurial increased from 1.1% to 3%.

20. What is the *primary* source code management system you typically use? (Choose one.)



**CMS:** Atlassian JIRA (16.3%) and Bugzilla (15.3%) continue to be ranked as the most popular change management systems followed by TRAC (10.3%) and Mantis (9.1%). 22.7% reported not using a CMS tool. These results are very similar to the 2009 findings.

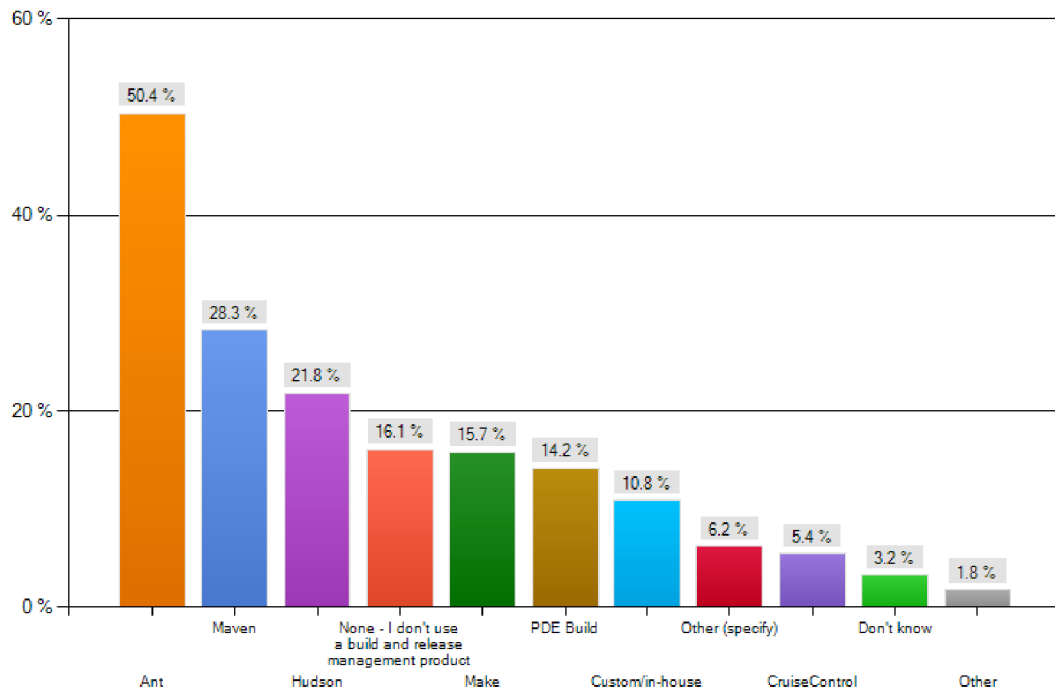
21. What is the *primary* change management system you typically use? (Choose one.)





**Build and Release Management:** Ant (50.4%) was the most popular build management tool, followed by Maven (28.3%) and Hudson (21.8%). Respondents were able to select multiple tools, so the numbers don't add to 100%.

**22. What build and release management products do you typically use? (Select all that apply.)**



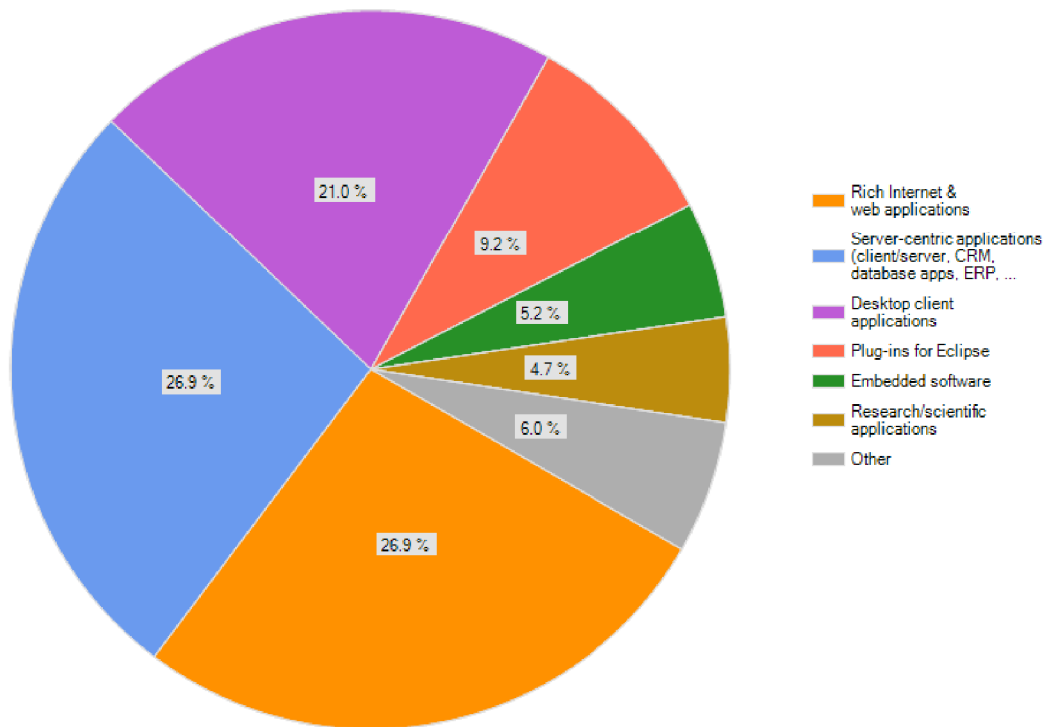
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## APPLICATION STYLE

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The types of applications respondents are developing tend to be server-centric (26.9%), web (26.9%) and desktop applications (21%). In general this is consistent with the 2009 survey results.

**17. What is the primary type of software are you personally involved in developing? (Choose one.)**



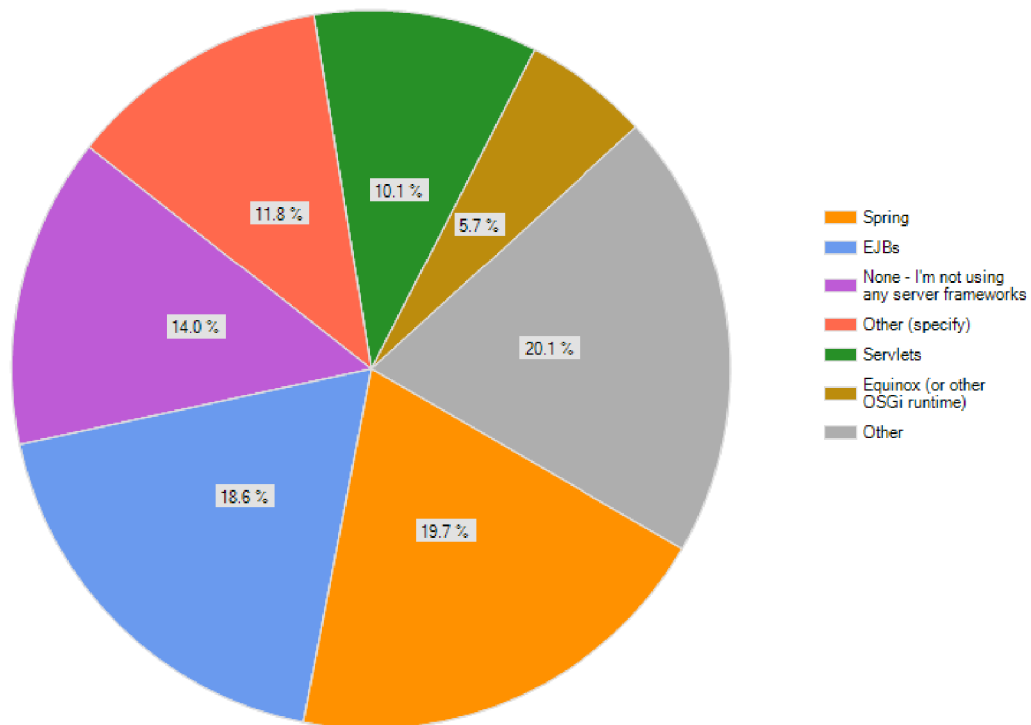
The survey then asked respondents in each of these three main categories to identify which software programs they use to develop their specific applications. Respondents were asked to select all that applied, with an option to write in additional tools.

Note: In 2009 the survey allowed for multiple choices, so it is difficult to compare results.

## Server-Centric Applications

For server-centric application development, Spring has become the most popular server framework (19.7%). This demonstrates the increasing popularity of the Spring framework with the Java developer space.

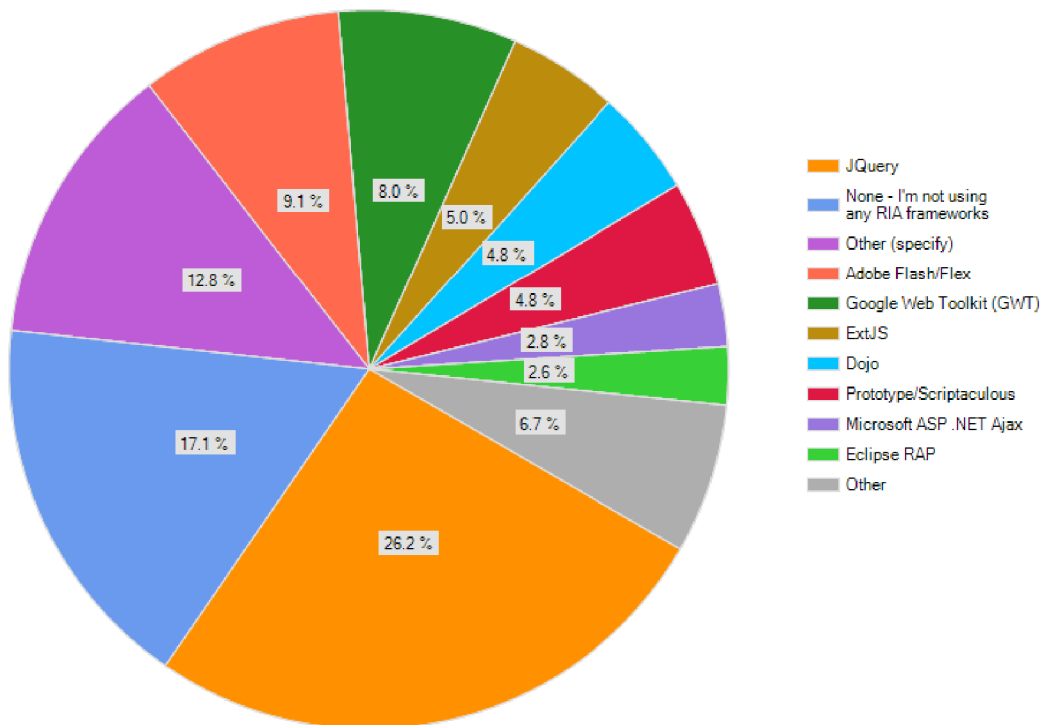
17d. What is the *primary* server framework you use for deployed applications? (Choose one.)



## Web and Rich Internet Applications

In 2009, the survey showed a large degree of fragmentation of RIA frameworks. In 2010, this appears to continue to be the case with one exception of JQuery that was identified by 26.2% respondents as being their primary RIA framework.

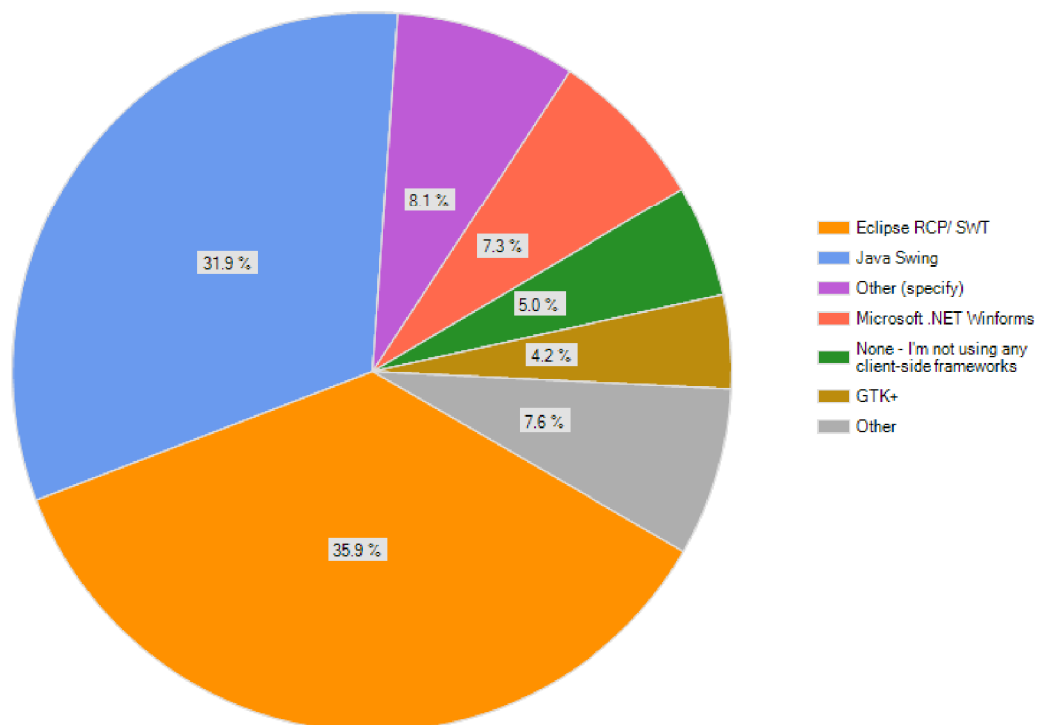
**17c. What is the <i>primary</i> RIA frameworks you use for deployed applications? (Choose one.)**



## Rich Desktop Applications

For rich desktop applications, developers' usage of Eclipse RCP (35.9%) and Swing (31.9%) were evenly split, which demonstrates a strong bias toward Java development.

17a. What is the *primary* client-side framework you use for deployed applications? (Choose one.)



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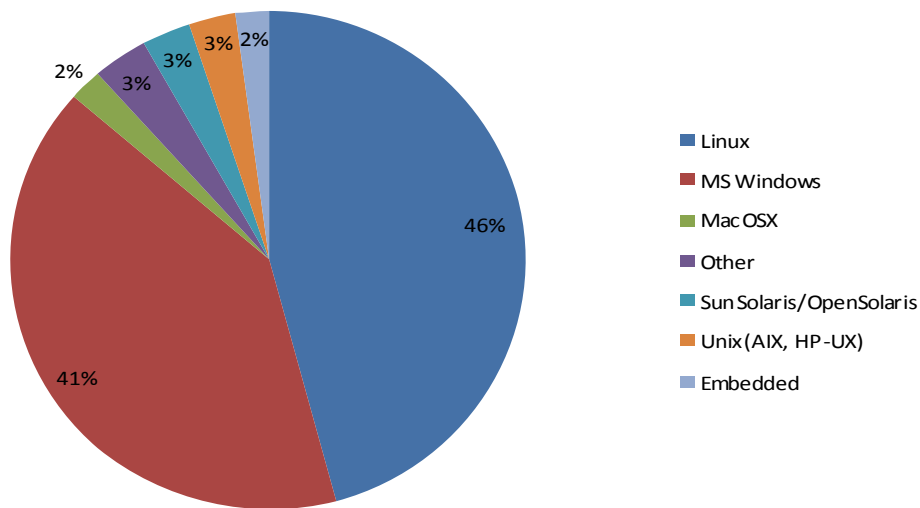
## THE DEPLOYMENT ENVIRONMENT

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Developers need to deploy their applications into a production deployment environment. The survey asked about the primary operating system, database and application server that were used to deploy their applications.

Linux continues to be the most popular deployment operating system at 44%, followed by Windows at 39%. Unlike the development operating system, between the 2009 and 2010 surveys there doesn't appear to be significant change in the primary deployment operating system.

14. What is your primary operating system for software  
<i>deployment</i>? (Choose one.)

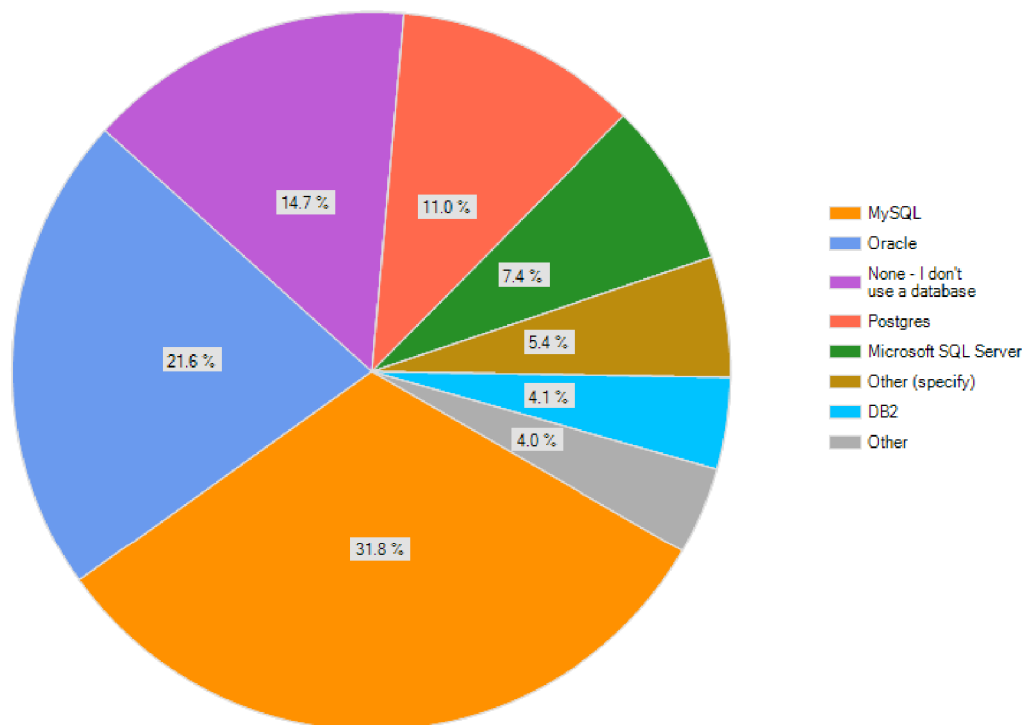


## Primary Database

The primary database used for deployment was MySQL (31.8%) followed by Oracle (21.6%). Interestingly, the use of MySQL increase from 27.7% (2009) to 31.8% (2010), while Oracle decreased from 27.3% (2009) to 21.6% (2010).

The choice of database tends to be drive others factors. For instance, MySQL users are more likely to be creating RIA applications (42.3%), to use Linux for their desktop OS (44%), and to not be using Java as their primary language but PHP (24.6%) or C/C++ (9.7%). Oracle's users however tend to be more focused on server centric applications (45.6%), to use Windows as their development desktop (75%), to specify Java as their primary language (89.4%) and when deploying to an application server, more likely to use JBoss (16.7%), Oracle WebLogic (13%) or IBM Websphere (10.6%).

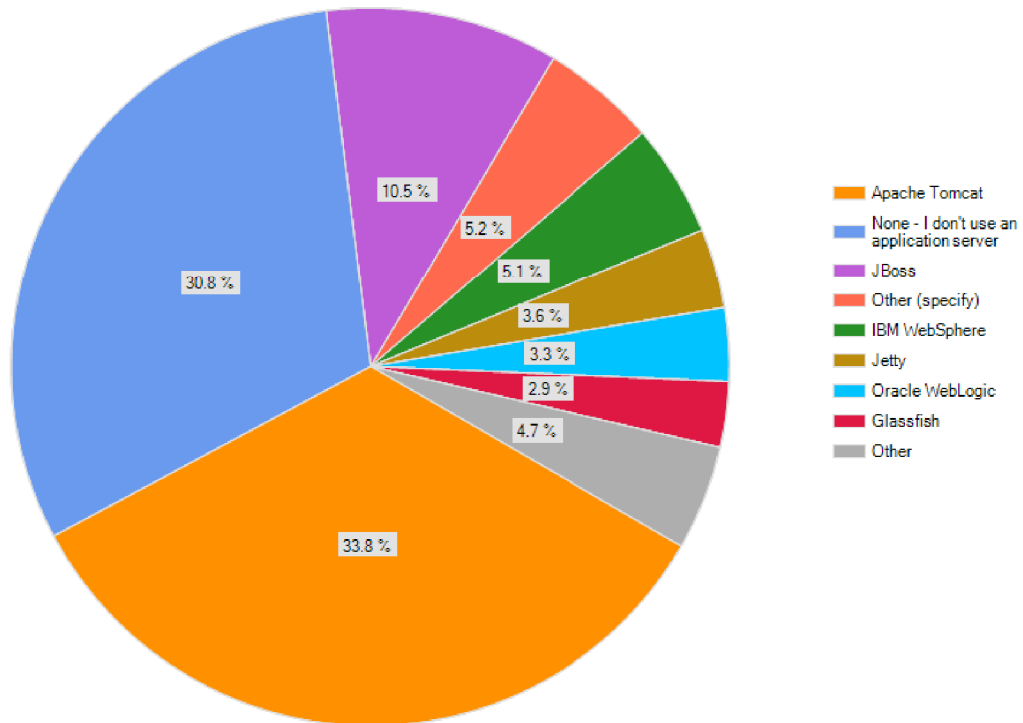
19. What is the <i>primary</i> database you typically use for deployed applications? (Choose one.)



## Primary Application Server

Apache Tomcat continues to be the dominant application server with 33.8%. Interestingly, 30.8%, an increase from 25.3% in 2009, claimed they did not use an application server.

18. What is the *primary* application server you typically use for deployed applications? (Choose one.)

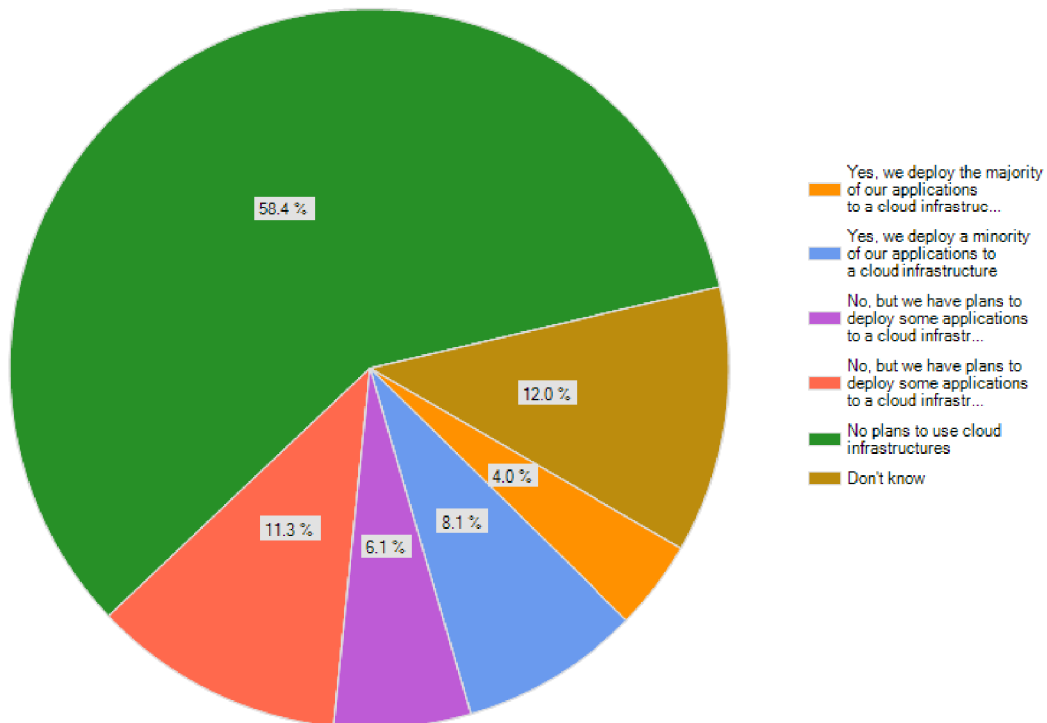




## Cloud Computing

Survey respondents will be asked about their organization's plans for deploying applications to a cloud infrastructure. A majority, 58.4%, claimed their organization had no plans to use cloud infrastructures, compared to 12.1% that are already deploying some applications to a cloud infrastructure. For those that are already using a cloud infrastructure or are planning to use one, Amazon EC2 (27.1%), Google AppEngine (17.6%) and private cloud (16.2%) are the most popular services.

**24. Are you or your organization deploying applications to a cloud infrastructure? (Choose one.)**

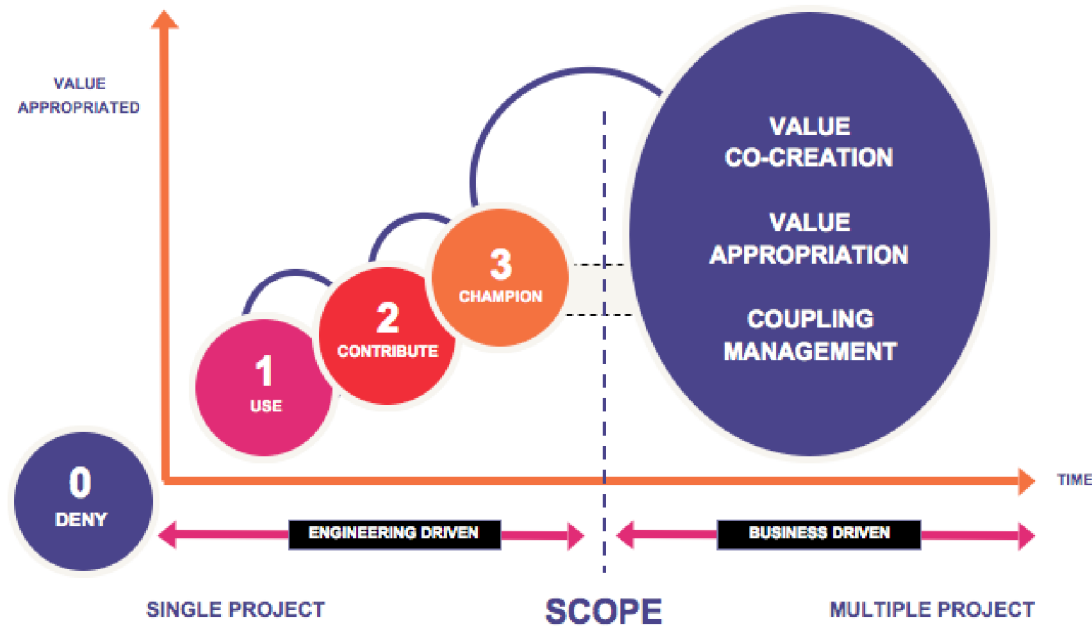


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## OPEN SOURCE MATURITY

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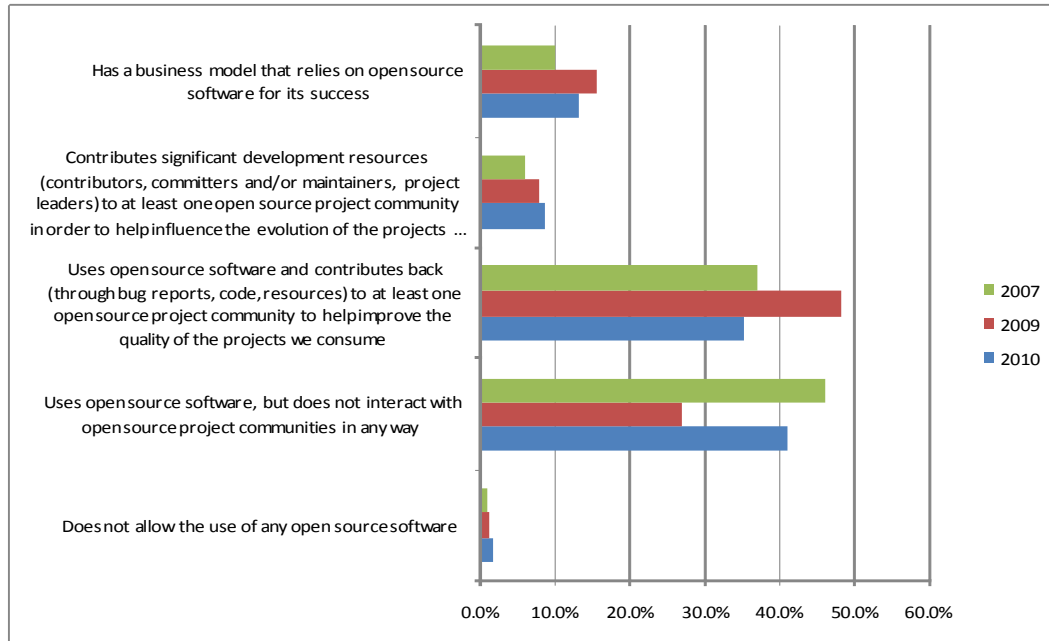
The Eclipse Foundation uses an Open Source Maturity model to explain how organizations perceive and participate in an open source community. Over time, an organization moves from denial of open source, to usage, to modest contribution, to leading and champion.



*The Open Source Maturity Model*

In 2009 there was a trend towards organizations contributing more to open source communities. However, in 2010 it would seem this trend has not been sustained. In 2009, 48% of the respondents were allowed to contribute back to an open source project but that has dropped to 35% in 2010. Conversely, in 2010, 41% of respondents have organizational policies that allow them to use but not contribute back to an open source community, which is an increase from the 27% level in 2009. This clearly shows a change in the level of willingness to contribute to open source communities.

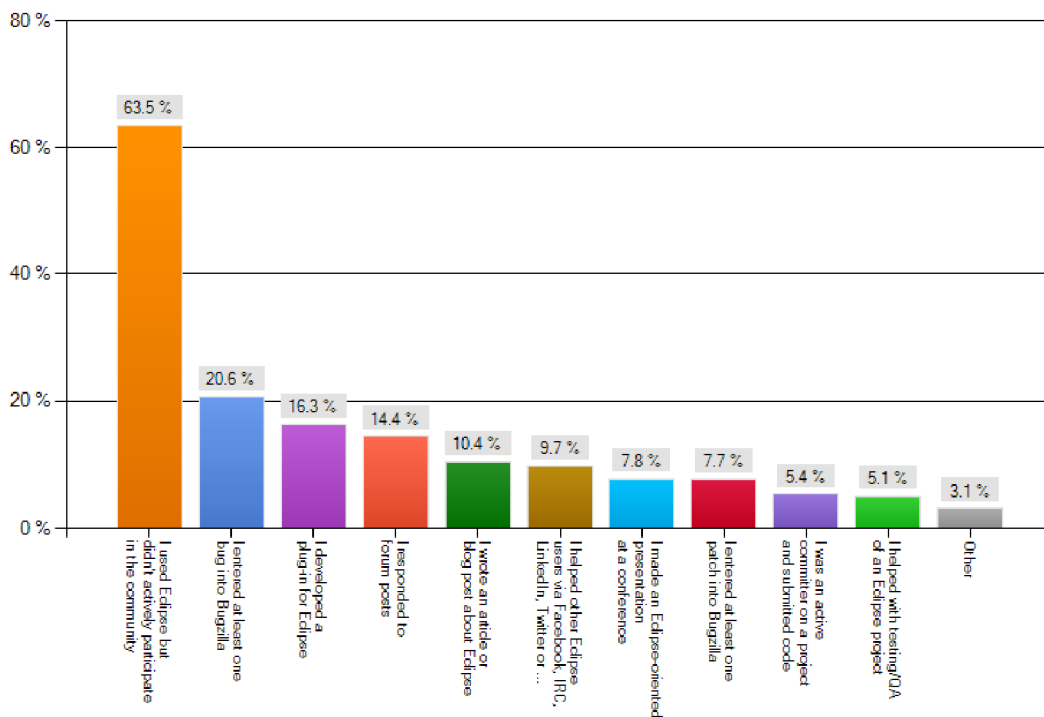
It is not clear the reason for this change but it is something worth investigating.



## ECLIPSE COMMUNITY PARTICIPATION

The survey also looked at the perception of and participation within the Eclipse community. The most common way to participate is by opening a bug (20.6%), developing a plug-in (16.3%) and responding to a forum post (14.4%). Unfortunately, a large population (63.5%) does not actively participate in the community.

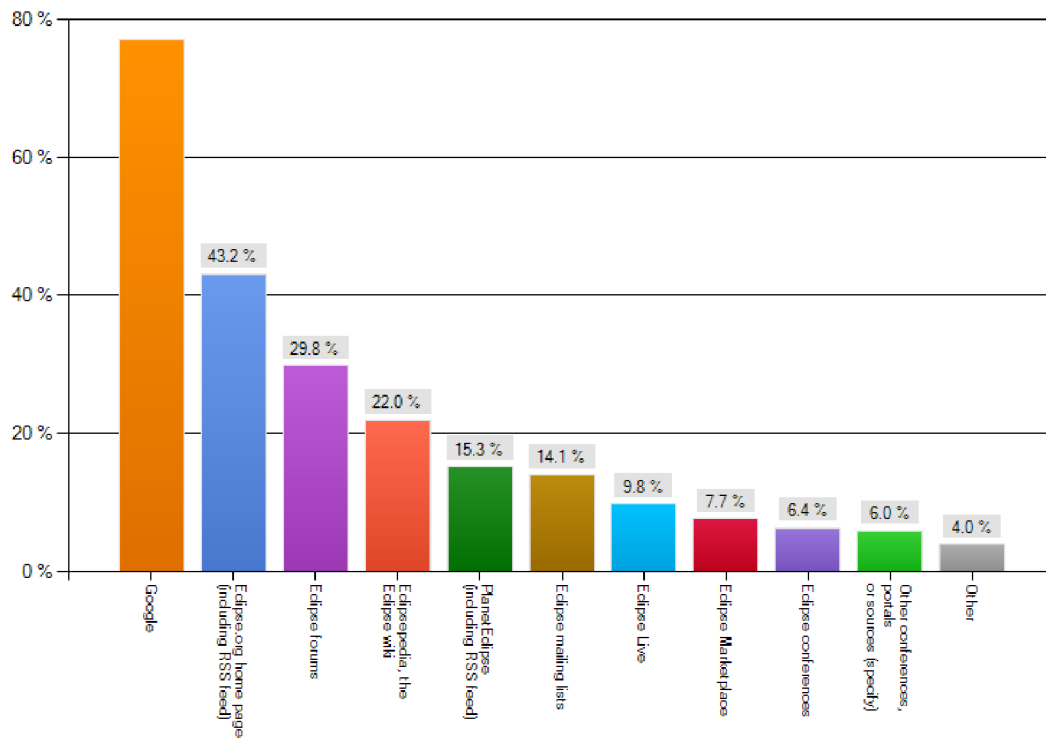
26. In the last year, how have you participated in the Eclipse community? (Select all that apply.)



## Sources of Eclipse-related Information

77.1% of the respondents use Google to find Eclipse-related information, by far the most popular method. The Eclipse Foundation home page (43.2%) and the Eclipse Forums (29.8%) are also popular sources of information.

**27. Where do you typically go to find Eclipse-related information? (Select all that apply.)**



## Overall Satisfaction

Overall, the Eclipse community is generally satisfied with Eclipse; 88.4% reported satisfied or very satisfied with Eclipse. This was very similar to the 89.1% approval rating in 2009. Congratulations to everyone!

**29. Overall, how satisfied are you with Eclipse? (Choose one.)**

